

**OKLAHOMA CITY ZOOLOGICAL TRUST**  
**Formal Meeting Agenda**  
 Rosser Conservation Education Center Auditorium  
 September 23, 2020 – 4:30 p.m.



**ZOOLOGICAL TRUST MEMBERS**

2020 SEP 22 PM 4:30  
 OKLAHOMA CITY CLERK

**Darryl Schmidt, Chair**  
**Keith Peters, Vice-Chair**  
**Vicki Howard, Secretary**  
**David Holt, Mayor**  
**Heather Ross, Surrogate to the Mayor**  
**Craig Freeman, City Manager**  
**Laura Johnson, Surrogate to the City Manager**

**Nikki Nice, Councilwoman, Ward 7**  
**Jon Trudgeon**  
**Aimee Salalati**  
**Matt McGuire**  
  
**Dwight Lawson, PhD, Executive Director/CEO**

**INFORMATION ABOUT OKLAHOMA CITY ZOOLOGICAL TRUST MEETINGS**

The Oklahoma City Zoological Trust meets the fourth Wednesday of each month at 4:30 PM. During the state of emergency in place during the COVID-19 pandemic, and in compliance with state and local orders, the meeting will be held in the Auditorium at the Rosser Conservation Education Center, where ample social distancing is possible.

It is the policy of the Oklahoma City Zoological Trust to ensure that communications with participants and members of the public with disabilities are as effective as communications with others. Anyone with a disability who requires an accommodation, a modification of policies or procedures, or an auxiliary aid or service in order to participate in this meeting should contact the Zoo at 405-425-0231 or TDD 405-297-2020 as soon as possible, but not later than 48 hours (not including weekends or holidays) before the scheduled meeting. The Zoo will give primary consideration to the choice of auxiliary aid or service requested by the individual with disability. If you need an alternate format of the agenda or any information provided at said meeting, please contact the Zoo at 405-425-0231 at least 48 hours prior to the scheduled meeting.

**ADDRESSING THE TRUST:** Citizens may address the Trust at the end of the agenda when the Chairman announces, "Citizens to be heard." Please contact the Zoo at 405-425-0231 at least 48 hours prior to the meeting, and leave a message that includes your name, the agenda item number, and the reason you would like to speak. Staff will submit requests received to the Chair. Please limit your comments to three (3) minutes or less.

**TRUST ACTIONS:** Official action can be taken only on items which appear on the agenda. The Trust may dispose of business on the agenda by adopting, approving, denying, or continuing resolutions, contracts, and claims against the Trust. Other actions may also be taken.

When more information is needed to act on an item, the Trust may refer the matter to the Executive Director/CEO or the Municipal Counselor. The Trust may also refer items to standing committees of the Trust for additional study.

Under certain circumstances, items are deferred to a specific later date or stricken from the agenda entirely.

**CONSENT DOCKET:** Items listed under "Consent Docket" are usually approved as a group with the proper motion from a member of the Trust. Members of the Trust may request discussion or separate action on any item on the Consent Docket. Citizens may request to address the Trust on any item on the Consent Docket. For more information about the Oklahoma City Zoological Trust, please call 405-424-3344.

Agenda Item	Addressed by:	Page No.	Recommended Action
<b>Call to Order</b> A. Verification of Compliance with Open Meeting Act	Darryl Schmidt	N/A	Informational
<b>1. Receive Minutes</b> A. Minutes of August 26, 2020	Darryl Schmidt		Approve
<b>2. Receive Staff and/or Committee Updates</b> A. Financial Report of August 2020	Dwight Lawson		Approve

Agenda Item	Addressed by:	Page No.	Recommended Action
<b>3. Items for Individual Consideration</b> A. Approval of Plans and Specifications for bid, Project MZ-0067 - Oklahoma City Zoo and Botanical Garden Lake Park Improvements.  B. Approval of Change Order No. 3, Project MZ-0060, Oklahoma City Zoo Orientation Plaza and Africa-Themed Savanna Exhibits, increase of \$6,000.00.  C. Third Supplement to the Food Service and Catering Operations Agreement with Lancer Hospitality, Oklahoma, LLC.	Dwight Lawson		Approve
	Dwight Lawson		Approve
	Dwight Lawson		Approve
<b>4. New Business</b>	Darryl Schmidt	N/A	Informational
<b>5. Items from Trustees</b>	Darryl Schmidt	N/A	Informational
<b>6. Staff Reports</b> A. Executive Director's Report	Dwight Lawson	PPT	Informational
<b>7. Citizens to be Heard</b>	Darryl Schmidt	N/A	Informational
<b>8. Adjournment</b>	Darryl Schmidt	N/A	Informational



# JOURNAL OF TRUST PROCEEDINGS

AUGUST 26, 2020  
ROSSER CONSERVATION EDUCATION CENTER

## Trustees Present:

Darryl Schmidt, Chair  
Keith Peters, Vice-Chair  
Vicki Howard, Secretary  
Heather Ross, Surrogate to the Mayor  
Laura Johnson, Surrogate to City Manager  
Nikki Nice, Councilwoman, Ward 7  
Jon Trudgeon  
Aimee Salalati  
Matt McGuire

## Staff Present:

Dwight Lawson, Executive Director/CEO  
Bob Mathew, Vice President of Finance/CFO  
Kevin Drees, Director of Animal Collections  
Kathryn Koontz, Executive Assistant

## Others Present:

Jerod Beatty, Assistant Municipal Counselor, City of Oklahoma City  
Jackie Haverly, OKC Mayor's Committee on Disability Concerns Representative  
Antwuan Jackson, Youth Councilor, Youth Council of Oklahoma City 2020/2021

## Agenda Topics

### 1. Call to Order

#### A. Verification of Compliance with Open Meeting Act

Chair Schmidt called the meeting to order at 4:30 p.m. and asked if the Trust is compliant with the Open Meeting Act. The Executive Assistant replied affirmatively.

#### B. Welcome to Youth Council Ward 7 Representatives

- a. Ms. Esmerelda Sandoval, Crooked Oak High School, Class of 2021
- b. Mr. Antwuan Jackson, Millwood High School, Class of 2021

Chair Schmidt congratulated Ward 7 Youth Councilors Ms. Esmeralda Sandoval and Mr. Antwuan Jackson on the honor of being chosen to participate in the 2020/2021 Youth Council, and welcomed Mr. Jackson to the Zoological Trust Meeting. Mr. Jackson introduced himself to the Trust, and thanked them for the opportunity to participate with the Zoological Trust in his role as Youth Councilor.

### 2. Oaths of Office

#### A. Aimee Salalati

**B. Matt McGuire**

City of Oklahoma City Assistant Municipal Counselor Jerod Beatty administered the Oath of Office and Loyalty Oath to Ms. Aimee Salalati and Mr. Matt McGuire. Chair Schmidt then welcomed the new Trustees to the Zoological Trust.

**3. Receive Minutes**

**A. Minutes of June 24, 2020.**

**APPROVED.** Moved by Trustee Trudgeon. Seconded by Trustee Howard.

**AYES:** Trustees Schmidt, Peters, Howard, Ross, Johnson, Nice, Trudgeon, Salalati, McGuire.

**4. Receive Staff and/or Committee Updates**

**A. Financial Report of June 2020.**

Bob Mathew provided information on the financial report of June 2020.

**APPROVED.** Moved by Trustee Trudgeon. Seconded by Trustee Johnson.

**AYES:** Trustees Schmidt, Peters, Howard, Ross, Johnson, Nice, Trudgeon, Salalati, McGuire.

**B. Financial Report of July 2020.**

Bob Mathew provided information on the financial report of July 2020.

**APPROVED.** Moved by Trustee Trudgeon. Seconded by Trustee Ross.

**AYES:** Trustees Schmidt, Peters, Howard, Ross, Johnson, Nice, Trudgeon, Salalati, McGuire.

**5. Items for Individual Consideration**

**A. Project MZ-0064-1, Oklahoma City Zoo Amphibian Plaza Site Preparation; construction completion, accepting the project and placing the maintenance bond into effect.**

Dr. Lawson advised that the construction was complete on Project MZ-0064-1, Oklahoma City Zoo Amphibian Plaza Site Preparation, and that Trust approval was needed to accept the earthwork part of the project, and place the maintenance bond into effect.

**APPROVED.** Moved by Trustee Trudgeon. Seconded by Trustee Nice.

**AYES:** Trustees Schmidt, Peters, Howard, Ross, Johnson, Nice, Trudgeon, Salalati, McGuire.

**B. Project MZ-0063, Cheetah and Wild Dog Exhibits; ratifying and approving Addenda Nos. 1, 2, and 3; awarding the construction contract to Shiloh Enterprises, Inc., in the amount of \$1,888,000; assigning Burgess Testing as testing laboratory; and approving contracts and bonds.**

Trustee Trudgeon requested information on how contractors are vetted before agreements are approved. Trustee Johnson serves on the City of Oklahoma City's Prequalification Review Board, and provided an explanation of the work done by the Board.

**APPROVED.** Moved by Trustee Trudgeon. Seconded by Trustee Ross.

**AYES:** Trustees Schmidt, Peters, Howard, Ross, Johnson, Nice, Trudgeon, Salalati, McGuire.

**6. New Business**

A. None.

**7. Items from Trustees**

- A. Trustee Nice welcomed Trustees Salalati and McGuire to the Trust, also welcoming Mr. Antwan Jackson. Trustee Nice shared some of Mr. Jackson's academic and personal achievements, advising that she looks forward to working with the Ward 7 Youth Councilors in the coming year.
- B. Trustee Trudgeon welcomed Trustees Salalati and McGuire, and also welcomed Mr. Jackson. Trustee Trudgeon thanked Dr. Lawson and staff for the work being done to keep the Zoo functioning well during this time.
- C. Trustees Ross and Peters joined in welcoming Trustees Salalati and McGuire, and Mr. Jackson.
- D. Trustee Johnson welcomed Trustees Salalati and McGuire, thanking them for their willingness to serve on the Zoological Trust. Trustee Johnson also welcomed Youth Councilor Mr. Antwan Jackson.
- E. Trustee McGuire thanked the Chair and Trustees for their welcome, and stated he is excited to participate in the Zoological Trust.
- F. Trustee Salalati thanked the Chair and Trustees for their warm welcome, and shared that she is glad to join the Zoological Trust.

**8. Staff Reports**

- A. Dr. Lawson reviewed current and upcoming Zoo activities, sharing information on Wild Encounters and feeding opportunities currently offered at the Zoo which have become extremely popular with guests. Timed ticketing and online admission purchases continue, with a special evening event, Sip & Stroll, extended through the end of September. The Oklahoma Zoological Society will host their 12<sup>th</sup> Annual ZOObrew September 25, 2020.

Dr. Lawson provided updates on Zoo animals, featuring new additions to the Zoo as well as animals expecting babies. Indian rhino "Nikki" in November of 2020. Giraffes Ellie and Julu will give birth in 2021, while Asian elephant Asha expects a calf in February, 2022. Dr. Lawson also shared information about Elephant Endotheliotropic Herpesvirus (EEHV).

Zoo membership updates and other current promotions were discussed, along with attendance data for recent months, which was compared to the past years' attendance numbers. The comparison indicated how the COVID 19 pandemic has impacted the Zoo. Dr. Lawson advised that the Zoo honored its annual tradition of "free days" by offering Oklahoma City and state residents and guests free admission in the afternoons during the first two weeks of August.

**9. Citizens to be Heard**

A. None.

**10. Adjournment**

There being no further business to come before the Trust, the Chair declared the meeting adjourned at 5:22 p.m.

# MEMO



To: Oklahoma City Zoological Trust

From: Dwight Lawson, Bob Mathew

Date: September 18, 2020

Re: **Financial Summary - August 2020**

<b>Attendance:</b>	<b>Actual</b>	<b>Budget</b>	<b>Variance</b>		<b>Last Year</b>	<b>Variance</b>	
			<b>Act-Budget</b>	<b>Variance %</b>		<b>Act-Last Year</b>	<b>Variance %</b>
Current Month	86,206	69,000	17,206	24.9%	66,890	19,316	28.9%
Year to date	135,501	157,000	(21,499)	-13.7%	180,980	(45,479)	-25.1%

**Operating Revenue:**

Current Month	\$809,345	\$640,564	\$168,781	26.3%	\$787,995	\$21,350	2.7%
Year to date	1,466,717	1,390,651	76,066	5.5%	1,721,990	(255,273)	-14.8%

Per-Capita Revenue for the month was \$9.39. Year to date per capita revenue is \$10.82 which is \$1.97 more than the budget of \$8.86

**Other Revenue:**

Current Month	\$12,639	\$19,089	(\$6,450)	-33.8%	\$38,300	(\$25,661)	-67.0%
Year to date	392,396	412,548	(\$20,152)	-4.9%	453,109	(\$60,713)	-13.4%

**Operating Expenses:**

Current Month	\$1,177,511	\$1,307,570	(\$130,059)	-9.9%	\$1,226,270	(\$48,759)	-4.0%
Year to date	\$2,276,324	\$2,533,431	(257,107)	-10.1%	2,497,528	(221,204)	-8.9%

**Operating Profit (Loss):**

Current Month	(\$355,526)	(\$647,917)	\$292,391	-45.1%	(\$399,975)	\$44,449	-11.1%
Year to date	(\$417,210)	(\$730,232)	313,022	-42.9%	(322,429)	(94,781)	29.4%

**Sales Tax Revenue:**

Current Month	\$1,224,708	\$1,126,943	\$97,765	8.7%	\$1,229,390	(\$4,682)	-0.4%
Year to date	\$2,358,327	\$2,252,708	105,619	4.7%	2,458,512	(100,185)	-4.1%

<b>Capital Projects:</b>	<b>Annual Budget</b>	<b>YTD Expenses</b>	<b>Budget</b>	
			<b>Remaining</b>	<b>%</b>
Capital Improvements	\$500,000	\$8,050	\$491,950	98.4%

**Zoo Support:**

Zoo Support from OZS	\$2,832,500	\$183,476	\$2,649,024	93.5%
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**OKLAHOMA CITY ZOOLOGICAL TRUST**

**FY 2020-21 Capital Projects**

**Budget Status as of August 31, 2020**

<b>Department</b>	<b>Capital Improvement Projects</b>	<b>Budget</b>	<b>YTD Expenses</b>	<b>Budget Remaining</b>	<b>Status</b>
Maintenance	HVAC Replacement	210,000	-	210,000	
Maintenance	Roof Replacement	100,000	-	100,000	
Maintenance	Boardwalk/Handrail Replacement	25,000	-	25,000	
Maintenance	Concrete Patch and Repair	7,500	-	7,500	
Maintenance	Painting	7,500		7,500	
				-	
				-	
				-	
				-	
	Train Realignment Project	23,000	8,050	14,950	
	Contingency	127,000		127,000	
	<b>Total</b>	<b>500,000</b>	<b>8,050</b>	<b>491,950</b>	

**Master-Plan Projects**

Master-Plan	Africa/Savana/Entry Plaza	29,309,000	2,149,638	27,159,362	CD anticipated 11/20
Master-Plan	Condor/Azelea Garden	1,683,221	1,345,190	338,031	Const start 11/19
Master-Plan	Zoo Lake Park	750,000	649,211	100,789	Complete
Master-Plan	Amphibian Plaza	773,199	773,199	-	Complete
Master-Plan	Cheetah & Dog Row	2,361,052	152,781	2,208,271	Const start 9/14/20
	<b>Total</b>	<b>34,876,472</b>	<b>5,070,019</b>	<b>29,806,453</b>	

**OKLAHOMA CITY ZOOLOGICAL TRUST**  
**INCOME STATEMENT SUMMARY**  
**FOR THE TWO MONTHS ENDING 8/31/2020**

	CURRENT MONTH			YEAR TO DATE		
	ACTUAL	BUDGET	LAST YR	ACTUAL	BUDGET	LAST YR
<b>REVENUES:</b>						
ADMISSIONS	\$332,328	\$269,701	\$242,658	\$609,441	\$596,512	\$631,824
ANIMAL SHOW ADMISSIONS	50,242	28,612	21,782	87,645	65,211	65,578
ANIMAL FEEDINGS	36,464	16,171	12,114	62,946	35,715	33,464
FOOD & BEVERAGE/VENDING	72,650	65,007	172,922	126,566	147,022	257,805
CATERING/RENTALS	24,308	5,002	18,781	36,831	9,984	32,155
CONCERTS		59,321	63,374		66,414	63,374
RIDES	56,664	86,733	106,500	92,297	201,782	306,797
MERCHANDISE COMMISSION	61,050	45,403	32,902	104,753	102,876	86,071
STROLLER/RENTALS/WILD ENC	74,880	45,081	44,851	128,242	113,546	110,942
EDUCATION	5,801	2,473	14,383	13,766	14,498	38,372
PROMOTIONS	81,778	13,337	40,291	179,278	29,434	48,197
OTHER	13,179	3,725	17,438	24,952	7,656	47,411
<b>TOTAL OPERATING REVENUE</b>	<b>809,345</b>	<b>640,564</b>	<b>787,995</b>	<b>1,466,717</b>	<b>1,390,651</b>	<b>1,721,990</b>
<b>COST OF GOODS SOLD</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>GROSS MARGIN</b>	<b>\$809,345</b>	<b>\$640,564</b>	<b>\$787,995</b>	<b>\$1,466,717</b>	<b>\$1,390,651</b>	<b>\$1,721,990</b>
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
<b>OPERATING EXPENSES:</b>						
SALARIES	625,625	659,312	638,928	1,159,254	1,236,209	1,222,857
BENEFITS	203,734	211,576	199,157	411,838	396,706	395,649
SUPPLIES	20,334	60,773	42,915	35,695	100,245	97,900
UTILITIES	118,626	115,659	116,151	163,848	183,837	166,843
OUTSIDE SERVICES	87,034	130,021	88,323	159,651	225,943	218,018
ANIMAL CARE	47,931	47,166	62,345	91,064	133,034	128,659
OTHER	74,226	83,063	78,452	254,973	257,456	267,601
<b>TOTAL OPERATING EXPENSE</b>	<b>1,177,511</b>	<b>1,307,570</b>	<b>1,226,270</b>	<b>2,276,324</b>	<b>2,533,431</b>	<b>2,497,528</b>
<b>OTHER REVENUES:</b>						
LEASES	0	0	0	369,483	369,080	369,483
CONTRIBUTIONS	12,244	11,387	15,183	22,157	28,343	36,401
INTEREST	395	7,701	23,117	756	15,125	47,224
<b>TOTAL OTHER REVENUE</b>	<b>12,639</b>	<b>19,089</b>	<b>38,300</b>	<b>392,396</b>	<b>412,548</b>	<b>453,109</b>
<b>OPERATING INCOME (LOSS)</b>	<b>(355,526)</b>	<b>(647,917)</b>	<b>(399,975)</b>	<b>(417,210)</b>	<b>(730,232)</b>	<b>(322,429)</b>
<b>TRANSFERS</b>	<b>(355,526)</b>	<b>(647,917)</b>	<b>(399,975)</b>	<b>(417,210)</b>	<b>(730,232)</b>	<b>(322,429)</b>
<b>NET INCOME (LOSS)</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

**OKLAHOMA CITY ZOOLOGICAL TRUST**  
**DETAILED STATEMENT OF ASSETS, LIABILITIES, AND EQUITY**  
**FOR THE TWO MONTHS ENDING 8/31/2020**

ASSETS	OPERATING FUND	ANIMAL FUND	RESTRICTED FUND	SALES TAX FUND	TOTAL	LAST YEAR
<b>CURRENT:</b>						
CASH & INVESTMENTS	\$1,410,721	\$0	\$96,984	\$16,143,240	\$17,650,945	\$18,180,020
ACCOUNTS RECEIVABLE	1,411,816	0	0	0	1,411,816	1,200,187
SALES TAX RECEIVABLE	0	0	0	1,919,975	1,919,975	1,989,934
INVENTORIES	123,024	0	0	0	123,024	101,092
PREPAID EXPENSES	28,241	0	0	0	28,241	27,521
<b>TOTAL CURRENT ASSETS</b>	<b>2,973,801</b>	<b>0</b>	<b>96,984</b>	<b>18,063,215</b>	<b>21,134,001</b>	<b>21,498,754</b>
<b>FIXED:</b>						
PROPERTY & EQUIPMENT	14,672,465	0	130,134,174	0	144,806,639	139,227,112
ACCUMULATED DEPREC	(10,354,854)	0	(41,655,208)	0	(52,010,062)	(48,264,164)
<b>NET FIXED ASSETS</b>	<b>4,317,611</b>	<b>0</b>	<b>88,478,966</b>	<b>0</b>	<b>92,796,577</b>	<b>90,962,947</b>
OTHER RECEIVABLES	2,952,982	0	0	0	2,952,982	4,296,170
DEFERRED EXPENSES	335,499	0	0	0	335,499	335,499
RESTRICTED ASSETS	0	0	11,451,155	0	11,451,155	10,828,841
NET PENSION ASSET	1,244,138	0	0	0	1,244,138	1,244,138
<b>TOTAL ASSETS</b>	<b>\$11,824,031</b>	<b>\$0</b>	<b>\$100,027,105</b>	<b>\$18,063,215</b>	<b>\$129,914,351</b>	<b>\$129,166,349</b>
DEFERRED OUTFLOWS	1,183,351	0	0	0	1,183,351	1,183,351
<b>TOTAL ASSETS &amp; DEF. OUTFLOWS</b>	<b>13,007,383</b>	<b>0</b>	<b>100,027,105</b>	<b>18,063,215</b>	<b>131,097,703</b>	<b>130,349,700</b>
<b>LIABILITIES</b>						
<b>CURRENT:</b>						
ACCOUNTS PAYABLE	\$450,278	\$0	\$256,343	\$0	\$706,621	\$658,332
ACCRUED LEAVE	141,104	0	0	0	141,104	114,793
ACCRUED PAYROLL	(4,736)	0	0	0	(4,736)	1,987
<b>TOTAL CURRENT LIAB</b>	<b>586,646</b>	<b>0</b>	<b>256,343</b>	<b>0</b>	<b>842,989</b>	<b>775,111</b>
<b>LONG TERM:</b>						
BONDS PAYABLE	0	0	560,000	0	560,000	490,000
NOTES PAYABLE	0	0	8,980,000	0	8,980,000	9,540,000
DISCOUNT ON NOTES PAYABLE	0	0	(23,850)	0	(23,850)	(25,075)
DEFERRED REVENUE	2,296,637	0	0	0	2,296,637	2,402,310
OPEB OBLIGATION	14,266,481	0	0	0	14,266,481	14,266,481
<b>TOTAL LONG TERM LIAB</b>	<b>16,563,118</b>	<b>0</b>	<b>9,516,150</b>	<b>0</b>	<b>26,079,268</b>	<b>26,673,716</b>
<b>TOTAL LIABILITIES</b>	<b>17,149,764</b>	<b>0</b>	<b>9,772,493</b>	<b>0</b>	<b>26,922,257</b>	<b>27,448,828</b>
DEFERRED INFLOWS	9,074,292	0	0	0	9,074,292	10,492,474
<b>FUND EQUITY</b>						
FUND BALANCE	(13,216,674)	0	90,254,612	18,063,215	95,101,153	92,408,399
<b>TOTAL LIABILITIES, DEFERRED INFLOWS AND FUND EQUITY</b>	<b>\$13,007,383</b>	<b>\$0</b>	<b>\$100,027,105</b>	<b>\$18,063,215</b>	<b>\$131,097,703</b>	<b>\$130,349,700</b>

**OKLAHOMA CITY ZOOLOGICAL TRUST**  
**BUDGET ANALYSIS**  
**FOR THE TWO MONTHS ENDING 8/31/2020**

	CURRENT MONTH			YEAR TO DATE		
	ACTUAL	BUDGET	LAST YR	ACTUAL	BUDGET	LAST YR
<b>REVENUES:</b>						
VISITOR SERVICES	\$684,278	\$545,454	\$633,729	\$1,211,890	\$1,240,201	\$1,491,981
GROUP EVENTS	24,308	75,576	82,155	36,831	98,862	96,029
OTHER	100,758	19,535	72,112	217,996	51,588	133,980
<b>TOTAL OPERATING REVENUE</b>	<b>809,345</b>	<b>640,564</b>	<b>787,995</b>	<b>1,466,717</b>	<b>1,390,651</b>	<b>1,721,990</b>
<b>OPERATIONAL EXPEND BY DIVISION:</b>						
ADMINISTRATIVE	178,844	241,511	189,648	431,380	516,863	446,881
ANIMAL	286,257	316,798	294,798	545,492	615,411	565,752
MARKETING & INTERPRETIVE SVC	80,823	63,278	64,150	181,478	121,751	134,282
BUILDING & GROUNDS	322,153	392,896	366,890	545,682	700,268	674,341
EDUCATION	50,055	52,806	62,677	96,724	100,976	123,388
VISITOR SERVICES	158,633	144,654	159,135	287,695	269,813	334,286
VETERINARY	100,746	95,626	88,972	187,873	208,349	218,598
<b>TOTAL OPERATING EXPENSE</b>	<b>1,177,511</b>	<b>1,307,570</b>	<b>1,226,270</b>	<b>2,276,324</b>	<b>2,533,431</b>	<b>2,497,528</b>
<b>NET OPERATING REVENUE</b>	<b>(368,166)</b>	<b>(667,006)</b>	<b>(438,275)</b>	<b>(809,607)</b>	<b>(1,142,780)</b>	<b>(775,538)</b>
<b>OTHER REVENUE:</b>						
SALES TAX FUND REVENUE	1,224,708	1,126,943	1,229,390	2,358,327	2,252,708	2,458,512
CONTRIBUTIONS	12,244	11,387	15,183	22,157	28,343	36,401
OTHER REVENUE	395	7,701	23,117	370,239	384,205	416,707
<b>TOTAL OTHER REVENUE</b>	<b>1,237,347</b>	<b>1,146,032</b>	<b>1,267,690</b>	<b>2,750,723</b>	<b>2,665,256</b>	<b>2,911,621</b>
<b>NET REVENUE BEFORE DEPRECIATION AND CAPITAL EXPENDITURES</b>	<b>\$869,181</b>	<b>\$479,026</b>	<b>\$829,415</b>	<b>\$1,941,116</b>	<b>\$1,522,476</b>	<b>\$2,136,083</b>
<b>OPERATING REVENUE/EXPENSE RATIO</b>	<b>68.73%</b>	<b>48.99%</b>	<b>64.26%</b>	<b>64.43%</b>	<b>54.89%</b>	<b>68.95%</b>



**TO:** Chair and Trustees of the Oklahoma City Zoological Trust

**FROM:** Dwight Lawson, Executive Director/CEO

**DATE:** September 24, 2020

**SUBJECT:** Approval of Plans and Specifications for bid, Project MZ-0067 – Oklahoma City Zoo and Botanical Garden Lake Park Improvements.

**Location:** 2000 Remington Place, Oklahoma City, OK

**Purpose:** In 2019, the Oklahoma Zoological Trust contracted with Breedlove Land Planning, Inc., as a consulting firm for Project MZ-0067 – Oklahoma City Zoo and Botanical Garden Lake Improvements. The plans and specifications for Project MZ-0067 are now complete, and staff would like to put this project out to bid.

**Background:** The project scope includes site improvements to three project areas at Zoo Lake Park. Project 1 (0.76 acres): Convert the lake side road into a dedicated walking/fishing trail. Restrict vehicle access from the main road and provide ADA compliant parking and accessibility. Construct two walls to receive future fishing piers. Create new perpendicular parking spaces along Zoo Lake Road and stub out a water line for a future restroom.

Project 2 (0.38 acres): Demolish and remove a failing parking lot east of the lake bluff and replace asphalt with soil improvements and a pollinator garden. Construct new curb and a curb ramp.

Project 3 (0.93 acres): Demolish and remove existing derelict restroom building and associated parking lot and replace asphalt with soil improvements and a pollinator garden. Construct new curb.

**Previous Action:** Oklahoma Zoological Society executed a Contract for Architectural Services for Project No. MZ-0067, Oklahoma City Zoo and Botanical Zoo Lake Park Improvements, Fixed Limit of Construction September 25, 2019, with Breedlove Land Planning, Inc. (“Architect”).

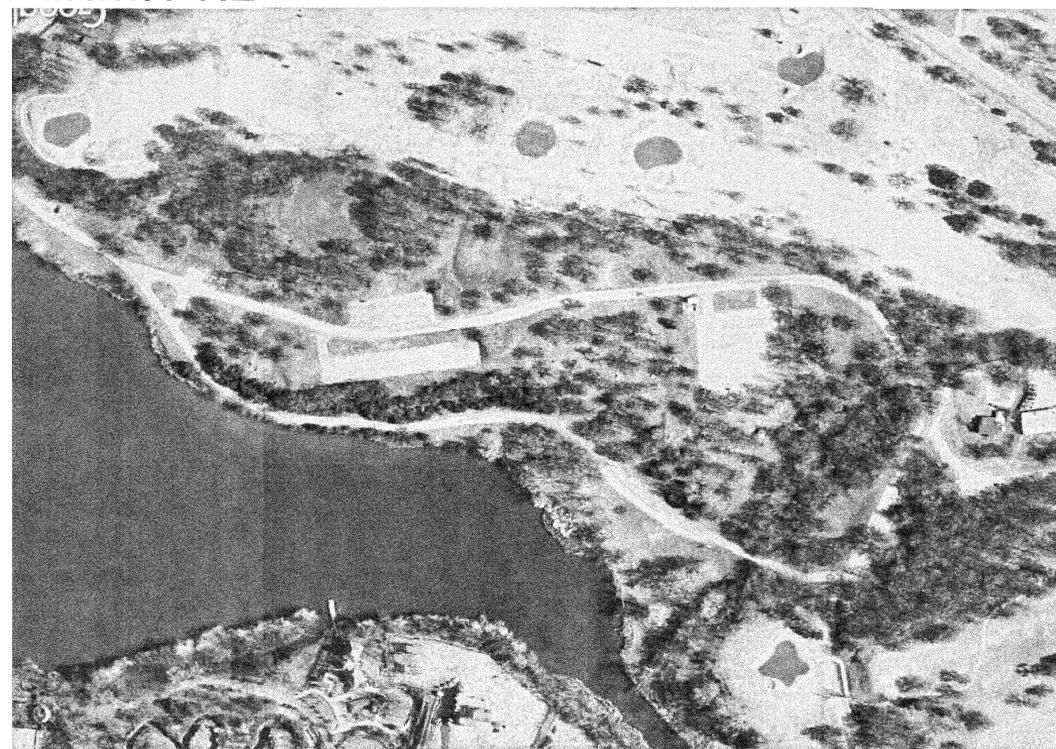
**Recommendation:** Approval of plans and specifications for bid for Project MZ-0067, Zoo Lake Park Improvements

# OKC ZOO

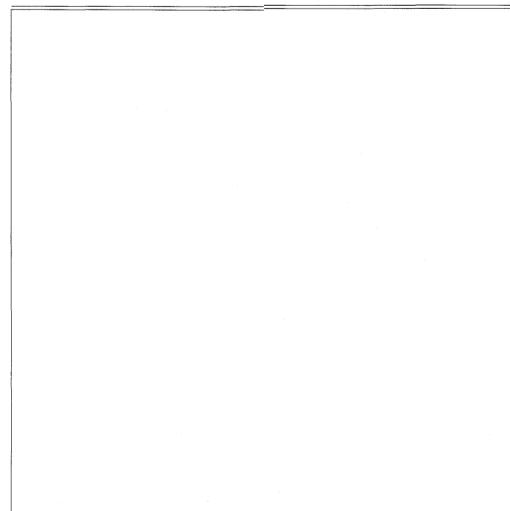
## LAKE PARK IMPROVEMENTS OKLAHOMA CITY ZOO 2502 NE 50TH STREET OKLAHOMA CITY, OKLAHOMA 73111

07/17/2020

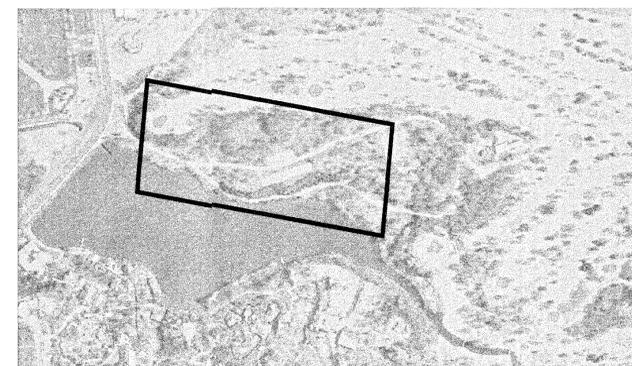
### PERMIT RESUBMITTAL SET



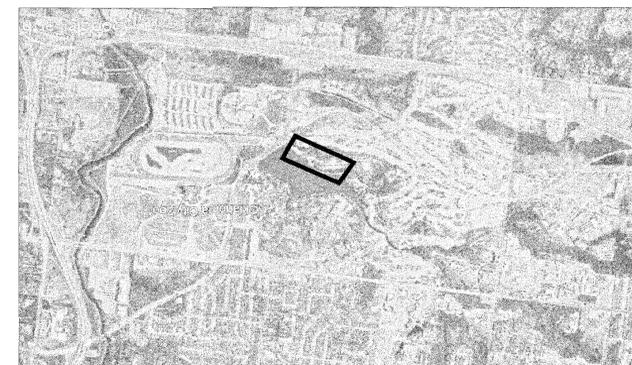
PERMIT STAMPS



#### EXHIBITS: AMPHIBIAN PLAZA



AERIAL MAP



VICINITY MAP



LOCATION MAP



The City of  
**OKLAHOMA CITY**  
Public Works Department

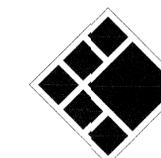
DAVID HOLT Mayor

#### COUNCIL MEMBERS

JAMES GREINER	Ward 1
JAMES COOPER	Ward 2
LARRY McATEE	Ward 3
TODD STONE	Ward 4
DAVID GREENWELL	Ward 5
JOBETH HAMON	Ward 6
NIKKI NICE	Ward 7
MARK K. STONECIPHER	Ward 8

CRAIG FREEMAN City Manager

ERIC J. WENGER, P.E. City Engineer



**BREEDLOVE LAND PLANNING**  
Landscape Architects • Civil Engineers  
15 Simpson Street, NW, Atlanta, GA 30308  
P: 770-483-1173 • www.landplanning.net

#### SHEET INDEX

SHEET NO.	DESCRIPTION
C000	COVER SHEET
C010/C011	GROUND RUN SURVEYS
C012	OVERALL PROPERTY BOUNDARY SURVEY
C020	CONSTRUCTION NOTES
C030	OVERALL SITE PLAN
C040	OVERALL SITE GRADING & DRAINAGE PLAN
C100/C101	PROJECT 1 DEMOLITION & REMOVAL PLAN
C110/C111	PROJECT 1 LAYOUT PLAN
C120/C121	PROJECT 1 GRADING PLAN
C130/C131	PROJECT 1 PLANTING PLAN
C140-C142	PROJECT 1 CONSTRUCTION DETAILS
C200	PROJECT 2 DEMOLITION & REMOVAL PLAN
C210	PROJECT 2 LAYOUT PLAN
C220	PROJECT 2 CONSTRUCTION DETAILS
C300	PROJECT 3 DEMOLITION & REMOVAL PLAN
C310	PROJECT 3 LAYOUT PLAN
C320	PROJECT 3 CONSTRUCTION DETAILS
OWNER PROJECT NUMBER: MZ-0067	
PROJECT NUMBER: 19069	

#### ONE CALL UTILITY LOCATION NUMBER

840-5032  
1-800-522-6543

This number is to be used for information on the location of all underground utilities. Contact this number and other numbers specified in the plans prior to any excavation.

#### PREPARED BY

KYLE WATSON WEBB  
REGISTERED PROFESSIONAL ENGINEER



NO. 30621

#### RECOMMENDED FOR APPROVAL

ERIC J. WENGER, P.E., DIRECTOR  
PUBLIC WORKS / CITY ENGINEER

DATE

DWIGHT LAWSON, OKLAHOMA CITY ZOO  
EXECUTIVE DIRECTOR/ CEO

DATE

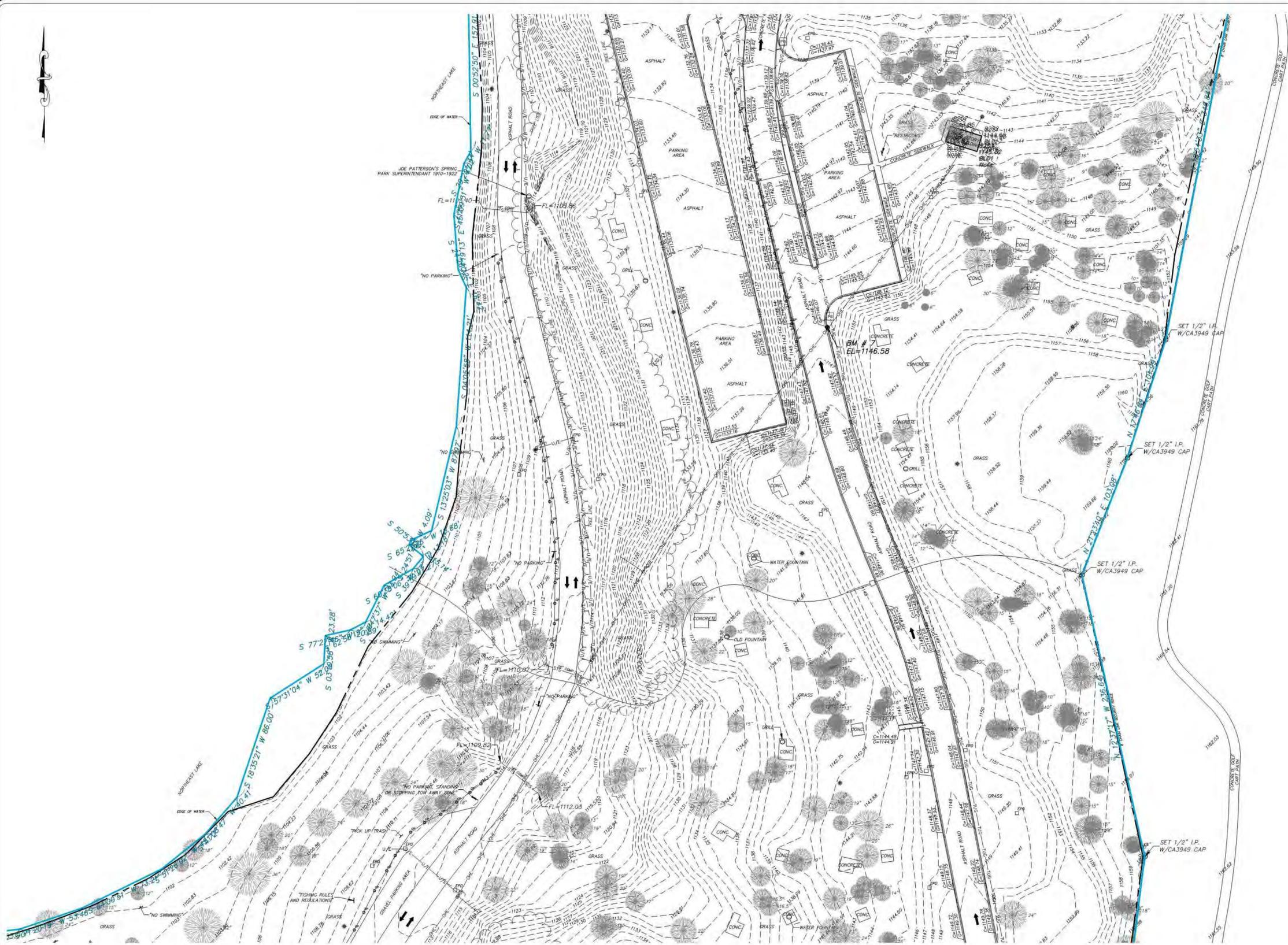
APPROVED AS FINAL PLANS  
THE OKLAHOMA CITY ZOOLOGICAL TRUST

CHAIRMAN

DATE

SECRETARY

DATE



**SURVEY LEGEND**

⊖ AIR CONDITIONER	⊖ ELECTRIC MANHOLE	⊖ GAS MARKER	⊖ MISC. MARKER	⊖ SPRINKLER CONTROL VALVE	⊖ TREE - TREE	⊖ WATER MANHOLE
⊖ AREA DRAIN OR CATCH BASIN	⊖ ELECTRIC MARKER	⊖ GUARD POST	⊖ PIER	⊖ SANITARY SEWER LIFT STATION	⊖ TREE - TREE	⊖ SQUARE WATER METER
⊖ ALPHA BOX	⊖ ELECTRIC UTILITY RISER	⊖ GREASE TRAP	⊖ PULLBOX	⊖ SIGN	⊖ TRAFFIC SIGNAL LIGHT	⊖ WATER SHUTOFF (SPRIG)
⊖ AUTO SPRINKLER	⊖ ELECTRIC UTILITY TRANSFORMER	⊖ GAS VALVE	⊖ PARKING METER	⊖ SANITARY SEWER MANHOLE	⊖ TV MANHOLE MARKING	⊖ WATER VALVE
⊖ AIR VENT	⊖ FRENCH DRAIN	⊖ HO SIGN	⊖ POWER POLE	⊖ SEPTIC TANK	⊖ TV MARKER	⊖ WATER WELL
⊖ PROP. MON.	⊖ FIRE HYDRANT	⊖ HO PARKING WITH SERVICE	⊖ POWER POLE WITH SERVICE	⊖ STORM SEWER MANHOLE	⊖ TV PEDESTAL	⊖ YARD LIGHT
⊖ BUSH	⊖ FLAG POLE	⊖ INLET	⊖ QUARTER CORNER EAST-NORTH	⊖ TRAFFIC CONTROL BOX	⊖ VENT	⊖
⊖ CLEAN OUT	⊖ FIRE VALVE	⊖ LIGHT POLE	⊖ QUARTER CORNER NORTH-SOUTH	⊖ TELEPHONE BOX	⊖ TELEPHONE MARKER	⊖ ROUND WATER METER
⊖ DOWN SPOUT	⊖ GUY ANCHOR	⊖ MAIL BOX	⊖ REFERENCE POINT	⊖ TELEPHONE MARKER	⊖ TELEPHONE PEDESTAL	⊖ WATER MARKER
⊖ ELECTRIC METER	⊖ GAS METER	⊖ MONITORING WELL	⊖ SECTION CORNER	⊖ TELEPHONE PEDESTAL	⊖	⊖ WATER METER PIT

<p><b>BM #1</b> FND. CUT "X" ON E CURB RETURN SE COR. INTERSECTION OF NE 50TH ST &amp; N GRAND BLVD ELEV=1118.29</p>	<p><b>BM #4</b> SET CUT "X" @ SW COR OF HANDICAP CONCRETE PAD #1-170 E OF LAKE ELEV=1118.29</p>	<p><b>BM #7</b> SET CUT "X" IN TOP OF CURB @ S ENTRANCE TO NE PARKING AREA ON SW CURB RETURN ELEV=1146.58</p>
<p><b>BM #2</b> FND. CUT "X" @ GATE ENTRANCE IN TOP OF CURB W SIDE OF PARK DRIVE ELEV=1110.27</p>	<p><b>BM #5</b> SET CUT "X" IN TOP OF CURB @ SE CURB RETURN @ THE NW COR OF PARK'S SE PARKING AREA ELEV=1124.81</p>	
<p><b>BM #3</b> SET CUT "X" IN TOP OF CURB ON NOSE OF ISLAND @ THE "Y" IN PARK DRIVE ELEV=1107.77</p>	<p><b>BM #6</b> SET CUT "X" IN TOP OF CURB W SIDE OF ISLAND S OF CELL TOWER ELEV=1149.79</p>	

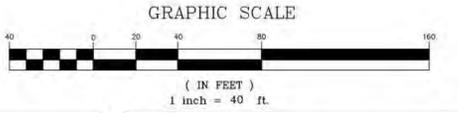
**UTILITY STATEMENT**

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

**SURVEY CONTROL**

**HORIZONTAL CONTROL:**  
OKLAHOMA STATE PLANE NORTH ZONE (CORS 2011)  
OKC 233-3/4" I.P. WITH ALUMINUM CAP  
20' ± N OF CL OF N.E. 36TH ST. AND 125' ± E OF CL OF N.E. KINGS ROW  
N: 185333.058  
E: 213321.307  
Z: 1192.40  
OKC 214-3/4" I.P. WITH ALUMINUM CAP  
45' ± N OF CL OF N.E. 50TH ST. AND 30' ± E OF CL OF WEST MIDDLE ENTRANCE TO TRICE HILL CEMETARY  
N: 190616.626  
E: 2133751.629  
Z: 1183.29

**VERTICAL CONTROL:**  
CP 10,000-3/4" I.P. WITH SRB CONTROL CAP  
45' ± N OF CL OF PARK DRIVE AND 25' ± NE OF NE CORNER OF PARK'S NORTHERN MOST PARKING AREA  
NAVD 88  
GEOID 128  
ELEV.=1106.91'



Field Book: 2018-03  
Party Chief: SL  
Produced By: JK  
Drawn By: JK  
Checked By: TD

Project Number: 115424  
Scale: 1" = 40'

**DesignReady® SURVEY**  
OKC ZOO EAST PROPERTY  
INTERSECTION OF N.E. 50TH ST. & N. GRAND BLVD.  
OKLAHOMA CITY, OKLAHOMA COUNTY  
STATE OF OKLAHOMA

**ENGINEERING SURVEYING PLANNING**

**SRB**

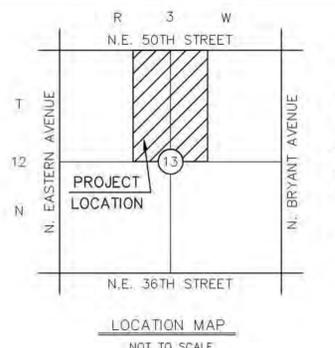
OKLAHOMA CITY  
100 N.E. 5th Street  
Oklahoma City, OK 73102  
P: 405.846.0004  
F: 405.846.0004  
www.srbok.com

OKLAHOMA CITY  
2021 S. Army Road  
Oklahoma City, OK 73102  
P: 405.846.0004  
F: 405.846.0004  
www.srbok.com

CERTIFICATE OF AUTHORIZATION NO. 3849 (EXPIRES JUNE 30, 2019)

**REVISIONS**

NO.	DATE	DESCRIPTION	BY	DATE
1	10-11-18	ISSUE FOR PERMITS	JK	
2	10-11-18	ADJUST MISSING TIEES	JK	



### SURVEY LEGEND

⊖ AIR CONDITIONER	⊙ ELECTRIC MANHOLE	⊙ GAS MARKER	⊙ MISC. MARKER	⊙ SPRINKLER CONTROL VALVE	⊙ TREE	⊙ WATER MANHOLE
⊖ AREA DRAIN OR CATCH BASIN	⊙ ELECTRIC MARKER	⊙ GUARD POST	⊙ PIER	⊙ SANITARY SEWER LIFT STATION	⊙ TREE	⊙ SQUARE WATER METER
⊖ ALPHA BOX	⊙ ELECTRIC UTILITY RISER	⊙ GREASE TRAP	⊙ PULLBOX	⊙ SIGN	⊙ TRAFFIC SIGNAL LIGHT	⊙ WATER SHUTOFF (GRIND)
⊖ AUTO SPRINKLER	⊙ ELECTRIC UTILITY TRANSFORMER	⊙ GAS VALVE	⊙ PARKING METER	⊙ SANITARY SEWER MANHOLE	⊙ TV MANHOLE	⊙ WATER VALVE
⊖ AIR VENT	⊙ FRENCH DRAIN	⊙ H/C SIGN	⊙ POWER POLE	⊙ SEPTIC TANK	⊙ TV MARKER	⊙ WATER WELL
⊖ PROP. MON.	⊙ FIRE HYDRANT	⊙ H/C PARKING (TR=100.00')	⊙ POWER POLE WITH SERVICE	⊙ STORM SEWER MANHOLE	⊙ TV PEDestal	⊙ YARD LIGHT
⊖ BUSH	⊙ FLAG POLE	⊙ INLET	⊙ QUARTER CORNER EAST-WEST	⊙ TRAFFIC CONTROL BOX	⊙ VENT	⊙ BM #1
⊖ CLEAN OUT	⊙ FIRE VALVE	⊙ LIGHT POLE	⊙ QUARTER CORNER NORTH-SOUTH	⊙ TELEPHONE MANHOLE	⊙ ROUND WATER METER	⊙ EL=100.00'
⊖ DOWN SPOUT	⊙ GUY ANCHOR	⊙ MAIL BOX	⊙ REFERENCE POINT	⊙ TELEPHONE MARKER	⊙ WATER MARKER	
⊖ ELECTRIC METER	⊙ GAS METER	⊙ MONITORING WELL	⊙ SECTION CORNER	⊙ TELEPHONE PEDestal	⊙ WATER METER PIT	

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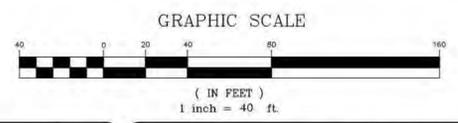
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**SURVEY CONTROL**

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 OKLAHOMA STATE PLANE NORTH ZONE (CORS 2011)  
 OKC 213-5/4" I.P. WITH ALUMINUM CAP  
 20' ± N OF CL OF N.E. 36TH ST. AND 125' ± OF CL OF N.E. KINGS ROW  
 N: 185333.058  
 E: 213321.307  
 Z: 1192.40

OKC 214-5/4" I.P. WITH ALUMINUM CAP  
 20' ± N OF CL OF N.E. 50TH ST. AND 30' ± E OF CL OF WEST MIDDLE ENTRANCE TO TRICE HILL CEMETARY  
 N: 190616.625  
 E: 213375.1629  
 Z: 1183.29

**VERTICAL CONTROL:**  
 CP 10,000-5/4" I.P. WITH SRB CONTROL CAP  
 45' ± N OF CL OF PARK DRIVE AND 25' ± NE OF NE CORNER OF PARK'S NORTHERNMOST PARKING AREA  
 NAVD 88  
 GEOID 12B  
 ELEV=1106.91'



Field Book	2018-03
Party Chief	SL
Processed By	JR
Drawn By	JK
Checked By	TD

**DesignReady® SURVEY**  
 OKC ZOO EAST PROPERTY  
 INTERSECTION OF N.E. 50TH ST. & N. GRAND BLVD.  
 OKLAHOMA CITY, OKLAHOMA COUNTY  
 STATE OF OKLAHOMA

**ENGINEERING SURVEYING PLANNING**

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 300 N.E. 5th Street  
 Oklahoma 73104  
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 www.srbok.com

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 300 N.E. 5th Street  
 Oklahoma 73104  
 F: 405-842-9244  
 www.srbok.com

CERTIFICATE OF AUTHORIZATION NO. 3449 EXPIRES JUNE 30, 2019

NO.	DATE	DESCRIPTION	BY	CHK
1.	5-27-18	ADD MISSING TREES	JK	SL
2.	10-17-18	ADD MISSING TREES	JK	SL

**CERTIFICATE OF SURVEY**  
Date of Last Field Visit: April 10, 2018

I, Taylor Denniston, Professional Land Surveyor do hereby certify as of the date set forth above that I have made a careful survey of a tract of land described as follows:

**LEGAL DESCRIPTION**

A tract of land lying in the South Half of Section Twelve (12), Township Twelve (12) North, Range Three (3) West of the Indian Meridian, and in the North Half (N/2) of Section Thirteen (13), Township Twelve (12) North, Range Three (3) West of the Indian Meridian, Oklahoma County, Oklahoma also being a part of the land described in AGREEMENT recorded in Book 7627, Page 585, more particularly described as follows:

COMMENCING at the Southwest corner of said Section Twelve (12);

THENCE North 89°39'56" East, along the south line of said Section 12 a distance of 86.44 feet;

THENCE Northeastly, along a curve to the left having a radius of 1151.82 feet (said curve subtended by a chord which bears North 89°16'00" East a chord distance of 148.73 feet) for an arc distance of 148.73 feet to the POINT OF BEGINNING;

THENCE Eastwesterly, continuing along the above described curve, having a radius of 1,151.82 feet (said curve subtended by a chord which bears North 77°30'12" East a chord distance of 1176.99 feet) for an arc distance of 1176.99 feet;

THENCE North 73°04'28" East a distance of 118.55 feet;

THENCE Northeastly, along a curve to the left having a radius of 512.72 feet (said curve subtended by a chord which bears North 52°22'31" East a chord distance of 242.75 feet) for an arc distance of 242.75 feet;

THENCE Northeastly, along a curve to the left having a radius of 305.58 feet (said curve subtended by a chord which bears North 28°15'21" East a chord distance of 181.75 feet) for an arc distance of 181.75 feet;

THENCE North 12°39'28" East a distance of 281.00 feet to a point on the south line of CASTLE HILL, recorded in Book 12 of Plate, Page 96;

THENCE South 89°39'56" East, along the south line of said CASTLE HILL, a distance of 654.26 feet;

THENCE North 02°20'47" West a distance of 30.00 feet to the Southwest corner of Lot Twelve (12), Block Four (4) of said CASTLE HILL;

THENCE North 12°53'11" East, along the west line of said Lot 12 a distance of 201.30 feet;

THENCE North 02°20'47" West a distance of 30.14 feet;

THENCE North 01°21'59" East, along the west line of Lot Five (5), Block Four (4) of said CASTLE HILL a distance of 204.83 feet to the Northwest corner of said Lot 5;

THENCE North 18°33'17" East a distance of 100.91 feet to a point on the centerline of Remington Place;

THENCE along said centerline the following Five (5) courses:

1. Easterly, along a non-tangent curve to the left having a radius of 1,509.28 feet (said curve subtended by a chord which bears South 81°53'31" East a chord distance of 637.88 feet) for an arc distance of 640.89 feet;

2. North 89°18'41" East a distance of 670.38 feet;

3. Southeastwesterly, along a curve to the right having a radius of 1,145.80 feet (said curve subtended by a chord which bears South 89°12'07" East a chord distance of 631.48 feet) for an arc distance of 630.24 feet;

4. South 42°42'25" East a distance of 717.13 feet;

5. Southeastwesterly, along a curve to the left having a radius of 498.22 feet (said curve subtended by a chord which bears South 59°25'48" East a chord distance of 286.68 feet) for an arc distance of 290.79 feet;

THENCE South 42°53'17" East a distance of 34.19 feet;

THENCE North 89°39'56" East a distance of 11.87 feet to a point on the centerline of Grand Boulevard;

THENCE along the centerline of Grand Boulevard the following Three (3) courses:

1. South 09°22'44" West a distance of 48.41 feet;

2. Southerly, along a curve to the left having a radius of 180.00 feet (said curve subtended by a chord which bears South 17°02'27" East a chord distance of 100.46 feet) for an arc distance of 108.31 feet;

3. South 43°33'37" East a distance of 50.81 feet;

THENCE South 86°42'30" West a distance of 38.37 feet to a point on a 30 foot Right-of-Way line for Grand Boulevard as described in DEEDBOOK recorded in Book 2558, Page 58;

THENCE Southwestwesterly, along said existing fence line the following Seventy-three (73) courses:

1. Continuing South 86°42'30" West a distance of 134.85 feet;

2. North 29°54'18" West a distance of 40.81 feet;

3. North 67°02'22" West a distance of 27.88 feet;

4. South 02°47'02" West a distance of 39.49 feet;

5. South 52°01'50" West a distance of 34.51 feet;

6. South 30°24'22" West a distance of 35.54 feet;

7. South 25°09'33" West a distance of 28.57 feet;

8. South 07°28'08" West a distance of 35.16 feet;

9. South 02°16'53" West a distance of 88.24 feet;

10. South 24°58'43" West a distance of 19.84 feet;

11. South 20°16'45" West a distance of 23.57 feet;

12. South 19°48'58" East a distance of 283.82 feet;

13. South 06°42'48" East a distance of 78.80 feet;

14. South 03°11'46" East a distance of 107.85 feet;

15. South 10°54'33" West a distance of 348.84 feet;

16. South 17°46'04" West a distance of 101.89 feet;

17. South 21°23'10" West a distance of 103.08 feet;

18. South 12°37'17" West a distance of 236.84 feet;

19. South 07°08'15" West a distance of 492.48 feet;

20. South 23°15'17" West a distance of 78.80 feet;

21. South 52°50'43" West a distance of 163.24 feet;

22. South 75°49'33" West a distance of 28.04 feet;

23. South 89°44'32" West a distance of 107.94 feet;

24. North 89°21'52" West a distance of 29.58 feet;

25. North 89°21'52" West a distance of 29.58 feet;

26. North 81°27'31" West a distance of 9.83 feet;

27. South 04°15'04" West a distance of 9.91 feet;

28. South 02°51'35" West a distance of 10.27 feet;

29. South 14°10'46" East a distance of 21.04 feet;

30. South 75°11'00" West a distance of 63.83 feet;

31. South 16°19'40" West a distance of 63.83 feet;

32. North 89°11'17" West a distance of 219.53 feet;

33. North 30°49'17" West a distance of 47.96 feet;

34. North 17°26'33" East a distance of 89.01 feet;

35. North 07°30'11" East a distance of 39.89 feet;

36. North 12°59'19" West a distance of 123.15 feet;

37. North 20°38'39" West a distance of 42.68 feet;

38. North 31°10'35" West a distance of 119.04 feet;

39. North 54°18'49" West a distance of 80.83 feet;

40. North 77°39'07" West a distance of 111.36 feet;

41. South 58°48'58" West a distance of 283.82 feet;

42. South 78°28'28" West a distance of 82.36 feet;

43. North 47°17'48" West a distance of 82.37 feet;

44. South 51°48'28" West a distance of 143.86 feet;

45. North 58°52'12" West a distance of 320.16 feet;

46. South 32°49'41" West a distance of 136.79 feet;

47. North 83°24'41" West a distance of 20.98 feet;

48. North 30°50'55" West a distance of 17.58 feet;

49. North 67°42'27" West a distance of 99.27 feet;

50. North 81°48'28" West a distance of 143.86 feet;

51. North 67°42'27" West a distance of 99.27 feet;

52. South 41°29'10" West a distance of 6.02 feet;

53. South 30°59'23" West a distance of 126.79 feet;

54. Southwesterly, along a non-tangent curve to the right having a radius of 387.94 feet (said curve subtended by a chord which bears South 43°25'38" West a chord distance of 128.37 feet) for an arc distance of 128.97 feet;

55. South 55°28'33" West a distance of 100.84 feet;

56. South 73°08'08" West a distance of 8.70 feet;

57. South 78°25'01" West a distance of 8.36 feet;

58. North 89°15'59" West a distance of 6.02 feet;

59. North 65°06'02" West a distance of 6.10 feet;

60. North 64°53'28" West a distance of 8.84 feet;

61. North 49°59'34" West a distance of 6.93 feet;

62. North 41°59'16" West a distance of 49.48 feet;

63. North 42°52'10" West a distance of 99.27 feet;

64. North 38°30'38" West a distance of 10.27 feet;

65. North 17°59'54" West a distance of 6.09 feet;

66. North 03°34'18" West a distance of 8.86 feet;

67. North 04°02'11" West a distance of 9.43 feet;

68. North 07°44'12" East a distance of 10.16 feet;

69. North 11°17'14" East a distance of 8.89 feet;

70. North 09°15'28" East a distance of 57.94 feet;

71. South 89°39'56" West a distance of 492.35 feet to a point on the East Right-of-Way line for Martin Luther King Avenue;

THENCE North 02°10'17" West along the East Right-of-Way line for Martin Luther King Avenue a distance of 120.42 feet;

THENCE along an existing fence line the following Six (6) courses:

1. North 36°29'08" East a distance of 225.18 feet;

2. North 89°42'53" East a distance of 226.31 feet;

3. North 44°51'30" East a distance of 42.23 feet;

4. North 13°20'41" West a distance of 61.54 feet;

5. North 49°03'02" West a distance of 115.72 feet;

6. North 03°13'05" East a distance of 128.34 feet;

THENCE Northeastly, along a non-tangent curve to the right having a radius of 1,488.48 feet (said curve subtended by a chord which bears North 41°28'03" East a chord distance of 193.82 feet) for an arc distance of 193.75 feet to a point on the centerline of Grand Boulevard as described in AGREEMENT shown in "Tank 1" recorded in Book 7627, Page 585;

THENCE along the said limits of lease the following Three (3) courses:

1. North 37°46'19" West a distance of 60.85 feet;

2. Northerly, along a non-tangent curve to the right having a radius of 698.01 feet (said curve subtended by a chord which bears North 20°14'07" West a chord distance of 451.24 feet) for an arc distance of 427.89 feet;

3. North 02°41'54" West a distance of 868.88 feet to the POINT OF BEGINNING.

Said tract of land contains an area of 7,917.150 square feet or 181.7528 acres.

THENCE along the said limits of lease the following Three (3) courses:

1. North 37°46'19" West a distance of 60.85 feet;

2. Northerly, along a non-tangent curve to the right having a radius of 698.01 feet (said curve subtended by a chord which bears North 20°14'07" West a chord distance of 451.24 feet) for an arc distance of 427.89 feet;

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3. North 02°41'54" West a distance of 868.88 feet to the POINT OF BEGINNING.

Said tract of land contains an area of 7,917.150 square feet or 181.7528 acres.

THENCE along the said limits of lease the following Three (3) courses:

DEMOLITION NOTES
1. CONTRACTOR SHALL REFER TO PHASING SECTION OF THE SPECIFICATIONS. ALL DEMOLITION SHALL BE COORDINATED WITH PHASING.
2. WORK DONE AHEAD OF SEQUENCE OR FOR TEMPORARY PROVISIONS SHALL HAVE EXISTING DISTURBED SURFACES PATCHED TO MATCH ORIGINAL CONDITIONS UNTIL NEW CONSTRUCTION REPLACES SUCH REPAIRS OR MODIFICATIONS.
3. CONTRACTOR IS RESPONSIBLE FOR PROPER DISPOSAL OF ALL ITEMS REMOVED FROM SITE. DISPOSAL SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL CODES. THERE SHALL BE NO ON-SITE BURIAL OF DEBRIS GENERATED FROM CONSTRUCTION ACTIVITIES.
4. UNLESS OTHERWISE NOTED, EXISTING ITEMS WITHIN THE PROJECT LIMITS WILL BE RETAINED IN PLACE AND PROTECTED FROM DAMAGE DURING THE CONSTRUCTION PERIOD. ANY FACILITIES THAT ARE DAMAGED WILL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS/HER EXPENSE.
5. CONTRACTOR SHALL SAVE 4 PROTECT ALL BUILDINGS, FOUNDATIONS, CANopies, FENCES, PLAY EQUIPMENT, ETC. ON THE PROPERTY, UNLESS OTHERWISE NOTED. DAMAGE SHALL BE REPAIRED/REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER.
6. CONTRACTOR SHALL SAVE AND PROTECT ALL EXISTING STORM DRAINAGE STRUCTURES UNLESS OTHERWISE NOTED.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF ALL FENCING WITHIN LIMITS OF WORK UNLESS OTHERWISE NOTED.
8. CONTRACTOR SHALL COORDINATE WITH OWNER THE REMOVAL ANY EXISTING LANDSCAPE MATERIALS OR SITE FEATURES WHICH THE OWNER ELECTS TO RETAIN.
9. CONTRACTOR SHALL ACCOMPLISH DEMOLITION WITHIN THE DRIP-LINE OF EXISTING SPECIMEN TREES BY UTILIZING HAND LABOR PROCEDURES WITHOUT DAMAGING THE ROOT SYSTEM OF TREE.
10. CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN SAFE, CLEARLY MARKED PEDESTRIAN ACCESS ROUTES TO ALL BUILDING ENTRANCES THROUGHOUT ALL PHASES OF CONSTRUCTION.
11. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM BUILDINGS AT ALL TIMES.
12. LIMITS OF CURB AND GUTTER DEMOLITION ARE SUBJECT TO THE NEAREST CONSTRUCTION JOINT.
13. CURB AND GUTTER AND WALKS SHALL BE REPAIRED TO THE NEAREST CONSTRUCTION JOINT.
14. CONTRACTOR SHALL PROVIDE ABRASION SAW CUTS PRIOR TO DEMOLITION ADJACENT TO ALL PAVEMENT AREAS TO BE SAVED FAILURE TO PROVIDE A CLEAN EDGE MAY RESULT IN ADDITIONAL DEMOLITION AND NEW PAVEMENT INSTALLATION PAID FOR AND EXECUTED BY THE CONTRACTOR.
15. CONTRACTOR IS RESPONSIBLE FOR DEMOLITION AND REMOVAL OR RELOCATION (AT HIS/HER EXPENSE) OF EXISTING ITEMS THAT CONFLICT WITH NEW CONSTRUCTION UNLESS OTHERWISE NOTED.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DEMOLITION AND REMOVAL AND/OR RELOCATION OF ALL ITEMS WHERE NEW PAVING IS LOCATED.
17. CONTRACTOR SHALL REPAIR TO EXISTING CONDITIONS ANY PAVING OR SITE FEATURE DEMOLISHED OR DAMAGED DURING INSTALLATION OF NEW RAIN LEADERS, UTILITIES OR OTHER NEW SITE FEATURES.
18. CONTRACTOR SHALL RELOCATE OR ADJUST AS NECESSARY ALL EXISTING UTILITY APPURTENANCES (CLEAN OUTS, VALVE/METER BOXES AND/OR COVERS, MANHOLES, ETC.) LOCATED WITHIN THE LIMITS OF CONSTRUCTION TO FINISHED GRADE AT NO ADDITIONAL COST TO THE OWNER.
19. CONTRACTOR SHALL COORDINATE THE REMOVAL AND OR RELOCATION OF EXISTING GAS AND WATER METERS, VALVES, LINES, POWER, TELEPHONE AND CABLE LINES THAT SERVICE THE EXISTING BUILDINGS WITH THE APPROPRIATE UTILITY COMPANIES.
20. CONTRACTOR IS RESPONSIBLE FOR REPAIRING IMMEDIATELY ANY DAMAGE TO AN ACTIVE UTILITY.
21. REFER TO SITE UTILITY PLANS FOR RELOCATION, REMOVAL, ABANDONMENT, AND/OR MODIFICATION OF ALL EXISTING PLUMBING FEATURES ON SITE.

STAKING PLAN NOTES
1. PROPOSED BUILDING USE, PUBLIC PARK
2. CONTRACTOR SHALL VERIFY CONDITIONS AND DIMENSIONS BEFORE PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES FOUND SHALL BE REPORTED TO THE ARCHITECT FOR CLARIFICATION AND/OR CORRECTION BEFORE PROCEEDING WITH THE WORK. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR DISCREPANCIES WHICH ARE NOT REPORTED.
3. CONTRACTOR SHALL STAKE ALL BUILDING CORNERS AND OBTAIN ARCHITECTS APPROVAL BEFORE POURING ANY FOOTINGS.
4. REFER TO ARCHITECTURAL PLANS FOR ACTUAL BUILDING DIMENSIONS.
5. ALL DIMENSIONS ARE TO THE FACE OF CURBS AND FACE OF WALLS, 6. ALL ANGLES ARE 90° UNLESS OTHERWISE NOTED.
7. CURB AND GUTTER RADII ARE 5' UNLESS OTHERWISE NOTED.
8. REFER TO UTILITY PLANS FOR UTILITY INFORMATION.
GRADING NOTES
NOTE: CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM ALL EXISTING AND PROPOSED BUILDINGS DURING CONSTRUCTION. NO EXISTING OR PROPOSED STORM STRUCTURES SHALL BE REMOVED, BLINDED OR COMPROMISED AT ANY TIME DURING THE CONSTRUCTION PERIOD WITHOUT PROVIDING ADEQUATE, TEMPORARY CONVEYANCE TO THE EXISTING DETENTION POND. AT NO TIME SHALL THE FLOW FROM EXISTING AND/OR PROPOSED STORM SYSTEMS BE INTERRUPTED AND LEFT UNATTENDED BY THE CONTRACTOR.
EXCESS CUT
EXCESS CUT MATERIAL: IF QUANTITY OF GRADING MATERIAL IS IN EXCESS OF QUANTITIES NECESSARY TO PROVIDE FINISH GRADE ELEVATIONS INDICATED ON DRAWINGS, EXCESS MATERIAL SHALL BE HAULED OFF SITE, HAULING AND DISPOSAL OF EXCESS MATERIAL SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR IS RESPONSIBLE FOR ABIDING BY ALL LOCAL, STATE, AND FEDERAL REGULATIONS IN DISPOSING OF EXCESS MATERIAL.
INSUFFICIENT FILL
INSUFFICIENT FILL MATERIAL: IF QUANTITY OF GRADING MATERIAL IS INSUFFICIENT TO PROVIDE FINISHED GRADE ELEVATIONS INDICATED ON DRAWINGS, CONTRACTOR SHALL OBTAIN ADDITIONAL FILL MATERIAL OF SPECIFIED QUALITY FROM AN OFF-SITE SOURCE. OBTAINING, HAULING, PLACEMENT, COMPACTION, AND STABILIZATION OF ADDITIONAL FILL MATERIAL SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ABIDING BY ALL LOCAL, STATE, AND FEDERAL REGULATIONS IN OBTAINING FILL MATERIAL.
NOTE
CONTRACTOR SHALL PROVIDE NECESSARY EROSION CONTROL MEASURES DURING THE DEMOLITION PHASE OF CONSTRUCTION.

GENERAL NOTES
1. NOTIFY ALL UTILITY PROVIDERS 24-HOURS PRIOR TO THE BEGINNING OF UTILITY DEMOLITION AND REMOVAL OR ADJUSTMENTS.
2. NOTIFY CITY/COUNTY INSPECTOR 24 HOURS PRIOR TO BEGINNING EVERY PHASE OF DEMOLITION.
3. HIGH INTENSITY LIGHTING FACILITIES SHALL BE SO ARRANGED THAT THE SOURCE OF ANY LIGHT IS CONCEALED FROM PUBLIC VIEW AND FROM ADJACENT RESIDENTIAL PROPERTY AND DOES NOT INTERFERE WITH TRAFFIC.
4. ALL BUFFERS AND TREE SAVE AREAS SHALL BE CLEARLY IDENTIFIED BY FLAGGING AND/OR FENCING PRIOR TO COMMENCEMENT OF ANY LAND DISTURBANCE.
5. ACCESS TO SITE DURING CONSTRUCTION SHALL BE MAINTAINED AT ALL TIMES FOR EMERGENCY VEHICLES.
6. TEMPORARY SEDIMENT STORAGE FEATURES AND PERIMETER BMPs SHALL BE CONSTRUCTED AND FULLY OPERATIONAL PRIOR TO ANY OTHER CONSTRUCTION OR GRADING.
7. NECESSARY BARRICADES, SUFFICIENT LIGHTS, SIGNS AND OTHER TRAFFIC CONTROL METHODS AS MAY BE NECESSARY FOR THE PROTECTION AND SAFETY OF THE PUBLIC SHALL BE PROVIDED AND MAINTAINED THROUGHOUT CONSTRUCTION.
8. CUT AND FILL SLOPES SHALL NOT EXCEED TWO FEET (2') HORIZONTAL TO ONE FOOT (1') VERTICAL.
9. ANY DISCREPANCY FOUND BETWEEN SHEETS IN THIS SET SHALL BE REFERRED TO THE ARCHITECT FOR CLARIFICATION PRIOR TO PROCEEDING WITH ANY CONSTRUCTION ACTIVITY.
10. CONTRACTOR SHALL VERIFY ALL BENCH MARKS AND EXISTING SITE CONDITIONS PRIOR TO PROCEEDING WITH DEMOLITION ACTIVITY.
11. TOPSOIL SHALL BE STRIPPED AND STOCKPILED ON-SITE. NO TOPSOIL SHALL BE REMOVED FROM SITE.
12. ALL CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, COUNTY AND LOCAL CODES AND MINIMUM STANDARDS AND SPECIFICATIONS.
13. ALL NECESSARY LICENSES AND PERMITS SHALL BE OBTAINED BY THE CONTRACTOR.
14. ALL GRADES SHOULD ARE FINISHED GRADES. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND GRADES.
15. TREES TO BE SAVED SHALL BE PROTECTED BY THE CONTRACTOR.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR RELOCATING ALL EXISTING UTILITIES AS NECESSARY.
17. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE IN COMPLIANCE WITH ANY AND ALL APPLICABLE NPDES, PERMITS AND CLEAN WATER ACT REQUIREMENTS. CONTRACTOR SHALL BE RESPONSIBLE AS THE PRIMARY PERMITTEE AND OPERATOR.
18. COMPACTION OF BACKFILL SHALL BE COMPACTED TO 95% PROCTOR DENSITY.
19. THERE SHALL BE NO BURIAL OF CONSTRUCTION DEBRIS OR ORGANICS ON THIS SITE. CONTRACTOR SHALL DISPOSE OF DEBRIS IN A MANNER THAT MEETS ALL FEDERAL, STATE, COUNTY, AND LOCAL REGULATIONS SET FORTH BY THE GOVERNING AGENCY.
20. CONTRACTOR SHALL PROVIDE ALL RECORD DRAWINGS "AS-BUILTS" AS REQUIRED BY OKLAHOMA CITY AND THIS CONTRACT.
21. APPROVAL OF THESE PLANS DOES NOT CONSTITUTE APPROVAL BY OKLAHOMA CITY OF ANY LAND DISTURBING ACTIVITIES WITHIN WETLAND AREAS. IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER TO CONTACT THE APPROPRIATE REGULATORY AGENCY FOR APPROVAL OF ANY WETLAND AREA DISTURBANCE.
22. ALL CONSTRUCTION TO COMPLY WITH OKLAHOMA CITY STANDARDS.

PLANTING NOTES
1. PLANT MATERIALS SHALL MEET MINIMUM REQUIREMENTS AS SET FORTH IN THE LATEST EDITION OF AMERICAN STANDARD FOR NURSERY STOCK.
2. PLANTS SHALL BE HEALTHY, VIGOROUS SPECIMENS, FREE OF PESTS AND DISEASE.
3. PLANTS ARE SUBJECT TO THE APPROVAL OF THE ARCHITECT OR OWNER BEFORE, DURING AND AFTER INSTALLATION.
4. DO NOT ALLOW AIR POCKETS TO FORM WHEN BACKFILLING.
5. DO NOT BREAK ROOTBALL.
6. IMMEDIATELY SOAK NEW PLANTINGS WITH WATER.
7. STAKE TREES IMMEDIATELY AFTER PLANTING AS INDICATED IN DETAILS OR AS DIRECTED BY THE ARCHITECT.
8. CONTRACTOR IS FULLY RESPONSIBLE FOR MAINTENANCE INCLUDING WATERING, WEEDING, SETTLING, PRUNING OF THIS WORK THROUGHOUT THE MAINTENANCE PERIOD AS INDICATED IN THE SPECIFICATIONS OR UNTIL SUBSTANTIAL COMPLETION (WHICHEVER IS GREATER).
9. THE CONTRACTOR IS ADVISED OF THE UNDERGROUND UTILITIES AND SHALL CHECK LOCATION OF SAME BEFORE COMMENCING DIGGING OPERATIONS.
10. CONTRACTOR SHALL FULLY GUARANTEE PLANTS FOR THIS JOB FOR A PERIOD OF ONE (1) YEAR BEGINNING ON THE DATE OF ACCEPTANCE.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR HIS/HER OWN TAKEOFF QUANTITIES AND REPORT ANY DISCREPANCIES TO THE ARCHITECT.
12. CONTRACTOR SHALL FLAG LOCATION OF PLANT MATERIAL FOR APPROVAL BY ARCHITECT BEFORE INSTALLATION.
13. PLANT BEDS SHALL BE MULCHED WITH A MINIMUM OF 3" OF CLEAN FRESH PINE STRAW.
14. AREAS DESIGNATED AS FLOWER BEDS SHALL RECEIVE 1" OF PLANTING MIXTURE TOPPED WITH 2" OF FINE BARK MINI CHIPS.
15. PLANTING MIXTURE SHALL BE PER SPECIFICATIONS.

EROSION CONTROL NOTES
1. NOTIFY CITY/COUNTY INSPECTORS 24 HOURS BEFORE BEGINNING OF EVERY CONSTRUCTION PHASE.
2. ALL BUFFERS AND TREE SAVE AREAS SHALL BE CLEARLY IDENTIFIED BY FLAGGING AND/OR FENCING PRIOR TO COMMENCEMENT OF ANY LAND DISTURBANCE.
3. THE INSTALLATION OF EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES SHALL OCCUR PRIOR TO OR CONCURRENT WITH LAND DISTURBING ACTIVITIES AND CONSTRUCTION ON THE SITE AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
4. ALL SEDIMENT BARRIERS SHALL BE INSTALLED PRIOR TO ANY GRADING.
5. SEDIMENT BARRIER DEVICES SHALL BE INSPECTED AND REPAIRED OF DAMAGE DAILY. ANY ACCUMULATED SEDIMENT SHALL BE REMOVED AND SPREAD ON SITE.
6. ALL DISTURBED AREAS SHALL BE GRASSSED AS SOON AS CONSTRUCTION PHASE PERMITS.
7. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE MAINTAINED AT ALL TIMES. ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTION OR AS REQUIRED BY CITY.
8. MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES, WHETHER TEMPORARY OR PERMANENT, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
9. ANY DISCREPANCY BETWEEN THIS SHEET AND OTHERS IN THIS SET SHALL BE REFERRED TO THE ARCHITECT BY THE CONTRACTOR FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
10. SEDIMENT STORAGE LEVEL MARKERS MUST BE INSTALLED IN SEDIMENT STORAGE STRUCTURES, INDICATING THE 1/3 FULL VOLUME.
11. MAXIMUM CUT OR FILL SLOPE IS (3:1) 3' HORIZONTAL TO 1' VERTICAL.
12. CONTRACTOR SHALL PROVIDE TEMPORARY DOWN DRAINS ON FILL SLOPES TO PREVENT EROSION PRIOR TO STABILIZATION.
13. CONTRACTOR SHALL REMOVE ACCUMULATED SEDIMENT FROM DETENTION BASIN AT END OF CONSTRUCTION WHEN ALL DISTURBED AREAS HAVE BEEN FULLY STABILIZED.
14. REFER TO SHEETS C400, C405, AND OTHER EROSION CONTROL SHEETS FOR ADDITIONAL NOTES REGARDING EROSION CONTROL AND NPDES REQUIREMENTS FOR THIS PROJECT.
OKC EROSION CONTROL NOTES
1. CONSTRUCTION ACTIVITIES THAT RESULT IN LAND DISTURBANCE OF EQUAL TO OR GREATER THAN ONE (1) ACRE, OR LESS THAN ONE (1) ACRE IF THEY ARE PART OF A LARGER COMMON PLAN OF DEVELOPMENT OR SALE THAT TOTALS AT LEAST ONE (1) ACRE MUST OBTAIN A PERMIT FROM OKC (FORM 606-007A) FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES. THIS MEANS THAT LAND DISTURBANCE OF ONE (1) ACRE OR MORE MUST PERMIT WITH OKC AND THE CITY OF OKLAHOMA CITY. STORM WATER QUALITY.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF ALL EROSION CONTROL DEVICES DAMAGED DUE TO CONSTRUCTION.
3. A COPY OF THE EROSION CONTROL SITE PLAN MUST ALWAYS BE ON SITE AND MADE AVAILABLE TO THE INSPECTOR UPON REQUEST.
4. A SUD PERMIT MUST BE OBTAINED BEFORE A WORK ORDER IS RELEASED.
PROJECT SITE DATA
PROJECT 1 AREA OF GRADING DISTURBANCE: 0.16 ACRES
PROJECT 2 AREA OF GRADING DISTURBANCE: 0.38 ACRES
PROJECT 3 AREA OF GRADING DISTURBANCE: 0.93 ACRES

UTILITIES NOTE
CONTRACTOR SHALL BE RESPONSIBLE TO SECURE THE SERVICES OF A PRIVATE UTILITY LOCATOR FROM DURING THE ENTIRE COURSE OF THE WORK. CONTRACTOR SHALL PAY FOR SAID SERVICES. CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY DAMAGED UTILITY AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL NOTIFY ARCHITECT OF ANY CONFLICTS WITH EXISTING UTILITIES PRIOR TO INSTALLATION OF ANY NEW UTILITIES. SHOULD CONTRACTOR BEGIN CONSTRUCTION PRIOR TO UTILITY LOCATOR'S INSPECTION ALL DAMAGED UTILITIES SHALL BE REPAIRED, REPLACED, OR RELOCATED AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL FIELD VERIFY THE ACTUAL LOCATION AND DEPTH OF UTILITIES WITHIN THE PROJECT LIMITS.
ALL SERVICES SHOULD ARE TO ASSIST THE CONTRACTOR IN LOCATING UTILITIES. ITEMS ARE SHOWN SCHEMATICALLY AND NEITHER THE ARCHITECT OR THE OWNER ASSUMES ANY RESPONSIBILITY FOR VARIANCES IN THEIR ACTUAL LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR OR REPLACE AS NECESSARY ANY UTILITIES DAMAGED, WHETHER SHOWN OR NOT. ACTIVITIES SUCH AS ABANDONMENT OR RELOCATION OF THE UTILITIES SHALL BE COORDINATED WITH THE RESPECTIVE UTILITY COMPANY.
FINAL GRASSING NOTE
ALL AREAS OF LAND DISTURBANCE TO RECEIVE GRASSING SHALL BE PLANTED WITH PASTURE BLEND (LOW RAINFALL) SEED MIX BY WARNER BROTHERS SEED COMPANY OR APPROVED. SEED SHALL BE PER APPLY RATE SHALL BE PER MANUFACTURER'S RECOMMENDATION.
ALL DESIGNATED AREAS SHALL BE PLANTED WITH A HYDRO-SEEDER AFTER AREAS HAVE BEEN PREPARED FOR SEEDING UNLESS PLANS SHOW OTHERWISE. HYDRO-MULCH 1000, AS MANUFACTURED BY PROFILE PRODUCTS CO. SHALL BE APPLIED AT THE RATE OF ONE THOUSAND FIVE HUNDRED (1500) POUNDS PER ACRE ON FLAT SURFACES, TWO THOUSAND (2000) POUNDS PER ACRE ON SLOPES UP TO 3H TO 1V, AND TWO THOUSAND FIVE HUNDRED (2500) POUNDS PER ACRE ON SLOPES GREATER THAN 3H TO 1V. APPLY SEED, FERTILIZER, LIME, AND FIBER IN ONE OPERATION. EXISTING TREES AND SHRUBS IN HYDRO-SEEDED AREA SHALL BE PROTECTED DURING HYDRO-SEEDING.

NOTE
CONTRACTOR SHALL BE RESPONSIBLE TO SECURE THE SERVICES OF A PRIVATE UTILITY LOCATOR FROM DURING THE ENTIRE COURSE OF THE WORK. CONTRACTOR SHALL PAY FOR SAID SERVICES. CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY DAMAGED UTILITY AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL NOTIFY ARCHITECT OF ANY CONFLICTS WITH EXISTING UTILITIES PRIOR TO INSTALLATION OF ANY NEW UTILITIES. SHOULD CONTRACTOR BEGIN CONSTRUCTION PRIOR TO UTILITY LOCATOR'S INSPECTION ALL DAMAGED UTILITIES SHALL BE REPAIRED, REPLACED, OR RELOCATED AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL FIELD VERIFY THE ACTUAL LOCATION AND DEPTH OF UTILITIES WITHIN THE PROJECT LIMITS.
NOTE
ALL SERVICES SHOULD ARE TO ASSIST THE CONTRACTOR IN LOCATING UTILITIES. ITEMS ARE SHOWN SCHEMATICALLY AND NEITHER THE ARCHITECT OR THE OWNER ASSUMES ANY RESPONSIBILITY FOR VARIANCES IN THEIR ACTUAL LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR OR REPLACE AS NECESSARY ANY UTILITIES DAMAGED, WHETHER SHOWN OR NOT. ACTIVITIES SUCH AS ABANDONMENT OR RELOCATION OF THE UTILITIES SHALL BE COORDINATED WITH THE RESPECTIVE UTILITY COMPANY.
NOTE
CONTRACTOR SHALL PROVIDE NECESSARY EROSION CONTROL MEASURES DURING THE DEMOLITION PHASE OF CONSTRUCTION.

### STORM WATER MANAGEMENT EROSION AND SEDIMENT CONTROL NOTES

#### GENERAL NOTES

The following are requirements to be followed by the Contractor during all phases of the project. Please note that this construction will be accomplished under the provisions of the National Pollutant Discharge Elimination System (NPDES) of the U.S. Environmental Protection Agency (EPA). A Storm Water Pollution Prevention Plan (SWP3) must be prepared for this project in conformance with EPA regulations (Code of Federal Regulations (CFR) 40, Part 122) and Oklahoma Department of Environmental Quality (ODEQ) General Permit (OKR-10). The Contractor will be responsible for compliance with the ODEQ's permit and the SWP3, as well as with all provisions of the plans and specifications. It will also be the Contractor's responsibility to prevent soil or sediment loss from the construction site. The Contractor shall not leave the site until all erosion control, sediment control, and storm water management practices are in place; have been inspected and found satisfactory; and all temporary practices have been properly removed.

#### STORM WATER MANAGEMENT

The project must be designed to provide positive post-construction control of storm water runoff from the site using gutters, curbs, inlets, piping, and outlets to the receiving stream. The erosion and sediment control measures discussed below will also provide some temporary storm water controls. During the course of construction, the contractor will install and maintain storm water controls in the sequence specified herein to provide comprehensive management of storm water for a project of this nature.

#### EROSION AND SEDIMENT CONTROL

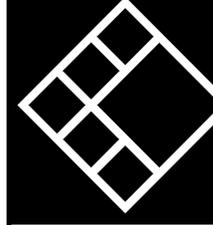
The project must be designed to minimize adverse off-site effects of soil erosion and resulting sediment loss through the use of proper construction techniques; and by installing both temporary and permanent management practices. All soil-disturbing activities performed by the Contractor will be accomplished in such manner as to prevent loss of sediment from the construction site during rainfall events. To accomplish this, the following specific steps will be taken during construction:

- Immediately after mobilization but prior to initiation any soil-disturbing activities, the Contractor will install all specified perimeter controls on the site. These practices have been designed to trap all sediment produced during soil-disturbing activities, and to prevent off-site damage. It is recognized that some site preparation may be required to properly install these practices.
- The recommended sequence for the installation and removal of erosion and sediment control measures is as follows: perimeter control measures (silt barriers and fencing) installed at designated areas; cleaning of street during construction; site grading (including temporary slope stabilization) as needed; installation of utilities; building construction; paving; final grading; installation of sod or vegetative materials; building construction; paving; final grading; installation of sod or vegetative materials; removal of temporary practices and perimeter controls; and site cleanup.
- During all soil-disturbing activities, the Contractor will take appropriate steps using accepted construction methods to minimize exposure of unprotected soil and other construction materials to rainfall. Particular care must be exercised when dealing with topsoil stockpiles, fill material, or soil on slopes. The Contractor will maintain a date log of all soil disturbance activities or major grading operations, and of all management practice or control measure installations.

- If, during the course of construction, any area of soil (including stockpiles) remains exposed for more than fourteen calendar days without suitable erosion control, then temporary stabilization measures should be installed unless soil-disturbing activities are planned on such areas within an additional seven calendar days. Suitable temporary stabilization measures are perimeter controls and silt barriers (such as rock bags, sand bags, and silt fencing) along all side-slope and down-slope borders of the disturbed area. Note that perimeter controls alone may not be successful; movement of large amounts of sediment produced by heavy rain on exposed soil could overwhelm such measures.
- At the Contractor's discretion, additional temporary erosion control practices (such as rock bags, sand bag barriers, and silt fences) may be installed along any down-slope of side-slope perimeter of a soil-disturbed area to prevent sediment movement. Anchored erosion control matting, mulches, or other acceptable methods may also be installed to stabilize any unprotected slopes during construction, and hold them to the appropriate grade.

As site conditions warrant, the Contractor may also choose to modify the type or arrangement of specified practices to improve their effectiveness. As with any other project changes, the Contractor must present all proposed modifications to the Project Engineer for approval prior to installation.

- The Contractor will inspect all specified practices at least once every fourteen calendar days, and after all rainfall events to insure that each specified practice remains intact. Any damage noted during such inspections shall be repaired promptly to restore the practice to original specifications. The Contractor will be responsible for maintenance of all erosion and sediment control practices as specified in the plans, including periodic regrading, and final grading after removal of all such practices.
- When water is used for dust control or to promote vegetation, the Contractor will prevent the escape of this water and any sediment it may carry from the construction site.
- Care must be exercised to prevent excessive off-site tracking of mud or sediment by construction vehicles. In addition to the specified gravel entrance, properly gravelled transition areas should be established at all temporary site exits to assist in mud removal from departing vehicles. The Contractor shall be responsible for cleaning the street daily, or as directed by the City, when mud is tracked onto the street from the construction site.
- During the site cleanup prior to the possession date, each temporary practice will be completely removed and the area finished to the appropriate post-project condition. This involves final grading, and installation of sod or grass seed on all bare soil areas. A minimum vegetation density of seventy percent, or an equivalent sediment stabilization measure (geotextiles, mulches, or gabions), is required until vegetation is established.



♦ **Bredlove Land Planning, Inc.** ♦ **Landscape Architects** ♦ **Civil Engineers** ♦

15 Simpson Street NW Atlanta, GA 30308 P: 770-483-1173 www.landplanning.net

**OKLAHOMA CITY ZOO  
LAKE PARK IMPROVEMENTS  
OKLAHOMA CITY, OK 73111**

**OKC PERMIT NUMBER:  
BLDC-2020-00912**

**CONSULTANT**

**SEAL**

REVISIONS		
No.	DATE	DESCRIPTION
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BLP, INC. PROJECT NO: 19069  
DATE: 03-22-2019  
DRAWING BY: LF/RW/AW  
CHECKED BY: AW

**PROJECT GENERAL NOTES**

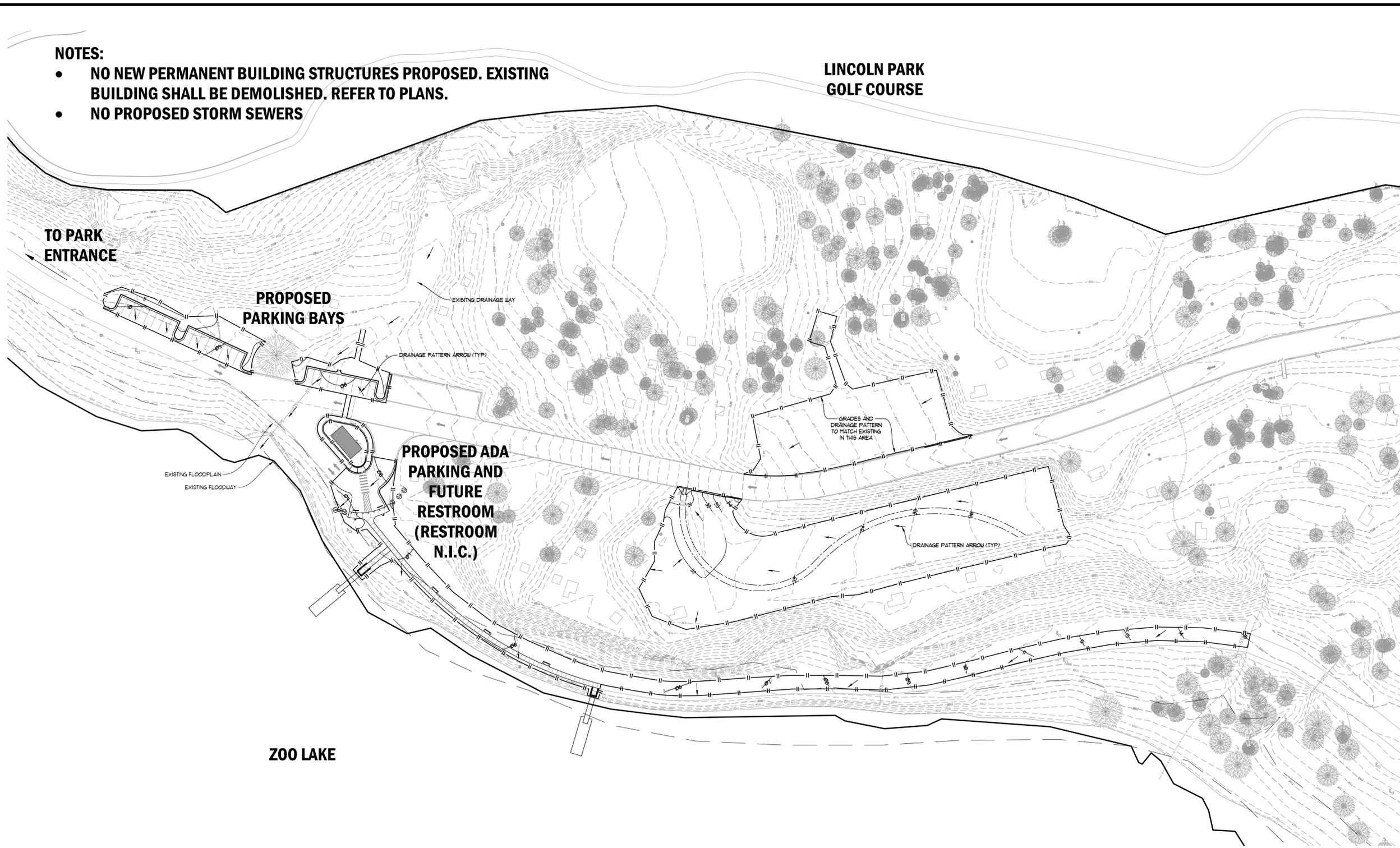
**C-020**

**TITLE**  
**SHEET#**



**NOTES:**

- NO NEW PERMANENT BUILDING STRUCTURES PROPOSED. EXISTING BUILDING SHALL BE DEMOLISHED. REFER TO PLANS.
- NO PROPOSED STORM SEWERS



**LINCOLN PARK GOLF COURSE**

**TO PARK ENTRANCE**

**PROPOSED PARKING BAYS**

**PROPOSED ADA PARKING AND FUTURE RESTROOM (RESTROOM N.I.C.)**

**ZOO LAKE**



AERIAL LOCATION MAP

DO NOT DUPLICATE DRAWINGS WITHOUT WRITTEN PERMISSION

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**24-HOUR ES&PC CONTACT**

CONTACT NAME: TOMMY BRYANT  
 CONTACT TITLE: FACILITY MANAGER  
 REPRESENTING: OKLAHOMA CITY ZOO  
 EMAIL ADDRESS: TBRYANT@OKCZOO.COM  
 24-HOUR PHONE NUMBER: 405-425-0201

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 Dial 811  
 Or Call 1-800-522-OKIE

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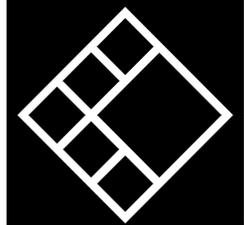
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**PLAN FOR REFERENCE ONLY**

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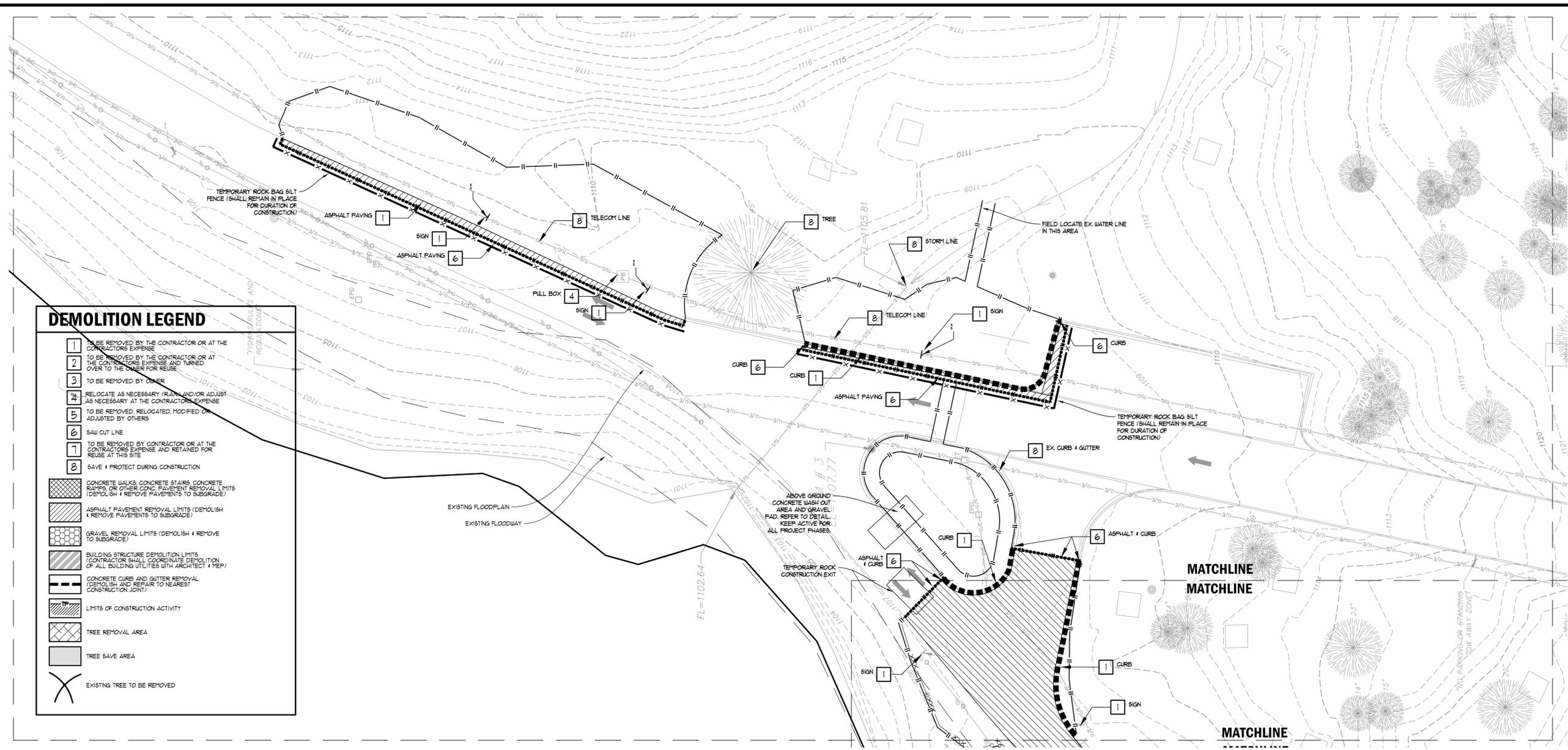
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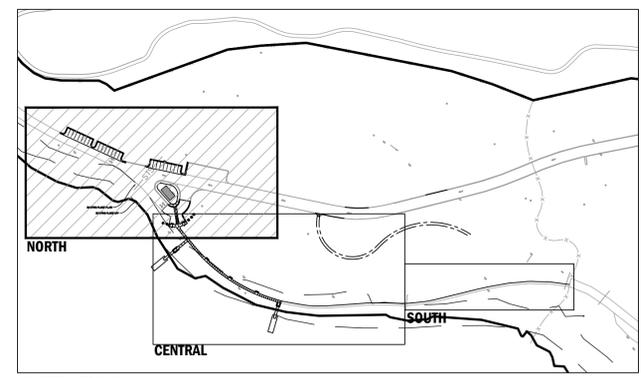
**OVERALL SITE GRADING & DRAINAGE PLAN**

**C-040**

◆ Bredlove Land Planning, Inc. ◆ Landscape Architects ◆ Civil Engineers ◆ 15 Simpson Street NW Atlanta, GA 30308 P: 770-483-1173 www.landplanning.net ◆



**FISHING TRAIL - NORTH**

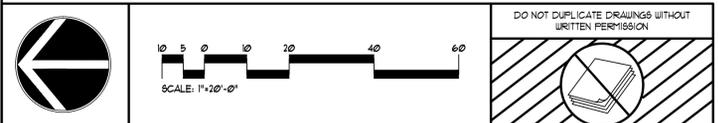


**KEY PLAN**

LAYOUT & STAKING		SITE UTILITIES		STORM DRAINAGE	
⊕	COORDINATE POINT	—W—	DOMESTIC WATER	▲	STORM STRUCTURE LABEL
P.O.B.	POINT OF BEGINNING	—F—	FIRE MAIN	▲	HEADWALL
Ⓢ	DETAIL REFERENCE (DETAIL SHEET)	FH	FIRE HYDRANT	▲	FLARED END SECTION - GDOT STANDARD 102
—	HANDRAIL AND/OR GUARDRAIL	P.V.	POST INDICATOR VALVE	▲	SAFETY END SECTION - GDOT STANDARD 102
—	G.D.O.T. TYPE 4010 VEHICULAR GUARDRAIL	TB	CONCRETE THRUST BLOCKING	▲	CATCH BASIN / GRATE INLET
<b>PAVEMENT MARKINGS</b>		WV	WATER VALVE	▲	JUNCTION BOX
←	PARKING ARROW - STRAIGHT, WHITE	S	GRAVITY SANITARY SEWER	▲	DROP INLET - FEDESTAL TOP
↶	PARKING ARROW - TURN, WHITE	FM	FORCE MAIN	▲	CURB INLET - GDOT STANDARD 1023a
—	PAINTED CROSSWALK - WHITE	<b>GENERAL</b>		▲	GDOT STANDARD 1023D
—	ADA PARKING ACCESSIBLE - BLUE	—TP—	TREE PROTECTION FENCE	▲	SINGLE-WING CATCH BASIN - GDOT STANDARD 1023D
—	PAINTED WORD "STOP" - WHITE	—	LIMITS OF CONSTRUCTION	▲	DOUBLE-WING CATCH BASIN - GDOT STANDARD 1024D
—	PAINTED WORD "ONLY" - WHITE	✕	EXISTING TREE TO BE REMOVED	▲	OUTLET CONTROL STRUCTURE
<b>SIGNAGE</b>		<b>SITE GRADING</b>		▲	TOP OF STRUCTURE ELEVATION
STOP	STOP SIGN - MUTCD STANDARD R1-1	—	PROPOSED INTERMEDIATE CONTOURS	▲	THROAT OF STRUCTURE ELEVATION
YIELD	YIELD SIGN - MUTCD STANDARD R1-2	—	PROPOSED INDEX CONTOURS	▲	HIGH-DENSITY POLYETHYLENE PIPE
R	NO PARKING SIGN - MUTCD STANDARD R8-3a	5005	SPOT ELEVATION	▲	ALUMINIZED STEEL TYPE 2 PIPE
DO NOT ENTER	DO NOT ENTER SIGN - MUTCD STANDARD R5-1	>>>>>	BERM	▲	A872 SPIRAL RIB CHIP (MANNING'S #40) ULTRAFLOU (TM) OR APPROVED EQUAL
ONE WAY	ONE WAY SIGN - MUTCD STANDARD R6-2	HP	HIGH POINT	▲	DUCTILE IRON PIPE
		LP	LOW POINT	▲	REINFORCED CONCRETE PIPE (CLASS IV OR V) W/ RUBBER O-RING GASKET (SCHEDULE 40)
		—	FLOW DIRECTION	▲	POLYVINYL CHLORIDE PIPE (SCHEDULE 40)
		2:1	SLOPE INDICATOR (4:1)	▲	INVERT ELEVATION - IN
		—	FINISHED GRADE AT TOP OF WALL	▲	INVERT ELEVATION - OUT
		—	FINISHED GRADE AT BOTTOM OF WALL	▲	HYDRAULIC GRADE LINE
		—	TOP OF CURB ELEVATION		

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CONSULTANT

SEAL

**OKLAHOMA CITY ZOO  
LAKE PARK IMPROVEMENTS  
OKLAHOMA CITY, OK 73111**

**OKC PERMIT NUMBER:  
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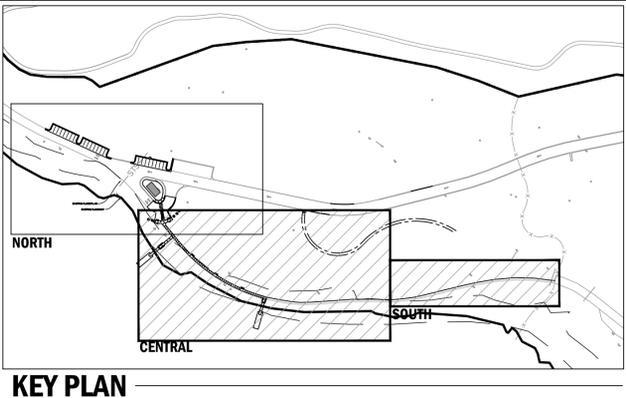
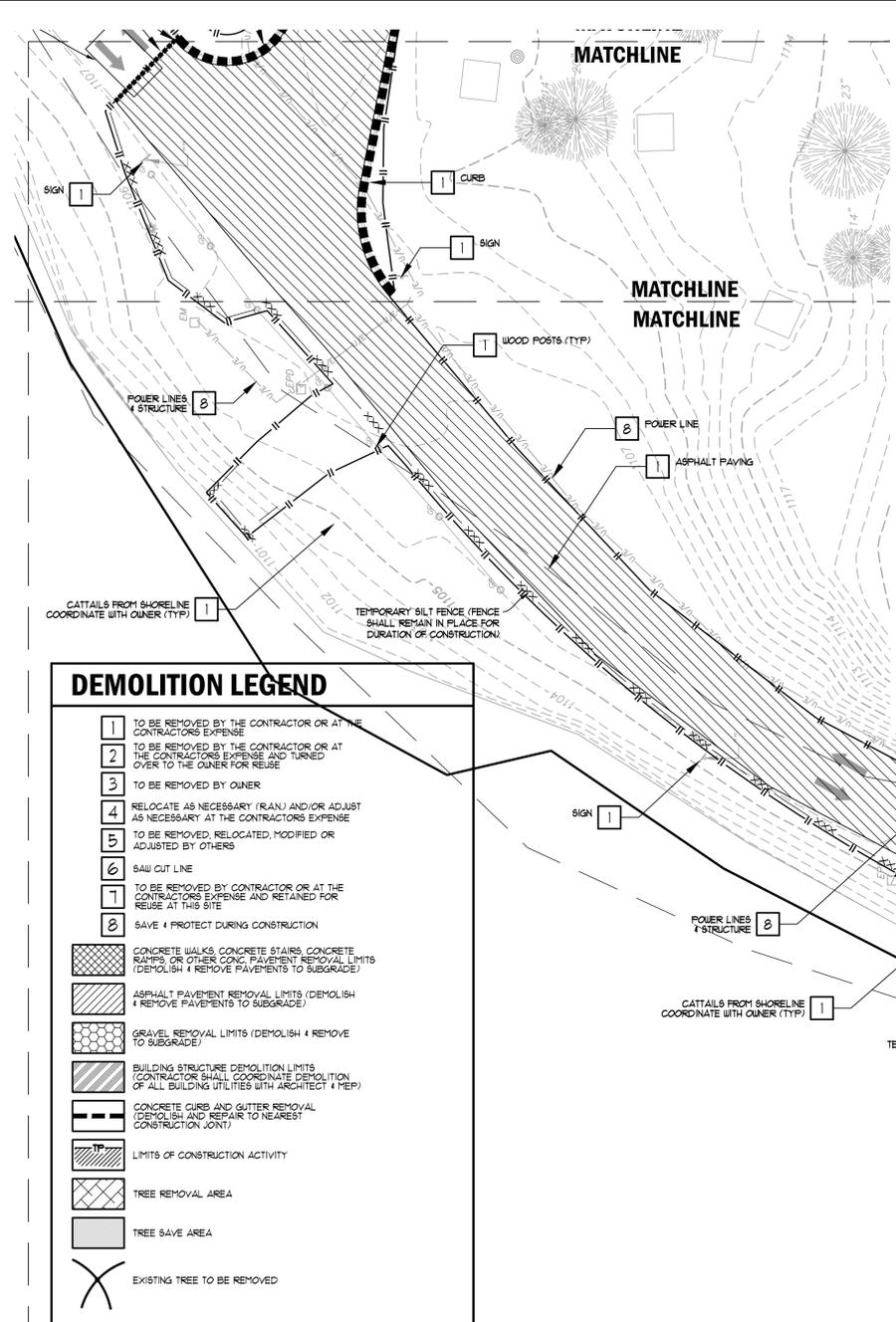
**PROJECT 1 -  
DEMOLITION &  
REMOVAL PLAN**

**C-100**

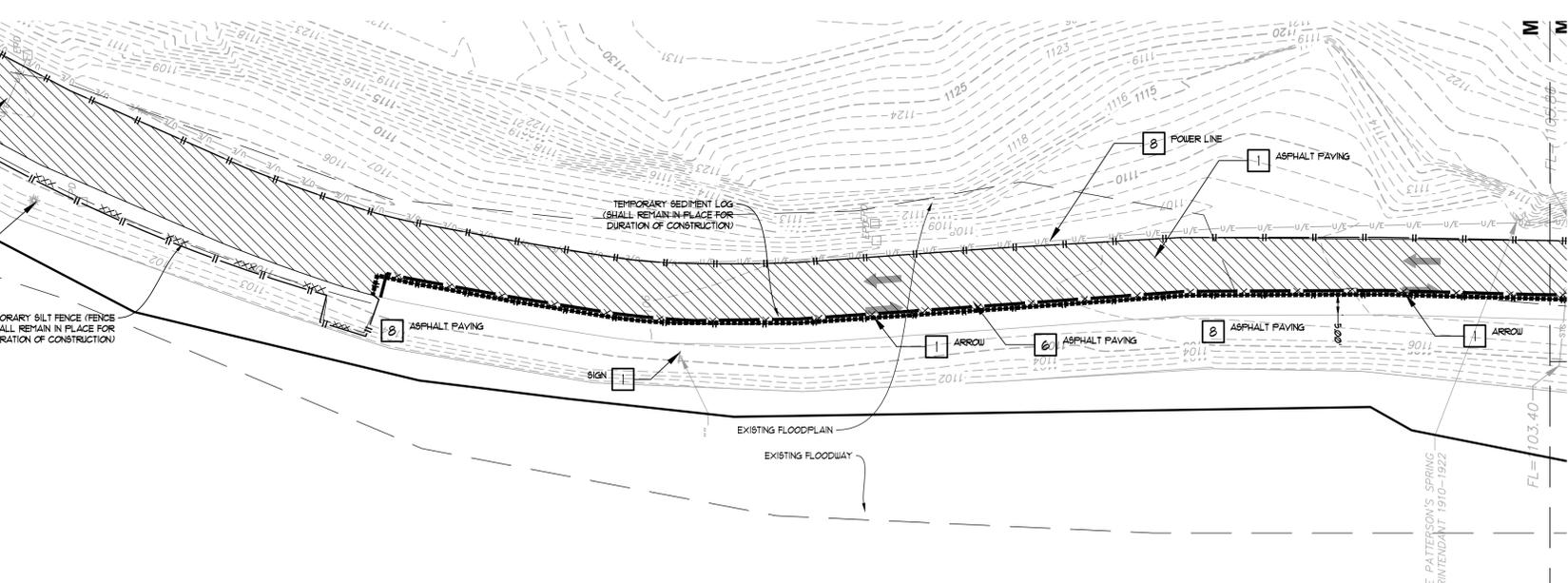
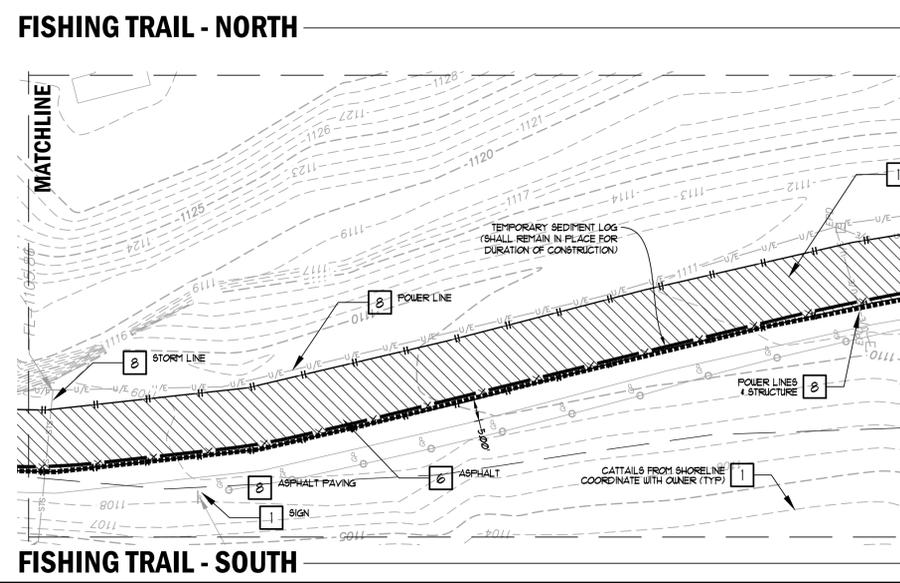
TITLE  
SHEET#

Civil Engineers  
Landscape Architects

15 Simpson Street NW Atlanta, GA 30308 P: 770-483-1173 www.landplanning.net



SITE PLAN LEGENDS		
<b>LAYOUT &amp; STAKING</b> + COORDINATE POINT P.O.B. POINT OF BEGINNING (C100) DETAIL REFERENCE (DETAIL) SHEET --- HANDRAIL AND/OR GUARDRAIL --- G.D.O.T. TYPE 4010 VEHICULAR GUARDRAIL	<b>SITE UTILITIES</b> --- W DOMESTIC WATER --- F FIRE MAIN FH FIRE HYDRANT FIV POST INDICATOR VALVE TB CONCRETE THRUST BLOCKING WV WATER VALVE --- S GRAVITY SANITARY SEWER --- FM FORCE MAIN	<b>STORM DRAINAGE</b> (A) STORM STRUCTURE LABEL HU HEADWALL FES FLARED END SECTION - GDOT STANDARD I12 SES SAFETY END SECTION - GDOT STANDARD I12 CB CATCH BASIN / GRATE INLET JB JUNCTION BOX DI (PED. TOP) DROP INLET - PEDESTAL TOP CI (10/30) CURB INLET - GDOT STANDARD 10/30 W/ TYPE 'E' HOOD SUCB SINGLE-UNG CATCH BASIN - GDOT STANDARD 10/33D DUCB DOUBLE-UNG CATCH BASIN - GDOT STANDARD 10/34D OCS OUTLET CONTROL STRUCTURE TOP TOP OF STRUCTURE ELEVATION TH THROAT OF STRUCTURE ELEVATION HDPE HIGH-DENSITY POLYETHYLENE PIPE A572 ALUMINIZED STEEL TYPE 2 PIPE A572-5B A572 SPIRAL RIB CMP (MANNING'S n=0.017, ULTRAFLOW (TM) OR APPROVED EQUAL) DCP DUCTILE IRON PIPE RCP REINFORCED CONCRETE PIPE (CLASS IV OR V) W/ RUBBER O-RING GASKET PVC POLYVINYL CHLORIDE PIPE (SCHEDULE 40) INV. IN INVERT ELEVATION - IN INV. OUT INVERT ELEVATION - OUT HGL HYDRAULIC GRADE LINE
<b>PAVEMENT MARKINGS</b> --- PARKING ARROW - STRAIGHT, WHITE --- PARKING ARROW - TURN, WHITE --- PAINTED CROSSWALK - WHITE --- ADA PARKING ACCESS AISLE - BLUE --- PAINTED WORD "STOP" - WHITE --- PAINTED WORD "ONLY" - WHITE	<b>GENERAL</b> --- TP TREE PROTECTION FENCE --- L LIMITS OF CONSTRUCTION X EXISTING TREE TO BE REMOVED	
<b>SIGNAGE</b> S SIGN STOP STOP SIGN - MUTCD STANDARD R1-1 YIELD YIELD SIGN - MUTCD STANDARD R1-2 NO PARKING NO PARKING SIGN - MUTCD STANDARD R8-3a DO NOT ENTER DO NOT ENTER SIGN - MUTCD STANDARD R5-1 ONE WAY ONE WAY SIGN - MUTCD STANDARD R6-2	<b>SITE GRADING</b> --- P PROPOSED INTERMEDIATE CONTOURS --- S PROPOSED INDEX CONTOURS +50.5 SPOT ELEVATION >>>>> BERM +HP HIGH POINT +LP LOW POINT --- F FLOW DIRECTION S SWALE 2:1 SLOPE INDICATOR (H:V) +TW 50.5 FINISHED GRADE AT TOP OF WALL +BW 50.5 FINISHED GRADE AT BOTTOM OF WALL +TC 50.5 TOP OF CURB ELEVATION	



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Civil Engineers

**OKLAHOMA CITY ZOO LAKE PARK IMPROVEMENTS OKLAHOMA CITY, OK 73111**

OKC PERMIT NUMBER: BLDG-2020-00912

REVISIONS

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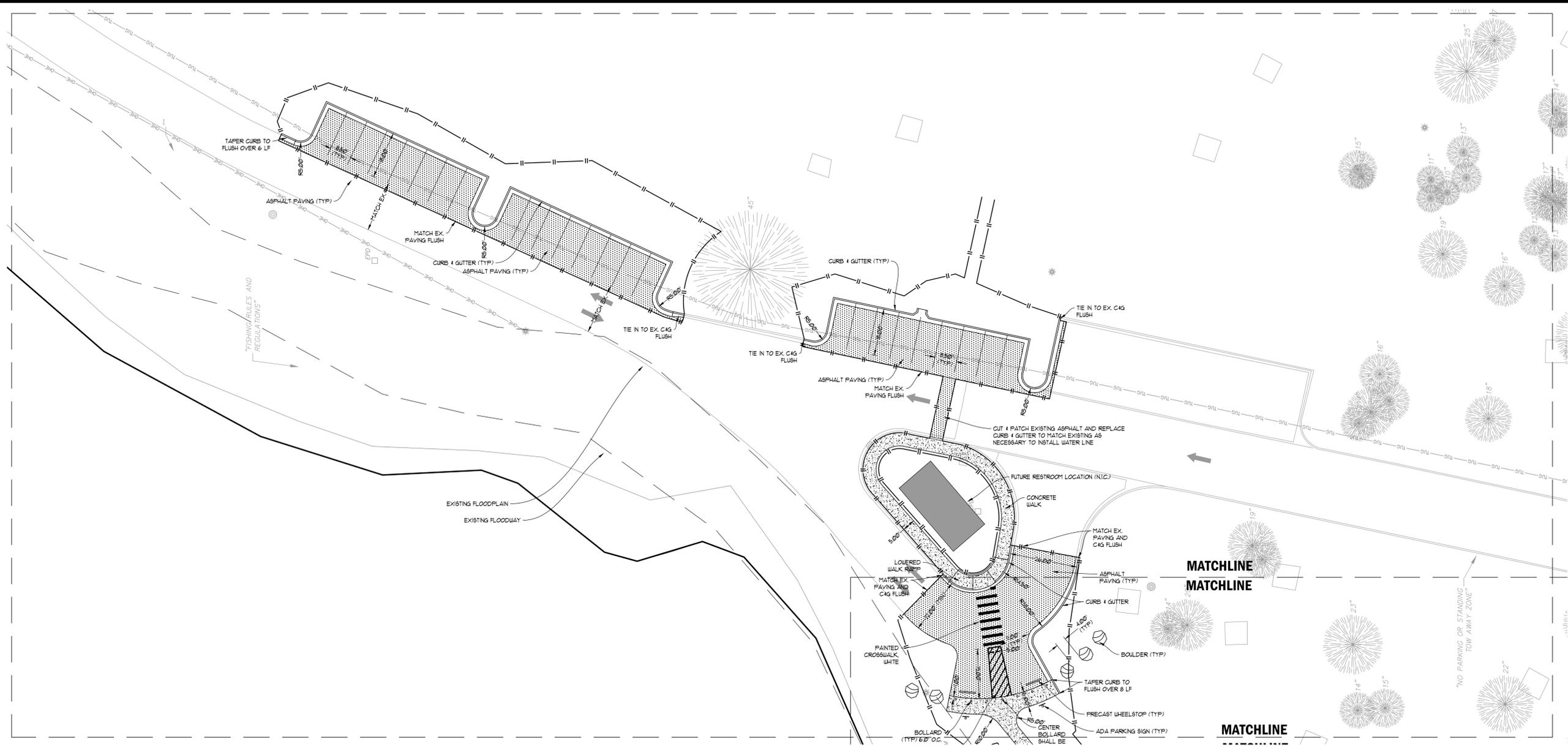
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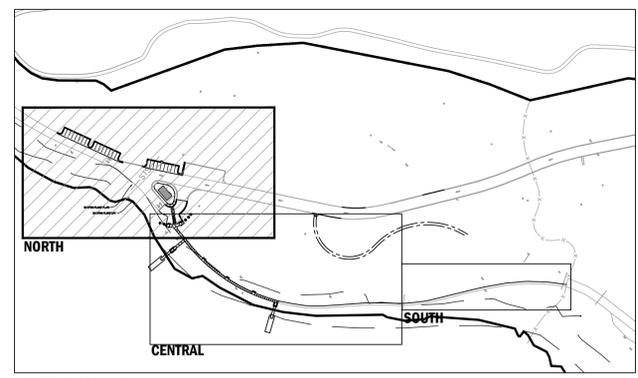
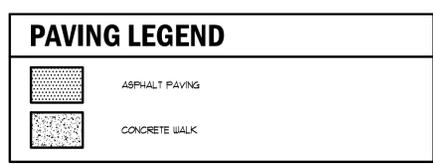
**PROJECT 1 - DEMOLITION & REMOVAL PLAN**

**C-101**

TITLE SHEET#



**FISHING TRAIL - NORTH**

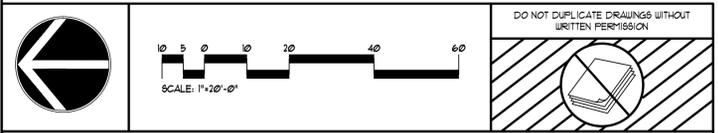


**KEY PLAN**

SITE PLAN LEGENDS		
<b>LAYOUT &amp; STAKING</b> + COORDINATE POINT P.O.B. POINT OF BEGINNING (DETAIL REFERENCE) (DETAIL SHEET) --- HANDRAIL AND/OR GUARDRAIL --- G.D.O.T. TYPE 4010 VEHICULAR GUARDRAIL	<b>SITE UTILITIES</b> --- W --- DOMESTIC WATER --- F --- FIRE MAIN FH --- FIRE HYDRANT FIV --- POST INDICATOR VALVE TB --- CONCRETE THRUST BLOCKING W --- WATER VALVE --- S --- GRAVITY SANITARY SEWER --- FM --- FORCE MAIN	<b>STORM DRAINAGE</b> (A) STORM STRUCTURE LABEL HW HEADWALL FES FLARED END SECTION - GDOT STANDARD 102 SES SAFETY END SECTION - GDOT STANDARD 102 CB CATCH BASIN / GRATE INLET JB JUNCTION BOX DI (FED. TOP) DROP INLET - FEDESTAL TOP CI (1013a) CURB INLET - GDOT STANDARD 1013a W/ TYPE E HOOD SUCB SINGLE-UNG CATCH BASIN - GDOT STANDARD 1033D DUCB DOUBLE-UNG CATCH BASIN - GDOT STANDARD 1034D OCS OUTLET CONTROL STRUCTURE TOP TOP OF STRUCTURE ELEVATION TH THROAT OF STRUCTURE ELEVATION HDPE HIGH-DENSITY POLYETHYLENE PIPE A572 ALUMINIZED STEEL TYPE 2 PIPE A572-5B A572 SPIRAL RIB CMP (MANNING'S H-8012 ULTRAFLOU (TM) OR APPROVED EQUAL DIP DUCTILE IRON PIPE RCP REINFORCED CONCRETE PIPE (CLASS IV OR V) W/ RUBBER O-RING GASKET PVC POLYVINYL CHLORIDE PIPE (SCHEDULE 40) INV. IN INVERT ELEVATION - IN INV. OUT INVERT ELEVATION - OUT HGL HYDRAULIC GRADE LINE
<b>PAVEMENT MARKINGS</b> ← PARKING ARROW - STRAIGHT, WHITE ↶ PARKING ARROW - TURN, WHITE PAINTED CROSOWALK - WHITE ADA PARKING ACCESSIBLE - BLUE PAINTED WORD "STOP" - WHITE PAINTED WORD "ONLY" - WHITE	<b>GENERAL</b> --- TP --- TREE PROTECTION FENCE --- L --- LIMITS OF CONSTRUCTION X EXISTING TREE TO BE REMOVED	<b>SIGNAGE</b> SIGN STOP SIGN - MUTCD STANDARD R1-1 YIELD SIGN - MUTCD STANDARD R1-2 NO PARKING SIGN - MUTCD STANDARD R8-3a DO NOT ENTER SIGN - MUTCD STANDARD R5-1 ONE WAY SIGN - MUTCD STANDARD R6-2
	<b>SITE GRADING</b> --- P --- PROPOSED INTERMEDIATE CONTOURS --- I --- PROPOSED INDEX CONTOURS +505 SPOT ELEVATION >>>> BERM +HP HIGH POINT +LP LOW POINT --- F --- FLOW DIRECTION --- SWALE 2:1 SLOPE INDICATOR (4:V) +TU 505 FINISHED GRADE AT TOP OF WALL +BW 505 FINISHED GRADE AT BOTTOM OF WALL +TC 505 TOP OF CURB ELEVATION	

**24-HOUR ES&PC CONTACT**

CONTACT NAME: TOMMY BRYANT  
 CONTACT TITLE: FACILITY MANAGER  
 REPRESENTING: OKLAHOMA CITY ZOO  
 EMAIL ADDRESS: TERRYANT@OKCZOO.COM  
 24-HOUR PHONE NUMBER: 405-425-0201



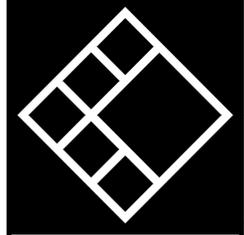
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CONSULTANT

SEAL

**OKLAHOMA CITY ZOO  
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OKLAHOMA CITY, OK 73111**

**OKC PERMIT NUMBER:  
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BLP, INC. PROJECT NO: 19069  
 DATE: 03-22-2019  
 DRAWING BY: LF/RW/AW  
 CHECKED BY: AW

**PROJECT 1 - LAYOUT PLAN**

**C-110**

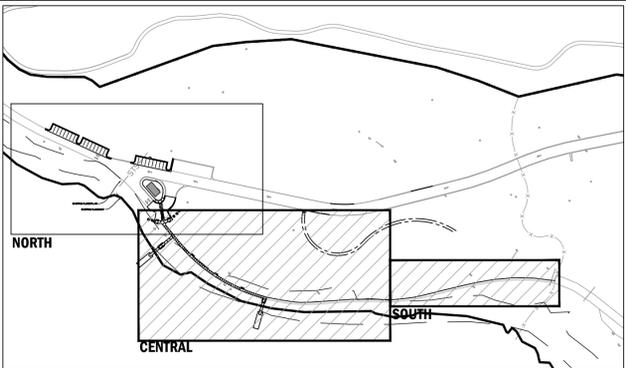
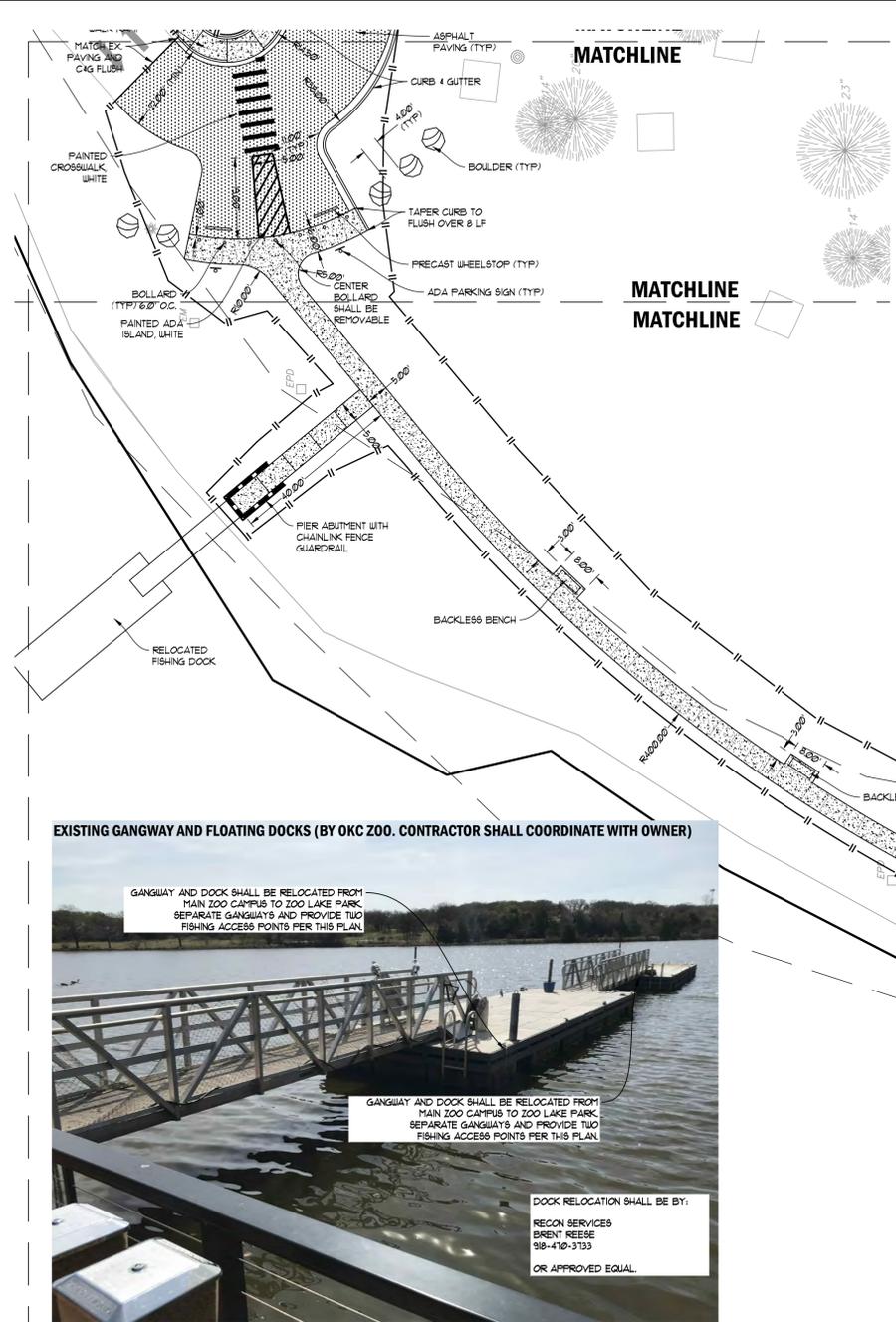
TITLE SHEET#

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Civil Engineers

Landscape Architects

**Bredlove Land Planning, Inc.**

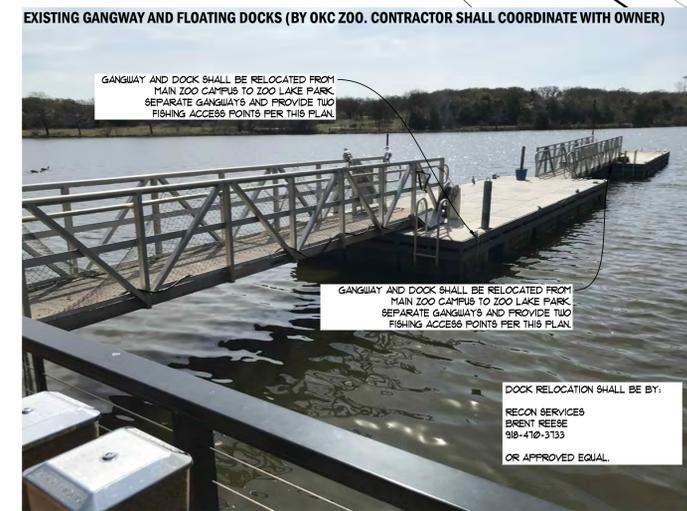


**PAVING LEGEND**

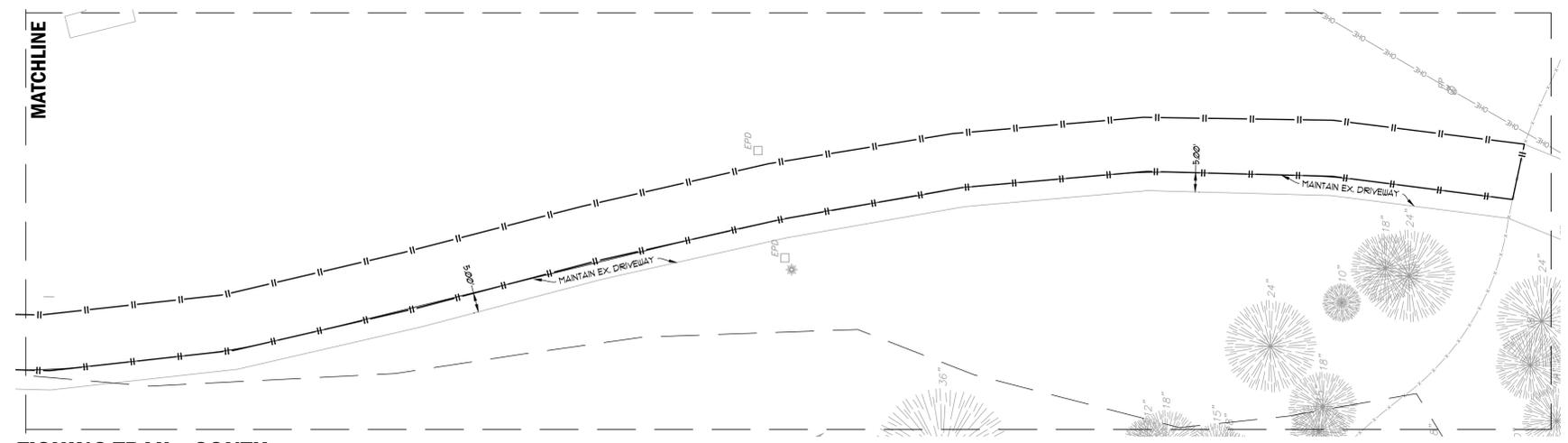
	ASPHALT PAVING
	CONCRETE WALK

**SITE PLAN LEGENDS**

LAYOUT & STAKING	SITE UTILITIES	STORM DRAINAGE
<ul style="list-style-type: none"> <li>COORDINATE POINT</li> <li>POINT OF BEGINNING</li> <li>DETAIL REFERENCE (DETAIL#)</li> <li>HANDRAIL AND/OR GUARDRAIL</li> <li>G.D.O.T. TYPE 4010 VEHICULAR GUARDRAIL</li> </ul>	<ul style="list-style-type: none"> <li>DOMESTIC WATER</li> <li>FIRE MAIN</li> <li>FIRE HYDRANT</li> <li>POST INDICATOR VALVE</li> <li>CONCRETE THRUST BLOCKING</li> <li>WATER VALVE</li> <li>GRAVITY SANITARY SEWER</li> <li>FORCE MAIN</li> </ul>	<ul style="list-style-type: none"> <li>STORM STRUCTURE LABEL</li> <li>HEADWALL</li> <li>FLARED END SECTION - GDOT STANDARD 1122</li> <li>SAFETY END SECTION - GDOT STANDARD 1122</li> <li>CATCH BASIN / GRATE INLET</li> <li>JUNCTION BOX</li> <li>DROP INLET - PEDESTAL TOP</li> <li>CI (10/15)</li> <li>CI (10/15)</li> <li>SUCB</li> <li>DUICB</li> <li>OCB</li> <li>TOP</li> <li>TH</li> <li>HDFE</li> <li>A572</li> <li>A572-SB</li> <li>DIP</li> <li>RCP</li> <li>FVC</li> <li>IN, IN</li> <li>IN, OUT</li> <li>HGL</li> </ul>
<p><b>PAVEMENT MARKINGS</b></p> <ul style="list-style-type: none"> <li>PARKING ARROW - STRAIGHT, WHITE</li> <li>PARKING ARROW - TURN, WHITE</li> <li>PAINTED CROSSWALK - WHITE</li> <li>ADA PARKING ACCESS AISLE - BLUE</li> <li>PAINTED WORD "STOP" - WHITE</li> <li>PAINTED WORD "ONLY" - WHITE</li> </ul>	<p><b>GENERAL</b></p> <ul style="list-style-type: none"> <li>TREE PROTECTION FENCE</li> <li>LIMITS OF CONSTRUCTION</li> <li>EXISTING TREE TO BE REMOVED</li> </ul>	
<p><b>SIGNAGE</b></p> <ul style="list-style-type: none"> <li>SIGN</li> <li>STOP SIGN - MUTCD STANDARD R1-1</li> <li>YIELD SIGN - MUTCD STANDARD R1-2</li> <li>NO PARKING SIGN - MUTCD STANDARD R8-3a</li> <li>DO NOT ENTER SIGN - MUTCD STANDARD R5-1</li> <li>ONE WAY SIGN - MUTCD STANDARD R6-2</li> </ul>	<p><b>SITE GRADING</b></p> <ul style="list-style-type: none"> <li>PROPOSED INTERMEDIATE CONTOURS</li> <li>PROPOSED INDEX CONTOURS</li> <li>SPOT ELEVATION</li> <li>BERM</li> <li>HIGH POINT</li> <li>LOW POINT</li> <li>FLOW DIRECTION</li> <li>SWALE</li> <li>SLOPE INDICATOR (H:V)</li> <li>FINISHED GRADE AT TOP OF WALL</li> <li>FINISHED GRADE AT BOTTOM OF WALL</li> <li>TOP OF CURB ELEVATION</li> </ul>	



**FISHING TRAIL - NORTH**



**FISHING TRAIL - SOUTH**

**24-HOUR ES&PC CONTACT**

CONTACT NAME: TOMMY BRYANT  
 CONTACT TITLE: FACILITY MANAGER  
 REPRESENTING: OKLAHOMA CITY ZOO  
 EMAIL ADDRESS: TBRYANT@OKCZOO.COM  
 24-HOUR PHONE NUMBER: 405-425-0201

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**CONSULTANT**

**SEAL**

**OKLAHOMA CITY ZOO LAKE PARK IMPROVEMENTS**  
 OKLAHOMA CITY, OK 73111

**OKC PERMIT NUMBER: BLDG-2020-00912**

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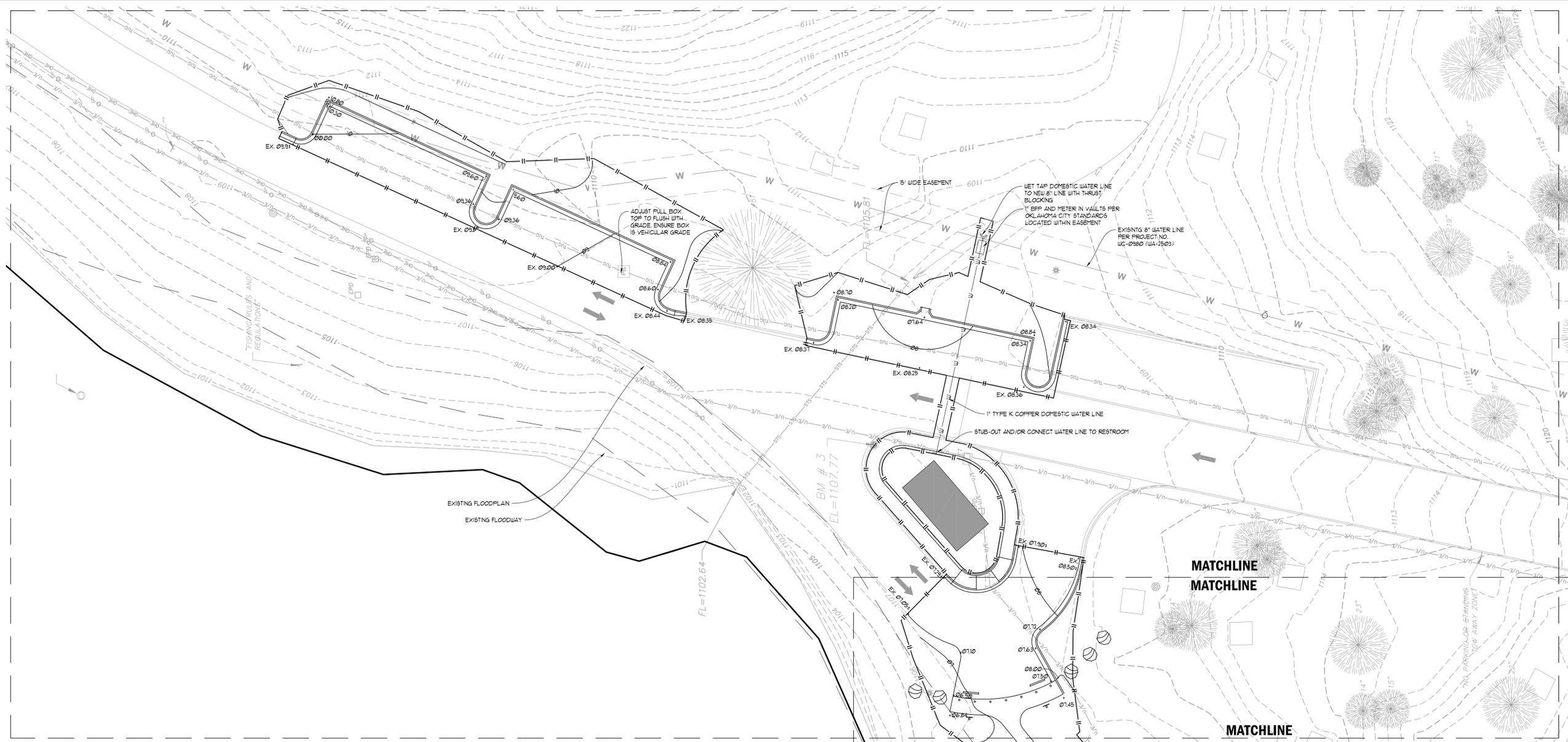
BLP, INC. PROJECT NO: 19069  
 DATE: 03-22-2019  
 DRAWING BY: LF/RW/AW  
 CHECKED BY: AW

**PROJECT 1 - LAYOUT PLAN**

**C-111**

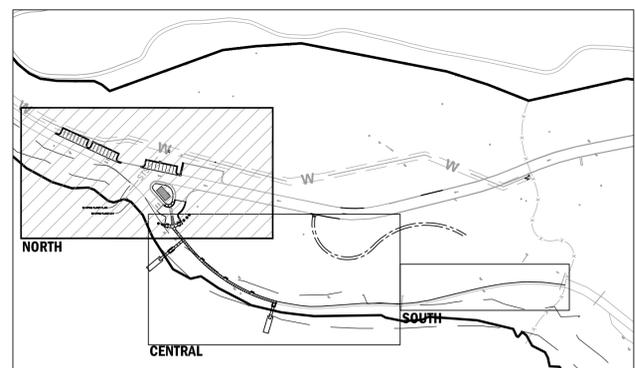
**TITLE SHEET#**

**Bredlove Land Planning, Inc.** Civil Engineers Landscape Architects



**FISHING TRAIL - NORTH**

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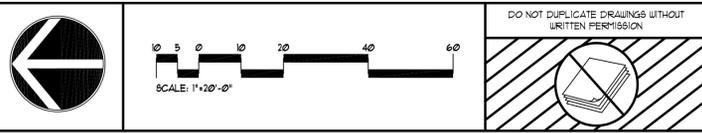


**KEY PLAN**

SITE PLAN LEGENDS		
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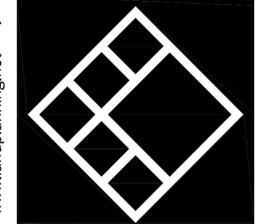
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LAKE PARK IMPROVEMENTS  
OKLAHOMA CITY, OK 73111**

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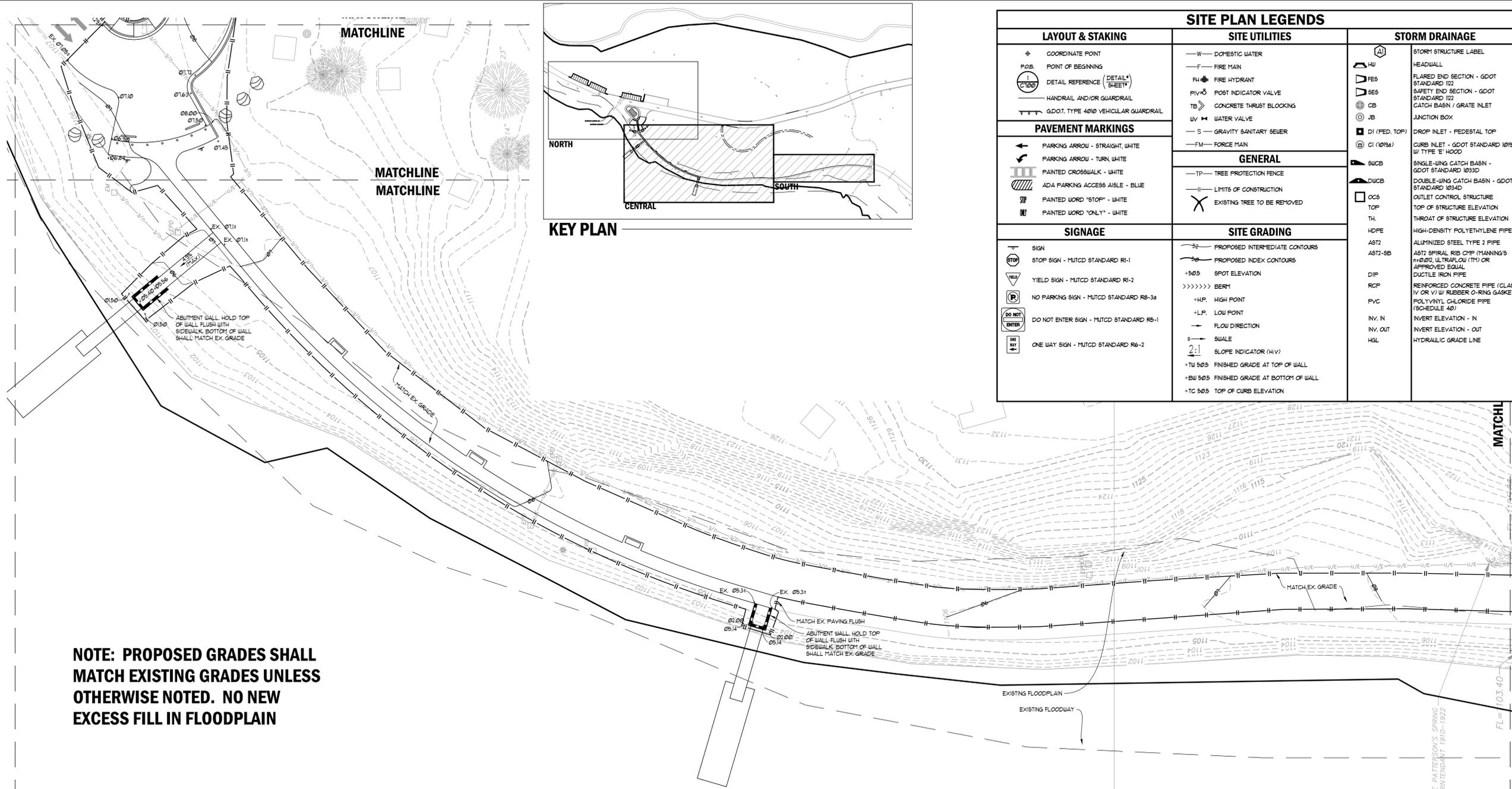
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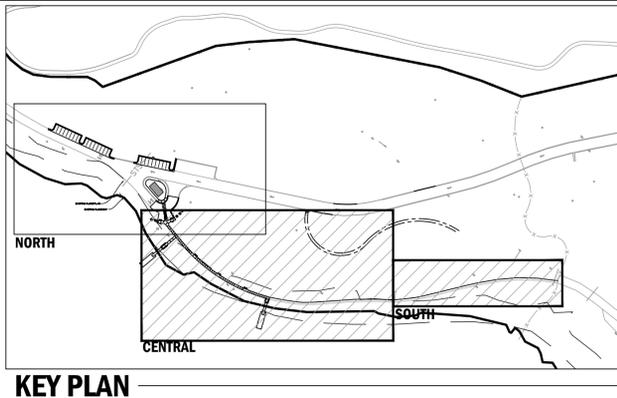
**PROJECT 1 -  
GRADING PLAN** TITLE

**C-120** SHEET#

Landscape Architects ◆ Civil Engineers ◆ 15 Simpson Street NW Atlanta, GA 30308 P: 770-483-1173 www.landplanning.net ◆ Breedlove Land Planning, Inc.

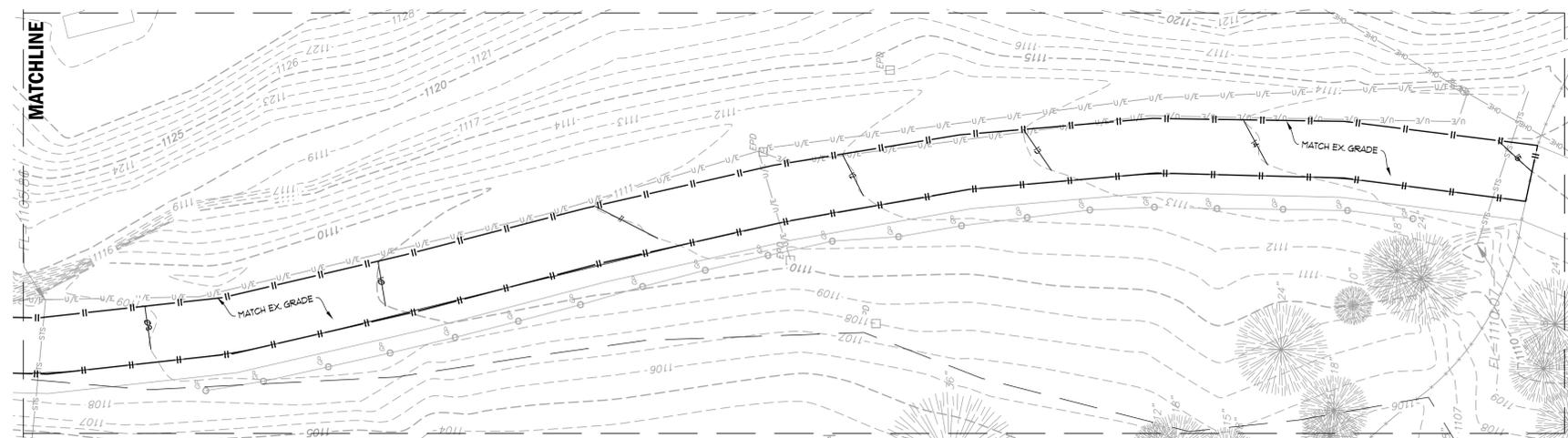


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SITE PLAN LEGENDS		
<b>LAYOUT &amp; STAKING</b> + COORDINATE POINT P.O.B. POINT OF BEGINNING (C1200) DETAIL REFERENCE (DETAIL SHEET) H AND/OR GUARDRAIL G.D.O.T. TYPE 4010 VEHICULAR GUARDRAIL	<b>SITE UTILITIES</b> W DOMESTIC WATER F FIRE MAIN FH FIRE HYDRANT FIV POST INDICATOR VALVE TB CONCRETE THRUST BLOCKING WV WATER VALVE S GRAVITY SANITARY SEWER FM FORCE MAIN	<b>STORM DRAINAGE</b> STORM STRUCTURE LABEL HEADWALL FLARED END SECTION - GDOT STANDARD I12 SAFETY END SECTION - GDOT STANDARD I12 CATCH BASIN / GRATE INLET JUNCTION BOX DI (PED. TOP) CI (10/15) SUCB DUCB OCB TOP TH HDPE A572 A572-SB DCP RCP PVC INV. IN INV. OUT HGL
<b>PAVEMENT MARKINGS</b> P PARKING ARROW - STRAIGHT, WHITE P TURN PARKING ARROW - TURN, WHITE P PAINTED CROSSWALK - WHITE P ADA PARKING ACCESS AISLE - BLUE P PAINTED WORD "STOP" - WHITE P PAINTED WORD "ONLY" - WHITE	<b>GENERAL</b> TP TREE PROTECTION FENCE L LIMITS OF CONSTRUCTION X EXISTING TREE TO BE REMOVED	
<b>SIGNAGE</b> S SIGN STOP STOP SIGN - MUTCD STANDARD R1-1 YIELD YIELD SIGN - MUTCD STANDARD R1-2 NO PARKING NO PARKING SIGN - MUTCD STANDARD R8-3a DO NOT ENTER DO NOT ENTER SIGN - MUTCD STANDARD R5-1 ONE WAY ONE WAY SIGN - MUTCD STANDARD R6-2	<b>SITE GRADING</b> S2 PROPOSED INTERMEDIATE CONTOURS S3 PROPOSED INDEX CONTOURS +50.5 SPOT ELEVATION >>>>> BERM +HP HIGH POINT +LP LOW POINT F FLOW DIRECTION S SWALE 2:1 SLOPE INDICATOR (H:V) +TW 50.5 FINISHED GRADE AT TOP OF WALL +BW 50.5 FINISHED GRADE AT BOTTOM OF WALL +TC 50.5 TOP OF CURB ELEVATION	

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**FISHING TRAIL - SOUTH**

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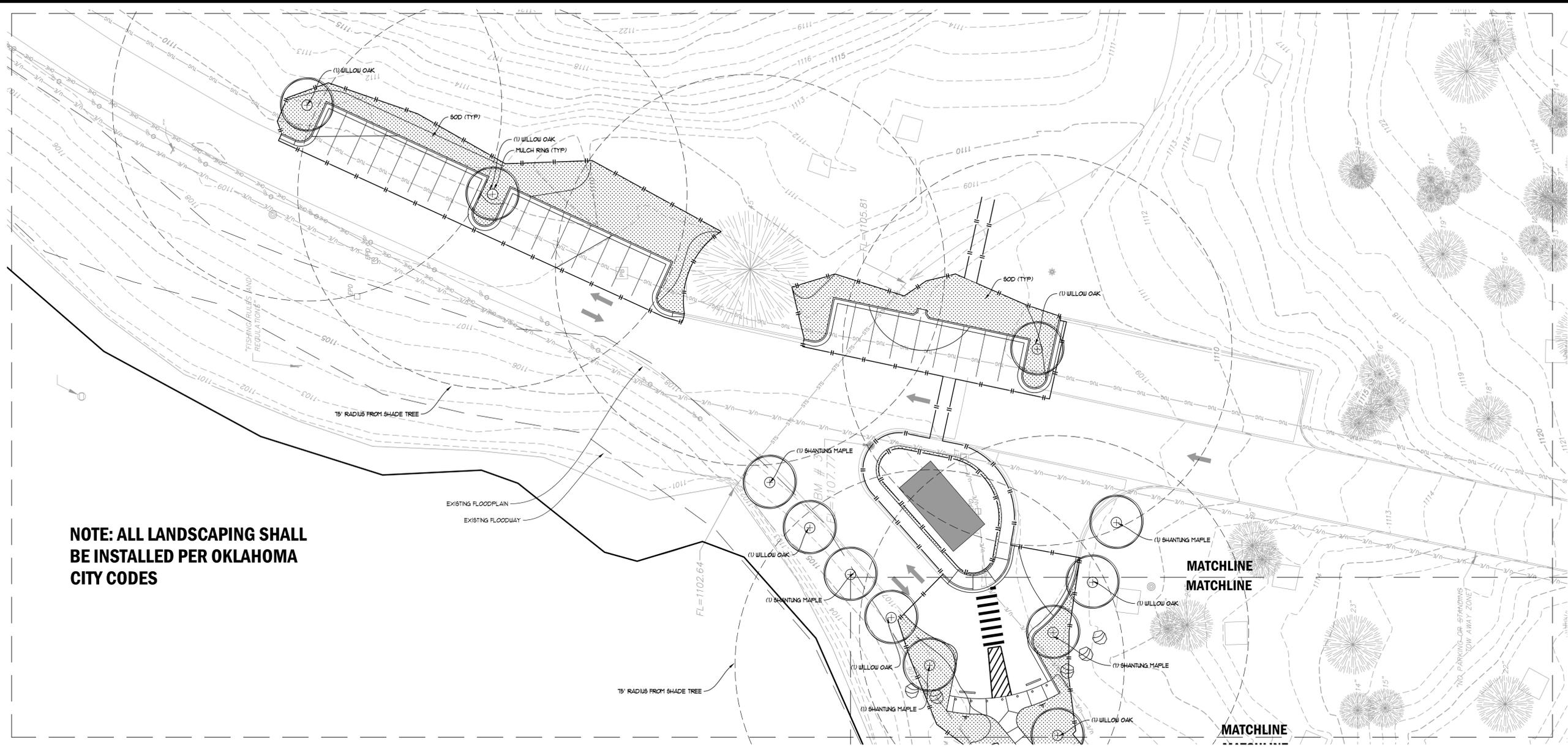
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**PROJECT 1 - GRADING PLAN**

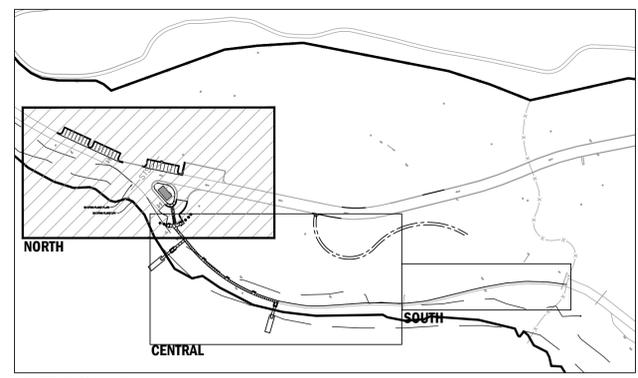
**C-121**

TITLE SHEET#



**NOTE: ALL LANDSCAPING SHALL BE INSTALLED PER OKLAHOMA CITY CODES**

**FISHING TRAIL - NORTH**

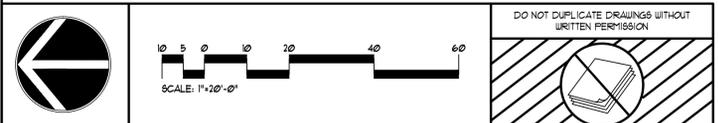


**KEY PLAN**

SITE PLAN LEGENDS		
<p><b>LAYOUT &amp; STAKING</b></p> <ul style="list-style-type: none"> <li>⊕ COORDINATE POINT</li> <li>P.O.B. POINT OF BEGINNING</li> <li>Ⓢ DETAIL REFERENCE (DETAIL SHEET)</li> <li>— HANDRAIL AND/OR GUARDRAIL</li> <li>— G.D.O.T. TYPE 4010 VEHICULAR GUARDRAIL</li> </ul> <p><b>PAVEMENT MARKINGS</b></p> <ul style="list-style-type: none"> <li>← PARKING ARROW - STRAIGHT, WHITE</li> <li>↶ PARKING ARROW - TURN, WHITE</li> <li>▨ PAINTED CROSSWALK - WHITE</li> <li>▨ ADA PARKING ACCESSIBLE - BLUE</li> <li>▨ PAINTED WORD "STOP" - WHITE</li> <li>▨ PAINTED WORD "ONLY" - WHITE</li> </ul> <p><b>SIGNAGE</b></p> <ul style="list-style-type: none"> <li>— SIGN</li> <li>⊠ STOP SIGN - MUTCD STANDARD R1-1</li> <li>⊠ YIELD SIGN - MUTCD STANDARD R1-2</li> <li>⊠ NO PARKING SIGN - MUTCD STANDARD R8-3a</li> <li>⊠ DO NOT ENTER SIGN - MUTCD STANDARD R5-1</li> <li>⊠ ONE WAY SIGN - MUTCD STANDARD R6-2</li> </ul>	<p><b>SITE UTILITIES</b></p> <ul style="list-style-type: none"> <li>— W DOMESTIC WATER</li> <li>— F FIRE MAIN</li> <li>⊕ FH FIRE HYDRANT</li> <li>⊕ PIV POST INDICATOR VALVE</li> <li>⊕ TB CONCRETE THRUST BLOCKING</li> <li>⊕ WV WATER VALVE</li> <li>— S GRAVITY SANITARY SEWER</li> <li>— FM FORCE MAIN</li> </ul> <p><b>GENERAL</b></p> <ul style="list-style-type: none"> <li>— TP TREE PROTECTION FENCE</li> <li>— L LIMITS OF CONSTRUCTION</li> <li>⊗ EXISTING TREE TO BE REMOVED</li> </ul> <p><b>SITE GRADING</b></p> <ul style="list-style-type: none"> <li>— 5:1 PROPOSED INTERMEDIATE CONTOURS</li> <li>— 3:1 PROPOSED INDEX CONTOURS</li> <li>• 50.5 SPOT ELEVATION</li> <li>&gt;&gt;&gt;&gt;&gt; BERM</li> <li>• HP HIGH POINT</li> <li>• LP LOW POINT</li> <li>— FLOW DIRECTION</li> <li>— SWALE</li> <li>2:1 SLOPE INDICATOR (4:V)</li> <li>• TU 50.5 FINISHED GRADE AT TOP OF WALL</li> <li>• BU 50.5 FINISHED GRADE AT BOTTOM OF WALL</li> <li>• TC 50.5 TOP OF CURB ELEVATION</li> </ul>	<p><b>STORM DRAINAGE</b></p> <ul style="list-style-type: none"> <li>Ⓢ STORM STRUCTURE LABEL</li> <li>Ⓢ HEADWALL</li> <li>Ⓢ FLARED END SECTION - GDOT STANDARD 102</li> <li>Ⓢ SAFETY END SECTION - GDOT STANDARD 102</li> <li>Ⓢ CATCH BASIN / GRATE INLET</li> <li>Ⓢ JUNCTION BOX</li> <li>Ⓢ DROP INLET - FEDESTAL TOP</li> <li>Ⓢ CURB INLET - GDOT STANDARD 1023a W/ TYPE E HOOD</li> <li>Ⓢ SINGLE-WING CATCH BASIN - GDOT STANDARD 1033D</li> <li>Ⓢ DOUBLE-WING CATCH BASIN - GDOT STANDARD 1034D</li> <li>Ⓢ OUTLET CONTROL STRUCTURE</li> <li>Ⓢ TOP OF STRUCTURE ELEVATION</li> <li>Ⓢ THROAT OF STRUCTURE ELEVATION</li> <li>Ⓢ HDPE HIGH-DENSITY POLYETHYLENE PIPE</li> <li>Ⓢ A572 ALUMINIZED STEEL TYPE 2 PIPE</li> <li>Ⓢ A572-58 A572 SPIRAL RIB CHIP (MANNING'S) #4020 ULTRAFLOU (TM) OR APPROVED EQUAL DUCTILE IRON PIPE</li> <li>Ⓢ DIP REINFORCED CONCRETE PIPE (CLASS IV OR V) W/ RUBBER O-RING GASKET (SCHEDULE 40)</li> <li>Ⓢ PVC POLYVINYL CHLORIDE PIPE (SCHEDULE 40)</li> <li>Ⓢ INV. IN INVERT ELEVATION - IN</li> <li>Ⓢ INV. OUT INVERT ELEVATION - OUT</li> <li>Ⓢ HGL HYDRAULIC GRADE LINE</li> </ul>

**24-HOUR ES&PC CONTACT**

CONTACT NAME: TOMMY BRYANT  
 CONTACT TITLE: FACILITY MANAGER  
 REPRESENTING: OKLAHOMA CITY ZOO  
 EMAIL ADDRESS: TBRYANT@OKCZOO.COM  
 24-HOUR PHONE NUMBER: 405-425-0201

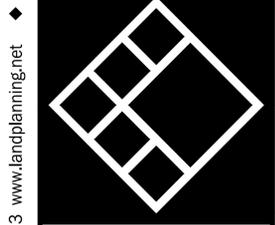


**CAUTION**

THE UTILITIES SHOWN ARE SHOWN FOR THE CONTRACTOR'S CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THESE PLANS. THE DESIGN PROFESSIONAL ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS SHOWN AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATIONS OF UTILITIES WITHIN THE LIMITS OF THE WORK. DAMAGES TO EXISTING UTILITIES BY THE CONTRACTOR FROM HIS/HER OPERATIONS, SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

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CONTRACTOR SHALL BE RESPONSIBLE FOR COMPACTION OF BACKFILL OF ALL UTILITY TRENCHES WITHIN SITE WORK LIMITS. THIS INCLUDES TRENCHES DUG AND BACKFILLED BY LOCAL UTILITIES, SUCH AS POWER, GAS, TELEPHONE, ETC. CONTRACTOR SHALL PROVIDE ADDITIONAL BACKFILL AND COMPACTION AS NECESSARY, IF SETTLEMENT OCCURS.



CONSULTANT

SEAL

**OKLAHOMA CITY ZOO  
LAKE PARK IMPROVEMENTS  
OKLAHOMA CITY, OK 73111**

**OKC PERMIT NUMBER:  
BLDC-2020-00912**

REVISIONS		
No.	DATE	DESCRIPTION

**RELEASED FOR CONSTRUCTION**

SUBMITTALS		
No.	DATE	DESCRIPTION
1	08-12-19	OWNER REVIEW SET
2	11-04-19	OWNER REVIEW SET
3	02-10-20	PERMIT SET
4	03-31-20	PERMIT RESUBMITTAL SET
5	07-17-20	PERMIT RESUBMITTAL SET
6		
7		
8		

BLP, INC. PROJECT NO: 19069  
 DATE: 03-22-2019  
 DRAWING BY: LF/RW/AW  
 CHECKED BY: AW

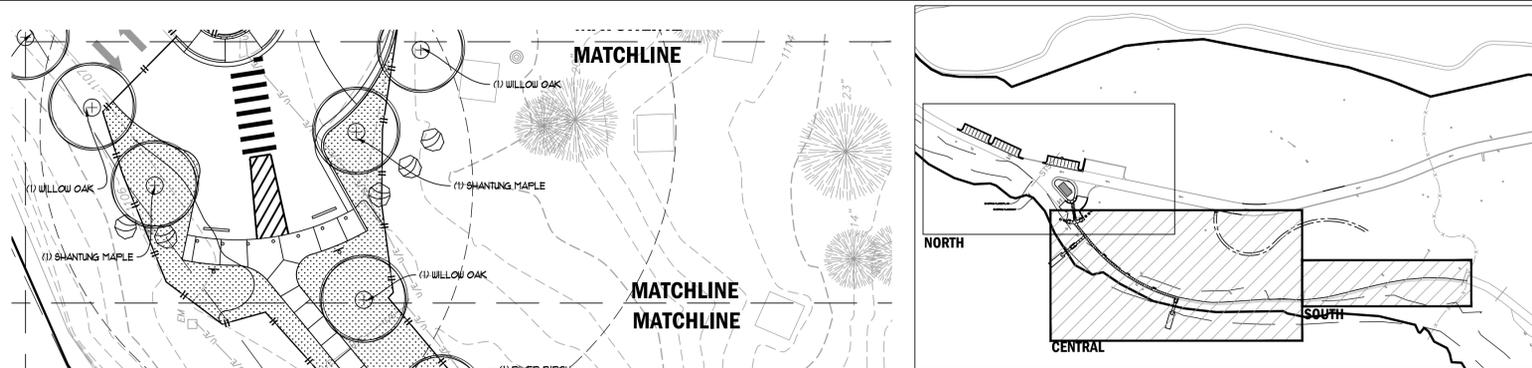
**PROJECT 1 - PLANTING PLAN**

**C-130**

**Bredlove Land Planning, Inc.**

Landscape Architects ♦ Civil Engineers ♦ 15 Simpson Street NW Atlanta, GA 30308 P: 770-483-1173 www.landplanning.net

SHEET#

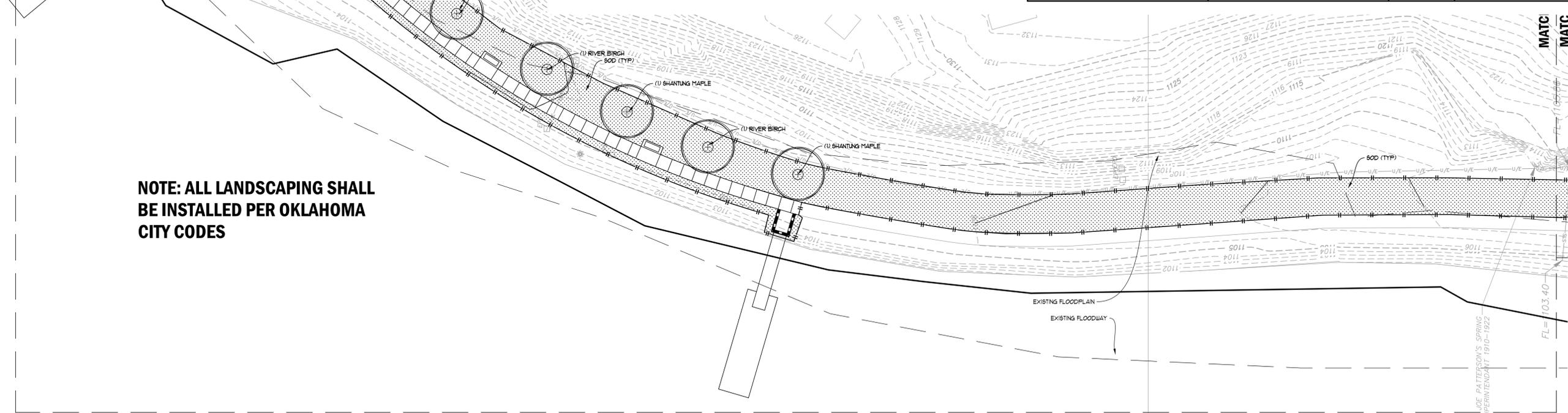


**KEY PLAN**

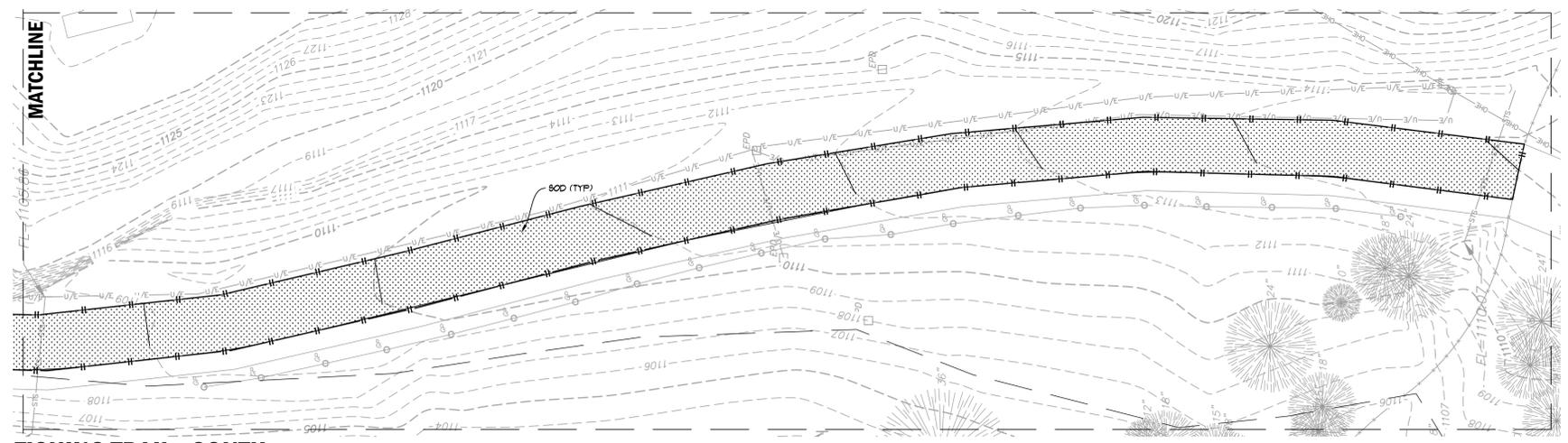
TREE PLANTING SCHEDULE					
CANOPY TREE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	REMARKS
	QUERCUS PHELLOS	WILLOW OAK	8	4" CAL.	FULL HEAD, SPECIMEN, STRONG STRAIGHT CENTRAL LEADER
	ACER TRUNCATUM	SHANTUNG MAPLE	8	4" CAL.	FULL HEAD, SPECIMEN, STRONG STRAIGHT CENTRAL LEADER
	BETULA NIGRA 'HERITAGE'	RIVER BIRCH	4	4" CAL.	FULL HEAD, SPECIMEN, STRONG STRAIGHT CENTRAL LEADER

SITE PLAN LEGENDS		
<b>LAYOUT &amp; STAKING</b>	<b>SITE UTILITIES</b>	<b>STORM DRAINAGE</b>
<ul style="list-style-type: none"> <li>COORDINATE POINT</li> <li>POINT OF BEGINNING</li> <li>DETAIL REFERENCE (DETAIL SHEET)</li> <li>HANDRAIL AND/OR GUARDRAIL</li> <li>G.D.O.T. TYPE 4010 VEHICULAR GUARDRAIL</li> </ul>	<ul style="list-style-type: none"> <li>DOMESTIC WATER</li> <li>FIRE MAIN</li> <li>FIRE HYDRANT</li> <li>POST INDICATOR VALVE</li> <li>CONCRETE THRUST BLOCKING</li> <li>WATER VALVE</li> <li>GRAVITY SANITARY SEWER</li> <li>FORCE MAIN</li> </ul>	<ul style="list-style-type: none"> <li>STORM STRUCTURE LABEL</li> <li>HEADWALL</li> <li>FLARED END SECTION - GDOT STANDARD I12</li> <li>SAFETY END SECTION - GDOT STANDARD I12</li> <li>CATCH BASIN / GRATE INLET</li> <li>JUNCTION BOX</li> <li>DROP INLET - PEDESTAL TOP</li> <li>CI (1015)</li> <li>CI (1015)</li> <li>SUCB</li> <li>DUICB</li> <li>OCB</li> <li>TOP</li> <li>TH</li> <li>HDFE</li> <li>AST2</li> <li>AST2-SB</li> <li>DIP</li> <li>RCP</li> <li>PVC</li> <li>INV. IN</li> <li>INV. OUT</li> <li>HGL</li> </ul>
<b>PAVEMENT MARKINGS</b>	<b>GENERAL</b>	
<ul style="list-style-type: none"> <li>PARKING ARROW - STRAIGHT, WHITE</li> <li>PARKING ARROW - TURN, WHITE</li> <li>PAINTED CROSSWALK - WHITE</li> <li>ADA PARKING ACCESS AISLE - BLUE</li> <li>PAINTED WORD "STOP" - WHITE</li> <li>PAINTED WORD "ONLY" - WHITE</li> </ul>	<ul style="list-style-type: none"> <li>TREE PROTECTION FENCE</li> <li>LIMITS OF CONSTRUCTION</li> <li>EXISTING TREE TO BE REMOVED</li> </ul>	
<b>SIGNAGE</b>	<b>SITE GRADING</b>	
<ul style="list-style-type: none"> <li>SIGN</li> <li>STOP SIGN - MUTCD STANDARD R1-1</li> <li>YIELD SIGN - MUTCD STANDARD R1-2</li> <li>NO PARKING SIGN - MUTCD STANDARD R8-3a</li> <li>DO NOT ENTER SIGN - MUTCD STANDARD R5-1</li> <li>ONE WAY SIGN - MUTCD STANDARD R6-2</li> </ul>	<ul style="list-style-type: none"> <li>PROPOSED INTERMEDIATE CONTOURS</li> <li>PROPOSED INDEX CONTOURS</li> <li>SPOT ELEVATION</li> <li>BERM</li> <li>H.P. HIGH POINT</li> <li>L.P. LOW POINT</li> <li>FLOW DIRECTION</li> <li>SWALE</li> <li>SLOPE INDICATOR (H:V)</li> <li>FINISHED GRADE AT TOP OF WALL</li> <li>FINISHED GRADE AT BOTTOM OF WALL</li> <li>TOP OF CURB ELEVATION</li> </ul>	

**NOTE: ALL LANDSCAPING SHALL BE INSTALLED PER OKLAHOMA CITY CODES**



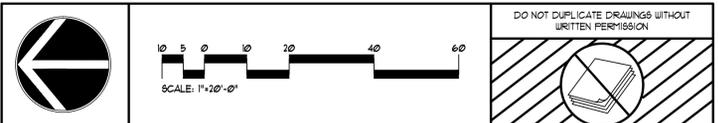
**FISHING TRAIL - NORTH**



**FISHING TRAIL - SOUTH**

**24-HOUR ES&PC CONTACT**

CONTACT NAME: TOMMY BRYANT  
 CONTACT TITLE: FACILITY MANAGER  
 REPRESENTING: OKLAHOMA CITY ZOO  
 EMAIL ADDRESS: TERRYANT@OKCZOO.COM  
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15 Simpson Street NW Atlanta, GA 30308 P: 770-483-1173 www.landplanning.net

Civil Engineers

Landscape Architects

**Bredlove Land Planning, Inc.**

**OKLAHOMA CITY ZOO LAKE PARK IMPROVEMENTS OKLAHOMA CITY, OK 73111**

**OKC PERMIT NUMBER: BLDG-2020-00912**

CONSULTANT

SEAL

REVISIONS

No.	DATE	DESCRIPTION

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SUBMITTALS

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BLP, INC. PROJECT NO: 19069

DATE: 03-22-2019

DRAWING BY: LF/RW/AW

CHECKED BY: AW

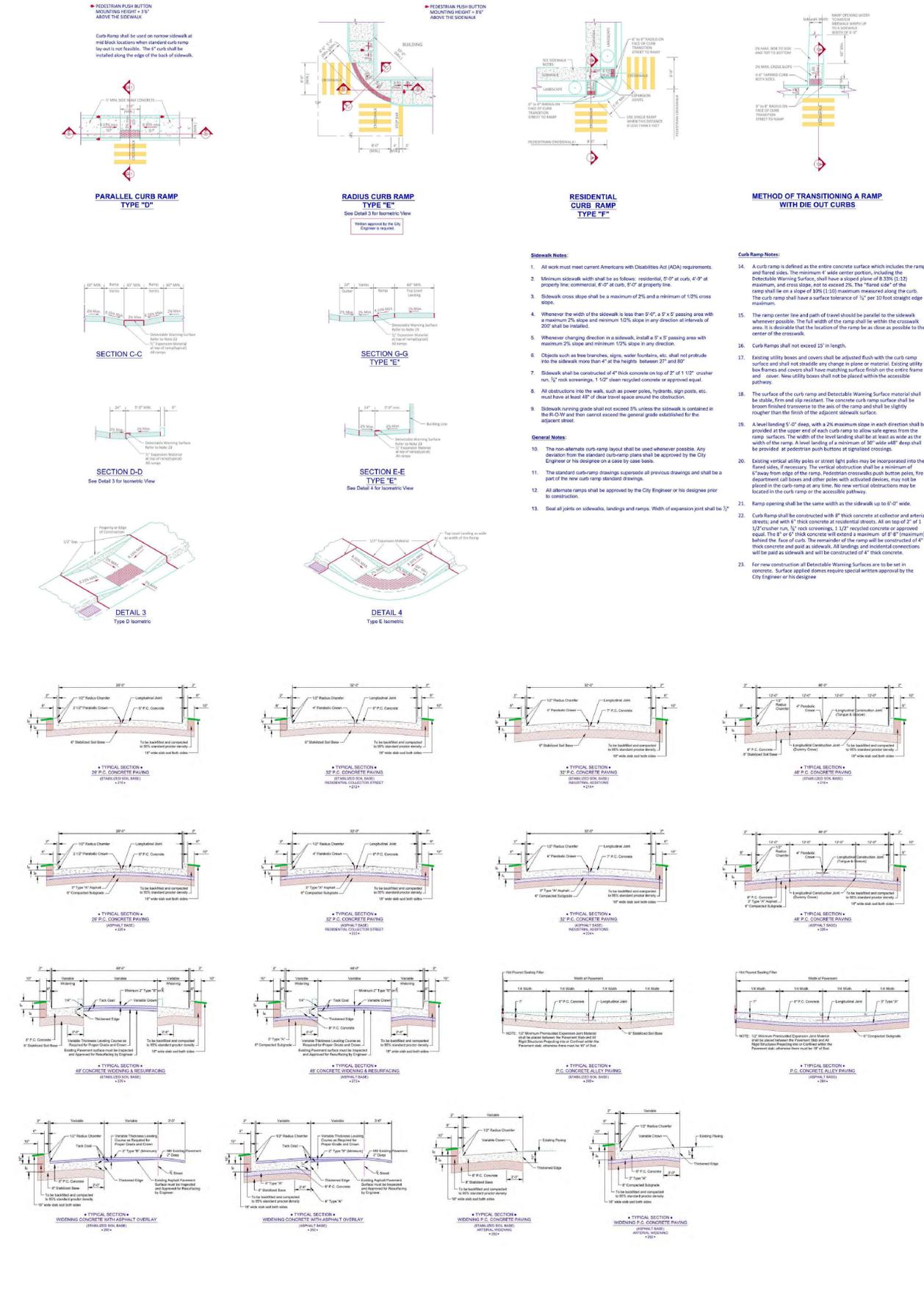
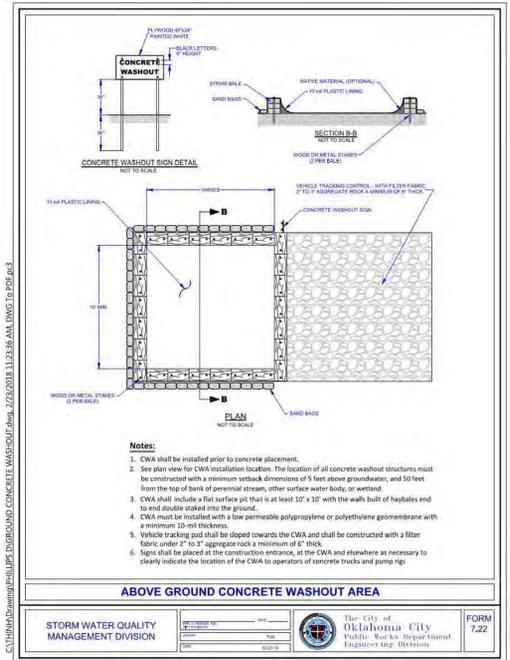
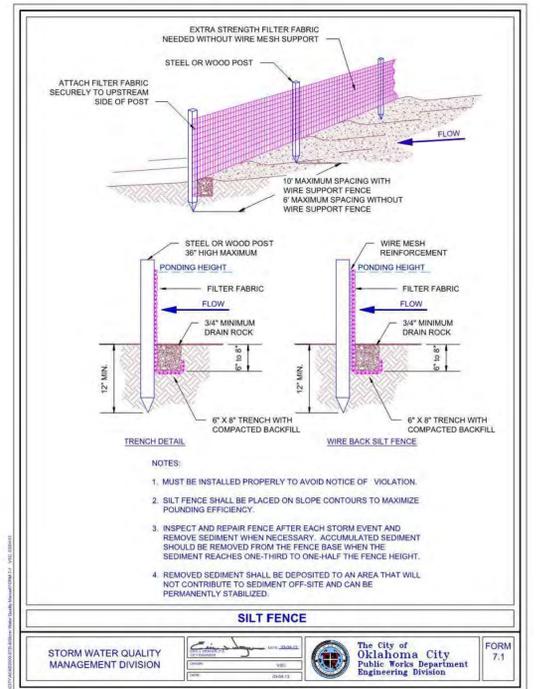
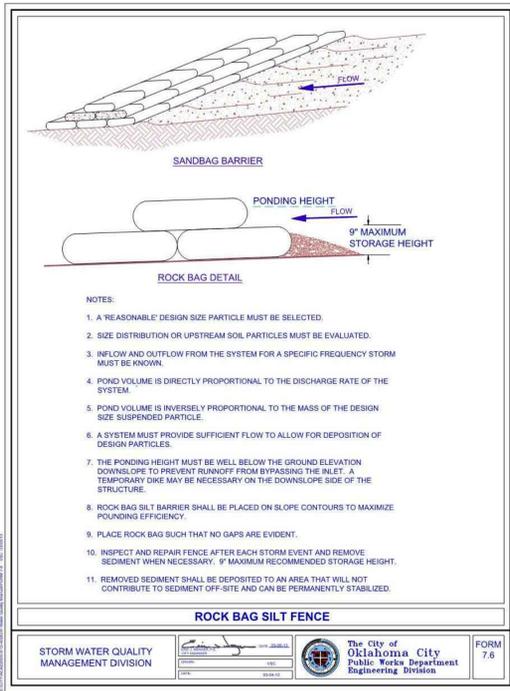
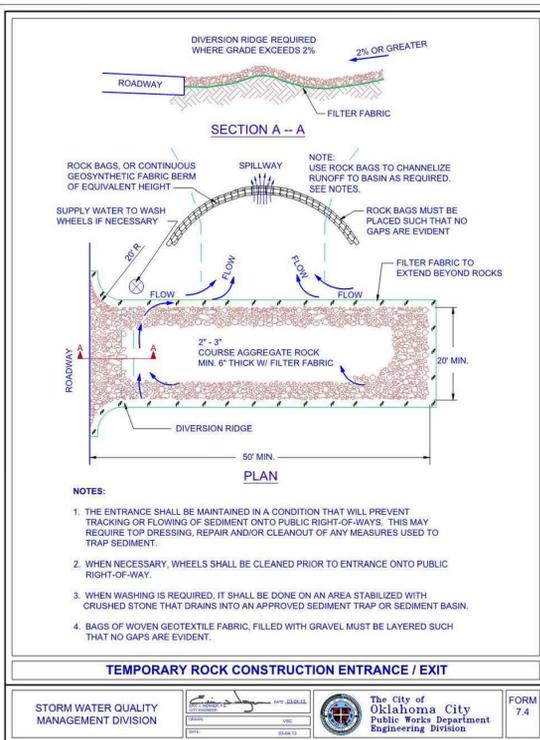
PROJECT 1 - PLANTING PLAN

**C-131**

TITLE

SHEET#





**CONSULTANT**

**SEAL**

**OKLAHOMA CITY ZOO LAKE PARK IMPROVEMENTS OKLAHOMA CITY, OK 73111**

**OKC PERMIT NUMBER: BLDG-2020-00912**

**REVISIONS**

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7		
8		

**BLP, INC. PROJECT NO: 19069**

**DATE: 03-22-2019**

**DRAWING BY: LF/RW/AW**

**CHECKED BY: AW**

**PROJECT 1 - CONSTRUCTION DETAILS**

**C-141**

**SHEET#**

**LANDSCAPE ARCHITECTS**

**Civil Engineers**

**ADA CURB RAMP DETAILS**

**STANDARD TYPICAL SECTIONS P.C. CONCRETE PAVING**

**REVISIONS**

**RELEASED FOR CONSTRUCTION**

**SUBMITTALS**

**BLP, INC. PROJECT NO: 19069**

**DATE: 03-22-2019**

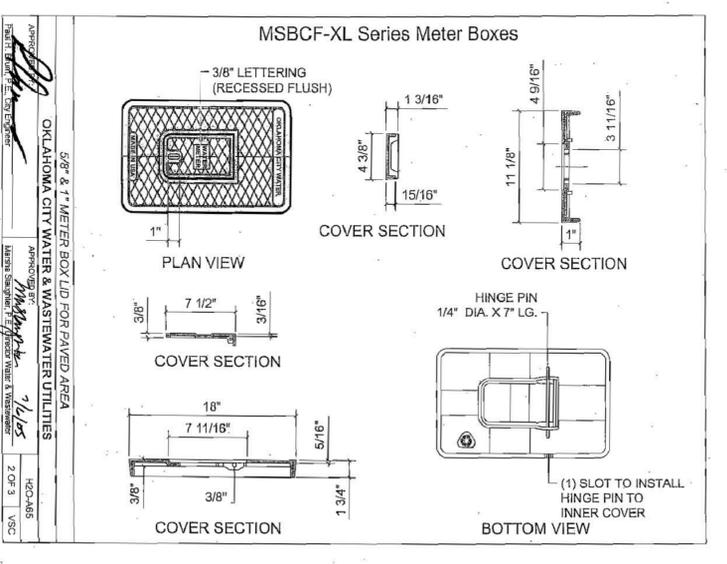
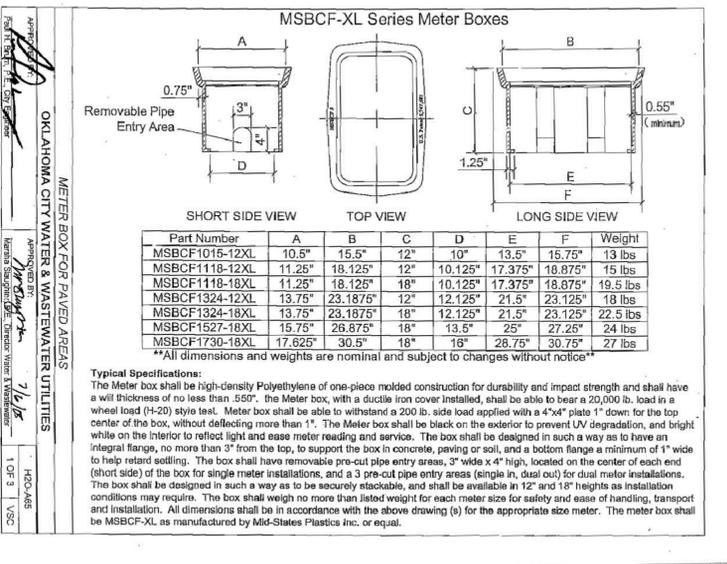
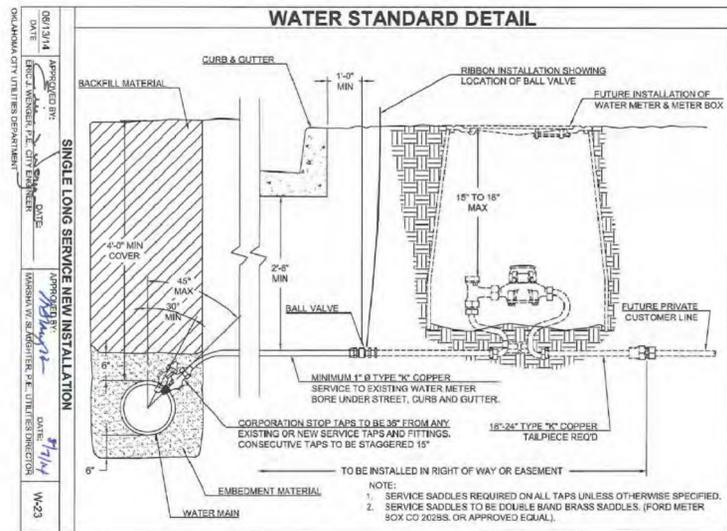
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**CHECKED BY: AW**

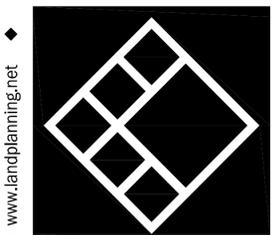
**PROJECT 1 - CONSTRUCTION DETAILS**

**C-141**

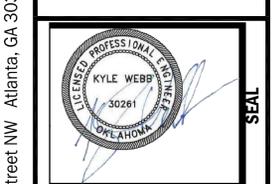
**SHEET#**



APPROVED BY: [Signature]  
 OKLAHOMA CITY WATER & WASTEWATER UTILITIES  
 H2C-596  
 2 OF 3  
 VSA



CONSULTANT



**OKLAHOMA CITY ZOO  
 LAKE PARK IMPROVEMENTS  
 OKLAHOMA CITY, OK 73111**

**OKC PERMIT NUMBER:  
 BLDG-2020-00912**

REVISIONS		
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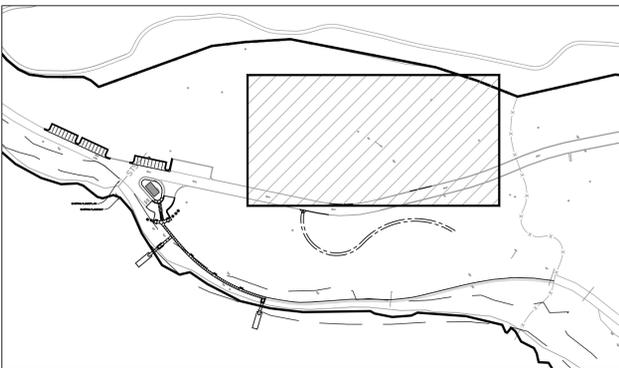
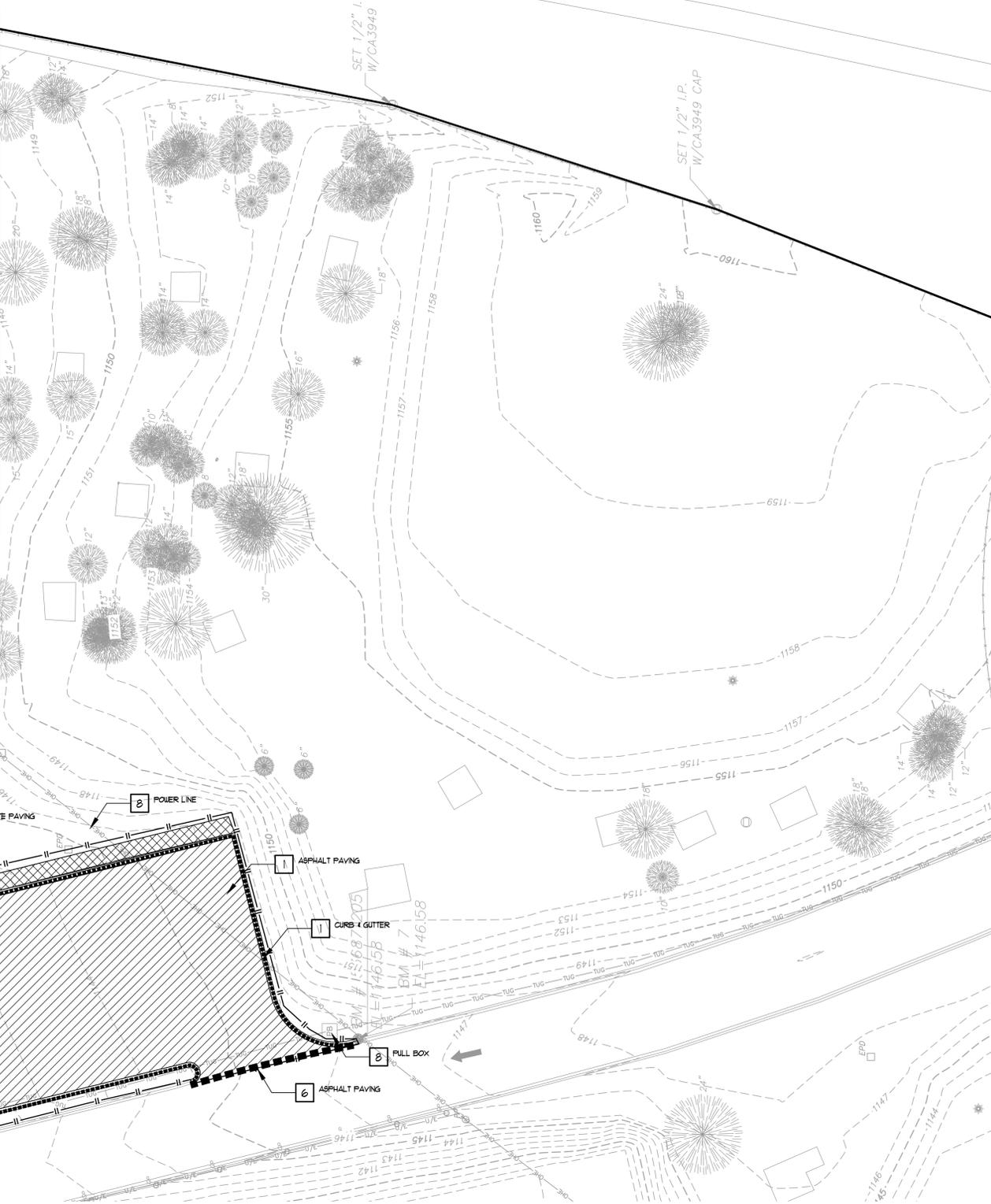
**PROJECT 1 -  
 CONSTRUCTION  
 DETAILS**

**C-142**

◆ Breedlove Land Planning, Inc. ◆ Landscape Architects ◆ Civil Engineers ◆ 15 Simpson Street NW Atlanta, GA 30308 P: 770-483-1173 www.landplanning.net ◆

SITE PLAN LEGENDS		
<b>LAYOUT &amp; STAKING</b>	<b>SITE UTILITIES</b>	<b>STORM DRAINAGE</b>
+ COORDINATE POINT P.O.B. POINT OF BEGINNING (C100) DETAIL REFERENCE (DETAIL SHEET) HANDRAIL AND/OR GUARDRAIL G.DOT. TYPE 40/10 VEHICULAR GUARDRAIL	W— DOMESTIC WATER F— FIRE MAIN FH— FIRE HYDRANT PIV— POST INDICATOR VALVE TB— CONCRETE THRUST BLOCKING W— WATER VALVE S— GRAVITY SANITARY SEWER FM— FORCE MAIN	(A) STORY STRUCTURE LABEL HW HEADWALL FES FLARED END SECTION - GDOT STANDARD 102 SES SAFETY END SECTION - GDOT STANDARD 102 CB CATCH BASIN / GRATE INLET JB JUNCTION BOX DI (PED. TOP) DROP INLET - PEDESTAL TOP CI (1015a) CURB INLET - GDOT STANDARD 103a W/ TYPE 'E' HOOD SUCB SINGLE-WING CATCH BASIN - GDOT STANDARD 1033D DUCB DOUBLE-WING CATCH BASIN - GDOT STANDARD 1034D OCS OUTLET CONTROL STRUCTURE TOP TOP OF STRUCTURE ELEVATION TH THROAT OF STRUCTURE ELEVATION HDPE HIGH-DENSITY POLYETHYLENE PIPE A572 ALUMINIZED STEEL TYPE 2 PIPE A572-5B A572 SPIRAL RIB CHIP (MANNING'S n=0.015) ULTRAFLOW (TM) OR APPROVED EQUIV. DIP DUCTILE IRON PIPE RCP REINFORCED CONCRETE PIPE (CLASS IV OR V) W/ RUBBER O-RING GASKET PVC POLYVINYL CHLORIDE PIPE (SCHEDULE 40) INV. IN INVERT ELEVATION - IN INV. OUT INVERT ELEVATION - OUT HGL HYDRAULIC GRADE LINE
<b>PAVEMENT MARKINGS</b>	<b>GENERAL</b>	
← PARKING ARROW - STRAIGHT, WHITE ↻ PARKING ARROW - TURN, WHITE PAINTED CROSSWALK - WHITE ADA PARKING ACCESS AISLE - BLUE PAINTED WORD "STOP" - WHITE PAINTED WORD "ONLY" - WHITE	TP— TREE PROTECTION FENCE L— LIMITS OF CONSTRUCTION X EXISTING TREE TO BE REMOVED	
<b>SIGNAGE</b>	<b>SITE GRADING</b>	
SIGN STOP SIGN - MUTCD STANDARD R1-1 YIELD SIGN - MUTCD STANDARD R1-2 NO PARKING SIGN - MUTCD STANDARD R8-3a DO NOT ENTER SIGN - MUTCD STANDARD R5-1 ONE WAY SIGN - MUTCD STANDARD R6-2	+5.05 PROPOSED INTERMEDIATE CONTOURS +5.05 PROPOSED INDEX CONTOURS +5.05 SPOT ELEVATION >>>>> BERM +HP. HIGH POINT +LP. LOW POINT → FLOW DIRECTION SWALE 2:1 SLOPE INDICATOR (H:V) +TW 505 FINISHED GRADE AT TOP OF WALL +BW 505 FINISHED GRADE AT BOTTOM OF WALL +TC 505 TOP OF CURB ELEVATION	

DEMOLITION LEGEND	
1	TO BE REMOVED BY THE CONTRACTOR OR AT THE CONTRACTOR'S EXPENSE
2	TO BE REMOVED BY THE CONTRACTOR OR AT THE CONTRACTOR'S EXPENSE AND TURNED OVER TO THE OWNER FOR REUSE
3	TO BE REMOVED BY OWNER
4	RELOCATE AS NECESSARY (RAIN) AND/OR ADJUST AS NECESSARY AT THE CONTRACTOR'S EXPENSE
5	TO BE REMOVED, RELOCATED, MODIFIED OR ADJUSTED BY OTHERS
6	SAVE & PROTECT DURING CONSTRUCTION
7	TO BE REMOVED BY CONTRACTOR OR AT THE CONTRACTOR'S EXPENSE AND RETAINED FOR REUSE AT THIS SITE
8	SAVE & PROTECT DURING CONSTRUCTION
(Hatched)	CONCRETE WALKS, CONCRETE STAIRS, CONCRETE RAMPS, OR OTHER CONC. PAVEMENT REMOVAL LIMITS (DEMOLISH & REMOVE PAVEMENTS TO SUBGRADE)
(Dotted)	GRAVEL REMOVAL LIMITS (DEMOLISH & REMOVE TO SUBGRADE)
(Diagonal Lines)	BUILDING STRUCTURE DEMOLITION LIMITS (CONTRACTOR SHALL COORDINATE DEMOLITION OF ALL BUILDING UTILITIES WITH ARCHITECT & MEP)
(Dashed)	CONCRETE CURB AND GUTTER REMOVAL (DEMOLISH AND REPAIR TO NEAREST CONSTRUCTION JOINT)
(Dotted)	LIMITS OF CONSTRUCTION ACTIVITY
(Cross-hatched)	TREE REMOVAL AREA
(Solid)	TREE SAVE AREA
X	EXISTING TREE TO BE REMOVED



SCALE: 1"=20'-0"

DO NOT DUPLICATE DRAWINGS WITHOUT WRITTEN PERMISSION

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**OKIE 811** Know what's below.  
Call before you dig.  
Dial 811  
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**OKLAHOMA CITY ZOO  
LAKE PARK IMPROVEMENTS  
OKLAHOMA CITY, OK 73111**

**OKC PERMIT NUMBER:  
BLDC-2020-00912**

REVISIONS		
No.	DATE	DESCRIPTION

**RELEASED FOR CONSTRUCTION**

SUBMITTALS		
No.	DATE	DESCRIPTION
1	08-12-19	OWNER REVIEW SET
2	11-04-19	OWNER REVIEW SET
3	02-10-20	PERMIT SET
4	03-31-20	PERMIT RESUBMITTAL SET
5	07-17-20	PERMIT RESUBMITTAL SET
6		
7		
8		

BLP, INC. PROJECT NO: 19069

DATE: 03-22-2019

DRAWING BY: LF/RW/AW

CHECKED BY: AW

**PROJECT 2 -  
DEMOLITION &  
REMOVAL PLAN**

**C-200**

15 Simpson Street NW Atlanta, GA 30308 P: 770-483-1173 www.landplanning.net

Civil Engineers

Landscape Architects

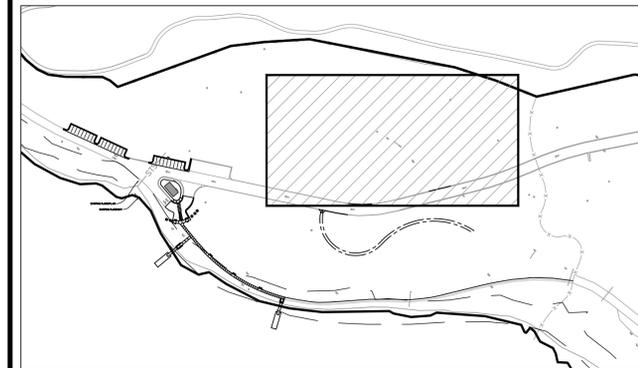
Bredlove Land Planning, Inc.

CONSULTANT

SEAL

TITLE

SHEET#



**NOTE: ALL LANDSCAPING SHALL BE INSTALLED PER OKLAHOMA CITY CODES**

SCALE: 1"=20'-0"

DO NOT DUPLICATE DRAWINGS WITHOUT WRITTEN PERMISSION

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CONSULTANT

SEAL

**OKLAHOMA CITY ZOO  
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OKLAHOMA CITY, OK 73111**

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BLP, INC. PROJECT NO: 19069  
DATE: 03-22-2019  
DRAWING BY: LF/RW/AW  
CHECKED BY: AW

**PROJECT 2 - LAYOUT PLAN**

TITLE

**C-210**

SHEET#

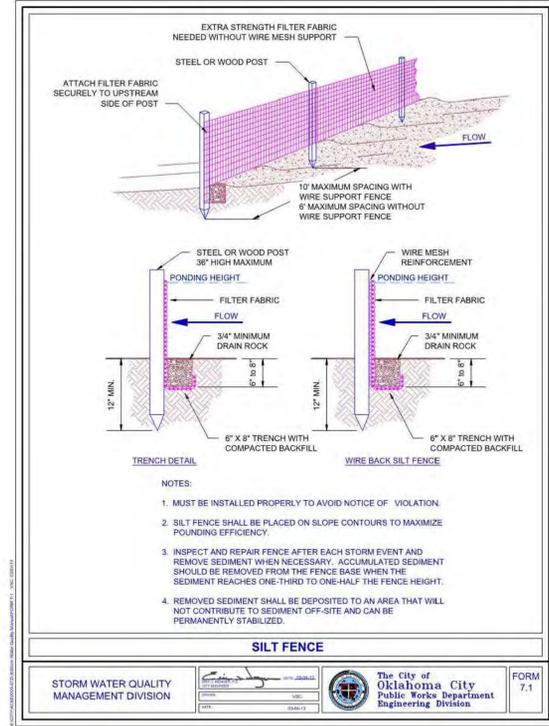
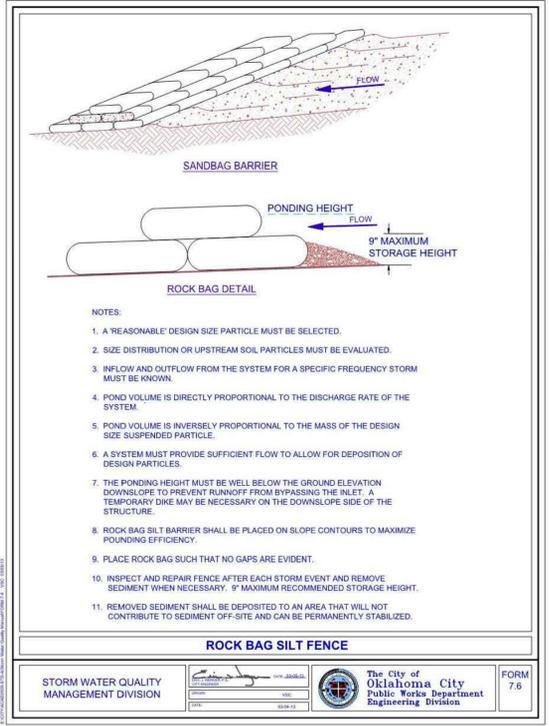
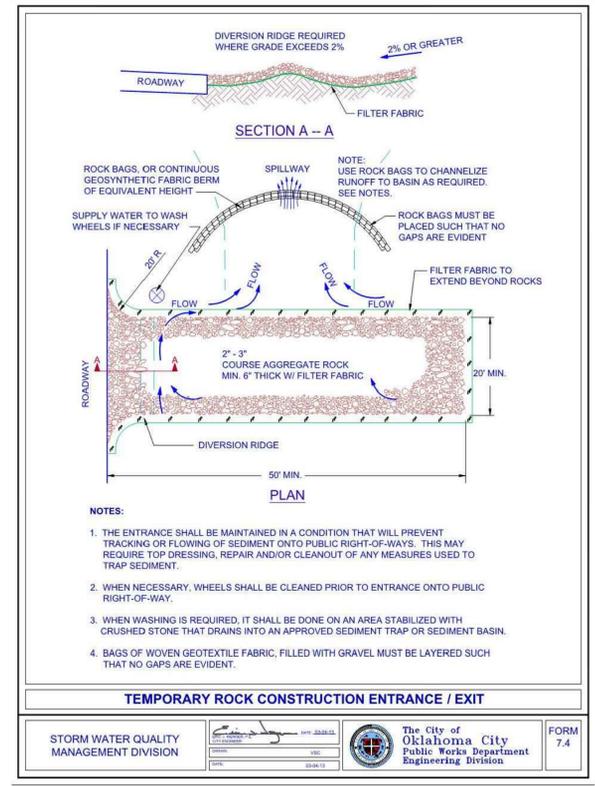
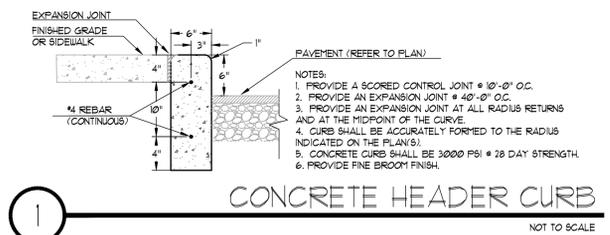
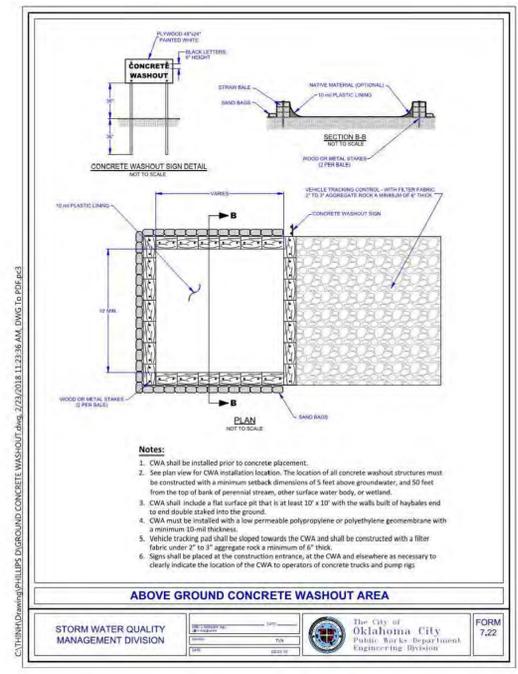
◆ Bredlove Land Planning, Inc. ◆ Landscape Architects ◆ Civil Engineers ◆ 15 Simpson Street NW Atlanta, GA 30308 P: 770-483-1173 www.landplanning.net

# SEED PREPARATION AND INSTALLATION NOTES:

11. SUBMITTALS:
  - A. SUBMIT PRODUCT DATA FOR ALL GRASSING MATERIALS, INCLUDING BUT NOT LIMITED TO:
    1. GENERAL DISTURBED AREAS HYDROSEED/MULCH MIX (STATE WHETHER COOL SEASON OR WARM SEASON MIX)
    2. MEADOW MIX HYDROSEED/MULCH
    3. LIME, FERTILIZER AND OTHER SOIL AMENDMENTS
  - B. CONTRACTOR QUALIFICATIONS: SUBMIT EVIDENCE OF QUALIFICATIONS PRIOR TO WORK.
  - C. MANUFACTURER'S CERTIFICATES: FOR EACH SOIL APPLICATION (INCLUDE SPECIES).
  - D. TESTING: COPIES OF SOIL LAB TEST RESULTS SHOWING RECOMMENDED AMENDMENTS AND APPLICATION RATES BASED ON SPECIFIC.
12. SITE CONDITIONS
  - A. TAKE ALL NECESSARY PRECAUTIONS IN BRINGING EQUIPMENT ON TO AND OFF OF THE SITE AND PROTECTING CURBS, WALKS, PAVING, STEPS, TREES & SHRUBS, AND ANY OTHER EXISTING CONSTRUCTION SITE DURING HYDROSEEDING AND GRASSING WORK.
  - B. ESTABLISH GRASS IN ALL AREAS DISTURBED BY CONSTRUCTION NOT REQUIRED TO BE DEVELOPED OTHERWISE.
13. HYDROSEED EQUIPMENT
  - A. HYDROSEEDING EQUIPMENT SHALL HAVE A BUILT IN MECHANICAL AGITATING SYSTEM TO MAINTAIN A HOMOGENEOUS MIXTURE OF MULCH, SEED, LIME, AND FERTILIZER FOR EACH 50 GALLONS OF WATER.
  - B. HYDROSEED / MULCH MIX COMPONENTS FOR NATIVE SEED MIXES:
    1. NATIVE SEED MIXTURES AS SPECIFIED OR SHOWN.
    2. WOOD CELLULOSE MULCH OR WOOD PULP APPLIED AT A RATE OF 2000 LBS/ACRE. SUBSTITUTE BONDED FIBER MATRIX MULCH APPLIED AT A RATE OF 3500 LBS PER ACRE WHEN SPECIFICALLY SHOWN ON THE PLANS.
    3. FERTILIZER: APPLY PHOSPHOROUS (P) AND POTASSIUM (K) NUTRIENTS AT THE RATIOS AND RATES AS RECOMMENDED BY SOIL TEST(S), HOWEVER IN NO CASE EXCEED 500 LBS/AC/YR OF A 0-10-10 COMMERCIAL GRADE. DO NOT APPLY NITROGEN TO NATIVE SEED MIX AREAS.
    4. FINELY GROUND FAST ACTING LIME (95% PASSING NO. 100 SIEVE) APPLIED AT A RATE OF 80 LBS/ACRE IF SOIL PH IS LESS THAN 5.5, OR NO SOIL ANALYSIS IS PERFORMED.
14. SEED BED PREPARATION & SOIL TESTING
  - A. FOR GENERAL AREAS WITH REMOVED TOPSOIL OR INSUFFICIENT TOPSOIL AND SLOPES 3H:1V, AND FLATTER:
    1. LOOSEN SUBGRADE AS NECESSARY TO A DEPTH NO LESS THAN 4 TO 6 INCHES ACHIEVING COMPACTION LEVELS NO GREATER THAN 80% OF STANDARD PROCTOR FIXING ANY TOPSOIL AND SOIL ADDITIVES INTO THE LOOSENED SUBGRADE.
    2. SPREAD 42 INCHES OF TOPSOIL EVENLY OVER DISTURBED AREAS AND MIX ALONG WITH OTHER INITIALS SOIL AMENDMENTS INTO THE LOOSENED SUBGRADE.
    3. DO NOT APPLY TOPSOIL OR COMPOST IN A FROZEN OR MDDY CONDITION. PROVIDE POSITIVE DRAINAGE IN ALL CASES.
  - B. FOR AREAS WHERE THE TOPSOIL HAS NOT BEEN REMOVED:
    1. SCARIFIED, SMOOTH, AND REMOVE LARGE STICKS, STONES (#4") AND ALL RUBBISH.
  - C. FOR GENERAL AREAS, STEEPER THAN 3H:1V
    1. LOOSEN SOIL TO A PRACTICAL DEPTH BY SCARIFYING, PLOWING AS PRACTICAL, DRAGGING A SPIKED CHAIN, WALK THE SURFACE WITH CLEATED EQUIPMENT OR F# SHOWN BY MAKING BERRATED CUTS. SPREAD 2" OF TOPSOIL STARTING AT THE TOP OF SLOPE ONLY IF THE SURFACE IS PREPARED WITH SERATED CUTS.
  - D. PERFORM SOIL TEST OF THE UPPER 4 TO 6 INCHES OF MIXED SUBGRADE AND TOPSOIL TO DETERMINE APPLICATION RATES OF LIME, FERTILIZER, AND OTHER AMENDMENTS. SOIL TESTS MAY BE PERFORMED BY COUNTY EXTENSION OFFICES, UNIVERSITY LABORATORIES OR OTHER LABORATORIES MUTUALLY AGREED BY THE DESIGN PROFESSIONAL AND CONTRACTOR.
  - E. APPLY 1 TON OF LIME PER ACRE TO SEEDBED, OR AS OTHERWISE NEEDED TO INCREASE PH TO BETWEEN 6.0 AND 6.5.
  - F. APPLY ANY ADDITIONAL FERTILIZER THAN SHOWN OR PROPOSED IN HYDROSEED MIX AT THE RECOMMENDED RATES FOR GRASSING AREAS AS DETERMINED BY A SOIL ANALYSIS NOT TO EXCEED 1500 LBS PER ACRE PER YEAR OF 6-12-12 FERTILIZER.
- G. APPLY ADDITIONAL PHOSPHOROUS AND POTASSIUM BASED FERTILIZER AT THE RECOMMENDED RATES FOR GRASSING AREAS AS DETERMINED BY A SOIL ANALYSIS. DO NOT APPLY NITROGEN TO NATIVE GRASS MIXES. MAXIMUM ADDITIONAL FERTILIZER FOR NATIVE GRASS AREAS IS 1500 LBS PER ACRE PER YEAR OF 0-10-10 FERTILIZER.
- H. SCARIFY OR TILL SOIL TO A DEPTH OF 6 INCHES, MIXING ANY LIME, FERTILIZER AND OTHER AMENDMENTS. REMOVE STICKS, STONES AND RUBBISH FROM SURFACE.
- J. PERFORM FINISH GRADING TO ACHIEVE SMOOTH CONTOURS AND MEET FINISH GRADES SHOWN ON THE PLANS, WITH ALLOWANCES MADE FOR SETTLEMENT AND SOIL THICKNESS WHERE APPLICABLE. FINISH SURFACE TEXTURES AS FOLLOWS:
  1. SMOOTH THE FINAL SURFACE ON AREAS 4H:1V OR FLATTER.
  2. PROVIDE SURFACE GROOVES WITH A TRACKED VEHICLE ON SLOPES EXCEEDING 4H:1V. SURFACE GROOVES ARE PERPENDICULAR TO THE FALL LINE OF THE SLOPE.
- K. MAINTENANCE FOR NATIVE OR NATIVE MEADOW MIX GRASS MIX AREAS:
  - A. RESEED AND WATER AREAS THAT DO NOT SHOW SATISFACTORY GROWTH WITHIN 45 DAYS OF PLANTING.
  - B. NATIVE MIX AREAS SHALL BE FULLY ESTABLISHED AT THE END OF THE 2ND GROWING SEASON WITH GRASS HEIGHTS OVER 15 FEET AND SCATTERED BARE SPOTS WITH NO VEGETATION ARE LIMITED TO NO MORE THAN 4 SQUARE FEET IN SIZE ACCOUNT FOR NO MORE THAN 10% OF THE TOTAL AREA.
  - C. DO NOT PROVIDE GENERAL MOWING DURING THE FIRST 2 GROWING SEASONS. PROVIDE ONLY SPOT TREATMENTS OF MOWING, APPLICATIONS OF AN APPROPRIATE HERBICIDE OR MECHANICAL REMOVAL AS REQUIRED TO CONTROL WEEDS AND INVASIVE PLANTS THAT WOULD INTERFERE WITH ESTABLISHMENT OF THE NATIVE MIX.
  - D. LONG TERM MAINTENANCE:
    1. AFTER NATIVE OR NATIVE MEADOW MIXES ARE ESTABLISHED- MOW TO A HEIGHT OF 6"-12" HEIGHT, WHEN DORMANT, ON A 3 YEAR ROTATION. DO NOT MOW DISC, OR BURN MORE THAN 1/3 OF AN ESTABLISHED AREA IN ANY ONE YEAR PERIOD.
    2. CONTINUE SPOT REMOVAL OR CONTROL OF INVASIVE VEGETATION AS NEEDED EACH GROWING SEASON. REMOVE SUCH VEGETATION PRIOR TO IT GOING TO SEED.
  - E. CONTRACTOR TO PROVIDE MAINTENANCE ON NATIVE OR NATIVE MEADOW MIX GRASS AREAS THROUGH THE END OF THE 2ND GROWING SEASON ON NO MORE FREQUENTLY THAN A MONTHLY BASIS.
- L. CLEAN UP:
  - A. REMOVE ANY SOIL, MULCH OR SIMILAR MATERIAL WHICH HAS BEEN BROUGHT ONTO PAVED AREAS. UPON COMPLETION OF THE PLANTING, REMOVE ALL EXCESS SOIL, STONES, AND DEBRIS WHICH HAS NOT PREVIOUSLY BEEN CLEANED UP AS DIRECTED BY THE DESIGN PROFESSIONAL.

# SEED MIX PRODUCT:

- WILDLIFE- PRAIRIE BUFFET™ SEED MIX  
BY GRASSLANDER  
3612 E 650 RD  
HENNESSEY, OK  
73142  
OR APPROVED EQUAL.
- WILDLIFE-PRAIRIE BUFFET CONTENTS:
- NATIVE WILDFLOWERS
- PLAINS COREOPSIS
  - LADY DAISY
  - BLACKEYED SUSAN
  - LANCELEAF COREOPSIS
  - PENNSYLVANIA SMARTWEED
  - HEALTH ASTER
  - SALT MARSH FLEABANE
  - STANDING CYPRESS
  - DRUMMOND PHLOX
  - MAPLELEAF DANDELION
  - PITCHER SAGE
  - SCARLET SAGE
  - HEALTHY BLUE SAGE
  - INDIAN BLANKET
  - TALL GAYFEATHER
  - THICKSPIKE GAYFEATHER
  - ENGLISHMAN DAISY
  - GREYHEAD CONEFLOWER
  - CLASPING CONEFLOWER
  - HEXAGON HAT CONEFLOWER
  - PRAIRIE CONEFLOWER
  - COMPASS PLANT
  - BLUE FLAG
  - LEMON MINT
  - AMERICAN BASKETFLOWER
  - WILD BERGAMOT
  - SHOBY EVENING PRIMROSE
  - COMMON EVENING PRIMROSE
  - FOURPOINT EVENING PRIMROSE
  - DAISY FLEABANE
  - BALDWIN IRONWEED
  - QUEEN'S DELIGHT
  - DOUNT GOLDENROD
  - CANADA GOLDENROD
  - BUTTERFLY MILKWEED
  - COMMON MILKWEED
  - BROADLEAF MILKWEED
  - BIENNIAL WILD GARLIC
  - SAND LILY
  - CLAYT'S WEED
  - WHITE BEARDSTONGUE
  - FOXGLOVE
  - GREENTHREAD
  - ROSE MTL BEE-PLANT
  - CARDINAL FLOWER
- WARM SEASON GRASSES
- BIG BLUESTEM
  - LITTLE BLUESTEM
  - BUSHY BLUESTEM
  - BROOMSEDGE BLUESTEM
  - INDIAN GRASS
  - SUTCHGRASS
  - SIDE-OATS GRAMA
  - BLUE GRAMA
  - EASTERN GAMA-GRASS
  - SAND LOVEGRASS
  - GREEN SPRANGLETOP
  - TALL DROPSEED
  - SAND DROPSEED
  - PURPLETOP
  - PURPLE THREE-AUN
  - ALKALI SACATON
- COOL SEASON GRASSES
- WESTERN WHEATGRASS
  - VIRGINIA WILDRYE
  - CANADA WILDRYE
- NATIVE LEGUMES
- ILLINOIS BUNDFLOWER
  - SHOBY PARTRIDGEPEA
  - PURPLE PRAIRIECLOVER
  - WHITE PRAIRIECLOVER
  - ROUNDHEAD LESPEDEZA
  - SHRUBS LESPEDEZA
  - LEADPLANT
  - SILKY PRAIRIECLOVER
  - CATCLAW SENSITIVE BRIAR
  - BLUE WILD INDIGO



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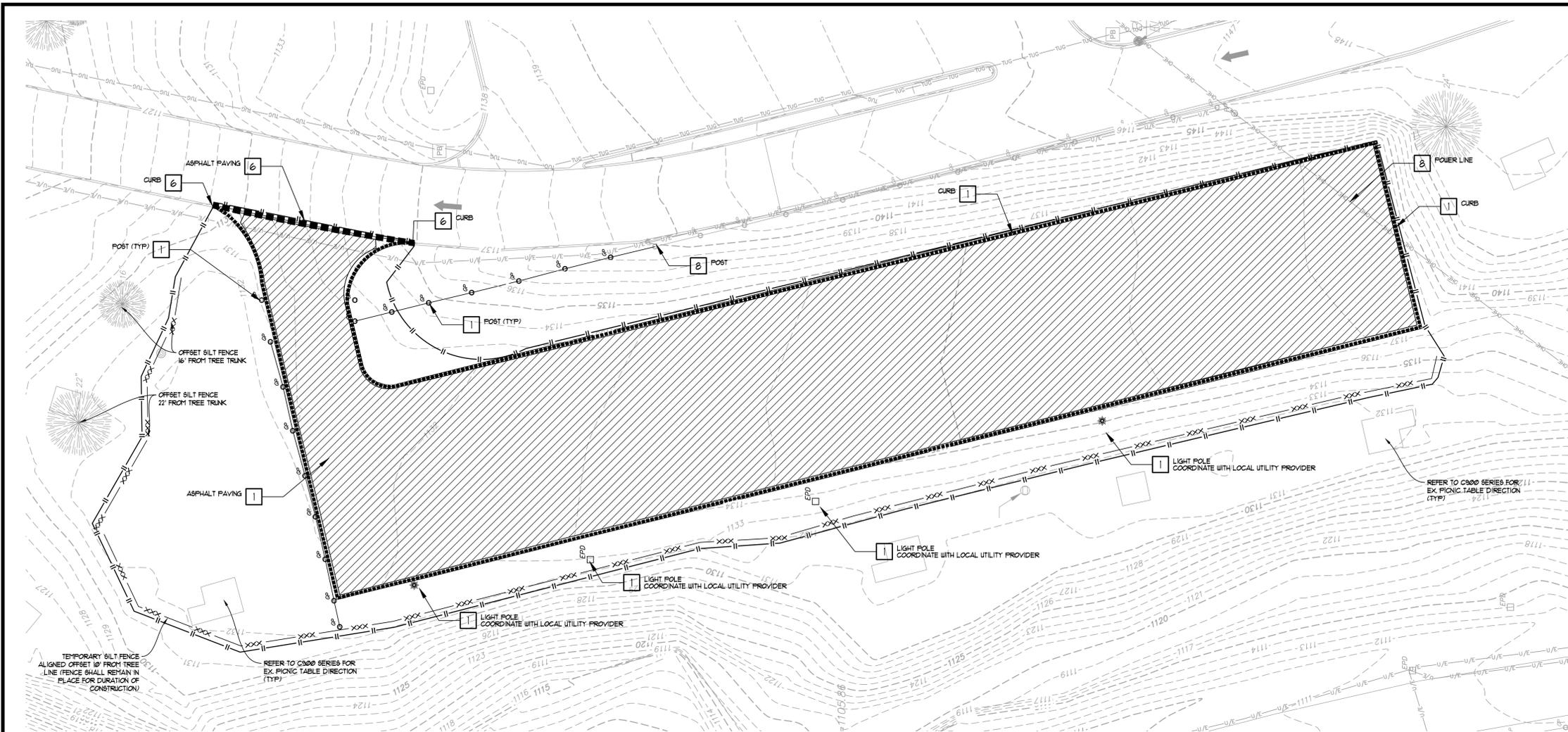
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CHECKED BY: AW

**PROJECT 2 - CONSTRUCTION DETAILS**

**C-220**

SHEET#



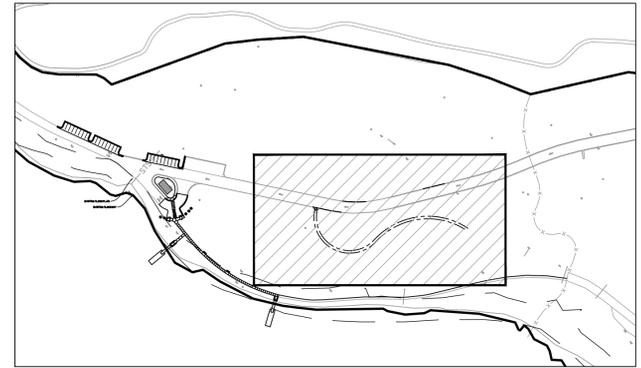
SITE PLAN LEGENDS	
<b>LAYOUT &amp; STAKING</b>	<b>SITE UTILITIES</b>
<ul style="list-style-type: none"> <li>Coordinate Point</li> <li>Point of Beginning</li> <li>Detail Reference (Detail Sheet)</li> <li>Handrail and/or Guardrail</li> <li>G.DOT. TYPE 4010 VEHICULAR GUARDRAIL</li> </ul>	<ul style="list-style-type: none"> <li>Domestic Water</li> <li>Fire Main</li> <li>Fire Hydrant</li> <li>Post Indicator Valve</li> <li>Concrete Thrust Blocking</li> <li>Water Valve</li> <li>Gravity Sanitary Sewer</li> <li>Force Main</li> </ul>
<b>PAVEMENT MARKINGS</b>	<b>GENERAL</b>
<ul style="list-style-type: none"> <li>Parking Arrow - Straight, White</li> <li>Parking Arrow - Turn, White</li> <li>Painted Crosswalk - White</li> <li>ADA Parking Access Aisle - Blue</li> <li>Painted Word "STOP" - White</li> <li>Painted Word "ONLY" - White</li> </ul>	<ul style="list-style-type: none"> <li>Tree Protection Fence</li> <li>Limits of Construction</li> <li>Existing Tree to be Removed</li> </ul>
<b>SIGNAGE</b>	<b>STORM DRAINAGE</b>
<ul style="list-style-type: none"> <li>Sign</li> <li>Stop Sign - MUTCD STANDARD R1-1</li> <li>Yield Sign - MUTCD STANDARD R1-2</li> <li>No Parking Sign - MUTCD STANDARD R8-3a</li> <li>Do Not Enter Sign - MUTCD STANDARD R5-1</li> <li>One Way Sign - MUTCD STANDARD R6-2</li> </ul>	<ul style="list-style-type: none"> <li>Storm Structure Label</li> <li>Headwall</li> <li>Flared End Section - GDOT STANDARD 1022</li> <li>Safety End Section - GDOT STANDARD 1022</li> <li>Catch Basin / Grate Inlet</li> <li>Junction Box</li> <li>Drop Inlet - Pedestal Top</li> <li>Curb Inlet - GDOT STANDARD 1019a w/ Type "E" Hood</li> <li>Single-Wing Catch Basin - GDOT STANDARD 1033D</li> <li>Double-Wing Catch Basin - GDOT STANDARD 1034D</li> <li>Outlet Control Structure</li> <li>Top of Structure Elevation</li> <li>Throat of Structure Elevation</li> <li>High-Density Polyethylene Pipe</li> <li>Aluminized Steel Type 2 Pipe</li> <li>AS17 Spiral Rib CMP (Manholes &amp; Manholes, Ultralou (TM) or Approved Equal)</li> <li>Ductile Iron Pipe</li> <li>Reinforced Concrete Pipe (Class IV or V) w/ Rubber O-Ring Gasket</li> <li>Polyvinyl Chloride Pipe (Schedule 40)</li> <li>Invert Elevation - In</li> <li>Invert Elevation - Out</li> <li>Hydraulic Grade Line</li> </ul>
<b>SITE GRADING</b>	
<ul style="list-style-type: none"> <li>Proposed Intermediate Contours</li> <li>Proposed Index Contours</li> <li>Spot Elevation</li> <li>Berm</li> <li>High Point</li> <li>Low Point</li> <li>Flow Direction</li> <li>Swale</li> <li>Slope Indicator (H/V)</li> <li>Finished Grade at Top of Wall</li> <li>Finished Grade at Bottom of Wall</li> <li>Top of Curb Elevation</li> </ul>	

### 24-HOUR ES&PC CONTACT

CONTACT NAME: TOMMY BRYANT  
 CONTACT TITLE: FACILITY MANAGER  
 REPRESENTING: OKLAHOMA CITY ZOO  
 EMAIL ADDRESS: TBRYANT@OKCZOO.COM  
 24-HOUR PHONE NUMBER: 405-425-0101

### DEMOLITION LEGEND

1	TO BE REMOVED BY THE CONTRACTOR OR AT THE CONTRACTOR'S EXPENSE
2	TO BE REMOVED BY THE CONTRACTOR OR AT THE CONTRACTOR'S EXPENSE AND TURNED OVER TO THE OWNER FOR REUSE
3	TO BE REMOVED BY OWNER
4	RELOCATE AS NECESSARY (RAIN) AND/OR ADJUST AS NECESSARY AT THE CONTRACTOR'S EXPENSE
5	TO BE REMOVED, RELOCATED, MODIFIED OR ADJUSTED BY OTHERS
6	SAW CUT LINE
7	TO BE REMOVED BY CONTRACTOR OR AT THE CONTRACTOR'S EXPENSE AND RETAINED FOR REUSE AT THIS SITE
8	SAVE & PROTECT DURING CONSTRUCTION
[Pattern]	CONCRETE WALKS, CONCRETE STAIRS, CONCRETE SLOPS OR OTHER CONC. PAVEMENT REMOVAL LIMITS (DEMOLISH & REMOVE PAVEMENTS TO SUBGRADE)
[Pattern]	ASPHALT PAVEMENT REMOVAL LIMITS (DEMOLISH & REMOVE PAVEMENTS TO SUBGRADE)
[Pattern]	GRAVEL REMOVAL LIMITS (DEMOLISH & REMOVE TO SUBGRADE)
[Pattern]	BUILDING STRUCTURE DEMOLITION LIMITS (CONTRACTOR SHALL COORDINATE DEMOLITION OF ALL BUILDING UTILITIES WITH ARCHITECT & MEP)
[Pattern]	CONCRETE CURB AND GUTTER REMOVAL (DEMOLISH AND REPAIR TO NEAREST CONSTRUCTION JOINT)
[Pattern]	LIMITS OF CONSTRUCTION ACTIVITY
[Pattern]	TREE REMOVAL AREA
[Pattern]	TREE SAVE AREA
[Symbol]	EXISTING TREE TO BE REMOVED



KEY PLAN

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 OKLAHOMA CITY, OK 73111

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Landscape Architects

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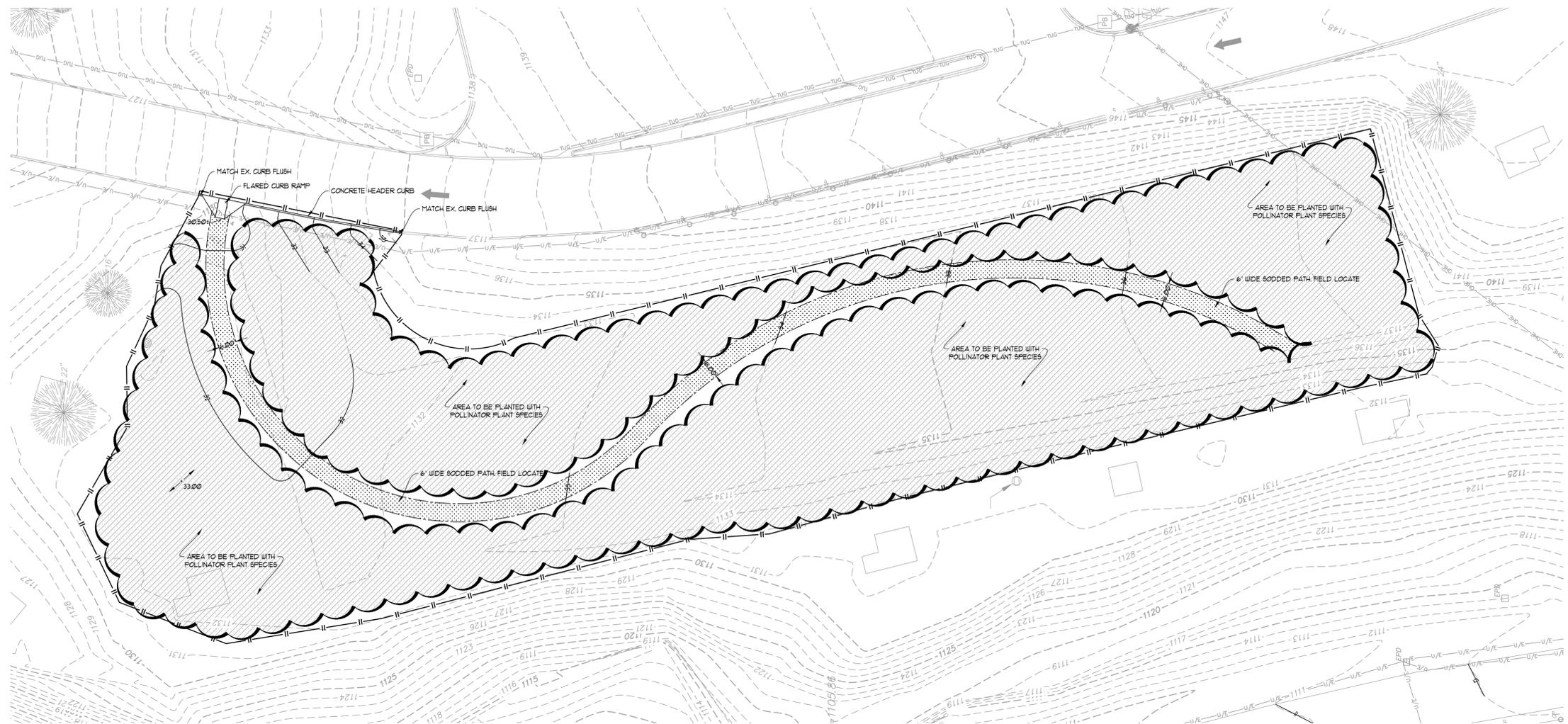
BLP, INC. PROJECT NO: 19069  
 DATE: 03-22-2019  
 DRAWING BY: LF/RW/AW  
 CHECKED BY: AW

**PROJECT 3 - DEMOLITION & REMOVAL PLAN**

TITLE

C-300

SHEET#

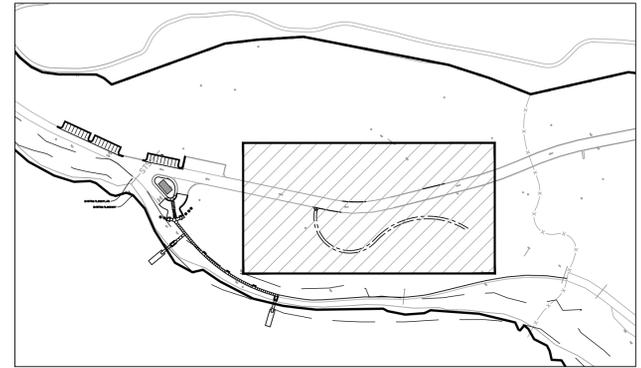


SITE PLAN LEGENDS	
<b>LAYOUT &amp; STAKING</b>	<b>SITE UTILITIES</b>
<ul style="list-style-type: none"> <li>Coordinate Point</li> <li>Point of Beginning</li> <li>Detail Reference (Detail Sheet)</li> <li>Handrail and/or Guardrail</li> <li>G.DOT. TYPE 4010 VEHICULAR GUARDRAIL</li> </ul>	<ul style="list-style-type: none"> <li>Domestic Water</li> <li>Fire Main</li> <li>Fire Hydrant</li> <li>Post Indicator Valve</li> <li>Concrete Thrust Blocking</li> <li>Water Valve</li> <li>Gravity Sanitary Sewer</li> <li>Force Main</li> </ul>
<b>PAVEMENT MARKINGS</b>	<b>GENERAL</b>
<ul style="list-style-type: none"> <li>Parking Arrow - Straight, White</li> <li>Parking Arrow - Turn, White</li> <li>Painted Crosswalk - White</li> <li>ADA Parking Access Aisle - Blue</li> <li>Painted Word "STOP" - White</li> <li>Painted Word "ONLY" - White</li> </ul>	<ul style="list-style-type: none"> <li>Tree Protection Fence</li> <li>Limits of Construction</li> <li>Existing Tree to be Removed</li> </ul>
<b>SIGNAGE</b>	<b>STORM DRAINAGE</b>
<ul style="list-style-type: none"> <li>Sign</li> <li>Stop Sign - MUTCD STANDARD R1-1</li> <li>Yield Sign - MUTCD STANDARD R1-2</li> <li>No Parking Sign - MUTCD STANDARD R8-3a</li> <li>Do Not Enter Sign - MUTCD STANDARD R5-1</li> <li>One Way Sign - MUTCD STANDARD R6-2</li> </ul>	<ul style="list-style-type: none"> <li>Storm Structure Label</li> <li>Headwall</li> <li>Flared End Section - GDOT STANDARD 1022</li> <li>Safety End Section - GDOT STANDARD 1022</li> <li>Catch Basin / Grate Inlet</li> <li>Junction Box</li> <li>Drop Inlet - Pedestal Top</li> <li>Curb Inlet - GDOT STANDARD 1013a w/ Type E Hood</li> <li>Single-Wing Catch Basin - GDOT STANDARD 1033D</li> <li>Double-Wing Catch Basin - GDOT STANDARD 1034D</li> <li>Outlet Control Structure</li> <li>Top of Structure Elevation</li> <li>Throat of Structure Elevation</li> <li>High-Density Polyethylene Pipe</li> <li>Aluminized Steel Type 2 Pipe</li> <li>AS72 Spiral Rib CMP (Manning's n=0.015) Ultra-Low (TL) or Approved Equal Ductile Iron Pipe</li> <li>Reinforced Concrete Pipe (Class IV or V) w/ Rubber O-Ring Gasket</li> <li>Polyvinyl Chloride Pipe (Schedule 40)</li> <li>Invert Elevation - In</li> <li>Invert Elevation - Out</li> <li>Hydraulic Grade Line</li> </ul>
<b>SITE GRADING</b>	
<ul style="list-style-type: none"> <li>Proposed Intermediate Contours</li> <li>Proposed Index Contours</li> <li>Spot Elevation</li> <li>Berm</li> <li>High Point</li> <li>Low Point</li> <li>Flow Direction</li> <li>Swale</li> <li>Slope Indicator (H/V)</li> <li>Finished Grade at Top of Wall</li> <li>Finished Grade at Bottom of Wall</li> <li>Top of Curb Elevation</li> </ul>	

**NOTE: ALL LANDSCAPING SHALL BE INSTALLED PER OKLAHOMA CITY CODES**

**24-HOUR ES&PC CONTACT**

CONTACT NAME: TOMMY BRYANT  
 CONTACT TITLE: FACILITY MANAGER  
 REPRESENTING: OKLAHOMA CITY ZOO  
 EMAIL ADDRESS: TBRYANT@OKCZOO.COM  
 24-HOUR PHONE NUMBER: 405-425-0201



**KEY PLAN**

DO NOT DUPLICATE DRAWINGS WITHOUT WRITTEN PERMISSION

**CAUTION**

THE UTILITIES SHOWN ARE SHOWN FOR THE CONTRACTOR'S CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THESE PLANS. THE DESIGN PROFESSIONAL ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS SHOWN AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATIONS OF UTILITIES WITHIN THE LIMITS OF THE WORK. DAMAGES TO EXISTING UTILITIES BY THE CONTRACTOR FROM HIS/HER OPERATIONS, SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

CONTRACTOR SHALL BE RESPONSIBLE TO SECURE THE SERVICES OF A PRIVATE UTILITY LOCATOR FIRM DURING THE ENTIRE COURSE OF CONSTRUCTION. CONTRACTOR SHALL PAY FOR SAID SERVICES. CONTRACTOR SHALL IMMEDIATELY REPAIR ALL UTILITIES DAMAGED BY CONSTRUCTION ACTIVITIES, AT NO ADDITIONAL COST TO THE OWNER.

CONTRACTOR SHALL BE RESPONSIBLE FOR COMPACTION OF BACKFILL OF ALL UTILITY TRENCHES WITHIN SITE WORK LIMITS. THIS INCLUDES TRENCHES DUG AND BACKFILLED BY LOCAL UTILITIES, SUCH AS POWER, GAS, TELEPHONE, ETC. CONTRACTOR SHALL PROVIDE ADDITIONAL BACKFILL AND COMPACTION AS NECESSARY, IF SETTLEMENT OCCURS.

**OKIE 811** Know what's below. Call before you dig. Dial 811 Or Call 1-800-522-OKIE

15 Simpson Street NW Atlanta, GA 30308 P: 770-483-1173 www.landplanning.net

**CONSULTANT**

**SEAL**

**OKLAHOMA CITY ZOO LAKE PARK IMPROVEMENTS OKLAHOMA CITY, OK 73111**

**OKC PERMIT NUMBER: BLD-2020-00912**

**REVISIONS**

No.	DATE	DESCRIPTION
1		
2		
3		
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5		
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**RELEASED FOR CONSTRUCTION**

**SUBMITTALS**

No.	DATE	DESCRIPTION
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5	07-17-20	PERMIT RESUBMITTAL SET
6		
7		
8		

BLP, INC. PROJECT NO: 19069  
 DATE: 03-22-2019  
 DRAWING BY: LF/RW/AW  
 CHECKED BY: AW

**PROJECT 3 - LAYOUT PLAN**

**C-310**

**TITLE SHEET#**

**Bredlove Land Planning, Inc.**

**Civil Engineers**

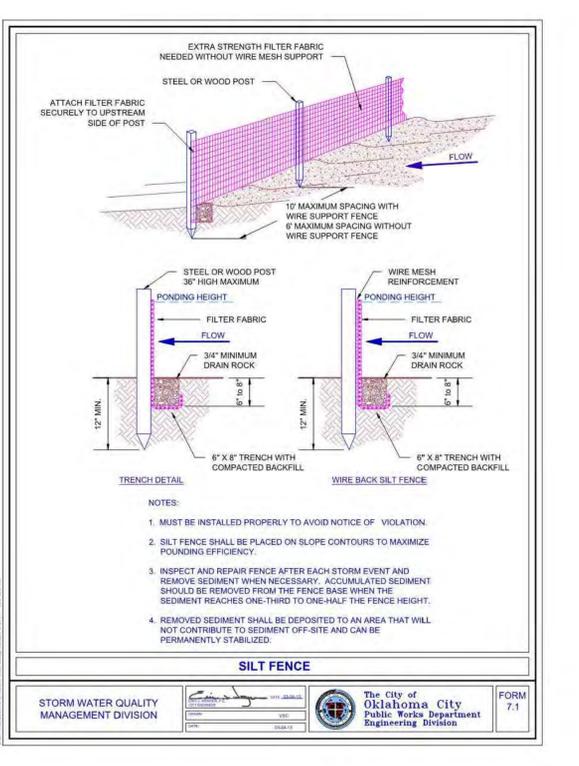
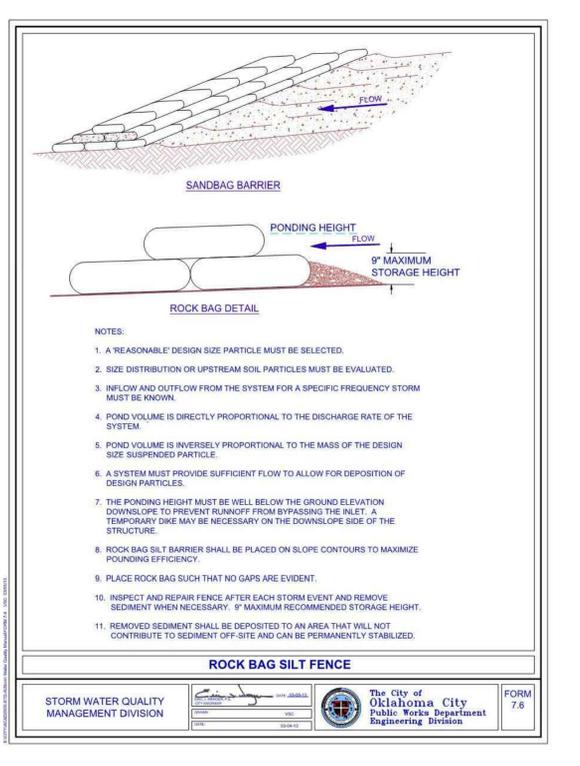
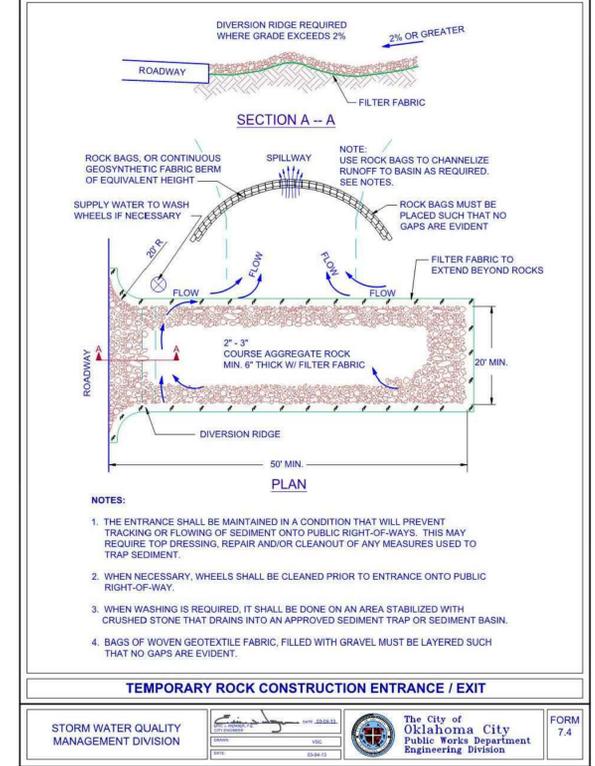
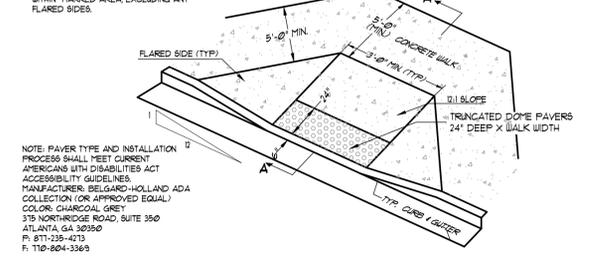
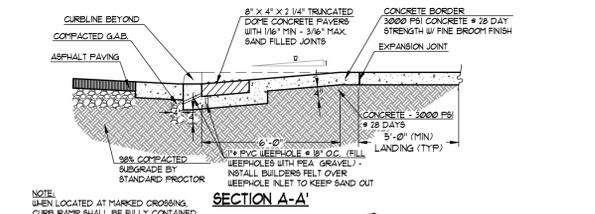
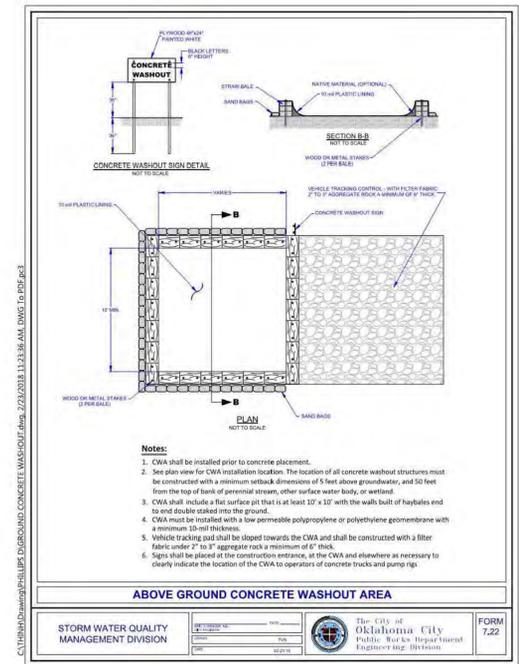
**Landscape Architects**

# SEED PREPARATION AND INSTALLATION NOTES:

- 1. SUBMITTALS
  - A. SUBMIT PRODUCT DATA FOR ALL GRASSING MATERIALS, INCLUDING, BUT NOT LIMITED TO:
    - GENERAL DISTURBED AREAS HYDROSEED/MULCH MIX (STATE WHETHER COOL SEASON OR WARM SEASON MIX)
    - MEADOW MIX HYDROSEED/MULCH
    - LIME, FERTILIZER AND OTHER SOIL AMENDMENTS
  - CONTRACTOR QUALIFICATIONS: SUBMIT EVIDENCE OF QUALIFICATIONS PRIOR TO WORK.
  - MANUFACTURER'S CERTIFICATES: FOR EACH SOIL APPLICATION (INCLUDE SPECIES).
  - TESTING: COPIES OF SOIL LAB TEST RESULTS SHOWING RECOMMENDED AMENDMENTS AND APPLICATION RATES BASED ON SPECIFIC
- 2. SITE CONDITIONS
  - A. TAKE ALL NECESSARY PRECAUTIONS IN BRINGING EQUIPMENT ON TO AND OFF OF THE SITE AND PROTECTING CURBS, WALKS, PAVING, TREES & SHRUBS, AND ANY OTHER EXISTING CONSTRUCTION SITE DURING HYDROSEEDING AND GRASSING WORK.
  - B. ESTABLISH GRASS IN ALL AREAS DISTURBED BY CONSTRUCTION NOT REQUIRED TO BE DEVELOPED OTHERWISE IN ALL CASES.
- 3. HYDROSEED EQUIPMENT
  - A. HYDROSEEDING EQUIPMENT SHALL HAVE A BUILT IN MECHANICAL AGITATING SYSTEM TO MAINTAIN A HOMOGENEOUS MIXTURE OF MULCH, SEED, LIME, AND FERTILIZER FOR EACH 150 GALLONS OF WATER.
  - B. HYDROSEED / MULCH MIX COMPONENTS FOR NATIVE SEED MIXES:
    - NATIVE SEED MIXTURES AS SPECIFIED OR SHOWN.
    - WOOD CELLULOSE MULCH OR WOOD PULP APPLIED AT A RATE OF 2000 LBS/ACRE. SUBSTITUTE BONDED FIBER MATRIX MULCH APPLIED AT A RATE OF 3500 LBS PER ACRE WHEN SPECIFICALLY SHOWN ON THE PLANS.
    - FERTILIZER: APPLY PHOSPHOROUS (P) AND POTASSIUM (K) NUTRIENTS AT THE RATIOS AND RATES AS RECOMMENDED BY SOIL TEST(S). HOWEVER IN NO CASE EXCEED 1500 LBS/AC/yr OF A 0-10-10 COMMERCIAL GRADE. DO NOT APPLY NITROGEN TO NATIVE SEED MIX AREAS.
    - FINELY GROUND FAST ACTING LIME (95% PASSING NO. 100 SIEVE) APPLIED AT A RATE OF 80 LBS/ACRE IF SOIL PH IS LESS THAN 5.5, OR IF NO SOIL ANALYSIS IS PERFORMED.
- 4. SEED BED PREPARATION & SOIL TESTING
  - A. FOR GENERAL AREAS WITH REMOVED TOPSOIL OR INSUFFICIENT TOPSOIL AND SLOPES 3:1V, AND FLATTER:
    - LOOSEN SUBGRADE AS NECESSARY TO A DEPTH NO LESS THAN 4 TO 6 INCHES ACHIEVING COMPACTION LEVELS NO GREATER THAN 80% OF STANDARD PROCTOR MIXING ANY TOPSOIL AND SOIL ADDITIVES INTO THE LOOSENED SUBGRADE.
    - SPREAD 42 INCHES OF TOPSOIL, EVENLY OVER DISTURBED AREAS AND MIX ALONG WITH OTHER INITIALS SOIL AMENDMENTS INTO THE LOOSENED SUBGRADE.
    - DO NOT APPLY TOPSOIL OR COMPOST IN A FROZEN OR MUDDY CONDITION. PROVIDE POSITIVE DRAINAGE IN ALL CASES.
  - B. FOR AREAS WHERE THE TOPSOIL HAS NOT BEEN REMOVED:
    - SCARIFY, SMOOTH, AND REMOVE LARGE STICKS, STONES (>4") AND ALL RUBBISH.
  - C. FOR GENERAL AREAS, STEEPER THAN 3:1V:
    - LOOSEN SOIL TO A PRACTICAL DEPTH BY SCARIFYING, PLOWING AS PRACTICAL, DRAGGING A SPIKED CHAIN, WALK THE SURFACE WITH CLEATED EQUIPMENT OR IF SHOWN BY MAKING SERRATED CUTS. SPREAD 2" OF TOPSOIL STARTING AT THE TOP OF SLOPE ONLY IF THE SURFACE IS PREPARED WITH SERRATED CUTS.
  - D. PERFORM SOIL TEST OF THE UPPER 4 TO 6 INCHES OF MIXED SUBGRADE AND TOPSOIL TO DETERMINE APPLICATION RATES OF LIME, FERTILIZER, AND OTHER AMENDMENTS. SOIL TESTS MAY BE PERFORMED BY COUNTY EXTENSION OFFICES, UNIVERSITY LABORATORIES OR OTHER LABORATORIES MUTUALLY AGREED BY THE DESIGN PROFESSIONAL AND CONTRACTOR.
  - E. APPLY 1 TON OF LIME PER ACRE TO SEEDBED, OR AS OTHERWISE NEEDED TO INCREASE PH TO BETWEEN 6.0 AND 6.5.
  - F. APPLY ANY ADDITIONAL FERTILIZER THAN SHOWN OR PROPOSED IN HYDROSEED MIX AT THE RECOMMENDED RATES FOR GRASSING AREAS AS DETERMINED BY A SOIL ANALYSIS NOT TO EXCEED 1500 LBS PER ACRE PER YEAR OF 6-10-10 FERTILIZER.
- 5. APPLY ADDITIONAL PHOSPHOROUS AND POTASSIUM BASED FERTILIZER AT THE RECOMMENDED RATES FOR GRASSING AREAS AS DETERMINED BY A SOIL ANALYSIS. DO NOT APPLY NITROGEN TO NATIVE GRASS MIXES. MAXIMUM ADDITIONAL FERTILIZER FOR NATIVE GRASS AREAS IS 1500 LBS PER ACRE PER YEAR OF 0-10-10 FERTILIZER.
- 6. SCARIFY OR TILL SOIL TO A DEPTH OF 6 INCHES, MIXING ANY LIME, FERTILIZER, AND OTHER AMENDMENTS. REMOVE STICKS, STONES AND RUBBISH FROM SURFACE.
- 7. PERFORM FINISH GRADING TO ACHIEVE SMOOTH CONTOURS AND MEET FINISH GRADES SHOWN ON THE PLANS, WITH ALLOWANCES MADE FOR SETTLEMENT AND SOIL THICKNESS WHERE APPLICABLE. FINISH SURFACE TEXTURES AS FOLLOWS:
  - SMOOTH THE FINAL SURFACE ON AREAS 4:1V OR FLATTER.
  - PROVIDE SURFACE GROOVES WITH A TRACKED VEHICLE ON SLOPES EXCEEDING 4:1V. SURFACE GROOVES ARE PERPENDICULAR TO THE FALL LINE OF THE SLOPE.
- 8. MAINTENANCE FOR NATIVE OR NATIVE MEADOW MIX GRASS MIX AREAS
  - A. RESEED AND WATER AREAS THAT DO NOT SHOW SATISFACTORY GROWTH WITHIN 45 DAYS OF PLANTING.
  - B. NATIVE MIX AREAS SHALL BE FULLY ESTABLISHED AT THE END OF THE 2ND GROWING SEASON WITH GRASS HEIGHTS OVER 15 FEET AND SCATTERED BARE SPOTS WITH NO VEGETATION ARE LIMITED TO NO MORE THAN 4 SQUARE FEET IN SIZE ACCOUNT FOR NO MORE THAN 10% OF THE TOTAL AREA.
  - C. DO NOT PROVIDE GENERAL MOWING DURING THE FIRST 2 GROWING SEASONS. PROVIDE ONLY SPOT TREATMENTS OF MOWING, APPLICATIONS OF AN APPROPRIATE HERBICIDE OR MECHANICAL REMOVAL AS REQUIRED TO CONTROL WEEDS AND INVASIVE PLANTS THAT WOULD INTERFERE WITH ESTABLISHMENT OF THE NATIVE MIX.
  - D. LONG TERM MAINTENANCE:
    - AFTER NATIVE OR NATIVE MEADOW MIXES ARE ESTABLISHED - MOW TO A HEIGHT OF 6-12" HEIGHT, WHEN DORMANT ON A 3 YEAR ROTATION. DO NOT MOW, DISC, OR BURN NOR 1/3 OF AN ESTABLISHED AREA IN ANY ONE YEAR PERIOD.
    - CONTINUE SPOT REMOVAL OR CONTROL OF INVASIVE VEGETATION AS NEEDED EACH GROWING SEASON. REMOVE SUCH VEGETATION PRIOR TO IT GOING TO SEED.
- 9. CONTRACTOR TO PROVIDE MAINTENANCE ON NATIVE OR NATIVE MEADOW MIX GRASS AREAS THROUGH THE END OF THE 2ND GROWING SEASON ON NO MORE FREQUENTLY THAN A MONTHLY BASIS.
- 10. CLEAN UP:
  - A. REMOVE ANY SOIL, MULCH OR SIMILAR MATERIAL WHICH HAS BEEN BROUGHT ONTO PAVED AREAS. UPON COMPLETION OF THE PLANTING, REMOVE ALL EXCESS SOIL, STONES, AND DEBRIS WHICH HAS NOT PREVIOUSLY BEEN CLEANED UP AS DIRECTED BY THE DESIGN PROFESSIONAL.

# SEED MIX PRODUCT:

- WILDLIFE-PRAIRIE BUFFET™ SEED MIX BY GRASSLANDER 5012 E 650 RD HENNESSEY, OK 73142 OR APPROVED EQUAL.
- WILDLIFE-PRAIRIE BUFFET CONTENTS:
- NATIVE WILDFLOWERS
- FLANS COREOPSIS
  - LAZY DAISY
  - BLACKEYED SUSAN
  - LANCELEAF COREOPSIS
  - PENNSYLVANIA SMARTLEED
  - HEATH ASTER
  - SALT MARSH FLEABANE
  - STANDING CYPRESS
  - DRUMMOND PHLOX
  - MAXILLIAN SUNFLOWER
  - FITCHER SAGE
  - SCARLET SAGE
  - MEALY BLUE SAGE
  - INDIAN BLANKET
  - TALL GAITHEATHER
  - THICKSPICE GAITHEATHER
  - ENGLEMANN DAISY
  - GREYHEAD CONEFLOWER
  - CLASPING CONEFLOWER
  - MEXICAN HAT CONEFLOWER
  - FRANCO CONEFLOWER
  - COMPASS PLANT
  - BLUE FLAX
  - LEMON MINT
  - AMERICAN BASKETFLOWER
  - WILD BERGAMOT
  - SHOBY EVENING PRIMROSE
  - COMMON EVENING PRIMROSE
  - FOURPOINT EVENING PRIMROSE
  - DAISY FLEABANE
  - BALDWIN IRONWEED
  - QUEEN'S DELIGHT
  - DOXY GOLDENROD
  - CANADA GOLDENROD
  - BUTTERFLY MILKWEED
  - COMMON MILKWEED
  - BROADLEAF MILKWEED
  - BIENNIAL WILD GUARA
  - SAND LILY
  - CLAMMY WEED
  - WHITE BEARDSTONGUE
  - FOXGLOVE
  - GREEN THREAD
  - ROCKY Mtn. BEEPLANT
  - CARDINAL FLOWER
- WARM SEASON GRASSES
- BIG BLUESTEM
  - LITTLE BLUESTEM
  - BUSHY BLUESTEM
  - BROOKSLEDGE BLUESTEM
  - INDIAN GRASS
  - SWITCHGRASS
  - SIDE-OATS GRAMA
  - BLUE GRAMA
  - EASTERN GAMAGRASS
  - SAND LOVEGRASS
  - GREEN SPRIANGLETOP
  - TALL DROPSPEED
  - SAND DROPSPEED
  - PURPLETOP
  - PURPLE THREE-AIN
  - ALKALI SACATON
- COOL SEASON GRASSES
- WESTERN WHEATGRASS
  - VIRGINIA WILDRYE
  - CANADA WILDRYE
- NATIVE LEGUMES
- ILLINOIS BUNDELOVER
  - SHOBY PASTUREPEA
  - PURPLE PRAIRIECLOVER
  - WHITE PRAIRIECLOVER
  - ROUNDHEAD LESPEDEZA
  - STEVES LESPEDEZA
  - LEADPLANT
  - SILKY PRAIRIECLOVER
  - CATCLAW SENSITIVE BIKARI
  - BLUE WILD INDIGO



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Civil Engineers

Landscape Architects

Bredlove Land Planning, Inc.

CONSULTANT

SEAL

OKLAHOMA CITY ZOO LAKE PARK IMPROVEMENTS OKLAHOMA CITY, OK 73111

OKC PERMIT NUMBER: BLD-2020-00912

REVISIONS		
No.	DATE	DESCRIPTION

**RELEASED FOR CONSTRUCTION**

SUBMITTALS		
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6		
7		
8		

BLP, INC. PROJECT NO: 19069

DATE: 03-22-2019

DRAWING BY: LF/RW/AW

CHECKED BY: AW

**PROJECT 3 - CONSTRUCTION DETAILS**

**C-320**

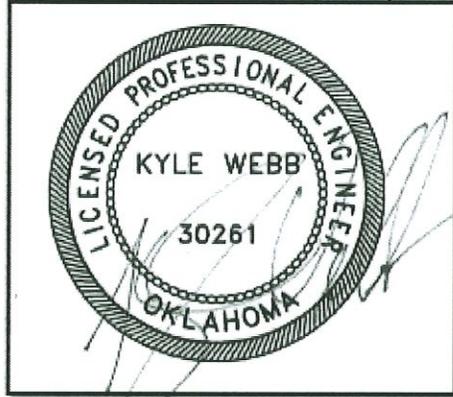
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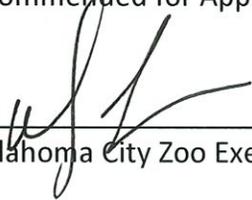
THE OKLAHOMA CITY ZOOLOGICAL TRUST

MZ-0067  
LAKE PARK IMPROVEMENTS

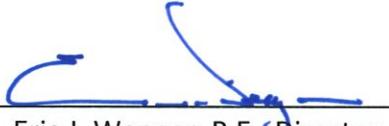
Prepared by:  
KYLE WATSON WEBB, P.E.  
BREEDLOVE LAND PLANNING, INC.



Architect/Engineer  
Recommended for Approval

  
\_\_\_\_\_  
Dwight Lawson, Oklahoma City Zoo Executive Director/CEO

Recommended for Approval

  
\_\_\_\_\_  
Eric J. Wenger, P.E., Director  
Public Works/City Engineer

**APPROVED** by the Chairman and Trustees of the Oklahoma City Zoological Trust  
this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

**ATTEST:**

\_\_\_\_\_  
Secretary

\_\_\_\_\_  
Chairman

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Attachments:

Consulting Engineer’s Plans and Drawings  
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THE OKLAHOMA CITY ZOOLOGICAL TRUST

**NOTICE TO BIDDERS**

Notice is hereby given that The Oklahoma City Zoological Trust will electronically receive and open sealed Bids for the construction of:

**MZ-0067  
LAKE PARK IMPROVEMENTS**

in the Office of the City Clerk, 2nd Floor, Municipal Building, 200 N. Walker Avenue, Oklahoma City, Oklahoma 73102, 10:00:00 a.m., on the 21<sup>st</sup> day of October 2020. Bids shall be opened electronically at the above stated time for receipt of Bids or as soon thereafter as practicable.

Bids must be made in accordance with this Notice to Bidders and the Bidding Documents, which are on file and available for examination at [www.bidsync.com](http://www.bidsync.com).

Bidders must preregister for Electronic Bidding at [www.bidsync.com](http://www.bidsync.com). Bidders shall be Pre-qualified in accordance with The City of Oklahoma City Ordinance No. 26.061.

Pre-Bid Site Visit: A pre-bid site visit will be held October 8, 2020, at 2:00 p.m., at the Oklahoma City Zoo Administration Office, 2101 NE 50<sup>th</sup> Street, Oklahoma City, Oklahoma 73111, zoo staff will direct to the site.

Additional information is contained in the Bidding Documents. Prior to bidding this project, Bidders must carefully examine the Bidding Documents, Addenda (if any) and the City of Oklahoma City Standard Specifications for Public Improvements.

# THE OKLAHOMA CITY ZOOLOGICAL TRUST

## INSTRUCTIONS TO BIDDERS

### ARTICLE 1 - IN GENERAL

#### 1.0 ACCESS

1.0.1 It is the policy of the City to ensure that communications with participants and members of the public with disabilities are as effective as communications with others. Anyone with a disability who requires an accommodation, a modification of policies or procedures, or an auxiliary aid or service in order to participate in a meeting should contact City Staff or TDD 297-2020 as soon as possible but not later than 48 hours (not including weekends or holidays) before the scheduled meeting. The department will give primary consideration to the choice of auxiliary aid or service requested by the individual with disability.

1.0.2 The City does not provide access to a computer for electronic bidding or electronic bid submission.

#### 1.1 BIDDING DOCUMENTS; DEFINITIONS

1.1.1 The “Bidding Documents” consist of: the “Bid Package”, Project Plans, Standard Specifications, Special Provisions and the documents referenced or incorporated, Bid Security or Bid Bond, Addenda and Contract and Bond Forms. Electronic copies of the Bidding Documents are available through the Electronic Bidding Program.

The “Bid Package” consists of: Bid Package Cover Sheet; Notice to Bidders; Instructions to Bidders; List of Documents Required for this Bid; Signature Requirements for Bidding Documents; Item Response Form; Anti/Non-Collusion Affidavit; Business Relationship Affidavit; Small and Disadvantaged Local Business Subcontracting Affidavit/Plan; any other documents listed in the List of Documents Required for this Bid; and any Addenda issued prior to the Bid Date.

Each Bidder shall be responsible for submitting their Bid in accordance with the Contract Documents, including all Addenda. Additionally, each Bidder shall be responsible for acquiring and distributing the necessary documents required to develop the Bid and construct the project.

The “Contract Documents” consist of: Bidding Documents; Contract; Performance Bond; Statutory Bond; Maintenance Bond; Defect Bond, if required; Contractor Identification Numbers; Certificate of Insurance; Certificate of Nondiscrimination; Special Provisions; Project Plans, Standard Specifications; other documents provided in the Contract Documents or required to be submitted with the Bidding Documents; and all Addenda issued prior to the Bid Date. Any Amendments and/or Change Orders issued after the award of Contract shall be a part of the Contract Documents upon their approval by the City.

1.1.2 The Definitions set forth in Part 1 of the City's "Standard Specifications for Construction of Public Improvements", and in the Bid Documents, are applicable to the Bidding Documents.

1.1.3 The "Bid Date" and "Bid Time" are the date and time for the receipt of Bids as provided in the Notice to Bidders.

1.1.4 The "Architect/Engineer" is that person or firm under contract with the City, Trust, or other contracting entity to prepare the plans and specifications for and supervise the construction of the Work.

1.1.5 The "Bid Security" is that security submitted with the Bid which shall be in the form of a certified check, cashier's check or Bid Bond equal to five percent (5%) of the Bid or of an irrevocable letter of credit in the amount of five percent (5%) of the Bid and issued in accordance with the provisions of the Public Competitive Bidding Act of 1974, as amended. (61 Okla. Stat. 2011, §107) The calculation of the amount of the Bid Security shall be as provided in Section 4.2.1 of these Instructions to Bidders. Provide the Bid Bond through the Electronic Bidding Process. Irrevocable Letters of Credit, certified check and/or cashier's check must be hand delivered to the Office of the City Clerk, 2nd Floor, Municipal Building, 200 N. Walker Avenue, Oklahoma City, Oklahoma 73102 prior to Bid Time.

1.1.6 "Prequalification" or "Pre-qualified" shall mean that prior to the Bid Date the Bidder is listed by the Prequalification Review Board as "Pre-qualified" for the type or types of Work required for the project.

1.1.7 "Completed" shall mean that the Work shall have been constructed in accordance with the plans and specifications and other Bidding Documents and is fully completed, the final inspection(s) have been made, and any corrections made to the satisfaction of the City Engineer.

1.1.8 "Acceptance" shall mean the formal recorded acceptance of the project by the City Council of the City of Oklahoma City or Awarding Public Entity.

1.1.9 "Small and Disadvantaged Local Business Subcontracting Program" shall mean that program which implements the policy adopted by the City Council of the City of Oklahoma City resolution of June 3, 2008, to promote and encourage the use of small and disadvantaged local businesses as subcontractors on public construction contracts and to require contractors performing public construction contracts to submit a Small and Disadvantaged Local Business Subcontracting Plan.

1.1.10 The "Electronic Bidding Process" shall mean a bid process through electronic means only. All signatures will be applied through electronic methods. Electronic Bidding Process is available at [www.bidsync.com](http://www.bidsync.com). For any assistance in completing the Electronic Bidding Process, please contact BidSync by email at [support@bidsync.com](mailto:support@bidsync.com) or telephone at 800-990-9339.

1.1.11. The "Bidder Acknowledgment" shall mean that the Bidder prepared this Bid and, before preparing the Bid, carefully read and examined the Bidding Documents and any other

documentation or information. Bidder is familiar with and able to comply with all the provisions of the Bidding Documents. Bidder agrees that if this Bid is accepted, Bidder will enter into the Contract with the City of Oklahoma City and properly submit the required Bonds, documents, and insurance within seven (7) calendar days following the City's notification of its intent to award Contract, unless such time is extended by the City Engineer. Bidder hereby agrees to commence work within ten (10) calendar days after the Work Order is issued by the City Engineer and to complete the work within the number of working days or by the calendar date specified in the Special Provisions of the Bidding Documents. Bidder encloses the Bid Security as required in Bidding Documents. The Anti/Non-Collusion Affidavit, in its entirety, is incorporated herein by reference.

1.1.12 "City Engineer" as defined in the Standard Specifications. When the project includes a participating public trust any notifications and approvals will also include the General Manager of any additional Awarding Public Entity.

1.1.13 "Awarding Public Entity" defined as the public entity, City and/or any participating public trust, awarding a Contract to a Bidder and entering a Contract for Public Improvement Work.

## 1.2 CONFIDENTIALITY

1.2.1 No Bidder shall divulge the sealed contents of a Bid to any person whomsoever, except those having a partnership or other financial interest with the Bidder in said Bid, until after the sealed Bids have been opened. A violation on the part of the Bidder shall make void any Contract made by the City with the Bidder based upon such Bid.

## 1.3 PREQUALIFICATION AND LICENSES

1.3.1 Specific procedures for prequalification are established in the "Standard Specifications for the Construction of Public Improvements." Application for prequalification must be made to the Contractor's Prequalification Board and the required information provided to the Board. Unless prequalification is specifically waived in the Bidding Documents for the project or by formal City action, all Bidders must be listed by the Prequalification Review Board as "Pre-qualified" for the type or types of work before the Bid Date. In the event prequalification is waived, or in addition to prequalification, the Bidder may be required to present other evidence of qualification as required in the Bidding Documents.

1.3.2 Bidder's shall be Pre-qualified for the specific type or types of construction, as provided in the Bidding Documents and the City of Oklahoma City's "Standard Specifications for the Construction of Public Improvements." Unless prequalification is specifically waived in the Special Provisions for the project, the City Clerk will not tabulate submission of any proposed Contractor or Bidder who is not listed, at the time for receipt of Bids, as Pre-qualified for the type or types of work required for the project and such submission will not be considered by the City.

1.3.3 The prequalification requirements for the project are set forth in the Special Provisions of the Bidding Documents.

1.3.4 Regardless of whether or not prequalification is required, any proposed Contractor or Bidder must have obtained any license or licenses required by the City which is/are necessary to the accomplishment of the work. Such license(s) must have been obtained prior to the submission of a Bid on the project. Failure to possess the necessary license(s) is reason for a recommendation to the City that a Contract not be awarded.

#### 1.4 SALES TAX

1.4.1 Oklahoma sales and use tax exemptions may be available to Contractors on City Projects. Contractor may pursue any available tax exemption at its own risk. The Contractor is solely responsible for interpreting and determining the applicability and availability of these exemptions. The Contractor should consult private legal counsel to determine whether purchases are exempt from applicable taxes. The Contractor is solely responsible for obtaining all documents and for complying with all regulations and procedures applicable to its use of these exemptions. The City's tax exemption information is available through the City website and at: <http://okcweb/documents/files/W9-2008.PDF>; however, by providing such information the City neither warrants the applicability or availability of any tax exemption nor does it waive or modify the provisions in Section 1.4.3 below.

1.4.2 Oklahoma sales and use tax exemptions are not available to Contractors on Trust Projects. However, Oklahoma sales and use tax exemptions may be available to the Trust for direct purchases made by the Trust. The Trust will only make direct purchases related to a Project as specifically and expressly stated in a Special Provision.

1.4.3 The Contractor will be responsible for and bear the cost of all applicable sales and use taxes and all other applicable local, state, or federal taxes pertaining to this Project. Applicable taxes will be deemed a cost the Contractor has included in its Bid and Contract Price (Lump Sum Price and Unit Prices) and by extension of such Unit Prices in any subsequently issued Amendment. Similarly, the Contractor must include any applicable taxes in any Change Order. Neither the City nor any participating Trust will be liable for any change in taxes or any new or additional taxes; such taxes will be and are a risk and liability of the Bidder or Contractor included in the its Bid and Contract Price and any such change in or new or additional tax will not be paid or reimbursed by the City or Trust.

#### 1.5 STANDARD SPECIFICATIONS

1.5.1 The City of Oklahoma City's "Standard Specifications for the Construction of Public Improvements," as amended, shall govern all aspects of bidding for and construction of the project. Exceptions to the "Standard Specifications" will be set forth in the Special Provisions. The Special Provisions shall prevail over any conflicting statement in the Standard Specifications. The Standard Specifications are available for review at [www.okc.gov](http://www.okc.gov) or purchase in the Development Center, 8<sup>th</sup> Floor, 420 W. Main Street, Oklahoma City, Oklahoma 73102.

## 1.6 ELECTRONIC BIDDING

1.6.1 The Electronic Bidding Process is available at [www.bidsync.com](http://www.bidsync.com). For any assistance in completing the electronic process, please contact BidSync by email at [support@bidsync.com](mailto:support@bidsync.com) or telephone at 800-990-9339.

1.6.2 Bidders must preregister for Electronic Bidding at [www.bidsync.com](http://www.bidsync.com) prior to completing, signing and submitting a bid on this project.

## ARTICLE 2 - BIDDER'S REPRESENTATIONS

2.1 The Bidder by making a Bid represents that:

2.1.1 The Bidder has read carefully and understands the Bidding Documents and has inspected the Project Site and become familiar with local conditions under which the Work is to be performed and has informed himself by independent research of the difficulties to be encountered and personally judged the accessibility of the Work and all attending circumstances affecting the cost of doing the Work and of the time required for its completion and has correlated the Bidder's personal observations with the requirements of the Bidding Documents and the Bid is made in accordance therewith.

2.1.2 The Bidder has read and understands the Bidding Documents to the extent that such documentation relates to the work for which the Bid is submitted and for other portions of the work, if any, being Bid concurrently or presently under construction.

2.1.3 The Bid is based upon the materials, equipment, systems or services required by the Bidding Documents without exception.

2.1.4 The Bidder has read and acknowledges that by confirming the Bid electronically, the Bidder is accepting the Bidder Acknowledgment as defined in section 1.1.11.

## ARTICLE 3 - BIDDING DOCUMENTS

3.1 COPIES

3.1.1 The Bidding Documents are available through the Electronic Bidding Process.

3.1.2 Bidders shall use complete sets of Bidding Documents in preparing Bids; neither the City nor the consulting Architect or consulting Engineer assumes responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

3.2 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

3.2.1 The Bidder shall at once report to the City Engineer or the consulting Architect/Engineer any errors, inconsistencies or ambiguities discovered. All requests for interpretation of the

Bidding Documents must be made to the City Engineer and to any consulting architect or consulting engineer.

3.2.2 Addendum Required. The Bidding Documents represent all the information the City will provide. Interpretations and corrections of and/or changes to the Bidding Documents will be made only by addendum. Such addenda shall be issued by the City Engineer and approved or ratified by the City. Interpretations and/or changes made in any other manner will not be binding upon the City and Bidders shall not rely upon them. All Addenda will be issued through the Electronic Bidding Process.

### 3.3 SUBSTITUTIONS

3.3.1 The materials, products and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution. The Notes to Buyer box in the Electronic Bidding Process cannot be used for substitutions. Using the Notes to Buyer box may result in the Bid being rejected.

Pre-Bid Consideration; Addendum required. No substitution will be considered prior to the receipt of Bids unless a written request for approval has been received by the City Engineer or consulting Architect/Engineer within seven (7) days prior to the Bid Date. Such requests shall include the name of the material, product, or equipment for which it is to be substituted and a complete description of the proposed substitution including drawings, performance and test data, and other information necessary for an evaluation. A statement setting forth changes in other materials, products, equipment or other portions of the work, including changes in the work of other contracts that incorporation of the proposed substitution would require, shall be included in the request. The burden of proof of the merit of the proposed substitution is upon the Bidder.

3.3.3 If a proposed substitution is approved prior to Bid Date, such approval will be set forth in an addendum issued by the City Engineer and approved or ratified by the City. Bidders shall not rely upon approvals made in any other manner.

3.3.4 Post-Contract Consideration. Substitutions may be considered after the award of Contract unless specifically prohibited in the Bidding Documents. However, any Bidder basing a Bid on a substitution not approved by pre-Bid addendum does so at the risk of being required to provide the materials designated in the Bidding Documents.

### 3.4 ADDENDA DELIVERY AND RECEIPT

3.4.1 The City Engineer may issue addenda as may be necessary in the best interest of the City. Addenda may amend the date and/or time for receipt of Bids or any specification, item, document or requirement in the Bidding Documents. Addenda will be delivered through the Electronic Bidding Process. It shall be the obligation of the Bidder to ascertain through the Electronic Bidding Process prior to the Bid Date, whether Bidder has received all addenda. Bidder has the obligation to read and comply with the terms of the Bidding Documents as amended by addenda, if any.

3.4.2 Copies of addenda will be made available for inspection through the Electronic Bidding Process.

3.4.3 The Electronic Bidding Process shall be considered proof that the City delivered notification of an addendum to a Bidder.

### 3.5 MANDATORY PRE-BID CONFERENCE

The City requires all prospective Bidders to attend a Pre-Bid Conference as a prequalification requirement to be eligible to submit a sealed Bid. Attendance is a prequalification requirement for this project. The Contractor who plans to submit a Bid must attend this conference. The City Engineer or his designee and any consultant for the project must also attend this conference. Failure to attend this conference will cause the City Clerk to not consider the Bidder's submission. The purpose of the conference is to discuss the plans and specifications.

**NOTE:** The Pre-Bid Conference will begin at the designated time; a sign-in sheet will be passed to all attendees; only full-time employees of the prospective Bidder's company will be considered as eligible representatives for attendance; and, five minutes after the meeting is called to order, the sign-in sheet will be closed (**late arrivals will not be allowed to sign in**). The official timekeeper for closing the sign-in sheet shall be the consulting Architect/Engineer or City staff member chairing the Pre-Bid Conference.

In the case of a joint venture, an eligible representative from **each** of the participating organizations in the joint venture must be in attendance. Sub-contractors are not required to attend.

The following will not be eligible to Bid on the project: (1) prospective Bidders leaving the meeting prior to adjournment of the Pre-Bid Conference; (2) prospective Bidders whose names have been placed on the sign-in sheet, but were not in attendance; or, (3) anyone arriving at the pre-Bid Conference after the sign-in sheet has been closed.

## ARTICLE 4 - BIDDING PROCEDURES

### 4.1 FORM AND STYLE OF BIDS

4.1.1 The Bid must be submitted through the Electronic Bidding Process.

4.1.2 All forms, all blanks and all affidavits must be completed, signed and submitted through the Electronic Bidding Process.

4.1.3 All prices must be completed and submitted electronically. Where so indicated by the makeup of the Item Response Form, sums shall be expressed in numerals. All base bid items must have a price indicated. All alternate bids, whether add alternates or deduct alternates, must have a price indicated, unless expressly stated otherwise in the Special Provisions. Should the Special Provisions expressly state that Bidders need not bid on all alternates, a Bidder that does

not wish to bid on that add/deduct alternate bid must enter “No Bid” into the Notes to Buyer box and a bid of “zero dollars” must be entered for that line item.

4.1.4 Where detailed or unit prices are requested or required in the Bidding Documents, the Bidder must complete and submit detailed or unit prices on the Item Response Form and the total bid amount shall be the cumulative total of the detailed or unit prices.

Unless otherwise provided in the Special Provisions, where unit prices are bid, payments and claims will be based on actual quantities used. Any substantial change(s) in quantities required to complete the work will require a Contract amendment and any deduction or increase in payment will be based on unit prices and actual verified and authorized quantities.

## 4.2 BID SECURITY

4.2.1 Each Bid shall be accompanied by a Bid Security in the form of a Bid Bond and/or irrevocable letter of credit or a certified check and/or cashier's check delivered by bid receipt time, in the amount of five percent (5%) of the amount of the Bid. Bid Bonds must be uploaded in the Electronic Bidding Process and must be submitted electronically with the Bid. Irrevocable Letters of Credit, certified check and/or cashier's check must be hand-delivered to the Office of the City Clerk, 2<sup>nd</sup> Floor, Municipal Building, 200 N. Walker Avenue, Oklahoma City, Oklahoma 73102, in a sealed envelope with notations including the Bidder's name, the project number and “Bid Security,” prior to Bid Time. For the purposes of this section, Bid shall mean the highest combination of the base bid plus all add/deduct alternate bids. The Bid Security is a guaranty that the Bidder will enter into a Contract with the City on the terms stated in the Bid and will furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds as required and/or the required certificates of insurance and other required documents, the amount of the Bid Security shall be forfeited to the City as liquidated damages, not as a penalty.

4.2.2 The City has the right to retain the Bid Security of Bidders until either (a) the Contract and bonds and other required documents have been executed or submitted by the successful Bidder, or (b) the specified time to award Bids has elapsed so that Bids may be withdrawn in accordance with State law, or (c) all Bids have been rejected, or (d) another Bidder has been determined to be the successful Bidder.

## 4.3 SUBMISSION OF BIDS

4.3.1 The Item Response Form and affidavits, the Bid Security and any other documents required to be submitted with the Bid shall be submitted through the Electronic Bidding Process. Bids will only be accepted electronically per Oklahoma City Municipal Code 2-871

4.3.2 All Bids from prequalified Bidders timely received may be considered by the City prior to a Contract being awarded. Bids shall be electronically delivered through the Electronic Bidding Process, not more than 96 hours, excluding Saturdays, Sundays, and holidays, prior to the Bid Date and Bid Time. All Bids received before more than 96 hours before the Bid Date and

Bid Time, will not be considered. Submissions will not be received after the time and date for receipt. through the Electronic Bidding Process.

4.3.3 The Bidder shall assume full responsibility for timely completion and submission of the Bid through the Electronic Bidding Process.

4.3.4 Any bid not submitted through the Electronic Bidding Process is invalid and will not receive consideration.

4.3.5 The Bid affidavits must be properly completed, signed, sworn to, notarized and submitted with the Bid electronically.

The required affidavits are:

- (1) Anti/Non-Collusion Affidavit
- (2) Business Relationship Affidavit
- (3) Such other Affidavits as may be required by law

#### 4.4 BIDS NOT TO BE MODIFIED OR WITHDRAWN

4.4.1 No Bid shall be withdrawn, altered, changed, executed or otherwise revised in any manner by any Bidder once delivered to the City Clerk through the Electronic Bidding Process.

### ARTICLE 5 - CONSIDERATION OF BIDS

#### 5.1 OPENING OF BIDS; TIME FOR CONSIDERATION

5.1.1 Pursuant to City Ordinance, Bids submitted and timely received will be opened publicly and will be read aloud in the presence of the City Clerk, the City Auditor and the Purchasing Agent or their designees at the time stated in the Notice to Bidders. Opened Bids will remain on file in the Office of the City Clerk for at least forty-eight (48) hours before a Contract is entered into. A tabulation of Bid information may be made available to the Bidders within a reasonable time.

#### 5.2 REJECTION OF BIDS

5.2.1 The Bids will be considered by the City. The City shall have the right to reject any or all Bids. By Resolution No. 93-01, adopted June 22, 1993, the City Council declared its intent to reject a Bid not accompanied by the required Bid Security, and/or a properly signed Item Response Form, and/or properly completed, signed and notarized Bid affidavits and/or by other item(s) required by the Bidding Documents, and may reject a Bid which is in any way incomplete or irregular. The City shall have the right to waive immaterial defects or irregularities in a Bid received and to accept the Bid, which, in the City's judgment, is in its own best interest.

#### 5.3 ACCEPTANCE OF BID AND AWARD OF CONTRACT

5.3.1 It is the intent of the City to award a Contract to the lowest and best responsible Bidder provided the Bid has been submitted in accordance with the requirements of the Bidding Documents.

5.3.2 The City shall have the right to accept add/deduct alternate bids in any order or combination and to determine the lowest and best Bidder on the basis of the sum of the base Bid and such alternates accepted by the City at its discretion, unless otherwise stated in the Special Provisions.

5.3.3 Should a Bidder who is awarded a Contract upon a Bid fail to execute and provide the Contract and bonds or to provide the required certificates of insurance and/or any other required documents, the City Council reserves the right to offer the Contract to the Bidder deemed to be the next lowest and best responsible Bidder.

## ARTICLE 6 - CONTRACT AND BONDS

### 6.1 BOND AND INSURANCE REQUIREMENTS

6.1.1 See the Special Provision for Bond requirements.

6.1.2 The cost of such bonds shall be included in the amount of the Bid.

6.1.3 The City may, by formal action, reject/not accept any bond if the surety issuing the bond is: (1) now in default or delinquent on any demand on any bond; (2) is an adverse party to the City of Oklahoma City or any of its participating public trusts in any litigation involving bonds issued in favor of the City of Oklahoma City or any of its participating public trusts; or, (3) is not licensed or otherwise permitted to do business in the State of Oklahoma.

### 6.2 TIME OF DELIVERY CONTRACTS, BONDS AND INSURANCE

6.2.1 The Bidder shall deliver the required Contract and bonds, together with the certificates of insurance as required in the Special Provisions, to the City's project manager no later than seven (7) calendar days following the City's notification of its intent to award Contract, unless that time is extended by the City Engineer.

**6.2.2 The date blanks on the Bonds shall be left blank. The dates will be inserted by the City upon approval of the Contract and Bonds by the Awarding Public Entity.**

6.2.3 The Bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of the power of attorney. The provisions for the competitive bidding of City projects and the form of and requirements for the Bidding Documents are governed by the Charter and Ordinances of the City of Oklahoma City, the Oklahoma Competitive Bidding Act, the City of Oklahoma City's "Standard Specifications for the Construction of Public Improvements," Resolution #93-01 of June 22, 1993, and other adopted policies of the City Council.

# SPECIAL PROVISIONS

MZ-0064-1

## AMPHIBIAN PLAZA SITE PREPARATION PROJECT

These Special Provisions are included in and are a part of the Bidding Documents for this project.

1. Standard Specifications for the Construction of Public Improvements. The City of Oklahoma City's "Standard Specifications for the Construction of Public Improvements" as most recently amended, is included by reference in these Bidding Documents in its entirety as though fully set forth herein. The provisions of the "Standard Specifications of the Construction of Public Improvements" are applicable to and binding upon this project unless and except where specifically superseded by a provision(s) of the Special Provisions and/or the Special Provisions-Technical for this project. The Special Provisions-Technical shall prevail over any conflicting statement in or requirement of the Special Provisions. Copies of the "Standard Specifications for the Construction of Public Improvements" may purchased in the Development Center, 8<sup>th</sup> Floor, 420 W. Main Street, Oklahoma City, Oklahoma 73102.

2. Nondiscrimination. Neither the Contractor nor any subcontractors employed on this project may discriminate against any employee or applicant for employment because of race, religion, creed, sex, color, national origin, ancestry, age or disability as defined by the Americans with Disabilities Act. A Certification of Nondiscrimination must be properly signed and submitted with the Contract. The requirements of the Certificate must be included in any subcontracts connected with the performance of the Contract. The Contract may be canceled by the City for noncompliance with the provisions of the Certificate and the Contractor may be declared to be ineligible for further contracts until satisfactory proof of intent to comply shall be made by the Contractor and/or any subcontractors.

The "Notice of Equal Employment Opportunity" poster must be exhibited in a central and public location at the place of business by the Contractor and each subcontractor while the Contractor and any subcontractors are performing work on the project.

3. Permits or Licenses. The Contractor must, at his own cost, secure all permits and licenses and pay all fees required by City of Oklahoma City Ordinance or State Statute and give all notices necessary and incidental to the lawful prosecution of the Work.

4. Laws to be Observed. The Contractor shall at all times observe and comply with all Federal and State laws and regulations and all City of Oklahoma City Ordinances, Codes and regulations which in any manner affect the conduct of the work and shall observe and shall comply with all orders and decrees which exist at the present or which may be enacted later, of bodies or tribunals having jurisdiction or authority over the work and no plea of misunderstanding or ignorance thereof will be considered.

5. Safety. Contractor shall establish and implement safety measures, policies and standards conforming to those required or recommended by governmental and quasi-governmental authorities including, but not limited to, the requirements of the United States Occupational Safety and Health Act.

6. Contract. Contractor will enter into the Contract with the City of Oklahoma City and properly submit the executed Contract and the required bonds, documents, and certificates of insurance within seven (7) calendar days following the City's notification of its intent to award Contract, unless said time is extended by the City Engineer. With the Contract, the Contractor will submit a properly signed Certificate of Nondiscrimination and a completed "Contractor Identification Numbers" form, which provides the information required. No work shall be commenced until the written Contract has been executed and the required bonds and insurance have been provided and a work order has been issued by the City Engineer.

7. Amendments and Change Orders. The provisions of the Contract may be amended or changed only by an amendment or a change order approved by the City. As used herein, the terms "amendment" and "change order" shall have the following meanings.

“Amendment” shall mean a modification to a construction contract which was Bid on a unit price basis and which modifies the quantity of an item or items based on the unit price stated in the Bid. No amendment shall be effective until it has been approved by the City. (Amendments are not subject to the percent of contract cost limits set in the Oklahoma Competitive Bidding Act, 61 O.S. (2011) Section 121.)

“Change Order” shall mean a modification of a lump sum contract or a contract bid on a unit price basis where a unit price has not been established for a particular item or items of work. The change order may authorize an addition, deletion or revision in the work or an adjustment of the contract price or the contract time. However, the cumulative amount of change orders shall not exceed the limit established by State law. No change order shall become effective until it has first been approved by the City.

8. Pre-Work Conference. The City shall hold a pre-work conference. The Contractor or his designee must attend the conference. The Contractor's superintendent and subcontractor(s) may attend. The City Engineer or his designee and any consultant for the project and a representative of the Field Services Division will attend for the City. The conference will be conducted at a time and place established by the City Engineer.

9. Contractor's Responsibility for the Work. Until formal written acceptance by the City, the work shall be under the charge and care of the Contractor. The Contractor shall take every necessary precaution to prevent injury or damage to the work or any part thereof by the action of the elements or any other cause whatsoever, whether arising from the execution or non-execution of the work. The Contractor shall at his own expense rebuild, repair, restore, and make good all injuries or damage to any portion of the work occasioned by any of the forgoing causes before formal acceptance of the work by the City.

10. Inspection. The City Engineer and his representatives and the consulting architect and his representatives or consulting engineer and his representatives shall at all times have access to the work. Contractor will provide proper and safe access for inspection. The City may maintain inspectors on the job site for the purpose of inspecting materials, workmanship and conditions of work and equipment. Contractor shall notify the City Inspector twenty-four (24) hours prior to pouring concrete and at any other times required in the Special Provisions. Contractor shall notify the City Inspector twenty-four (24) hours prior to performing work relating to exposing, supporting, adjusting, connecting or relocating waterlines. The phone number for Field Services is 297-3571. The Field Services office is open between 7:30 a.m. and 4:30 p.m., Monday through Friday.

In addition to the above inspections, the Contractor shall provide proper and safe access for all inspections required by City of Oklahoma City Ordinances and Technical Codes and any other inspections required by Federal or State laws or regulations.

It is the Contractor's responsibility to arrange for and have conducted any and all inspections required by the City of Oklahoma City's Building, Plumbing, Electrical, Mechanical, Fire, and Zoning Codes and to comply with all the provisions of said Codes.

11. Testing. The City Engineer will provide a test schedule for the work and shall designate which samples must be taken or tests be conducted and which must be taken or conducted in the presence of an inspector. The City Engineer may require such additional tests as he deems necessary to the proper construction of the project. All tests will be made in accordance with the appropriate specifications. The Contractor shall provide such facilities as the City Engineer or his representatives may require for collecting and forwarding samples. All tests shall be made at a laboratory designated by the City and at the expense of the City.

12. Payment and Retainage. Partial payments shall be made based on the Work timely completed and in accordance with the Contract and the submission of the required documents. Five percent (5%) of all partial payments due shall be withheld as retainage.

Applications for payment shall be made upon the forms provided by the City or photocopies thereof and such forms must be properly completed, signed and notarized. Applications for payments shall have attached thereto the Contractor's invoice and other supporting detail. Contractor must supply invoices for any stored materials for which payment is claimed.

13. Closing a Street. Streets or lanes of streets in the construction zone may be closed only upon the prior approval of the City Engineer or his designee. Should a street closing be approved, the Contractor is responsible for notifying the following at least twenty-four (24) hours in advance of the closing. Notification by Fax is preferred.

Department	FAX #	Telephone #
Inspection Services	682-7067	297-3571
Traffic Engineer	297-3365	297-2531

Police Support Services	297-1718	297-1144
Fire Department	297-3329	297-3314
Emergency Operations Center	424-1609	297-2255

14. Detours. The City Engineer or his designee shall first approve all detour routes while streets are closed during construction. The Contractor must sign and maintain all detour routes and the signs and devices must be in conformance with the requirements of the "Manual on Uniform Traffic Devices."

15. Barricades and Warning Signs. Where work is carried on in, or adjacent to, any street, alley or public place, the Contractor shall, at his own expense, furnish, erect and maintain such barricades, fences, lights, warning signs and danger signals and shall provide such watchmen and take such other precautionary measures for the protection of persons or property and of the work as may be necessary. In addition, a sufficient number of barricades shall be erected to keep pedestrians and vehicles from entering on or into any work zone(s). From sunset to sunrise, the Contractor shall furnish and maintain at least one light on each barricade. All devices shall be in conformance with the "Manual on Uniform Traffic Control Devices." The Contractor shall provide an "after hours" phone number to the City of Oklahoma City's Emergency Operations Center and to the Field Services Division to be used for notification to the Contractor of the need to repair signs, barricades or other warning or control devices. Failure to comply with these requirements may result in the issuance of a Stop Work Order to remain in effect until the deficiencies are corrected. The issuance of a Stop Work Order shall not act to defer or suspend the counting of the working days for the project.

16. Final Cleaning Up. Upon completion of the work and before acceptance and final payment will be made, the Contractor shall clean and remove from the site of the work surplus and discarded materials, temporary structures, barricades and other warning devices, stumps and portions of trees and debris of any kind. The Contractor shall leave the site or the work in a neat and orderly condition. Waste materials removed from the site of the work shall be disposed of at locations satisfactory to the City Engineer and which are in compliance with Federal, State and City of Oklahoma City requirements.

17. Insurance and Indemnity. The Contractor shall obtain and maintain insurance coverage as provided below. The required insurance shall be maintained in full force and effect until completion and formal acceptance by the City of the Project. The Contractor must provide, pay for, and maintain insurance, written with an insurance company acceptable to the City, for the coverage and amounts of coverage not less than those set forth below. All insurance must be from responsible insurance companies eligible to do business in the state of Oklahoma. The requirements provided below are designed to meet the minimum insurance coverage of the City. The Contractor shall be solely responsible for the sufficiency of its own insurance program.

All liability policies (except worker's compensation insurance) must name the City of Oklahoma City, and all parties to this Contract, and any public trust participating in the Project, as additional insureds without reservation or restriction. All liability policies must provide that with respect to claims involving any insured, each such interest shall be deemed separate for any and all other interest herein and coverage shall apply as though each such interest was separately

insured. A no claims made insurance coverage or policy may be accepted; however if any insurance is written in a "claims-made" form, the Contractor must also provide tail coverage that extends a minimum of one year from the expiration of this Contract.

Any deductibles or self-insured retentions in excess of \$25,000, or any scheme other than a fully insured coverage of general liability, automobile liability and/or employer's liability must be requested by the Contractor and formally approved in advance by the City. At the option of the City, approval of deductibles or self-insured retention may be conditioned upon: (1) the Contractor must require the insurer to reduce or eliminate such deductibles or self-insured retentions with respect to the City; or (2) the Contractor must procure a irrevocable letter of credit naming the City as a loss payee or bond guaranteeing payment of the losses and related investigations, claim administration and defense expenses not otherwise covered by the Contractor's insurance because of deductibles or self-insurance retentions; or (3) the Contractor must provide owner's protection liability coverage with the City, and all other parties to this Contract and parties participating in the Project or Program, each as the named insured, for the commercial general liability requirement, in a combined single-limit bodily injury and property damage amount of One Million Dollars (\$1,000,000.00). However, the City is not required to approve any deductibles or self-insured retentions.

The insurance coverage and limits required must be evidenced by properly executed certificates of insurance on the form furnished by The City or on forms approved by the Oklahoma Insurance Commissioner. The Contractor shall furnish to the Project Manager current copies of certificates of insurance required below with its signed Contract and Bonds. The certificates must include the Project number and Project description. The certificates must also be signed by the authorized representative of the insurance company(s) and must be accompanied by proof that the person signing is an authorized representative thereof. In addition, certified, true and exact copies of all insurance policies and endorsements providing the required insurance coverage shall be provided to the City on a timely basis if requested by the City Engineer or Project Manager. The required insurance coverage and policies shall be performable in Oklahoma City, Oklahoma, and shall be construed in accordance with the laws of Oklahoma.

In the event of a reduction in any aggregate insurance coverage or limits below the coverage required, the Contractor shall take immediate steps to have the full amount of the required insurance coverage reinstated. If at any time the City requests a written statement from the insurance company(s) as to any impairment to the aggregate coverage or limits, the Contractor hereby agrees to promptly authorize and have delivered to the City such statement. The Contractor shall remove or cover any impairment to insurance coverage as soon as known to it. The Contractor authorizes the City to confirm with the Contractor's insurance agents, brokers, surety and/or insurance carriers all information necessary to confirm or evidence the Contractor's compliance with bonding and insurance requirements. The Contractor's insurance coverage shall be primary to any insurance or self-insurance program carried by the City.

There may be no termination, non-renewal or modification of such insurance coverage or policy without at least thirty (30) days prior written notice to the City, in conformance with the provisions of this Contract. Any notification of cancellation, termination, non-renewal or modification must be submitted to the Project Manager and shall include the Project number in

the reference line. The Contractor must provide a covenant from the insurance agent that the insurance agent will provide the City and any participating public trust with such thirty (30) days advanced written notice as described above. No notice to proceed, work order, occupancy of the premises, or payment for any work shall be provided unless and until the required insurance policy and coverage have been obtained and certificates of insurance are provided and insurance coverage is in effect.

The minimum amounts of such insurance policy and continuing coverage shall be:

Worker's Compensation and Employer's Liability Insurance. The Contractor shall maintain, during the term of the Contract, Worker's Compensation Insurance as prescribed by the laws of the state of Oklahoma and Employer's Liability Insurance for all its, employees employed at the site of the Project, and in case any work is subcontracted, the Contractor shall require the subcontractor similarly to provide Worker's Compensation and Employer's Liability Insurance for all the subcontractor's employees, unless such employees are covered by the protection afforded by the Contractor. In the event any class of employees engaged in work performed under the Contract or at the site of the Project is not protected under such insurance heretofore mentioned, the Contractor shall provide and shall cause each subcontractor to provide adequate, Worker's Compensation and Employer's Liability insurance for the protection of the employees not otherwise protected.

Commercial General Liability Insurance. The Contractor shall provide and maintain commercial general liability insurance coverage not less than the greater of the following amounts: (1) \$1,000,000; (2) the maximum cumulative liability of the City, all parties to this Contract, and any public trust participating in the Project under the Governmental Tort Claims Act (51 O.S. § 151 *et seq.*) and any amendment or addition thereto; or (3) the minimum amount required by the Contractor's prequalification classification. The current required minimum commercial general liability coverage for each entity under the GTCA is \$175,000 per person for bodily injury or death, \$25,000 for property damage and \$1,000,000 for any number of claims arising out of a single accident or occurrence.

Automobile Liability Insurance. The Contractor shall provide and maintain comprehensive automobile liability insurance coverage as to the ownership, maintenance, and use of all owned, non-owned, leased or hired vehicles not less than the greater of the following amounts: (1) \$1,000,000; (2) the maximum cumulative liability of the City, all parties to this Contract, and any public trust participating in the Project under the Governmental Tort Claims Act (51 O.S. § 151 *et seq.*) and any amendment or addition thereto; or (3) the minimum amount required by the Contractor's prequalification classification. The current required minimum commercial general liability coverage for each entity under the GTCA is \$175,000 per person for bodily injury or death, \$25,000 for property damage and \$1,000,000 for any number of claims arising out of a single accident or occurrence.

The requirements of the insurance provisions listed above shall survive the completion, expiration, cancellation or termination of this Contract. All policies, unless specified otherwise,

shall remain in full force and effect during this Contract, during the construction of the Project, and for a period of two (2) years after the final, formal acceptance of this Project by the City.

The lapse of any of the insurance policy or coverage required by this Contract is a breach of this Contract. The City may at its option suspend this Contract until there is full compliance with this paragraph, or may cancel or terminate this Contract and seek damages for the breach of this Contract. The remedies in this paragraph shall not be deemed to waive or release any remedy available to the City. The City expressly reserves the right to pursue and enforce any other cause or remedy in equity or at law.

Nothing in this provision defines or limits the responsibilities and duties of the Contractor under any other provision of this Contract, including but not limited to any indemnification provision. Nothing in this insurance provision shall define or limit the rights of the City or any party to this Contract or any public trust participating in the Project under any other provision of this Contract, including but not limited to any indemnification provision.

On all building projects the successful bidder will provide Builder's Risk Insurance (all risk coverage for building or facility construction and renovation projects). The Contractor shall procure and shall maintain, during the term of the Contract, builder's risk insurance (broad form coverage, including theft, fire coverage on building construction or renovation) in the amount of one hundred percent (100%) of the construction cost. Such insurance shall remain in effect until 11:59 p.m. on the date of final acceptance of the entire fully completed project by formal action of the Trust, whether or not the project is substantially completed or whether or not the building or some part thereof is occupied in any manner prior to final formal acceptance. The Contractor shall be named as insured and the City and its beneficiary trusts (as their interests may appear) shall be named as additional insureds. The coverage shall provide protection for the Contractor, the City, and any participating public trust, respectively, against property damage and damage claims which may arise from activities, omissions, or operations by the Contractor or its subcontractors under the Contract and also against any of the special hazards which may be encountered by the Contractor or its subcontractors in the performance of the Contract. Neither the Contractor nor any of its subcontractors, employees, or agents shall commit any act, operation, or omission that would vitiate, invalidate, or impair the insurance coverage hereunder. The insurance coverage must also include all stored materials, supplies, and equipment when stored off site.

18. Bonds. As required by and in accordance with the Bidding Documents the successful Bidder shall furnish bonds. The bonds must be submitted on the forms, or photocopies thereof, provided in the Bidding Documents. All bonds must be provided by a Surety authorized to do business in the State of Oklahoma. The bonds are Performance Bond, Statutory Bond, Maintenance Bond and, whenever applicable, Defect Bond, and are particularly described in the Standard Specifications.

18.1. Performance Bond. A properly executed Performance Bond in favor of the City of Oklahoma City, and any participating Trust, on the form provided in the Bidding Documents must be submitted with the Contract. Generally, the Performance Bond shall guarantee the Contractor's full and faithful execution of the work and performance of the Contract in

accordance with the Contract, and any Change Order or Amendment to the Contract, and provide for the protection of the City and all property owners against any damage by reason of acts or omissions of the Contractor or the improper execution of the work or the use of inferior materials.

18.2 Statutory Bond. A properly executed Statutory Bond on the form provided in the Bidding Documents must be submitted with the Contract. The Statutory Bond shall provide that the Contractor will make payment for all labor, materials and equipment used in the construction of the project. The Statutory Bond shall be made in favor of the State of Oklahoma and subcontractors, and all suppliers of labor, material, rented machinery or equipment, and repair of and parts for equipment used or consumed in the performance of the contract.

18.3 Maintenance Bond. A properly executed Maintenance Bond on the form provided in the Bidding Documents must be submitted with the Contract. The Maintenance Bond shall be in favor of the City of Oklahoma City, and any participating Trust, and shall be for a period of **2 years**. The bond for the term of this Contract will be in an amount equal to one hundred percent (100%) of the Contract amount.

18.4. Defect Bond. If applicable, a properly executed Defect Bond on the form provided in the Bidding Documents must be submitted with the Contract. The Defect Bond shall be in favor of the City of Oklahoma City, and any participating Trust, and the term shall be the same duration as the Maintenance Bond. The Defect Bond will be in an amount equal to one hundred percent (100%) of the Contract amount for the term of the bond. The Contractor will provide a properly executed Defect Bond provided by a surety authorized to do business in the State of Oklahoma if the Contractor has not complied with the provision 1, 2, 3, or 4 below:

18.4.1 The Contractor has not shown proof of his intentions to perform and maintain for the specified period of maintenance bond tenure, by establishing within a forty (40) mile radius of the office of the City Engineer, 420 W. Main Street, Oklahoma City, Oklahoma, a business address (as defined in the Oklahoma City Municipal Code) with a telephone (staffed by competent employees approved by the City Engineer under who supervision the work will be performed), and a yard (as defined in the Oklahoma City Municipal Code) equipped with sufficient necessary equipment available 24 hours-a-day to perform and maintain all classes and subclasses of work for which the Contractor is pre-qualified to bid. This office and yard as equipped shall have been established prior to the time the applicant submits his application for qualification; or,

18.4.2. Contractor opting to have the City retain a sum equal to 15% of the total Contract amount for the extent of the maintenance period (said funds may be used by the City to insure compliance with the maintenance obligations of the City); or

18.4.3 Contractor opting to provide a properly executed Defect Bond on a form provided by the City and issued by a surety authorized to do business in the state of Oklahoma; or

18.4.4 Contractor acting in a joint venture with a Pre-qualified person which meets the requirements of City Council Resolution of May 27, 1997 pertaining to prequalification.

The Defect Bond guarantees the Contractor shall timely repair any defect and maintain or provide for the timely maintenance of any repair on the project for a specified term. The term of the Defect Bond shall be as provided in the Special Provisions and in an amount equal to one hundred percent (100%) of the Contract amount. The Defect Bond shall be made in favor of the **OKLAHOMA CITY ZOOLOGICAL TRUST**.

19. Time of Completion. Work on this project shall commence immediately following the Notice to Proceed with an estimated completion date of 125 calendar days. In the event that the City gives a Notice to Proceed past the date above, the City may change the Completion Date accordingly. The rate of progress shall be such that the whole Work will be performed in accordance with the Contract Documents, Plans, Specifications and approved Change Orders and Amendments and the premises be cleaned within the time stated herein, unless an Extension of Completion Date is approved by the City Engineer in the manner hereinafter specified.

19.1 ~~Flex Start~~. ~~The Contractor may submit a written request for up to a sixty (60) day Flex Start date prior to Award of Contract. If the request is granted by the City Engineer, the Completion Date will be adjusted by Change Order in accordance with 108.03 in the Standard Specifications. Flex Start will begin on the date of Award of Contract.~~

19.2 Extension of Completion Date. The Contractor may request an extension in time when a delay occurs which is beyond the Contractor's control. A claim for such extension must be submitted to the City Engineer in writing by the Contractor within seven (7) days from and after the time when the alleged cause of delay occurred.

If adverse weather conditions are the basis for a claim for extension of the completion date, 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 construction activities occurring on the critical path of the construction schedule.

Any Extension of Completion Date for adverse weather will only be approved for time only, no additional charges, costs or compensation, in any amount, for the contractor or subcontractors will be considered.

If the satisfactory execution and completion of the Contract should require work or materials in greater amount or quantities than those set forth in the contract, then the Contract time may be increased.

In adjusting the time for completion of the project, all strikes, lockouts, unusual delays in transportation or any condition over which the Contractor has no control unless and except delays by a subcontractor deemed to be within the control of the Contractor and any suspensions of activities ordered by the City Engineer for causes not the fault of the Contractor shall be excluded from the computation of the Contract time for the completion of the work. No allowance shall be made for delays or suspensions of the prosecution of the work due to the fault of the Contractor.

19.3 Construction Schedule. The Contractor shall perform construction scheduling and phasing/sequencing required to perform the work as indicated in the Contract Documents. The Contractor shall develop the construction schedule for the project in order to establish a chronological and logical order for the scheduling of construction and related activities. The schedule shall graphically illustrate a series of activities including project start, description of project activities, relationships and time required for completion. The maximum duration for any single activity shall not exceed thirty (30) days.

The schedule must establish the critical path for completion of the project from the Notice to Proceed through Final Acceptance of the work. The Contractor shall provide a preliminary schedule and a final schedule of the project for review by the Consultant and City Engineer.

Within fourteen (14) calendar days following the Pre-Work meeting, the Contractor shall submit the construction schedule indicating a comprehensive overview of the project including all major activities necessary to complete the work. The Consultant and City Engineer will consider acceptance of the construction schedule once the Contractor has incorporated all comments.

The construction schedule must be updated monthly and submitted with each request for payment. Claims for payment for work performed will not be processed until the monthly updated schedule is received. Any significant change to the project sequencing must be submitted for acceptance by the City Engineer.

The number of lost days a contractor should expect during an average year for exterior weather sensitive activities has been determined. The figures are based on the number of days each month that receive precipitation greater than ½-inch and/or snowfall over one inch. No days have been included for drying time, below freezing temperatures or temperatures below what is specified for the placement of materials. The number of lost days shall be reconciled by the Architect/Engineer and City Engineer as requested by the Contractor at the end of each month.

Days	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Lost	8	7	5	3	3	3	2	2	2	3	4	7

The lost weather days shall be included in the schedule for the normal five-day work week (excluding weekends and holidays) for the duration of the project. Weather days exceeding lost days may be submitted for approval to the Architect/Engineer and City Engineer, which may extend the completion date for the project. Refer to the Standard Specification section 111.06 for Day’s Work and Working Hours.

Schedule float is defined as the amount of time an activity can slip past its duration without delaying the overall project. Float is not owned by the Contractor. The use of float by the City or any other parties shall not be deemed as justification for an extension of time on the project or cause delay to the Contractor in completing the work.

19.4 Conformance to Schedule. The Contractor shall conform to all submitted and accepted construction schedules. In the event that a construction schedule has not been accepted by the

Architect/Engineer and City Engineer, the most recently submitted or accepted construction schedule shall be utilized in planning work activities. The City shall not be responsible for any delays to work or changes to the construction schedule in the absence of an accepted construction schedule.

In the event that the Contractor is not able to conform to the latest submitted or accepted construction schedule, a recovery schedule shall be developed and submitted with the next monthly schedule update. The recovery schedule shall be considered a revision to the schedule that must be approved by the Architect/Engineer and City Engineer. The recovery schedule must show completion of the project within the time allowed on the project unless the City Engineer grants an extension of time.

19.5. Substantial Completion: A project is considered substantially complete when the following items have been performed.

19.5.1 The work and/or designated phases of construction, as identified in the Contract Documents, is functionally complete and can be fully utilized for the intended purpose including any field changes, substitutions, change orders, amendments, and agreement of quantities approved in accordance with Standard Specification section 108.03.

19.5.2 A Substantial Completion Walk-through has been performed and a list of incomplete or defective work has been identified, itemized and included on the punch list.

19.5.4 Contractor will submit final quantities and as-built drawings to Engineer of Record for processing.

19.5.4 The City Engineer will issue a letter of Substantial Completion.

19.6 Completion of Punch List. When a Project is declared Substantially Complete, the Contractor must complete the Punch List within thirty (30) Calendar days. Liquidated damages will be assessed for each day beyond the thirty (30) Calendar days in accordance with 111.09 of the Standard Specifications. Extension of the thirty (30) Calendar days to complete the Punch List due to adverse weather conditions is limited to actual lost days.

19.7 Final Acceptance. Prior to final acceptance and release of retainage by the awarding public agency the following must be complete:

19.6.1 A final walk-through has been performed verifying all items are complete.

19.6.2 A directory containing the firm name of each subcontractor and material supplier on the project, subcontractor's and material suppliers address, telephone number, and representative to contact for repair and/or maintenance.

19.8 Time is of the Essence

Both the City and the Contractor expressly agree that time is of the essence with respect to this Project. Progress and completion of construction in a timely manner is necessary to limit inconvenience and improve safety to the public.

19.9 Interruption of Work

Once construction operations commence within the Project limits, Work shall continue on each available Work Day (as defined in Section 111.06 of the Standard Specification) without interruption until all Work is substantially completed. The use of the term Work Day does not change a Project to a Working Day Project.

Non-performance of Work on available Working Days (not related to weather conditions and without prior written authorization from the City Engineer) will result in the assessment of Liquidated Damages on each occurrence for any interruption of work in excess of three (3) consecutive days, in accordance with the Standard Specification or the Special Provisions for the project. This assessment will be in addition to any Liquidated Damages which may or may not be due the City for non-completion of the Project prior to the specified Completion Date.

20. Verification and Inspection of Payroll Records. The Contractor shall keep weekly records; permits inspection of records; and certify and provide copies of payroll records and contracts and subcontracts. Example forms are available from the Public Works Department for the convenience of the Contractor.

**21. Prequalification Required.**

**For this project, Contractor must be Prequalified as listed by the Prequalification Review Board under the provisions of the Ordinance No. 26,061 approved by City Council on December 19, 2018. The Prequalification areas acceptable for this project are as follows:**

**Pre-qualified in the area of Paving Contractor “B” (2018).**

22. Small and Disadvantaged Local Business Subcontracting Program. The City of Oklahoma City has adopted a program to encourage and promote the use of small and disadvantaged local businesses as subcontractors on public construction contracts as set forth in the Oklahoma Public Competitive Bidding Act. The successful bidder awarded a public improvement contract by the City must provide the City a small and disadvantaged local business subcontracting plan setting forth the Contractor’s efforts and strategies to provide and extend opportunities for small and disadvantaged local business participation in the performance of subcontracts on City projects. The Contractor’s plan must be submitted to the City Engineer before a notice to proceed with work will be issued. The plan must set forth the Contractor’s outreach efforts and internal efforts. The Contractor must create and maintain records demonstrating its efforts and the success of its efforts. The Contractor must provide a report on the progress and success of its small and disadvantaged local business subcontracting plan to the City Engineer as a condition precedent to final payment and release of retainage. The project will neither be deemed substantially complete nor be accepted for final payment until the Contractor submits a report on the progress and success of its small and disadvantaged local business subcontracting plan. Provided, however, on emergency projects, the public construction contractor may be permitted to submit its small and disadvantaged local business subcontracting plan after the issuance of the notice to proceed.

23. Construction Stakes and Survey. The City Engineer shall furnish the Contractor with permanent horizontal and vertical alignment points for field control throughout the Project limits.

Permanent benchmarks shall be provided within two hundred (200) feet of the beginning and end of the Work.

All other horizontal or vertical controls not specifically noted, but required for proper completion of the Work, shall be provided by the Contractor. The Contractor shall furnish staking unless otherwise provided in the Special Provisions. If there is not a Bid line item for payment on Construction Stakes and Surveying, paragraphs 23.8, 23.9 and 23.10. are not applicable.

23.1 Construction staking shall consist of furnishing, placing and maintaining construction stakes or marks as necessary to establish lines and grades required for completion of the Work.

23.2 Field control shall be provided by the City Engineer prior to the Work commencing. The Contractor shall exercise care in the preservation of previously placed stakes and bench marks and shall have them reset at the Contractor's expense when damaged, lost, displaced or removed. Bridge centerline, horizontal, and vertical control shall be set by the City Engineer.

23.3 The Contractor shall use personnel and equipment suitable for all construction staking required. The Contractor shall provide all necessary stakes such as: offset, reference point, slope, pavement, curb line and grading stakes. Stakes for bridges, sewers, water lines, drainage facilities, gutter line, culverts, and other structures shall be provided to ensure correct layout of the Work. Stakes for line and grade shall be adequate to maintain the required tolerances for the Work. The station number and distance from the centerline of construction shall be marked on all grade stakes.

23.4 When grading quantities are to be paid by field measure, the Contractor shall furnish both original and final cross section field notes. Field notes shall be the basis of partial payments for work completed. Final field measured quantities shall be paid according to survey field notes. Where discrepancies occur, the decision of the City Engineer is final.

23.5 The Contractor shall furnish the original survey records to the City Engineer for permanent files. These records shall be furnished as completed during the progress of the Work. Records shall be maintained in permanently bound field books and/or level books and formatted in a manner commonly accepted by the surveying profession or digital files acceptable to the City Engineer.

23.6 The Contractor shall, upon request by the City Engineer, provide daily survey notes and cut sheets to assist the City Engineer in checking correctness of the construction staking. When significant errors occur, the Contractor shall re-survey to the satisfaction of the City Engineer. The Contractor shall provide, at the Contractor's expense, proper and safe access for checking the construction staking. Any inspection or verification by the City Engineer shall not relieve the Contractor of responsibility for the correctness of the total Work to be performed.

23.7 The Contractor shall notify the City Engineer when plan errors require deviations from the specified elevations or horizontal locations.

23.8 Measurement for construction staking shall be based on estimated Work completed.

23.9 Payment for construction staking shall be lump sum, which shall be full compensation for furnishing all materials, equipment, labor and incidentals necessary to complete the work as specified.

23.10 Partial payments for lump sum Contracts shall follow the schedule below:

25% of lump sum	on first estimate
50% of lump sum	on 10 percent complete Work and Original Survey Record submitted to date
75% of lump sum	on 50 percent complete Work and Original Survey Record submitted to date
95% of lump sum	on 75 percent complete Work and Original Survey Record submitted to date
100 percent	when all field books and records are furnished to the City Engineer

#### 24. Storm Water Construction Activities Permit

In order for the City of Oklahoma City to remain in compliance with the Environmental Protection Agency (EPA), Oklahoma Department of Environmental Quality (ODEQ) regulations, and maintain its own NPDES permit, the City must ensure all construction activities within its corporate boundaries are in compliance under the following regulations:

Environmental Protection Agency  
Code of Federal Regulations (40 CFR, Part 122)  
Clean Water Act  
Oklahoma Department of Environmental Quality  
Oklahoma Pollutant Discharge Elimination System Act (OPDES) 27A O.S. 2-6-201  
ODEQ General Permit OKR10  
City of Oklahoma City  
Oklahoma City Municipal Code

A copy of the City's Best Management Practices Manual can be downloaded at <http://www.okc.gov/pw/storm.html> or a copy can be picked up at the City of Oklahoma City's City Clerk's Office, 200 N. Walker, 2nd Floor, Oklahoma City, Oklahoma 73102.

As a part of this project the contractor will be required to submit a completed Notice of Intent (NOI), a Storm Water Pollution Prevention Plan (SWPPP) and an Erosion Control Site Plan for permitting purposes. The Contractor shall be required to follow the plans as submitted and approved at all times during construction of the project. Along with the above stated items the Contractor shall also provide a check payable to the City of Oklahoma City in an amount required by this project. This permit must be issued before the Contractor will be allowed to obtain the building/construction permit. Permits issued may be renewed annually upon filing of a renewal application and payment of permit fee, provided that the applicant's activity, and the location where it is carried on are the same as originally permitted. In addition, the application

for renewal shall be subject to all the requirements pertaining to original permit. (Oklahoma City Municipal Code 48-33)

The following note shall be on every plan submitted to the City of Oklahoma City:

Construction activities that result in land disturbance of equal to or greater than one (1) acre, or less than one (1) acre if they are part of a larger common plan of development or sale that totals at least one (1) acre must also obtain a permit from ODEQ (form 605-002a) for Storm Water Discharge from Construction Activities. This means that land disturbing of one (1) acre or more must permit with ODEQ and the City of Oklahoma City, Storm Water Quality.

## **SPECIAL PROVISIONS – TECHNICAL**

### **Project Number MZ-0064-1 Amphibian Plaza Site Preparation Project**

These Special Provisions are included in and are a part of the Bidding Documents for this project.

Section 31 1000	Site Preparation
Section 31 2200	Grading
Section 31 2500	Erosion and Sedimentation Controls
Section 32 1200	Paving
Section 32 1900	Planting Preparation
Section 32 9200	Grassing
Section 33 1100	Water Utility Distribution

## SECTION 311000 - SITE PREPARATION

### PART 1 - GENERAL

#### 1.1 WORK INCLUDED:

- A. This section covers site work layout, protection of existing items to remain, site clearing and grubbing.
- B. Site Conditions: Contractor shall visit the site, familiarize himself with actual conditions, and verify existing conditions in the field.

#### 1.2 LAYOUT WORK:

- A. Layout work shall be done under supervision of a registered professional or person familiar with construction layout work.

#### 1.3 TREE SAVE:

- A. Contractor shall make every effort possible to save existing trees. The Contractor shall limit his clearing operations and equipment movement to within the "Limits of Work" and shall not disturb the existing terrain or trees outside the work area.

#### 1.4 MAINTENANCE:

- A. Maintain carefully all benchmarks, monuments and other reference points. If disturbed or destroyed, replace as directed. If found at variance with drawings, notify Owner's Representative before proceeding with layout work.

#### 1.5 JOB CONDITIONS:

- A. Locate storage sheds, temporary office, and stockpile topsoil so as to best advance progress of work, and as approved by the Owner's Representative.

#### 1.6 PUBLIC SAFETY:

- A. Provide all safety fence barricades guards, lights and other installations required to protect persons and property during this part of the work. This shall be in addition to such protection required elsewhere in this specification.
- B. All work and storage areas shall be secured with temporary plastic safety fencing (as manufactured by services and materials company - Grainger catalog #9ME95 or approved equal). Contractor shall maintain plastic safety fencing daily to assure a complete barrier.

1.7 UTILITIES PROTECTION LAW (DIG LAW):

- A. Comply with Oklahoma Utilities Protection Law. Notice must be given to the Utilities Protection Center; 800-282-7411 three (3) working days preceding the day the work (digging) is to begin. This notice must contain County (where project is located), Town (or closest City or Town), location (street address), type of work to be done, name of Contractor, company name and address, telephone number, which company/individual (the work is being done for), date and time the Contractor is planning to dig.

PART 2 - MATERIALS

2.1 ENGINEERING EQUIPMENT:

- A. Surveyor's transit and measuring devices properly calibrated to accurately lay out the work shall be used.

2.2 OTHER LAYOUT EQUIPMENT:

- A. Provide stakes and batter boards of size and quality commensurate with function. Use wire or non-stretching cord to establish reference lines for site clearing and grading.

2.3 PROTECTION MATERIALS:

- A. Materials for protection of trees and other existing work remaining shall be treated wood and/or exterior plywood of size, strength, and extent to provide protection of existing work remaining.

PART 3 - EXECUTION

3.1 LAYOUT:

- A. Before the work is started, the Contractor shall stake out the entire control lines of work and establish bench marks and reference points. This work shall be examined by the Owner's Representative, and on his approval the Contractor shall complete the staking.
- B. The Contractor shall be responsible for all grade stakes and line stakes during the grading and filling operations, resetting all grade stakes and line stakes destroyed.
- C. Contractor shall verify all benchmarks, property corners and property lines (bearings and distances) prior to construction. Contractor shall stake all property corners and all property lines every 50' with 2"x2"x4' long stakes. Stakes shall be labeled property line and marked with red flagging.

3.2 CLEARING:

- A. Clear all areas to be graded of debris and extraneous materials.
- B. Clearing consists of the removal from the general construction areas and proper disposal of all trees, brush, stumps, logs, grass, weeds, roots, decayed vegetable matter, refuse dumps, and all other objectionable matter resting on the original ground surface or appearing or being placed on these areas at any time before final acceptance of the work, except as provided for elsewhere.
- C. This item also includes the removal and proper disposal of any obstructions not to be salvaged, such as fences and poles, and incidental structures within the construction area which might interfere with construction.

3.3 GRUBBING:

- A. Grubbing shall include the removal and proper disposal of all stumps, roots, and other vegetation or perishable matter that exists below the original ground surface. All sound, unsound or decayed stumps shall be removed to a depth of two (2) feet below the original ground.

3.4 REMOVAL OF MATERIALS:

- A. The removal and disposal of all cleared and grubbed materials shall be the responsibility of the Contractor. All matter shall be removed from the site. Material that is removed from the site shall be disposed of at a location that is approved by the Owner's Representative. No material of clearing and grubbing operations shall be pushed or placed in areas that are not to be cleared.
- B. Contractor shall be responsible for complying with all local ordinances and obtaining the necessary permits for disposing of trees, stumps, and other debris.

END OF SECTION 311000

## SECTION 312200 - SITE GRADING

### PART 1 - GENERAL

#### 1.1 SCOPE:

- A. This section covers stripping and stockpiling topsoil, grading, hauling, excavating, compaction and backfilling required for building pad and site work, and temporary grading or ditching and silt control to protect the site and adjoining property from water and silt damage.

#### 1.2 RELATED SECTIONS:

- A. Submittals.
- B. Testing Laboratory Services

#### 1.3 REFERENCES:

- A. ASTM D422 - Particle Size Analysis of Soils.
- B. ASTM D423 - Test for Liquid Limit of Soils.
- C. ASTM D424 - Test for Plastic Limit and Plasticity Index of Soils.
- D. ASTM D1556 - Test for Density of Soil In Place Sand Cone Method.
- E. ASTM D2922 - Density of Soil and Soil Aggregates in Place By Nuclear Methods.
- F. ASTM D3017 - Moisture Content On Soil Aggregates In Place By Nuclear Methods (Shallow Depth).
- G. ASTM D1557 0 Standard Test Methods For Moisture-Density Relations of Soils and Soil - Aggregate Mixtures Using 10 lb. Rammer and 18" Drop.

#### 1.4 DEFINITIONS:

- A. Backfill is defined as fill immediately behind foundation elements or retaining walls.
- B. Structural fill is defined as all fill under the structure not defined as backfill.

#### 1.5 QUALITY ASSURANCE:

- A. Coordinate and schedule in a timely manner with Testing/Inspection Agency the following quality related items
- B.
  - 1. Obtain samples of the structural fill from the borrow site.
  - 2. Verify structural fill.

3. Determine particle size, liquid limit, plastic limit, plasticity index and maximum density of each type of soil.
  4. Observe proofrolling.
  5. Perform a sufficient number of field density tests to verify compaction of structural fill.
  6. Verify foundation-bearing capacity.
  7. Verify quantities of material removed and quantities of material placed where Unit Prices are involved.
  8. Verify that subgrade has been properly prepared to receive structural fill.
- C. Upon completion of Work, obtain written verification from Testing/Inspection Agency that work was performed in compliance with recommendations in Geotech Report.

1.6 SUBSURFACE CONDITIONS:

- A. Copies of subsurface investigation report of the site will be made available upon request. The data is not intended as a representation or warranty of the continuity of such conditions. Owner will not be responsible for interpretation or conclusions drawn therefrom by the Contractor. The data is made available for the convenience of the Contractor and is not guaranteed to represent all conditions that may be encountered.
- B. Contractor may examine the site and make his own subsurface explorations at no additional cost to the Owner. Notify Owner prior to making any subsurface explorations.

1.7 EXISTING CONDITONS:

- A. Site Conditions: Existing conditions are shown on the drawings. Contractor shall visit the site, familiarize himself with actual conditions and verify existing conditions in the field.

1.8 PROTECTION:

- A. The Contractor shall limit his grading and filling operations to within the work areas and shall not disturb the existing terrain or trees outside these lines, except for cleanup and underbrush removal. Location designated by the Owner's Representative.
- B. Bench Marks and Monuments: Carefully maintain all benchmarks, monuments and other reference points. If disturbed or destroyed, replace as directed, at no additional cost to the Owner. If found at variance with the drawings, notify the Architect.
- C. Fill material placed against drainage structures or backfilled around utility pipes shall be placed and compacted by methods, which will not cause any damage. Any damage, which does occur, shall be repaired or replaced by the Contractor at his own expense.
- D. Graded Areas: Any settlement or washing that occurs prior to acceptance of the work shall be repaired and grades re-established to the required elevations and slopes. Fill to required subgrade levels any areas where settlement occurs.

- E. All work shall be performed in accordance with applicable codes, ordinances and requirements of the Local Municipality Development Department.
- F. Temporary Grading and Drainage: The Contractor shall provide effective drainage for the entire site at all times. Watersheds shall be diverted by ditching or embankment to prevent encroachment of surface water in the excavations. No impoundment of water will be permitted except as provided in the drawings. Pools, puddles or inundated excavations shall be drained immediately. The Contractor shall be fully responsible for all water damage to the site, to the installed work and to adjacent property owners.

1.9 DISPOSITION OF EXISTING UTILITIES:

- A. Follow rules and regulations of authorities having jurisdiction for the respective utilities in executing work under this section.
- B. Active Utilities Shown on Drawings: Protect from damage and remove or relocate only as indicated or specified.
- C. Active Utilities Not Shown on Drawings: Protect or relocate in accordance with written instructions of Architect, and Contract Sum shall be adjusted for such additional work in accordance with Contract Conditions.
- D. Inactive and Abandoned Utilities: Remove, plug or cap. In absence of specific requirements, plug or cap such utility lines at least 4 feet outside of existing building walls or as required by local regulations.
- E. Locate existing underground utilities by careful hand excavation. If utilities are to remain in place, provide protection from damage during construction operations.
- F. Cooperate with Owner and utility companies in keeping respective services and facilities in operation. Do not interrupt existing utility service facilities occupied and used by Owner or others, unless written permission is given by the Architect and then only after temporary utility services have been provided.
- G. Should uncharted or incorrectly charted piping or other utilities be encountered during excavation, consult the Architect immediately for directions.
- H. Repair damaged utilities to satisfaction of utility owner.

1.10 NOTICE:

- A. Notify the Architect forty-eight (48) hours prior to the beginning of any excavation work.

PART 2 - EXECUTION

2.1 LAYOUT:

- A. Establish and maintain stakes as required for drives, parking, walks and other site improvements. Protect benchmarks, monuments and other reference points, and replace any that are disturbed or destroyed by these operations.
- B. Prior to construction, have structure location staked and certified by an Oklahoma licensed surveyor. If discrepancies between actual lines and elevations exist, notify Architect before proceeding with layout of structure.

## 2.2 TOPSOIL:

- A. After all demolition, clearing and disposal is completed, the Contractor shall strip from the top of the existing ground all topsoil in all areas to be graded. Stockpile topsoil in designated or approved locations where it will not interfere with the work.
- B. At completion of job, available topsoil shall be distributed to all disturbed or re-graded areas except building, parking lot, drives and walks at the direction of the Architect. Topsoil distribution shall be a minimum of four (4) inches deep. Ground shall be scarified before placing topsoil. After fine grading has been accomplished, Contractor shall use a "rock hound" type attachment to their equipment to pick up rocks and debris over all sports/play field and lawn areas. Topsoil shall be machine raked or hand raked and all debris hauled from the site.

## 2.3 GRADING:

- A. All exterior grades shall be performed in accordance with the drawings to easy contours. In all cases, grades shall have sufficient pitch to drain water.
- B. All grading shall be done as required to bring the earth to the finished grades. Grades not otherwise indicated shall be uniform levels of slopes between points where elevations are given or between such points and existing finished grades.
- C. Balancing Dirt: Adjust grades on sports/play field as necessary to balance earthwork on site.
- D. Unsatisfactory Fill Material on Site: If graded and excavated grading materials on site are unsatisfactory for use as compacted fill, satisfactory fill shall be obtained on site. Obtaining and hauling of satisfactory fill material shall be performed by Change Order.
- E. Moisture Control: Where subgrade or layer of soil material must be moisture conditioned before compaction, uniformly apply water to surface of subgrade, or layer of soil material, to prevent free water appearing on surface during or subsequent to compaction operations. Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to specified density. Soil material that has been removed because it is too wet to permit compaction may be stockpiled or spread and allowed to dry. Assist drying by discing, harrowing or pulverizing until moisture content is reduced to a satisfactory value.

- F. Grades: Cut, place, compact fill and rough grade entire project area to within vertical tolerance not to exceed one tenth (0.10) foot above or below finished grades shown with allowances made for sub-grades.
- G. For parking areas, drives and roadways, and concrete walks, subgrade to depth as shown on drawings.
- H. For lawn and play field areas, grade to finished grades as shown on plan. Refer to item 2.02, Topsoil, for distribution of topsoil.

2.4 EXCAVATION:

- A. The Contractor shall excavate to lines, elevations, dimensions, and depth, plus such additional space sufficient for forms and working space, as indicated on the drawings.

2.5 EXCAVATION EMBANKMENT AND BRACING:

- A. The Contractor shall accept full responsibility for all excavations. He shall protect all excavation embankments against collapse. Where possible, embankments over four (4) feet high shall be made at a slope not greater than one and one half (1-1/2) horizontal to one (1) vertical, or where the soil is very sandy or wet the slope should be not greater than two (2) horizontal to one (1) vertical. Steeper slopes than those suggested herein may be employed when the work is done under the supervision of a Registered Geotechnical Engineer.
- B. Where it is not possible to provide a safe embankment slope, all banks shall be temporarily supported and maintained secure until permanent support has been provided.
- C. Where ditches or trenches that are over four (4) feet deep, cross bracing and shoring shall be provided to prevent collapse.
- D. The Contractor shall provide bracing systems designated by an Oklahoma Registered Professional Engineer experienced in such designs. The design drawings shall show the work and sequence in its entirety and be submitted to the Architect prior to commencing the work.
- E. To prevent caving or settlement of earth adjacent to excavations, and for the protection of persons as well as property, shoring, bracing and other similar work shall be provided and installed to meet the conditions in each particular case and shall be left in place until construction has reached a point where backfills behind walls or in ditches have been made and the need for shoring and bracing eliminated.

2.6 DEWATERING:

- A. No concrete, unit masonry nor fills of any kind shall be placed on flooded bearing levels nor on levels that are muddy or disturbed by the presence of water. The presence of

excess water at any bearing level shall constitute an unsuitable condition, and the Contractor shall remove excess water by pumping, well pointing, trenching and draining or other approved method. The Contractor shall be responsible for removal of all surface water. Any ground water dewatering shall be a Change Order to the Contract. The dewatering process shall be conducted in a manner to properly drain and protect all structural bearing points. Water shall be conducted by pipes, hoses or ditches to a point on the site that will allow it to drain freely into the natural drainage areas.

## 2.7 EARTH EXCAVATION:

- A. Earth Excavation shall consist of all material found below the surface of the ground except active utilities and rock.
- B. All excavations shall be made to the proper depth with allowances made for workspace.
- C. All excavations shall be kept free of water at all times. All mud caused by standing water must be completely removed from any excavation before the placing of any permanent material. Where necessary, the water table shall be maintained during construction by the use of pumps and ditches at a level two (2) feet below the deepest excavation. No excavation shall be made to full depth when freezing temperature may be expected. Protect excavation bottom from frost if placing of concrete or gravel is delayed. All footing excavations shall be completely free of pin roots.
- D. Excess Excavation: If excavations for foundations or footings of any kind are carried by the Contractor, without proper authorization, below the indicated or specified levels, they shall be refilled to the required levels with concrete of the class specified for footings, without extra cost to the Owner.

## 2.8 ROCK EXCAVATION:

- A. Rock excavation shall consist of all material, which cannot be excavated except by drilling, blasting or wedging. It shall consist of un-decomposed stone hard enough to ring under a hammer, and the amount of solid stone shall be not less than one (1) cubic yard in volume. Rock is further defined as follows:
  - 1. General Excavation: Any material occupying an original volume of more than one cubic yard which cannot be excavated with a single-tooth ripper drawn by a crawler tractor having a minimum draw bar pull rated at not less than fifty-three thousand (53,000) pounds.
  - 2. Trench Excavation: Any material which occupying an original volume of more than one cubic yard cannot be excavated with a backhoe having a bucket curling force rated at not less than twenty-six thousand (26,000) pounds.
- B. When rock is encountered, the earth shall be cleared away and any rock shall be verified by the testing lab. The Architect shall be notified before any rock has been blasted or removed in any way. Once rock is uncovered, grading sections shall be taken. When rock is completely removed, new grading sections shall be taken to determine the quantity of rock removed. Contractor shall bear the expense of taking grading sections.

- .....
- C. All blasting shall be done in accordance with local ordinances, and permits shall be obtained where required by law.
- D. Rock that is removed shall become the property of the Contractor and shall be removed from the site and/or buried as allowed by the specifications.
- E. Decomposed rock and similar material that can be removed by tractor drawn ripper or power machinery as previously mentioned will be classified as earth excavation.
- F. Rock Payment Lines are limited to the following: Two (2) feet outside of concrete work for which forms are required, except footings. One (1) foot outside perimeter of footings and one (1) foot below bottom of exterior wall footings and interior column footings. In pipe trenches, six (6) inches below invert elevation of pipe and two (2) feet wider than inside diameter of pipe, but not less than three (3) feet minimum trench width. Neat outside dimensions of concrete work where no forms are required. Under slabs on grade, six (6) inches below bottom of concrete slab.

2.9 GRADE MAINTENANCE:

- A. The Contractor shall provide additional fill material, remove excess material, or redistribute material, should grades be changed by erosion or other construction without additional cost.

2.10 PROOFROLLING:

- A. Proofrolling shall be accomplished with a loaded tandem axle dump truck weighing twenty (20) to thirty (30) tons, with two (2) complete coverages in each of two perpendicular directions. Proofrolling shall be accomplished under the observation of the Geotechnical Consultant. Any areas which "pump" under the wheels of the loaded truck shall be undercut and replaced with clean, compacted fill.

2.11 CONTROLLED STRUCTURAL FILL – BUILDINGS:

- A. Building area fill shall be defined as a fill supporting a building structure and extending ten (10) feet on each side of said area measured at the finished grade, thereafter tapering away at a forty-five (45) degree angle.
- B. All areas to receive building area fill shall be cleared and stripped as herein specified. Subgrade for all fill areas shall be inspected and approved by the Architect before beginning the fill operation. Refer to 2.10 PROOFROLLING, included in this section. Fill material shall be placed in lifts not to exceed eight (8) inches in loose measure. The fill shall be compacted to at least ninety-eight (98) percent of the maximum dry density as determined by the Standard Proctor Compaction Test (ASTM D 698). During the fill placement, in-place density tests shall be performed as hereinafter specified. The soil used for fill material shall be free of organic material and debris. All backfill in these fill areas shall be placed in thin lifts and compacted as specified above.

## **2.12 CONTROLLED STRUCTURAL FILL - DRIVES, WALKS AND PARKING AREAS:**

- A. Paving area fill shall be defined as a fill supporting any asphalt or concrete paving for parking of cars or trucks, or driveways, and extending for a distance of ten (10) feet on each side of said area measured at the finished grade, thereafter tapering away at a forty-five (45) degree angle.
- B. All areas to receive paving area fill shall be cleared and stripped as herein specified. Subgrade for all fill areas shall be inspected and approved by the Architect before beginning the fill operation. Refer to 2.10 PROOFROLLING, included in this section. Fill material shall be placed in lifts not to exceed eight (8) inches in loose measure. The fill shall be compacted to at least ninety-five (95) percent of the maximum dry density as determined by the Standard Proctor Compaction Test (ASTM D 698). During the fill placement, in-place density tests shall be performed as hereinafter specified. The soil used for fill material shall be free of organic material and debris. All backfill in these fill areas shall be placed in thin lifts and compacted as specified above.

## **2.13 GENERAL AREA FILL:**

- A. General area fill shall be defined as all fill in the general grading area covering banks, hollows, drain ditches, etc.
- B. Area to receive fill shall be stripped of trees, stumps and vegetation, and topsoil shall be stockpiled before fill is placed. Fill material shall be placed in lifts not exceeding eight (8) inches in loose measure and shall be compacted to at least ninety (90) percent of the maximum dry density as determined by Standard Proctor Compaction Test (ASTM D 698). Water content of fill shall be within three (3) percent of optimum moisture content.

## **2.14 TESTING OF FILL:**

- A. Tests of the fill in place shall be performed by testing agency.
- B. Tests will be paid for by Owner. Failing tests shall be paid for by the Contractor. Tests shall be made continuously as necessary during the placing and compacting of the fill.
- C. Tests for fill will be made as follows:
  - 1. Paving Area Fill: One (1) test shall be made for each two-foot lift of each 1,000 sq. ft. of area.
  - 2. General Area Fill: One (1) test shall be made for each two-foot lift of each 1,000 sq. ft. of area.
  - 3. Utility trench or retaining wall: One (1) test shall be made each 150 linear feet of area and backfill tested every two (2) feet of lift.
  - 4. All tests shall be delivered in four (4) copies for distribution: two copies to the Architect, one copy to the Owner and one copy to the General Contractor.

## **2.15 EROSION CONTROL:**

- A. Protect newly graded areas from actions of the elements. Settlement or washing that occurs prior to acceptance of work shall be repaired, and grades established to required elevations shall be maintained by the Contractor until the date of substantial completion as issued by the Architect.
- B. Contractor shall be fully responsible for any damage occurring to property above or below the site which is a result of drainage or silt from the site. Contractor shall fully inspect prior to commencing any work and take any precautions in addition to these hereinafter specified which he deems necessary to protect the adjacent property.
- C. The Contractor shall construct silt collecting facilities as shown on drawings. Also construct and maintain all silt barriers as shown on the drawings.
- D. Contractor shall take all precaution possible to prevent erosion of all graded areas of the site. Commence all fills at outmost part of fill and slope towards original ground so that all surface storm water drains back away from fill and does not run over the top of fill slope. Construct swales at bottom of proposed fill slopes prior to construction of any fills. Construct and maintain a swale at the outermost part of top fills as fills are constructed.
- E. Install storm drainage as grading progresses and makes additional storm drainage installation possible. Direct swales to drainage structure locations as shown on drawings.

2.16 MECHANICAL TRADES:

- A. Wherever trenches are needed, either within or outside the building perimeter, excavation for the backfilling of same shall be done. Care and placing of backfill in these trenches shall be governed by paragraph on backfill previously specified.

2.17 CLEAN UP:

- A. During construction, debris shall not be dumped on any part of the property or on any unauthorized place. All debris, construction materials, Contractor's buildings or equipment, logs, stumps, boulders, or any other extraneous material deposited during construction shall be removed from the site, which includes all graded areas, all wooded areas, and all other undisturbed areas. All debris shall become the property of the Contractor and hauled away from the site. All existing debris, logs, stumps, boulders, or other extraneous material shall be removed from all undisturbed or graded areas.

END OF SECTION 312200

## SECTION 312500 - EROSION & SEDIMENTATION CONTROLS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS:

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.
- B. Best Management Practices Manual for Construction and Land Disturbing Activities, Latest Edition, as published by the City of Oklahoma City Public Works Department. Apply to all land disturbing activities.

#### 1.2 RELATED SECTIONS:

- A. Grading Section 31 22 00
- B. Grassing Section 32 92 00

#### 1.3 SCOPE OF WORK:

- A. The work specified in this Section consists of furnishing, installing and maintaining temporary erosion controls and temporary sedimentation controls and pollution controls (air, water, soil) as specified herein and as shown on drawings. The work shall include all labor, equipment and materials, and performing all operations in connection with site preparation through final site stabilization.
- B. Erosion and sediment control "Best Management Practices" shall be installed prior to land disturbing activities, during land disturbing activities, and shall be properly maintained until a permanent vegetative cover is provided on all disturbed areas.
- C. Install additional erosion and sedimentation control measures it deems necessary or as required from on site inspections by the local governing authority.
- D. Temporary sedimentation barriers include, but are not limited to: silt fence, stabilized construction entrance / exit.

#### 1.5 PROJECT CONDITIONS:

- A. Protect adjacent and downstream properties from any siltation or sedimentation from disturbed areas.

- B. The Contractor is responsible for all quantities of soil erosion control measures regardless if shown on the drawings. The extent of soil erosion control measures shown on the drawings should be considered minimum.

PART 2 - PRODUCTS

2.1 SILT FENCE:

- A. Unless otherwise shown on the Plans, silt fence fabric shall meet the following minimum requirements

TYPE FENCE	C
Tensile Strength (lbs. Min.) (1) (ASTM D-4632)	Warp – 120 Fill – 180
Elongation (% Max.) (ASTM D-4632)	40
AOS (Apparent Opening Size) (Max. Sieve Size) (ASTM D-4751)	#30
Ultraviolet Stability (2) (ASTM D-4632 after 300 hours weathering in accordance with ASTM D-4355)	80
Bursting Strength (PSI Min.) (ATM D-3786 Diaphragm Bursting Strength Tester)	175
Minimum Fabric With (Inches)	36

PART 3 - EXECUTION

3.1 EROSION AND SEDIMENTATION CONTROL:

- A. Sedimentation Control: diversion berms, silt dams, traps, barriers and appurtenances shall be installed and shall be maintained in-place for duration of construction, as shown and detailed on erosion control plan.
- B. Install perimeter controls prior to clearing and grading activities.
- C. Silt fence: Install as shown on the Details. In the absence of a provided detail, trench 6” deep along silt fence line layout and bury one foot of fabric. Set steel or wood posts at a 6’ maximum spacing (10’ if using wire reinforcement). Set posts a minimum of 12” deep.
- D. Temporary Construction Entrance – A stabilized, stone aggregate construction entrance shall be constructed, as per the detail set forth in the Plans. The temporary construction entrance shall reduce vehicle tracking of sediments. Out-going trucks shall

have the tires washed prior to exiting the site onto any public street or right-of-way. Any mud, dirt, or rock that is tracked onto public streets shall be swept immediately and material placed within the perimeter controls.

- E. The Contractor shall have all erosion and sedimentation control devices in service and operating properly prior to completion and final acceptance of the contract and thru final stabilization.

3.5 DUST CONTROL:

- A. The Contractor shall keep airborne dust to a minimum by using water sprinkling or tossing and/or other suitable means to limit dust and dirt from rising and scattering in the air.

3.6 POLLUTION AND SPILL PREVENTION:

- A. The Contractor shall make every effort to control both air and water pollution. Pollutants such as fuels, lubricants, bitumens, raw sewage and other harmful materials will not be discharged into or near rivers, streams or man-made channels. Equipment maintenance shall be performed with containment and capture of used oil. Contractor shall not pour or drain used lubricants or other necessary mechanical fluids onto the ground. Remove from site and deliver to a recycling center.

- B. Material Management Practices

- 1. The following material management practices shall be used to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff. The Contractor shall follow good housekeeping practices onsite during the construction project.
  - a. An effort shall be made to store only enough product required to do the job.
  - b. All materials stored onsite shall be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.
  - c. Products shall be kept in their original containers with the original manufacturer's label.

- D. Product Specific Practices

- 1. The following product specific practices shall be followed for products stored on-site:
  - a. Concrete:
    - 1) Concrete trucks shall be allowed to wash out, discharge, and drum wash only at the identified equipment maintenance area(s). Maintenance areas shall be equipped with a discharge

containment area (e.g., earth berms surrounding area). The containment area shall be cleaned up and removed from the site upon completion of concrete installation work.

3.8 REMOVAL OF TEMPORARY EROSION CONTROL DEVICES:

- A. As soon as permanent vegetative cover is established, Contractor shall remove temporary devices, including sediment barriers, berms, silt traps and similar devices.
- B. Remove all debris resulting from temporary erosion control from project site.

END OF SECTION 312500

## SECTION 321200 - PAVING

These Special Technical Provisions-Paving are included in and are a part of the Bidding Documents for this project.

### 1. Water Meter Boxes

Traffic rated boxes will be required where a water meter falls within a sidewalk, paved areas, or in an area to be paved. Type of box shall be an approved City design. See attached meter location detail.

All work required to adjust, relocate or replace Water Meters and/or Meter Boxes shall be performed by a pre-qualified, approved water meter contractor. A list of current pre-qualified water meter contractors may be obtained from the Utilities Department Meter Shop, 621 N. Pennsylvania Avenue (405-297-3990).

### 2. Erosion/Sediment Controls

Unless otherwise provided for by the Plans and/or Specifications, it is the intent that construction fully comply with the Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES) general permit requirements. The contractor will be required to conduct the work in a manner that will prevent pollutants or sediment from leaving the construction site. The contractor who is awarded a City owned project is responsible for obtaining all applicable storm water discharge permits and the installation, maintenance, and inspection of all erosion controls and other Best Management Practices (BMP). A storm water quality construction or land disturbance permit is required on any disturbance prior to the start of land disturbing activities. Construction activity that results in land disturbance of equal to or greater than one (1) acre, or less than one (1) if part of a greater common plan of development or sale that totals at least one (1) acre, must also obtain a permit from Oklahoma Department of Environmental Quality (ODEQ) for storm water discharges from Construction Activities. This means land disturbance of one (1) acre or more must permit with both ODEQ and the City of Oklahoma City. The contractor shall submit to the City of Oklahoma City Storm Water Quality (SWQ) division a Notice of Intent (NOI), Storm Water Pollution Prevention Plan (SWPPP), Erosion Control Site Plan, and permit fee. A Jurisdictional Determination from the Oklahoma Corps of Engineers will be required if the USGS 7.5 Minute Quadrangle maps indicate the "Waters of the United States" and "Wetlands" exist within this project. There will be additional requirements if the project is within an area that has an EPA approved Total Maximum Daily Load (TMDL), Watershed plan, or Municipal Compliance plan.

Prior to any land disturbing activities a Notice of Intent (NOI) will be required to be submitted to the City of Oklahoma City SWQ, ODEQ and have an approved land disturbing permit. Typical BMP's and details are included and must be adhered to during construction. Areas of work and work schedule may be dictated by the need to comply with the sediment control requirements. The Engineer or his representative may require additional measures beyond those shown in the plan as necessary to comply with EPA requirements. All control measures must be maintained in serviceable condition throughout the duration of the project and removed and properly disposed of upon completion. The contractor shall appoint personnel to make the inspections of the control devices as specified in the SWPPP and make available to the City Inspector for review.

Payment for temporary erosion control devices shall be as noted in the bid proposal and shall include all costs of permitting and reporting. The contractor will maintain temporary erosion control until revegetation is established and accepted by the City, and a Notice of Termination (NOT) has been approved by the City of Oklahoma City and ODEQ.

3. Revegetation

In areas where sod is to be placed, the Contractor shall determine the type of existing sod cover and replace in kind. Sod shall be placed and maintained in accordance with the Standard Specifications.

A Notice of Termination should be filed with the City of Oklahoma City Storm Water Quality Division and/or ODEQ after the permitted project has reached revegetation that consists of 70% per square foot of all area disturbed during construction. Storm Water Discharge permits will not be terminated until such vegetation has been reached.

4. Private Lawn Irrigation Systems on Public Right of Way

If the Contractor encounters a private lawn irrigation system in the public right of way which obstructs the proposed construction (sidewalks, driveways, ramps, etc.), the Contractor shall cut, cap and remove it to the minimum extent possible, causing the least amount of damage to the lawn irrigation system. The Contractor shall provide 1 ½-inch PVC conduit(s) under the proposed sidewalk to assist the property owner with reconnecting the lawn irrigation system and shall coordinate its placement with them. The property owner shall be responsible for reconnecting their lawn irrigation system and making it operational upon completion of the work. The Contractor shall mark the locations of said conduit(s) and where the system was cut and capped. All Contractor costs for the above mentioned materials and labor shall be included in the price bid for other items of work.

5. Excavation

Unless otherwise provided in the proposal, grading and/or excavation required to meet existing driveway grades or required to prevent edge of pavement drop-offs of more than one inch shall be considered incidental and the cost thereof shall be included in other items of work.

The cost of excavation for sidewalks, driveways, edge of pavement drop-offs, etc. shall be included in the price bid for other items of work.

6. Proof Rolling

a. Pavement (Milled and Non-milled)

Cold Milled Pavement: The contractor shall proof roll the pavement surface to detect areas in need of pavement repair. The vehicle provided shall have an axle load of 34,000 pounds. The entire milled surface shall be proof rolled at a walking speed so that the construction inspector can mark the areas in need of pavement repair. Proof Rolling Pavement shall be paid for by the square yard as provided for in the bid proposal.

Non-milled Pavement:

For pavement that has not been milled, the contractor shall use a vehicle of equivalent weight and axle loading to perform the proof rolling, as approved by the Engineer. The other requirements and basis of payment are stated above.

b. Proof Rolling Subgrade

The contractor shall proof roll the completed subgrade prior to the start of paving operations. The vehicle provided shall have an axle load of 17,000 pounds. The entire subgrade surface shall be proof rolled at a walking speed so that the construction inspector can mark the areas requiring remedial measures. Proof Rolling Subgrade shall be paid for by the square yard.

7. Base Material

All foundation base material for sidewalks, wheelchair ramps, driveways, retaining walls, etc. shall consist of 2-inch minimum thickness of 1.5-inch crusher run, 3/8-inch rock screenings, 1.5-inch recycled concrete or approved equal. This requirement shall replace other specifications or plan details requiring a sand cushion. The base material shall be compacted before any concrete is placed. Unless otherwise provided, the cost of this material shall be included in the price bid for other items of work.

8. P.C. Concrete Panel Repair

Where only one lane is to be removed and replaced, transverse joints will match existing joints in the remaining lane. Where both lanes will be removed and replaced, transverse joints shall not exceed 15-foot spacing nor be less than 10-feet. Transverse construction and contraction joints shall be dowelled using 1-inch diameter X 18-inch long dowels. 1¼" diameter x 18-inch dowels shall be required for pavement repairs exceeding 8" thickness. The dowel spacing shall be at 18 inch centers. Longitudinal joints shall use No. 5 X 18-inch deformed tie bars at 18-inch centers. The cost of dowels, tie bars, pavement sawing, subgrade compaction and concrete removal are to be included in the price bid for PC Concrete Pavement. Use Class AA 4000 PSI (HES) concrete.

Where repairs are to be made on streets with integral curb, saw cut 2-feet from the face of curb for slab removal. Where curb and gutter was constructed, saw cut at the face of gutter. Cost of saw cut to be included in cost of PCC pavement patching.

9. Hot Mix Asphalt Paving

a. Plant Mix Bituminous Bases and Surfaces, (Superpave)

This special provision adopts in the entirety the Requirements of the ODOT 2009 Standard Specifications for Highway Construction, Section 411 Hot Mix Asphalt; Section 708 Plant Mix Bituminous Bases and Surfaces; and ODOT Special Provision for Plant Mix Bituminous Bases and Surfaces Superpave), 708-26 9a-f) 09, issued 3/19/2012; except as note below:

Any references to the Department, Resident Engineer or Materials Engineer shall be interpreted to mean the City and the City Engineer.

Reclaimed Asphalt Pavement will be accepted for surface mixes on resurfacing projects in an amount not to exceed 25% by weight (PG-64-22 OK); and in an amount not to exceed 15% by weight for surface mixes on major collector or arterial streets (PG 70-28 OK) or (PG 76-28 OK).

Natural sand allowed in all mixes containing RAP will be reduced by an amount equal to the natural sand in the RAP, which is assumed to be 30%.

Where PG 70-28 OK or PG-78-28 OK asphalt is specified in the plans or proposal, the design mix shall be based on > 3 million ESAL's.

It is the intent of these specifications to place a minimum of 0.94 x maximum theoretical density of the job mix design in pounds per cubic foot of Hot Mix Asphalt (HMA) resurfacing per square yard per inch thick of pavement to be surfaced. To allow for tolerance, HMA placed will be accepted for payment up to 1.02 x maximum theoretical density in pounds per cubic foot of the job mix formula per square yard per inch thick as shown on the Typical Section. In other words, the plan quantity cannot be exceeded by more than 9% or no additional payment will be made for the overage.

No additional payment will be allowed for HMA placed that exceeds the width or thickness shown or designated by the Engineer. The total weight of HMA placed for each square yard of pavement resurfaced shall be computed by dividing the total weight of HMA placed by the total square yards of pavement as shown to be resurfaced on the Typical Section and plans.

The target density for all HMA is 95%.

Low hanging tree limbs shall be trimmed to allow the placement of hot mix asphalt. The cost of this work shall be included in other items of work.

b. Warm Mix Asphalt Material Requirements

Unless otherwise noted on the plans or specifications, Warm Mix Asphalt (WMA) will be accepted at the Contractor's option. ODOT Special Provision for Warm Mix Asphalt Material Requirements, No. 708-22(a) 09 dated 4/28/2012 is adopted in its entirety by this special provision.

Warm Mix Asphalt (W M A) is defined as an asphalt binder and aggregate mixture which, by additive or process, can be produced and placed at a reduced temperature from normal HMA temperatures. WMA requirements are the same as for HMA except where noted. Ensure that the WMA immediately behind the paver is at least 215°F [102°C].

c. Reclaimed Asphalt Pavement (RAP) and Reclaimed Asphalt Shingles (RAS)

Use of post-manufactured RAS or post-consumer RAS is permitted. RAS are defined as processed asphalt shingle material from manufacturing of asphalt roofing shingles or from re-roofing residential structures. Post-manufactured RAS are processed manufacturer's shingle scrap byproduct. Post-consumer RAS, or tear-offs, are processed shingle scrap removed from residential structures. RAS may be used separately or in conjunction with reclaimed asphalt pavement (RAP).

Process the RAS by ambient grinding or granulating such that 100% of the particles pass the ½-inch sieve. Determine asphalt content and gradation of the RAS material for mixture design purposes in accordance with Oklahoma Department of Transportation Procedure OHD- L-26. Do not exceed the maximum allowable percentages of RAS shown in Table 1. Asphalt binder from RAS and RAP is designated as reclaimed asphalt

binder. When RAS or RAP is used, calculate and ensure that the ratio of the reclaimed asphalt binder to total binder does not exceed the percentages shown in Table 1. The allowable percentages shown in Table 1 may be decreased or increased when shown on the plans.

Prior to use, remove all materials that are not part of the shingle, such as wood, paper, metal, and plastic. Determine the deleterious content of RAS material for mixture design purposes in accordance with Oklahoma Department of Transportation Procedure OHD L-9. Unless otherwise approved, do not use RAS if deleterious materials are more than 1.5% of the stockpiled RAS. Certify RAS from post-consumer sources has no hazardous material content. Certification shall be written and signed by a Professional Engineer, registered in the State of Oklahoma. The producer shall submit a material certification for approval to the City Engineer, stating the stockpile meets the deleterious material requirement when submitting the mixture design.

Plants producing asphalt mixes containing RAS shall be required to maintain two stockpiles of RAS determined by passing/retained on the on the 1/2-inch screen. A cold feed bin for each stockpile shall be required.

Table 1		
Maximum Allowable Amounts of Reclaimed Material, RAP and RAS		
Mixture Description	Binder Replacement, Maximum Allowable %	
	Percentage by Weight of Total Mixture	
	Fractionated RAP	RAS
Reclaimed Mixes, Surface Course	25.0	0.0(1.5% Residential)
Reclaimed Mixes, Base Course	19.0	1.5
Reclaimed Mixes, Base Course	25.0	0.0

\*If RAS is used  
 ^If no RAS is used

The maximum binder replacement in the surface course shall be 25% for Type S4 or S5 (PG 64-22 OK).

- d. Hot Mix Asphalt Surface Course 1.5" Thick and Less (Thinlay)  
 The contractor shall determine the best compactive effort to achieve proper density. Roll to the point of break over and then back off one pass. For example, if three passes with the roller and achieves a density of 95% with the nuclear density tester, and on the 4th pass the density is 94.8%, the best compactive effort would be with a rolling pattern of 3 passes. Do not use a vibratory steel wheel roller on Thinlay.
- e. Tack Coat Material  
 The tack material shall be CSS-1h or CBC-1h. The application rate shall be 0.15 Gallons/Square Yard of diluted emulsion, diluted with water at a ratio of 1:1. This ratio means that one part water and one part emulsion is mixed to apply the tack. Therefore,

if the total application rate is 0.15 Gallons/Square Yard, then the emulsion rate is 0.075 Gallons/Square Yard. The 1:1 dilution rate shall not be changed by the contractor. The emulsion shall be measured and paid for by the gallon, before dilution. The tack coat application rate may be adjusted slightly based on field conditions, with approval of the Project Engineer or Construction Inspector. The tack coat shall be completely cured before placing the hot mix asphalt.

Before the hot mix asphalt is laid, the surface upon which it is to be placed shall be cleaned thoroughly to the satisfaction of the Engineer. A combined mechanical broom/vacuum system, acceptable to the Engineer, and shall be given a uniform tack coat application with asphalt emulsion of the type shown herein. A conventional power broom and a power blower/vacuum shall also be acceptable.

The tack coat shall be applied, with a sprayer approved by the Engineer. Tests (ASTM D 2995) shall be required to verify the application rate of the distributor truck. All contact surfaces of curbs and gutters, manholes and other structures shall be painted with a thin uniform coat of asphaltic material used for the tack coat.

10. Tactile Markers/Truncated Domes

The following are the approved manufacturers of Cast in Place, Cast In Place Replaceable and Surface Applied Tactile Markers/Truncated Domes;

Manufacturer	Part Numbers		
	Cast In Place	Cast In Place Replaceable	Surface Applied
Armor-Tile Tactile Systems	ADA-C-2460	ATH-R-2460	ADA-S-2460
Answer Industries	N/A	24C-1R	24S-1R
Access Product Inc.	N/A	ACC-R-2X5	ACC-S-2X5
ADA Solutions, Inc.	2460IDPAV2	2460REP	2460IDRET2

The standard color for all Tactile Markers/Truncated Domes is Brick Red (Federal Color No. 22144).

Cast-in-Place Replaceable Tactile Markers/Truncated Domes shall be used when a new concrete ramp is being installed. If approved by the Engineer, Surface Applied Tactile Markers/Truncated Domes may be used when the existing ramp meets all required ADA regulations, except that it does not have tactile markers/truncated domes. When Surface Applied Tactile Markers/Truncated Domes are used, they shall not be glued in place to the existing ramp and shall be secured in place by screws per the manufacturer’s recommendations.

Cast in Place Replaceable Tactile Markers/Truncated Domes shall be guaranteed in writing for a period of five (5) years from date of final completion. The guarantee includes defective work, breakage, deformation, fading and loosening of tiles. A two foot by five foot area of Tactile Markers/Truncated Domes shall have at least 11 anchors.

## 11. Cold Milling

- a. **Pavement-Locating Water Valve Boxes and Manholes**  
Prior to cold milling the pavement, the Contractor shall locate all water valve boxes and manholes by painting a "V" or "MH" on the top of the adjacent curb and measuring the perpendicular distance from the face of curb. Said measurements shall also be painted on the top of curb and be provided to the construction inspector in writing including the adjacent address. If a water valve box or manhole has been previously covered and cannot be located, the City will provide the measurements to the Contractor so he can locate, adjust and construct a concrete collar around them per MD 11 or MD 12
- b. **Fine Milling of Hot Mix Asphalt (HMA) or Portland Cement Concrete Pavement**  
The removal of HMA or concrete pavement shall be accomplished using a fine milling machine. The rotary drum shall utilize carbide tip tools spaced not more than 5/16 inches apart. The forward speed of the milling machine shall be limited to no more than 45 feet/minute.

Protection shall be provided around existing catch basin inlets, manholes, utility valve boxes, and any similar structures. Any damage to such structures as a result of the milling operation is the Contractor's responsibility and shall be repaired at the Contractor's expense. To prevent the infiltration of milled material into the storm drainage system, the Contractor shall take special care to prevent the milled material from falling into the inlet openings or inlet grates. Any milled material that has fallen into inlet openings or inlet grates shall be removed at the Contractor's expense.

The milled surface shall provide a riding surface with a uniform textured appearance. The milled surface shall be free from gouges, longitudinal grooves and ridges, oil film, and other imperfections that are a result of defective equipment, improper use of equipment, or poor workmanship. The Contractor, under the direction of the inspector, shall perform random spot-checks with a Contractor supplied ten-foot straightedge to verify surface tolerances at a minimum of five locations per day. The variation of the top of two ridges from the testing edge of the straightedge, between any two ridge contact points, shall not exceed ¼ inch. The variation of the top of any ridge to the bottom of the groove adjacent to that ridge shall not exceed ¼ inch. Any unsatisfactory surfaces produced are the responsibility of the Contractor and shall be corrected at the Contractor's expense and to the satisfaction of the Engineer. The depth of removal will be verified by taking a measurement every 250 feet per each pass of the milling machine, or as directed by the Engineer. These depth measurements shall be used to monitor the average depth of removal.

Where a surface delamination between HMA layers or a surface delamination of HMA on Portland Cement Concrete causes a non-uniform texture to occur, the depth of milling shall be adjusted +/- ½ inch or until delamination is eliminated. When removing a HMA pavement entirely from an underlying Portland cement concrete pavement, all of the HMA pavement shall be removed leaving a uniform surface of Portland cement concrete, unless otherwise directed by the Engineer.

Method of Measurement: This work will be measured for payment by the number of square yards of area from which the milling of asphalt has been completed and the work accepted.

No area deductions will be made for minor un-milled areas such as catch basin inlets, manholes, utility boxes and any similar structures.

Basis of Payment: This work will be paid for at the contract unit price per square yard for "Fine Milling" to the depth(s) specified. This price shall include all equipment, tools, labor, and materials incidental thereto. No additional payments will be made for multiple passes with the milling machine to remove the bituminous surface.

No separate payments will be made for cleaning the pavement prior to paving; providing protection and doing handwork removal of bituminous concrete around catch basin inlets, manholes, utility valve boxes and any similar structures; repairing surface defects as a result of the Contractors negligence; providing protection to underground utilities from the vibration of the milling operation; removal of any temporary milled transition; removal and disposal of millings; furnishing a sweeper and sweeping after milling. The costs for these items shall be included in the contract unit price for Fine Milling.

#### 12. Handrail

Handrails are necessary for any drop-off of 18-inches or greater or as directed by the Engineer. This item will be measured by the Linear Foot for the sections of railing completed in place in compliance with the Standard Specifications or special details provided with the proposal.

#### 13. Retaining Walls

Concrete shall be Class "A" concrete (3000 PSI). All exposed edges shall have a 3/4inch chamfer. This item will be measured by the cubic yard of concrete completed in place in compliance with the Standard Specifications or special details provided with the proposal.

#### 14. Articulating Joint Strips

Articulated joint strips may be used in sidewalk construction adjacent to a tree to prevent future trip hazards. Use as directed by the City Engineer. The material shall be "TripStop", manufactured by Access Products Inc., or approved equal.

#### 15. Transverse Crack Repair-Asphalt

Transverse asphalt cracks 2-inch wide or wider shall be repaired by removing the asphalt a minimum of 6-inch on each side of the centerline of the crack to a depth of at least 6-inch or the depth of the existing asphalt, whichever is greater. The asphalt can be removed by milling or by sawing the asphalt on each side of the crack and removing it by hand. The contractor may choose another removal method, if approved by the Engineer before the work commences. The resulting trench shall be filled with 4000 PSI HES concrete.

The Engineer and/or the Inspector shall mark the asphalt cracks to be repaired. Asphalt cracks less than 2-inch wide shall be filled and compacted per GR-27, "Asphalt cracks more than 1/2" to 2" wide in surfaces to be overlaid shall be cleaned by blowing out the cracks using a 90 psi air compressor and in a manner acceptable to the Engineer. Cleaned cracks shall be filled by hand with Type S6 Hot Mix Asphalt prior to resurfacing (See Bid Item No. 301-34). Said asphalt shall be placed about 3/8" to 1/2" above the existing pavement surface to allow for compaction. A small steel wheel roller shall be used to compact the asphalt".

Bid Item 303-07 shall be used for the above work and shall be paid for by the unit price bid per linear foot. Such payment shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals, and for performing the work in accordance with these specifications.

16. Asphalt Crack Seal

The asphalt crack seal material shall be Crafcro Polyflex Type 2 – Part No. 34518, or approved equal installed in accordance with the manufacturer’s instructions. Contractor shall provide material specifications and recommended installation procedures for review prior to starting work.

17. Driveway/Sidewalk-Construction, Removal and Replacement

The measuring of removal and replacement of 6-inch PCC driveway includes from the edge of the roadway to the property line. If the gutter is removed in front of the drive, this removal and replacement will be considered and paid for as driveway removal and driveway replacement.

Where a new driveway is being constructed in conjunction with a sidewalk, the contractor shall space a keyed construction joint between the two, at no additional cost.

Where new concrete sidewalk is being placed adjacent to existing concrete drive, the sidewalk shall be poured 6-inch thick for a distance of 5-foot back for the drive.

Where a new driveway is being constructed in conjunction with a sidewalk, the contractor shall provide a keyed construction joint between the two, at no additional cost.

Where new concrete is being placed adjacent to existing concrete, a 2-inch by 2-inch lip shall be excavated below the existing concrete to help prevent differential settlement. The concrete shall taper back to the normal thickness of the slab in a distance of 12-inch. For example, if a new 4-inch thick sidewalk is being placed adjacent to an existing 4-inch thick sidewalk, the thickness of the new sidewalk will be 6-inch thick where it abuts the existing sidewalk.

18. Existing Concrete Pavement Joint and Crack Sealing

Joints-Joints shall be sealed per the City’s Standard Specifications, Section 310-Concrete Joint Rehabilitation. In lieu of sandblasting, all joints shall be cleaned using a wire wheel. All joints shall be widened 1/4-inch to remove all dirt and debris. Joints must be sealed first with silicone and allowed to completely cure before cracks are sealed with rubberized asphalt. This will prevent an adverse reaction to the silicone.

Random Cracks-All cracks shall be routed and blown out using filtered oil free and moisture free air at a minimum of 90 PSI and 120 CFM. Blowing out of the crack shall be accomplished by using a blow tube that will fit into the crack. If the crack extends down to a muddy subgrade, a heat lance (propane heated compressed air) shall be used to clean the crack. If necessary, a wire wheel can also be used to clean a crack after routing. The depth of crack cleaning shall be the crack width plus 1/4-inch. The crack sealant is Crafcro Polyflex Type 2, Part No. 34518, or approved equal.

Curb & Gutter-The curb and gutter shall be cleaned as stated in “Joints” above and sealed using Sonneborn Sonolastic NP1 Polyurethane Sealant, or approved equal. Unless otherwise provided,

the curb and gutter sealant shall be paid for by the linear foot under Bid Item No. 310-03, "Cleaning and Sealing Concrete Joints".

Street Clean Up-After joints and cracks have been cleaned and sealed; the contractor shall clean the pavement surface of dust and debris deposited by the crack and joint cleaning operation. This shall be done to the satisfaction of the Engineer prior to scheduling a final inspection.

19. Construction Traffic Control

The daily maintenance of traffic control devices on the job site shall be performed by a Contractor employee that is a "Certified Work Zone Temporary Traffic Control Technician". The certification must be from a nationally recognized organization approved by the City of Oklahoma City.

A Traffic Control Plan (TCP) shall be required for all work performed on arterial and/or collector streets, or other such locations as may be determined by the Engineer. The TCP shall be reviewed by the Public Works Department, Traffic Management Division before any work is performed. The cost of the TCP shall be included in Pay Item 802-00 "Construction Signing and Traffic Control".

The City reserves the right to remedy (at the Contractor's expense) any neglect on the part of the Contractor regarding the public convenience and safety, upon twenty four (24) hour written notice. In cases of emergency, the City shall have the right to remedy without notice at the Contractor's expense.

20. Prequalification Requirements

The Prime Contractor shall be listed by the City of Oklahoma City's Prequalification Review Board under the provisions of the Contractor's Prequalification Resolution of May 27, 1997 and Ordinance No. 20,815. Subcontractors shall be listed as Pre-qualified with the City of Oklahoma City in the area of work being performed by the Subcontractor. (See Special Provisions for Pre-qualification Class)

21. Concrete Valley Gutters

The cost for 8" Concrete Valley Gutters (Class AA 4000 PSI HES) shall include pavement saw cut and removal, excavation, reinforcing steel (as shown on the plans), concrete, and subgrade compaction (95% Standard Proctor Density). Concrete valley gutters shall be constructed after the asphalt paving work has been completed.

22. Concrete Sawing

All concrete shall be sawed using a walk behind concrete saw mounted on wheels. Hand held concrete saws are not allowed.

23. Seating of PC Concrete Pavement

Prior to overlaying with asphalt, saw cut completely through the existing PC concrete paving a distance of 2'0" from face of curb (unless otherwise directed); seat the concrete with at least three passes of a 10 ton (minimum) steel wheeled, self-propelled roller. Roller speed shall not exceed 4 mph and vibration will not be permitted.

Payment will be made by the square yard measured in place of SEATING PC CONCRETE PAVING, and will include the cost of saw cut.

24. Geo-Composite Fabric Membrane

Geo-composite fabric membrane, used to reinforce and waterproof pavement cracks and joints to reduce reflective cracking of asphalt concrete overlays, shall be composed of flexible, high density asphalt mastic bitumen between a top layer of heat resistant, high strength woven polyester reinforcing fabric and a bottom layer of non-woven heat resistant polyester fabric. Geo composite fabric material may be supplied with a polymer modified asphalt self-adhesive layer and removable release liner.

Geo-composite fabric membrane shall be protected from moisture and rain and stored at temperatures not exceeding 120°F. Any material that becomes wet prior to installation shall be removed from the jobsite and discarded in a manner acceptable to the Engineer.

The surface upon which the geo-composite fabric membrane will be placed shall be free of dirt, water and vegetation. Surface cracks and joints less than 3/8" wide need not be cleaned or filled. Surface cracks/joints and other distressed areas 3/8" or greater, but less than 2" wide shall be cleaned and filled with an approved crack filler or Type S-6 Asphalt compacted to the existing surface elevation. Cracks/joints and other distressed areas greater than 2" wide shall be cleaned and filled with Type S-6 Asphalt compacted to the existing pavement surface elevation. Cracks and /or joints with a vertical elevation variation greater than 1/2" shall be wedged with compacted with type S-6 Asphalt to level the distressed area.

The material shall be applied when existing surface temperature is a minimum of 50°F. The existing road surface shall be clean and dry prior to installation.

The use of solvents (i.e. kerosene, gasoline, diesel fuel, etc.) or other materials such as those used to clean paving equipment and tools is strictly prohibited. In the event that such solvents or materials come in contact with the material, the contaminated stress relief materials shall be removed immediately from the roadway and discarded in a manner acceptable to the Engineer.

Place the material immediately after the binder coat is applied to the surface. Keep the roll of material in tension during placement. The woven polyester side of the material shall be placed face up exposed to traffic, with the non-woven polyester side placed into the tack coat. The material shall be centered as close as possible over the crack or joint.

The Binder Coat may be applied with a hand-held wand and nozzle that produces a fan shaped spray, or with a hand-held wand without a nozzle and a squeegee to spread the tack coat evenly at the specified rate and width. The binder coat shall be applied at a rate of 0.15 gallons per square yard on existing surfaces or 0.20 gallons per square yard of milled surface. The binder coat shall extend a maximum of 1 1/2" beyond the edges of the material being placed.

Application of the binder directly from the distributor bar on a distributor truck is prohibited for all transverse applications. For longitudinal applications, the distributor truck nozzles should be set at 20° to the axis of the bar and care must be taken to apply the binder at the correct width and rate.

Where transverse and longitudinal joints/cracks intersect, the material may be lap or butt jointed. Where overlaps are employed, they shall be made in the direction of paving operations and should be a minimum of 2" and a maximum of 5" in length, and the overlapping pieces shall be bonded with asphalt binder coat. Laps resulting from three layers are not permitted.

Immediately after placement, the material shall be rolled on the binder coat with a riding static drum or rubber wheeled roller, taking care to ensure that the edges of the material are securely bonded to the pavement surface. A rubber wheeled roller shall be used on milled surfaces. The rolling in process shall consist of three or more passes.

The material may be opened to traffic as soon as the binder coat has cooled sufficiently to lose its stickiness. The material shall not be left exposed for more than 24 hours where breaking traffic is expected, or on grades of 5% or greater. The material shall not be left exposed for more than seven days unless otherwise approved by the Engineer. Resurfacing operations are not permitted to commence until the material is thoroughly bonded to the existing surface. Once the material is properly installed, it may be exposed to moisture and rain prior to the application of the overlay. However, the material must be dry at the time the overlay is placed.

A paving tack coat, applied at the rate stated in plans shall be used over the material prior to paving. Cutback asphalts are prohibited. Dry washed sand or limestone dust may be broadcast ahead of the paver if the material is sticking to the tires of trucks or paving equipment. If a vibratory roller is used during compaction of the overlay, care must be taken to avoid excessive amplitude. The vibratory roller should be set to the lowest amplitude and highest frequency settings.

The use of emulsified asphalts and/or cutback asphalts is strictly prohibited for use as a tack to bond the material to the existing paving surface.

#### Geo-Composite Fabric Membrane Specification

Material provided shall conform to the following specifications:

Cold Flexibility	No cracking or separation of fabric	ASTM D146 (modified)
Tensile Strength (Peak)	2,000 psi minimum	ASTM D412 (modified)
Elongation	20 % minimum	ASTM D412 (modified)
Weight	0.8 lbs. /sq. ft. (typical )	N/A
Mastic Density	80 PCF min.	ASTM D70
Density (mastic)	80 lbs. /cubic ft. minimum	ASTM D70
Thickness	0.135 inches minimum	ASTM D1777
Thickness Retention	75% minimum retained after loading	ASTM D395 (modified)
Absorption (mastic)	1% Maximum	ASTM D517
Brittleness	Passes	ASTM D517
Puncture Resistance	450 lbs. minimum	ASTM E154
Mastic Softening Point (mastic)	210°F. Minimum	ASTM D36

\* Note: Sampling in accordance with ASTM D146.

Basis of Payment:

Geo-Composite Fabric Membrane shall be paid for at the unit price bid per linear foot of material of the width specified in the proposal, complete and in place. The cost of tack coat, crack/joint sealing and all other items and materials incidental to the construction and required by the specifications shall not be paid for separately, but shall be included in the price bid for Geo-Composite Fabric membrane.

25. Radar Presence Detector (RPD) and Continuous Tracking Advance Detector (CTAD)

The Radar Presence Detector (RPD) shall consist of the Wavetronix SmartSensor Matrix Model 225 or approved equal and the Continuous Tracking Advance Detector (CTAD) shall consist of the Wavetronix SmartSensor Advance Model 200V or approved equal. The contractor shall also provide installation along with associated wiring/cables, controller modules, and all other necessary items of work for a complete operational vehicle detection system. The RPD shall be designed with a matrix of 16 radars and shall be able to detect and report presence in up to 10 lanes within a 90 degree field of view with boundaries as close as 6 feet from the base of the pole on which the RPD is mounted. The RPD shall be able to detect and report presence in curved lanes and areas with islands and medians.

The CTAD shall detect range and speed to the stop bar for vehicles or clusters of vehicles moving in the user-selected direction of travel. The CTAD shall dynamically track and update the estimated time of arrival (ETA) for each vehicle as it approaches the stop-bar; each newly-measured ETA result will be continually compared against the pre-determined ETA ranges that define the dilemma zone, and a green light extension request will be provided to the controller when one or more vehicles are within that range. The CTAD shall also detect instantaneous roadway efficiency.

Item shall include 2 TS-2 SDLC cabinet interfaces (CI) Wavetronix Click Model 650 or approved equal. CI shall be an enclosed unit, suitable for placement on a controller cabinet shelf. CI shall have a master power switch, individual sensor power switches, and standard 120VAC power plug. Each CI shall provide up to 64 detector channels using the NEMA TS-2 SDLC connection. Sensor connections to the CI shall be accomplished by color-coded, quick-connect insulation displacement terminations. CI shall have an OLED illuminated display panel and six-button keypad for navigation and settings entry/revision. CI shall be configurable via Ethernet RJ-45 port using a standard web browser.

System configuration and installation shall be supervised by a representative of the manufacturer, or a contractor representative trained and certified by the manufacturer to perform this work.

26. Forward Looking Infrared (FLIR)

This bid item consists of the installation of mast arm mounted Integrated Thermal Traffic Sensors, associated wiring/cables, interface panels, NEMA TS-2 SDLC controller interface modules and all other necessary items of work for a complete operational vehicle detection system. The Integrated Thermal Traffic Sensors shall utilize Forward Looking Infrared Camera technology and Detection processing within the single sensor without requiring detection processors in the traffic controller cabinet, and shall be able to detect and report presence of vehicles 24 hours per day without needing artificial lighting in all weather and natural lighting conditions within a 17, 25, 35, or 90 degree field of view integrated thermal traffic sensors shall be able to detect and report presence in curved lanes and areas with islands and medians. The

Integrated Thermal Traffic Sensors shall utilize only three conductor wires for power and communications and shall not require coaxial cable. Field setup shall be done using a setup computer running Microsoft Windows 7/Windows 8 or a touch-screen tablet running Windows Surface Pro operating system. Interface software shall be provided to the city at no additional cost. Contractor shall not be required to provide a setup computer or tablet unless specifically called out elsewhere in the project specifications.

Supplier of Integrated Thermal Traffic Sensors shall verify sensor field of view angle required for individual approaches based on project plans and/or site survey prior to ordering equipment.

Cabinet interface for the system shall be limited to a power/communications interface panel, Ethernet Communications Edge Card using Broadband-Over-Power (BPL) technology, and a TS-2 SDLC module and shall be compatible with standard NEMA TS-1 and TS-2 Loop Detector Card Racks. TS-2 SDLC module shall be configured so that vehicle and bicycle detection outputs are assigned starting with TS-2 detector input #17. Detector inputs 1 through 16 are reserved for technician panel detector test switches and shall not be used for Integrated Thermal Traffic Sensor interface.

END OF SECTION

## SECTION 329000 - PLANTING PREPARATION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS:

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

#### 1.2 DESCRIPTION OF WORK:

- A. Extent of landscape development work is shown on drawings.
- B. Sub-grade Elevations: Excavation, filling and grading required to establish elevations shown on drawings are not specified in this section. Refer to earthwork sections.

#### 1.3 QUALITY ASSURANCE:

- A. Subcontract landscape work to a single firm specializing in landscape work.
- B. Landscape subcontractor shall provide continuous superintendence by an experienced plantsman during the layout, preparation and execution of all landscape work.

##### 1. Pre-Landscape Conference

- a. Prior to the commencement of any landscape work, meet at the site with:
  - 1) Owner
  - 2) Architect/Landscape Architect
  - 3) Contractor's Project Manager
  - 4) Contractor's Job Superintendent
  - 5) Landscape Contractor
  - 6) Landscape Contractor's Foreman who will actually be on site full time during the preparation and installation of landscape work.
- 2. Record (by the Contractor) the discussions of the conference and the decisions and agreements (or disagreements) reached and furnish a copy of the record to each party attending.
- 3. Review foreseeable methods and procedures related to the landscape work, including but not necessarily limited to the following:
  - a. Review project requirements (drawings, specifications, and other contract documents, and in particular landscape work).

- b. Review availability of materials, tradesmen, equipment, and facilities needed to make progress and avoid delays.
  - c. Review required inspection, testing, certifying, and accounting procedures.
  - d. Review regulations concerning code compliance, environmental protection, health, safety and similar considerations.
  - e. Review required submittals, both completed and yet to be completed.
  - f. Review soils conditions, soil preparation, installation methods and drainage conditions for landscape work.
  - g. Review protection and maintenance of landscape work.
- C. Installer Qualifications: A qualified landscape Installer whose work has resulted in successful establishment of plants.
- 1. Professional Membership: Installer shall be a member in good standing of either the Professional Landcare Network or the American Nursery and Landscape Association.
  - 2. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when work is in progress.
- D. Provide quality, size, genus, species, and variety of plants indicated, complying with applicable requirements in ANSI Z60.1.
- E. Measurements: Measure according to ANSI Z60.1. Do not prune to obtain required sizes.
- 1. Trees and Shrubs: Measure with branches and trunks or canes in their normal position. Take height measurements from or near the top of the root flare for field-grown stock and container grown stock. Measure main body of tree or shrub for height and spread; do not measure branches or roots tip to tip. Take caliper measurements 6 inches above the root flare for trees up to 4-inch caliper size, and 12 inches above the root flare for larger sizes.
- F. Plant Material Observation: Landscape Architect may observe plant material either at place of growth or at site before planting for compliance with requirements for genus, species, variety, cultivar, size, and quality. Landscape Architect retains right to observe trees and shrubs further for size and condition of balls and root systems, pests, disease symptoms, injuries, and latent defects and to reject unsatisfactory or defective material at any time during progress of work. Remove rejected trees or shrubs immediately from Project site.
- 1. Notify Landscape Architect of sources of shrubs and groundcovers seven days in advance of delivery to site.
  - 2. At least one month prior to the expected planting date of trees, request that the Landscape Architect provide a representative to select and tag stock to be planted under this section. Contractor shall pay for the transportation, subsistence and overnight accommodations, if necessary, for the Landscape Architect during the period of time required to select and tag the plant material.
  - 3. The Contractor shall be responsible to certify the availability of quality plants in specified sizes from sources of supply prior to requesting that the Landscape Architect make plant source inspections. In the event that plants at the inspection location are found to be unavailable or of insufficient size, the Contractor shall be

- liable to reimburse the Landscape Architect for all costs of the Landscape Architect's hourly services which are incurred during unproductive inspection trips.
4. Unless specifically designated otherwise, a representative of the Contractor shall accompany the Landscape Architect on all plant material selection field trips.
  5. All trees for the project shall be individually tagged for approval with the Landscape Architect seals, and no trees shall be accepted for delivery to the site without such seals.
  6. Plants to be inspected shall be in locations and conditions that allow direct and unobscured inspection by the Landscape Architect. Harvested trees held in storage shall not have branches tied up. Harvested trees shall not have trunks obscured by burlap, cardboard trunk protection, or other devices that would otherwise obscure inspection.
  7. Inspection and approval of plants at the source shall not impair the right of subsequent inspection and rejection upon delivery to the site or during the progress of the work if the Landscape Architect finds that plants do not meet the requirements in the Plant Schedule or Plant Legend shown on Drawings, have declined noticeably due to handling abuse, lack of maintenance, or other causes. Cost of replacements, as required, shall be borne by the Contractor.
  8. No balled and burlapped trees held above ground for more than sixty (60) days will be acceptable.

#### 1.4 SUBMITTALS:

- A. Materials and Product data: Submit complete materials list of plants, amendments, fertilizers and non-proprietary items to be provided under this Section, including source/supplier, size, and quantity.
  1. Provide name and location of nursery, contact person, and telephone number for proposed sources of all plant material.
  2. Supply product data for all proprietary products specified herein. Furnish manufacturer's literature or laboratory analytical data for the following items:
    - a. Nursery invoices for all plant material for this project
    - b. Pesticides and Herbicides: Include product label and manufacturer's application instructions specific to the Project.
    - c. Organic Mulches
    - d. Fertilizers
    - e. Edging Materials and Accessories
    - f. ArborBrace Tree Guying System
- B. Plant Photographs: Include color photographs in digital format of each required species and size of plant material as it will be furnished to the Project. Photographs should be a minimum resolution of 100 dpi, so that details of plants can be discerned. Take photographs from an angle depicting true size and condition of the typical plant to be furnished. Include a scale rod or other measuring device in each photograph. For species where more than 20 plants are required, include a minimum of three photographs showing the average plant, the best quality plant, and the worst quality plant to be furnished. Identify each photograph with the full scientific name of the plant, plant size, and name of the growing nursery.

- C. Certification: Submit certificates of inspection as required by governmental authorities. Submit manufacturer's or vendors certified analysis for soil amendments and fertilizer materials. Submit other data substantiating that materials comply with specified requirements.
- D. Submit seed vendor's certified statement for each grass seed mixture required, stating botanical and common name, percentage by weight, and percentages of purity, germination, and weed seed for each grass seed species.
- E. Soil Analysis: For each unamended soil type, furnish soil analysis and a written report by the Soil-Testing Laboratory.
  - 1. Provide samples from a minimum of (3) areas to contain tree and shrub planting. Samples shall be taken from planting areas dispersed throughout the Project site.
  - 2. Report suitability of tested soil for plant growth.
    - a. State mechanical gradation (sieve analysis) compared to the USDA Soil Classification System; plot on a gradation curve.
    - b. State chemical analysis of nitrate nitrogen, ammonium nitrogen, phosphorus, potassium, calcium, magnesium, extractable aluminum, lead, zinc, cadmium, copper, soluble salts, pH, and buffer pH.
    - c. State recommendations for nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce satisfactory Planting Soil suitable for healthy, viable plants.
    - d. State organic content analysis. Acceptable test methods for determining soil organic matter include the most current version of ASTM D2974 Test Methods for Moisture, Ash, and Organic Matter of Peat and Other Organic Soils and TMECC 05.07A Loss-On-Ignition Organic Matter Method.
    - e. State soil biological function, with potentially mineralizable nitrogen as a proxy for assessment of biological activity. Acceptable test methods for determining mineralizable nitrogen can be found in LG Bundy and JJ Meisinger. "Nitrogen Availability Indices," in RW Weaver, S Angle, P Bottomley, et. Al eds, Methods of Soil Analysis, Part 2, Microbial and Biochemical Properties (Soil Science of America Book Series, No. 5: Madison, WI, 1994): pp. 951-984.
    - f. Report presence of low cation exchange capacity (CEC); if present provide additional recommendations for corrective action.
    - g. Report presence of problem salts, minerals, or heavy metals; if present, provide additional recommendations for corrective action.
    - h. Other soil testing requirements:
    - i. Preparation of Samples: Prepare soils samples for each sample area in accordance with guidelines provided by the soil testing laboratory. Label sample on the outside of bag, identifying sample by location and date of sample. Provide a number for each sample, and a location key plan for samples; report results clearly indicating sample number.
    - j. Topsoil: Provide a one cubic foot sample for each 200 cubic yard proposed stockpile of topsoil for testing. All stockpile sampling shall be per ASTM D5435 -03(2008), Standard Test Method for Diagnostic Soil Test for Plant Growth and Food Chain Protection. Separate stockpiles into 200 cubic yard piles and labeled in the field with a numbering system referenced in all

soil samples and test results. Stockpiles shall be formed sufficiently in advance so that pH, organic content, and carbon/nitrogen ratio have been stabilized. Additionally, provide up to three (3) samples in the site from Planting Soil after topsoil has been spread and amended. Samples from spread and amended Planting Soils shall be taken from locations as directed by Owner's Representative and packaged as noted above in the presence of the Owner's Representative.

- F. All tests for gradation, organic content, soil biological function, soil chemistry, and pH shall be performed by the contractor at no expense to the Owner.

#### 1.5 DELIVERY, STORAGE AND HANDLING:

- A. Packaged Materials: Deliver packaged materials in containers showing weight, analysis and name of manufacturer. Protect materials from deterioration during delivery, and while stored at site.
- B. Trees and Shrubs: Provide freshly dug trees and shrubs. Do not prune prior to delivery unless otherwise approved by Architect. Do not bend or bind-tie trees or shrubs in such manner as to damage bark, break branches or destroy natural shape. Provide protective covering during delivery. Do not drop balled and burlapped stock during delivery.
- C. Deliver trees and shrubs after preparations for planting have been completed and plant immediately. If planting is delayed more than six (6) hours after delivery, set trees and shrubs in shade, protect from weather and mechanical damage, and keep roots moist by covering with mulch, burlap or other acceptable means of retaining moisture.
- D. Do not remove container grown stock from containers until planting time.

#### 1.6 JOB CONDITIONS:

- A. Proceed with and complete landscape work as rapidly as portions of site become available, working within seasonal limitations for each kind of landscape work required. See Section Phasing for specified start and completion requirements.
- B. Utilities: Determine location of underground utilities and perform work in a manner that will avoid possible damage. Hand excavate, as required. Maintain grade stakes set by others until removal is mutually agreed upon by parties concerned.
- C. Excavation: When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions, notify Architect for instructions before planting.
- D. Coordination with Lawns: Plant trees and shrubs after final grades are established and prior to planting of lawns, unless otherwise acceptable to Architect. If planting of trees

and shrubs occurs after lawn work, protect lawn areas and promptly repair damage to lawns resulting from planting operations.

- E. Remove and replace trees, shrubs, or other plants found to be dead or in unhealthy condition during warranty period. Make replacements during growth season following end of warranty period, unless, in opinion of Architect, it is advisable to extend warranty period for a full growing season.
- F. Only one replacement (per tree, shrub or plant) will be required at end of warranty period, except for losses or replacements due to failure to comply with specified requirements.
- G. The contractor and any sub-Contractor responsible for the execution of the Work in this Specification shall review and confirm in writing that the subsoil elevations have been brought to the proper subgrade elevations prior to proceeding with the spreading of the Planting Soil.
- H. The Contractor and sub-Contractor responsible for the execution of the Work of this Specification shall review the subgrades and verify that the subgrades have been prepared as required by this section, prior with the spreading of the Planting Soil. Carefully review the requirements of this section to understand the requirements of percolation testing, compaction, slope and absence of debris in the subgrade prior to spreading of the Planting Soil.

## PART 2 - PRODUCTS

### 2.1 TOPSOIL:

- A. Topsoil for all areas to be planted shall be obtained from topsoil stockpiled during grading operations. If necessary amount of topsoil is not present on site, Contractor shall secure topsoil of specified quality from off-site source. Topsoil shall be approved by the Architect prior to delivery to site. Obtaining, hauling and placing topsoil shall be at the expense of the Contractor. Topsoil shall be a sandy clay loam with texture as follows: 20-40% sand; 45-75% clay; and 0-30% silt. It shall contain from 2-1/2 to 5% organic matter. Topsoil shall be uniform quality, free from hard clods, sod, stiff clay, hard pan, stones larger than 1", lime cement, ashes, slag, concrete, tar residues, tarred paper, boards, chips, sticks, or other undesirable materials. There must be a slight acid reaction to the soil with no excess of calcium or carbonate. Soil shall be delivered in a loose friable condition. Prior to delivery, soil test shall be taken and submitted for approval, along with packaged or boxed and labeled soil samples.

### 2.2 SOIL AMENDMENTS:

#### A. INORGANIC SOIL AMENDMENTS

- 1. Lime: ASTM C 602, agricultural liming material containing a minimum of 80 percent calcium carbonate equivalent and as follows:

- a) Class: O, with a minimum of 95 percent passing through No. 8 sieve and a minimum of 55 percent passing through No. 60 sieve.
- 2. Perlite: Horticultural perlite, soil amendment grade.
- 3. Agricultural Gypsum: Minimum 90 percent calcium sulfate, finely ground with 90 percent passing through No. 50 sieve.
- 4. Sand: Clean, washed, natural or manufactured, and free of toxic materials.

2.3 FERTILIZERS:

- A. Commercial Fertilizer: Commercial-grade complete organic fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 100 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
  - 1. Composition: As required by soil test results.
- B. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
  - 1. Composition: 20 percent nitrogen, 10 percent phosphorous, and 10 percent potassium, by weight.
- C. Pre-emergent Weed Control: Shall be Scotts Pro Grow ornamental herbicide two (2) (granular) or approved equal.

2.4 PLANT MATERIALS:

- A. Quality: Provide trees, shrubs, and other plants of size, genus, species and variety shown and scheduled for landscape work and complying with recommendations and requirements of ANSI Z60.1 "American Standard for Nursery Stock".
- B. Deciduous Trees: Provide trees of height and caliper scheduled or shown and with branching configuration recommended by ANSI Z60.1 for type and species required. Provide single stem trees except where special forms are shown or listed.
  - 1. Provide balled and burlapped (B&B) deciduous trees.
  - 2. Container grown deciduous trees will be acceptable in lieu of balled and burlapped deciduous trees subject to specified limitations of ANSI Z60.1 for container stock.
  - 3. Container grown deciduous shrubs will be acceptable in lieu of balled and burlapped deciduous shrubs subject to specified limitations for container grown stock.
- C. Coniferous and Broadleafed Evergreens: Provide evergreens of sizes shown or listed. Dimensions indicate minimum spread for spreading and semi-spreading type evergreens and height for other types, such as globe, dwarf, cone, pyramidal, broad up-right, and columnar. Provide normal quality evergreens with well-balanced form complying with requirements for other size relationships to the primary dimension shown.

1. Provide balled and burlapped (B&B) evergreens.
2. Container grown evergreens will be acceptable subject to specified limitations for container grown stock.

2.5 GROUND COVER:

- A. Provide plants established and well-rooted in removable containers or integral peat pots and with not less than minimum number and length of runners required by ANSI Z60.1 for the pot size shown or listed.

2.6 MISCELLANEOUS LANDSCAPE MATERIALS:

- A. Anti-Erosion Mulch: Provide clean, seed-free salt hay or threshed straw of wheat, rye, oats or barley.
- B. Anti-Desiccant: Emulsion type, film-forming agent designed to permit transpiration but retard excessive loss of moisture from plants. Deliver in manufacturer's fully identified containers and mix in accordance with manufacturer's instructions.
- C. Filtration/Separation Fabric: Water permeable filtration fabric of fiberglass or polypropylene fabric.
- D. Wrapping: Tree-wrap tape not less than 4" wide, designed to prevent bore damage and winter freezing.
  1. Stakes and Guys:
  2. Upright and Guy Stakes: Rough-sawn, sound, new softwood with specified wood pressure-preservative treatment, free of knots, holes, cross grain, and other defects, 2-by-2-inch nominal by length indicated, pointed at one end.
  3. Flags: Standard surveyor's plastic flagging tape, white, 6 inches long.
  4. Staking-and-Guying Devices: Proprietary stake and adjustable tie systems to secure each new planting by plant stem; sized as indicated and per manufacturer's written recommendations. Subject to requirements, provide ArborBrace Tree Guying System, or approved equal.
    - a. 2" to 4" Caliper Trees: Arborbrace ATG-R Nylon; or ATG-HD Aluminum kits.
    - b. 4" to 7" Caliper Trees: Arborbrace ATG-J Jumbo kit

PART 3 - EXECUTION

3.1 TIME OF PLANTING:

- A. At the option and on the full responsibility of the Contractor, planting operations may be conducted under unseasonable conditions without additional compensation.

3.2 SEASON:

- A. Planting of trees and shrubs shall be from October 15th to March 15th.

### 3.3 PREPARATION:

- A. Layout individual tree and shrub locations and areas for multiple plantings. Stake locations and outline areas and secure Architect's acceptance before start of planting work. Make minor adjustments as may be required.
- B. Preparation of Planting Soil: Before mixing, clean topsoil of roots, plants, sods, stones, clay lumps, and other extraneous materials harmful or toxic to plant growth.
- C. Amended Soil: Composition: As required by soil test results.
- D. For pit and trench type backfill, mix planting soil prior to backfilling, and stockpile at site.
- E. For planting beds and lawns, mix planting soil prior to planting or apply on surface of topsoil and mix thoroughly before planting.
- F. Preparation for Planting Lawns and Sodded Lawns: Refer to Section 32 92 00 TURF AND GRASSES.
- G. Preparation of Planting Beds:
  - 1. Loosen subgrade of planting areas to a minimum depth of 12 inches. Remove stones larger than 1 inch in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property. Prior to spreading of Planting Soil, subgrades shall have been tested to determine if they are too compact to drain water as specified in this Section.
  - 2. Thoroughly blend Planting Soil off-site before spreading or spread topsoil, apply soil amendments and fertilizer on surface, and thoroughly blend Planting Soil.
  - 3. For all planting areas for groundcovers and perennials spread Planting Soil to a minimum depth of 12 inches but not less than required to meet finish grades after natural settlement.
  - 4. For all planting areas for massed continuous shrubs spread Planting Soil to a minimum depth of 24 inches but not less than required to meet finish grades after natural settlement.
  - 5. For all planting areas do not spread Planting Soil if subgrade or Planting Soil is frozen, muddy, or excessively wet.
- H. Excavation for Trees and Shrubs:
  - 1. Excavate pits, beds and trenches with vertical sides and with bottom of excavation slightly raised at center to provide proper drainage. Loosen hard subsoil in bottom of excavation.
  - 2. Allow for 4" setting layer of planting soil mixture.
  - 3. For balled and burlapped (B&B trees and shrubs), make excavations at least half again as wide as the ball diameter and equal to the ball depth, plus following allowance for setting ball on a layer of compacted backfill.

4. For container grown stock, excavate as specified for balled and burlapped stock, adjusted to size of container width and depth.
5. Dispose of subsoil removed from planting excavations. Do not mix with planting soil or use as backfill.
6. Fill excavations for trees and shrubs with water and allow to percolate out before planting.

#### 3.4 PLANTING - PLANTING TREES AND SHRUBS:

- A. Set balled and burlapped (B&B) stock on layer of compacted planting soil mixture, plumb and in center of pit or trench with top of ball at same elevation as adjacent finished landscape grades. Remove burlap from sides of balls; retain on bottoms. When set, place additional backfill around base and sides of ball, and work each layer to settle backfill and eliminate voids and air pockets. When excavation is approximately 2/3-full, water thoroughly before placing remainder of backfill. Repeat watering until no more is absorbed. Water again, after placing final layer of backfill.
- B. Set bare rootstock on cushion of planting soil mixture. Spread roots and carefully work backfill around roots by hand and puddle with water until backfill layers are completely saturated. Plumb before backfilling and maintain plumb while working backfill around roots and placing layers of soil mixture above roots. Set collar 1" below adjacent finish landscape grades. Spread out roots without tangling or turning up to surface. Cut injured roots clean; do not break.
- C. Set container grown stock as specified for balled and burlapped stock, except cut cans on 2 sides with an approved can cutter; remove bottoms of wooden boxes after partial backfilling so as not to damage root balls.
- D. Dish top of backfill to allow for mulching.
- E. Mulch pits, trenches and planted areas. Provide not less than 3" thickness of mulch and work into top of backfill and finish level with adjacent finish grades.
- F. Apply anti-desiccant using power spray to provide an adequate film over trunks, branches, stems, twigs and foliage.
- G. If deciduous trees or shrubs are moved in full-leaf, spray with anti-desiccant at nursery before moving and again 2 weeks after planting.
- H. Prune, thin out and shape trees and shrubs in accordance with standard horticultural practice. Prune trees to retain required height and spread. Unless otherwise directed by Architect, do not cut tree leaders, and remove only injured or dead branches from flowering trees, if any. Prune shrubs to retain natural character.
- I. Remove and replace excessively pruned or misformed stock resulting from improper pruning.

- J. Wrap tree trunks of 2" caliper and larger. Start at ground and cover trunk to height of first branches and securely attach. Inspect tree trunks for injury, improper pruning and insect infestation and take corrective measures before wrapping.
- K. Guy and stake trees immediately after planting, as detailed.

3.5 PLANTING GROUND COVER:

- A. Space plants as shown or scheduled.
- B. Dig holes large enough to allow for spreading of roots and backfill with planting soil. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water. Water thoroughly after planting, taking care not to cover crowns of plants with wet soils.
- C. Mulch areas between ground cover plants: place not less than 3" thick.

3.6 CLEANUP AND PROTECTION:

- A. During landscape work, keep pavements clean and work area in an orderly condition.
- B. Protect landscape work and materials from damage due to landscape operations, operations by other contractors and trades and trespassers. Maintain protection during installation and maintenance periods. Treat, repair or replace damaged landscape work as directed.
- C. Any soil, mulch or similar material that has been brought onto paved areas by hauling operations, or otherwise, shall be removed promptly, keeping these areas clean at all times. Upon completion of the planting, all excess soil, stones and debris which has not previously been cleaned up shall be removed from the site. All lawns and planting areas shall be prepared for final inspection.

3.7 WARRANTY:

- A. Special Warranty: Installer agrees to repair or replace plantings and accessories that fail in materials, workmanship, or growth within specified warranty period.
- B. Failures include, but are not limited to, the following:
  - 1. Death and unsatisfactory growth, except for defects resulting from incidents that are beyond Contractor's control.
  - 2. Structural failures including plantings falling or blowing over.
  - 3. Faulty performance of tree stabilization and edgings.
  - 4. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
- C. Warranty Periods from Date of Substantial Completion:
  - 1. Trees, Shrubs, Vines, and Ornamental Grasses: 12 months.
  - 2. Ground Covers, Biennials, Perennials, and Other Plants: 12 months.

- D. Include the following remedial actions as a minimum:
1. Immediately remove dead plants and replace unless required to plant in the succeeding planting season.
  2. Replace plants that are more than 25 percent dead or in an unhealthy condition at end of warranty period.
  3. A limit of one replacement of each plant will be required except for losses or replacements due to failure to comply with requirements.
  4. Provide extended warranty for period equal to original warranty period, for replaced plant material.

3.8 MAINTENANCE SERVICE:

- A. Contractor shall provide maintenance for all plants installed under this Contract for 12 months beginning after the Substantial Completion.
- B. Maintenance of new planting shall consist of watering, cultivating, weeding, fertilizing, pest management, mulching, resetting plants to proper grades or upright position, restoring planting berms around planting holes, and tightening and repairing tree stakes and guy supports. Replace, without cost to the Owner, all dead plants and all plants not in a vigorous, thriving condition, as determined by the Landscape Architect during and at the end of the Maintenance Period.
- C. Contractor shall provide watering as necessary for establishing plant materials throughout the 12-month warranty period.

3.9 FIELD QUALITY CONTROL:

- A. FINAL PLANTING INSPECTION (FOR BEGINNING OF MAINTENANCE AND WARRANTY PERIOD)
1. At the completion of all landscape and planting work under this contract, and before the beginning of the 12 Month Maintenance and Warranty Period, the Final Planting Inspection shall be performed.
  2. The Contractor shall request the Final Planting Inspection in writing to the Architect ten days prior to anticipated inspection date in order that a mutually agreeable time for inspection may be arranged.
  3. The Architect, Contractor and such others as the Architect shall direct, shall be present at the Final Planting Inspection.
  4. At the time of the Final Planting Inspection, the Contractor shall have all planting areas, under this Contract, free of weeds and neatly cultivated.
  5. If, after the inspection, the Architect is of the opinion that all work has been performed as per the Drawings and Specifications and that all plant materials are in satisfactory growing condition, the architect will give the Contractor written notice of acceptance of the planting portions of the Work and commencement of the Maintenance and Warranty Periods.
  6. Work requiring corrective action in the judgment of the Architect shall be performed within ten days after the Final Planting Inspection. Corrective work and

materials replacement shall be in accordance with the Drawings and Specifications and shall be made by the Contractor at no cost to the Owner.

*END OF SECTION 329000*

## SECTION 329200 - GRASSING

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section Includes:
  - I. Preparation of turf/grass planting areas.
  - II. Grass, meadow seed mixes.
  - III. Sod application.
  - IV. Hydroseed application.
  - V. Protection, maintenance, guarantee.

#### 1.2 SUBMITTALS:

- A. Submit product data for all grassing materials, including, but not limited to:
  - I. General disturbed areas hydroseed/mulch mix (state whether cool season or warm season mix)
  - II. Meadow mix hydroseed/mulch.
  - III. Lime, fertilizer and other soil amendments
- B. (Sub) Contractor Qualifications: Submit evidence of qualifications prior to work.
- C. Manufacturer's certificates: for each Sod application (include species).
- D. Testing:
  - I. Copies of soil lab test results showing recommended amendments and application rates based on specific grass or grass land planting species.

#### 1.3 QUALITY ASSURANCE (not used)

- A. (Sub) Contractor Qualifications:
  - I. Bonded fiber matrix mulch application Contractor shall be certified by the producer / manufacturer of the bonded fiber matrix material. Provide evidence of Certification to the Design Professional prior to work.
  - II. Grassing and lawn maintenance shall be performed by a reputable lawn maintenance contractor. Secure pre-approval of lawn maintenance Contractor by the Design Professional and Owner, prior to any lawn installation commencement.
- B. After sod areas have been brought to subgrade, but before subgrade prep, build a mockup to comply with the following requirements:
  - I. Construct a 20' x 20' sod installation mockup at a location selected by the Design Professional or by the Owners Representative.
  - II. Construct the mockup according to Contract documents including, but not limited to subgrade preparation, installation of soil amendments such as topsoil/compost, rock/stone/debris removal, fine grading and sod installation.

III.Approved mockups which achieve Contract requirements may become part of the completed work if undisturbed at the time of Substantial Completion.

1.4 SITE CONDITIONS

- A. Take all necessary precautions in bringing equipment on to and off of the site and protecting curbs, walks, paving, steps, trees & shrubs, and any other existing construction site during hydroseeding and grassing work.
- B. Establish grass in all areas disturbed by construction not required to be developed otherwise.

PART 2 - PRODUCTS

2.1 SOD

- A. Unless otherwise shown on the Plans, sod is at least 95 percent Bermuda grass strongly rooted and free of pernicious weeds.
- B. Acceptance criteria (sod rolls):
  - I.Height of grass in sod rolls is uniform and does not to exceed 3 inches.
  - II.Soil is between 1 and 1-1/2 inches thick

2.2 GRASS SEED

- A. Provide fresh, clean, new-crop seed complying with tolerance for purity and germination established by Official Seed Analysts of North America

Germination and hard seed minimum	70%
Purity minimum	90%
Weed seed maximum	2%
Noxious seeds maximum	1% of mix.

2.3 PERMANENT SEED MIXES

- A. Common Bermuda, *Cynodon dactylon*
  - a. Planting rate 10 lbs per acre.
  - b. Planting dates Jan., Feb., Oct., Nov., Dec. for unhulled seeds and when planted with 30 lbs of winter annuals or Tall Fescue.
  - c. Planting dates March – June for hulled seeds.
  - d. Mowing maintenance height <4> inches.

- B. Native Meadow Mix:
  - I. Apply when “Meadow Mix” “Short Meadow Mix”, or “Short Native Meadow Mix” is specified or shown on the Plans.
  - II. Apply at rate of 40 lbs /acre, planting dates April 1-June 30.
  - III. Submitted mixes to conform with the drawings.

## 2.4 HYDROSEED EQUIPMENT

- A. Hydroseeding equipment shall have a built in mechanical agitating system to maintain a homogenous mixture of mulch, seed, lime, and fertilizer for each 150 gallons of water.

## 2.5 GENERAL HYDROSEED / MULCH MIX

- A. Hydroseed / mulch mix components:
  - I. General seed mixtures as specified or shown on the Plans.
  - II. Wood cellulose mulch or wood pulp applied at a rate of 2000 lbs/acre. Substitute bonded fiber matrix mulch applied at a rate of 3,500 lbs per acre when specifically shown on the Plans.
  - III. Fertilizer: Apply nutrients at the ratios and rates as recommended by soil test(s), however in no case exceed 1500 lbs/ac/yr of a 6-12-12 commercial grade.
  - IV. Finely ground fast acting lime (95% passing No. 100 sieve) applied at a rate of 80 lbs/acre if soil pH is less than 5.5, or if no soil analysis is performed.

## 2.6 NATIVE SEED HYDROSEED / MULCH MIX

- A. Hydroseed / mulch mix components for Native seed mixes:
  - I. Native seed mixtures as specified or shown.
  - II. Wood cellulose mulch or wood pulp applied at a rate of 2000 lbs/acre. Substitute bonded fiber matrix mulch applied at a rate of 3,500 lbs per acre when specifically shown on the Plans.
  - III. Fertilizer: Apply Phosphorous (P) and Potassium (K) nutrients at the ratios and rates as recommended by soil test(s), however in no case exceed 1500 lbs/ac/yr of a 0-10-10 commercial grade. **Do not apply Nitrogen to native seed mix areas.**
  - IV. Finely ground fast acting lime (95% passing No. 100 sieve) applied at a rate of 80 lbs/acre if soil pH is less than 5.5, or if no soil analysis is performed.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine grading, substrates and conditions where turf and grasses will be established.
- B. Do not proceed with permanent grassing installation unless satisfactory conditions exist. Satisfactory conditions include but are not limited to:
  - I. Provide allowances when establishing subgrade elevations for topsoil and soil amendment installation and settlement.

- II.Slopes are stable, do not exceed 2H:1V for <Steep Slope> areas, and do not exceed 3H:1V for all other other areas,
- III.Slopes have been graded to divert any concentrated flow away from slope faces.

### 3.2 TEMPORARY TURF

- A. Season: Plant temporary seed mixes at the rates and species, in accordance with the time of year, as shown in Part 2 and on the Plans.
- B. Maintain temporary turf until the permanent planting season, at which time the temporary grass shall be mowed down to the ground surface, the area disk harrowed (for conversion to permanent grassing), the soil prepared for the permanent surface as shown on the Plans.

### 3.3 SEED BED PREPARATION & SOIL TESTING

- A. For general areas with removed topsoil or insufficient topsoil and slopes 3H:1V, and flatter:
  - I.Loosen subgrade as necessary to a depth no less than 4 to 6 inches achieving compaction levels no greater than 80% of standard proctor mixing any topsoil and soil additives into the loosened subgrade.
  - II.Spread 2 inches of topsoil evenly over disturbed areas and mix along with other initials soil amendments into the loosened subgrade.
  - III.Do not apply topsoil or compost in a frozen or muddy condition. Provide positive drainage in all cases.
- B. For areas where the topsoil **has not been** removed:
  - I.Scarified, smooth, and remove large sticks, stones (>4”) and all rubbish.
- C. For general areas, steeper than 3H:1V
  - I.Loosen soil to a practical depth by scarifying, plowing as practical, dragging a spiked chain, walk the surface with cleated equipment or if shown by making serrated cuts. Spread 2” of topsoil starting at the top of slope only if the surface is prepared with serrated cuts.
- D. Perform soil test of the upper 4 to 6 inches of mixed subgrade and topsoil to determine application rates of lime, fertilizer, and other amendments. Soil tests may be performed by County extension offices, University laboratories or other laboratories mutually agreed by the Design Professional and Contractor.
- E. Apply 1 ton of lime per acre to seedbed, or as otherwise needed to increase pH to between 6.0 and 6.5.
- F. Apply any additional fertilizer than shown or proposed in non-native turf type hydroseed mix at the recommended rates for grassing areas as determined by a soil analysis not to exceed 1500 lbs per acre per year of 6-12-12 fertilizer..
- G. For native grass mixes only: apply additional phosphorous and potassium based fertilizer at the recommended rates for grassing areas as determined by a soil analysis. **Do not apply nitrogen to native grass mixes.** Maximum additional fertilizer for native grass areas is 1500 lbs per acre per year of 0-10-10 fertilizer.

- H. Scarify or till soil to a depth of 6 inches, mixing any lime, fertilizer, and other amendments.
- I. Remove sticks, stones and rubbish from surface.
- J. Perform finish grading to achieve smooth contours and meet finish grades shown on the Plans, with allowances made for settlement and sod thickness where applicable. Finish surface textures as follows:
  - I. Smooth the final surface on areas 4H:1V or flatter.
  - II. Provide surface grooves with a tracked vehicle on slopes exceeding 4H:1V. Surface grooves are perpendicular to the fall line of the slope.

### 3.4 ADDITIONAL PREPARATION FOR TURF AREAS INCLUDING: SOD AREAS, IRRIGATED GRASSING AREAS, GRASS PLAY AREAS

- A. Spread for 4 inches min. total depth of topsoil on loosened subgrade and prior to performing soil tests.
- B. Contractor option to blend topsoil, compost, and other soil amendments prior to spreading on loosened subgrade at onsite or offsite location if approved by the Design Professional and if blending is observed by Design Professional or Testing Agency.
- C. Remove all stones, sticks and rubbish over 1.0" by hand raking or by a rockhound attachment.

### 3.5 SODDING

- A. Lay sod by butting the ends and sides up evenly and staggering the rolls of sod. Do not overlap sod.
- B. As soon as the sod is laid or as it is being laid, roll over it with a light roller, ensure all of the sod is in contact with the soil. The completed sodded areas shall be true to finish grade, even and firm at all points.
- C. Commence watering within 4 hours of placement.

### 3.6 SEEDING AND MULCHING

- A. Apply seed and mulch to smoothed finish grade surface at the rates specified in Part 2. Permanent planting dates shall be approved by the Design Professional and conform to Part 2 for individual mixes.
- B. Comply with manufacturer recommendations for hydroseed/ mulch mixtures, generally install in a 2 step process.
  - I. Step 1- apply seed, amendments, and small amount of mulch for visual metering of areas to be vegetated. Apply seed and amendments at the specified rates.
  - II. Step 2- Immediately mix and apply the remaining mulch and growing media and applying in opposing directions to achieve total specified mulch rate per are and with complete coverage. Remove any mulch slurry sprayed onto any hardscape surface or non-grass planting bed.

- C. Any areas not specifically called out as sod shall be hydroseeded unless otherwise specified.

### 3.7 GENERAL MAINTENANCE, PROTECTION, GUARANTEE

- A. Protect and maintain all grass areas by watering, mowing as necessary, replanting, and overseeding to establish a uniform stand. Reseed if satisfactory initial growth does not occur within 18 days of planting.
- B. Maintain through <acceptance by Owner> and a minimum of 60 days after material completion of the project.
- C. Provide frequent light irrigation if no natural rain events during the first 2 weeks of seeding to prevent the top of the soil from drying out.
- D. After seed germination and when grass is about 1 inch tall, reduce irrigation frequency and increase volume as necessary to maintain growth and establish root zone.
- E. Repair all seed washing and erosion.
- F. Apply maintenance fertilization each subsequent growing season as required based on recommended rate from soil analysis and based on plant species needs.
- G. Maintain grass height as recommended in Part 2 seed mixtures or as indicated in other Part 3 articles.

### 3.8 MEADOW MIX GRASS MIX AREAS

- A. Reseed and water areas that do not show satisfactory growth within 45 days of planting.
- B. Native mix areas shall be fully established at the end of the 2nd growing season with grass heights over <1.5> feet and scattered bare spots with no vegetation are limited to no more than 4 square feet in size account for no more than 10% of the total area.
- C. Do not provide general mowing during the first 2 growing seasons. Provide only spot treatments of mowing, applications of an appropriate herbicide or mechanical removal as required to control weeds and invasive plants that would interfere with establishment of the native mix.
- D. Long Term Maintenance:
  - I. After native or native meadow mixes are established- mow to a height of 6-12" height, when dormant, on a 3 year rotation. Do not mow, disc, or burn more than 1/3 of an established area in any one year period.
  - II. Continue spot removal or control of invasive vegetation as needed each growing season. Remove such vegetation prior to it going to seed.
  - III. needed each growing season. Remove such vegetation prior to it going to seed.
- E. Contractor to provide maintenance on native or native meadow mix grass areas through the end of the 2<sup>nd</sup> growing season on no more frequently than a monthly basis.

3.9 CLEAN UP:

- A. Remove any soil, mulch or similar material which has been brought onto paved areas. Upon completion of the planting, remove all excess soil, stones, and debris which has not previously been cleaned up as directed by the Design Professional.

**END OF SECTION 329200**

## SECTION 331100 - WATER UTILITY DISTRIBUTION PIPING

### PART 1 - GENERAL

#### 1.1 DESCRIPTION / SCOPE:

- A. Work described in this section includes construction of the water distribution system (domestic and fire protection) as shown on the drawings from the existing system to the points where it is indicated. Contractor shall be responsible to consult with the local governing authority prior to formulating bid to coordinate timing of on-site water improvements with off-site water line improvements.

#### 1.2 STANDARDS:

- A. Domestic water lines and backflow prevention devices shall conform with and comply with current Local Issuing Authority Department of Public Utilities Water Main Standards.
- B. Fire lines, fire hydrants and related fire protection system shall conform with Local Issuing Authority Fire Department requirements and NFPA 24, Outside Protection, latest edition.

#### 1.3 SUBMITTALS:

- A. Product data: Submit six (6) copies for each type of piping material, prefabricated structure, and casting. Indicate product descriptions and installation procedures.
- B. As-builts: Contractor shall provide the Owner with one (1) copy of a reproducible sepia of an "as-built" plan of all underground utilities showing the location of each with dimensions shown to the building and/or curb line from each underground utility.

#### 1.4 QUALITY ASSURANCE:

- A. Requirements of regulatory agencies: Comply with applicable codes, ordinances, rules, regulations, and laws of local, municipal, state or federal authorities having jurisdiction.
- B. Water distribution systems shall meet all requirements of the Local Issuing Authority Water System and shall be subject to review by system inspectors.

#### 1.5 GUARANTEE:

- A. Contractor shall guarantee the construction and workmanship of water distribution system for a period of one (1) year from the date of substantial completion.

#### 1.6 JOB CONDITIONS:

- A. Water distribution system shall be coordinated with grading and paving operations.

- B. Water mains shall be installed when subgrade is within six (6) inches of final grade, and prior to paving base installation.

1.7 PERMITS:

- A. Contractor shall obtain all necessary permits for work within public right-of-way.

1.8 UTILITY CONNECTIONS:

- A. It shall be the Contractor's responsibility to determine all requirements of the local Water Department regarding new utility service to the site. The installation shall be in complete accordance with those requirements.
- B. All costs incidental to complete utility services, including cutting and patching of street, water main connections and water meter shall be included in the bid price.

1.9 TRENCHING, BEDDING AND BACKFILLING:

- A. All excavation and backfill for work under this section shall be in accordance with OKC specifications

1.10 TESTING:

- A. The domestic water piping shall be tested at 150 psi for 30 minutes.
- B. The Local Issuing Authority shall be notified prior to covering any buried or concealed plumbing to observe the work at their discretion.

1.11 DISINFECTION:

- A. All domestic and fire water piping shall be disinfected with chlorine before it is placed into operation. The chlorinating material shall be liquid chlorine conforming to Federal Specification BB-C-120 and shall be introduced to the system by experienced operators only. The chlorine solution applied to the piping sections or system shall contain at least fifty parts per million of available chlorine and shall remain in the sections or system for a period of not less than sixteen (16) hours. During the disinfection period all valves shall be opened and closed at least four times. After the disinfection period, the chlorinated water shall be flushed from the system with clear water until the residual chlorine content is not greater than two-tenths parts per million (0.2 PPM). Submit written certification to the Owner that the system was disinfected.

PART 2 - PRODUCT

2.1 DOMESTIC PIPING MATERIAL:

- A. *COPPER / DUCTILE IRON PIPE MATERIAL*

1. Domestic water service pipe installed underground 3" and less shall be Type "K" hard drawn copper tubing with wrought copper solder joint fittings conforming to ASTM B-88-72. Minimum depth of cover shall be 36".
2. Domestic water pipe installed underground 4" and larger shall be cement lined ductile iron pipe conforming to ANSI A21.51. Minimum depth of cover shall be 36".
3. Install warning tapes 12" above all underground piping. Warning tapes shall have a metallic core to make them detectable. Warning tape shall be Brady 91603(blue) for water lines, 91604(green) for sanitary sewer lines and 91600(yellow) for gas lines or approved equal by Seton or T&B Westline. Warning tape shall rise out of the ground and be accessible at the building wall or other outside location.

*B. C900 POLYVINYL CHLORIDE (PVC) PIPING SYSTEMS*

1. Pipe shall be bell and spigot type pressure pipe and couplings conforming to AWWA C900 for 4 inch to 12inch diameter pipe.
2. Unless otherwise noted minimum internal pressure is 150 psi working and 250 psi design.
3. Minimum dimension ration (DR), unless otherwise shown is 14.
4. Unless otherwise noted, joints and fittings shall be mechanical type conforming to AWWA C110/A21.10. Outside coating of ductile iron pipe shall be coated with a minimum of 1 mil of asphalt in accordance with AWWA C-151. The inside lining for ductile iron fittings shall be cement mortar lined per AWWA C-104.

*C. PIPE JOINTS*

1. Joints in copper pipe shall be made with lead free solder containing tin-copper-silver or 95-5 tin antimony.
2. In lieu of soldered fittings in copper pipe, the contractor may substitute Victaulic or Grinnell Gruvlok groved mechanical couplings or T-Drill mechanically formed fittings with brazed connections. Each of these systems shall be used in accordance with the manufacturer's published instructions.
3. Joints in ductile iron water and sewer pipe shall be Tyton joints except that joints at fittings in water lines shall be bolted mechanical joints.
4. Connections of copper pipe to ferrous pipe and/or equipment shall be made with dielectric unions, Watts series 3000, Victaulic or Gruvlok Clearflow or approved equal.

*D. VALVES*

1. Unless specifically indicated otherwise, the valves shall be designed for not less than 150 pounds working pressure. The valves shall be suitable for the service for which they are installed.

2. Gate valves for copper water lines shall be Milwaukee Fig. 115 bronze valve with non-rising stem (nut and valve key) and sweat ends or approved equal by Crane, Hammond, Mueller, Nibco, Stockham or Watts. Valves shall be set at a depth that will allow access using a valve key.
3. Gate valves for ductile iron water lines shall be Watts model 406-NRS-RW flanged gate valve with non-rising stem (nut and valve key) or approved equal by Crane, Hammond, Kitz, Milwaukee, Mueller, Nibco, or Stockham. Valves shall be set at a depth that will allow access using a valve key.
4. Double check valves shall be Watts No. 709-RW or 007-QT as indicated, epoxy coated double check valve with two gate valves and four test cocks. The valve assembly shall be U. L. listed. Approved equal valves by Ames, Febco, Hersey or Wilkins are acceptable.

## 2.2 FIRE PROTECTION PIPING MATERIAL:

### A. VALVES

1. OS & Y valves, post indicator valves and check valves shall be listed by U. L. for use in fire mains. Gate valves: Iron-Body Bronze - Mounted Gate Valves, Sizes 3" - 12", inclusive: Order Specification: Double-Disc, Parallel Seats, Non-rising stem (IS), Rated at 200-psi WWP, O-ring seals, Std 2" square wrench nut, and conforming to AWWA Specifications C500 in all respects. Check with Water Department for direction of opening.

### B. UNDERGROUND PIPING – DUCTILE IRON

1. Underground piping shall be cement lined ductile iron pipe manufactured in accordance with ANSI 21.51.
2. Joints in ductile iron water pipe shall be Tyton joints except that joints at fittings shall be bolted mechanical joints.
3. Fitting for underground piping shall be ductile iron manufactured in accordance with ANSI A21-10. All ductile iron pipe fittings shall be in accordance with AWWA C151/ANSI A21.51.

### C. C900 POLYVINYL CHLORIDE (PVC) PIPING SYSTEMS

1. Pipe shall be bell and spigot type pressure pipe and couplings conforming to AWWA C900 for 4inches and larger diameter pipe. Unless otherwise noted, pipe pressure class is 165 psi. Spigot end of pipe shall be marked to visually determine when the spigot is fully seated in the bell of the adjoining pipe.
2. Joints shall be push-on or mechanical elastomeric gasket type conforming to ASTM D3139.
3. Fittings: Mechanical joint iron with restrained glands designed by their manufacturer specifically for application to PVC pipe.

### D. SCHEDULE 40 OR 80 PVC PIPING SYSTEMS

1. Where noted, PVC Pipe shall be either Schedule 40 or 80 per ASTM D1785.
2. Joints and fittings shall be solvent welded per ASTM D2672. Thrust blocking is not required for solvent welded or other restrained joint PVC pipe systems.

3. Provide transition gaskets and restraint glands designed for this this piping when shown on the plans for transitioning to C900 systems at iron fittings.
- E. BACKFLOW PREVENTION VALVES
1. Double check detector valve assembly shall be Watts 709 DCDA double check valve with detector CFM meter, two OS & Y gate valves and four test cocks.
  2. Valves shall have epoxy coated cast iron bodies. The valve assembly shall be U. L. listed.
  3. Valves shall be as manufactured by Watts or approved equal by Ames, Febco or Hersey.
- F. FIRE HYDRANTS
1. Fire hydrants shall be an AWWA listed type having two 2-1/2" hose outlets and a 4-1/2" pumper outlet with threads compatible with Local Fire Department equipment.

## PART 3 - EXECUTION

### 3.1 GENERAL:

- A. The subcontractor installing water main pipe lines and accessories shall obtain the necessary permits from local governing authority prior to performing any work on site.
- B. Line and Grade: All pipe shall be laid and maintained to the required lines and grades; with fittings, valves and hydrants at the required locations; and with joints centered and spigots home; and with all valve and hydrant stems plumb.
- C. Protecting underground and surface structures: Temporary support, adequate protection and maintenance of all underground and surface utility structures, drains, sewers and other obstructions encountered in the progress of the work shall be furnished by the Contractor at his own expense.
- D. Sub-surface exploration: Whenever necessary to determine the location of existing pipes, valves, or other underground structures, the Contractor shall examine all available records and shall make all explorations and excavations for such purpose.
- E. All non-metallic piping shall have a tracing wire installed with said piping.
- F. Underground piping which is used for fire protection shall be installed by a Contractor which holds a current Oklahoma Certificate of Competency for Automatic Fire Sprinkler Systems.

### 3.2 LAYING PIPE:

- A. Underground fire protection piping shall be installed in accordance with NFPA 24-8-1 through 8-7. All tees, plugs, caps and bends shall be anchored with clamps, tie rods and

concrete thrust blocks in accordance with NFPA 24-8-6. Underground fire protection piping shall have a minimum of forty-two (42) inches of cover above the top of the pipe.

- B. General: Before lowering pipe into trenches, the bottom of the ditch shall be graded so that when pipe is in the ditch it will have a bearing for its entire length. The pipe shall be carefully examined for defects and the inside cleaned. After placing pipe in ditch, the bell gasket, and spigot shall be wiped free from all dirt, sand and foreign material. The gasket and spigot shall then have applied a film of lubricant. The plain ends of the pipe shall then be entered into the socket after which the pipe is forced into the socket until it makes contact with the bottom of the socket.
- C. Trench water: At times when pipe laying is not in progress, the open ends of pipe shall be closed by approved means, and no trench water shall be permitted to enter the pipe.
- D. Cutting pipe: Cutting of pipe for inserting valves, fittings or closure pieces shall be done in a neat and workmanlike manner without damage to the pipe.
- E. Direction of laying: Unless otherwise directed, pipe shall be laid with bell ends facing in the direction of laying. For lines on an appreciable slope, bells shall face upgrade.
- F. Permissible deflection: Wherever necessary to deflect pipe from a straight line, either in the vertical or horizontal plane, to avoid obstruction, to plumb stems, or where long radius curves are permitted, the degree of deflection shall be as recommended by the manufacturer of the pipe.
- G. Unsuitable conditions: No pipe shall be laid in water or when the trench conditions or weather is unsuitable for such work, except by written permission of the Engineer.

### 3.3 DUCTILE IRON PIPE - PUSH ON JOINTS:

- A. Joints shall be made by means of a compression-type, push-on resilient gasket. Gasket shall be pre-lubricated before installation using a lubricant recommended by the pipe manufacturer. The seated joint shall be identified by the visible mark on the spigot of the installed pipe section. When the temperature is above 60 degrees F., the spigot end of each cast iron pipe lead shall be forced tightly on the bell of the preceding pipe. When the temperature is below 60 degrees F., the pipe shall be laid with the spigot end 1/16 inch from the face of the bell for expansion.
- B. Flexible joint pipe shall be assembled, handled and installed in accordance with the printed recommendations which accompany the pipe provided by the manufacturer of the piping material.

### 3.4 SETTING APPURTENANCES:

- A. Valves and fittings: Gate valves and pipe fittings shall be set and jointed to new pipe in the manner previously specified for cleaning, laying and jointing pipe.

- B. Valve boxes: Cast iron valve boxes shall be firmly supported and maintained centered and plumb over the wrench nut of the gate valve, with box cover flush with the surface of the finished pavement or at such other level as may be directed.

3.5 SETTING HYDRANTS:

- A. General locations: Hydrants shall be located in a manner to provide complete accessibility, and in such manner that the possibility of damage from vehicles or injury to pedestrians will be minimized.
- B. Position of nozzles: All hydrants shall stand plumb and shall have their nozzles at an angle of 45 degrees with respect to the curb. They shall conform to the established grade, with nozzles at least eighteen (18) inches above the ground.
- C. Drainage at hydrant: Wherever hydrants are set in impervious soil, a drainage pit as shown on the drawings shall be excavated below each hydrant and filled and compacted with coarse gravel or broken stone mixed with coarse sand, under and around the bowl of the hydrant and to a level six (6) inches above the waste opening.
- D. Cleaning: Hydrants shall be thoroughly cleaned of dirt or foreign matter before setting.

3.6 ANCHORAGE OF BENDS, TEES, AND PLUGS:

- A. Limiting pipe diameter and degree of bend: Reaction or thrust backing shall be applied on all pipe lines at all tees, plugs caps and at bends deflecting eleven degrees or more, or movement shall be prevented by attaching suitable metal rods or straps.
- B. Material for reaction backing: Reaction or thrust backing shall be of concrete. Backing shall be placed between solid, unexcavated ground and the fitting to be anchored; the area of bearing on pipe and on ground in each instance shall be as shown on the drawings. The backing shall, unless otherwise directed, be so placed that the pipe and fittings' joints will be accessible for repairs.

3.7 FLUSHING OF SYSTEM:

- A. Underground piping shall be thoroughly flushed in accordance with NFPA 24-8-8 prior to the connection of inside piping.

3.8 HYDROSTATIC TESTS:

- A. Pressure during test: After the pipe has been laid and partially backfilled as specified, all newly laid pipe, or any valved section of it, shall, unless otherwise specified, be subjected to hydrostatic pressure of two hundred (200) psi for at least three (3) hours in accordance with NFPA 24-9.2.
- B. Procedure: Test shall conform with AWWA C600. Each section of pipe shall be slowly filled with water and the specified test pressure, measured at the lowest point of elevation, shall be applied by means of a pump connected to the pipe in a satisfactory

manner. The pump, pipe connection gauges and all necessary apparatus shall be furnished by the Contractor. The test shall be applied to each valved section in order to check this leakage through all valves. Contractor shall notify and request Fire Marshal to monitor all pressure test and leakage test procedures.

- C. Expelling air before test: Before applying the specified test pressure, all air shall be expelled from the pipe. To accomplish this, taps shall be made, if necessary, at points of highest elevation, and afterwards tightly plugged.
- D. Leakage defined: Leakage is defined as the quantity of water to be supplied into the newly laid pipe, or any valved section of it, necessary to maintain the specified leakage test pressure after the pipe has been filled with water and air expelled. Fire Marshal to monitor leakage test.
- E. Permissible leakage: Suitable means shall be provided by the Contractor for determining the quantity of water lost by leakage under normal operating pressure. No pipe installation will be accepted until or unless this leakage is less than ten (10) U.S. Gal. per 24 hours per mile per inch nominal diameter. In calculating leakage, the Fire Marshal will make allowance for added joints in the pipeline above those incidental to normal unit lengths of pipe.
- F. Variation from permissible leakage: Should any test of combined sections of pipe laid disclosed leakage per mile of pipe greater than that specified, or if individual sections show leakage greater than the specified limit, the Contractor shall, at his own expense, locate and repair the defective joints until the leakage is within the specified allowance.
- G. Time for making test: Pipe may be subjected to hydrostatic pressure, inspected, and tested for leakage at any convenient time to Contractor, Engineer and Fire Marshal after partial completion of backfill. The Contractor shall truck water as necessary to make the tests when each section is ready.
- H. Certification: The joint Owner-Contractor inspection and test certificates in accordance with NFPA –24-A-9-2.1 shall be satisfactorily completed and submitted to the Fire Marshall, Owner and water system authority.

### 3.9 STERILIZATION:

- A. Before being placed in service, all new water main pipe lines and accessories shall be chlorinated. All chlorinating equipment and materials, labor and supplies shall be furnished by the Contractor in the Contract. Prior to chlorination, all dirt and foreign matter shall be removed by a thorough flushing through the hydrants or by other approved means. Each valved section of new laid pipe shall be flushed independently. That shall be done prior to the pressure test and must be done before the trench has been backfilled. All flushing, chlorinating and testing of water main pipe lines shall be in strict compliance with the Local Issuing Authority Public Works Department.
- B. Sterilization procedure shall be in accordance with AWWA C601. Sterilization shall be accomplished by the application of clear water containing a minimum of 50 ppm of available chlorine. The chlorine bearing water shall remain in contact with the surfaces

being sterilized for a period of not less than 24 hours. At the end of the contact period, the chlorine residual in all units and at extremities of pipelines shall be at least 25 ppm. The Contractor shall arrange for the testing of treated water through the Owner's Representative and Local Issuing Authority Public Works Department Testing Laboratory.

- C. Chlorinating valves and hydrants: In the process of chlorinating water pipe, all valves or other appurtenances shall be operated while the pipeline is filled with the chlorinated agent.
- D. Final flushing and test: Following chlorination, all treated water shall be thoroughly flushed from the newly laid pipeline at its extremities until the replacement water throughout its length shall, upon test, be approved by the Local Issuing Authority Public Works Department. The Contractor shall be responsible for rearranging for the test samples.
- E. Repetition of procedure: Should the initial treatment prove ineffective; the chlorination procedure shall be repeated until confirmed tests shown that water sampled conforms to the requirements previously stated.

END OF SECTION 331100

## LIST OF CONTRACT DOCUMENTS

The Successful Bidder, as Contractor, is responsible for the proper completion and submission of the documents listed below within seven (7) calendar days following the City's notification of its intent to award Contract, unless that time is extended by the City Engineer.

All forms must have the original ink signature of a person authorized to bind the Contractor. All documents must be attested to or notarized as required by the "Signature Requirements for Bidding Documents."

All bonds must be issued by a surety licensed to do business in the State of Oklahoma and meeting the requirements of the Oklahoma Competitive Bidding Act (Title 61 O.S. 2011, §113) and the Instruction to Bidders.

### REQUIRED CONTRACT DOCUMENTS

Contract

Performance Bond in the amount of the Contract

Statutory Bond in the amount of the Contract

Maintenance Bond in the amount of the Contract and for the term required in the Special Provisions

Certificate of Nondiscrimination

\*Small and Disadvantaged Local Business Subcontracting Plan & Affidavit

Certificates of Insurance in the types and amounts required in the Special Provisions, including:

Workers' Compensation

Public liability and Property Damage

Builder's Risk

Contractor's Identification Numbers as required by the Commissioner of Labor

Submit the Identification Numbers on the form provided herein.

Defect Bond, if required by the Contractor's Prequalification Resolution

Any other documents required in the Bidding Documents

\*A notice to proceed will not be issued by the City Engineer until the Small and Disadvantaged Local Business Subcontract Plan & Affidavit is received by the City Engineer. Subsequent to completion of project final inspection, neither project final acceptance nor payment of final claim will be initiated until the Small and Disadvantaged Local Business Subcontracting Plan Close Out Report is received by the City Engineer.

Forms to be Used. Contractor shall use only the forms provided by the City of Oklahoma City or photocopies thereof and shall make no changes or alterations in the documents other than to add signature lines for joint ventures or limited liability companies in accordance with the instructions in the "Signature Requirements for Bidding Documents."

**CONTRACT**

**THIS CONTRACT AND AGREEMENT**, made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by and between the Oklahoma City Zoological Trust, party of the first part, hereinafter termed "Trust", and \_\_\_\_\_, party of the second part, hereinafter termed "Contractor".

**WITNESSETH:**

**WHEREAS**, the City has caused to be prepared in accordance with law, certain specifications, and other bidding documents for the work hereinafter described and has approved and adopted all of said bidding documents, and has caused Solicitation for Bids to be given and advertised as required by law, and has received sealed proposals for the furnishing of all labor and materials for:

(insert project name and number)

as outlined and set out in the bidding documents and in accordance with the terms and provisions of said Contract; and

**WHEREAS**, Contractor, in response to said Solicitation for Bids, published in The Journal Record, \_\_\_\_\_, has submitted to the City in the manner and at the time specified, a sealed proposal in accordance with the terms of this Contract; and

**WHEREAS**, the City in the manner provided by law, has publicly opened, examined, and canvassed the proposals submitted and has determined and declared the above-named Contractor to be the lowest responsible bidder on the above described project, and has duly awarded this Contract to said Contractor for the sum named in the proposal, to wit:

\_\_\_\_\_ Dollars (\$\_\_\_\_\_).

**NOW, THEREFORE**, for and in consideration of the mutual agreements and covenants herein contained, the parties to this Contract have agreed and hereby agree as follows:

1. The Contractor shall, in a good and first-class workmanlike manner, at its own cost and expense, furnish all labor, materials, tools and equipment required to perform and complete said work in strict accordance with the Contract Documents, including the Bidding Documents, "Standard Specifications for Construction of Public Improvements", any special provisions, schedules and the plans adopted and approved by the City, all of which documents are on file in the Office of the City Clerk of the City of Oklahoma City and are made a part of

this Contract as fully as if the same were herein set out at length, with the following additions and/or exceptions: (if none, so state) None.

2. The City shall make payments to the Contractor in the following manner: On or about the first day of each month, the City Engineer, or other appropriate person, will review estimates of the value, based on Contract prices and/or schedule of values of work done and materials incorporated in the work and of materials suitably stored at the site thereof during the preceding calendar month. The Contractor shall furnish to the City Engineer, or other appropriate person, such detailed information as he may request. Each monthly estimate for payment must contain or have attached an affidavit as required by 74 O.S. § 85.22.

3. On completion of the work, but prior to the acceptance thereof by the City, it shall be the duty of the City Engineer, or other appropriate person, to determine that said work has been completely and fully performed in accordance with said Contract Documents, and upon making such determination, said official shall make his final certificate to the City. The Contractor shall furnish proof that all claims and obligations incurred by him in connection with the performance of said work have been fully paid and settled; said information shall be in the form of an affidavit, which shall bear the approval of the surety on the Contract bonds for payment of the final estimate to the Contractor; thereupon, the final estimate (including retainages) will be approved and paid and the same shall be in full for all claims of every kind and description said Contractor may have by reason of having entered into or arising out of this Contract.

**IN WITNESS WHEREOF**, the parties hereto have caused this instrument to be executed in one (1) original, the day and year first above written.

**ATTEST:**

\_\_\_\_\_  
Contractor (name of company)

\_\_\_\_\_  
(Witness/Secretary)

\_\_\_\_\_  
(Individual - President)

**THE OKLAHOMA CITY  
ZOOLOGICAL TRUST**

**ATTEST:**

\_\_\_\_\_  
Secretary

\_\_\_\_\_  
Chairman

**REVIEWED** for form and legality.

---

Assistant Municipal Counselor

**PERFORMANCE BOND**

**KNOW ALL MEN BY THESE PRESENTS:**

That We, \_\_\_\_\_, as Contractor, and \_\_\_\_\_, as Surety, are held and firmly bound unto the Oklahoma City Zoological Trust, a municipal trust, hereinafter termed "Trust", in the full and just sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_), such sum being equal to 100% of the Contract price for the payment of which, well and truly to be made, we, and each of us, bind ourselves, our heirs, executors and assigns, themselves, and its successors and assigns, jointly and severally, firmly by these presents.

The conditions of this obligation are such, that whereas, said Contractor is the lowest and best bidder for the making of the following City work and improvement:

(insert project number and name)

has entered into a certain written Contract with the City on the \_\_\_ day of \_\_\_\_\_, 20\_\_\_, for the erection and construction of said work and improvement all in compliance with the plans and specifications therefore, made a part of said Contract and on file in the Office of the City Clerk, and said Contract is hereby made a part and parcel of this bond as if literally written herein.

**NOW, THEREFORE,** if the Contractor shall fully and faithfully execute the work and perform said Contract according to its terms, conditions, and covenants, and in exact accordance with the bid of said Contractor, and according to certain plans and specifications heretofore made, adopted, and placed on file in the Office of the City Clerk of the City of Oklahoma City, as set out in the specifications herein, and shall promptly pay or cause to be paid, all labor, material and/or repairs and all bids for labor performed on said work, whether by subcontract or otherwise, and shall protect and save harmless the said City and all interested property owners against all claims, demands, causes of action, losses or damage, and expense to life or property suffered or sustained by any person, firm, or corporation by reason of negligence of the Contractor or his or its agents, servants, or employees in the construction of said work, or by or in consequence of any improper execution of the work or act of omission or use of inferior materials by said Contractor, or his or its agents, servants, or employees, and shall protect and

save the City harmless from all suits and claims of infringement or alleged infringement of patent rights or processes, then this obligation shall be void; otherwise, this obligation shall remain in full force and effect.

**IT IS FURTHER EXPRESSLY AGREED AND UNDERSTOOD** by the parties hereto that no changes or alterations in said Contract and no deviations from the plan or mode of procedure herein fixed shall have the effect of releasing the sureties, or any of them, from the obligations of this bond.

**IN WITNESS WHEREOF**, the said Contractor has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its duly authorized officer, and the said Surety has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its attorney-in-fact, duly authorized so to do, the day and year first above written.

Executed this \_\_\_\_ day of \_\_\_\_\_, 20\_\_ by the Contractor.

\_\_\_\_\_  
Contractor (name of company)

**ATTEST:**

\_\_\_\_\_  
Secretary/Witness

By: \_\_\_\_\_  
Authorized Officer

Executed this \_\_\_\_ day of \_\_\_\_\_, 20\_\_ by the Surety.

**ATTEST:**

\_\_\_\_\_  
Surety

\_\_\_\_\_  
Secretary/Witness

By: \_\_\_\_\_  
Attorney-in-Fact

**REVIEWED** for form and legality.

\_\_\_\_\_  
Assistant Municipal Counselor

**APPROVED** by the City Council of the City of Oklahoma City this \_\_\_\_\_ day  
of \_\_\_\_\_, 20\_\_\_\_\_.

**ATTEST:**

\_\_\_\_\_  
Secretary

\_\_\_\_\_  
Chairman

**STATUTORY BOND**

**KNOW ALL MEN BY THESE PRESENTS:**

That We, \_\_\_\_\_, as Contractor, and \_\_\_\_\_, as Surety, are held and firmly bound unto the Oklahoma City Zoological Trust, in the sum of \_\_\_\_\_ Dollars (\$\_\_\_\_\_), such sum being equal to 100% of the Contract price for the payment of which, well and truly to be made, we, and each of us, bind ourselves, our heirs, executors and assigns, themselves, and its successors and assigns, jointly and severally, firmly by these presents.

The conditions of this obligation are such, that whereas, the above Bonded Contractor, \_\_\_\_\_, is the lowest and best bidder for the making of the following City work and improvement:

(insert project name and number)

and has entered into a certain written Contract with the City of Oklahoma City (hereinafter termed "City") on the \_\_\_ day of \_\_\_\_\_, 20\_\_\_, for the erection and construction of said work and improvement, in exact accordance with the bid of said Contractor, and according to certain plans and specifications theretofore made, adopted and placed on file in the Office of the City Clerk of the City of Oklahoma City.

**NOW, THEREFORE,** if said Contractor shall fail or neglect to pay all indebtedness incurred by said Contractor or subcontractor of said Contractor who perform work in the performance of said Contract, and such repairs to and rental of machinery and equipment as may be furnished by a subcontractor to the person or persons contracting with the City, within thirty (30) days after the same becomes due and payable, the person, firm or corporation entitled thereto may sue and recover on this bond, the amount so due and unpaid.

It is further expressly agreed and understood by the parties hereto that no changes or alterations in said Contract and no deviations from the plan or mode of procedure herein fixed shall have the effect of releasing the sureties, or any of them, for the obligations of this bond.

**IN WITNESS WHEREOF,** the said Contractor has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its duly authorized officers; and the said Surety has caused these presents to be executed in its name and its corporate seal to be

hereunto affixed by its attorney-in-fact, duly authorized so to do, the day and year first above written.

Executed this \_\_\_\_ day of \_\_\_\_\_, 20\_\_ by the Contractor.

**ATTEST:**

\_\_\_\_\_  
Contractor (name of company)

\_\_\_\_\_  
Secretary/Witness

By: \_\_\_\_\_  
Authorized Officer

Executed this \_\_\_\_ day of \_\_\_\_\_, 20\_\_ by the Surety.

**ATTEST:**

\_\_\_\_\_  
Surety

\_\_\_\_\_  
Secretary/Witness

By: \_\_\_\_\_  
Attorney-In-Fact

**REVIEWED** for form and legality.

\_\_\_\_\_  
Assistant Municipal Counselor

**APPROVED** by the Chairman and Trustees of the Oklahoma City Zoological Trust this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

**ATTEST:**

\_\_\_\_\_  
Secretary

\_\_\_\_\_  
Chairman

## MAINTENANCE BOND

### KNOW ALL MEN BY THESE PRESENTS:

That We, \_\_\_\_\_, as Contractor, and \_\_\_\_\_, as Surety, are held and firmly bound unto the [insert name of Trust], a municipal trust, (hereinafter termed "Trust"), in the full and just sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_), such sum being equal to the Contract price for a period of \_\_\_\_\_ (\_\_\_\_) year(s), for the payment of which, well and truly to be made, we, and each of us, bind ourselves, our heirs, executors, and assigns, themselves, and its successors and assigns, joint and severally, firmly by these presents.

The conditions of this obligation are such that whereas, said Contractor has by a certain Contract between the Contractor and the Trust, dated this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, agreed to construct in the City of Oklahoma City:

(insert project name and number)

all in compliance with the Contract Documents therefore, made a part of said Contract and on file in the Office of the City Clerk of the City of Oklahoma City; and to maintain the said improvement in the amounts set forth above against any failure due to workmanship or material for a period of \_\_\_\_\_ years from the date of acceptance of the \_\_\_\_\_ by the Trust.

**NOW, THEREFORE,** if said Contractor shall pay or cause to be paid to the Trust, all damage, loss, and expense which may result by reason of defective materials and/or workmanship in connection with said work occurring within a period of \_\_\_\_\_ year(s) from and after acceptance of said project by the Trust, then this obligation shall be null and void, otherwise to be and remain in full force and effect.

It is further agreed that if the said Contractor or Surety herein shall fail to maintain said improvements against any failure due to defective workmanship and/or material for a period of \_\_\_\_\_ year(s) and at any time repairs shall be necessary that the cost of making said repairs shall be determined by the City Council of the City of Oklahoma City, or some person or persons designated by them to ascertain the same, and if, upon thirty (30) days notice, the said amount ascertained shall not be paid by the Contractor or Surety herein, or if the necessary repairs are not made, the said amount shall become due upon the expiration of thirty (30) days

and suit may be maintained to recover the amount so determined in any Court of competent jurisdiction. And that the amount so determined shall be conclusive upon the parties as to the amount due on this bond for the repair or repairs included therein, and that the cost of all repairs shall be so determined from time to time during the life of this bond as the condition of the improvements may require.

It is further expressly agreed and understood by the parties hereto that no changes or alterations in said Contract and no deviations from the plan or mode of procedure herein fixed shall have the effect of releasing the sureties, or any of them, from the obligations of this bond.

**IN WITNESS WHEREOF**, the said Contractor has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its duly authorized officers; and the said Surety has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its attorney-in-fact, duly authorized so to do, the day and year first above written.

Executed this \_\_\_\_ day of \_\_\_\_\_, 20\_\_ by the Contractor.

**ATTEST:**

\_\_\_\_\_  
Contractor (name of company)

\_\_\_\_\_  
Secretary/Witness

By \_\_\_\_\_  
Authorized Officer

Executed this \_\_\_\_ day of \_\_\_\_\_, 20\_\_ by the Surety.

**ATTEST:**

\_\_\_\_\_  
Surety

\_\_\_\_\_  
Secretary/Witness

By: \_\_\_\_\_  
Attorney-in-Fact

**REVIEWED** for form and legality.

\_\_\_\_\_  
Assistant Municipal Counselor

**APPROVED** by the Chairman and Trustees of the Oklahoma City Zoological Trust  
this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

**ATTEST:**

\_\_\_\_\_  
Secretary

\_\_\_\_\_  
Chairman

## DEFECT BOND

We, \_\_\_\_\_, as Contractor, and \_\_\_\_\_, as Surety, a corporation organized under the laws of the State of \_\_\_\_\_, and authorized to transact business in the State of Oklahoma, are held and firmly bound unto the Oklahoma City Zoological Trust, a municipal trust, hereinafter termed "Trust", in the amount of \_\_\_\_\_ Dollars (\$\_\_\_\_\_); said sum being equal to one hundred percent (100%) of the Contract price as provided herein for a period of \_\_\_\_\_ year(s). We, as Contractor and Surety, bind ourselves and each of us, our heirs, executors, administrators, trustees, successors and assigns, jointly and severally.

**WHEREAS**, the Contractor entered into a written Contract with the Trust to perform and provide work and construct or create or repair the project, to wit: Project No. \_\_\_\_\_, generally described as \_\_\_\_\_ all in compliance with the Bidding Documents for said project.

**NOW, THEREFORE**, should the Contractor, during the term of this Defect Bond, timely and expeditiously repair or replace, or cause to be repaired or replaced, any defective, inferior or non-compliant workmanship, work and material regarding or relating to the project, and should the Surety, at the end of the term of this Defect Bond, pay, or cause to be paid, to the Trust all damages, losses, costs and expenses which directly or indirectly may result from: (1) the untimely repair or replacement of inferior, non-compliant or defective materials, work and workmanship in connection with said project; (2) the failure to timely and expeditiously maintain, repair or replace same; and (3) the cost and expense incurred by the Trust to have any defective, inferior or non-compliant work, material or workmanship repaired, replaced or maintained, timely and expeditiously, by Trust staff and/or third parties, then this Defect Bond shall terminate at the end of the term provided in the Standard Provisions; otherwise, this Defect Bond shall remain in effect.

The term of this Defect Bond shall commence upon the formal final acceptance of the entire project by the Trust as fully and totally complete and shall run for: (1) the total number of years as provided in the Standard Provisions for this project ("term of years"); or (2) until all repairs and replacement of defective, inferior or non-compliant materials, work or workmanship

occurring or discovered prior to the termination of this Defect Bond have been completed and all sums due from the Surety and the Contractor therefore have been paid, whichever is later.

Executed this \_\_\_\_ day of \_\_\_\_\_, 20\_\_ by the Contractor.

\_\_\_\_\_  
Contractor (name of company)

**ATTEST:**

\_\_\_\_\_  
Secretary/Witness

By: \_\_\_\_\_  
Authorized Officer

Executed this \_\_\_\_ day of \_\_\_\_\_, 20\_\_ by the Surety.

\_\_\_\_\_  
Surety

**ATTEST:**

\_\_\_\_\_  
Secretary/Witness

By: \_\_\_\_\_  
Attorney-in-Fact

**REVIEWED** for form.

\_\_\_\_\_  
Assistant Municipal Counselor

**APPROVED** by the Chairman and Trustees of the Oklahoma City Zoological Trust  
this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

**ATTEST:**

\_\_\_\_\_  
Secretary

\_\_\_\_\_  
Chairman

**THE CITY OF OKLAHOMA CITY**

**CERTIFICATE OF NONDISCRIMINATION**

In connection with the performance under the Contract, the Contractor agrees as follows:

A. The Contractor agrees not to discriminate against any employee or applicant for employment because of race, creed, sex, color, national origin, ancestry, age or disability as defined by the Americans with Disabilities Act of 1990, Sec. 3(2). Contractor shall take affirmative action to ensure that employees are treated without regard to their race, creed, sex, color, national origin, ancestry, age or disability, as defined by the Americans with Disabilities Act of 1990, Sec. 3(2). Such actions shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruiting or recruitment, advertising, layoff or termination, rate of pay or other forms of compensation and selection for training, including apprenticeship. The Contractor and Subcontractors shall agree to post in a conspicuous place, available to employees and applicants for employment, notices to be provided by the City Clerk of the City of Oklahoma City setting forth the provisions of this Section.

B. In the event of the Contractor's noncompliance with this Nondiscrimination Certificate, the Contract may be canceled, terminated or suspended by the Contracting Public Entity. The Contractor may be declared by the Contracting Public Entity ineligible for further contracts until satisfactory proof of intent to comply shall be made by the Contractor and/or Subcontractors.

C. The Contractor agrees to include the requirements of this Nondiscrimination Certificate in any subcontracts connected with the performance of this Contract.

I have read the above and agree to abide by these requirements:

**This form must be fully completed and signed by the Contractor or Contractor's Authorized Agent.**

\_\_\_\_\_  
Name of Individual, Partnership, Limited Liability Company, or Corporation hereinafter called Bidder

\_\_\_\_\_  
Signature of Bidder or Authorized Agent

\_\_\_\_\_  
Type or print name and title of person who signed above

This Certificate is required by Oklahoma City Municipal Code, Chapter 25, Article III § 25-41, as incorporated by reference in the City of Oklahoma City's *Standard Specifications for the Construction of Public Improvements* or otherwise in the Bidding Documents.

**THE CITY OF OKLAHOMA CITY**

**PUBLIC CONSTRUCTION PROJECT SUBCONTRACTING  
PLAN & AFFIDAVIT**

The following Affidavit must be submitted by the successful Bidder, or Bidder's Authorized Agent. A Notice to Proceed will not be issued by the City Engineer until the affidavit is received.

The undersigned, of lawful age, being first duly sworn on oath, affirms and states that the Bidder has the authority to execute this Public Construction Project Subcontracting Plan. The bidder further states that they understand the resolution creating the Small, Disadvantaged, Minority and Woman-owned Subcontracting Program adopted by the City Council of the City of Oklahoma City on June 3, 2008.

**I. Public Construction Project Subcontracting Plan**

A. Outreach - In the space provided below describe in detail your company's efforts regarding outreach to small, minority, disadvantaged and women owned businesses in an effort to utilize their services in conjunction with Project Number \_\_\_\_\_.

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B. Internal Efforts – In the space provided below describe in detail any initiatives in place within your company directed at establishing policies and procedures to ensure that small, minority, disadvantaged and women owned businesses are made aware of and given the opportunity to submit bids for sub-contracting on publicly funded projects.

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A Notice to Proceed for the project listed above will not be issued by the City Engineer until this document is completed and returned to the Public Works department. The document must be



# PUBLIC CONSTRUCTION PROJECT SUBCONTRACTING PLAN

## CLOSE OUT REPORT

Project No. and Name: \_\_\_\_\_

Submitted for: \_\_\_\_\_ By \_\_\_\_\_  
Company Name Signature

This form shall be completed and returned to the City Engineer's Office following final inspection. Final acceptance and payment of final claim will not be initiated until receipt of this document by the City Engineer.

In the space provided below please provide the requested information for each subcontractor employed on the project listed above.

Subcontractor Name and Address  
of Principal Place of Business

Dollar amount of  
Subcontract

.....	.....
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....

ISSUE DATE: \_\_\_\_\_

THE CITY OF OKLAHOMA CITY

Project No. & Name: \_\_\_\_\_

## CERTIFICATE OF INSURANCE

PRODUCER

NOTE: THIS CERTIFICATE CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER, NOR DOES IT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY POLICIES BELOW, EXCEPT AS SHOWN BELOW.

**COMPANIES AFFORDING COVERAGE**

ADDRESS

COMPANY A  
LETTER

COMPANY B  
LETTER

INSURED

COMPANY C  
LETTER

COMPANY D  
LETTER

ADDRESS

COMPANY E  
LETTER

COVERAGES: THIS IS TO CERTIFY THAT THE INSURANCE POLICIES LISTED BELOW HAVE BEEN ISSUED TO THE INSURED, FOR THE POLICY PERIOD INDICATED HEREIN. THE POLICIES SHOWN IN THIS CERTIFICATE ARE DEEMED PRIMARY TO ANY INSURANCE CARRIED BY THE INSURED FOR THE SPECIFIC LOCATION, PROJECT OR EVENT.

TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE	POLICY DATE	EXPIRATION DATE	LIMITS
GENERAL LIABILITY <input type="checkbox"/> COMMERCIAL <input type="checkbox"/> GENERAL LIABILITY  <input type="checkbox"/> OCCURRENCE <input type="checkbox"/> CLAIMS MADE AND TAIL COVERAGE					GENERAL AGGREGATE
					BODILY INJURY (Per Person)
					PROPERTY DAMAGE (Per Accident)
					EACH OCCURRENCE
AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS					COMBINED SINGLE LIMIT
					BODILY INJURY (Per Person)
					BODILY INJURY (Per Accident)
					PROPERTY DAMAGE
WORKER'S COMPENSATION AND EMPLOYER LIABILITY Standard Compliance for the State of Oklahoma					EACH ACCIDENT
					DISEASE - POLICY LIMIT
					DISEASE - EACH EMPLOYEE
VALUABLE PAPERS INSURANCE (If required by Contract)					
EXCESS LIABILITY (If required by Contract)					EACH OCCURRENCE
					AGGREGATE
OTHER (If required by Contract)					

DESCRIPTION OF OPERATIONS/VEHICLES/SPECIAL ITEMS

THE CITY OF OKLAHOMA CITY IS AN ADDITIONAL INSURED, WITH RESPECT TO LIABILITY, ARISING OUT OF THE PROJECT OR EVENT.  
 THE CITY OF OKLAHOMA CITY IS A LOSS PAYEE ON VALUABLE PAPERS INSURANCE.

CERTIFICATE HOLDER(S)  The City of Oklahoma City and its beneficiary trusts 420 W. Main St., Suite 400 Oklahoma City, OK 73102	CANCELLATION  IT IS AGREED THAT NONE OF THESE POLICIES WILL BE CANCELLED OR CHANGED EXCEPT IN THE APPLICATION OF THE AGGREGATE LIABILITY LIMIT PROVISIONS, SO AS TO AFFECT THE INSURANCE DESCRIBED IN THIS CERTIFICATE UNTIL AFTER 30 DAYS PRIOR WRITTEN NOTICE OF SUCH CANCELLATION OR REDUCTION IN COVERAGES AND 10 DAYS WRITTEN NOTICE OF NON-RENEWAL FOR NONPAYMENT OF PREMIUM HAS BEEN DELIVERED TO THE CERTIFICATED HOLDER.
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(PLEASE READ CAREFULLY)

**CERTIFICATE OF INSURANCE EXPLANATION OF  
THE CITY OF OKLAHOMA CITY AND PARTICIPATING TRUST(S)**

The Certificate Holder(s) require the use of this Certificate of Insurance as evidence that the insurance requirements of the contract have been complied with and will continue as long as the contract is in force. The City and/or Trust rely on this Certificate as proof of compliance with the insurance requirements agreed upon. The City and/or Trust must be advised of any cancellation or nonrenewal of the insurance coverages required or any reduction in the coverages provided, in compliance with the contract, as shown in the Certificate of Insurance. Thirty (30) days prior written notice of cancellation or reduction in coverages (other than an aggregate limit provision reduction) and ten (10) days written notice of nonrenewal for nonpayment of premium must be provided to the City and/or Trust so that the City and/or Trust may take appropriate action.

Many certificates of insurance are received by the City and its Trusts and many contain statements claiming that the certificate is issued as a matter of information only and confers no rights upon the certificate holder. A common example is "Should any of the above described policies be canceled before the expiration date hereof, the issuing company will endeavor to mail (number of days) days written notice to the named holder, but failure to mail such notice shall impose no obligation of liability of any kind upon the company, its agents or representatives." This is unacceptable.

The City and Trust have the right of notice of cancellation, nonrenewal and reduction of coverage, as a requirement in the contract. The City and Trust rely upon the Certificate of Insurance as evidence of contract compliance.

The authorization requirement (that the authorized representative signing the Certificate of Insurance provide written acknowledgment by the insurance company or companies to the City and/or Trust) is written proof that the person signing the Certificate is legally authorized by the insurance company or companies to obligate them, as shown in the Certificate.

The City and/or Trust must have positive evidence in the form of the Certificate of Insurance that the insurance requirements of the contract have been met and will continue to be met without interruption during the term of the contract.

No activity will begin until the insurance Certificate is received. Your cooperation in providing the City and/or Trust with acceptable evidence of insurance compliance will prevent confusion and delay.

## CONTRACTOR IDENTIFICATION NUMBERS

*This form is to be completed and submitted with the Contract.*

Project Number \_\_\_\_\_

Description: \_\_\_\_\_  
\_\_\_\_\_

Name of Contractor \_\_\_\_\_

The Contractor provides the following Identification Numbers:

Oklahoma Tax Commission \_\_\_\_\_

Oklahoma Employment Security Commission \_\_\_\_\_

Internal Revenue Service \_\_\_\_\_

Social Security Administration \_\_\_\_\_

Contractor is reminded that no Contractor or subcontractor may be employed on this project that is listed by the Commissioner of Labor as ineligible to bid on or be awarded a public works contract or public construction contract. A list of ineligible contractors may be obtained from the Commissioner of Labor.

## LIST OF DOCUMENTS REQUIRED FOR THIS BID

Project Number: \_\_\_\_\_  
Description: \_\_\_\_\_

The Bidder is responsible for reviewing this list of required documents and any requirements of the Special Provisions and/or Special Provisions - Technical and assuring that each and every required document is properly completed. Forms and Affidavits should be completed and submitted in accordance with provisions of the "Signature Requirements for Bidding Documents." Bids not submitted in accordance with these requirements will be recommended for rejection. All documents required for this Bid are included in the Electronic Bidding Process.

### ***DOCUMENTS REQUIRED FOR THIS BID***

Completed Electronic Line Items (Item Response Form)  
Anti/Non-Collusion Affidavit  
Business Relationship Affidavit  
Bid Security

Failure to submit a required document may be cause for rejection of the Bid. However, the contracting public entity reserves the right to require timely submission of document(s) required in the Special Provisions.

Forms Not in Packet. If an item is listed on this page or in the Special Provisions and the form is not included in this packet, it is the Bidder's responsibility to notify the City Engineer.

Forms to be Used. Bidder must use the forms provided in the Electronic Bidding Process. Bid Security form shall be provided by the Contractor.

## **SIGNATURE REQUIREMENTS FOR BIDDING DOCUMENTS**

All Bid Documents and Contract Documents must be signed by a person having the legal authority to bind the Bidder/Contractor and be completed in accordance with the rules listed below.

### **PART I. A. INSTRUCTIONS FOR SUBMISSION OF BIDS**

- (1) The name of the individual, limited liability company, partnership, corporation or joint venture submitting the Bid must be provided. The Bidding Documents must be electronically signed in accordance with the requirements of Part I.B. herein. The name and title of each person who electronically signed the Bidding Documents must be provided.
- (2) All blank spaces in the Bidding Documents, which require the provision of any information or any statement from the Bidder must be filled in or the Bid may be rejected.
- (3) All Affidavits must be completed, signed and submitted electronically.
- (4) The Bid Security must be submitted with the Bid in accordance with the Bidding Documents

### **PART I. B. SIGNATURE REQUIREMENTS FOR SUBMISSION OF THE BIDDING DOCUMENTS**

- (1) Bids submitted by a Corporation: Bidding Documents must be electronically signed by the President or Vice President of the corporation or comply with Part I.B. (6).
- (2) Bids submitted by a Sole Proprietorship or Individual: Bidding Documents must be electronically signed by the owner or individual, or comply with Part I.B. (6).
- (3) Bids submitted by a Partnership: Bidding Documents must be electronically signed by a General Partner or comply with Part I.B. (6).
- (4) Bids submitted as a Joint Venture: Bidding Documents must be electronically signed by an authorized agent having authority to bind the Joint Venture and comply with Part I.B. (6).
- (5) Bids Submitted by a Limited Liability Company: Bidding Documents must be electronically signed by the Manager or an authorized agent having authority to bind the limited liability company or comply with Part I.B. (6). Such Bids must be accompanied by the documentation required in Part II.B. (5) below.
- (6) Signature Requirements for Bidder's Authorized Agent: Some businesses may delegate the authority to sign the Bidding Documents to an authorized agent. In such cases, all documents requiring signature must be electronically signed by the "authorized" agent. Attached to the Bidding Documents must be the documentation required in Part II.B.(6) below.

(7) Additional Documentation: Additional documentation of authority may be required on any authority issue or Contract issue.

#### PART II. A. INSTRUCTIONS FOR SUBMISSION OF THE CONTRACT DOCUMENTS

(1) All documents listed on the "List of Contract Documents" must be submitted within seven (7) calendar days following the City's notification of its intent to award Contract, unless that time is extended by the City Engineer (if the Bidder shows delays in returning the contract are beyond the Bidder's control).

(2) The Contract and other forms must be signed and, if so provided on the form, notarized. Where notarization is required, the notary must legibly: enter the date; enter the name and title of the affiant (person(s) sworn); sign as Notary Public; provide the date of commission expiration; and may impress his/her notary seal or stamp, where applicable.

(3) Type or legibly print the name of the individual, limited liability company, partnership, corporation or joint venture awarded the Contract on the line provided for this information. The name and title of each person who signed the Contract Documents must be typed or legibly printed on the line below the signature line.

#### PART II. B. SIGNATURE REQUIREMENTS FOR SUBMISSION OF THE CONTRACT AND BONDS

(1) Contracts submitted by a Corporation: Contract Documents must have the original ink signature of the President or Vice President of the corporation. That signature must be witnessed by the Corporate Secretary or Assistant Corporate Secretary, and the firm's corporate seal, if any, must be affixed in accordance with 18 O.S. (2011) § 1016. Should the corporation not have a seal or should the seal not be available, then the person signing must demonstrate authority to bind the corporation, as set forth in paragraph II.B.(6) below. The name and title of each person who signed the Contract or bond must be typed or legibly printed on the line below the signature line.

(2) Contracts submitted by a Sole Proprietorship or Individual: Contract Documents must have the original ink signature of the owner or individual, respectively, on the signature line, or comply with Part II.B.(6). The name and title of each person who signed the Contract or bond must be typed or legibly printed on the line below the signature line.

(3) Contracts submitted by a Partnership: Contract Documents must have the original ink signature of a General Partner on the signature line or comply with Part II.B.(6). The name and title of each person who signed the Contract or bond must be typed or legibly printed on the line below the signature line.

(4) Contracts submitted by a Joint Venture: If two or more parties submit a joint Bid, the Contract Documents must be signed in ink by the appropriate representatives of each/all parties. Any of the parties which are corporations must have the appropriate signature(s) and attestation(s) as provided above or comply with Part II.B.(6). The Contract Documents should be

altered, but only to add the signature lines (name of Contractor, signature line, name and title line, and attestation line) to meet this requirement. The name and title of each person who signed the Contract or bond must be typed or legibly printed on the line below the signature line.

(5) Contracts Submitted by a Limited Liability Company: Contract Documents must have the original ink signature of the Manager or an authorized agent having authority to sign contracts and bonds and to bind the limited liability company. Attached to the Contract Documents, signed by the authorized agent, must be a properly executed copy of the articles of organization; the operating agreement; and any bylaws, resolution or other document of the authorizing entity, specifically providing the authorized agent with the authority to execute the Contract Documents on behalf of and binding the authorizing entity. All documents designating and authorizing the agent to bind the limited liability company must be notarized by a Notary Public who will complete the required information and may affix his/her seal or stamp. The name and title of each person who signed the Contract Documents must be typed or legibly printed on the line below the signature line. Additional pages may be added, but each signature must be properly notarized.

(6) Signature Requirements for Bidder's Authorized Agent: Some businesses may delegate the authority to sign the Contract Documents to an authorized agent. In such cases, all Contract Documents requiring signature must have the original ink signature of the "authorized" agent. Attached to the Contract Documents, signed by the authorized agent, must be a properly executed power of attorney or other document of the authorizing entity, specifically providing the "authorized" agent with the authority to execute the Contract Documents on behalf of and binding the authorizing entity. Each signature on the authorizing documents must be notarized by a Notary Public who will complete the required information and may affix his/her seal or stamp. The name and title of each person who signed the Contract, bond, or any authorizing document must be typed or printed on the line below the signature line. Additional pages may be added, but all signatures must be properly notarized. If attachments to the Bid Documents are required by this section, attachments may be uploaded through the Electronic Bidding Process.

(7) Additional Documentation: Additional documentation may be required.

**ORIGINAL FORMS TO BE SUPPLIED BY THE CITY OF OKLAHOMA CITY:**

**BID LINE ITEMS FROM BIDSYNC**

**ANTI/NON-COLLUSION AFFIDAVIT**

**BUSINESS RELATIONSHIP AFFIDAVIT**



TO: Zoological Trust Chair and Trustees

FROM: Dwight Lawson, Zoo Director

DATE: September 23, 2020

SUBJECT: Approval of Change Order No. 3, Project MZ-0060, Oklahoma City Zoo Orientation Plaza and Africa-Themed Savanna Exhibits, increase of \$6,000.00.

Location: 2000 Remington Place, Oklahoma City, OK 73111

Purpose: Change Order No. 3 for Project MZ-0060, Oklahoma City Zoo Orientation Plaza and Africa-Themed Savanna Exhibits, amends the Design Scope to include design of the interior finishes and basic MEP needed for fit-out to the interiors of the food, beverage, and retail venue, which is not currently included in the contract.

All food service equipment, required power, and installation will be provided by the food and beverage vendor, with fixturing and casework provided by Lancer. ID graphics for the venues are not included at this time and can be added at a later date if deemed necessary.

Background: The Oklahoma City Zoo Orientation Plaza and Africa-Themed Savanna Exhibits

Previous Action: The Zoological Trust approved the construction contract on October 23, 2019; an Amended and Restated Contract was approved January 22, 2020, which declares the contract made retroactive to July 24, 2019. Change Order No. 1 was approved and executed December 4, 2019. Change Order No. 2 was approved April 22, 2020.

Contract Price:	Original Contract Amount	\$3,469,000.00
	Net Changes by Previous	
	Change Orders	\$ (15,415.00)
	Change Order No. 3	<u>\$ 6,000.00</u>
	Revised Contract Amount	\$ 3,459,585.00

Contractor: Peckham Guyton Alberts & Viets, Inc. (PGAV)

Review: Public Works Department

Recommendation: Approve Change Order.

**AMENDMENT NO. 3 TO AMENDED AND RESTATED CONTRACT FOR  
ARCHITECTURAL SERVICES**

This amendment is made and entered into this \_\_\_ day of \_\_\_\_\_, 2020 by and between the Oklahoma City Zoological Trust, herein called "Trust", and Peckham Guyton Albers & Vlets, Inc., herein called "Architect".

**WITNESSETH:**

**WHEREAS**, the Trust and the Architect entered into an agreement on January 22, 2020 (retroactive to July 24, 2019) as follows:

Project No. MZ-0060  
Zoo Orientation Plaza and Africa-Themed Savannah Exhibits; and

**WHEREAS**, this project provides for the Architect's design and all other architectural services related to the zoo orientation plaza and Africa-themed savannah exhibits; and

**WHEREAS**, the Architect's subconsultant inadvertently included \$33,000 of the Basic Services fee in their reimbursable expenses; and

**WHEREAS**, the fees had to be reallocated in accordance with the intended scope of work; and

**WHEREAS**, the reallocation was authorized under the auspices of the amended and restated contract; and

**WHEREAS**, subsequent to execution of the original contract as previously amended and restated, it was determined to be in the best interest of the Trust to direct the Architect to design a biofiltration wetlands; and

**WHEREAS**, the above work was authorized under auspices of **Amendment No. 1**; and

**WHEREAS**, subsequent to execution of the original contract as previously amended and during the final design phase, it was determined to be in the best interest of the Trust to remove the following items from the original scope of work: 1) Pygmy Hippo Habitat and associated life support system (LSS) and wetlands systems; and 2) train ride and associated shelter; and

**WHEREAS**, a portion of the design fees originally designated for the above items were applied towards redesign of other habitats and the children's play area in the pachyderm building, as well as the installation of updated containment in the existing giraffe holding building; and

**WHEREAS**, the above work was authorized under auspices of **Amendment No. 2**; and

**WHEREAS**, subsequent to execution of the original contract as previously amended, it has been determined to be in the best interest of the Trust to direct the Engineer to provide interior finish design services for the food/beverage and retail venues (including basic mechanical, electrical, and plumbing design) to make the space suitable for occupation; and

**WHEREAS**, the original contract must be amended to incorporate the Architect's revised scope of work related to these services and associated fees; and

**WHEREAS**, the total compensation to be paid to the Architect for this Contract and amendment is as follows:

For the original contract:

Not to exceed \$3,469,000 for architectural services

For Amendment No. 1:

Not to exceed \$65,965 for architectural services

For Amendment No. 2:

An overall decrease of \$81,380 for architectural services (a decrease of \$72,800 in Basic Services and a decrease of \$8,580 for Reimbursable Expenses)

For Amendment No. 3:

Not to exceed \$6,000 for architectural services

Total Amended Contract:

Not to exceed \$3,459,585 for all services (an increase of \$6,000); and

**WHEREAS**, both parties agree to amend said contract; and

**NOW, THEREFORE**, the parties agree as follows:

- I. Amend **Paragraph 2. Basic Services.** to read as follows:

**Basic Services.** The Architect is hereby engaged and employed by the Trust to perform in accordance with good architectural practices and in the best interest of the Trust in accordance with the professional standard of care all of the work as set out herein (including **Amendment No. 1** work related to design of biofiltration wetlands for this project; and including **Amendment No. 2** work related to revising the design to delete the Pygmy Hippo Habitat and associated LSS and wetlands systems, as well as the train ride and associated shelter, and providing for the redesign of other habitats and the children's play area in the pachyderm building, as well as the installation of updated containment in the giraffe holding building; and including **Amendment No. 3** work related to interior design services necessary for the retail, food and beverage venues); including Exhibit A, and including but

not limited to the following:

- II. Amend **Paragraph 5. Compensation.** to read as follows:

**Compensation.** The aggregate total compensation for all architectural services under this Contract shall not exceed a total fee of \$3,459,585 (an increase of \$6,000), which includes: for Basic Services an amount not to exceed \$3,136,325 (an increase of \$6,000), and for Reimbursable Expenses an amount not to exceed \$223,260, both of which are specifically set forth in Exhibit B, attached hereto and incorporated herein; and for Additional Services, as set forth in Exhibit B-1, an amount not to exceed \$100,000.

- III. Amend **EXHIBIT A – SCOPE OF WORK** by the addition of the following “**Exhibit A- Scope of Work (added by Amendment No. 3)**”;

**Exhibit A Scope of Work  
(Added by Amendment No. 3)**

**Scope of Services**

PGAV will provide the design of the interior finishes and basic mechanical, electrical and plumbing for Lancer to connect to and finish the interior fit-out. All food service equipment, required power, and installation will be provided by the food and beverage vendor. All food and beverage and retail fixturing and casework will be provided by Lancer. ID graphics for the venues are not included at this time.

Items provided by PGAV and our consultant team are as outlined below. PGAV has not included any meetings with Lancer to coordinate per Owner request. Should coordination or additional design be required, PGAV will review with the Oklahoma City Zoo first.

**Design Solutions**

1. Task 2
  - A. Food and Beverage
    1. Design and specify interior wall, floor, and ceiling finishes at Architect’s discretion.
    2. Design, detail and specify the walk-up food service counter
    3. Provide 3 – 2inch empty conduits above the ceiling from electrical service panels to the food and beverage space. Electrical running to equipment is not included.
    4. Provide supply and exhaust to the food and beverage space.
    5. Provide floor drains in the food and beverage space at engineer’s discretion. Coordination with kitchen equipment is not included.
    6. Provide 1-1/2-inch CW to wall for future use. Plumbing to any equipment is not included.
    7. Provide design and specification for floor drain and mop sink against wall in location determined by Owner.

8. Provide lay-in ceiling light fixtures at engineer's discretion and one wall-mounted light switch near the exterior door.
- B. Retail
1. Design and specify interior wall, floor, and ceiling finishes at Architect's discretion.
  2. Provide one (1) duplex electrical outlet at each column location.
  3. Provide electrical and data stub-up for POS in floor at center of building. Coordination with retail fixturing or casework is not included. Connection to electrical and data not included.
  4. Provide electrical for one (1) fan in the center of the space for fan by vendor. Fan specification not included.
  5. Provide one (1) empty conduit and junction box at the ceiling for lighting by vendor. Lighting design and specification not included.
  6. Provide heaters within the space in locations to be determined by Engineer. Type (gas vs electric) to be determined.

### **Review Meetings**

None at this time

### **Deliverables**

#### Task 2

- A. Food & Beverage
1. Updated drawings to incorporate interior finishes
  2. Details of the food service counter
  3. Electrical drawing for 2 empty conduits
  4. Electrical drawings for lay-in ceiling fixtures
  5. Mechanical drawing for supply / return in building
  6. Plumbing drawings for floor drains, mop sink, and chilled water stub out
  7. Specifications for additional items
- B. Retail
1. Updated drawings to incorporate interior finishes
  2. Electrical drawings for an outlet at each column, stub out for ceiling fan in center of ceiling, one conduit and junction box for lighting
  3. Electrical and data drawing for stub out in center of space
  4. Drawings for heaters within space
  5. Specifications for additional items

#### IV. Amend **EXHIBIT B – COMPENSATION** to read as follows:

**EXHIBIT B  
COMPENSATION  
PROJECT NO. MZ-0060  
ZOO ORIENTATION PLAZA AND AFRICA-THEMED SAVANNAH EXHIBITS**

Under the terms of this Contract, the Architect agrees to perform the work and services described in this Contract. The Trust agrees, in accordance with the limitations and conditions set forth in the Contract, to pay an amount not to exceed \$3,459,585 (an increase of \$6,000) which includes: for Basic Services an amount not to exceed \$3,136,325 (an increase of \$6,000), and for Reimbursable Expenses, an amount not to exceed \$223,260, both of which are specifically set forth in this Exhibit B; and for Additional Services, as set forth in Exhibit B-1, an amount not to exceed \$100,000.

#### B.I. Basic Work and Services

Compensation for basic services may not exceed \$3,136,325 (an increase of \$6,000), and in no event may the Architect receive compensation in excess of the amount listed for each task for performance of its basic services.

The Architect may receive up to the following amounts of the not to exceed amounts for services rendered upon the completion of the following tasks. Partial payments of the not to exceed amounts for each task may be invoiced for incremental work completed. Not to exceed amounts below are accumulative for successive tasks.

Task 1 an amount not to exceed:	Conceptual Planning Report completed under separate contract with the Zoo Trust.
Task 1A an amount not to exceed: \$841,960	Completion and approval by the Executive Director of the design development document/schematic for the project.
Task 2 an additional amount not to exceed: \$1,216,980 (an increase of \$6,000)	Completion and acceptance by the Trust of the final plans and specifications for the project.
Task 3 an additional amount not to exceed: \$97,310	Award of the construction contract to the successful Bidder.
Task 4 an additional amount not to exceed: \$872,075	Upon completion and final acceptance by the Trust of the completed project. Said amount is to be paid proportionately to the level of completion of project construction. The proportionate amount is to be consistent with the Construction Contractor's percentage of completion.

Task 5 an additional amount not to exceed:  
\$108,000

Upon satisfactory completion and acceptance of  
the as-built drawings.

## B.II. Reimbursable Expenses

The Trust agrees to pay reimbursable expenses in an amount not to exceed \$223,260. Reimbursable expenses are in addition to the compensation for professional services and include actual expenditures made by Architect in the interest of the project, with the prior approval of the Executive Director, and include the following:

1. Printing of the documents at each phase; drawings, specifications, 11x17 drawings, and reports.
2. Travel for meetings, includes flight, hotel, food, car rental, parking fees, shuttle and miscellaneous.
3. Printing of colored plans, renderings, etc.
4. Delivery of the documents using FedEx or similar.
5. Permitting fees not covered by the Trust.
6. Subconsultant Travel - \$2,160

Reimbursable expenses are limited to the actual cost for expenditures and shall not include any anticipated profits, overhead expenses, salaries and/or such other costs.

IT IS UNDERSTOOD AND AGREED BY AND BETWEEN, the Trust and the Architect that, as amended by this Instrument, all terms and conditions of the original Contract shall remain in full force and effect and the provisions of this Instrument shall become a part of the original Contract as if fully written herein.

IN WITNESS WHEREOF, this amendment was executed and approved by the Architect this \_\_\_\_\_ day of \_\_\_\_\_, 2020.

ATTEST:

*Michael Schardt*  
\_\_\_\_\_  
Secretary

(and Corporate Seal – either print stamped or embossed – if embossed, must be leaded sufficiently to be visible in a PDF file reproduction)



PECKHAM GUYTON ALBERS & VIETS, INC.

*[Signature]*  
\_\_\_\_\_  
President

APPROVED by the Executive Director this \_\_\_\_\_ day of \_\_\_\_\_, 2020.

THE OKLAHOMA CITY ZOOLOGICAL TRUST

\_\_\_\_\_  
Executive Director

IN WITNESS WHEREOF, this amendment was ratified and approved and executed by the Oklahoma City Zoological Trust this \_\_\_\_\_ day of \_\_\_\_\_, 2020.

ATTEST:

THE OKLAHOMA CITY ZOOLOGICAL TRUST

\_\_\_\_\_  
Secretary

\_\_\_\_\_  
Chairman

**REVIEWED** for form and legality.

---

Assistant Municipal Counselor



# CERTIFICATE OF LIABILITY INSURANCE

10/18/2020

DATE (MM/DD/YYYY)

7/22/2020

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Lockton Companies 444 W. 47th Street, Suite 900 Kansas City MO 64112-1906 (816) 960-9000	CONTACT NAME:	
	PHONE (A/C, No, Ext):	FAX (A/C, No):
	E-MAIL ADDRESS:	
	INSURER(S) AFFORDING COVERAGE	NAIC #
	INSURER A : The Cincinnati Casualty Company	28665
	INSURER B : The Cincinnati Indemnity Company	23280
	INSURER C : Lloyds of London	
	INSURER D :	
	INSURER E :	
	INSURER F :	

COVERAGES PECGU01 CERTIFICATE NUMBER: 16071409 REVISION NUMBER: XXXXXXXX

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> SEVERABILITY CLAUSE GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC OTHER:	Y	Y	EPP0584708	7/24/2020	7/24/2021	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 \$
A	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS NON-OWNED AUTOS ONLY <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input checked="" type="checkbox"/>	Y	Y	EPP0584708	7/24/2020	7/24/2021	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ XXXXXXXX BODILY INJURY (Per accident) \$ XXXXXXXX PROPERTY DAMAGE (Per accident) \$ XXXXXXXX \$ XXXXXXXX
A	UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input type="checkbox"/> RETENTION \$	Y	Y	EPP0584708	7/24/2020	7/24/2021	EACH OCCURRENCE \$ 1,000,000 AGGREGATE \$ 1,000,000 \$ XXXXXXXX
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N	N/A	EWC0584709	7/24/2020	7/24/2021	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
C	Architects & Engr Professional	N	N	LDUSA1900882	10/18/2019	10/18/2020	\$1,000,000 EACH CLAIM & IN THE ANNUAL AGG; \$75,000 DED. FOR ALL PROJECTS.

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)  
 RE: PROJECT NO. MZ-0060; OKLAHOMA CITY ZOO JOB; THE CITY AND ITS PARTICIPATING TRUSTS ARE ADDITIONAL INSURED AS RESPECTS GENERAL, AUTO AND EXCESS LIABILITY, AND THESE COVERAGES ARE PRIMARY, AS REQUIRED BY WRITTEN CONTRACT. THE ADDITIONAL INSURED'S OWN COVERAGE IS EXCESS AND NON-CONTRIBUTORY WITH THE GENERAL LIABILITY AND EXCESS LIABILITY AND ON THE AUTO LIABILITY AS RESPECTS THE USE OF VEHICLES OWNED BY "NAMED INSURED" IF REQUIRED BY WRITTEN CONTRACT. WAIVER OF SUBROGATION APPLIES TO GENERAL LIABILITY, AUTO LIABILITY, EXCESS/UMBRELLA LIABILITY, AND WORKERS COMPENSATION/EMPLOYER'S LIABILITY, WHERE ALLOWED BY STATE LAW AND IF REQUIRED BY WRITTEN CONTRACT.

<b>CERTIFICATE HOLDER</b> 16071409 THE OKLAHOMA CITY ZOOLOGICAL TRUST % OKLAHOMA CITY ZOOLOGICAL PARK ATTN: DWIGHT LAWSON, EXEC. DIRECTOR/CEO 2000 REMINGTON PLACE OKLAHOMA CITY OK 73111	<b>CANCELLATION</b> SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.  AUTHORIZED REPRESENTATIVE 
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July 31, 2020  
REVISED: August 11, 2020  
REVISED: September 4, 2020

Via Email

Mr. Dwight Lawson  
Executive Director & CEO  
Oklahoma City Zoo and Botanical Garden  
2000 Remington Place  
Oklahoma City, OK 73111

**RE: Zoo Orientation Plaza and Africa-Themed Savanna Exhibits  
Amendment #03  
PGAV Project No. 77022-00**

Dear Dwight:

Attached is Design Scope Amendment #03 which includes the interior finish design for the food & beverage and retail venues.

The amount of Design Scope Amendment No. 03 is **\$6,000.00**. These services will be billed as a fixed fee per the original contract terms. No additional estimated reimbursables have been included in this change order.

Please review the attached documents. If you are in agreement with them, please sign a copy and return to PGAV for our records.

If you have any questions or concerns, please do not hesitate to call.

Sincerely,



Emily I. Howard  
Vice President

---

Approval

/lsb

Attachments

c: M. Konzen, J. Marecek, A. Schumacher, D. Hansen, File

## **Scope of Services**

In discussions with Lancer, the Owner's food and retail vendor, the interiors of the food & beverage venue and the retail venue require fit-out. This scope of services is not currently included in our contract.

Per discussions with the Zoo, PGAV will provide the design of the interior finishes and basic MEP for Lancer to connect to and finish the interior fit-out themselves. All food service equipment, required power, and installation will be provided by the food and beverage vendor. All food & beverage and retail fixturing and casework will be provided by Lancer. ID graphics for the venues are not included at this time and can be added at a later date if deemed necessary.

Items provided by PGAV and our consultant team are as outlined below. PGAV has not included any meetings with Lancer to coordinate per Owner request. Should coordination or additional design be required, PGAV will review with the Owner first.

Scope will include the following:

## **Design Solutions**

1. Task 2
  - A. Food and Beverage
    1. Design and specify interior wall, floor, and ceiling finishes at Architect's discretion.
    2. Design, detail and specify the walk-up food service counter
    3. Provide 3 – 2" empty conduits above the ceiling from electrical service panels to the food and beverage space. Electrical runs to equipment is not included.
    4. Provide supply and exhaust to the food and beverage space.
    5. Provide floor drains in the food and beverage space at engineer's discretion. Coordination with kitchen equipment is not included.
    6. Provide 1-1/2" CW to wall for future use. Plumbing to any equipment is not included.
    7. Provide design and specification for floor drain and mop sink against wall in location determined by Owner.
    8. Provide lay-in ceiling light fixtures at engineer's discretion and one wall-mounted light switch near the exterior door.
  - B. Retail
    1. Design and specify interior wall, floor, and ceiling finishes at Architect's discretion.
    2. Provide one (1) duplex electrical outlet at each column location.
    3. Provide electrical and data stub-up for POS in floor at center of building. Coordination with retail fixturing or casework is not included. Connection to electrical and data not included.
    4. Provide electrical for one (1) fan in the center of the space for fan by vendor. Fan specification not included.
    5. Provide one (1) empty conduit and junction box at the ceiling for lighting by vendor. Lighting design and specification not included.

6. Provide heaters within the space in locations to be determined by Engineer.  
Type (gas vs electric) to be determined.
2. Task 3
  - A. Review bids associated with this scope of work, included per original design scope
3. Task 4
  - A. Review shop drawings / submittals for scope noted above, included per original design scope
  - B. Review and respond to contractor RFI's for scope noted above, included per original design scope

### **Review Meetings**

4. None at this time

### **Other Items**

5. None at this time.

### **Deliverables**

6. Task 2
  - A. Food & Beverage
    1. Updated drawings to incorporate interior finishes
    2. Details of the food service counter
    3. Electrical drawing for 2 empty conduits
    4. Electrical drawings for lay-in ceiling fixtures
    5. Mechanical drawing for supply / return in building
    6. Plumbing drawings for floor drains, mop sink, and chilled water stub out
    7. Specifications for additional items
  - B. Retail
    1. Updated drawings to incorporate interior finishes
    2. Electrical drawings for an outlet at each column, stub out for ceiling fan in center of ceiling, one conduit and junction box for lighting
    3. Electrical and data drawing for stub out in center of space
    4. Drawings for heaters within space
    5. Specifications for additional items
7. Task 4
  - A. Responses to contractor RFI's
  - B. Shop drawing / submittal review

### **Schedule:**

8. Pending the review and approval process, and assuming a start date of September 8, 2020, we plan to complete this work by September 23, 2020.

**Fee Proposal Breakdown**

**Fee Component**

**Oklahoma City Zoo - Orientation Plaza and Africa-Themed Savanna**

Original Contract Sum			
Fees		3,144,000	
Reimbursables		225,000	
Add services		100,000	
			<b>3,469,000</b>
Net Changes by Previous Change Orders			
Amendments 1, 2			<b>-15,415</b>
Revised Contract Sum Prior to this Design Phase Change Order			<b>3,453,585</b>

**Current Design Phase Amendment #03 - Food & Beverage and Retail Design**

<b>Fee - PGAV</b>	hours	avg rate	
Management	0	245	0
Design / Dwgs / Specs	40	150	6,000
Credit - good will	1		-3,800
			2,200
<b>Fee - Subconsultants</b>			
MEP/FP - exp			3,800
			3,800
			<b>Total Fee - Amendment #03</b>
			<b>6,000</b>

**Estimated Reimbursables**

PGAV - Included in Base Fee			0
MEP/FP - exp			0
			0
			<b>Total Reimbursables - Amendment #03</b>
			<b>0</b>

<b>New Contract Sum Including Amendment #03</b>			<b>3,459,585</b>
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**TO:** Chair and Trustees of the Oklahoma City Zoological Trust

**FROM:** Dwight Lawson, Executive Director/CEO

**DATE:** September 24, 2020

**SUBJECT:** Third Supplement to the Food Service and Catering Operations Agreement with Lancer Hospitality, Oklahoma, LLC.

**Location:** 2000 Remington Place, Oklahoma City, OK 73111

**Purpose:** Lancer Hospitality currently operates Food Service and Catering Operations at the Zoo, as well as operating the retail stores at the Zoo. The Food and Beverage contract, as well as the agreement covering retail services, both expire on January 31, 2024.

**Background:** On January 5, 2017, the Zoo and Lancer entered into a Food Service and Catering Operations Agreement giving Lancer the exclusive right to sell food and beverages at the Oklahoma City Zoo and Botanical Garden.

February 1, 2018, the Zoo and Lancer amended certain terms of the Agreement under the First Supplement to the Food Service and Catering Agreement.

March 25, 2020, the Zoo and Lancer further amended certain terms of the Agreement under the Second Supplement to the Food Service and Catering Agreement.

The Third Supplement is to ratify the terms and conditions of the Agreement dated January 5, 2017, as amended, as well as consent to the modifications contained herein which are made in response to disruptions due to the pandemic.

**Recommendation:** Approval of Third Supplement to the Food Service and Catering Operations Agreement with Lancer Hospitality, Oklahoma, LLC.

## **THIRD SUPPLEMENT TO THE FOOD SERVICE AND CATERING OPERATIONS AGREEMENT**

This Third Supplement to the Food Service and Catering Operations Agreement (“Third Supplement”) is made and entered into as of the 1st day of October, 2020 (the “Effective Date”), by and between the Oklahoma City Zoological Trust (“Zoo”) and Lancer Hospitality, Oklahoma, LLC (“Lancer”).

WHEREAS, on January 5, 2017, Zoo and Lancer entered into a Food Service and Catering Operations Agreement (“Agreement”) whereby the Zoo granted Lancer the exclusive right to sell food and beverages at the Oklahoma City Zoo;

WHEREAS, on February 1, 2018, Zoo and Lancer amended certain terms of the Agreement under the First Supplement to the Food Service and Catering Agreement (“First Supplement”);

WHEREAS, on March 25, 2020, Zoo and Lancer further amended certain terms of the Agreement under the Second Supplement to the Food Service and Catering Agreement (“Second Supplement”);

WHEREAS the Zoo and Lancer now desire to further supplement and amend the agreement pursuant to the terms set forth herein;

WHEREAS, the Zoo joins in this Third Supplement for the purpose of consenting to the modifications contained herein and ratifying the terms and conditions of the Agreement dated January 5, 2017, as amended, for the benefit of the parties due to the effects of the COVID-19 pandemic on the Zoo and Lancer’s food and catering operations at the Zoo.

NOW, THEREFORE, in consideration of the foregoing, the parties hereto agree as follows:

- I. **Amendment of Section 2.** Section 2 (“PERIOD OF PERFORMANCE”) of the Agreement, as previously amended by the First Supplement, is hereby further amended as follows (added text is italicized, and deleted text is stricken through):

### SECTION 2 PERIOD OF PERFORMANCE

The period of performance under this Agreement will be from the Commencement Date for seven (7) years, *plus fifty one (51) days, the period that the Zoo was closed by order of the State of Oklahoma due to the COVID-19 pandemic, through ~~January 31, 2024~~ March 22, 2024*, unless sooner terminated as herein provided. With the mutual consent of the parties this Agreement may be renewed for one (1) additional (5) year term (an “Extension Term”) subject to the same or re-negotiated terms and conditions.

**II. Amendment of Section 5.** Section 5 (“COMMISSIONS”) of the Agreement, as previously amended by the Second Supplement, is hereby further amended as follows (added text is italicized):

SECTION 5  
COMMISSIONS

Commissions. Lancer shall pay to Client a commission on an incremental basis based on the following percentages of total annual Adjusted Gross Receipts (“Commission”). The Commission shall be calculated and payable for each Accounting Period as provided herein.

	Adjusted Gross Receipts	Commission
Retail Sales	\$0-1,000,000	25%
	\$1,000,000	27%
	\$2,000,000+	28%

	Adjusted Gross Receipts	Commission
Catering (including Alcoholic Beverage Services)	\$0+	16%

So long as Client is in good standing under and has not breached this Agreement and no casualty or other loss has materially impacted Lancer’s food sales, Lancer guarantees a minimum aggregate Commission payment to the Zoo of Six Hundred Thousand Dollars (\$600,000) annually for the first five (5) years of this Agreement, and Six Hundred Fifty Thousand Dollars (\$650,000) each for years six (6) and (7) of this Agreement. *With respect to the 51 day extension period or any other extension period that might occur as a result of the COVID-19 pandemic, there shall be no guarantee on the Commission payment for the extension period.* The aforementioned guarantees are provided with the assumption that total annual Zoo attendance will exceed 925,000 per Contract Year. Attendance numbers shall be determined by the Zoo in the ordinary and customary manner that the Zoo has historically used to calculate attendance numbers, except notwithstanding the aforementioned, attendance numbers shall exclude guests attending Catering events outside normal operating hours. If Zoo attendance is less than 925,000 people per Contract Year, then the amount of the guarantees in this paragraph will be reduced proportionally by the following equation:

Guarantee amount x (the total annual visitors/925,000 visitors)

Commission excludes:

1. all discounted sales or credits provided by Lancer, including but not limited to Client Sponsored Catering, On-Duty Zoo Employee Discount, On-Duty Volunteer Discount, Zoo sponsored events, the Member Appreciation Day Discount, and Catering Credit;

2. proceeds from any “Round-Up” program, as discussed in Section 9.
3. food sales made to Lancer employees; and
4. all ancillary services provided by Lancer or a subcontractor not specifically specified in the chart above, including but not limited to things such as leasing decorations, audio-visual equipment and set up/take down related to Room Rentals.

*Notwithstanding the foregoing, for the twelve (12) month period commencing October 1, 2020, through September 30, 2021 (the “Relief Period”), Lancer shall pay to Client a commission on an incremental basis based on the following percentages of total Adjusted Gross Receipts (“Commission”). The Commission shall be calculated and payable for each Accounting Period as provided herein.*

	<i>Adjusted Gross Receipts</i>	<i>Commission</i>
<i>Retail Sales</i>	<i>\$0-1,000,000</i>	<i>18%</i>
	<i>\$1,000,000</i>	<i>22%</i>
	<i>\$2,000,000+</i>	<i>25%</i>

	<i>Adjusted Gross Receipts</i>	<i>Commission</i>
<i>Catering (including Alcoholic Beverage Services)</i>	<i>\$0+</i>	<i>14%</i>

**III. Amendment of Section 6.** Section 6 (“ACCOUNTING & REPORTING”), Subsection C, of the Agreement is hereby amended as follows (added text is italicized, and deleted text is stricken through):

SECTION 6  
ACCOUNTING & REPORTING

\* \* \* \* \*

C. Statement of Gross Receipts. Within *seventeen (17)* calendar days following the end of each Accounting Period, Lancer shall provide Client with a final statement of Gross Receipts, Adjusted Gross Receipts, and Commission in form and substance acceptable to the Client for the immediately preceding accounting period (the “Statement of Gross Receipts”). The Statement of Gross Receipts shall detail all Gross Receipts by revenue categories (such as, without limitation, concession stands, carts, kiosks, vending machines, foodservices points of sale, catering sales, alcoholic beverage sales, Client Sponsored Catering). *The Commission payment will be due twenty (20) business days following the end of each Accounting Period.*

IV. **Amendment of Section 41.** Section 41 (“OTHER”) of the Agreement is hereby amended as follows (added text is italicized):

SECTION 41  
OTHER

A. If issues arise that are not detailed in this agreement, both Client and Lancer agree to refer to the RFP for guidance (Exhibit F).

B. *The parties agree to the following additional terms:*

1. *Capital expenditures remaining (\$287,287.00) shall be frozen during the Relief Period noted in Section 5 above, unless an emergency replacement is required.*

2. *Lancer agrees that the food services and catering capital buy-back will be reduced on a dollar per dollar value for the commission reduction granted during the Relief Period noted in Section 5 above, calculated as the difference between the contract Commission percentages and the Relief Period Commission percentages, against actual sales during the Relief Period.*

3. *Zoo/Trust will accept the contract capital buy-out reduction as a philanthropic donation from Lancer.*

V. **Continuing Effect.** Except as modified herein, all terms and conditions of the original Agreement, as previously amended, shall continue in full force and effect.

IN WITNESS WHEREOF, the undersigned have executed this Agreement as of the day and year first above written.

APPROVED this \_\_\_\_\_ day of \_\_\_\_\_, 2020.

**OKLAHOMA CITY ZOOLOGICAL TRUST**

ATTEST:

\_\_\_\_\_  
Secretary

\_\_\_\_\_  
Chairman

**REVIEWED** for form and legality.

\_\_\_\_\_  
Assistant Municipal Counselor

**LANCER HOSPITALITY OKLAHOMA, LLC**

By: \_\_\_\_\_

**Matthew King, President**  
**Dining & Events – Elior NA**