



CITY COUNCIL AGENDA

NOTICE IS GIVEN THAT THE CITY COUNCIL OF THE CITY OF LAMESA, TEXAS, WILL MEET IN A REGULARLY SCHEDULED MEETING AT 5:30 P.M. ON TUESDAY, MAY 2, 2017, **814 SOUTH HOUSTON (FORREST PARK COMMUNITY CENTER)**, FOR THE PURPOSE OF CONSIDERING AND TAKING OFFICIAL ACTION ON THE FOLLOWING ITEMS:

1. **CALL TO ORDER:**
2. **INVOCATION:**
3. **RESOLUTION IN MEMORIAM FOR RAY RENNER'S CONTRIBUTIONS & SERVICE TO THE CRMWA BOARD OF DIRECTORS:** City Council to consider passing a resolution In Memoriam for Ray Renner's contributions and service to the CRMWA Board of Directors. *(City Manager and Dale Newberry, City's CRMWA Representative)*
4. **PRESENTATION OF THE CITY FY 2015/2016 AUDIT REPORT:** Hear financial audit report for Fiscal Year 2015 - 2016 from a representative of Bolinger, Segars, Gilbert & Moss, L.L.P. and consider accepting audit report as well as authorizing publication of audit report. *(City Manager, Finance Director and City Auditor)*
5. **ORDINANCE REPEALING INCREASE IN SWIMMING POOL FEES ADOPTED IN FY 2016/2017 BUDGET ORDINANCE (O-18-16):** City Council to consider an Ordinance on Second reading repealing the increase in Swimming Pool Fees adopted in Ordinance No: O-18-16 adopting the Budget for the Fiscal Year beginning October 1, 2016 and ending September 30, 2017 and amending Chapter 1, Article 1.08 of the Code of Ordinances of the City of Lamesa, Texas, entitled "Parks and Recreation" regarding imposition of fees for use of City Swimming Pool.
6. **AWARD OF CONSTRUCTION BID TO DARNELL CONSTRUCTION FOR 2016 CDBG WATERLINE IMPROVEMENTS:** City Council to consider awarding construction bid after verification of System Award Management (SAM) status to Darnell Construction (apparent low bidder) for 2016 CDBG Waterline project per Texas Department of Agriculture guidelines. *(City Manager, Kay Howard – Howco Services, and City Engineer)*
7. **BUDGET AMENDMENT IV:** City Council to consider amending Ordinance O-18-16 on first reading with respect to October 1, 2016 fiscal year budget. *(City Manager & Finance Director)*
8. **CALL FOR CONSTRUCTION BID – BOYS AND GIRLS CLUB LAKE PROJECT:** City Council to consider a call for Construction Bids for the Boys and Girls Club Lake Project. *(Mayor, City Manager, Scott Leonard and Tim Hair – Dunaway Engineering Firm)*
9. **DISCUSSION / ACTION FOR PLANNING CITY'S 100TH ANNIVERSARY (CITY INCORPORATED - MAY 25, 1917) AND ANY DESIRED RELATED EVENT:** City Council to discuss and consider approval for event planning desired for the City's 100th Anniversary (City Incorporated – May 25, 2017) and give staff direction. *(Mayor)*

10. DESIGNATE REGULARLY SCHEDULED MEETINGS: City Council to take action to designate the regularly scheduled City Council meetings for May 2017. (City Manager)

- **May 9, 2017 (Cancelled – Moved to May 11, 2017)**
- **May 11, 2017 (Canvass Elections)**
- **May 16, 2017 (Regularly Scheduled Meeting)**

11. EXECUTIVE SESSION: Council to consider convening into closed executive session regarding Consultation with Attorney regarding contemplated litigation under the provisions of the Texas Open Meetings Act (Chapter 551.071, Texas Government Code). No action will be taken in closed session. The Council will reconvene into open session after the completion of the executive session.

A. TMLIRP Insurance Claim – Fire Truck Settlement (*City Manager & City Attorney*)

B. May 6, 2017 City election regarding qualification of candidate for office (*City Attorney*)

12. ADJOURNMENT: *The next regularly scheduled meeting of the City Council of the City of Lamesa will be May 11th, 2017 at 5:30 P.M.*

PLEASE NOTE: DESIGNATED REGULARLY SCHEDULED MEETINGS FOR ECONOMIC DEVELOPMENT PROJECT:

- **May 9, 2017 (CANCELLED) – Changed to MAY 11, 2017 (Canvass Elections)**
- **May 16, 2017**

Open Meetings Information

CLOSED MEETINGS

The City Council reserves the right to adjourn into closed session at any time during the course of this meeting to discuss any of the matters listed above, as authorized by Texas Government Code Section 551.071 (Consultation with Attorney), 551.072 (Deliberations about Real Property), 551.073 (Deliberations about Gifts and Donations), 551.074 (Personnel Matters), 551.076 (Deliberations about Security Devices) and 551.087 (Economic Development).

PUBLIC PARTICIPATION

The meeting will be held pursuant to the provisions of the Texas Open Meetings Act (Govt. Code, Chapter 551). Discussion and actions are limited to the agenda items listed above. Persons desiring to address the City Council or express their opinion about a particular item on this agenda should notify the City Secretary before the meeting. Persons desiring to present other business or discuss matters not on this agenda should submit a request in writing to the City Secretary by the end of business hours on the Wednesday before the next meeting in order to be considered for inclusion on that agenda.

MEETING ACCESSIBILITY

Upon request, auxiliary aids and services will be provided to an individual with a disability in order to allow them to effectively participate in the city council meeting. Those requesting auxiliary aids or services should notify the contact person listed below at least twenty-four hours prior to the meeting by mail, telephone or RELAY Texas (1-800-735-2989)

Contact: Norma Garcia at 806-872-4322

601 South First Street, Lamesa, Texas 79331

Telephone - (806) 872-4322

Fax - (806) 872-4338

CERTIFICATION OF NOTICE

I certify this agenda was posted at the City Hall, 601 South First Street, Lamesa, Texas at 4:45 p.m., April 28th, 2017, in accordance with Chapter 551.041 of the Government Code.

Norma Garcia, City Secretary



City Council Agenda

City of Lamesa, Texas

DATE OF MEETING: MAY 2, 2017

AGENDA ITEMS: 1 & 2

1. **CALL TO ORDER:** *Announcement by the Mayor.* "This meeting is being held in accordance with the provisions of the Texas Open Meetings Act (Govt. Code, Chapter 551). Discussion and actions are limited to the agenda items as posted. Persons desiring to address the City Council or express their opinion about a particular item on this agenda should complete a request at this time. Persons desiring to present other business or discuss matters not on this agenda should submit a request in writing to the City Secretary in order to be considered for inclusion on the agenda of the next meeting. A quorum being present as evidenced by the presence of ___ members of the City Council, this meeting is hereby called to order."

The following members are present:

JOSH STEVENS	Mayor
BRANT STEWART	Council Member – District 1
MARIE A. BRISENO	Mayor Pro-tem/Council Member – District 2
FABIAN RUBIO	Council Member – District 3
BOBBY G. GONZALES	Council Member - District 4
FRED VERA	Council Member – District 5
CHANCE BRITT	Council Member – District 6

City Staff members present at the meeting:

SHAWNA D. BURKHART	City Manager
NORMA GARCIA	City Secretary
RUSSELL CASSELBERRY	Attorney

Members of the press present at the meeting:

Members of the public present at the meeting:

2. **INVOCATION:
AND PLEDGE OF ALLEGIANCE.**



City Council Agenda
City of Lamesa, Texas

DATE OF MEETING: MAY 2, 2017

AGENDA ITEM: 3

SUBJECT: RESOLUTION IN MEMORIAM FOR RAY RENNER'S CONTRIBUTIONS & SERVICE TO THE CRMWA BOARD OF DIRECTORS:
PROCEEDING: Resolution
SUBMITTED BY: City Staff

SUMMARY STATEMENT

City Council to consider passing a resolution In Memoriam for Ray Renner's contributions and service to the CRMWA Board of Directors.

COUNCIL ACTION

DISCUSSION _____

Motion by Council Member _____ to pass a resolution In Memoriam for Ray Renner's contributions and service to the CRMWA Board of Directors. Motion seconded by Council Member _____ and upon being put to a vote the motion _____.

VOTING: "AYE" _____ "NAY" _____ "ABSTAIN" _____

CITY MANAGER'S MEMORANDUM

Recommend approval.

RESOLUTION NO. _____

**A RESOLUTION IN MEMORIAM OF MR. RAY RENNER, A
MEMBER OF THE BOARD OF DIRECTORS OF THE
CANADIAN RIVER MUNICIPAL WATER AUTHORITY.**

On this the 2nd day of May, 2017, there came on and was held at the regular meeting place, the City Hall, an open meeting of the City Council of the City of Lamesa, Texas held pursuant to the provisions of the Texas Open Meetings Act; there being a quorum present and acting throughout the meeting, the following resolution was formally submitted by motion and duly seconded for the consideration and action of the meeting, to wit:

WHEREAS, Water conservation and the development of water resources have long been matters of concern to the municipalities and individual citizens of the Panhandle and of the South Plains of Texas; and

WHEREAS, Mr. Ray Renner passed from this life on the 15th day of December, 2016, and with his passing the citizens of this area lost a citizen concerned with and active in the conservation and development of water resources of Texas; and

WHEREAS, Mr. Ray Renner served as a member of the Board of Directors of the Canadian River Municipal Water Authority, from the City of Lamesa, since its establishment in 1953 until July 2007. Serving as Vice-President from September 1962 to January 1978 and President from January 1978 to January 1982. He also served as a member of the President's Cabinet Committee, the Legislative Committee and the Personnel Committee, and in other capacities to assist with the operation of the Authority facilities; and

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF LAMESA, TEXAS:

I.

That the City of Lamesa City Council expressed their deepest regret and sorrow on the passing of Mr. Ray Renner; and

II.

That this resolution In Memory of Ray Renner, be spread upon the official minutes of the City of Lamesa to preserve for all time the memory of the services rendered by Ray Renner, and that the Secretary be, and is hereby instructed to send a copy of this resolution to the family of Ray Renner with the City of Lamesa City Council's condolences.

Upon being put to a vote, the resolution was Passed, Approved, and Adopted this 2nd day of May, 2017, by a majority vote and ordered to be spread upon the

minutes of the City Council of the City of Lamesa, Texas and recorded in the resolution book thereafter.

ATTEST:

APPROVED:

Norma Garcia
City Secretary

Josh Stevens
Mayor

City Council Agenda
City of Lamesa, Texas

DATE OF MEETING: MAY 2, 2017

AGENDA ITEM: 4

SUBJECT: PRESENTATION OF THE CITY FY 2015/2016 AUDIT REPORT:
PROCEEDING: Action
SUBMITTED BY: City Staff
EXHIBITS: Audit Report (to be distributed by the City Auditor)

SUMMARY STATEMENT

Hear financial audit report for Fiscal Year 2015 - 2016 from a representative of Bolinger, Segars, Gilbert & Moss, L.L.P. and consider accepting audit report as well as authorizing publication of audit report.

COUNCIL ACTION

DISCUSSION _____

Motion by Council Member _____ to accepting the FY 2015/2016 Audit report and authorizing publication of audit report. Motion seconded by Council Member _____ and upon being put to a vote the motion _____.

VOTING: "AYE" _____ "NAY" _____ "ABSTAIN" _____

CITY MANAGER'S MEMORANDUM

Recommend approval.

City Council Agenda

City of Lamesa, Texas

DATE OF MEETING: MAY 2, 2017

AGENDA ITEM: 5

SUBJECT: ORDINANCE REPEALING INCREASE IN SWIMMING POOL FEES ADOPTED IN FY 2016/2017 BUDGET ORDINANCE (O-18-16)
PROCEEDING: Ordinance, Second Reading
SUBMITTED BY: City Staff
EXHIBITS: Ordinance

SUMMARY STATEMENT

City Council to consider an Ordinance on second reading repealing the increase in Swimming Pool Fees adopted in Ordinance No: O-18-16 adopting the Budget for the Fiscal Year beginning October 1, 2016 and ending September 30, 2017 and amending Chapter 1, Article 1.08 of the Code of Ordinances of the City of Lamesa, Texas, entitled "Parks and Recreation" regarding imposition of fees for use of City Swimming Pool.

COUNCIL ACTION

DISCUSSION _____

Motion by Council Member _____ to approve an Ordinance on second reading repealing the increase in Swimming Pool Fees adopted in Ordinance No: O-18-16 adopting the Budget for the Fiscal Year beginning October 1, 2016 and ending September 30, 2017 and amending Chapter 1, Article 1.08 of the Code of Ordinances of the City of Lamesa, Texas, entitled "Parks and Recreation" regarding imposition of fees for use of City Swimming Pool. Motion seconded by Council Member _____ and upon being put to a vote the motion _____.

VOTING: "AYE" _____ "NAY" _____ "ABSTAIN" _____

CITY MANAGER'S MEMORANDUM

Recommend approval.

ORDINANCE NO. _____

AN ORDINANCE OF THE CITY OF LAMESA, TEXAS, REPEALING THE INCREASE IN SWIMMING POOL FEES ADOPTED IN ORDINANCE NO: 0-18-16 ADOPTING THE BUDGET FOR THE FISCAL YEAR BEGINNING OCTOBER 1, 2016, AND ENDING SEPTEMBER 30, 2017, AND AMENDING CHAPTER 1, ARTICLE 1.08, OF THE CODE OF ORDINANCES OF THE CITY OF LAMESA, TEXAS, ENTITLED "PARKS AND RECREATION" REGARDING IMPOSITION OF FEES FOR USE OF CITY SWIMMING POOL

On the 18th day of April, 2017, there came on and was held at the City Hall of the City of Lamesa, Texas, an open meeting of the City Council of the City of Lamesa, Texas, held pursuant to the provisions of the Texas Open Meetings Act (Texas Government Code, Chapter 551), there being a quorum present and acting throughout the meeting, the following ordinance was formally submitted by motion and duly seconded for the consideration and action of the meeting, to-wit:

WHEREAS, the increase in swimming pool fees adopted in Ordinance No. 0-18-16 adopting the annual budget for the year beginning October 1, 2016, and ending September 30, 2017, should be repealed and Chapter 1, Article 1.08 of the Code of Ordinances of the City of Lamesa, Texas, should be amended to reflect the fees for use of the City swimming pool.

NOW, THEREFORE BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LAMESA, TEXAS:

SECTION 1. That the increase in swimming pool fees adopted in Ordinance No. 0-18-16 adopting the annual budget for the year beginning October 1, 2016, and ending September 30, 2017, be, and is hereby, repealed.

SECTION 2. That Chapter 1, Article 1.08 of the Code of Ordinances of the City of Lamesa, Texas, be, and is hereby, amended by adding Section 1.08.006 " Fees For Use of City Swimming Pool":

§ 1.08.006 Fees for the Use of City Swimming Pool

- (1) Child Fee: \$2.00 per day
- (2) Adult Fee: \$3.00 per day
- (3) Splash Pass – Child (15 visits): \$20.00
- (4) Splash Pass – Adult (15 visits): \$30.00
- (5) Refundable Deposit for Pool Rentals - \$125
- (6) Rental of Pool - \$60 per Pool Party (4 hour maximum)
- (7) Salary of 2 Lifeguards per Pool Party - \$12.25 per hour per lifeguard (totals \$98.00 for 4 hours). NOTE: Maximum of 25 people per lifeguard.

Parties will be held to a maximum of 175 people. Fees will increase incrementally based on these maximums listed above.

SECTION 3. The effective date of this Ordinance shall be May 12, 2017.

SECTION 4. The City Secretary is hereby authorized and directed to publish the descriptive caption of this ordinance in the manner and for the length of time prescribed by City Charter and applicable state law.

Upon being put to a vote, the foregoing ordinance was Passed, on First Reading, on the 18th of April, 2017; and

Upon being put to a vote, the foregoing ordinance will be Passed, on Second Reading, on the 2nd day of May, 2017.

ATTEST:

APPROVED:

Norma Garcia, City Secretary

Josh Stevens, Mayor

City Council Agenda

City of Lamesa, Texas

DATE OF MEETING: MAY 2, 2017

AGENDA ITEM: 6

**SUBJECT: AWARD OF CONSTRUCTION BID TO DARNELL
 CONSTRUCTION FOR 2016 CDBG WATERLINE
 IMPROVEMENTS**

PROCEEDING: Award Bid

SUBMITTED BY: City Staff

EXHIBITS List of Bidders/Bids

SUMMARY STATEMENT

City Council to consider awarding construction bid after verification of System Award Management (SAM) status to Darnell Construction (apparent low bidder) for 2016 CDBG Waterline project per Texas Department of Agriculture guidelines.

COUNCIL ACTION

DISCUSSION _____

Motion by Council Member _____ to award construction bid after verification of System Award Management (SAM) status to Darnell Construction (apparent low bidder) for 2016 CDBG Waterline project per Texas Department of Agriculture guidelines to Darnell Construction (apparent low bidder). Motion seconded by Council Member _____ and upon being put to a vote the motion _____.

VOTING: "AYE" _____ "NAY" _____ "ABSTAIN" _____

CITY MANAGER'S MEMORANDUM

At the request of Howco Services and the Texas Department of Agriculture, the City has been asked to make the award of the construction bid after verification of System Award Management (SAM) status has been confirmed. Original action taken on April 18, 2017 did not receive SAM status review prior to award of the construction bid. **Recommend approval.**



City of Lamesa, Texas

City of Lamesa Water, Texas Water System Improvements
Water Line Replacement TxCDBG No. 7216280
Lamesa, Texas
 April 18, 2017 @ 4:00 PM, CDT

01.2775.17

Contractor	Bid Bond	Addendum #1	Addendum #2	Base Proposal
L. Howard Construction	✓	✓	✓	\$ 240,680.63
Deerwood Construction	✓	✓	✓	\$ 212,210.55
Utility Contractors of America	✓	✓	✓	\$ 271,765.00
Darnell Construction	✓	✓	✓	\$ 206,909.00

City Council Agenda

City of Lamesa, Texas

DATE OF MEETING: MAY 2, 2017

AGENDA ITEM: 7

SUBJECT: BUDGET AMENDMENT IV
PROCEEDING: Ordinance, First Reading
SUBMITTED BY: City Staff
EXHIBITS: Ordinance

SUMMARY STATEMENT

City Council to consider amending Ordinance O-18-16 on first reading with respect to October 1, 2016 fiscal year budget.

COUNCIL ACTION

DISCUSSION _____

Motion by Council Member _____ to amend Ordinance O-18-16 on first reading with respect to October 1, 2016 fiscal year budget. Motion seconded by Council Member _____ and upon being put to a vote the motion _____.

VOTING: "AYE" _____ "NAY" _____ "ABSTAIN" _____

CITY MANAGER'S MEMORANDUM

Recommend approval.

ORDINANCE NO. _____

**AN ORDINANCE OF THE CITY OF LAMESA, TEXAS, AMENDING
ORDINANCE NO. 0-18-16 TO APPROPRIATE FUNDS IN THE CITY
OF LAMESA BUDGET FOR FISCAL YEAR 2016-2017.**

On the 2nd day of May, 2017, there came on and was held at the City Hall of the City of Lamesa, Texas, an open meeting of the City Council of the City of Lamesa, Texas, held pursuant to the provisions of the Texas Open Meetings Act (Government Code, Chapter 551). There being a quorum present and acting throughout the meeting, the following ordinance was formally submitted by motion and duly seconded for the consideration and action of the meeting, to-wit:

WHEREAS, the City Council desires to amend Ordinance No. 0-18-16 to make certain revisions to the 2016-2017 Budget of the City of Lamesa to authorize and appropriate funds as listed below; and

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LAMESA, TEXAS:

SECTION 1. That the City of Lamesa 2016-2017 Budget contained in Ordinance No. 0-16-18 be, and same is hereby, amended to change the amount appropriated by the following:

	<u>Revenues</u>	<u>Expenditures</u>
General Fund (1)	\$ 72,614.18	\$ 72,614.18
Utility Fund (2)	\$ 34,563.91	\$ 34,563.91
Solid Waste Fund (3)	\$ 7,768.86	\$ 7,768.86
Special Revenue Fund (17)	\$ 35,103.00	\$ 35,103.00
Golf Fund (18)	\$ 4,888.56	\$ 4,888.56

SECTION 2. Effective date: That this Ordinance shall become effective as of this May 21, 2017.

SECTION 3. The City Secretary is hereby authorized and directed to cause publication of this Ordinance as provided by law.

Upon being put to a vote, the foregoing ordinance was Passed, on First Reading on May 2, 2017 by a majority vote; and on May 11, 2017, there will be held at the regular meeting place, the City Hall, an open meeting of the City Council of the City of Lamesa, Texas held pursuant to the provisions of the Texas Open Meetings Act (Government Code, Chapter 551); there being a quorum present and acting throughout the meeting, the foregoing ordinance was formally submitted by motion and duly seconded for the consideration and action of the meeting, and upon being put to a vote, the foregoing ordinance was Passed on Second Reading by a majority vote and ordered to be spread upon the minutes of the City Council of the City of Lamesa, Texas and recorded in the ordinance book thereafter.

ATTEST:

APPROVED:

Norma Garcia
City Secretary

Josh Stevens
Mayor

CITY OF LAMESA
BUDGET AMENDMENT 2017-04 FOR FY 2016/2017

GENERAL FUND (1)

This budget amendment reflects a \$22,815.60 of Insurance claim reimbursements for hail damage to vehicles that occurred September 16, 2016. This budget amendment will increase the Vehicle line items in the following department budgets.

Increase Revenues – (01-40914) – Insurance Recovery	\$ 11,043.65
Increase Expenses - (01-5051-504) – Vehicles (Fire)	\$ 1,320.50
Increase Expenses - (01-5063-504) – Vehicles (Police)	\$ 8,801.65
Increase Expenses - (01-5091-504) – Vehicles (Parks)	\$ 921.50

This budget amendment reflects a \$61,570.53 of Insurance claim reimbursements for hail damage to roofs that occurred September 16, 2016. This budget amendment will increase the Buildings & Structures line items in the following department budgets.

Increase Revenues – (01-40914) – Insurance Recovery	\$ 61,570.53
Increase Expenses - (01-5041-401) – Buildings & Structures (Vehicle)	\$ 14,623.63
Increase Expenses - (01-5051-401) – Buildings & Structures (Fire)	\$ 12,997.64
Increase Expenses - (01-5066-401) – Buildings & Structures (Police)	\$ 1,469.24
Increase Expenses - (01-5066-401) – Buildings & Structures (Streets)	\$ 26,009.20
Increase Expenses - (01-5066-401) – Buildings & Structures (Parks)	\$ 6,470.82

UTILITY FUND (2)

This budget amendment reflects a \$8,891.65 of Insurance claim reimbursements for hail damage to vehicles that occurred September 16, 2016. This budget amendment will increase the Vehicle line items in the following department budgets.

Increase Revenues – (02-41212) – Insurance Recovery	\$ 8,891.65
Increase Expenses - (02-5111-504) – Vehicles (Water Production)	\$ 2,914.70
Increase Expenses - (02-5112-504) – Vehicles (Water Distribution)	\$ 5,976.95

This budget amendment reflects a \$25,672.26 of Insurance claim reimbursements for hail damage to roofs that occurred September 16, 2016. This budget amendment will increase the Buildings & Structures line items in the following department budgets.

Increase Revenues – (02-41212) – Insurance Recovery	\$ 25,672.26
Increase Expenses - (02-5111-401) – Buildings & Structures (Water Production)	\$ 3,043.08
Increase Expenses - (02-5112-401) – Buildings & Structures (Water Distribution)	\$ 18,466.77
Increase Expenses - (02-5113-401) – Buildings & Structures (Wastewater Collection & Treatment)	\$ 4,162.41

SOLID WASTE MANAGEMENT FUND (3)

This budget amendment reflects a \$2,880.30 of Insurance claim reimbursements for hail damage to vehicles that occurred September 16, 2016. This budget amendment will increase the Vehicle line item in the following department budget.

Increase Revenues – (03-42210) – Insurance Recovery	\$ 2,880.30
Increase Expenses - (03-5211-504) – Vehicles (Landfill)	\$ 2,880.30

This budget amendment reflects a \$4,888.56 of Insurance claim reimbursements for hail damage to roofs that occurred September 16, 2016. This budget amendment will increase the Buildings & Structures line item in the following department budget.

Increase Revenues – (03-42210) – Insurance Recovery	\$ 4,888.56
Increase Expenses - (03-5211-401) – Buildings & Structures (Landfill)	\$ 4,888.56

SPECIAL REVENUE FUND (17)

This budget amendment reflects a \$35,103.00 Weaver Foundation grant to Movieland for a roof replacement. This budget amendment will increase the Capital Outlay - Movieland line item in the following department budget.

Increase Revenues – (17-43116) – Movieland – Weaver Foundation	\$ 35,103.00
Increase Expenses - (17-5411-960) – Capital Outlay - Movieland	\$ 35,103.00

GOLF FUND (18)

This budget amendment reflects a \$6,809.01 of Insurance claim reimbursements for hail damage to roofs that occurred September 16, 2016. This budget amendment will increase the Buildings & Structures line item in the following department budget.

Increase Revenues – (18-43116) – Insurance Recovery	\$ 4,888.56
Increase Expenses - (18-5311-401) – Buildings & Structures (Proshop)	\$ 4,888.56

FIRST FINANCIAL TRUST
& ASSET MANAGEMENT
COMPANY, N.A.
400 PINE ST., SUITE 300
ABILENE, TEXAS 79601

88-112
1113

NO454279

DATE April 17, 2017

THIRTY FIVE THOUSAND ONE HUNDRED AND THREE DOLLARS AND NO/100

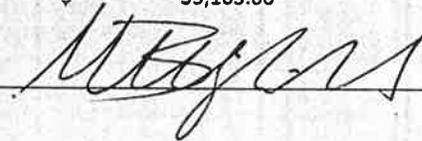
PAY TO THE ORDER OF

THE AMOUNT

CITY OF LAMESA

\$ 35,103.00

GRANT FOR MOVIELAND ROOF REPLACEMENT; APPROVED 3/23/17


MP

⑈454279⑈ ⑆111301122⑆ ⑈01805515401⑈

TRUST CHECK

FIRST FINANCIAL TRUST & ASSET
MANAGEMENT COMPANY, N.A.
400 PINE ST., SUITE 300 ABILENE, TEXAS 79601

NO454279

4039400

WILLIAM M. WEAVER FOUNDATION

04/17/17

53

GRANT FOR MOVIELAND ROOF REPLACEMENT; APPROVED 3/23/17

\$ 35,103.00

1

City Council Agenda

City of Lamesa, Texas

DATE OF MEETING: MAY 2, 2017

AGENDA ITEM: 8

SUBJECT: CALL FOR CONSTRUCTION BID – BOYS AND GIRLS CLUB LAKE PROJECT
PROCEEDING: Action
SUBMITTED BY: City Staff

SUMMARY STATEMENT

City Council to consider a call for Construction Bids for the Boys and Girls Club Lake Project.

COUNCIL ACTION

DISCUSSION _____

Motion by Council Member _____ to call for Construction Bids for the Boys and Girls Club Lake Project. Motion seconded by Council Member _____ and upon being put to a vote the motion _____.

VOTING: "AYE" _____ "NAY" _____ "ABSTAIN" _____

CITY MANAGER'S MEMORANDUM

Recommend approval.



Transmittal

4000 N. Big Spring Street Suite 101, Midland, 79705

PROJECT: Boys & Girls Club Lake Park - Phase 1 003174 DATE: 4/26/2017

SUBJECT: Boys & Girls Club Lake Park - Phase I Improvements TRANSMITTAL ID: 00001

PURPOSE: For your review and comment VIA: Info Exchange

FROM

NAME	COMPANY	EMAIL	PHONE
Jason Kelliher 4000 N. Big Spring Street Suite 101 Midland 79705 United States	Dunaway Associates, L.P.	jkelliher@dunawayassociates.com	(432) 699-4889

TO

NAME	COMPANY	EMAIL	PHONE
Shawna Burkhart Lamesa City Hall 601 S. First Street Lamesa TX 79331 United States	City of Lamesa	sburkhart@ci.lamesa.tx.us	(806) 872-4321

REMARKS: Shawna,

Please find the attached Contract Documents, Specifications, and Plans for your review and approval. Please direct comments, questions, or revision notes to Tim Hair at thair@dunawayassociates.com or by phone at 432-848-4403.

Our suggestion for distribution of bidding documents, plans and specifications is to use the service www.civcastusa.com. They are an on-line bid document management service and are a useful tool for project advertisement, distribution of bidding documents, issuing addenda, etc. They advertise the project to the major plan rooms and to a large database of contractors. In addition, we can send special notifications to specific contractors who are known to perform this type of work in the region. It has worked well for me in the past and I believe it will serve this project well. If agreeable, we will amend the advertisement to include it as the plan distribution method.

Our proposed time line for the project bidding is as follows:
 Wednesday, April 26 - Submit Contract Documents, Specifications, and Plans for review by City of Lamesa
 Monday, May 1 through Thursday, May 4 - Make any corrections, additions, or revisions to plans per comments from City of Lamesa

Transmittal

DATE: 4/26/2017
TRANSMITTAL ID: 00001

Friday, May 5 - Upload Contract Documents, Specifications, and Plans to CivCastUSA.com for distribution and advertisement.
Week of May 8th - First Advertisement in newspaper
Week of May 15th - Second Advertisement in newspaper.
Monday, May 29th - Bid date
At City of Lamesa Discretion - Award of Contract at regularly scheduled or special City Council Meeting.

DESCRIPTION OF CONTENTS

QTY	DATED	TITLE	NOTES
1	4/24/2017	1514 Lamesa B&G Park - 100% Construction Documents.pdf	
1	4/26/2017	17-0426 - Lamesa B&GCLP - Bidding Set for Review (1 of 2).pdf	
1	4/26/2017	17-0426 - Lamesa B&GCLP - Bidding Set for Review (2 of 2).pdf	

LAMESA BOYS & GIRLS CLUB LAKE PARK
PHASE 1 PARK IMPROVEMENTS



LAMESA, TX

CITY OFFICIALS

Mayor
Josh Stevens
Dave Nix, Past Mayor

City Council

District One	Brant Stewart
District Two	Marie Briseno
District Three	Fabian Rubio
District Four	Bobby Gonzales
District Five	Fred Vera
District Six	Chance Britt

City Manager
Shawna Burkhart

Director of Utilities
Dionicio Garza, Jr.

City Secretary
Norma Garcia

Park Superintendent
Robert Ramirez



Mask Landscape Architecture
4000 North Big Spring Drive, Suite 101
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Phone: 432.848-4403
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April 28, 2017

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**Boys & Girls Club Lake Park
Phase 1 Improvements**

April 28, 2017
City of Lamesa, TX

SECTION 000100 – ADVERTISEMENT FOR BIDS

1.1 PROJECT INFORMATION

- A. Notice to Bidders: Qualified bidders may submit bids for project as described in this Document. Submit bids per the Instructions to Bidders.
- B. Project Identification: Lamesa Boys & Girls Club Lake Park – Phase I Park Improvements
 - 1. Project Location:
 - a. Lamesa Boys & Girls Club Lake Park
400 N. 9th Street
Lamesa, TX 79331
- C. Owner: City of Lamesa

Owner's Representative:
Shawna Burkhart, City Manager
601 S. 1st Street
Lamesa, Texas 79331
Tel: (806) 872-2124
- D. Landscape Architect: Mask Landscape Architecture, 4000 N. Big Spring Street, Suite 101, Midland, Texas 79705; 432-848-4403
 - 1. Project Manager: Timothy Hair, PLA
- E. Project Description: Phase I improvements to the Boys and Girls Club Lake Park for the City of Lamesa including public pavilion area with concrete retaining wall, structural foundation, pre-fabricated pavilion, public lighting, public restroom structure, pond aeration equipment for existing playa lake, concrete paving sidewalks, earthwork and miscellaneous electrical.
- F. Construction Contract: Bids will be received for the following Work:
 - 1. Furnish & Install mobilization to site, bonds and insurance; site grading & earthwork; concrete retaining wall; 38' x 50' pavilion with lighting; restroom with utility connections; pond aeration system; concrete sidewalk paving; stone seat walls and columns; and electrical improvements.

1.2 BID SUBMITTAL AND OPENING

- A. Owner will receive sealed bids until the bid time and date at the location given below. Owner will consider bids prepared in compliance with the Instructions to Bidders issued by Owner, and delivered as follows:
 - 1. Bid Date: Tuesday, May 23 2017
 - 2. Bid Time: 4:30 P.M., Local Time

3. Location: City Council Chamber; City Hall; 400 N. 9th Street; Lamesa, TX 79331
- B. Bids will be opened at 5:30 P.M., same day of delivery, and read aloud at City Council meeting.

1.3 OBTAINING PROJECT DOCUMENTS

1. Complete sets of Bidding & Contract Documents can be obtained from the Issuing Office, described as follows:

- a. Digital Copies of plans and specifications will be available by phone or email request:

Project Manager:

Timothy Hair, PLA

Phone: 432-848-4403

Email: Thair@dunawayassociates.com

2. Documents will be provided to prime bidders only; only complete sets of documents will be issued.

END OF DOCUMENT

SECTION 000200 – INSTRUCTIONS TO BIDDERS

ARTICLE - 1 DEFINITIONS

- A. Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings below:
1. Issuing Office – The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered

ARTICLE - 2 BIDDER'S REPRESENTATIONS

- A. The Bidder by making a Bid represents that
1. 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 Project, if any, being bid concurrently or presently under constructions.
 2. The Bid is compliance with the Bidding Documents.
 3. The Bidder has visited the site, become familiar with local conditions under which the Work is to be performed and has correlated the Bidder's personal observations with the requirements of Bidding Documents.
 4. The Bidder has investigated all required fees, permits, and regulatory requirements of authorities having jurisdiction and has properly included in the submitted bid the cost of such fees, permits, and requirements not otherwise indicated as provided by Owner.
 5. The Bidder is a properly licensed Contractor according to the laws and regulations of City of Lamesa, Dawson County, and State of Texas and meets qualifications indicated in the Procurement and Contracting Documents.
 6. The Bidder has incorporated into the Bid adequate sums for work performed by installers whose qualifications meet those indicated in the Procurement and Contracting Documents.
 7. The Bid is based upon the materials, equipment and systems required by the Bidding Documents without exception.
 8. The Schedule Requirements contained within the Bidding Documents are reasonable and the Bidder will meet the required completion dates.

ARTICLE - 3 BIDDING DOCUMENTS

- A. Interpretation or Correction of Procurement and Contracting Documents:
1. The bidder shall carefully study and compare the Bidding Documents with each other, and with other work being bid concurrently or presently under construction to the extent

that it relates to the Work for which the Bid is submitted, shall examine the site and local conditions, and shall at once report to the Landscape Architect error, inconsistencies or ambiguities discovered.

2. Bidders and Sub-bidders requiring clarification or interpretations of the Bidding Documents shall make a written request which shall reach the Landscape Architect at least seven days prior to the date for the receipt of bids.
3. Interpretations, corrections and changes of the Bidding Documents will be made by Addendum. Interpretations, corrections and changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon them.

B. Substitutions:

1. The materials, products and equipment described in the Bidding Documents establish a standard required function, dimension, appearance and quality to be met by any proposed substitution.
2. Bidders must submit written requests for substitutions at least ten days prior to the date for receipt of bids in order to guarantee consideration of the same. If such request is made later than 10 days prior to bid date, it is at the Landscape Architect's discretion as to whether the substitution will be considered, regardless of the suitability of the substitution. Such requests shall include the name of the material 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, 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. The burden of proof of the merit of the proposed substitution is upon the proposer. The Landscape Architect's decision of approval or disapproval of a proposed substitution shall be final.
3. If the Landscape Architect approves a proposed substitution prior to receipt of the Bids, such approval will be set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner.
4. No substitutions will be considered after the Contract award unless specifically provided for in the Contract Documents.

C. Addenda:

1. Addenda will be transmitted to all who are known by issuing office to have received a complete set of the Bidding Documents.
2. Copies of Addenda will be made available for inspection wherever the Bidding Documents are on file for that purpose.
3. Addenda may be issued at any time prior to the receipt of bids.
4. Each Bidder shall ascertain prior to submitting a Bid that the Bidder has received all Addenda issued, and the Bidder shall acknowledge their receipt in the Bid.

- a. Owner may elect to waive the requirement for acknowledging receipt of Addenda as follows:
 - 1) Information received as part of the Bid indicates that the Bid, as submitted, reflects modifications to the Procurement and Contracting Documents included in an unacknowledged Addendum.
 - 2) Modifications to the Procurement and Contracting Documents in an unacknowledged Addendum do not, in the opinion of Owner, affect the Contract Sum or Contract Time.

ARTICLE - 4 BIDDING PROCEDURES

A. Preparation of Bids:

1. Bids shall be submitted on the Bid Form issued by the Owner.
2. All blanks on the bid form shall be legibly executed in a non-erasable medium. Where any blank is not relevant to the proposal under consideration, the Bidder shall acknowledge that blank space by entering "NONE" or "NO BID" as applicable.
3. Sums shall be expressed in both words and figures. In case of discrepancy, the amount written in words shall govern.
4. Interlineations, alterations and erasures must be initialed by the signer of the Bid.
5. All requested Alternates shall be bid. If no change in the Base Bid is required, enter "NO CHANGE."
6. Where two or more Bids for designated portions of the Work have been requested, the Bidder may, without forfeiture of the bid security, state the Bidder's refusal to accept the award of less than the combination of Bids stipulated by the Bidder. The Bidder shall make no additional stipulations on the bid form nor qualify the Bid in any other manner.
7. Each Bid shall state the legal name of the Bidder and the nature of legal form of each Bidder. The Bidder shall provide evidence of legal authority to perform within the jurisdiction of the Work. Each copy shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further give the state of incorporation. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder. Facsimiles and photo copies are not acceptable. Signatures must be original and in blue ink.
8. Do not include sales taxes or Federal excise taxes on your Bid; Owner is exempt from these taxes on their purchases. This exemption does not include such taxes on the Bidder's proposed purchases. Use of the Owner's tax exempt number is prohibited.
9. The Bid shall include unit prices when called for by the Procurement and Contracting Documents. Owner may elect to consider unit prices in the determination of award. Unit prices will be incorporated into the Contract.

10. Owner may elect to disqualify a bid due to failure to submit a bid in the form requested, failure to bid requested alternates or unit prices, failure to complete entries in all blanks in the Bid Form, or inclusion by the Bidder of any alternates, conditions, limitations or provisions not called for.

B. Bid Security:

1. Each Bid shall be accompanied by a bid security in the form and amount required below. The Bidder pledges to enter into a Contract with the Owner on the terms stated in the Bid and will, if required, 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 if required, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty. The amount of the bid security shall not be forfeited to the Owner if the event the Owner fails to comply with Section 6.2.
2. If a surety bond is required, it shall be written on 000450 – Bid Bond unless otherwise provided in the Bidding Documents, and the attorney-in-fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of the power of attorney. Facsimiles and photo copies are not acceptable. Signatures must be original and in blue ink.
3. The Owner will have the right to retain the bid security of Bidders to whom an award is being considered until either (a) the Contract has been executed and bonds, if required, have been furnished, or (b) the specified time has elapsed so that Bids may be withdrawn or (c) all Bids have been rejected.
4. Bid security shall be required in the amount of five (5) percent of the total Base Bid and all additive alternates for the project. The bid security shall be forfeited to the Owner if the successful Bidder does not execute the contract within 10 Days of issuance to Owner.
5. Bid security shall be returned after execution of the Contract and approval of the Performance and Payment Bonds by the Owner.

C. Submission of Bids:

1. Bid submittal shall include Bid Form (including Proposed Schedule of Values), and bid security, if required, Certificate of Insurance, and proof of Worker's Compensation Insurance. No other documents are to be submitted. All copies of the Bid, and the bid security, if any shall be enclosed in a sealed opaque envelope. The envelope shall be addressed to the party receiving the Bids and shall be identified with the Project Name, the Bidder's name and address, the Bid number, Bid opening date and if applicable, the designated portion of the Work for which the Bid is submitted. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof.
2. Include Bidder's Contractor License Number applicable in Project jurisdiction on the face of the sealed bid envelope.

3. Bids shall be deposited at the designated location prior to the time and date for receipt of Bids. Bids received after the time and date for receipt of Bids will be destroyed.
4. The Bidder shall assume full responsibility for timely delivery at the location designate for receipt of Bids.
5. Oral, telephonic, facsimile, or other electronically transmitted bids will not be considered.
6. Alternate proposals not requested by the Owner nor stipulated on the "Bid Form" will be considered or acted upon.

D. Modification or Withdrawal of Bids:

1. A Bid may not be modified, withdrawn or canceled by the Bidder and the Bidder agrees to maintain and honor their proposal for a period of sixty (60) calendar days following the time and date designated for the receipt of Bids, and each Bidder so agrees in submitting a Bid.
2. Prior to the time and date designated for receipt of the Bids, a Bid submitted may be modified or withdrawn by notice to the party receiving the Bids at the place designated for receipt of Bids. Such notice shall be in writing over the Signature of the Bidder. Written confirmation over the signature of the Bidder shall be received, and date and time stamped by the receiving party on or before the date and time set for receipt of Bids. A change shall be so worded as not to reveal the amount of the original Bid.
3. Such modifications to or withdrawal of a bid may only be made by persons authorized to act on behalf of the Bidder. Authorized persons are those so identified in the Bidder's corporate bylaws, specifically empowered by the Bidder's charter or similar legally binding document acceptable to Owner, or by a power of attorney, signed and dated, describing the scope and limitations of the power of attorney. Make such documentation available to Owner at the time of seeking modifications or withdrawal of the Bid.
4. Owner will consider modifications to a bid written on the sealed bid envelope by authorized persons when such modifications comply with the following: the modification is indicated by a percent or stated amount to be added to or deducted from the Bid; the amount of the Bid itself is not made known by the modification; a signature of the authorized person, along with the time and date of the modification, accompanies the modification. Completion of an unsealed bid form, awaiting final figures from the Bidder, does not require power of attorney due to the evidenced authorization of the Bidder implied by the circumstance of the completion and delivery of the Bid.
5. Withdrawn bids may be resubmitted up to the date and time designated for the receipt of Bids provided they are then fully in conformance with these Instructions to Bidders.
6. Bid security, if required, shall be in an amount sufficient for the Bid as resubmitted.

ARTICLE - 5 CONSIDERATION OF BIDS

- A. At the discretion of the Owner, if stipulated, in the Advertisement or Invitation to Bid, the properly identified Bids received on time will be publicly opened and will be read aloud. An abstract of the Bids may be available to Bidders.
- B. The owner shall have the right to reject any or all Bids. A Bid not accompanied by a required bid security or by other data required by the Bidding Documents, or a Bid which is in any way incomplete or irregular is subject to rejection.
 - 1. Owner reserves the right to reject a bid based on Owner's and Landscape Architect's evaluation of qualification information submitted following opening of bids. Owner's evaluation of the Bidder's qualifications will include: status of licensure and record of compliance with licensing requirements, record of quality of completed work, record of Project completion and ability to complete, record of financial management including financial resources available to complete Project and record of timely payment of obligations, record of Project site management including compliance with requirements of authorities having jurisdiction, record of and number of current claims and disputes and the status of their resolution, and qualifications of the Bidder's proposed Project staff and proposed subcontractors.
- C. Acceptance of Bid (Award):
 - 1. It is the intent of the Owner to award a Contract to the lowest qualified Bidder provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The owner shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the Owner's judgment, is in the Owner's own best interests.
 - 2. The Owner shall have the right to accept Alternates in any order or combination, and to determine the low Bidder on the basis of the sum of the Base Bid and combinations of Alternates accepted.

DOCUMENT 000410 - UNIT PRICES FORM

ARTICLE 1 – BID RECIPIENT

- A. This Bid is submitted to:
- City of Lamesa
400 N. 9th Street
Lamesa, TX 79331
- B. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER’S ACKNOWLEDGEMENTS

- A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitations those dealing with the disposition of Bid Security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon the request of the Owner.

ARTICLE 3 – BIDDER’S REPRESENTATIONS

- A. In submitting this Bid, Bidder Represents that:
1. Bidder has examined and carefully studied the Bidding Documents, other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged:

Addendum No.

Addendum Date

- B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
- C. Bidder is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performances of the Work.
- D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities), and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site.

- E. Bidder has considered the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings, if any, identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents, and (3) Bidder's safety precautions and programs.
- F. Based on the information and observations referred to in Article 3, Paragraph E above, Bidder does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performances of the Work at the price(s) bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. Bidder has given Landscape Architect written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Landscape Architect is acceptable to Bidder.
- I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

ARTICLE 4 – BIDDER'S CERTIFICATION

- A. Bidder certifies that
 - 1. This Bid is genuine and not made in the interest or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
 - 2. Bidder has not Directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
 - 3. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
 - 4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph Article 4, A-4:
 - a. "Corrupt Practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;
 - b. "Fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 - c. "Collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

- d. "Coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 – BASIS OF BID

- A. Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

Base Bid – Lamesa Boys & Girls Club Lake – Phase I Improvements

No.	Description	Quantity	Unit	Unit Price	Subtotal
1	Provide all mobilization, bonds, and insurance required for the project, complete in place for the sum of _____ dollars and _____ cents per Lump Sum.	1	L.S.	\$ _____	\$ _____
2	Furnish & Install site grading and earthwork, including boulder walls, complete in place, for the sum of _____ dollars and _____ cents per Lump Sum.	1	L.S.	\$ _____	\$ _____
3	Furnish & Install concrete retaining wall including steel tube railing system, complete in place, for the sum of _____ dollars and _____ cents per Lump Sum.	1	L.S.	\$ _____	\$ _____
4	Furnish & Install 38' x 50' pavilion including structural foundation, metal frame and roof, and all required electrical improvements, complete in place, for the sum of _____ dollars and _____ cents per Lump Sum.	1	L.S.	\$ _____	\$ _____

5	Furnish & Install restroom, including foundation, masonry building, roof, water and sewer connections, stainless steel fixtures, electrical improvements, and other appurtenances shown in the plans, complete in place, for the sum of _____ dollars and _____ cents per Lump Sum.	1	L.S.	\$ _____	\$ _____
6	Furnish & Install Pond Aeration System, including compressor, piping, valves, fittings, diffusers, and electrical, complete in place, for the sum of _____ dollars and _____ cents per Lump Sum.	1	L.S.	\$ _____	\$ _____
7	Furnish & Install all concrete paving shown on the plans including sidewalks, accessible curb ramps, and warning surfaces, complete in place, for the sum of _____ dollars and _____ cents per Lump Sum.	1	L.S.	\$ _____	\$ _____
8	Furnish & Install stone seat walls and columns complete in place, for the sum of _____ dollars and _____ cents per Lump Sum.	1	L.S.	\$ _____	\$ _____

TOTAL BASE BID (ITEMS 1 THORUGH 8): \$ _____

BASE BID IN WORDS: _____

Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit prices Bid items will be based on actual quantities, determined as provided in the Contract Documents.

ALTERNATE DEDUCT #1 - Lamesa Boys & Girls Club Lake – Phase I Improvements

No.	Description	Quantity	Unit	Unit Price	Subtotal
1	DEDUCT Furnish & Install stone seat walls and columns complete in place, for the sum of _____ dollars and _____ cents per Lump Sum.	1	L.S.	\$ _____	\$ _____

ALTERNATE DEDUCT #2 - Lamesa Boys & Girls Club Lake – Phase I Improvements

No.	Description	Quantity	Unit	Unit Price	Subtotal
1	DEDUCT Furnish & Install restroom, including foundation, masonry building, roof, water and sewer connections, stainless steel fixtures, electrical improvements, and other appurtenances shown in the plans complete in place, for the sum of _____ dollars and _____ cents per Lump Sum.	1	L.S.	\$ _____	\$ _____

ARTICLE 6 – TIME OF COMPLETION

- A. Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with the General Conditions on or before the dates or within the number of calendar days in indicated in the Agreement.
- B. Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 – ATTACHMENTS TO THIS BID

- A. The following documents are submitted with and make a condition of this Bid:
 - 1. Required Bid security
 - 2. List of proposed Subcontractors
 - 3. List of Proposed Suppliers
 - 4. List of Project References
 - 5. Certification of Bidder
 - 6. Required Bidder Qualification Statement with Supporting Data

ARTICLE 8 – DEFINED TERMS

- A. The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 – BID SUBMITTAL

- A. This Bid is submitted by:

If Bidder is:

An Individual

Name (typed or printed): _____

By: _____
(Individual's signature)

Doing business as: _____

A Partnership

Partnership Name: _____

By: _____
(Signature of general partner – attach evidence of authority to sign)

A Corporation

Corporation Name: _____ (SEAL)

State of Incorporation: _____

Type (General Business, Professional, Service, Limited Liability): _____

By: _____
(Signature – attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____
(CORPORATE SEAL)

Attest _____

Date of Qualification to do business in Texas is ____/____/____.

A Joint Venture

Name of Joint Venture: _____

First Joint Venturer Name: _____ (SEAL)

By: _____
(Signature of first joint venture partner – attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Second Joint Venturer Name: _____ (SEAL)

By: _____
(Signature of second joint venture partner – attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

(Each joint venture must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

B. Bidder's Information

Phone No. _____ Fax No. _____

E-mail _____

SUBMITTED on: _____, 20____.

END OF DOCUMENT

BID BOND

THE STATE OF TEXAS

SURETY'S NO. _____

COUNTY OF DAWSON

KNOW ALL MEN BY THESE PRESENTS, That we, _____, (hereinafter called Principal), as Principal, and _____, duly organized under the laws of the State of _____, (hereinafter called the Surety), as Surety, are held and firmly bound unto City of Lamesa, (hereinafter called the Obligee), in the sum of _____ (\$ _____) Dollars, for the payment of which sum, well and truly to be made, we, the said Principal and the said Surety, bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally..

WHEREAS, said Principal has entered into a written Contract with said Obligee, dated _____, for _____, in accordance with the terms and conditions of said Contract, which is hereby referred to and made a part hereof as if fully set forth herein:

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall faithfully, enter into such written Contract, then this obligation shall be void; otherwise to remain in full force and effect.

IT IS EXPRESSLY UNDERSTOOD AND AGREED that if said Principal should withdraw its Bid anytime after such Bid is opened and before official rejection of such Bid or, if successful in securing the award thereof, said Principal should fail to enter into the Contract and furnish satisfactory Performance Bond and Payment Bond, the Obligee, in either of such events, shall be entitled and is hereby given the right to collect this Bid Bond as liquidated damages.

PROVIDED further that if any legal action be filed upon this Bond venue shall lie in Dawson County, Texas.

IN WITNESS WHEREOF, the said principal and surety have signed and sealed this instrument on this the _____ day of _____, 20____.

PRINCIPAL

Title: _____

Company: _____

Address: _____

SURETY

Title: _____

Company: _____

Address: _____

ATTACH CERTIFICATE OF INSURANCE HERE:

SEE GENERAL CONDITIONS, ARTICLE 5
FOR INSURANCE REQUIREMENTS

IMPORTANT PLEASE READ:

**PLEASE ATTACH POLICY ENDORSEMENTS FOR INCLUDING THE CITY OF LAMESA AS AN
ADDITIONAL INSURED AND PROVISION OF THE WAIVER OF SUBROGATION)**

CONTRACT

STATE OF TEXAS

COUNTY OF DAWSON

THIS AGREEMENT, made and entered into this _____ day of _____ 20_____, by and between the City of Lamesa, of the County of Dawson, and the State of Texas, acting through

_____ thereunto duly authorized so to do, Party of the First Part, hereinafter termed Owner, and

_____ of the City of _____, County of _____ and State of _____, Party of the Second Part, herein-after termed Contractor.

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the Party of the First Part (Owner), and under the conditions expressed in the bond bearing even date herewith, the said Party of the Second Part (Contractor) hereby agrees with said Party of the First Part (Owner) to commence and complete the construction of items of work included in this project which are described as follows: Lamesa Boys & Girls Club Lake Park – Phase I Improvements and miscellaneous items of construction.

These improvements are shown on the plans entitled "Lamesa Boys & Girls Club Lake Park – Phase I" dated _____, and the specifications attached hereto.

This contract shall include all extra work in connection, therewith, under the terms as stated in the General Conditions of the Agreement; and at his (or their) owner proper cost and expense to furnish all the materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and other accessories and services necessary to complete the said construction, in accordance with the conditions and prices stated in the Proposal attached hereto, and in accordance with all the General Conditions of the Agreement, and in accordance with the plans, which includes all maps, plats, blueprints and other drawings and printed or written explanatory matter thereof, and the Specifications therefor, as prepared by Mask Landscape Architecture, herein entitled the Landscape Architect, each of which has been identified by the endorsement of the Contractor and the Engineer thereon, together with the Contractor's written Proposal, and General Conditions of the Agreement, and the Performance Bond and Payment Bond hereto attached; all of which are made a part hereof and collectively evidence and constitute the entire contract.

The Bidder hereby agrees to commence work under this contract within 10 days of a date to be specified in written "Notice to Proceed" and to complete the work under the Base Bid identified on the plans within one hundred twenty (120) consecutive calendar days from Notice to Proceed. Work under Additive Alternates, if awarded, shall be done during the time allowed for Base Bid.

Bidder further agrees to pay as liquidated damages the sum of seven hundred fifty dollars (\$750.00) for each consecutive calendar day beyond the days allowed as hereinafter provided in Paragraph 32 of the General Conditions.

The Owner agrees to pay the Contractor in current funds for the performance of the contract in accordance with the Proposal submitted therefor, subject to additions and deductions, as provided in the specifications, and to make payments on account thereof as provided therein.

By executing this Contract, Contractor agrees to waive and does hereby waive any claim it has or may have against the Landscape Architect, regarding the award of attorney's fees, which are in any way related to the Contract, or the construction, interpretation or breach of the Contract. The Contractor specifically agrees that if the Contractor brings or commences any legal action or proceeding related to this Contract, the construction, interpretation, validity or breach of this Contract, including but not limited to any action pursuant to the provisions of the Texas Uniform Declaratory Judgments Act (Texas Civil Practice and Remedies Code Section 37.001, et. seq., as amended), the Contractor agrees to waive and relinquish any and all rights to the recovery of attorney's fees to which Contractor might otherwise be entitled.

The Contractor agrees that this is the intentional relinquishment of a presently existing known right. The Contractor acknowledges that it understands all terms and conditions of the Contract.

By execution of the Contract, the Contractor hereby represents and warrants to the Owner, the Contractor has read and understood the Contract.

This Contract shall be governed by the laws of the State of Texas. Venue of any suit, right or cause of action arising under or in connection with this contract shall lie exclusively in Dawson County, Texas. All payments and performance under or connected to this contract shall be deemed to have occurred exclusively in Dawson County, Texas.

IN WITNESS WHEREOF, the parties to these presents have executed this Agreement in the year and day first above written.

Party of the First Part (Owner)

City of Lamesa

ATTEST:

By _____
Shawna Burkhart, City Manager

By _____
Printed name:

Party of the Second Part (Contractor)

ATTEST:

By _____
Printed Name:

By _____
Printed name:

Complete Address:

PERFORMANCE BOND

THE STATE OF TEXAS

SURETY'S NO. _____

COUNTY OF _____

KNOW ALL MEN BY THESE PRESENTS, That we, _____, (hereinafter called Principal), as Principal, and _____, duly organized under the laws of the State of _____, (hereinafter called the Surety), as Surety, are held and firmly bound unto _____, (hereinafter called the Obligee), in the sum of _____ (\$ _____) Dollars, for the payment of which sum, well and truly to be made, we, the said Principal and the said Surety, bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally..

WHEREAS, said Principal has entered into a written Contract with said Obligee, dated _____, for _____, in accordance with the terms and conditions of said Contract, which is hereby referred to and made a part hereof as if fully set forth herein:

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, That if the above bounden Principal shall well and truly keep, do and perform each and every, all and singular, the matters and things in said contract set forth and specified to be by said Principal kept, done and performed, at the times and in the manner in said contract specified, or shall pay over, make good and reimburse to the above named Obligee, all loss and damage which said Obligee may sustain by reason of failure or default on the part of said Principal so to do, then this obligation shall be null and void; otherwise shall remain in full force and effect.

FURTHERMORE, Notwithstanding the provisions of the Contract, the term of this bond shall apply from _____, 20____, until _____, 20____, and may be extended by the Surety by Continuation Certificate. However, neither non-renewal by the Surety, nor the failure or inability of the Principal to file a replacement bond in the event of non-renewal, shall itself constitute a loss to the obligee recoverable under this bond or any renewal or continuation thereof. The liability of the Surety under this bond and all continuation certificates issued in connection therewith shall not be cumulative and shall in no event exceed the amount as set forth in this bond or in any additions, riders, or endorsements properly issued by the Surety as supplements thereto. In no event shall Surety's aggregate liability exceed the penal sum of this bond.

NO SUIT, ACTION OR PROCEEDING by the Obligee to recover on this bond shall be sustained unless the same be commenced within two (2) years following the date on which Principal ceased work on said Contract.

IN WITNESS WHEREOF, the said principal and surety have signed and sealed this instrument on this the _____ day of _____ 20____.

PRINCIPAL

Title: _____

Company: _____

Address: _____

SURETY

Title: _____

Company: _____

Address: _____

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: That we, _____,
(hereinafter called the Principal) and _____, duly organized under the laws of
the State of _____, (hereinafter called the Surety), as Surety, are held and firmly bound unto
_____ (hereinafter called the Obligee), in the sum of
_____ Dollars (\$ _____) for the payment of which sum,
well and truly to be made to the Obligee, and its successors, the said Principal and Surety do bind themselves, their
heirs, executors, administrators, successors, and assigns, jointly and severally.

WHEREAS, the Principal has entered into a written Contract with Obligee dated _____, for
_____, in accordance with the terms and conditions of said Contract, which is hereby referred to and
made a part hereof as if fully set herein:

NOW, THEREFORE, if the said Principal shall pay all claimants supplying labor and materials to him or a
Subcontractor in the prosecution of the Work provided for in the Contract, then, this obligation shall be void; otherwise
the same is to remain in full force and effect;

PROVIDED, HOWEVER, that this Bond is executed pursuant to the provisions of Chapter 2253 of the Texas
Government Code, as amended, and Article 53.201 of the Property Code, and all liabilities on this bond shall be
determined in accordance with the provisions of said articles to the same extent as if they were fully copied at length
herein.

Surety, for value received, stipulates and agrees that the bond shall automatically be increased by the amount of any
change order or supplemental agreement which increases the terms of the contract, or to the work performed
thereunder, or the plans, specifications, or drawings accompanying the same shall in any way affect its obligation on
this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms
of the contract or to the work to be performed thereunder

IN WITNESS WHEREOF, the said principal and surety have signed and sealed this instrument on this the _____
day of _____ 20____.

PRINCIPAL

Title: _____
Company: _____

Address: _____

SURETY

Title: _____
Company: _____

Address: _____

SECTION 000700 – GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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GENERAL CONDITIONS

ARTICLE I - DEFINITIONS AND TERMINOLOGY

1.01 Defined Terms

A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*--Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*--The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.

3. *Application for Payment*--The form acceptable to Landscape Architect which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*--Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Bid*--The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidder*--The individual or entity who submits a Bid directly to Owner.

7. *Bidding Documents*--The Bidding Requirements and the proposed Contract Documents (including all Addenda).

8. *Bidding Requirements*--The Advertisement or Invitation to Bid, Instructions to Bidders, bid security of acceptable form, if any, and the Bid Form with any supplements.

9. *Change Order*--A document recommended by Landscape Architect which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

10. *Claim*--A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*--The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*-- The Contract Documents shall consist of the Advertisement for Bids (Advertisement), Instructions to Bidders, Bid Form (Proposal), Form of Agreement Between Owner & Contractor, Performance Bond, Payment Bond, General Conditions of the Construction Contract, Supplementary Conditions of the Construction Contract, Technical Specifications, Plans, and all modifications thereof incorporated in any of the documents before the execution of the contract. The Contract Documents are complementary, and what is called for by any one shall be as binding as if called for by all. In case of conflict between any of the Contract Documents, priority of interpretation shall be in the following order: Signed Contract, Performance Bond, Special Bonds (if any), Bid Form (Proposal), Special Provisions, Advertisement for Bids, Instructions to Bidders, Technical Specifications, Plans, and General Conditions of the Contract. Approved Shop Drawings, other Contractor's submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

13. *Contract Price*--The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*--The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any, (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Landscape Architect's written recommendation of final payment.

15. *Contractor*--The individual or entity with whom Owner has entered into the Agreement.

16. *Cost of the Work*--See Paragraph 11.01.A for definition.

17. *Drawings*--That part of the Contract Documents prepared or approved by Landscape Architect which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.

18. *Effective Date of the Agreement*--The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

19. *Engineer*--The individual or entity named as such in the Agreement.

20. *Field Order*--A written order issued by Landscape Architect which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

21. *General Requirements*--Sections of Division 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.

22. *Hazardous Environmental Condition*--The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

23. *Hazardous Waste*--The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

24. *Landscape Architect* --The individual or entity named as such in the Agreement.

25. *Laws and Regulations; Laws or Regulations*--Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

26. *Liens*--Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

27. *Milestone*--A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

28. *Notice of Award*--The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.

29. *Notice to Proceed*--A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.

30. *Owner*--The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.

31. *PCBs*--Polychlorinated biphenyls.

32. *Petroleum*--Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

33. *Progress Schedule*--A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.

34. *Project*--The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

35. *Project Manual*--The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

36. *Radioactive Material*--Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

37. *Related Entity* -- An officer, director, partner, employee, agent, consultant, or subcontractor.

38. *Resident Project Representative*--The authorized representative of Landscape Architect who may be assigned to the Site or any part thereof.

39. *Samples*--Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

40. *Schedule of Submittals*--A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

41. *Schedule of Values*--A schedule, prepared and maintained by Contractor, allocating portions of the

Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

42. *Shop Drawings*--All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.

43. *Site*--Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.

44. *Specifications*--That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.

45. *Subcontractor*--An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.

46. *Substantial Completion*--The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Landscape Architect, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

47. *Successful Bidder*--The Bidder submitting a responsive Bid to whom Owner makes an award.

48. *Supplementary Conditions*--That part of the Contract Documents which amends or supplements these General Conditions.

49. *Supplier*--A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or any Subcontractor.

50. *Underground Facilities*--All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications,

cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

51. *Unit Price Work*--Work to be paid for on the basis of unit prices.

52. *Work*--The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

53. *Work Change Directive*--A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Landscape Architect ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 Terminology

A. The following words or terms are not defined but, when used in the Bidding Requirements or Contract Documents, have the following meaning.

B. *Intent of Certain Terms or Adjectives*

1. The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Landscape Architect. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Landscape Architect as to the Work. It is intended that such exercise of professional judgment, action or determination will be solely to evaluate, in general, the Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Landscape Architect any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. Day

1. The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

D. Defective

1. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

a. does not conform to the Contract Documents, or

b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents, or

c. has been damaged prior to Landscape Architect's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. Furnish, Install, Perform, Provide

1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, "provide" is implied.

F. Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 - PRELIMINARY MATTERS

2.01 Delivery of Bonds and Evidence of Insurance

A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.

B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 Copies of Documents

A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 Commencement of Contract Times; Notice to Proceed

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 Starting the Work

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 Before Starting Construction

A. Preliminary Schedules: Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Landscape Architect for timely review:

1. a preliminary Progress Schedule; indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to

serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 Preconstruction Conference

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Landscape Architect, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

2.07 Initial Acceptance of Schedules

A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Landscape Architect, and others as appropriate will be held to review for acceptability to Landscape Architect as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Landscape Architect.

1. The Progress Schedule will be acceptable to Landscape Architect if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Landscape Architect responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Landscape Architect if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Landscape Architect as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 Intent

A. The Contract Documents are complementary; what is required by one is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof)

to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to Owner.

C. Clarifications and interpretations of the Contract Documents shall be issued by Landscape Architect as provided in Article 9.

3.02 Reference Standards

A. Standards, Specifications, Codes, Laws, and Regulations

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual or code, or any instruction of a Supplier shall be effective to change the duties or responsibilities of Owner, Contractor, or Landscape Architect, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, or Landscape Architect, or any of, their Related Entities, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 Reporting and Resolving Discrepancies

A. Reporting Discrepancies

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Landscape Architect any conflict, error, ambiguity, or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from Landscape Architect before proceeding with any Work affected thereby.

2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of

any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, Contractor shall promptly report it to Landscape Architect in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.

3. Contractor shall not be liable to Owner or Landscape Architect for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor knew or reasonably should have known thereof.

B. Resolving Discrepancies

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

a. the provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 Amending and Supplementing Contract Documents

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

1. A Field Order;

2. Landscape Architect's approval of a Shop Drawing or Sample; (Subject to the provisions of Paragraph 6.17.D.3); or

3. Landscape Architect's written interpretation or clarification.

3.05 Reuse of Documents

A. Contractor and any Subcontractor or Supplier or other individual or entity performing or furnishing all of the Work under a direct or indirect contract with Contractor, shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Landscape Architect or Landscape Architect's consultants, including electronic media editions; or

2. reuse any of such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Landscape Architect and specific written verification or adaptation by Landscape Architect.

B. The prohibition of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 Electronic Data

A. Copies of data furnished by Owner or Landscape Architect to Contractor or Contractor to Owner or Landscape Architect that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party..

C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 - AVAILABILITY OF LANDS;
SUBSURFACE AND PHYSICAL CONDITIONS;
HAZARDOUS ENVIRONMENTAL CONDITIONS;
REFERENCE POINTS

4.01 Availability of Lands

A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 Subsurface and Physical Conditions

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Landscape Architect has used in preparing the Contract Documents; and

2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that Landscape Architect has used in preparing the Contract Documents.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or

make any claim against Owner or Landscape Architect, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 Differing Subsurface or Physical Conditions

A. *Notice:* If Contractor believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or

2. is of such a nature as to require a change in the Contract Documents; or

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Landscape Architect in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Landscape Architect's Review:* After receipt of written notice as required by Paragraph 4.03.A, Landscape Architect will promptly review the pertinent condition, determine the necessity of Owner's obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Landscape Architect's findings and conclusions.

C. Possible Price and Times Adjustments

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and

b. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:

a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or

b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

c. Contractor failed to give the written notice as required by Paragraph 4.03.A.

3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, Owner and Landscape Architect, and any of their Related Entities shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of Landscape Architects, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 Underground Facilities

A. Shown or Indicated: The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Landscape Architect by the owners of such Underground Facilities, including Owner, or by

others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Landscape Architect shall not be responsible for the accuracy or completeness of any such information or data; and

2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:

a. reviewing and checking all such information and data,

b. locating all Underground Facilities shown or indicated in the Contract Documents,

c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction, and

d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. Not Shown or Indicated

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Landscape Architect. Landscape Architect will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Landscape Architect concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or

Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 Reference Points

A. Owner shall provide engineering surveys to establish reference points for construction which in Landscape Architect's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Landscape Architect whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.06 Hazardous Environmental Condition at Site

A. *Reports and Drawings:* Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the Landscape Architect in the preparation of the Contract Documents.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Landscape Architect, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work.

Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.

D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Landscape Architect (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Landscape Architect concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any.

E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered to Contractor written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.

F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.

G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Landscape Architect, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of Landscape Architects, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous

Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06. G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Landscape Architect, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 - BONDS AND INSURANCE

5.01 Performance, Payment, and Other Bonds

A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent must be accompanied by a certified copy of the agent's authority to act.

C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Landscape Architect and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 Licensed Sureties and Insurers

A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 Certificates of Insurance

A. Contractor shall deliver to Owner, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.

B. Owner shall deliver to Contractor, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.

5.04 Contractor's Liability Insurance

A. Contractor shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;

2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;

3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;

4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:

a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or

b. by any other person for any other reason;

5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and

6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insured (subject to any customary exclusion regarding professional liability) Owner and Landscape Architect, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

3. include completed operations insurance;

4. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;

5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of

insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);

6. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and

7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment.

a. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 Owner's Liability Insurance

A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 Property Insurance

A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the interests of Owner, Contractor, Subcontractors, and Landscape Architect, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;

2. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, (other than caused by flood)

and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;

3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Landscape Architect;

5. allow for partial utilization of the Work by Owner;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Landscape Architect with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

B. Owner shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Landscape Architect, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.

D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 Waiver of Rights

A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Landscape Architect, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, and Landscape Architect, and all other individuals or entities identified in the Supplementary Conditions to be listed as insured or additional insured (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.

B. Owner waives all rights against Contractor, Subcontractors, and Landscape Architect, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and

2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization

pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.

C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Landscape Architect, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 Receipt and Application of Insurance Proceeds

A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order .

B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 Acceptance of Bonds and Insurance; Option to Replace

A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the

start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 Partial Utilization, Acknowledgment of Property Insurer

A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.01 Supervision and Superintendence

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Landscape Architect in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Landscape Architect except under extraordinary circumstances. The superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to or received from the superintendent shall be binding on Contractor.

6.02 Labor; Working Hours

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Landscape Architect. **Regular working hours for this project will be 8:00 am to 5:00 pm, Monday through Friday.**

6.03 Services, Materials, and Equipment

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Landscape Architect, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 Progress Schedule

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 Substitutes and "Or-Equals"

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Landscape Architect for review under the circumstances described below.

1. "*Or-Equal*" Items: If in Landscape Architect's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Landscape Architect as an "or-equal" item, in which case review and approval of the proposed item may, in Landscape Architect's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Landscape Architect determines that:

1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole,

3) it has a proven record of performance and availability of responsive service; and

b. Contractor certifies that, if approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times, and

2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. Substitute Items

a. If in Landscape Architect's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item

under Paragraph 6.05.A.1, it will be considered a proposed substitute item.

b. Contractor shall submit sufficient information as provided below to allow Landscape Architect to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Landscape Architect from anyone other than Contractor.

c. The requirements for review by Landscape Architect will be as set forth in Paragraph 6.05.A.2.d, as supplemented in the General Requirements and as Landscape Architect may decide is appropriate under the circumstances.

d. Contractor shall make written application to Landscape Architect for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:

1) shall certify that the proposed substitute item will:

a) perform adequately the functions and achieve the results called for by the general design,

b) be similar in substance to that specified, and

c) be suited to the same use as that specified;

2) will state:

a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time;

b) whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and

c) whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;

3) will identify:

a) all variations of the proposed substitute item from that specified, and

b) available engineering, sales, maintenance, repair, and replacement services;

4) and shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change,

B. Substitute Construction Methods or Procedures: If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Landscape Architect. Contractor shall submit sufficient information to allow Landscape Architect, in Landscape Architect's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Landscape Architect will be similar to those provided in Paragraph 6.05.A.2.

C. Landscape Architect's Evaluation: Landscape Architect will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Landscape Architect may require Contractor to furnish additional data about the proposed substitute item. Landscape Architect will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Landscape Architect's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an "or equal." Landscape Architect will advise Contractor in writing of any negative determination.

D. Special Guarantee: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

E. Landscape Architect's Cost Reimbursement: Landscape Architect will record Landscape Architect's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Landscape Architect approves a substitute item so proposed or submitted by Contractor, Contractor shall reimburse Owner for the charges of Landscape Architect for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the charges of Landscape Architect for making changes in the Contract Documents (or in the provisions of any other direct

contract with Owner) resulting from the acceptance of each proposed substitute.

F. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 Concerning Subcontractors, Suppliers, and Others

A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Landscape Architect to reject defective Work.

C. Contractor shall be fully responsible to Owner and Landscape Architect for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Landscape Architect and any such Subcontractor, Supplier or other individual or entity, nor

2. shall anything in the Contract Documents create any obligation on the part of Owner or Landscape Architect to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or

other individual or entity except as may otherwise be required by Laws and Regulations.

D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.

E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Landscape Architect through Contractor.

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

G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Landscape Architect. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, and Landscape Architect, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 Patent Fees and Royalties

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of Owner or Landscape Architect its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Landscape Architect, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 Permits

A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 Laws and Regulations

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Landscape Architect shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on

entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 Taxes

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 Use of Site and Other Areas

A. Limitation on Use of Site and Other Areas

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Landscape Architect, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Landscape Architect, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

B. Removal of Debris During Performance of the Work: During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. Cleaning: Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and

machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading Structures*: Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 Record Documents

A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Landscape Architect for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Landscape Architect for Owner.

6.13 Safety and Protection

A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;
2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

C. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor,

any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Landscape Architect or , or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

D. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Landscape Architect has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 Safety Representative

A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 Hazard Communication Programs

A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 Emergencies

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Landscape Architect prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Landscape Architect determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 Shop Drawings and Samples

A. Contractor shall submit Shop Drawings and Samples to Landscape Architect for review and approval in accordance with the acceptable Schedule of Submittals

(as required by Paragraph 2.07). Each submittal will be identified as Landscape Architect may require.

1. Shop Drawings

a. Submit number of copies specified in the General Requirements.

b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Landscape Architect the services, materials, and equipment Contractor proposes to provide and to enable Landscape Architect to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples:* Contractor shall also submit Samples to Landscape Architect for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals.

a. Submit number of Samples specified in the Specifications.

b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Landscape Architect may require to enable Landscape Architect to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Landscape Architect's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. Submittal Procedures

1. Before submitting each Shop Drawing or Sample, Contractor shall have determined and verified:

a. all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

b. the suitability of all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;

c. all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and

safety precautions and programs incident thereto; and

d. shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.

3. With each submittal, Contractor shall give Landscape Architect specific written notice of any variations, that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawing's or Sample Submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Landscape Architect for review and approval of each such variation.

D. *Landscape Architect's Review*

1. Landscape Architect will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Landscape Architect. Landscape Architect's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Landscape Architect's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. Landscape Architect's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Landscape Architect has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Landscape Architect's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. Resubmittal Procedures

1. Contractor shall make corrections required by Landscape Architect and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Landscape Architect on previous submittals.

6.18 Continuing the Work

A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 Contractor's General Warranty and Guarantee

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Landscape Architect and its Related Entities shall be entitled to rely on representation of Contractor's warranty and guarantee.

B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

1. observations by Landscape Architect;

2. recommendation by Landscape Architect or payment by Owner of any progress or final payment;

3. the issuance of a certificate of Substantial Completion by Landscape Architect or any payment related thereto by Owner;

4. use or occupancy of the Work or any part thereof by Owner;

5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Landscape Architect;

6. any inspection, test, or approval by others; or

7. any correction of defective Work by Owner.

6.20 Indemnification

A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Landscape Architect, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable .

B. In any and all claims against Owner or Landscape Architect or any of their respective consultants, agents, officers, directors, partners, or employees by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Landscape Architect and Landscape Architect's officers, directors, partners, employees, agents, consultants and subcontractors arising out of:

1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or

2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 Delegation of Professional Design Services

A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.

B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Landscape Architect will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Landscape Architect.

C. Owner and Landscape Architect shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Landscape Architect have specified to Contractor all performance and design criteria that such services must satisfy.

D. Pursuant to this Paragraph 6.21, Landscape Architect's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Landscape Architect's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 - OTHER WORK AT THE SITE

7.01 Related Work at Site

A. Owner may perform other work related to the Project at the Site with Owner's employees, or via other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to Contractor prior to starting any such other work; and

2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.

B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and shall properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of Landscape Architect and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Landscape Architect in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 Coordination

A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

- 1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
- 2. the specific matters to be covered by such authority and responsibility will be itemized; and
- 3. the extent of such authority and responsibilities will be provided.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 Legal Relationships

A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.

B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's actions or inactions.

C. Contractor shall be liable to Owner and any other contractor for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's action or inactions.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.01 Communications to Contractor

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Landscape Architect.

8.02 Replacement of Landscape Architect

A. In case of termination of the employment of Landscape Architect, Owner shall appoint a landscape architect to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Landscape Architect.

8.03 Furnish Data

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 Pay When Due

A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 Lands and Easements; Reports and Tests

A. Owner's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by Landscape Architect in preparing the Contract Documents.

8.06 Insurance

A. Owner's responsibilities, if any, in respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 Change Orders

A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 Inspections, Tests, and Approvals

A. Owner's responsibility in respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 Limitations on Owner's Responsibilities

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 Undisclosed Hazardous Environmental Condition

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 Evidence of Financial Arrangements

A. If and to the extent Owner has agreed to furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents, Owner's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

ARTICLE 9 - LANDSCAPE ARCHITECT'S STATUS DURING CONSTRUCTION

9.01 Owner's Representative

A. Landscape Architect will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Landscape Architect as Owner's representative during construction are set forth in the Contract Documents and will not be changed without written consent of Owner and Landscape Architect.

9.02 Visits to Site

A. Landscape Architect will make visits to the Site at intervals appropriate to the various stages of construction as Landscape Architect deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Landscape Architect, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Landscape Architect will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Landscape Architect's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Landscape Architect will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Landscape Architect's visits and observations are subject to all the limitations on Landscape Architect's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Landscape Architect's visits or observations of Contractor's Work Landscape Architect will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 Project Representative

A. If Owner and Landscape Architect agree, Landscape Architect will furnish a Resident Project Representative to assist Landscape Architect in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Landscape Architect's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 Authorized Variations in Work

A. Landscape Architect may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 Rejecting Defective Work

A. Landscape Architect will have authority to reject Work which Landscape Architect believes to be defective, or that Landscape Architect believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning

whole as indicated by the Contract Documents. Landscape Architect will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 Shop Drawings, Change Orders and Payments

A. In connection with Landscape Architect's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

B. In connection with Landscape Architect's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.

C. In connection with Landscape Architect's authority as to Change Orders, see Articles 10, 11, and 12.

D. In connection with Landscape Architect's authority as to Applications for Payment, see Article 14.

9.07 Determinations for Unit Price Work

A. Landscape Architect will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Landscape Architect will review with Contractor the Landscape Architect's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Landscape Architect's written decision thereon will be final and binding (except as modified by Landscape Architect to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 Decisions on Requirements of Contract Documents and Acceptability of Work

A. Landscape Architect will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Landscape Architect in writing within 30 days of the event giving rise to the question

B. Landscape Architect will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believe that any such decision entitles them to an adjustment in the Contract

Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Landscape Architect's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.

C. Landscape Architect's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

D. When functioning as interpreter and judge under this Paragraph 9.08, Landscape Architect will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 Limitations on Landscape Architect's Authority and Responsibilities

A. Neither Landscape Architect's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Landscape Architect in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Landscape Architect shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Landscape Architect to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Landscape Architect will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Landscape Architect will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Landscape Architect will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Landscape Architect's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to,

the Resident Project Representative, if any, and assistants, if any.

ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

10.01 Authorized Changes in the Work

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 Unauthorized Changes in the Work

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.B.

10.03 Execution of Change Orders

A. Owner and Contractor shall execute appropriate Change Orders recommended by Landscape Architect covering:

1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

3. changes in the Contract Price or Contract Times which embody the substance of any written

decision rendered by Landscape Architect pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 Notification to Surety

A. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any bond to be given to a surety, the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 Claims

A. *Landscape Architect's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Landscape Architect for decision. A decision by Landscape Architect shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.

B. *Notice:* Written notice stating the general nature of each Claim, shall be delivered by the claimant to Landscape Architect and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Landscape Architect and the other party to the Contract within 60 days after the start of such event (unless Landscape Architect allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Landscape Architect and the claimant within 30 days after receipt of the claimant's last submittal (unless Landscape Architect allows additional time).

C. *Landscape Architect's Action:* Landscape Architect will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:

1. deny the Claim in whole or in part,
2. approve the Claim, or

3. notify the parties that the Landscape Architect is unable to resolve the Claim if, in the Landscape Architect's sole discretion, it would be inappropriate for the Landscape Architect to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.

D. In the event that Landscape Architect does not take action on a Claim within said 30 days, the Claim shall be deemed denied.

E. Landscape Architect's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.

F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 - COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 Cost of the Work

A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in Paragraph 11.01.B.

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include,

without limitation, superintendents, foremen, and other personnel employed full time at the Site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Landscape Architect, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.

4. Costs of special consultants (including but not limited to Engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

5. Supplemental costs including the following:

a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Landscape Architect, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expresses, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. Costs Excluded: The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attor-

neys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.

2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A and 11.01.B.

C. Contractor's Fee: When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

D. Documentation: Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Landscape Architect an itemized cost breakdown together with supporting data.

11.02 Allowances

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Landscape Architect.

B. Cash Allowances

1. Contractor agrees that:

a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

C. Contingency Allowance

1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Landscape Architect to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 Unit Price Work

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Landscape Architect subject to the provisions of Paragraph 9.07.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:

1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

2. there is no corresponding adjustment with respect any other item of Work; and

3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 Change of Contract Price

A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Landscape Architect and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or

2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;

b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;

c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and

f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 Change of Contract Times

A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Landscape Architect and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 Delays

A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners

or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

B. If Owner, Landscape Architect, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

C If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.

D. Owner, Landscape Architect and the Related Entities of each of them shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of Landscape Architects, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 Notice of Defects

A. Prompt notice of all defective Work of which Owner or Landscape Architect has actual knowledge will be given to Contractor. All defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 Access to Work

A. Owner, Landscape Architect, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspecting, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's Site safety procedures and programs so that they may comply therewith as applicable.

13.03 Tests and Inspections

A. Contractor shall give Landscape Architect timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:

1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;

2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in said Paragraph 13.04.C; and

3. as otherwise specifically provided in the Contract Documents.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Landscape Architect the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Landscape Architect's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Landscape Architect.

E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Landscape Architect, it

must, if requested by Landscape Architect, be uncovered for observation.

F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Landscape Architect timely notice of Contractor's intention to cover the same and Landscape Architect has not acted with reasonable promptness in response to such notice.

13.04 Uncovering Work

A. If any Work is covered contrary to the written request of Landscape Architect, it must, if requested by Landscape Architect, be uncovered for Landscape Architect's observation and replaced at Contractor's expense.

B. If Landscape Architect considers it necessary or advisable that covered Work be observed by Landscape Architect or inspected or tested by others, Contractor, at Landscape Architect's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Landscape Architect may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.

C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of Landscape Architects, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.

D. If, the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 Owner May Stop the Work

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner

to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 Correction or Removal of Defective Work

A. Promptly after receipt of notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Landscape Architect, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 Correction Period

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or
2. correct such defective Work; or
3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and

damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications .

D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

13.08 Acceptance of Defective Work

A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Landscape Architect's recommendation of final payment, Landscape Architect) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Landscape Architect as to reasonableness) and the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Landscape Architect's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 Owner May Correct Defective Work

A. If Contractor fails within a reasonable time after written notice from Landscape Architect to correct defective Work or to remove and replace rejected Work

as required by Landscape Architect in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Landscape Architect and Landscape Architect's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.

C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 Schedule of Values

A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Landscape Architect.

Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 Progress Payments

A. Applications for Payments

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Landscape Architect for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. Review of Applications

1. Landscape Architect will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Landscape Architect's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Landscape Architect's recommendation of any payment requested in an Application for Payment will constitute a representation by Landscape Architect to Owner, based on Landscape Architect's observations on the Site of the executed Work as an experienced and qualified design professional and on Landscape Architect's review of the Application for Payment and the accompanying data and schedules, that to the best of Landscape Architect's knowledge, information and belief:

a. the Work has progressed to the point indicated;

b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and to any other qualifications stated in the recommendation); and

c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Landscape Architect's responsibility to observe the Work.

3. By recommending any such payment Landscape Architect will not thereby be deemed to have represented that:

a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Landscape Architect in the Contract Documents; or

b. that there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Landscape Architect's review of Contractor's Work for the purposes of recommending payments nor Landscape Architect's recommendation of any payment, including final payment, will impose responsibility on Landscape Architect:

a. to supervise, direct, or control the Work, or

b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or

c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or

d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or

e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Landscape Architect may refuse to recommend the whole or any part of any payment if, in Landscape Architect's opinion, it would be incorrect to

make the representations to Owner stated in Paragraph 14.02.B.2. Landscape Architect may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Landscape Architect's opinion to protect Owner from loss because:

a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;

b. the Contract Price has been reduced by Change Orders;

c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or

d. Landscape Architect has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due

1. Ten days after presentation of the Application for Payment to Owner with Landscape Architect's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. Reduction in Payment

1. Owner may refuse to make payment of the full amount recommended by Landscape Architect because:

a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;

b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;

c. there are other items entitling Owner to a set-off against the amount recommended; or

d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.

2. If Owner refuses to make payment of the full amount recommended by Landscape Architect, Owner will give Contractor immediate written notice (with a copy to Landscape Architect) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld.

Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor corrects to Owner's satisfaction the reasons for such action.

3. If it is subsequently determined that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1.

14.03 Contractor's Warranty of Title

A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 Substantial Completion

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Landscape Architect in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Landscape Architect issue a certificate of Substantial Completion.

B. Promptly after Contractor's notification, Owner, Contractor, and Landscape Architect shall make an inspection of the Work to determine the status of completion. If Landscape Architect does not consider the Work substantially complete, Landscape Architect will notify Contractor in writing giving the reasons therefor.

C. If Landscape Architect considers the Work substantially complete, Landscape Architect will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Landscape Architect as to any provisions of the certificate or attached list. If, after considering such objections, Landscape Architect concludes that the Work is not substantially complete, Landscape Architect will within 14 days after submission of the tentative certificate to Owner notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Landscape Architect considers the Work substantially complete, Landscape Architect will within said 14 days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Landscape Architect believes justified after consideration of any objections from Owner.

D. At the time of delivery of the tentative certificate of Substantial Completion, Landscape

Architect will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Landscape Architect in writing prior to Landscape Architect's issuing the definitive certificate of Substantial Completion, Landscape Architect's aforesaid recommendation will be binding on Owner and Contractor until final payment.

E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to complete or correct items on the tentative list.

14.05 Partial Utilization

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Landscape Architect, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions.

1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor will certify to Owner and Landscape Architect that such part of the Work is substantially complete and request Landscape Architect to issue a certificate of Substantial Completion for that part of the Work.

2. Contractor at any time may notify Owner and Landscape Architect in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Landscape Architect to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Landscape Architect shall make an inspection of that part of the Work to determine its status of completion. If Landscape Architect does not consider that part of the Work to be substantially complete, Landscape Architect will notify Owner and Contractor in writing giving the reasons therefor. If Landscape Architect considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial

Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 Final Inspection

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Landscape Architect will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 Final Payment

A. Application for Payment

1. After Contractor has, in the opinion of Landscape Architect, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:

a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.7;

b. consent of the surety, if any, to final payment;

c. a list of all Claims against Owner that Contractor believes are unsettled; and

d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other

indebtedness connected with the Work for which Owner or Owner's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. Landscape Architect's Review of Application and Acceptance

1. If, on the basis of Landscape Architect's observation of the Work during construction and final inspection, and Landscape Architect's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Landscape Architect is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Landscape Architect will, within ten days after receipt of the final Application for Payment, indicate in writing Landscape Architect's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Landscape Architect will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Landscape Architect will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. Payment Becomes Due

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Landscape Architect, less any sum Owner is entitled to set off against Landscape Architect's recommendation, including but not limited to liquidated damages, will become due and , will be paid by Owner to Contractor.

14.08 Final Completion Delayed

A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Landscape Architect so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Landscape Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Landscape Architect with the Application for such payment. Such payment shall be

made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 Waiver of Claims

A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.01 Owner May Suspend Work

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Landscape Architect which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 Owner May Terminate for Cause

A. The occurrence of any one or more of the following events will justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);

2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;

3. Contractor's disregard of the authority of Landscape Architect; or

4. Contractor's violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:

1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion),

2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and

3. complete the Work as Owner may deem expedient.

C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Landscape Architect as to their reasonableness and, when so approved by Landscape Architect, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph Owner shall not be required to obtain the lowest price for the Work performed.

D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.

E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B, and 15.02.C.

15.03 Owner May Terminate For Convenience

A. Upon seven days written notice to Contractor and Landscape Architect, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. reasonable expenses directly attributable to termination.

B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 Contractor May Stop Work or Terminate

A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Landscape Architect fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Landscape Architect, and provided Owner or Landscape Architect do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Landscape Architect has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Landscape Architect, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of

this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 - DISPUTE RESOLUTION

16.01 Methods and Procedures

A. Either Owner or Contractor may request mediation of any Claim submitted to Landscape Architect for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.

B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.

C. If the Claim is not resolved by mediation, Landscape Architect's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:

1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions, or

2. agrees with the other party to submit the Claim to another dispute resolution process, or

3. gives written notice to the other party of their intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 - MISCELLANEOUS

17.01 Giving Notice

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or

2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 Computation of Times

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 Cumulative Remedies

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 Survival of Obligations

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 Controlling Law

A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 Headings

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

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for labor, materials and incidentals incurred in the construction of these improvements, have been paid in full, including any retainage, and that there are no claims pending, of which he has been notified.

layouts at his discretion, but this check will not relieve the Contractor of his responsibility of correctly locating line and grade in accordance with the plans and specifications.

7. CALENDAR DAY

- A. Time for completion of the project and for liquidated damages shall be in accordance with the provisions of the Contract. A calendar day is defined as every day shown on the calendar.

- C. The Engineer/Architect will take all measurements necessary for the determination of the amount of work performed under the various items for which payment is provided. Whenever necessary, work will be suspended to permit this work, but such suspension will be as brief as practicable and the Contractor shall be allowed no extra compensation therefor.

8. PROTECTION OF PROPERTY

- A. The Contractor shall exercise care to prevent damage to all structures, either above or below ground, including buildings, fences, pipelines, utilities, roads, etc., whether publicly or privately owned and including work performed by others. The Contractor shall be responsible for locating all underground facilities that might be damaged by the proposed construction.

- D. The Contractor shall satisfy himself as to the accuracy of all measurements before constructing any permanent structure and shall not take advantage of any errors which may have been made in laying out the work. Such stakes and markings as the Engineer/Architect may set for either his own or the Contractor's guidance shall be scrupulously preserved by the Contractor. In case of negligence on the part of the Contractor or his employees, resulting in the destruction of such stakes or markings, an amount equal to the cost of replacing same may be deducted from subsequent estimates due the Contractor, at the discretion of the Engineer/Architect.

- B. The Contractor shall be responsible for all damage done to either public or private property during the course of construction except as specifically provided otherwise in these specifications.

- C. Known existing underground utilities and structures are shown on the plans. Their locations are believed to be reasonably accurate but are not guaranteed.

- D. The Contractor shall take all steps necessary to protect these existing facilities during construction.

11. PERMITS AND CODES

9. WATER, ELECTRICAL POWER, AND OTHER UTILITIES

- A. Contractor will be required to make arrangement for and pay the water, electrical power, or any other utilities required during construction.

- A. Contractor shall give all notices required by and comply with all applicable law, ordinances, and codes of the Local Government. All construction work and/or utility installations shall comply with all applicable ordinances and codes including all written waivers. Before installing any work, the Contractor shall examine the Drawings and Technical Specifications and if the Drawings and Technical Specifications fail to comply with such applicable ordinances or codes, the Owner will adjust the Contract by Change Order to conform to such ordinances and codes (unless waivers in writing covering the difference have been granted by the governing body or department) and make appropriate adjustment in the Contract Price or stipulated unit prices.

10. LINES AND GRADES

- A. Landscape Architect will provide the Contractor with horizontal control points and a benchmark for vertical control. All construction staking shall be done by the Contractor. References to lines and grades as established by the Landscape Architect shall be in reference to these control points.

- B. Should the Contractor fail to observe the foregoing provisions and proceed with the construction and/or install any utility at variance with any applicable ordinance or code, including any written waivers (notwithstanding the fact that such installation is in compliance with the Drawings and Technical Specifications), the Contractor shall remove such work without cost to the Owner.

- B. The Engineer/Architect will provide the Contractor with all necessary information relating to control points set by the Engineer/Architect. The Contractor will be responsible for laying out the work. The Engineer/Architect will check grade control and major

- C. Contractor shall at his own expense, secure and pay to

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SECTION 000750 - SPECIAL CONDITIONS OF THE CONSTRUCTION CONTRACT

1. SCOPE OF WORK

- A. The work to be accomplished under these specifications, including the plans, shall consist of the following:
1. *Furnish & Install site grading & earthwork, concrete retaining wall, 38' x 50' pavilion with lighting, restroom, pond aeration system, concrete sidewalk paving, and stone seat walls and columns.*
- B. All labor, materials and equipment necessary to complete the work called for in these specifications and shown on the plans shall be furnished by the Contractor.
- C. Payment for the various items of work will be made as specified under the various payment paragraphs of the technical sections.

2. CONTRACT DOCUMENTS

- A. All work covered by this contract shall be done in accordance with the Contract Documents described in the General Conditions. The drawings included in the documents consist of the plans generally entitled Boys and Girls Club Lake Park – Phase I Improvements; more specifically listed in Section 000800 - Schedule of Drawings.
- B. All bidders shall be thoroughly familiar with all drawings and specifications. The Contractor shall be responsible for the satisfactory completion of all work shown on the drawings or specified.
- C. The intent of the plans and specifications is to prescribe a complete work or improvement which the Contractor undertakes to do in full compliance with the plans, the specifications, the special provisions, proposal, and contract. The Contractor shall do all work including such additional, extra, and incidental work as may be considered necessary to complete the project in a satisfactory and acceptable manner, as provided in the plans, proposal, and contract. He shall furnish, unless otherwise provided in the specifications, special provisions, or contract, all materials, equipment, tools, labor and incidentals necessary to prosecute the completion of the work.
- D. The Contract Documents are complementary, and what is called for by any one shall be as binding as if called for by all. In case of conflict between any of the Contract Documents, priority of interpretation shall be

in the following order: Signed Contract, Performance Bond, Special Bonds (if any), Bid Form (Proposal), Special Provisions, Advertisement to Bidders, Instructions to Bidders, Technical Specifications, Plans, and General Conditions of the Contract.

3. TIME AND ORDER OF COMPLETION

- A. The Contractor will be permitted to prosecute certain portions of the work in the order and manner of his own choosing to the best interest of the project. However, the work shall be conducted in such manner and with such materials, equipment and labor as may be required to insure completion in accordance with the plans and specifications within the time stated in the Proposal and in the Contract. The Contractor shall furnish the Engineer/Architect with his proposed progress schedule and this schedule shall be approved by the Engineer/Architect before work is commenced on the project.
- B. The Contractor is reminded that approved material submittals are required prior to the incorporation of the materials into this project. To avoid any delays in the progress of the work, it is imperative that complete information be provided to the Engineer/Architect as early as possible for review and approval.

4. LIMITATION OF OPERATION

- A. Nighttime construction activities will not be permitted without the prior approval of the Engineer/Architect. If required and permitted, nighttime construction activities shall be as noted on the plans and coordinated, through the Engineer/Architect. During nighttime construction, Contractor shall provide all equipment traveling within the project area with a flashing light, which shall remain visible and operational at all times.
- B. The Contractor shall be subject to a pre-construction conference to discuss phasing and project safety control after award of contract.

5. CONSTRUCTION ACTIVITY

- A. There are no special clauses or stipulations of Section SP-5 "Construction Activity" that apply to this Contract.

6. AFFIDAVIT OF BILLS PAID

- A. Prior to final acceptance of this project by the Owner, the Contractor shall execute an affidavit that all bills

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setting forth:

construction shall be determined by the Engineer/Architect and authorized by him in writing.

1. Name and address of the insured.
2. The location of the operations to which the insurance applied.
3. The number of policy and the type or types of insurance in force thereunder on the date borne by such certificate.
4. The expiration date of the policy and the limit or limits of liability thereunder on the date borne by such certificate.
5. A statement that the insurance of the type afforded by the policy applied to all of the operations of whatever character, which are undertaken by the insured during the performance of this contract, provided such operations are required in the performance of the contract.
6. A provision that the policy may be canceled only by mailing written notice to the named insured at the address shown in this policy stating when, not less than ten (10) days thereafter, cancellation of such policy shall be effective, with copy to the Owner of letter of intent.

- D. These certificates will become a part of the Contract Documents and must be included with Contract Documents before execution by the Owner. Coverages specified herein apply to all operations of the Contractor in connection with this work, including automobile and other vehicles.
- E. The Contractor's insurance shall cover himself and all subcontractors and sub-subcontractors. All other sublevels of contractors shall provide copies of proof of insurance if not covered by the general contractor.

17. REMOVAL AND DISPOSAL OF STRUCTURES, UTILITIES AND OBSTRUCTIONS

- A. All materials and debris specified to be disposed of by the Contractor shall become the property of the Contractor and shall be properly disposed of off the project site by the Contractor.

18. CONFORMITY WITH PLANS AND ALLOWABLE DEVIATIONS

- A. Finished surfaces shall conform to the lines, grades, cross sections and dimensions. Any deviation from the plans which may be required by the exigencies of

19. REMOVAL OF DEFECTIVE AND UNAUTHORIZED WORK

- A. All work which has been rejected or condemned shall be repaired or, if it cannot be satisfactorily repaired, removed and replaced at the Contractor's expense. Materials not conforming to the requirements of the specifications shall be removed immediately from the site of the work and replaced with satisfactory material by the Contractor at his expense.
- B. Work done beyond that shown on the plans, or as given, except as herein provided, work done without proper inspection, or any extra or unclassified work done without written authority and prior agreement in writing as to prices, will be done at the Contractor's risk and will be considered unauthorized and, at the option of the Engineer/Architect, may not be measured and paid for and may be ordered removed and replaced at the Contractor's expense.
- C. Upon the failure of the Contractor to repair satisfactorily or to remove and replace, if so directed, rejected, unauthorized, or condemned work or materials immediately after receiving formal notice from the Engineer/Architect, the Owner may recover for such defective work or materials on the Contractor's bond, or by action in a court having proper jurisdiction over such matters, or may employ labor and equipment and satisfactorily repair or remove and replace such work and charge the cost of the same to the Contractor, which cost will be deducted from any money due him.

20. DISPUTED CLAIMS FOR EXTRA WORK

- A. In case the Contractor deems extra compensation is due him for work on materials not clearly covered in the contract, or not ordered by the Engineer/Architect as an extra, the Contractor shall notify the Engineer/Architect in writing of his intention to make claim for such extra compensation before he begins the work on which he bases the claim and shall afford the Engineer/Architect every facility for keeping actual cost of the work. Failure on the part of the Contractor to give such notification or to afford the Engineer/Architect proper facilities for keeping strict account of actual costs shall constitute a waiver of the claim for such extra compensation. The filing of such notice by the contractor and the keeping of costs by the Engineer/Architect shall not in any way be construed to prove validity of the claim. When the work has been completed, the Contractor shall within 10 days file his

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claim for extra compensation with the Engineer/Architect, who will present it to the Owner for consideration.

satisfactory evidence that all obligations of the nature hereinabove designated have been paid, discharged or waived.

21. INDEMNIFICATION

- A. The contractor shall indemnify and hold harmless and defend the Owner, Engineer/Architect, and all of their officers, agents and employees from all suits, actions, claims, damages, personal injuries, losses, property damage and expenses of any character whatsoever, including attorney's fees, brought for or on account of any injuries or damages received or sustained by any person or persons or property, on account of any negligent act of the contractor, their agents or employees, or any subcontractor, in the execution, supervision and operations growing out of or in any way connected with the performance of this contract, and contractor will be required to pay any judgment with costs which may be obtained against the Owner, Engineer/Architect or any of their officers, agents or employees, including attorney's fees.
- B. The contractor shall indemnify and hold harmless and defend the Owner and all of the Owner's officers, agents, and employees and Dunaway Associates, L.P and the officers, agents and employees of Dunaway Associates, L.P. from all suits, actions, claims, damages, personal injuries, accidental death, property damage, losses, and expenses of any character whatsoever, including attorney's fees, brought for or on account of any injuries or damages received or sustained by any person or persons or property, on account of any negligent act of the Owner, the Owner's officers, agents and employees, or on account of any negligent act of Dunaway Associates, L.P. or the officers, agents and employees of Dunaway Associates, L.P. Whether such negligent acts were the sole proximate cause of the injury or damage or a proximate cause jointly and concurrently with the contractor or the contractor's employees, agents or subcontractors negligence, in the execution, supervision and operations growing out of or in any way connected with the performance of this contract, and contractor will be required to pay any judgment with costs which may be obtained against the owner or any of its officers, agents or employees, including attorney's fees.
- C. The Contractor agrees that he will indemnify and save the Owner and Dunaway Associates, L.P. harmless from all claims growing out of any demands of subcontractors, laborers, workmen, mechanics, materialmen, and furnishers of machinery and parts thereof, equipment, power tools, all supplies, including commissary incurred in the furtherance of the performance of this contract. When Owner so desires, the Contractor shall furnish

- D. The Contractor hereby waives all rights to any attorney's fees awarded as a result of any action brought under the Texas Uniform Declaratory Judgments Act relating to this contract.

22. CONTRACTOR'S RESPONSIBILITY FOR WORK

- A. Until acceptance by the Owner of any part or all of the construction, as provided for in these specifications, it shall be under the charge and care of the Contractor, and he shall take every necessary precaution against injury or damage to any part of the work by the action of the elements or from any other cause whatsoever, whether arising from the execution or from the nonexecution of the work. The Contractor shall rebuild, repair, restore, and make good, at his own expense, all injuries or damage to any portion of the work occasioned by any of the above causes before its completion and acceptance.

23. CORRECTION OF FAULTY WORK AFTER FINAL PAYMENT

- A. The making of the final payment by the Owner to the Contractor shall not relieve the Contractor of responsibility for faulty materials or workmanship. The Contractor shall promptly replace any such defects discovered within one year from the date of written acceptance of the work.
- B. The Performance Bond shall remain in effect until one year after the date of the written acceptance of the work to insure compliance by the Contractor with the requirements of this paragraph.

24. SEPARATE CONTRACTS

- A. The Owner reserves the right to let other contracts in connection with or in the vicinity of the project. The Contractor shall afford other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall coordinate his work and theirs. The Contractor's coordination with other contractors shall require the approval of the Engineer/Architect.

25. TRENCH SAFETY

- A. The Contractor shall strictly comply with all requirements of the Occupational Safety and Health Administration (OSHA) Manual, Chapter XVII, Subpart P - EXCAVATION, TRENCHING AND

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SHORING for all trenching and excavation operations.

- B. If depths of trenches are encountered which are over five (5) feet, the Contractor shall cut the trench walls to the angle of repose of the soils encountered, or shall submit alternate shoring details to the Engineer/Architect for approval.

26. LOAD RESTRICTIONS

- A. The Contractor shall comply with all legal load restrictions in the hauling of materials on public roads beyond the limits of the work. A special permit will not relieve the Contractor of liability for damage which may result from the moving of material or equipment.
- B. The operations of equipment of such weight or so loaded as to cause damage to structures or to any other type of construction will not be permitted. Hauling of materials over the base course will not be permitted. Hauling of materials over the base course or surface course under construction shall be limited as directed. No loads will be permitted on a concrete pavement, base, or structure before the expiration of the curing period. The Contractor shall be responsible for all damage done by his/her hauling equipment and shall correct such damage at his/her own expense.

27. NOTICE TO PROCEED

- A. The notice to proceed shall state the date on which it is expected the Contractor will begin the construction and from which date contract time will be charged. The Contractor shall begin the work to be performed under the contract within 10 days of the date set by the Engineer/Architect in the written Notice to Proceed, but in any event, the Contractor shall notify the Engineer/Architect at least 24 hours in advance of the time actual construction operations will begin.

28. PAYMENT FOR MATERIALS ONHAND

- A. Partial payments may be made to the extent of the delivered cost of materials to be incorporated in the work, provided that such materials meet the requirements of the contract, plans and specifications and are delivered to acceptable sites on the project location or at other sites in the vicinity that are acceptable to the Owner. Such delivered costs of stored or stockpiled materials may be included in the next partial payment after the following conditions are met:
 - 1. The material has been stored or stockpiled in a manner acceptable to the Engineer/Architect at or on an approved site.

- 2. The Contractor has furnished the Engineer/Architect with acceptable evidence of the quantity and quality of such stored or stockpiled materials.
- 3. The Contractor has furnished the Engineer/Architect with satisfactory evidence that the material and transportation costs have been paid.
- 4. The Contractor has furnished the owner legal title (free of liens or encumbrances of any kind) to the material so stored or stockpiled.
- 5. The Contractor has furnished the Owner evidence that the material so stored or stockpiled is insured against loss by damage to or disappearance of such materials at any time prior to use in the work.

- B. It is understood and agreed that the transfer of title and the Owner's payment for such stored or stockpiled materials shall in no way relieve the Contractor of his/her responsibility for furnishing and placing such materials in accordance with the requirements of the contract, plans and specifications.
- C. In no case will the amount of partial payments for materials on hand exceed the contract price for such materials or the contract price for the contract item in which the material is intended to be used.
- D. No partial payment will be made for stored or stockpiled living or perishable plant materials.
- E. The Contractor shall bear all costs associated with the partial payment of stored or stockpiled materials in accordance with the provisions of this subsection. Partial payments shall be in accordance with GC-46, "Partial Payments To Contractor."

29. WEIGHING AND MEASURING EQUIPMENT

- A. Except as modified herein, all scales and scale installations shall meet the requirements of the National Institute of Standards and Technology Handbooks 44 and 112 (published by the U.S. Department of Commerce and available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.D. 20402-9325), except that the required accuracy shall be 0.4 percent of the load being weighed or one (1) graduation on the dial of the scale. The Contractor shall provide personnel, facilities and equipment for checking the scales to the satisfaction of the Engineer/Architect.

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- B. All scales shall be checked prior to beginning of operations, after each move, at such other times when in the opinion of the Engineer/Architect there is a question as to their accuracy or adequacy, and at least once each six (6) months. The Contractor shall furnish a report of calibration from a scale mechanic licensed by the Texas Department of Agriculture using certified weights and approved by the Engineer/Architect, certifying that the scales meet the requirements of this item. Plant operations shall cease during the checking operation. When inaccuracy or inadequacy is discovered, scale use will not be resumed until corrective measures have been completed and/or the scales calibrated. Whenever equipment is adjusted, the adjustments shall be so made as to bring performance errors as close as practicable to zero value.

contractor has or might have in the future, including but not limited to breach of contract, quantum meruit, claims under the due process and takings clauses of the Texas and United States Constitutions, tort claims, or owner's negligence.

30. SOVEREIGN IMMUNITY

- A. By executing this contract the Owner is not waiving its right to sovereign immunity. The Owner is retaining its immunity from suit. The Owner is not granting consent to be sued by legislative resolution or action.

34. INDEPENDENT CONTRACTOR

- A. It is expressly understood and agreed that Contractor shall perform all work and services described herein as an independent contractor and not as an officer, agent, servant or employee of the Owner; that the Contractor shall have exclusive control of and the exclusive right to control the details of the services and work performed hereunder, and all persons performing the same; and shall be solely responsible for the acts and omissions of its officers, agents, employees, contractors and subcontractors; that the doctrine of respondent superior shall not apply as between owner and Contractor, its officers, agents, employees, contractors and subcontractors; and that nothing herein shall be construed as creating a partnership or joint enterprise between Owner and Contractor. No person performing any of the work and services described hereunder by Contractor shall be considered an officer, agent, servant or employee of the Owner. Further, it is specifically understood and agreed that nothing in this contract is intended or shall be construed as creating a "Community of Pecuniary Interest" or "An Equal Right of Control" which would give rise to vicarious liability. Contractor shall be an independent contractor under this contract and shall assume all of the rights, obligations and liabilities, applicable to it as such independent contractor.

31. GOVERNING LAW AND VENUE

- A. The Contract shall be governed by the laws of the State of Texas. All performance and payment made pursuant to this contract shall be deemed to have occurred in the City of Lamesa, County of Dawson, State of Texas. Exclusive venue for any claims, suits or any other action arising from or connected in any way to this contract or the performance of this contract shall be in Dawson County, Texas. This contract shall be governed by the laws of the State of Texas. The obligations and undertakings of each of the parties to this contract shall be deemed to have occurred in Lamesa, Texas.

35. NOTICE OF ALLEGED BREACH; STATUTORY PREREQUISITES

32. THIRD-PARTY BENEFICIARY

- A. This Contract does not create a third-party beneficiary. There is no third-party beneficiary to this Contract. Neither this Contract, nor any term or provision hereof, nor any inclusion by reference, shall be construed as being for the benefit of any party not in signatory hereto.

- A. As a condition precedent to filing suit for alleged damages incurred by an alleged breach of an express or implied provision of this Contract, Contractor or his legal representative, shall give the reasonable official of the Owner notice in writing (consisting of one original and seven copies of notice attached to a copy of this contract) of such damages, duly verified, within one hundred and fifty days (150) after the same has been sustained. The discovery rule does not apply to the giving of this notice. The notice shall include when, where and how the damages occurred, the apparent extent thereof, the amount of damages sustained, the amount for which the Contractor will settle, the physical and mailing addresses of Contractor at the time and date the claim was presented and the physical and mailing addresses of Contractor for the six months immediately preceding the occurrence of

33. RELEASES

- A. Notwithstanding any other provisions, contractor hereby releases, acquits, relinquishes and forever discharges owner, owner's employees and officer, and Dunaway Associates, L.P., and its employees and officers, from any and all demands, claims, damages or causes of action of any kind whatsoever which

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such damages, and the names and addresses of the witnesses upon whom the Contractor relies to establish its claim; and a failure to so notify the City Manager within the time and manner provided herein shall exonerate, excuse and except the Owner from any liability whatsoever. The Owner is under no obligation to provide notice to Contractor that Contractor's notice is insufficient. Owner reserves the right to request reasonable additional information regarding the claim. Said additional information shall be supplied within thirty (30) days after receipt of notice.

- B. The statutory prerequisites outlined herein constitute jurisdictional requirements pursuant to Section 271.154 of the Texas Local Government Code and Section 311.034 of the Texas Government Code. Notwithstanding any other provision, Contractor's failure to comply with the requirements herein shall perpetually bar Contractor's claim for damages under Chapter 271 of the Texas Local Government Code, and Section 311.034 of the Texas Government Code, regardless if Owner has actual or constructive notice or knowledge of said claim or alleged damages. Contractor agrees that the requirements of this entire contract are reasonable.

- B. Contractor agrees that this is the voluntary and intentional relinquishment and abandonment of a presently existing known right. Contractor acknowledges that it understands all terms and Conditions of the agreement. The contractor further acknowledges and agrees that there was and is no disparity of bargaining power between the owner and the contractor. This section shall not be construed or interpreted as a waiver of sovereign immunity.

- C. The contractor and owner are relying on their own judgment. Each party had the opportunity to discuss this agreement with legal counsel prior to its execution.

36. ASSIGNMENT

- A. Contractor shall not, either directly or indirectly, assign all or any part of this contract or any interest, right or privilege herein, without the prior written consent of the Owner. The issue on whether or not to grant consent to an assignment is in the sole discretion of the Owner.

37. WAIVER OF ATTORNEY'S FEES

- A. By executing this agreement, contractor agrees to waive and does hereby knowingly, conclusively, voluntarily and intentionally waive any claim it has or may have in the future against the owner, regarding the award of attorney's fees, which are in any way related to the agreement, or the construction, interpretation or breach of the agreement. The contractor specifically agrees that if the contractor brings or commences any legal action or proceeding related to this agreement, the construction, interpretation, validity or breach of this agreement, including but not limited to any action pursuant to the provisions of the Texas Uniform Declaratory Judgments Act (Texas Civil Practice and Remedies Code Section 37.001, et seq., as amended), or Chapter 271 of the Texas Local Government Code, the contractor agrees to abandon, waive and relinquish any and all rights to the recovery of attorney's fees to which contractor might otherwise be entitled.

Notice of Award

Dated: _____

Project:	Owner:	Owner's Contract No.:
Contract:		Landscape Architect's Project No.:
Bidder:		

You are notified that your Bid dated _____ for the above Contract has been considered. You are the Successful Bidder and are awarded a Contract for:

Phase I improvements to the Boys and Girls Club Lake Park for the City of Lamesa including public pavilion area with concrete retaining wall, structural foundation, pre-fabricated pavilion, public restroom facilities, pond aeration equipment for existing playa lake, concrete paving sidewalks, earthwork and miscellaneous electrical.

The Contract Price of your Contract is: \$ _____

5 copies of each of the proposed Contract Documents (Agreement) accompany this Notice of Award.

You must comply with the following conditions precedent within 15 days of the date you receive this Notice of Award.

1. Deliver to the Owner 6 fully executed counterparts of the Contract Documents.
2. Deliver with the executed Contract Documents the
 - a.) Contract security [Bonds] as specified in the Instructions to Bidders (Article 4), and General Conditions of the Construction Contract (Paragraph 5.01);
 - b.) Proof of Insurance as specified in the Supplemental Conditions (Article 16)

Deliver to the Owner insurance certificates in the form and amounts indicated in the Supplementary Conditions.

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award and declare your Bid security forfeited.

Within ten days after you comply with the above conditions, Owner will return to you one fully executed counterpart of the Contract Documents.

Owner
By: _____
Authorized Signature

Notice to Proceed

Dated: _____

Project:	Owner:	Owner's Contract No.:
Contract:		Landscape Architect's Project No.:
Bidder:		

You are notified that the Contract Times under the above contract will commence to run on _____. On or before that date, you are to start performing your obligations under the Contract Documents. In accordance with Article 4 of the Agreement, the date of Substantial Completion is _____ **calendar days**, and the date of readiness for final payment is _____ **calendar days**.

Before you may start any Work at the Site, Paragraph 2.01.B of the General Conditions provides that you and Owner must each deliver to the other (with copies to Engineer and other identified additional insurers) certificates of insurance which each is required to purchase and maintain in accordance with the Contract Documents.

Also, before you may start any Work at the Site, you must [add other requirements]:

All conditions have been met.

_____	Owner
Given by: _____	Authorized Signature
_____	Title
_____	Date

SECTION 000800 - SCHEDULE OF DRAWINGS

Sheet No.	Description
<u>General</u>	
0	Cover Sheet
L1.0	General Notes & Existing Conditions
<u>Site Plan</u>	
L2.0	Site Reference Plan
L2.1	Site Plan
L2.1G	Grading Plan
L2.2	Pavilion Enlarged Plan
<u>Details</u>	
L3.0	Site Details
L3.1	Retaining Wall Details
L3.2	Pavilion Details
L3.3	Lighting Schedule & Details
L3.4	Restroom Details
<u>Structural</u>	
S1.0	General Structural Notes
S2.0	Foundation Plan & Details
<u>Civil</u>	
C1.0	Water & Sewer Services
<u>Electrical</u>	
E1	Electrical Site Plan
E2	Pavilion & Restrooms Electrical
E3	Electrical Specifications

SECTION 01010 – SUMMARY OF WORK

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Park improvements include earthwork, concrete retaining wall, pavilion, restroom, pond aeration equipment, concrete pavement, and miscellaneous facilities as listed in the plans and specifications.

1.2 CONTRACT METHOD

- . The work shall be done under a Lump Sum Contract.

1.3 CONTRACTOR USE OF PREMISES

- . Limit use of premises for work, storage, ingress and egress of personnel, and deliveries to areas indicated on Drawings.
- A. Conform to the City of Lamesa's rules and regulations regarding use of the project site.
- B. Owner will occupy premises during entire construction period. Cooperate with Owner in scheduling operations.

1.4 CONTRACT DOCUMENTS

- A. Full intent, meaning, and spirit of Contract Documents is to provide complete, finished, and fully operational park facility as shown on plans.
- B. Drawings show diagrammatically work to be performed, and are not intended to show every incidental part, fitting and member required for a complete project. Incidental parts, fittings, and members shall be required as part of the Contract and are considered incidental to the installation.
- C. The specifications establish the quality of materials and workmanship to be performed. They are not intended to describe every step or member in the process of construction. Procedures, craftsmanship and materials of high quality shall be employed where not specifically called for in these specifications.

END OF SECTION

SECTION 01045 – CUTTING AND PATCHING

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Cutting, fitting (replacement) and patching, including related excavation and backfill of any item of work, as follows:
1. Properly fit together all parts of the several systems.
 2. Uncover portions of the work to provide for installation of ill-timed work.
 3. Remove and replace work which does not conform to the Contract Documents as determined by Owner.
 4. Provide routine penetrations of non-structural surfaces for installation of piping, ductwork, and electrical conduit.

1.2 SUBMITTALS

- A. Submit written request for authorization to Owner in advance of cutting, patching, or alterations which affect:
1. Structural integrity of any element of the project.
 2. Integrity of weather-exposed or moisture resistant element.
 3. Efficiency, maintenance, or safety of any operational element.
 4. Visual qualities of sight-exposed elements.

B. Include in each request for authorization the following:

1. Identification of the project.
2. Description of work affected by this action.
3. The necessity for cutting, patching, or alteration.
4. Effect on work as to structural or weatherproof integrity of project.
5. Description of Proposed Work
 - a. Extent of cutting, patching, or alteration.
 - b. Who will execute work.
 - c. Products proposed to be used.
 - d. Supporting of elements during work.
 - e. Extent of refinishing to be done.
6. Alternatives to cutting, patching or alterations.
7. Written approval of each separate Contractor affected by the work.
8. Cost proposal, when applicable.
9. Date and time the work will be executed.

1.3 PAYMENT FOR COSTS:

- B. Costs caused by ill-timed or defective work, or work not conforming to Contract Documents, including costs for additional services of Architect: Party responsible for ill-timed, defective or nonconforming work.
- B. Costs to correct damage to existing structures, pavement or any previously finished work that is not ill-timed, defective or nonconforming: Party responsible for damage.
- C. Costs to correct damage to existing structures, pavement, or any previously finished work that is not ill-timed, defective or nonconforming when damage is caused by construction methods or procedures adopted by a Contractor or Subcontractor strictly to expedite the completion of his work only: Party is responsible for damage to structural integrity of any element of the project.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Comply with each specific product involved according to its respective section.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Do not begin cutting and patching prior to receipt of written authorization from Owner.
- B. Inspect existing conditions, including elements subject to damage or to movement during cutting and patching.
- C. After uncovering work, inspect conditions affecting installation of products, or performance of work and report unsatisfactory or questionable conditions to Owner.

3.2 PREPARATION PRIOR TO CUTTING

- A. Provide shoring, bracing and support as required to maintain structural integrity of project.
- B. Provide protection for other portions of Project.
- C. Provide protection from the elements.

3.3 PERFORMANCE

- A. Execute fitting and adjustment of products to provide finished installation to comply with specified tolerances, finishes.
- B. Execute cutting and demolition by methods which will prevent damage to other work and will provide proper surfaces to receive installation of repairs and new work.
- C. Execute excavating and backfilling by methods which will prevent damage to other work and will prevent settlement.
- D. Restore work which has been cut or removed; install new products to provide completed work in accord with requirements of Contract Documents.
- E. Refinish entire surfaces as necessary to provide an even finish
 - 1. Continuous surfaces: to nearest intersections.
 - 2. Assembly: entire refinishing.
- F. No cutouts, access doors or mechanical or electrical devices of any kind shall be installed in finish materials or areas other than within mechanical rooms and shafts without specific prior approval by Architect of location and appearance.

3.4 CLEANING

- A. Prior to covering work and beginning cleanup, obtain written approval of cutting, patching and related operations from Owner.
- B. Upon receipt of written approval from Owner, cleanup and restore the affected area to a condition equal to or better than before patching and/or cutting operations were conducted.

END OF SECTION

SECTION 001077 – REFERENCE STANDARDS

PART 1 - GENERAL

The Contractor will be responsible for the following facilities unless stated otherwise:

1.1 SCOPE

Various sections of specifications contain references to specific standards. Applicable portions of standards listed that are not in conflict with specification requirements are hereby made a part of Contract Documents.

1.2 RELATED SECTIONS

A. Section 01440 – Testing Laboratory Services

1.3 QUALITY ASSURANCE

- A. Modifications and exceptions to standards shall be considered as amendments and unmodified portions shall remain in effect.
- B. In case of conflict between standards, or between specifications and standards, most stringent requirement shall govern.
- C. Editions of standards shall be latest edition at time of bid openings, or contract award, as applicable, including any supplements or amendments thereto.

PART 2 – PRODUCTS

2.1 MATERIALS

A. Schedule of Standards

- 1. Reference standards are listed in various sections using abbreviations contained below.
- 2. Following schedule is partial; additional abbreviations and standards may not appear.

AA - Aluminum Association
AASHO - American Association of State Highway & Transportation Officials
ACI - American Concrete Institute
AIA - American Institute of Architects
AISC - American Institute of Steel Construction
AITC - American Institute of Timber Construction
ANSI - American National Standards Institute
APA - American Plywood Association

ASHRAE - American Society of Heating, Refrigeration, & Air-Conditioning Engineers
ASTM - American Society for Testing & Materials
AWS - American Welding Society
AWPA - American Wood Preservers Associations
AAMA - Architectural Aluminum Manufacturers Association
AWI - Architectural Woodwork Institute
BIA - Brick Institute of America
BHMA - Builders Hardware Manufacturers Association
CPSC - Consumer Product Safety Commission
CRA - California Redwood Association
CTI - Ceramic Tile Institute
CLFMA - Chain Link Fence Manufacturers Association
CRSI- Concrete Reinforcing Steel Institute
FM- Factory Mutual System
FS - Federal Specification
FGMA - Flat Glass Marketing Association
HPMA - Hardwood Plywood Manufacturers Association
MS - Military Specification
NAAMM - National Association of Architectural Metal Manufacturers
NCMA - National Concrete Masonry Association
NEMA -National Electrical Manufacturers Association
NFPA - National Fire Protection Association
NPCA - National Precast Concrete Association
OSHA - Occupational Safety & Health Act
PCA - Portland Cement Association
SMACNA - Sheet Metal & Air Conditioning Contractors National Association
SFPA - Southern Forest Products Association
SDI - Steel Deck Institute
SJI - Steel Joist Institute
TCA - Tile Council of America
UL - Underwriters Laboratories
WCLIB - West Coast Lumber Inspection Bureau
WWPA - Western Wood Products Association

END OF SECTION

SECTION 01340 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES SUBMITTALS

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Shop drawings, product data and sample submittal requirements.

1.2 GENERAL REQUIREMENTS

- A. Submittal procedures and requirements are specified in the General Conditions set forth by the Owner. Procedures will be finalized with Contractor at pre-construction conference.
- B. Contractor will provide submittal forms to complete and enclose with each set of submittal data.
- C. Submittal data will indicate which specification section and paragraph applies to that data.
- D. No work shall be fabricated or any product shipped to project site prior to Owner's approval of submittal.
- E. Submittal data is required on all specified items including those furnished exactly as specified.
- F. Refer to individual specification sections for required submittal data.
- G. Contractor shall maintain a permanent file of all approved submittals on project site.
- H. Submittal data shall be provided in one hard cover 3 ring notebook for each set of data.

1.3 IDENTIFICATION OF SUBMITTAL

- A. Submittals shall be identified as follows:
 - 1. Name of contractor, subcontractor, or material supplier originating submittal.
 - 2. Name and location of project.
 - 3. Index of items submitted.
 - 4. Identification of each material or item of equipment.
 - 5. Date of submittal.
 - 6. Contractor's certification.

1.4 NUMBER OF SUBMITTALS

- A. For submittals requiring bond prints, a sepia or other reproducible along with 2 bond copies shall be submitted for approval. Reproducible with attached submittal review comments by A/E will be returned to Contractor whereby he may take whatever steps necessary to make proper distribution of reviewed drawings. Maximum sheet size 24 inches by 36 inches.
- B. Submit five sets of brochures or manufacturer's published data.

1.5 TIME OF SUBMITTALS

- A. A/E will process submittals promptly and return as soon as possible. For lengthier and more complex submittals, allow minimum of 10 working days for review.

END OF SECTION

SECTION 01440 – TESTING AND LABORATORY CONTROL

PART 1 – GENERAL

Drawings, Standard General Conditions of Contract, Special Conditions and Division-1 specification sections, apply to work of this section.

1.1 DESCRIPTION

- A. Inspection, Testing, and Control: An independent testing laboratory (approved by the owner) selected and paid by the Contractor will perform the professional laboratory services described herein.
- B. Codes: Testing laboratory shall perform required inspections and tests in accordance with Building Code, Local Authorities, State Regulations and the specifications of ASTM and other respective technical societies.

1.2 WORK INCLUDED

Testing services may include, but are not limited to the following:

- A. Field Density Tests
- B. Moisture Content of Existing Subgrade
- C. Gradation Analyses
- D. Concrete Test Cylinders
- E. Concrete Source Quality Control
- F. Concrete Field Quality Control
- G. Keeping Inspection and testing Logs of Specified Inspections and Tests.
- H. Submitting to Engineer, Contractor, and Owner, certificates, records and reports of inspections and tests.

1.3 RESPONSIBILITY OF CONTRACTOR

- A. Testing services will be paid for by the contractor.
- B. Deliver to laboratory adequate quantities of representative sample of materials proposed for use which are required to be tested.
- C. Advise laboratory sufficiently in advance of construction operations to allow laboratory to complete any required check-tests and assign personnel for field inspection and testing as

- specified. Should cancellation or deployment of Testing Services be required after notification to laboratory has been given, Contractor shall be responsible for making such arrangements.
- D. Provide adequate facilities for safe storage and proper curing of concrete test samples on project site for the first 24 hours and also for subsequent field curing as required by ASTM Specifications C31.
 - E. Furnish such nominal labor as required to assist laboratory personnel in obtaining and handling samples at site.

1.4 AUTHORITY AND DUTIES OF LABORATORY PERSONNEL

- A. Laboratory personnel shall inspect and/or test materials, assemblies, specimens, and work performed including design mixes, methods and techniques as specified and report results to the Owner and Owner's Representative.
- B. Should it appear that the material furnished or work performed by the Contractor fails to meet requirements of Contract Documents, testing laboratory shall direct the attention of the Contractor and the Owner to such failure or infringement immediately.
- C. Testing laboratory personnel are not authorized to revoke, alter, relax, enlarge, or release any requirement of the Contract Documents, or to approve or to accept any portion of work.

PART 2 – EXECUTION

2.1 CAST-IN-PLACE CONCRETE

- A. Design Mixes
 - 1. Concrete mixtures shall adhere to the specifications - Refer to Section 03300, Cast-in-Place Concrete.
 - 2. At the beginning of the work, the batch plant shall submit proposed concrete mixes for review by the Owner's Representative, including the sieve analysis of fine and aggregate ASTM C-136, dry rodded weight of coarse aggregate - ASTM C-29, and the specific gravity (bulk saturated surface dry), of fine and coarse aggregates ASTM 127 and 128.
 - 3. Concrete shall not be mixed for placing until after laboratory reports reflect that each proposed mix will develop the strength required.
- B. Test Cylinders: At least one (1) test shall be made of each day's placement, for each type of concrete, for each fifty (50) cubic yards (or part thereof), on each different portion or section of the work. Test cylinders shall be 6"x12" and shall be made and tested by the laboratory. Each test shall consist of four (4) specimens, one (1) of which shall be broken at seven (7) days, two (2) of which shall be broken at twenty-eight (28) days, and one (1) held in reserve.
- C. Source Quality Control: An independent testing laboratory shall inspect and control concrete mixing and loading of transit mix trucks and control concrete mixing and loading of transit mix trucks at batch plant at beginning of each pour.

- D. Field Quality Control: At beginning of each concrete "pour" or from each mixer truck (at discretion of Owner), test for slump shall be performed in accordance with "Method of Slump Test for Consistency of Portland Cement" (ASTM C-143) unless waived by Owner's Representative. If slump is greater than that specified, concrete shall be rejected.
- E. The work represented by the items tested shall not be considered acceptable until the Owner has approved the test results.
- F. Should the final testing indicate that specifications have not been met, the Contractor will be responsible for performing work necessary to meet specifications.
- G. The testing laboratory should report any deviations from the specified directions for pouring of the concrete to the General Contractor and to the Owner immediately. Conditions at site shall be noted and recorded for each "pour".

END OF SECTION

SECTION 01500 – CONSTRUCTION FACILITIES

PART 1 – GENERAL

The Contractor will be responsible for the following facilities unless stated otherwise:

1.1 STORAGE SHEDS

The Contractor may provide on the premises at convenient locations with respect to building construction areas, suitable watertight storage sheds for storage of materials, equipment, and tools which might be damaged by exposure to weather; maintain same in good condition. Remove when no longer needed or relocate from time to time where preliminary location might interfere with subsequent work. Location of storage sheds shall be approved by Owner.

1.2 POWER AND LIGHT

- A. Obtain and have installed temporary electrical power service line to point convenient for and available to trades, including mechanical and other subcontractors. Pay for cost of current used.
- B. Install temporary lighting to maintain illumination in areas where work is being performed. Where practical, place temporary lights in locations where permanent lighting fixtures are to be installed.
- C. Pay for power until Substantial Completion is awarded by Owner.

1.3 SANITARY FACILITIES

Provide one or more toilet buildings for use of persons employed on job. Post notices, take such precautions as may be necessary, remove refuse deposited in or about buildings, and maintain premises in sanitary condition.

1.4 WATER

Obtain temporary water from local utility authority. Pay for costs for temporary water connections and water usage fees until Substantial Completion is awarded by Owner.

1.5 TRAFFIC CONTROL AND SAFETY

Provide traffic control and safety during construction. Meet City requirements or public safety, barriers, and traffic control. Coordinate with Owner during necessary street control.

1.6 PROTECTION OF THE PUBLIC

- A. Conduct work in manner to ensure least possible obstruction to public traffic and protect safety of public. Provide public safety and convenience.
- B. Locate materials placed on site, or materials excavated and construction materials or equipment used, to cause as little obstruction to public as possible.

- C. Owner reserves right to remedy any neglect on part of Contractor as regards to public convenience and safety which may come to its attention. Cost of such work done or material furnished by Owner shall be deducted from monies due or to become due to Contractor.

1.7 LIFTING AND HOISTING

Supply hoists, lifts, cranes, and towers as required for handling of various materials. Installation of equipment shall meet applicable safety requirements.

1.8 WATCHMAN AND JANITOR

- A. Employ watchman at such time as deemed necessary to protect or attend work. Make other security arrangement required during progress of work.
- B. Provide person or persons for janitor work who shall attend to temporary toilet rooms and keep them clean and supplied and keep construction areas broomed and relatively clean.

1.9 REMOVAL OF TEMPORARY FACILITIES

When temporary facilities are no longer needed for proper conduct of work, completely remove from project and repair or replace material, equipment, or finished surface damaged.

1.10 PARKING

All construction personnel parking shall be located in Storage Yard or areas authorized by Owner. Do not park vehicles or equipment under the dripline of existing trees.

1.11 STORAGE AND STOCKPILE OF EXCAVATED MATERIALS

Except for topsoil, excavated materials not utilized in earthwork process for fill shall be disposed of at off-site location.

1.12 SCAFFOLDING

Provide and install scaffolding, ramps, platforms, rails, guards, stairs, and ladders necessary for the performance of the work. All safety standards, ordinances, codes, and insurance requirements shall be met. All items shall be so constructed as to afford safety and protection to both craftsmen and their work.

1.13 DE-WATERING

Surface or subsurface water or other fluid shall not be permitted to accumulate in excavations or under or adjacent to any structures. Should such conditions develop, water and other fluids shall be controlled and disposed of by means of temporary pumps, piping, drain lines, ditches, dams or other approved methods.

1.14 SHORING

Temporary shoring required for installation of work shall be included. Assume responsibility for this work and make good damage caused by improper supports or failure of shoring in any respect.

1.15 FENCING

As needed for security and public safety, provide fencing around all areas of staging and work at a minimum of 6 feet in height, with 2-inch galvanized posts spaced 10 feet on center, well-braced, and having 2-inch diamond mesh chain link fabric. Fence shall be complete with sliding or swinging gates with necessary hardware and padlock. Provide two keys for Owner's use. Remove fencing and fill post holes upon completion of work. Provide fencing with fire gates as necessary for emergency access.

1.16 BARRICADES

Erect and maintain barricades to protect adjacent structures, paving, and lawns, from damage by construction vehicles and operations. Erect barricades where required to prevent injury to public.

1.17 FIRE PROTECTION

Provide fire and emergency access during construction. Comply with requirements of local fire official for fire safety during progress of work. Provide fire protection plan which shall be approved by Fire Marshall prior to beginning work.

1.18 TRENCH SAFETY

Provide shoring or safety slopes for trenches or excavations exceeding 5 feet in depth. Comply with requirements of Texas Trench Safety Law, Article 601B, Vernon's Texas Civil Statutes, and the City of The Colony requirements.

END OF SECTION

SECTION 01605 – WARRANTIES AND MAINTENANCE

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Warranties (guarantees), maintenance, service.

1.2 WARRANTIES (GUARANTEES)

- A. Provide written warranty and guarantee of all work against defects in materials, equipment, or workmanship for a period of one year from the date of substantial completion. Also provide any additional warranties and guarantees of work items and components as specified in individual sections of these specifications.

1.3 SERVICE

- A. Furnish necessary service to each electrical and mechanical system, such as adjustment of controls, air distribution, and water balancing valves, mechanical repair of equipment, and other work requiring specialized training, for the one year period, concurrent with warranty period specified.
- B. This shall not include repair of damage due to fire (unless fire results from faulty material or workmanship on part of Contractor), storm, vandalism, or other factors entirely beyond control of Contractor, nor shall it include routine service such as oiling motors, replacing lamps, or other work not requiring equipment and motors, cleaning filters, and replacing lamps.
- C. No additional compensation will be paid for work performed during one year warranty period.

PART 2 – EXECUTION

2.1 WARRANTIES

Product warranties and guarantees provided by subcontractors, suppliers, and manufacturers for specific items such as building components, mechanical equipment, air conditioners, unit heaters, water heaters, and water coolers will be filled in by Contractor. Owner's name is the City of Lamesa. Show model numbers, serial numbers, date installed or accepted as required to complete warranty/guarantee forms.

END OF SECTION

SECTION 01610 – PRODUCT HANDLING

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Transportation, handling, storage protection of materials and equipment

PART 2 – EXECUTION

2.1 PACKAGING AND TRANSPORTATION

- A. Instruct suppliers to package products in containers which will provide protection during shipment, handling, and storage. Protect sensitive products against exposure to elements, moisture, and physical damage.
- B. Deliver products in undamaged, dry condition, in original unopened containers or packaging with identifying labels intact and legible.
- C. Delivery of Owner supplied structures shall be the responsibility of the contractor.
- D. Do not deliver products or materials prior to 60 days before scheduled beginning of installation for each respective product or material type.

2.2 STORAGE AND PROTECTION

- A. Store products, immediately on delivery, in accordance with manufacturer's instructions. Protect until installed.
- B. Upon delivery of Owner supplied structures (pavilions and park entry signage) the contractor assumes all responsibilities for storage and protecting of these structures.
- C. Water-tight storage facilities of suitable size, with floors raised above the ground shall be provided for all types of materials liable to damage from exposure to the weather; other materials shall be stored on blocks of the ground. Materials shall be placed as to permit easy access for proper inspection and identification. All material shall be stored according to manufacturer's recommendations. Any material which has deteriorated, become damaged or otherwise unfit for use, shall not be used in work. Upon completion of all work, or when directed, remove storage facility construction from the site. During construction, open ends of all drains, piping conduit, and all openings in equipment shall be closed before leaving the work at any time as to prevent the entrance of all foreign matter.

2.3 MAINTENANCE OF EQUIPMENT IN STORAGE

- A. For mechanical and electrical equipment in long-term storage, provide manufacturer's service instructions to accompany each item, with notice of enclosed instructions shown on exterior of package.**
- B. Service equipment on a regularly scheduled basis, maintaining a log of services; submit as a record document.**

END OF SECTION

SECTION 01630 – PRODUCT OPTIONS, EQUAL MATERIALS, AND SUBSTITUTIONS

PART 1 – GENERAL

1.1 SECTION INCLUDES

Procedures and requirements for substitution of materials, products, or equipment other than that specified.

1.2 CONTRACTOR'S OPTIONS

- A. For products specified only by reference standards, select any product meeting standards, by any manufacturer.
- B. For products specified by naming several products or manufacturers, select any product and manufacturer named.
- C. For products specified by naming only one product and manufacturer, there is no option unless substitution is approved as specified. Products of other manufacturers shall meet minimum performance criteria specified or quality of product description.
- D. For products specified by naming only one product and manufacturer, followed by the words "No Substitution," there is no option.

1.3 SUBSTITUTIONS

- A. Submit equal materials substitution requests to the Consultant no less than 10 days prior to the bid deadline. Submit equal material substitution requests on form provided in this section. If substitution requests are approved, they will be confirmed by Addendum issued not less than seven days prior to the bid date.
- B. Substitutions will only be considered after bid opening for following:
 - 1. Substitution is required for compliance with subsequent interpretations of code or insurance requirements;
 - 2. Specified product is unavailable through no fault of Contractor;
 - 3. Manufacturer or fabricator refuses to certify or guarantee specified product as required.
 - 4. Subsequent information reveals that specified product is unable to perform properly or to fit in the designated space; or
 - 5. In A/E's sole judgment, substitution would be in Owner's best interest.
- C. Post-bid substitution requests will not be considered unless there are significant extenuating circumstances, such as unavailability of a product because of actions by the manufacturer. If post-bid substitutions are required, follow the requirements for pre-bid substitutions.
- D. Substitution will not be approved if implementation would require a substantial revision to construction documents.

- E. Requests for substitutions shall be considered only when Contractor submits the following in writing:
 - 1. Statement by Contractor that proposed substitution is in full compliance with Contract Documents and applicable codes.
 - 2. Complete technical data including applicable drawings, complete specifications, test data, samples and performance tests of the article proposed for substitution.
 - 3. List of all trades affected by substitution.
 - 4. Indication of resulting contract cost adjustment.
- F. Contractor shall be responsible for effects upon related work and additional costs generated by substitution approval. Furthermore, Contractor shall agree in writing to bear cost of A/E's time, at rate of 2.55 times the direct salary cost, for review of substitution requests, whether the substitution is approved or not.

1.4 EQUAL MATERIALS

- A. Burden of proof that proposed material substitution is equal to that specified is Contractor's responsibility. Owner shall be the final judge of a proposed substitutions ability to meet the construction document requirements.
- B. In evaluating equal materials, Owner may consider local representation and availability of parts, service, etc. When local services are available for specified materials, the lack of these services may be regarded as sufficient cause for disapproval of substitutions.
- C. Equipment Equals: Equipment specified is intended to establish standards of design, quality and capacities. Proposed substitutions shall be equal in such features as noise level, power requirements, metal gauges, vibration attenuation, finish, appearance, certification of recognized testing agencies and standard bureaus, allowable working pressures, physical size and arrangement so far as effects installation in the available space, factory applied insulation, electrical devices, capacity reduction facilities, access to internal parts, pressure losses, operating speeds, coil face areas, fan diameter, operating efficiencies, and all other features and capacities specified herein.

1.5 REQUEST FOR SUBSTITUTION

- A. Submit three copies of request for each item proposed for substitution.
- B. Use Substitution Request Form as provided by construction manager.
- C. Identify product by Specifications section and Article numbers. Provide manufacturer's name and address, trade name of product, and model or catalog number. List fabricators and suppliers as appropriate.
- D. List similar projects using product, dates of installation, and names of Consultant and Owner.

1.6 CONTRACTOR REPRESENTATION

- A. Request for substitution constitutes a representation that Contractor has investigated proposed product and has determined that it is comparable or superior in every respect to specified product.
- B. Coordinate installation of accepted substitute, making such changes as may be required for Work to be complete.
- C. Certify that cost data presented is complete and includes related cost generated by the substitution.
- D. Waive claims for additional costs related to substitution which may later become apparent.

1.7 MECHANICAL AND ELECTRICAL SUBSTITUTIONS

Shop drawings and data shall thoroughly document substitutions of mechanical and electrical equipment and Contractor shall be fully responsible for changes generated elsewhere by the substitution.

END OF SECTION

SECTION 01710 – CLEANING

PART 1 – GENERAL

Drawings, Standard General Conditions of Contract, Supplementary Conditions and Division-1 Specification Sections, apply to work of this section.

1.1 DESCRIPTION

Cleaning during period of construction and at completion of the work.

1.2 DISPOSAL REQUIREMENTS

Conduct cleaning and disposal operation to comply with codes, ordinances, regulations, and anti-pollution laws.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Use only those cleaning materials which will not create hazards to health or property and which will not damage surfaces.
- B. Comply with manufacturer's recommendations.

PART 3 – EXECUTION

3.1 DURING CONSTRUCTION

- A. The site and adjacent properties shall be kept free from accumulations of waste materials, rubbish, and wind blown debris, resulting from construction operations.
- B. Provide on-site containers for the collection of waste materials, debris and rubbish.
- C. Remove waste materials, debris and rubbish from the site daily and dispose at a legal disposal area away from the site.

3.2 DUST CONTROL

Schedule operations so that dust and other contaminants resulting from cleaning process will not fall on wet or newly coated surfaces.

3.3 FINAL CLEANING

- A. Employ skilled workmen for final cleaning
- B. See Section 01705 - Project Closeout.

END OF SECTION

SECTION 01720 – PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

Drawings, Standard General Conditions of Contract, Supplementary Conditions and Division 1 Specification Sections, apply to work of this section.

PART 2 – EXECUTION

2.1 PROJECT RECORD DOCUMENTS

Maintain at the site one record copy of the following:

- A. Drawings - Prints of drawings shall be clearly marked Record Prints.
- B. Specifications
- C. Addenda
- D. Change Orders and Written Instructions
- E. Field Orders and Written Instructions
- F. Submittals
 - 1. Shop Drawings
 - 2. Product Data
 - 3. Samples
 - 4. Substitutions
 - 5. Field Test Reports

2.2 STORAGE AND MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Store Record Documents and samples in Field Office apart from documents used for construction.
- B. Label documents other than drawing Record Documents and file documents and samples in accordance with Section number listings in Table of Contents of these specifications.
- C. Keep Record Documents and samples available for inspection by the Owner.

2.3 DRAWINGS

Record actual construction of:

- A. Horizontal and vertical locations of underground or concealed utilities and apparatus referenced to permanent features visible at surface.
- B. Field changes or dimensions and detail.
- C. Changes made by Field Order or by Change Order.
- D. Details not on original drawings.

2.4 SPECIFICATIONS AND ADDENDA

Record in each section changes made by Addenda, Change Order, and Field Order.

2.5 SUBMITTALS

Prior to final inspection, deliver Record Documents to Owner.

2.6 OWNER INSPECTION OF PROJECT RECORD DOCUMENTS

Inspection by Owner shall be a minimum of once monthly. Owner's verification that documents are current shall be a requirement for issuance of Certificate of Payment.

END OF SECTION

SECTION 01740 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 – GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for the following:
 - 1. Disposing of nonhazardous demolition and construction waste.
- B. Related Requirements:
 - 1. Section 311000 "Site Clearing" for disposition of waste resulting from site clearing and removal of above- and below-grade improvements.
 - 2. Section 312000 "Earth Moving" for excavation at structures, paving

1.2 DEFINITIONS

- A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.
- C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
- E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.

PART 1 - PRODUCTS (Not Used)

PART 2 - EXECUTION

2.1 PLAN IMPLEMENTATION

- A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.

- B. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work occurring at Project site.
- C. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - 1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.
 - 2. Comply with Section 01500 "Construction Facilities" for controlling dust and dirt, environmental protection, and noise control.

2.2 DISPOSAL OF WASTE

- A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
 - 1. Except as otherwise specified, do not allow waste materials that are to be disposed of to accumulate on-site.
 - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- A. Burning: Do not burn waste materials.
- B. Disposal: Remove waste materials from Owner's property and legally dispose of them.

END OF SECTION

SECTION 02270 – EROSION AND SEDIMENT CONTROL

PART 1 – GENERAL

1.1 SUMMARY

- A. Furnish all labor, equipment and materials needed to complete the Work as shown on the Plans and specified herein.
- B. The work performed under this section shall comply with the plan requirements for this project and with the requirements and intent of the NPDES Storm Water Discharge Permit program to the extent that it applies to this project.

1.2 RELATED SECTIONS

- A. Section 02220 - EARTHWORK
- B. Section 02930 – HYDRAULIC SEEDING

1.3 QUALITY ASSURANCE

- A. Comply with applicable requirements of all governing authorities having jurisdiction. The Specifications and the Plans are not represented as being comprehensive, but rather to convey the intent to provide complete slope protection and erosion control for both the Owner's and adjacent property.
- B. Erosion control measures shall be established at the beginning of construction and maintained during the entire length of construction. On-site areas which are subject to severe erosion and off-site areas which are especially vulnerable to damage from erosion and/or sedimentation are to be identified and receive additional erosion control measures as directed by the Owner.
- C. All land-disturbing activities shall be planned and conducted to minimize the size of the area to be exposed at any one time and to minimize the time of exposure.
- D. Surface water runoff originating upgrade of exposed area shall be controlled to reduce erosion and sediment loss during the period of exposure.
- E. When the increase in the peak rates and velocity of storm water runoff resulting from a land-disturbing activity is sufficient to cause accelerated erosion of the receiving ditch or stream, the Contractor shall install measures to control both the velocity and rate of release so as to minimize accelerated erosion and increased sedimentation of the stream as directed by the Owner.
- F. All land-disturbing activities shall be planned and conducted so as to minimize off-site sedimentation damage.
- G. The Contractor shall be responsible for periodically cleaning out and disposing of all sediment once the storage capacity of the drainage feature or structure receiving the

sediment is reduced by one-half. The Contractor shall also be responsible for cleaning out and disposing of all sediment at the time of completion of the Work.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Silt Fence Fabric:
 - 1. Mirafi 100X or approved equivalent.
 - 2. Minimum bursting strength: 300 psi.
 - 3. Edges treated to prevent unraveling.
 - 4. Furnished with o-rings or clips to facilitate attachment to woven wire fabric.
- B. Wire Fencing: Steel wire fencing (hog wire) with minimum 14 gauge wire and a maximum 14 gauge wire and a maximum opening of 6 inches.
- C. Posts:
 - 1. Steel, T-section minimum 4 feet 6 inches long, minimum of 1.3 pounds per foot without anchor plate.
 - 2. Anchor plate attached before coating.
 - 3. Fabricate with lugs or other approved means to prevent vertical movement from the wire fencing.
- D. Tie Wire: Galvanized in accordance with ASTM A112.
- E. Temporary cover for graded areas shall be undamaged, air dry threshed straw free from weed seeds.

PART 3 - EXECUTION

- 3.1 Prepare and implement Storm Water Pollution Prevention Plan (SWPPP or SWP3) Best Management Practices (BMPs). The Contractor shall be responsible for developing the Best Management Practices plan and modifying, if necessary throughout the project. The Contractor shall install, monitor and repair all erosion control devices until areas are re-vegetated.
- 3.2 CONDITION OF SUBSTRATE:
 - A. Erosion control measures must be implemented prior to the commencement of any soil disturbing activity.

- B. Stabilize fill and grade of areas to receive soil erosion and sediment control in accordance with Section 02220, "EARTHWORK". Maintain positive drainage to sediment and erosion control devices during and after grading operations.

3.3 SILT FENCE:

- A. Install steel posts on a minimum of 4-foot centers. Minimum embedment of 6".
- B. Minimum height of the silt fence to be 2 feet with a 6-inch clearance between the top of the silt fence and the top of the posts.
- C. Install the steel posts on a slight angle towards the anticipated runoff surface.
- D. Trench in the toe of the silt fence so that the down slope face of the trench is flat and perpendicular to the line of flow.
- E. Minimum trench depth: 6 inches.
- F. Trench width: 6 inches.
- G. Attach wire fence (hog wire) to the posts.
- H. Attach the silt fence fabric to the wire fence (hog wire) and secure with a minimum of two wire ties per post.
- I. Backfill over the silt fence fabric in the trench.
- J. When build up of soil, silt, or any other material behind the silt fence reaches a height of 6 inches or when the silt fence is no longer functioning efficiently, remove all accumulated material and repair the silt fence as needed.

3.4 DUST CONTROL

- A. Dust control of the Contractor's performance of the Work shall be performed by the Contractor by applying water.
- B. Dust control shall be provided in the amounts and locations as ordered by the Owner's Representative.

3.5 PROTECTION AND MAINTENANCE:

- A. Protect erosion and sediment control devices from damage. Repair and replace dikes, silt fences and other measures when damaged by construction, natural and other physical causes. All soil erosion and sediment control devices shall be repaired or replaced at the expense of the Contractor and shall function as originally intended.
- B. Periodically (at least once every 7 days and after each rainfall event) inspect and maintain erosion and sediment control structures, until final stabilization of disturbed ground areas is achieved.

- C. All stock piled soil shall be surrounded by a silt fence to properly control sediment runoff.
- D. Inspection services provided by the Owner's Representatives do not relieve the Contractor's responsibility for inspection and maintenance of the erosion control measures.
- E. The Contractor is responsible for modifying or providing additional erosion control devices to control erosion from his operations on the site. This may become necessary due to disturbance of additional areas or phasing of the Contractor's operations.

3.6 STAGING AREAS:

At such time when the specific location of the staging areas are determined, silt fences, diversions, or equivalent sediment controls are required for all side slope and down slope boundaries of the staging area and shall be provided by the Contractor. The erosion control plan for each staging area shall be approved by the Owner's Representative and devices shall be in place prior to occupation of the staging areas. All relative material and labor to construct and maintain the staging area erosion control plans shall be subsidiary to the other items of work.

- 3.7 The Contractor shall be responsible for complying with the Storm Water Pollution Prevention Plan as provided by Owner's Representative.

END OF SECTION

SECTION 024119 - SELECTIVE DEMOLITION

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes:

1. Demolition and removal of selected site elements.
2. Salvage of existing items to be reused or recycled.

1.2 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.
- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

1.3 INFORMATIONAL SUBMITTALS

- A. Pre-Demolition photographs.

1.4 CLOSEOUT SUBMITTALS

- A. Inventory of items that have been removed and salvaged.

1.5 FIELD CONDITIONS

- A. Notify Landscape Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- B. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
1. If suspected hazardous materials are encountered, do not disturb; immediately notify Landscape Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.
- C. Storage or sale of removed items or materials on-site is not permitted.
- D. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
1. Maintain fire-protection facilities in service during selective demolition operations.

1.6 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials and using approved contractors so as not to void existing warranties.

PART 2 – PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ASSE A10.6 and NFPA 241.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- B. Inventory and record the condition of items to be removed and salvaged.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.

3.3 PROTECTION

- A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
- B. Temporary Shoring: Design, provide, and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
- C. Remove temporary barricades and protections where hazards no longer exist.

3.4 SELECTIVE DEMOLITION

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:

1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
 2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 3. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
 4. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 5. Dispose of demolished items and materials promptly.
- B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
- C. Removed and Salvaged Items:
1. Clean salvaged items.
 2. Store items in a secure area until delivery to Owner.
 3. Protect items from damage during transport and storage.
- D. Removed and Reinstalled Items:
1. Clean and repair items to functional condition adequate for intended reuse.
 2. Protect items from damage during transport and storage.
 3. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
- E. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Landscape Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.5 CLEANING

- A. Remove demolition waste materials from Project site and dispose of them in an EPA-approved construction and demolition waste landfill acceptable to authorities having jurisdiction.
1. Do not allow demolished materials to accumulate on-site.
 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn demolished materials.

- C. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION

SECTION 033000 – CAST IN PLACE CONCRETE

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies cast-in-place concrete, including reinforcement, concrete materials, mix design, placement procedures, and finishes.
- B. Related Sections include the following:
 - 1. Division 31 Section “Earth Moving” for drainage fill under slabs-on-grade.

1.3 SUBMITTALS

- A. General: In addition to the following, comply with submittal requirements in ACI 301.
- B. Product Data: For each type of manufactured material and product indicated.
- C. Design Mixes: For each concrete mix.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer who has completed concrete work similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
- B. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products complying with ASTM C 94 requirements for production facilities and equipment.
- C. Source Limitations: Obtain each type of cement of the same brand from the same manufacturer’s plant, each aggregate from one source, and each admixture from the same manufacturer.
- D. Comply with ACI 301, “Specification for Structural Concrete,” including the following, unless modified by the requirements of the Contract Documents.
 - 1. General requirements, including submittals, quality assurance, acceptance of structure, and protection of in-place concrete.
 - 2. Formwork and form accessories.
 - 3. Steel reinforcement and supports.
 - 4. Concrete mixtures.
 - 5. Handling, placing, and constructing concrete.

6. Lightweight concrete.

PART 2 – PRODUCTS

2.1 FORMWORK

- A. Furnish formwork and form accessories according to ACI 301.

2.2 STEEL REINFORCEMENT

- A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60, deformed.
- B. Plain-Steel Wire: ASTM A 82, as drawn.
- C. Plain-Steel Welded Wire Fabric: ASTM A 185, fabricated from as-drawn steel wire into flat sheets.
- D. Deformed-Steel Welded Wire Fabric: ASTM A 497, flat sheet.

2.3 CONCRETE MATERIALS

- A. Portland Cement: ASTM C 150, Type I.
- B. Portland Cement: ASTM C 150, Type II.
- C. Portland Cement: ASTM C 150, Types I or II or Type I/II.
- D. Normal-Weight Aggregate: ASTM C 33, uniformly graded, not exceeding 1-1/2-inch nominal size.
- E. Lightweight Aggregate: ASTM C 330.
- F. Water: Potable and complying with ASTM C 94.

2.4 ADMIXTURES

- A. General: Admixtures certified by manufacturer to contain not more than 0.1 percent water-soluble chloride ions by mass of cement and to be compatible with other admixtures. Do not use admixtures containing calcium chloride.
- B. Air-Entraining Admixture: ASTM C 260.
- C. Water-Reducing Admixture: ASTM C 494, Type A.
- D. High-Range, Water-Reducing Admixture: ASTM C 494, Type F.
- E. Water-Reducing and Accelerating Admixture: ASTM C 494, Type E.
- F. Water-Reducing and Retarding Admixture: ASTM C 494, Type D.

2.5 RELATED MATERIALS

- A. Vapor Retarder: Multi-ply reinforced polyethylene sheet, ASTM E 1745, Class C, not less than 7.8 mils thick; or polyethylene sheet, ASTM D 4397, not less than 10 mils thick.
- B. Fine-Graded Granular Material: Clean mixture of crushed stone, crushed gravel, and manufactured or natural sand; ASTM D 448, Size 10, with 100 percent passing a No. 4 sieve and 10 to 30 percent passing a No. 100 sieve; complying with deleterious substance limits of ASTM C 33 for fine aggregates.
- C. Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber, or ASTM D 1752, cork or self-expanding cork.

2.6 CURING MATERIALS

- A. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.
- B. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. dry.
- C. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
- D. Water: Potable.
- E. Clear, Solvent-Borne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B.
- F. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B.
- G. Clear, Solvent-Borne, Membrane-Forming Curing and Sealing Compound: ASTM C 1315, Type 1, Class A.
- H. Clear, Waterborne, Membrane-Forming Curing and Sealing Compound: ASTM C 1315, Type 1, Class A.

2.7 CONCRETE MIXES

- A. Comply with ACI 301 requirements for concrete mixtures.
- B. Prepare design mixes, proportioned according to ACI 301, for normal-weight concrete determined by either laboratory trial mix or field test data bases, as follows:
 - 1. See Plans, Sheet S1.0 for mix design requirements.

2.8 CONCRETE MIXING

- A. Ready-Mixed Concrete: Comply with ASTM C 94.

- B. Ready-Mixed Concrete: Comply with ASTM C 94 and ASTM C 1116.
 - 1. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.
- C. Project-Site Mixing: Measure, batch, and mix concrete materials and concrete according to ASTM C 94. Mix concrete materials in appropriate drum-type batch machine mixer.
 - 1. For mixer capacity of 1 cu. Yd. or smaller, continue mixing at least one and one-half minutes, but not more than five minutes after ingredients are in mixer, before any part of batch is released.
 - 2. For mixer capacity larger than 1 cu. Yd., increase mixing time by 15 seconds for each additional 1 cu. Yd..
 - 3. Provide batch ticket for each batch discharged and used in the Work, indicating Project identification name and number, date, mix type, mix time, quantity, and amount of water added. Record approximate location of final deposit in structure.

PART 3- EXECUTION

3.1 FORMWORK

- A. Design, construct, erect, shore, brace, and maintain formwork according to ACI 301.

3.2 VAPOR RETARDER

- A. Install, protect, and repair vapor-retarder sheets according to ASTM E 1643; place sheets in position with longest dimension parallel with direction of pour.
- B. Lap joints 6 inches and seal with manufacturer's recommended tape.
 - 1. Cover vapor retarder with fine-graded granular material, moisten, and compact with mechanical equipment to elevation tolerances of plus 0 inch or minus $\frac{3}{4}$ inch.

3.3 STEEL REINFORCEMENT

- A. Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.
 - 1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.

3.4 JOINTS

- A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.
- B. Construction Joints: Locate and install so as not to impair strength or appearance of concrete, at locations indicated or as approved by Architect.

- C. Isolation Joints: Install joint-filler strips at junctions with slabs-on-grade and vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.
 - 1. Extend joint fillers full width and depth of joint, terminating flush with finished concrete surface, unless otherwise indicated.
- D. Contraction (Control) Joints in Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of the concrete thickness, as follows:
 - 1. Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint with groover tool to a radius of 1/8 inch. Repeat grooving of contraction joints after applying surface finishes. Eliminate groover marks on concrete surfaces.
 - 2. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch- wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.

3.5 CONCRETE PLACEMENT

- A. Comply with recommendations in ACI 304R for measuring, mixing, transporting, and placing concrete.
- B. Do not add water to concrete during delivery, at Project site, or during placement.
- C. Consolidate concrete with mechanical vibrating equipment.

3.6 FINISHING FORMED SURFACES

- A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defective areas repaired and patched, and fins and other projections exceeding ¼ inch in height rubbed down or chipped off.
 - 1. Apply to concrete surfaces not exposed to public view.
- B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defective areas. Completely remove fins and other projections.
 - 1. Apply to concrete surfaces exposed to public view or to be covered with a coating or covering material applied directly to concrete, such as waterproofing, dampproofing, veneer plaster, or painting.
 - 2. Do not apply rubbed finish to smooth-formed finish.
 - 3. Apply the following rubbed finish, defined in ACI 301, to smooth-formed finished concrete.
 - a. Smooth-rubbed finish.
 - b. Grout-cleaned finish.
 - c. Cork-floated finish.

- C. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces, unless otherwise indicated.

3.7 FINISHING UNFORMED SURFACES

- A. General: Comply with ACI 302.1R for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.
- B. Screed surfaces with a straightedge and strike off. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane before excess moisture or bleedwater appears on the surface.
 - 1. Do not further disturb surfaces before starting finishing operations.
- C. Scratch Finish: Apply scratch finish to surfaces to receive concrete floor topping or mortar setting beds for ceramic or quarry tile, ortland cement terrazzo, and other bonded cementitious floor finish, unless otherwise indicated.
- D. Float Finish: Apply float finish to surfaces indicated, to surfaces to receive trowel finish, and to floor and slab surfaces to be covered with fluid-applied or sheet waterproofing, built-up or membrane roofing, or sand-bed terrazzo.
- E. Trowel Finish: Apply a hard trowel finish to surfaces indicated and to floor and slab surfaces exposed to view or to be covered with resilient flooring, carpet, ceramic or quarry tile set over a cleavage membrane, paint, or another thin film-finish coating system.
- F. Trowel and Fine-Broom Finish: Apply a partial trowel finish, stopping after second troweling, to surfaces indicated and to surfaces where ceramic or quarry tile is to be installed by either thickset or thin-set methods. Immediately after second troweling, and when concrete is still plastic, slightly scarify surface with a fine broom.
- G. Nonslip Broom Finish: Apply a nonslip broom finish to surfaces indicated and to exterior concrete platforms, steps, and ramps. Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route.

3.8 TOLERANCES

- A. Comply with ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."

3.9 CONCRETE PROTECTION AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection, and follow recommendations in ACI 305R for hot-weather protection during curing.
- B. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.

- C. Begin curing after finishing concrete, but not before free water has disappeared from concrete surface.
- D. Curing Methods: Cure formed and unformed concrete for at least seven days by moisture curing, moisture-retaining-cover curing, curing compound, or a combination of these as follows:
 - 1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
 - a. Water.
 - b. Continuous water-fog spray.
 - c. Absorptive cover, water saturated and kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorptive covers.
 - 2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
 - 3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

3.10 FIELD QUALITY CONTROL

- A. Testing Agency: Contractor will engage a qualified independent testing and inspecting agency to sample materials, perform tests, and submit test reports during concrete placement. Tests will be performed according to ACI 301.
 - 1. Testing Frequency: Obtain one composite sample for each day's pour of each concrete mix exceeding 5 cu. Yd., but less than 25 cu. Yd., plus one set for each additional 50 cu. Yd. or fraction thereof.
 - 2. Testing Frequency: Obtain at least one composite sample for each 100 cu. Yd. or fraction thereof of each concrete mix placed each day.

3.11 REPAIRS

- A. Remove and replace concrete that does not comply with requirements in this Section.

END OF SECTION

SECTION 044313 – ANCHORED STONE MASONRY VENEER

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes:

1. Stone masonry anchored to grout infill

B. Related Requirements

1. Section 047200 Cast Stone Masonry

1.2 ACTION SUBMITTALS

A. Product Data: For each variety of stone, stone accessory, and manufactured product.

B. Samples:

1. For each stone type indicated.
2. For each color of mortar required.

1.3 FIELD CONDITIONS

A. Protection of Stone Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work.

B. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Comply with cold-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40°F and above and will remain so until masonry has dried.

C. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

1.4 QUALITY ASSURANCE

A. Field Supervision: Require stone mason subcontractor specialist firm to maintain an experienced full-time supervisor on the job site during times that stone masonry work and cleaning are in progress.

B. Field-Constructed Mockups: Prior to start of general masonry work, prepare the following sample panels where directed by Landscape Architect. Prepare sample panels using same materials and methods proposed for the Work, and under same weather conditions to be expected during time of the Work. Obtain Landscape Architects acceptance of visual qualities before proceeding with the Work. Retain acceptable panels in an undisturbed condition,

suitably marked, during construction as a standard for judging the completed Work.

1. Store Masonry: Demonstrate materials and methods to be used on a sample panel approximately 5' long x 2'-3' tall.
2. Source of Materials: Obtain materials for stone masonry work from a single source for each type material required (stone, cement, sand, etc.) to ensure a match of quality, color, pattern, and texture to existing stone walk.

1.5 QUALITY ASSURANCE

- A. Source of Materials: Obtain materials for stone masonry work from a single source for each type material required (stone, cement, sand, etc.) to ensure a match of quality, color, pattern, and texture to existing stone walk.
- B. Carefully pack, handle, and ship stone and accessories strapped together in suitable packs or pallets, or in crates or heavy-duty containers. Unload and handle to prevent chipping and breaking.
- C. Deliver other materials to Project site in manufacture's original and unopened containers and packaging, bearing labels as to type and names of products and manufacturers.
- D. Protect masonry restoration materials during storage and construction from rain, snow, and ground water, and from staining or missing with soil and other materials.
- E. Protect grout, mortar, and other materials from deterioration by moisture and temperature. Store in a dry place or in waterproof containers. Keep containers tightly closed and away from open flames. Protect liquid components from freezing.
- F. Comply with manufacture's recommendations for minimum and maximum temperature requirements for storage.

1.6 PROJECT CONDITIONS

- A. Do not mortar joints unless air temperature is greater than 40°F and will remain so for at least 48 hours after completion of Work.
- B. Apply stone only when surface and air temperatures are between 50°F and 90°F and rain is not expected within 24 hours.
- C. Stain Prevention: Prevent grout, mortar and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.
 1. Protect base of walls from rain-splashed mud and mortar splatter by coverings spread on ground and over wall surface.
 2. Protect sills, ledges and projections from mortar droppings.

PART 2 – PRODUCTS

2.1 SAN SABA STONE

A. Varieties and Sources: Subject to compliance with requirements, provide the following:

1. SAN SABA Stone Veneer, Random Pattern, 4" Veneer, with natural cleft face. Dark Brown to Tan Color Range. Remove all Orange colored stone. Available at: Corona Stone, 4000 N. County Rd. 1150, Midland, Texas 79705, 432.701.0849, Contact: Jackson Noel.

2.2 MORTAR MATERIALS

A. Portland Cement: ASTM C 150, Type I or Type II, except Type III may be used for cold-weather construction; natural color or white cement may be used as required to produce mortar color indicated.

1. Low-Alkali Cement: Not more than 0.60 percent total alkali when tested according to ASTM C 114.

B. Hydrated Lime: ASTM C 207, Type S.

C. Mortar Pigments: Natural and synthetic iron oxides and chromium oxides, compounded for use in mortar mixes and complying with ASTM C 979. Use only pigments with a record of satisfactory performance in stone masonry mortar.

1. Provide Lambert Dark Buff Pigment

D. Aggregate: Masonry Sand ASTM C 144 and as follows:

1. For pointing mortar, use aggregate graded with 100 percent passing No. 16 sieve.

E. Water: Potable; Clean, free of oils, acids, alkalis, and organic matter.

2.3 VENEER ANCHORS

A. Materials:

1. Hot-Dip Galvanized, Carbon-Steel Wire: ASTM A 82/A 82M; with ASTM A 153/A 153M, Class B-2.

B. Corrugated-Metal Veneer Anchors: Not less than 16 gauge – thick by 1 1/4 – wide hot-dip galvanized -steel sheet with corrugations having a wavelength of 0.3 to 0.5 inch and an amplitude of 0.06 to 0.10 inch.

C. Adjustable, Screw-Attached Veneer Anchors: Units consisting of a wire tie section and a metal anchor section that allow vertical adjustment but resist tension and compression forces perpendicular to plane of wall, for attachment over sheathing to wood or metal studs, and as follows:

1. Structural Performance Characteristics: Capable of withstanding a 100-lbf load in both tension and compression without deforming or developing play in excess of 0.05 inch.

2.4 FABRICATION

- A. Select stone to produce pieces of thickness, size, and shape indicated, including details on Drawings and pattern specified in "Setting Stone Masonry" Article.
 - 1. Shape stone specified to be laid in, random range pattern.
- B. Thickness of Stone: Provide thickness indicated, but not less than the following:
 - 1. Thickness: 4 inches plus or minus 1/2 inch.
- C. Finish exposed stone faces and edges to comply with requirements indicated for finish and to match approved samples.
 - 1. Finish: Natural cleft.

2.5 MORTAR MIXES

- A. General: Do not use admixtures unless otherwise indicated.
 - 1. Do not use calcium chloride.
 - 2. Use portland cement-lime mortar unless otherwise indicated.
 - 3. Mixing Pointing Mortar: Thoroughly mix cementitious and aggregate materials together before adding water. Then mix again, adding only enough water to produce a damp, unworkable mix that will retain its form when pressed into a ball. Maintain mortar in this dampened condition for one to two hours. Add remaining water in small portions until mortar reaches required consistency. Use mortar within 30 minutes of final mixing; do not retemper or use partially hardened material.
- B. Mortar for Stone Masonry: Comply with ASTM C 270, Proportion Specification.
 - 1. Mortar for Setting Stone and Fill: Type S.
 - 2. Mortar for Pointing Stone: Type N.
- C. Pigmented Mortar: Use colored cement product or select and proportion pigments with other ingredients to produce color required. Do not add pigments to colored cement products.
 - 1. Pigments shall not exceed 10 percent of portland cement by weight.

PART 3 – EXECUTION

3.1 SETTING STONE MASONRY

- A. Perform necessary field cutting and trimming as stone is set.
 - 1. Use hammer and chisel to split stone that is fabricated with split surfaces.

- B. Sort stone before it is placed in wall to remove stone that does not comply with requirements relating to aesthetic effects, physical properties, or fabrication, or that is otherwise unsuitable for intended use.
- C. Arrange stones in uncoursed rubble pattern with joint widths within tolerances indicated.
- D. Arrange stones with color and size variations uniformly dispersed for an evenly blended appearance.
- E. Maintain uniform joint widths except for variations due to different stone sizes and where minor variations are required to maintain bond alignment if any. Lay walls with joints not less than 3/8 inch at narrowest points or more than 1 inch at widest points.

3.2 INSTALLATION OF ANCHORED STONE MASONRY

- A. Anchor stone masonry to unit masonry with wire anchors unless otherwise indicated. Connect anchors to masonry joint reinforcement with vertical rods inserted through anchors and through eyes of masonry joint reinforcement projecting from unit masonry.
- B. Embed veneer anchors in mortar joints of stone masonry at least halfway, but not less than 1-1/2 inches, through stone masonry and with at least a 5/8-inch cover on exterior face.
- C. Space anchors not more than 18 inches o.c. vertically and 32 inches o.c. horizontally, with not less than one anchor per 2.67 sq. ft. of wall area. Install additional anchors within 12 inches of openings, sealant joints, and perimeter at intervals not exceeding 12 inches.
- D. Rake out joints for pointing with mortar to depth of not less than 3/4 inch before setting mortar has hardened. Rake joints to uniform depths with square bottoms and clean sides.
- E. Fill voids between veneer in walls/columns with mortar fill

3.3 POINTING

- A. Prepare stone-joint surfaces for pointing with mortar by removing dust and mortar particles. Where setting mortar was removed to depths greater than surrounding areas, apply pointing mortar in layers not more than 3/8 inch deep until a uniform depth is formed.
- B. Point stone joints by placing and compacting pointing mortar in layers of not more than **3/8 inch** deep. Compact each layer thoroughly and allow to it become thumbprint hard before applying next layer.
- C. Tool joints, when pointing mortar is thumbprint hard, with a smooth jointing tool to produce the following joint profile:
 - 1. Joint Profile: Smooth, flat face recessed 1 inch below edges of stone (raked joint).

3.4 ADJUSTING AND CLEANING

- A. In-Progress Cleaning: Clean stone masonry as work progresses. Remove mortar fins and smears before tooling joints.
- B. Final Cleaning: After mortar is thoroughly set and cured, clean stone masonry as follows:
 - 1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
 - 2. Test cleaning methods on mockup; leave one-half of panel uncleaned for comparison purposes. Obtain Landscape Architect's approval of sample cleaning before cleaning stone masonry.
 - 3. Protect adjacent stone and nonmasonry surfaces from contact with cleaner by covering them with liquid strippable masking agent, polyethylene film, or waterproof masking tape.
 - 4. Wet wall surfaces with water before applying cleaner; remove cleaner promptly by rinsing thoroughly with clear water.
 - 5. Clean stone masonry by bucket and brush hand-cleaning method described in BIA Technical Note No. 20, Revised II, using job-mixed detergent solution.
 - 6. Clean stone masonry with proprietary acidic cleaner applied according to manufacturer's written instructions.

3.5 EXCESS MATERIALS AND WASTE

- A. Excess Stone: Stack excess stone where directed by Owner for Owner's use.
- B. Disposal as Fill Material: Dispose of clean masonry waste, including mortar and excess or soil-contaminated sand, by crushing and mixing with fill material as fill is placed.

END OF SECTION

SECTION 047200 - CAST STONE MASONRY

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes:

1. Cast-stone trim

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product:

1. For cast-stone units, include dimensions and finishes.

B. Shop Drawings: Show fabrication and installation details for cast-stone units. Include dimensions, details of reinforcement and anchorages if any, and indication of finished faces.

C. Samples:

1. For each color and texture of cast stone required.
2. For colored mortar.

1.3 INFORMATIONAL SUBMITTALS

A. Qualification Data: For manufacturer.

B. Material Test Reports: For each mix required to produce cast stone, based on testing according to ASTM C 1364.

1.4 QUALITY ASSURANCE

C. Manufacturer Qualifications: A qualified manufacturer of cast-stone units similar to those indicated for this Project, that has sufficient production capacity to manufacture required units, and is a plant certified by the Cast Stone Institute the Architectural Precast Association or the Precast/Prestressed Concrete Institute for Group A, Category AT.

PART 2 – PRODUCTS

2.1 CAST-STONE UNITS

A. Advanced Architectural Stone, 115 Lee St., Fort Worth, TX 76140, (800) 687-4352.

B. Cast-Stone Units: Comply with ASTM C 1364.

1. Units shall be manufactured using the vibrant dry tamp method.

- C. Fabricate units with sharp areas and accurately reproduced details, with indicated texture on all exposed surfaces unless otherwise indicated.
 - 1. Slope exposed horizontal surfaces 1:12 to drain unless otherwise indicated.
 - 2. Provide raised fillets at backs of sills and at ends indicated to be built into jambs.
 - 3. Provide drips on projecting elements unless otherwise indicated.
- D. Cure Units as Follows:
 - 1. Cure units in enclosed, moist curing room at 95 to 100 percent relative humidity and temperature of 100 deg F for 12 hours or 70 deg F for 16 hours.
 - 2. Keep units damp and continue curing to comply with one of the following:
 - a. No fewer than five days at mean daily temperature of 70 deg F or above.
 - b. No fewer than six days at mean daily temperature of 60 deg F or above.
 - c. No fewer than seven days at mean daily temperature of 50 deg F or above.
 - d. No fewer than eight days at mean daily temperature of 45 deg F or above.
- E. Acid etch units after curing to remove cement film from surfaces to be exposed to view.
- F. Colors and Textures: "Natural Limestone" color, smooth texture.

2.2 ACCESSORIES

- A. Anchors: Type and size indicated, fabricated from Type 304 stainless steel complying with ASTM A 240/A 240M, ASTM A 276, or ASTM A 666.
- B. Dowels: 1/2-inch- diameter round bars, fabricated from Type 304 stainless steel complying with ASTM A 240/A 240M, ASTM A 276, or ASTM A 666.
- C. Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging masonry surfaces. Use product expressly approved for intended use by cast-stone manufacturer and expressly approved by cleaner manufacturer for use on cast stone and adjacent masonry materials.

2.3 MORTAR

- A. Comply with requirements in Section 044313 "Anchored Stone Masonry Vencer" for mortar mixes.
 - 1. For setting mortar, use Type S.
 - 2. For pointing mortar, use Type N.
- B. Provide mortar pigment to match Cast Stone color

2.4 SOURCE QUALITY CONTROL

- A. Engage a qualified independent testing agency to sample and test cast-stone units according to ASTM C 1364.

PART 3 – EXECUTION

3.1 SETTING CAST STONE IN MORTAR

- A. Set units in full bed of mortar with full head joints unless otherwise indicated.
 - 1. Fill dowel holes and anchor slots with mortar.
- B. Rake out joints for pointing with mortar to depths of not less than 3/4 inch. Rake joints to uniform depths with square bottoms and clean sides. Scrub faces of units to remove excess mortar as joints are raked.
- C. Point mortar joints by placing and compacting mortar in layers not greater than 3/8 inch. Compact each layer thoroughly and allow it to become thumbprint hard before applying next layer.

3.2 INSTALLATION TOLERANCES

- A. Variation from Plumb: Do not exceed 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2 inch maximum.
- B. Variation from Level: Do not exceed 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2 inch maximum.
- C. Variation in Joint Width: Do not vary joint thickness more than 1/8 inch in 36 inches or one-fourth of nominal joint width, whichever is less.
- D. Variation in Plane between Adjacent Surfaces (Lipping): Do not vary from flush alignment with adjacent units or adjacent surfaces indicated to be flush with units by more than 1/16 inch, except where variation is due to warpage of units within tolerances specified.

3.3 ADJUSTING AND CLEANING

- A. Remove and replace stained and otherwise damaged units and units not matching approved Samples. Cast stone may be repaired if methods and results are approved by Architect.
- B. Replace units in a manner that results in cast stone matching approved Samples, complying with other requirements, and showing no evidence of replacement.
- C. In-Progress Cleaning: Clean cast stone as work progresses.
 - 1. Remove mortar fins and smears before tooling joints.
 - 2. Remove excess sealant immediately, including spills, smears, and spatter.
- D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed cast stone as follows:
 - 1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.

2. Test cleaning methods on sample; leave one sample uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of cast stone.
3. Protect adjacent surfaces from contact with cleaner by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape.
4. Wet surfaces with water before applying cleaners; remove cleaners promptly by rinsing thoroughly with clear water.
5. Clean cast stone by bucket-and-brush hand-cleaning method described in BIA Technical Notes 20.
6. Clean cast stone with proprietary acidic cleaner applied according to manufacturer's written instructions.

END OF SECTION

SECTION 057000 - ORNAMENTAL METAL WORK

PART 1 – GENERAL

1.1 SUBMITTALS

- A. In addition to product data, submit the following:
 - 1. Shop Drawings showing details of fabrication, assembly and installation including templates for anchor bolt placement.
 - 2. Samples of each type of metal finish indicated.

1.2 RELATED DOCUMENTS

- A. Section 099113 Exterior Painting

PART 2 – PRODUCTS

2.1 GENERAL

- A. Provide materials selected for their surface flatness, smoothness, and freedom from surface blemishes on exposed surfaces.

2.2 STEEL AND IRON

- A. Tubing.
 - 1. Cold-formed, ASTM A 500; or hot rolled, ASTM A 501.
 - 2. Steel plates, Shapes and Bars: ASTM A 36.

2.3 MISCELLANEOUS MATERIALS

- A. Welding Electrodes and Filler Metal: Type and alloy to match metal to be welded.
- B. Fasteners: Type and alloy to match metal to be fastened; use Phillips flat head screws for exposed fasteners if not otherwise indicated.
- C. Anchors and Inserts: Furnish as required for installation in other work. Use cadmium or galvanized anchors and inserts for exterior work.

2.4 FABRICATION

- A. Form metalwork to required shapes and sizes, with true lines, curves and angles. Provide necessary rebates, lugs and brackets for assembly and installation. Use concealed fasteners

where possible. At exposed connections, grind exposed welds smooth and flush to match and blend with adjacent surfaces. Mill joints to tight hairline fit; cope or miter corners.

- B. Work to dimensions shown or accepted on the shop drawings, using proven details of fabrication and support. Use types of materials shown or specified for various components of work.
- C. Shop paint metal work, except those members to be embedded in concrete, and surfaces or edges to field welded. Remove rust, scale, and other deleterious materials before applying shop coat. Remove oil, grease, or solvent.

2.5 FINISHES

- A. Comply with NAAMM "Metal Finishes Manual" for application and designation of finishes. Protect finished metal items. Apply heavy coating of bituminous paint (SSPC-Paint 12) on concealed surfaces to be in contact with concrete, masonry, wood, or dissimilar metals.
 - 1. Steel and Iron Finishes:
 - a. Hot-dip galvanize items indicated to be galvanized to comply with ASTM A 153 for galvanizing iron and steel hardware and ASTM A 123 for galvanizing iron and steel products made from rolled, pressed, and forged steel shapes, castings, plates, bars, and strips.
 - b. All exposed steel to be primed and painted per this section. Paint to match pavilion and lights – Dark Bronze, RAL8019
 - B. Preparation for paint finish: Clean surfaces of dirt, grease, and loose rust or mill scale, including items fabricated from a galvanized steel, if any, followed by a conversion coating of type suited to organic coating applied over it.

PART 3 – EXECUTION

3.1 ANCHORS AND FASTENERS

- A. Provide anchors and fasteners to secure items to in-place construction as required.

3.2 LAY OUT

- A. Set items in accurate locations, aligned, plumbed and level. Repair or replace damaged items as directed.

3.3 CONNECTIONS

- A. Fit exposed connections accurately together to form tight, hairline joints or, where indicated with uniform reveals and spaces for sealants and joint fillers.
- B. Where cutting, welding and grinding are required for proper shop fitting and jointing of

ornamental metal items, restore finishes to eliminate any evidence of such corrective work.

3.4 FINISHES

- A. Do not cut or abrade finishes, which cannot be completely restored in the field. Return items with such finishes to the shop for required alterations, followed by complete refinishing or provide new units as required.

3.5 REPLACEMENT

- A. Restore damaged protective coverings after installation. Maintain until other work in same area is completed. Remove protective coverings and clean exposed surface prior to final inspection.

END OF SECTION

SECTION 099113 - EXTERIOR PAINTING

PART 1 – GENERAL

1.1 SUMMARY

- A. Section includes surface preparation and the application of paint systems on exterior substrates.
 - 1. Steel.
- B. Related Requirements
 - 1. 057000 – Ornamental Metal Work

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product. Include preparation requirements and application instructions.
- B. Samples: For each type of paint system and each color and gloss of topcoat.
- C. Product List: For each product indicated. Include printout of current "MPI Approved
- D. Products List" for each product category specified, with the proposed product highlighted.

1.3 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Paint: 5 percent, but not less than 1 gal. of each material and color applied.

1.4 QUALITY ASSURANCE

- A. Mockups: Apply mockups of each paint system indicated and each color and finish selected to verify preliminary selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
 - 1. Landscape Architect or owner will select one surface to represent surfaces and conditions for application of each paint system specified in Part 3.
 - a. Vertical and Horizontal Surfaces: Provide samples.
 - b. Other Items: Landscape Architect will designate items or areas required.
 - 2. Final approval of color selections will be based on mockups.

- c. If preliminary color selections are not approved, apply additional mockups of additional colors selected by Landscape Architect or owner at no added cost to Owner.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to products listed in other Part 2 articles for the paint category indicated.

2.2 PAINT, GENERAL

- A. MPI Standards: Provide products that comply with MPI standards indicated and that are listed in its "MPI Approved Products List."
- B. Material Compatibility:
 - 1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
 - 2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.
- C. VOC Content: Provide materials that comply with VOC limits of authorities having jurisdiction.
- D. Color: Dark Bronze, RAL8019

2.3 METAL PRIMERS

- A. Primer, Alkyd, Quick Dry, for Metal: MPI #76.
 - 1. Sherwin Williams, Kem Bond HS Universal Metal Primer, B50WZ4.

2.4 WATER-BASED PAINTS

- A. Light Industrial Coating, Exterior, Water Based, Semi-Gloss (Gloss Level 5): MPI #163.
 - 1. Sherwin Williams, Sher-Cryl High Performance Acrylic, B66T354.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
- B. Proceed with coating application only after unsatisfactory conditions have been corrected.
 - 1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to substrates and paint systems indicated.
- B. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.

3.3 APPLICATION

- A. Apply paints according to manufacturer's written instructions and recommendations in "MPI Manual."
- B. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

3.4 CLEANING AND PROTECTION

- A. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Landscape Architect, and leave in an undamaged condition.
- B. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.5 EXTERIOR PAINTING SCHEDULE

- A. Steel Substrates:
 - 1. Water-Based Light Industrial Coating System:
 - a. Prime Coat: Primer, alkyd, anti-corrosive for metal, MPI #79.
 - b. Intermediate Coat: Light industrial coating, exterior, water based, matching topcoat.
 - c. Topcoat: Light industrial coating, exterior, water based, semi-gloss (Gloss Level 5), MPI #163.

END OF SECTION

SECTION 107300 – SPECIALTIES MANUFACTURERS OF PROTECTIVE COVERS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Custom cross-gable shelter with standing seam steel roofing, 38'-0" x 50'-0".

1.2 REFERENCES

A. REFERENCE STANDARDS:

1. AISC - American Institute of Steel Construction Manual of Steel Construction.
2. ASTM - American Society for Testing and Materials.
3. AWS - American Welding Society.
4. LEED - Leadership in Energy and Environmental Design.
5. OSHA – Occupational Safety and Health Administration Steel Erection Standard 29 CFR 1926 Subpart R-Steel Erection.
6. PCI - Powder Coating Institute.
7. SSPC - Steel Structures Painting Council.

1.3 SUBMITTALS

A. GENERAL SUBMITTAL:

Submit two (2) sets of submittal drawings and two (2) sets of calc books, both signed and sealed by a Professional Engineer licensed in the State of Texas.

B. PRODUCT DESIGN LOADS:

The building shall be designed to meet the governing building code with the following design loads:

1. Building Code: IBC 2012
2. Ground Snow Load (Pg): 10 pounds per square foot, or as required by City of Lamesa
3. Basic Wind Speed (V): 110 miles per hour, or as required by City of Lamesa
4. Seismic Design: as required for site specific conditions.

C. SUBMITTAL REQUIREMENTS:

Calculations and Submittal drawings shall include, at a minimum:

- i. Calculations:
 - a. References to building codes and design manuals used for calculations.
 - b. Identification of lateral force resisting system.
 - c. Formulas used for determining snow, wind, and seismic loads to specific project location.
 - d. Three dimensional modeling input, model geometry, and analysis results.

- e. Member design results and controlling load combinations.
- f. Connection design for structural bolts, welds, plate thicknesses, and anchorage to the foundation.
- g. Foundation designs must include the required combinations of gravity and lateral loads.

2. Submittal Drawings:

- a. Anchor bolt layout.
- b. Foundation design.
- c. Three dimensional views of frame.
- d. Member sizes and locations.
- e. Structural connection details, including bolt sizes and plate thicknesses.
- f. Roof trim and connection details.

D. FOUNDATION DESIGN:

The shelter shall be set on prepared foundations designed by an engineer retained by owner using the column reactions provided by manufacturer.

E. ANCHOR BOLTS:

Anchor bolts shall be provided by manufacturer.

1.4 QUALITY ASSURANCE

A. MANUFACTURER QUALIFICATIONS:

- 1. Minimum of 10 years in the shelter construction industry.
- 2. Full time on-staff Quality Assurance Manager.
- 3. All welders AWS Certified.
- 4. Annual audit of Quality System by Third Party Agency.
- 5. Annual audit of powder coat finish system by Third Party Agency (PCI).

B. MANUFACTURER CERTIFICATIONS:

- 1. City of Houston, TX Approved Steel Fabricator.
- 2. San Bernardino County, CA Approved Steel Fabricator.
- 3. Clark County, NV Approved Steel Fabricator.

1.5 STORAGE AND HANDLING

A. STORAGE AND HANDLING REQUIREMENTS:

- 1. Installer shall store product in a dry place or covered if out in the weather and keep product out of direct sun.
- 2. Installer shall store product elevated from soils to allow air circulation and to not introduce mold, fungi decay or insects to the product.



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3. Product must be handled with protective straps or padded forks if lifting with mechanical equipment. Use of chain or cable to lift product into place will not be accepted.

1.6 FIELD OR SITE CONDITIONS

- A. Foundations shall be at the same elevation unless specifically noted otherwise on the drawings.

1.7 MANUFACTURER WARRANTY

- A. Shelter must have a 10-year limited warranty on steel frame members
- B. Shelter must have a 10-year limited warranty on paint system.
- C. Pass through warranty of metal roof manufacturer to be provided upon request.

PART 2 - PRODUCTS

2.1 SHELTER SYSTEM AND MATERIALS

A. MANUFACTURERS:

1. Acceptable Manufacturer: Coverworx Recreational Architecture, 11800 E. Nine Mile Rd., Warren, MI 48089; 586-486-1088; E-mail: info@coverworx.com; www.coverworx.com. Receive pricing from Debra Finch, Paul E. Allen Co., Inc. at 214-697-1320 or 972-724-2646, or email: debrafinch@aol.com.
2. The product shall be designed, produced, and finished at a facility owned and directly supervised by the supplier who has a minimum of ten years under same ownership making pre-manufactured shelters.

B. SUBSTITUTION LIMITATIONS:

1. Substitutions must be approved a minimum of ten (10) days before bid. All approved manufacturers shall be notified in writing before the bid date and shall not be allowed to bid without written notification.
2. Alternate suppliers must meet the qualifications and provide proof of certifications listed under section 1.4 QUALITY ASSURANCE.
3. Alternate suppliers must provide an equivalent paint system to Coverworx's listed under Section 2.1 D. 8. FINISHES.

C. DESCRIPTION OF PRODUCT:

1. MODEL NUMBER: CGA-3850-SB-SW-C2
2. DESCRIPTION AND SIZE: Custom CrossGable, 38'-0" x 50'-0"
3. ROOF SLOPE: 4/12
4. EAVE HEIGHT: 10'-0" Clearance height from finish grade to the underside of the perimeter beam.
5. ADDITIONAL OPTIONS: Custom gable end ornamentation.



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D. PRODUCT REQUIREMENTS AND MATERIALS:

1. GENERAL:

The pre-engineered package shall be pre-cut unless otherwise noted and pre-fabricated which will include all parts necessary to field construct the shelter. The shelter shall be shipped knocked to minimize shipping expenses. Field labor will be kept to a minimum by pre-manufactured parts. Onsite welding is not necessary.

2. REINFORCED CONCRETE:

- a. Concrete shall have minimum 28-day compressive strength of 3,000 psi and slump of 4" (+/- 1"), unless otherwise noted on the drawings.
- b. Reinforcing shall be ASTM A615, grade 60.

3. STEEL COLUMNS:

- a. Hollow structural steel tube minimum ASTM A500 grade B with a minimum wall thickness of 1/8".
- b. Unless columns are direct buried columns shall be anchored directly to concrete foundation with a minimum of four anchor rods to meet OSHA requirement 1926.755(a)(1).

4. STRUCTURAL FRAMING:

Hollow Structural Steel tube minimum ASTM500 grade B. "I" beams, tapered columns, or open channels shall not be accepted for primary beams.

5. COMPRESSION MEMBERS:

Compression rings of welded plate minimum ASTM A36 or compression tubes or structural steel tube minimum ASTM A500 grade B shall only be used.

6. CONNECTIONS:

Connection Requirements:

- a. Anchor bolts shall be ASTM F1554 (Grade 36) unless otherwise noted.
- b. Structural fasteners shall be zinc plated ASTM A325 high strength bolts and high strength nuts.
- c. All structural fasteners shall be hidden within framing members.
- d. No field welding shall be required to construct the shelter.
- e. All welds shall be free of burrs and inconsistencies.
- f. All exposed fasteners shall be painted by manufacturer prior to shipment to match frame or roof colors as applicable.
- g. Manufacturer shall provide extra structural and roofing fasteners.



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7. ROOFING MATERIALS:

a. ROOF SYSTEM OF STANDING SEAM METAL ROOFING:

1. Standing seam metal roofing to be 24-gauge galvalume 16" wide with ribs 1-3/4" high.
2. Roof surface shall be painted with Kynar 500 to the manufacturer's standard color: Ash Grey Ceiling surface shall be a "wash coat" primer.
3. Roof panels shall be factory precut to size and angled to provide ease of one-step installation.
4. Metal roofing trim shall match the color of the roof and shall be factory made of 24 gauge Kynar 500 painted steel.
5. Trim shall include panel ridge caps, hip caps, eave trim, rake trim, roof peak cap, and corner trim as applicable for model selected. Trim may need to be cut to length and notched. Reference drawings for additional information.
6. Ridge, hip, and valley caps shall be pre-formed with a single central bend to match the roof pitch and shall be hemmed on the sides.
7. Roof peak cap shall be pre-manufactured.
8. Manufacturer must supply painted screws with metal and neoprene washers.

8. FINISHES:

a. STANDARD POWDER COAT FINISH:

1. Steel shall be cleaned, pretreated, and finished at a facility directly supervised by the manufacturer.
2. Steel shall be shot blasted to SSPC-SP10 near-white blast cleaning. SSPC-SP2 hand tool cleaning will not be an acceptable alternative.
3. Parts shall be pretreated in a 3 stage iron phosphate or equal washer.
4. Epoxy primer powder coat to be applied to parts for superior corrosion protection.
5. Top coat of Super Durable TGIC powder coat shall be applied over the epoxy primer.
6. Finish shall not have any VOC emissions.
7. Sample production parts shall have been tested and meet the following criteria:
 - a. Salt spray resistance per ASTM B 117/ ASTM D 1654 to 5,000 hours with no creep from scribe line and rating of 10.
 - b. Humidity resistance per ASTM D2247-02 to 3,000 hours with no loss of adhesion or blistering.
 - c. Color/UV resistance per ASTM G154-04 to 2,000 hours exposure, alternate cycles with results of no chalking, 75% color retention, color variation maximum 3.0 E variation CIE formula (before and after 2,000 hours exposure).
8. The manufacturer shall be PCI 4000 S Certified



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PART 3 - EXECUTION

3.1 INSTALLERS

- A. Protect building products after arrival at destination from weather, sunlight, and damage.
- B. Building products shall be placed on blocks well off the ground and separated with wood strips so that air can circulate around each member.
- C. Cover top and bottom with moisture-resistant paper.
- D. Non-marring slings and/or padded forks shall be used when handling.
- E. Installers are to use proper building practices recognized by OSHA and to have minimum 5 years experience in installing shelters of similar construction. These trades include but are not limited to: masonry work, steel construction, sheet metal work, carpentry, electrical and paint finishing.
- F. Examination of final work is done by verifying that the erection of the structure was done in conformance to the installation instructions provided by Coverworx and local building codes.

3.2 ERECTION

A. FOUNDATIONS:

The shelter shall be placed on Coverworx designed foundations with materials by others. Design approved by the Engineer of Record identified in Section 1.3 D. FOUNDATION DESIGN.

B. INSTALLATION:

Install all components according to manufacturer's installation instructions and these specifications.

C. GENERAL CONTRACTOR:

Interface with other work is to be coordinated by the customer or the customer's agent. Certain designs have electrical or other plumbing requirements that are not supplied by Coverworx.

D. TOLERANCES:

Tolerances on steel structural members are set according to AISC construction practices, abided in the factory, and cannot be increased. No field slotting or opening of holes will be allowed. It is therefore essential that contractors conform to the tolerances specified on the installation drawings for anchor bolt or column layout details.

E. OSHA COMPLIANCE:

OSHA Compliance to Steel Erection Standard 29CFR 1926 Subpart R-Steel Erection.



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3.3 REPAIR

- A. Do not attempt any field repairs without first contacting Coverworx.

3.4 FIELD OR SITE QUALITY CONTROL

- A. Field or Site Tests and Inspections are not required by Coverworx but may be required by the customer or by the local building inspector.

END OF SECTION



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SECTION 133421 – PRE-ENGINEERED BUILDINGS



**GENERAL SPECIFICATIONS
FOR
PRECAST CONCRETE RESTROOMS**

1. Scope

The specifications contained herein encompass the materials for the fabrication of a transportable, prefabricated concrete restroom structure.

2. General

Modular Connections, LLC is an N.P.C.A. certified manufacturing facility. Restroom structures will meet design criteria to satisfy the standards of public accommodation for restroom areas according to the guidelines established by the Americans with Disabilities Act of 1990 and its subsequent revisions. The concrete wall sections of the structure will be designed and manufactured to withstand the penetration of a 30/06 rifle projectile fired at distance of 15' per UL 752 standards. The structure will also be a two hour fire rated concrete structure (per UBC).

Design and manufacturing of the structure module(s) shall conform to the requirements of ACI 318-89 and its subsequent revisions. Module(s) will have lifting points integrated into either the wall or roof panels and the necessary lifting brackets/shackles will be supplied with the module(s).

The structure will be composed of single piece, steel reinforced concrete wall, roof and floor panels and may consist of more than one concrete module. Interior layouts are customized to suit purchaser needs but all designs will have a man accessible service/chase area constructed of either concrete or wood framed partition walls.

The exterior dimensions of the structure will be determined by the occupancy count specified. Structure width and length dimensions communicated will be the exterior distance between the outside edges of each wall panel. Shipping dimensions communicated will differ and will account for the edge-to-edge dimension of the roof panel as it is designed to extend beyond the wall panels. The finished floor to finished ceiling interior height shall be no less than 8'-0" at eave location for any roof profile.

All service utilities shall enter the structure via a cast-in opening in the floor of the service/chase area. All distribution of utilities within the structure shall terminate at the service/chase area floor opening.

3. Structural Design

Floor panels will be a single 8" thick waffled structural precast concrete panel. Ribs shall be 2'-0" O.C. transverse and 4'-0" O.C. longitudinal. All surfaces shall be smoothed. Exposed floor finish will be either commercial grade 12"x12" vinyl tile applied with mastic or be epoxy painted with texture additives.

Roof panels will be a cast low slope 4" thick single panel, gable style with two 4" thick panels or a single flat panel to accept a site applied secondary roof system. Roof panels will extend beyond the module walls by a minimum of 2" on all sides except on mating side of multiple module configurations. Exposed side of roof panel will be waterproofed, sheathed with a multi-layer rubber sealing membrane or covered with 24 gauge, overlapping and ribbed metal roofing panels.

Wall panels will be 4" thick with cast-in steel plates along the edges to facilitate a welded steel bar connection at all wall-to-wall, wall-to-roof and wall-to-floor intersections.

Interior framing for shower enclosures, concealment walls and partitions will be metal or treated wood stud construction with sheathing materials to compliment the overall interior finish scheme.

Exterior finish of wall panels will be one of three types: 1) sealed exposed aggregate; 2) smooth acrylic paint over broom finish concrete; 3) smooth acrylic paint over a simulated architectural feature (brick, rock, stone, wood grain, etc.) cast into the wall panel. Exterior surface of walls and roof shall be sealed prior to final finishing with two coats of sealer in strict conformance with manufacturer's instructions.

Interior finish of wall panels and underside of roof panels will be one of three styles: 1) painted moisture resistant gypsum board; 2) 3/4" HDPE plywood sheathing; 3) acrylic paint over form smoothed concrete. Rigid foam board insulating material can be added to the gypsum board and HDPE plywood finishes to achieve desired R factor insulating values.

Floor finish will be either 12"x12" commercial grade vinyl tile or urethane based paint and non-slip textured additive with 4" flexible cove molding.

All exposed floor/wall and ceiling/wall intersections will be trimmed with painted fiber-cement board where no gypsum or HDPE interior finish exists.

All wall/floor/ceiling joints will be sealed with a continuous line of compressible, resilient sealant.

Door frames will be 16 gauge galvanized steel and cast into the wall panel.

When called for, natural lighting windows will be 4"x4" decorative glass block inserts mortared/grouted/sealed into cast-in wall openings. Tube style skylight systems are available.

4. Design Criteria

Structure module(s) will be designed to the following:

- floor panel to meet ASCE 7-88, uniform distributed load of 150 lbs. per square foot (200PSF or 300PSF options available).

General Specifications (continued)

- roof panel to meet SCE 7-88 roof snow load specification of 60 lbs. per square foot (increased roof load options available and ice fall protection options are available).
- wind loading to meet ASCE 7-88 basic wind speed specifications of 150 MPH.
- structure will be designed for earthquake category D.

5. Materials Specifications

Compressive strength of concrete used shall be 5000 PSI at 28 days.

Mix design shall be 114-118 lbs. per cubic foot structural lightweight concrete. Cement component of concrete mix will conform to the requirements of the Standard Specifications for Portland Cement, ASTM Designation C150. Concrete aggregates shall conform to one of the following:

- Specifications for Concrete Aggregates, ASTM Designation: C33.
- Specifications for Lightweight Aggregates for Structural Concrete, ASTM Designation C330.
- Water shall be free from injurious quantities of oil, alkali, vegetable matter and salt. Non-potable water shall not be used in mixing concrete. Admixtures to be used in concrete shall be subject to prior approval by the quality control supervisor and shall be shown capable of maintaining essentially the same composition and performance throughout the work as the product used in establishing the concrete proportions in the mix design.
- Air-entraining admixtures shall conform to Specifications for Air-entraining Admixtures for Concrete, ASTM Designation: C260.
- Water reducing admixtures, retarding admixtures, accelerating admixtures, and water reducing and accelerating admixtures shall conform to Specifications for Chemical Admixtures for Concrete, ASTM Designation: C494.
- Fly ash or other pozzolans used as admixtures shall conform to Specifications for Fly Ash and Raw or Calcined Natural Pozzolans for Use in Portland Cement Concrete, ASTM Designation: C618.

Reinforcement bars shall be deformed steel conforming to the requirements of the Specifications for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement, ASTM Designation: A615.

Welded smooth wire fabric shall be steel wire fabric conforming to the requirements of the Specifications for Welded Steel Wire Fabric for Concrete Reinforcement, ASTM Designation: A185.

Concrete sealer will be Thoroseal waterproof sealant or equivalent.

Concrete form liner for simulated architectural features will be Dayton Superior products, Reckli products or equivalent.

Exterior color application will be BASF MasterProtect HB 400 (formerly Thorocoat) a water-based, high-build, 100% acrylic, waterproof coating for above-grade concrete. Interior color application (walls & ceiling) will be Sherwin Williams ProMar 200 acrylic coatings.

Floor color application will be Sherwin Williams Armorseal Rextthane single component, aliphatic, moisture cure urethane industrial floor coating or Armstrong 12"x12" standard Excelon Imperial Texture commercial vinyl tile with recommended adhesive.

Joint trim will be HardieTrim 4/4, 5/4 decorative non-load bearing trim products.

Metal parts color application shall be Sherwin Williams Sher-Kem metal finishing enamel.

General Specifications (continued)

Rubber roof membrane to be multi-layer material affixed to face of roof panel with metal termination strip with fasteners at 6" intervals - Duro-Last 40 MIL (DL40) or equivalent.

Metal roof panels will be 24 gauge, R-panel style over sealing membrane - All American Metal Components or equivalent.

6. Doors & Windows

Entry doors will be 3'x7'x1-3/4" 18 gauge, flush fit, square edge style, galvanized insulated steel - CECO, Megamet, DeanSteel or equivalent. Hardware package and accessories will include NRP non corrosive hinges or adjustable tension self-closing hinges, lever handle, mortise style lockset, interior deadbolt (where specified), door check, door stop, weather-stripping and exterior aluminum drip cap. Service area entry doors will be 2'7"x7'x1-3/4" size of identical materials.

Primary locksets will be mortise style with interchangeable core and keys - Sargent, Schlage, Yale or equivalent. Deadbolt locks, where required, will be configured to purchaser specifications - PDQ or equivalent. Interior panic bar exit hardware, where required, will be two point style - Monarch or equivalent.

Natural lighting windows will be 6"x6" glass blocks - Pittsburg Corning products or equal.

Skylights will be Solatube daylighting system model 160DS or equivalent.

7. Electrical Equipment

Equipment and wiring will conform to the latest edition of the National Electrical Code and shall consist of the following as a minimum:

- 100 amp, 120/240v AC, 20 position surface mounted load center and cover with 12 single pole 20 amp breakers -
- PVC conduit, boxes and fittings
- appropriately gauged conductor for all circuits
- GFCI duplex outlets

Interior Lighting. To be switch controlled or motion/occupancy activated damp location two bulb fluorescent or strip LED interior fixtures.

Exterior Lighting. To be photocell actuated incandescent or LED weather protected fixtures.

Emergency & Exit Lighting. Will be two head style with batteries and charger.

8. Heating, Cooling & Ventilation Equipment

Segregated occupancy areas will each have an appropriately sized switch or motion actuated ventilation system that is comprised of an appropriately sized electric in line fan with grills and ducting to a common backdraft louvered exhaust vent located in the service/chase area. Louvered inverted Y style 12"x12" intake vents will be located in the lower half of entry doors or in the module walls.

Where interior climate control is specified, heating and cooling equipment will consist of appropriately sized ductless style electric heat pump units with thermostat controls - Mitsubishi, Fujitsu or equivalent.

General Specifications (continued)

Wall mounted fan forced electric heaters will be located in service/chase area where piping freeze protection is specified - Qmark Type CRA or equivalent.

9. Plumbing

Plumbing materials, installation and testing will be in accordance with the latest edition of applicable state and local code procedures, methods and requirements including the most stringent health and safety standards as interpreted by the authority having jurisdiction. Above ground water supply piping to be Type L Hard Copper with soldered fittings and connections with all drain, waste and vent piping to be PVC Schedule 40.

10. Fixtures

Toilet stations to consist of wall mounted siphon jet style with carrier, rear or top spud, elongated bowl in either Vitreous china or stainless steel finish with hinged plastic seat - Kohler, Acorn, Metcraft or equivalent.

Urinal stations to consist of wall mounted siphon jet style with carrier, rear or top spud, in either Vitreous china or stainless steel finish - Kohler, Acorn, Metcraft or equivalent.

Lavatory stations will be wall mounted style with 4" centers in Vitreous china or stainless steel finish - Kohler, Acorn, Metcraft or equivalent.

Flush valves will be ADA compliant, low consumption style configured as concealed or exposed with either manual or sensor control - Zurn or equivalent.

Faucets will be ADA compliant configured as manual or sensor control with or without metering - Zurn, Delta, Symmons or equivalent.

Shower stations will be 36"x36" transfer type and constructed of Swanstone solid surface wall panels/trim & floor or equivalent with chrome finish pushbutton timing shower valves - SYMMONS 4420 or equivalent and hand held shower head(s) where required. Shower seats for ADA size shower stations will be reversible, solid phenolic folding style - BOBRICK B-5181 or equivalent

Hot water supply will depend upon configuration and will be either 4.8 kW electric tank-less hot water units - EEMAX or equivalent or floor standing, tank style, commercial electric water heaters.

Water fountains will be ADA compliant, single or double station, ambient or refrigerated, wall mounted style in stainless steel finish - Elkay or equivalent

Restroom and service areas will have 2" PVC floor drains with covers.

11. Accessories & Amenities

Basic restroom accessories will include wall mounted multiple roll toilet paper dispensers (Royce Rolls or equivalent), wall mounted center pull paper towel dispensers, liquid soap dispensers, stainless steel framed wall hung mirrors and the appropriate ADA compliant structure signage.

Optional accessories will include purchaser specified items such as concealed motor or flush mount electric air blown hand dryer - Excel Dryer XLERATOR or equivalent, wall mounted, fold down baby

General Specifications (continued)

changing station - BOBRICK or equivalent, sanitary napkin receptacles, waste paper receptacles, coat hooks, kick plates, etc.

SECTION 265600 - EXTERIOR LIGHTING

PART 1 – GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Exterior luminaires with lamps and ballasts

1.2 ACTION SUBMITTALS

- A. Product Data: For each luminaire, mount, and support component, arranged in order of lighting unit designation. Include data on features, accessories, and finishes.
- B. Shop Drawings: Anchor-bolt templates keyed to specific poles and certified by manufacturer.

1.3 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Comply with IEEE C2, "National Electrical Safety Code."
- C. Comply with NFPA 70.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. Products: Subject to compliance with requirements, provide product indicated on Drawings.

2.2 GENERAL REQUIREMENTS FOR LUMINAIRES

- A. Luminaires shall comply with UL 1598 and be listed and labeled for installation in wet locations by an NRTL acceptable to authorities having jurisdiction.
- B. Lateral Light Distribution Patterns: Comply with IESNA RP-8 for parameters of lateral light distribution patterns indicated for luminaires.
- C. Metal Parts: Free of burrs and sharp corners and edges.
- D. Sheet Metal Components: Corrosion-resistant aluminum unless otherwise indicated. Form and support to prevent warping and sagging.

- E. Housings: Rigidly formed, weather- and light-tight enclosures that will not warp, sag, or deform in use. Provide filter/breather for enclosed luminaires.
- F. Doors, Frames, and Other Internal Access: Smooth operating, free of light leakage under operating conditions, and designed to permit relamping without use of tools. Designed to prevent doors, frames, lenses, diffusers, and other components from falling accidentally during relamping and when secured in operating position. Doors shall be removable for cleaning or replacing lenses. Designed to disconnect ballast when door opens.
- G. Exposed Hardware Material: Stainless steel, or per manufacturers recommendations.
- H. Plastic Parts: High resistance to yellowing and other changes due to aging, exposure to heat, and UV radiation.
- I. Light Shields: Metal baffles, factory installed and field adjustable, arranged to block light distribution to indicated portion of normally illuminated area or field.
- J. Reflecting surfaces shall have minimum reflectance as follows unless otherwise indicated:
 - 1. White Surfaces: 85 percent.
 - 2. Specular Surfaces: 83 percent.
 - 3. Diffusing Specular Surfaces: 75 percent.
- K. Lenses and Refractors Gaskets: Use heat- and aging-resistant resilient gaskets to seal and cushion lenses and refractors in luminaire doors.
- L. Luminaire Finish: Manufacturer's paint applied to factory-assembled and -tested luminaire before shipping. Where indicated, match finish process and color of pole or support materials.
- M. Factory-Applied Finish for Aluminum Luminaires: Comply with NAAMM's "Metal Finishes Manual for Landscape Architectural and Metal Products" for recommendations for applying and designating finishes.
 - 1. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.
 - a. Color: Dark Bronze, RAL8019
- N. Factory-Applied Labels: Comply with UL 1598. Include recommended lamps and ballasts. Labels shall be located where they will be readily visible to service personnel, but not seen from normal viewing angles when lamps are in place.
 - 1. Label shall include the following lamp and ballast characteristics:
 - a. "USES ONLY" and include specific lamp type.
 - b. Lamp tube configuration (twin, quad, triple), base type, and nominal wattage for compact fluorescent luminaires.
 - c. Lamp type, wattage, bulb type (ED17, BD56, etc.) and coating (clear or coated) for HID luminaires.
 - d. Start type (preheat, rapid start, instant start) compact fluorescent luminaires.

- e. ANSI ballast type (M98, M57, etc.) for HID luminaires.
- f. CCT and CRI for all luminaires.

2.3 GENERAL REQUIREMENTS FOR POLES AND SUPPORT COMPONENTS

- A. Structural Characteristics: Comply with AASHTO LTS-4-M.
- B. Luminaire Attachment Provisions: Comply with luminaire manufacturers' mounting requirements. Use stainless-steel fasteners and mounting bolts unless otherwise indicated.
- C. Mountings, Fasteners, and Appurtenances: Corrosion-resistant items compatible with support components.
 - 1. Materials: Shall not cause galvanic action at contact points.
 - 2. Anchor Bolts, Leveling Nuts, Bolt Caps, and Washers: Hot-dip galvanized after fabrication unless otherwise indicated.
 - 3. Anchor-Bolt Template: Plywood or steel.
- D. Handhole: Oval-shaped, with minimum clear opening of 2-1/2 by 5 inches, with cover secured by stainless-steel captive screws. Coordinate handhole installation with Pavilion manufacturer.

PART 3 – EXECUTION

3.1 LUMINAIRE INSTALLATION

- A. Install lamps in each luminaire.
- B. Fasten luminaire to indicated structural supports.
 - 1. Use fastening methods and materials selected to resist seismic forces defined for the application and approved by manufacturer.
- C. Adjust luminaires that require field adjustment or aiming.

3.2 CORROSION PREVENTION

- A. Aluminum: Do not use in contact with earth or concrete. When in direct contact with a dissimilar metal, protect aluminum by insulating fittings or treatment.
- B. Steel Conduits: Comply with Section 260533 "Raceways and Boxes for Electrical Systems." In concrete foundations, wrap conduit with 0.010-inch- thick, pipe-wrapping plastic tape applied with a 50 percent overlap.
- C. All conduits should be concealed below grade or within steel pavilion structure. No exposed conduits are acceptable.

END OF SECTION

SECTION 311000 - SITE CLEARING

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes:

1. Protecting existing vegetation to remain.
2. Removing existing vegetation.
3. Clearing and grubbing.
4. Stripping and stockpiling topsoil.
5. Removing above- and below-grade site improvements.
6. Disconnecting, capping or sealing site utilities.
7. Temporary erosion- and sedimentation-control measures.

B. Related Requirements:

1. Section 015639 Temporary Tree and Plant Protection
2. Section 312000 Earth Moving

1.2 MATERIAL OWNERSHIP

- A. Except for stripped topsoil and other materials indicated to be stockpiled, salvaged, reinstalled, or otherwise remain on Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

1.3 PROJECT CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
 2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.
- B. Utility Locator Service: Notify utility locator service for area where Project is located before site clearing.
- C. Do not commence site clearing operations until temporary erosion- and sedimentation-control and plant-protection measures are in place.
- D. The following practices are prohibited within protection zones:
1. Storage of construction materials, debris, or excavated material.
 2. Parking vehicles or equipment.
 3. Foot traffic.

4. Erection of sheds or structures.
5. Impoundment of water.
6. Excavation or other digging unless otherwise indicated.
7. Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION

3.1 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.
- B. Locate and clearly identify trees, shrubs, and other vegetation to remain or to be relocated.
- C. Protect existing site improvements to remain from damage during construction.
 1. Restore damaged improvements to their original condition, as indicated in drawings, notes, and as acceptable to Owner.

3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- A. Provide temporary erosion- and sedimentation-control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to erosion- and sedimentation-control Drawings and requirements of authorities having jurisdiction.
- B. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.
- C. Inspect, maintain, and repair erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
- D. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

3.3 TREE AND PLANT PROTECTION

- A. General: Protect trees and plants remaining on-site according to drawings.
- B. Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations, in a manner approved by Landscape Architect and Owner.

3.4 EXISTING UTILITIES

- A. Locate, identify, disconnect, and seal or cap utilities indicated to be removed or abandoned in place.
 - 1. Arrange with utility companies to shut off indicated utilities.

3.5 CLEARING AND GRUBBING

- A. Remove obstructions, trees, shrubs, and other vegetation to permit installation of new construction.
 - 1. Grind down stumps and remove roots, obstructions, and debris to a depth of 12 inches below exposed subgrade.
 - 2. Use only hand methods for grubbing within protection zones.
- B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.
 - 1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches, and compact each layer to a density equal to adjacent original ground.

3.6 SITE IMPROVEMENTS

- A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction.

3.7 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.

END OF SECTION

SECTION 312000 - EARTH MOVING

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes:

1. Excavating and filling for rough grading the Site.
2. Preparing subgrades for slabs on grade, walks, pavement.
3. Excavating and backfilling for structures.
4. Drainage course for concrete slabs-on-grade.
5. Subbase course for concrete paving.
6. Excavating and backfilling trenches for utilities and pits for buried utility structures.

1.2 DEFINITIONS

A. Backfill: Soil material used to fill an excavation.

1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
2. Final Backfill: Backfill placed over initial backfill to fill a trench.

B. Base Course: Aggregate layer placed between the subbase course and hot-mix asphalt paving.

C. Bedding Course: Aggregate layer placed over the excavated subgrade in a trench before laying pipe.

D. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.

E. Drainage Course: Aggregate layer supporting the slab-on-grade that also minimizes upward capillary flow of pore water.

F. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.

1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Landscape Architect. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
2. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Landscape Architect. Unauthorized excavation, as well as remedial work directed by Landscape Architect, shall be without additional compensation.

G. Fill: Soil materials used to raise existing grades.

- H. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.
- I. Subbase Course: Aggregate layer placed between the subgrade and base course for hot-mix asphalt pavement, or aggregate layer placed between the subgrade and a cement concrete pavement or a cement concrete or hot-mix asphalt walk.
- J. Subgrade: Uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, drainage fill, drainage course, or topsoil materials.
- K. Utilities: On-site underground pipes, conduits, ducts, and cables as well as underground services within buildings.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct preexcavation conference at park sites.

1.4 INFORMATIONAL SUBMITTALS

- A. Material test reports.

1.5 FIELD CONDITIONS

- A. Utility Locator Service: Notify utility locator service for area where Project is located before beginning earth-moving operations.
- B. Do not commence earth-moving operations until plant-protection measures specified in Section 015639 "Temporary Tree and Plant Protection" are in place.
- C. Do not commence earth-moving operations until erosion and sediment control measures are implemented per local and regulatory requirements.

PART 2 – PRODUCTS

2.1 SOIL MATERIALS

- A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.
- B. Satisfactory Soils: Soils of sandy loam classification, free of rock or gravel larger than 1/2" in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.
- C. Unsatisfactory Soils:
 - 1. For fill under structures, slabs, and paving: Clayey soils, or soils containing rock or gravel larger than 1" in any dimension, debris, waste, frozen materials, vegetation, or other deleterious matter.

2. For rough grading in landscape areas: Soils comprised of heavy clay, compacted base, caliche, or any materials ordinarily used for compacted subgrade not allowing adequate permeability for structural integrity and plant growth.
 3. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.
- D. Subbase Material: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940/D 2940M; with at least 90 percent passing a 1-1/2-inch (37.5-mm) sieve and not more than 12 percent passing a No. 200 (0.075-mm) sieve, 15% maximum plasticity index.
- E. Backfill Material: Naturally or artificially grade mixture of on-site or select material; with at least 30 percent (by weight) passing through a No. 200 (0.075-MM) sieve, 15% maximum plasticity index, with maximum particle size of two inches for hand-compaction, and three inches for mechanical compaction.

2.2 ACCESSORIES

- A. Warning Tape: Acid- and alkali-resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility; colored to comply with local practice or requirements of authorities having jurisdiction.
- B. Detectable Warning Tape: Acid- and alkali-resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, a minimum of 6 inches wide and 4 mils (0.1 mm) thick, continuously inscribed with a description of the utility, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches deep; colored to comply with local practice or requirements of authorities having jurisdiction.

PART 3 – EXECUTION

3.1 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth-moving operations.
- B. Protect and maintain erosion and sedimentation controls during earth-moving operations.
- C. Protect subgrades and foundation soils from freezing temperatures and frost. Remove temporary protection before placing subsequent materials.

3.2 EXCAVATION, GENERAL

- A. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.

1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.

3.3 EXCAVATION FOR STRUCTURES

- A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 1 inch. If applicable, extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections.
 1. Excavations for Footings and Foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work.
 2. Pile Foundations: Stop excavations 6 to 12 inches above bottom of pile cap before piles are placed. After piles have been driven, remove loose and displaced material. Excavate to final grade, leaving solid base to receive concrete pile caps.
 3. Excavation for Underground Tanks, Basins, and Mechanical or Electrical Utility Structures: Excavate to elevations and dimensions indicated within a tolerance of plus or minus 1 inch. Do not disturb bottom of excavations intended as bearing surfaces.
- B. Excavations at Edges of Tree- and Plant-Protection Zones:
 1. Excavate by hand or with an air spade to indicated lines, cross sections, elevations, and subgrades. If excavating by hand, use narrow-tine spading forks to comb soil and expose roots. Do not break, tear, or chop exposed roots. Do not use mechanical equipment that rips, tears, or pulls roots.
 2. Cut and protect roots according to requirements in Section 015639 "Temporary Tree and Plant Protection."

3.4 EXCAVATION FOR WALKS AND PAVEMENTS

- A. Excavate surfaces under walks and pavements to a minimum depth of 6 inches to remove surface vegetation and root systems, to a width 2' outside pavement lines. This material should not be used for structural fill or backfill.
- B. Should soils become wet during site construction, excavate, aerate to dry, and recompact adequately, or excavate and replace with approved soil fill. Construction should not take place in wet soils.

3.5 EXCAVATION FOR UTILITY TRENCHES

- A. Excavate trenches to indicated gradients, lines, depths, and elevations.
- B. Excavate trenches to uniform widths to provide the following clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches higher than top of pipe or conduit unless otherwise indicated.
 1. Clearance: As indicated in Drawings

C. Trench Bottoms: Excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduit. Shape subgrade to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits. Remove projecting stones and sharp objects along trench subgrade.

1. Excavate trenches 6 inches deeper than elevation required in rock or other unyielding bearing material to allow for bedding course.

D. Trenches in Tree- and Plant-Protection Zones:

1. Hand-excavate to indicated lines, cross sections, elevations, and subgrades. Use narrow-tine spading forks to comb soil and expose roots. Do not break, tear, or chop exposed roots. Do not use mechanical equipment that rips, tears, or pulls roots.
2. Do not cut main lateral roots or taproots; cut only smaller roots that interfere with installation of utilities.
3. Cut and protect roots according to requirements in Section 015639 "Temporary Tree and Plant Protection."

3.6 EXCAVATION IN PLAYAS OR NATURAL RETENTION STRUCTURE

- A. Contractor will be responsible for any necessary damming or dewatering at playas and natural retention structures prior to excavation. No special payments will be made for such arrangements.
- B. Fill and recompact disturbed areas with clayey soils in 6" lifts to 95% of Maximum Dry Density.
- C. Special care will be made to not perforate existing soil liner of playas and natural retention structures except where necessary.

3.7 SUBGRADE INSPECTION

- A. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Landscape Architect, without additional compensation.

3.8 UNAUTHORIZED EXCAVATION

- A. Fill unauthorized excavation under foundations or wall footings by extending bottom elevation of concrete foundation or footing to excavation bottom, without altering top elevation. Lean concrete fill, with 28-day compressive strength of 3000 psi, may be used when approved by Landscape Architect.
 1. Fill unauthorized excavations under other construction, pipe, or conduit as directed by Landscape Architect.

3.9 STORAGE OF SOIL MATERIALS

- A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 - 1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

3.10 SOIL FILL

- A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.
- B. Place and compact fill material in layers to required elevations as follows:
 - 1. Under grass and planted areas, use satisfactory soil material.
 - 2. Under walks and pavements, use satisfactory soil material.
 - 3. Under steps and ramps, use engineered fill.
 - 4. Under building slabs, use engineered fill.
 - 5. Under footings and foundations, use engineered fill.

3.11 SOIL MOISTURE CONTROL

- A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.
 - 1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
 - 2. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.12 COMPACTION OF SOIL BACKFILLS AND FILLS

- A. Place backfill and fill soil materials in layers not more than 6 inches in loose depth for material compacted by heavy compaction equipment and not more than 4 inches in loose depth for material compacted by hand-operated tampers.
- B. Place backfill and fill soil materials evenly on all sides of structures to required elevations and uniformly along the full length of each structure.
- C. Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D 698.
 - 1. Under structures, building slabs, steps, and pavements, scarify and recompact top 12 inches of existing subgrade and each layer of backfill or fill soil material at 95 percent Maximum Dry Density.
 - 2. Under walkways, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 95 percent Maximum Dry Density.
 - 3. Under turf in disturbed areas, scarify and recompact top 4 inches below subgrade and compact each layer of backfill or fill soil material at 80 percent Maximum Dry Density. Reference Section 329113 (Soil Preparation) for soil under Solid Sod.

4. For utility trenches, compact each layer of initial and final backfill soil material at 85 percent Maximum Dry Density.

3.13 GRADING

- A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
- B. Site Rough Grading: Slope grades to direct water away from slabs and to prevent ponding. Finish subgrades to elevations required to achieve indicated finish elevations, within the following subgrade tolerances:
 1. Turf or Unpaved Areas: Plus or minus 1 inch.
 2. Walks: Plus or minus 1 inch.
 3. Pavements: Plus or minus 1/2 inch.

3.14 SUBBASE AND BASE COURSES UNDER PAVEMENTS AND WALKS

- A. Place subbase course on subgrades free of mud, frost, snow, or ice.
- B. On prepared subgrade, place subbase course under pavements and walks as follows:
 1. Shape subbase course to required crown elevations and cross-slope grades.
 2. Place subbase course that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.
 3. Compact subbase course at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D 698.

3.15 DRAINAGE COURSE UNDER CONCRETE SLABS-ON-GRADE

- A. Place drainage course on subgrades free of mud, frost, snow, or ice.
- B. On prepared subgrade, place and compact drainage course under cast-in-place concrete slabs-on-grade as follows:
 1. Place drainage course that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.
 2. Compact each layer of drainage course to required cross sections and thicknesses to not less than 95 percent of maximum dry unit weight according to ASTM D 698.

3.16 FIELD QUALITY CONTROL

- A. Special Inspections: Owner will engage a qualified special inspector to perform inspections:
- B. Testing Agency: Owner will engage a qualified geotechnical engineering testing agency to perform tests and inspections.

- C. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earth moving only after test results for previously completed work comply with requirements.
- D. Footing Subgrade: At footing subgrades, at least one test of each soil stratum will be performed to verify design bearing capacities. Subsequent verification and approval of other footing subgrades may be based on a visual comparison of subgrade with tested subgrade when approved by Landscape Architect.
- E. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil materials to depth required; recompact and retest until specified compaction is obtained.

3.17 PROTECTION

- A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
- B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
- C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
 - 1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.18 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Remove surplus satisfactory soil and waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION 312000

SECTION 321313 CONCRETE PAVING

PART 1 – GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Walks
 - 2. Paving adjacent to structures
- B. Related Requirements
 - 1. 312000 – Earth Moving

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples: For each exposed product and for each color and texture specified.
- C. Other Action Submittals:
 - 1. Design Mixtures: For each concrete paving mixture. Include alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

1.3 QUALITY ASSURANCE

- A. Ready-Mix-Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.
- B. ACI Publications: Comply with ACI 301 unless otherwise indicated.

PART 2 – PRODUCTS

2.1 STEEL REINFORCEMENT

- A. Plain-Steel Welded Wire Reinforcement: ASTM A 185/A 185M, fabricated from as-drawn steel wire into flat sheets.
- B. Deformed-Steel Welded Wire Reinforcement: ASTM A 497/A 497M, flat sheet.
- C. Reinforcing Bars: ASTM A 615/A 615M, Grade 60; deformed.

- D. Plain-Steel Wire: ASTM A 82/A 82M, as drawn.
- E. Deformed-Steel Wire: ASTM A 496/A 496M.
- F. Dowel Bars: ASTM A 615/A 615M, Grade 60 plain-steel bars. Cut bars true to length with ends square and free of burrs.
- G. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars, welded wire reinforcement, and dowels in place. Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire, plastic, or precast concrete of greater compressive strength than concrete specified.

2.2 CONCRETE MATERIALS

- A. Project concrete paving to be broom finish normal grey concrete.
- B. Cementitious Material: Use the following cementitious materials, of same type, brand, and source throughout Project:
 - 1. Portland Cement: ASTM C 150, gray portland cement Type I; Minimum 5 sacks per cubic yard.
 - a. Fly Ash: ASTM C 618, Class C .
- C. Normal-Weight Aggregates: ASTM C 33, Class 4S, uniformly graded. Provide aggregates from a single source.
- D. Water: Potable and complying with ASTM C 94/C 94M.
- E. Air-Entraining Admixture: ASTM C 260.
- F. Chemical Admixtures: Admixtures certified by manufacturer to be compatible with other admixtures and to contain not more than 0.1 percent water-soluble chloride ions by mass of cementitious material.

2.3. CURING MATERIALS

- A. Absorptive Cover: AASHTO M 182, Class 3, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. dry .
- B. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
- C. Water: Potable.
- D. Evaporation Retarder: Waterborne, monomolecular, film forming, manufactured for application to fresh concrete.
- E. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating.

- F. White, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 2, Class B, dissipating.

2.4. RELATED MATERIALS

- A. Joint Fillers: [ASTM D 1751, asphalt-saturated cellulosic fiber] in preformed strips.
- B. Joint Sealant: Multi-part, pourable, urethane joint sealant – color to match concrete

2.5. CONCRETE MIXTURES

- A. Prepare design mixtures, proportioned according to ACI 301, with the following properties:
 - 1. Compressive Strength (28 Days): 3000 psi .
 - 2. Maximum Water-Cementitious Materials Ratio at Point of Placement: 7 gal /sack.
 - 3. Slump Limit: 5 inches, plus or minus 1 inch.
- B. Chemical Admixtures: Use admixtures according to manufacturer's written instructions.

2.6. CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M. Furnish batch certificates for each batch discharged and used in the Work.

PART 3 – EXECUTION

3.1. EXAMINATION AND PREPARATION

- A. Proof-roll prepared subbase surface below concrete paving to identify soft pockets and areas of excess yielding.
- B. Remove loose material from compacted subbase surface immediately before placing concrete.

3.2. EDGE FORMS AND SCREED CONSTRUCTION

- A. Set, brace, and secure edge forms, bulkheads, and intermediate screed guides to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.
- B. Clean forms after each use and coat with form-release agent to ensure separation from concrete without damage.

3.3. STEEL REINFORCEMENT

- A. General: Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.

3.4. JOINTS

- A. General: Form construction, isolation, and contraction joints and tool edges true to line, with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline unless otherwise indicated.
- B. Construction Joints: Set construction joints at side and end terminations of paving and at locations where paving operations are stopped for more than one-half hour unless paving terminates at isolation joints.
- C. Isolation Joints: Form isolation joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, other fixed objects, and where indicated.
- D. Contraction Joints: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of the concrete thickness:
- E. Edging: After initial floating, tool edges of paving, gutters, curbs, and joints in concrete with an edging tool to a 1/4-inch radius. Repeat tooling of edges after applying surface finishes. Eliminate edging-tool marks on concrete surfaces.
- F. Joint fillers: Extend joint fillers full width and depth of joint and not less than 1/2 inch or more than one inch below finished surface where joint sealant is indicated. Place top of joint filler flush with finished concrete surface when no joint sealant is required.
 - 1. Furnish joint fillers in one-piece lengths for full width being placed wherever possible. Where more than one length is required, lace or clip joint filler sections together.
 - 2. Protect top edge of joint filler during concrete placement with a metal, plastic, or other temporary pre-formed cap. Remove protective cap after concrete has been placed on both sides of joint.
- G. Install dowel bars and support assemblies at joints where indicated. Lubricate or asphalt-coat one-half of dowel length, or use plastic cap to prevent concrete bonding to one side of joint.
- H. Seal construction and isolation joints with joint sealant per this section.

3.5. CONCRETE PLACEMENT

- A. Moisten subbase to provide a uniform dampened condition at time concrete is placed.
- B. Comply with ACI 301 requirements for measuring, mixing, transporting, placing, and consolidating concrete.
- C. Deposit and spread concrete in a continuous operation between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place.
- D. Screed paving surface with a straightedge and strike off.
- E. Commence initial floating using bull floats or darbies to impart an open-textured and uniform surface plane before excess moisture or bleed water appears on the surface. Do not

further disturb concrete surfaces before beginning finishing operations or spreading surface treatments.

3.6 FLOAT FINISHING

- A. General: Do not add water to concrete surfaces during finishing operations.
- B. Float Finish: Begin the second floating operation when bleed-water sheen has disappeared and concrete surface has stiffened sufficiently to permit operations. Float surface with power-driven floats or by hand floating if area is small or inaccessible to power units. Finish surfaces to true planes. Cut down high spots and fill low spots. Refloat surface immediately to uniform granular texture.
 - 1. Heavy-Textured Broom Finish: Draw a stiff-bristle broom across float-finished concrete surface perpendicular to line of traffic to provide a uniform, fine-line texture.

3.7 CONCRETE PROTECTION AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
- B. Comply with ACI 306.1 for cold-weather protection.
- C. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete but before float finishing.
- D. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.
- E. Curing Methods: Cure concrete by moisture curing.

3.8 PAVING TOLERANCES

- A. Comply with tolerances in ACI 117 and as follows:
 - 1. Elevation: 3/4 inch.
 - 2. Thickness: Plus 3/8 inch, minus 1/4 inch.
 - 3. Surface: Gap below 10-foot-long, unlevelled straightedge not to exceed 1/2 inch.
 - 4. Joint Spacing: 3 inches.
 - 5. Contraction Joint Depth: Plus 1/4 inch, no minus.
 - 6. Joint Width: Plus 1/8 inch, no minus.

3.9 REPAIRS AND PROTECTION

- A. Remove and replace concrete paving that is broken, damaged, or defective or that does not comply with requirements in this Section. Remove work in complete sections from joint to joint unless otherwise approved by Landscape Architect.

- B. Protect concrete paving from damage. Exclude traffic from paving for at least 14 days after placement. When construction traffic is permitted, maintain paving as clean as possible by removing surface stains and spillage of materials as they occur.
- C. Maintain concrete paving free of stains, discoloration, dirt, and other foreign material. Sweep paving not more than two days before date scheduled for Substantial Completion inspections.

END OF SECTION

SECTION 329113 - SOIL PREPARATION

PART 1 – GENERAL

1.1. SUMMARY

- A. Section includes planting soils specified by composition of the mixes.
- B. Related Requirements:
 - 1. Section 329200 Turf and Grasses
 - 2. Section 312000 Earth Moving

1.2 DEFINITIONS

- A. Imported Soil: Soil that is transported to Project site for use.
- B. Manufactured Soil: Soil produced by blending soils, sand, stabilized organic soil amendments, and other materials to produce planting soil.
- C. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified as specified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.
- D. Subgrade: Surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.
- E. Subsoil: Soil beneath the level of subgrade; soil beneath the topsoil layers of a naturally occurring soil profile, typified by less than 1 percent organic matter and few soil organisms.
- F. Surface Soil: Soil that is present at the top layer of the existing soil profile. In undisturbed areas, surface soil is typically called "topsoil"; but in disturbed areas such as urban environments, the surface soil can be subsoil.
- G. USCC: U.S. Composting Council.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples: For each bulk-supplied material in sealed containers labeled with content, source, and date obtained; providing an accurate representation of composition, color, and texture.
- C. Plant Soil Existing: If existing plant soil is stockpiled for intended reuse by Contractor, soil tests must be provided for approved use of existing soil as landscape planting soil.

1.4 INFORMATIONAL SUBMITTALS

- A. Field quality-control reports.

PART 2 – PRODUCTS

2.1 MATERIALS

2.2 PLANTING SOILS SPECIFIED BY COMPOSITION

- A. **Planting-Soil Type: Tree, Shrub and Turf Planting:** Manufactured soil consisting of manufacturer's basic topsoil, blended in a manufacturing facility with sand, stabilized organic soil amendments, and other materials to produce viable planting soil.
1. **Basis-of-Design Product:** Subject to compliance with requirements, provide RECOM landscape soil, 4705 W. Industrial Ave., Midland, TX 79703, 432.520.2034, www.recomtx.com, or comparable product by a landscape soil supplier within 200 miles of project site.
 2. **Additional Properties of Manufacturer's Basic Soil before Amending:** Soil reaction of pH 5 to 7.5 and minimum of 4 percent organic-matter content, friable, and with sufficient structure to give good tilth and aeration.
 3. **Unacceptable Properties:** Manufactured soil shall not contain the following:
 - a. **Unacceptable Materials:** Concrete slurry, concrete layers or chunks, cement, plaster, building debris, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, acid, and other extraneous materials that are harmful to plant growth.
 - b. **Unsuitable Materials:** Stones, roots, plants, sod, clay lumps, and pockets of coarse sand that exceed a combined maximum of 5 percent by dry weight of the manufactured soil.
 - c. **Large Materials:** Stones, clods, roots, clay lumps, and pockets of coarse sand exceeding 1-1/2 inches in any dimension.
 4. **Blend manufacturer's basic soil with the following soil amendments and fertilizers in the following quantities to produce planting soil:**
 - a. **Weight of Sulfur :** 1-1/2 pounds per cu. yd. >.
 - b. **Weight of Commercial Fertilizer:** 1/2 pound per cu. yd.
- B. **Planting-Soil Type: Existing Soil- Turf (hydroseed only)-** Existing soil meeting property requirements and approval by Landscape Architect. Amended with stabilized organic soil amendments, and other materials to produce viable planting soil.
1. **Properties of Existing Soil before Amending:** Soil reaction of pH 5 to 7.5 and minimum of 4 percent organic-matter content, friable, and with sufficient structure to give good tilth and aeration.
 2. **Unacceptable Properties:** Soil shall not contain the following:
 - a. **Unacceptable Materials:** Concrete slurry, concrete layers or chunks, cement, plaster, building debris, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, acid, and other extraneous materials that are harmful to plant growth.

- b. Unsuitable Materials: Stones, roots, plants, sod, clay lumps, and pockets of coarse sand that exceed a combined maximum of 5 percent by dry weight of the manufactured soil.
 - c. Large Materials: Stones, clods, roots, clay lumps, and pockets of coarse sand exceeding 1-1/2 inches in any dimension.
3. Blend existing soil with the following soil amendments and fertilizers in the following quantities to produce planting soil:
- a. Ratio of Loose Compost to Soil: 20 pounds per cu. yard.
 - b. Volume of Sand: 1/3 per cu. yd.
 - c. Weight of Sulfur: 1-1/2 pounds per cu. yd.
 - d. Weight of Commercial Fertilizer: 1/2 pound per cu. yd.

2.3 INORGANIC SOIL AMENDMENTS

- A. Sulfur: Granular, biodegradable, and containing a minimum of 90 percent elemental sulfur, with a minimum of 99 percent passing through a No. 6 sieve and a maximum of 10 percent passing through a No. 40 sieve.
- B. Sand: Clean, washed, natural or manufactured, free of toxic materials, and according to ASTM C 33/C 33M.

2.4 ORGANIC SOIL AMENDMENTS

- A. Compost: Well-composted, stable, and weed-free organic matter produced by composting feedstock, and bearing USCC's "Seal of Testing Assurance," and as follows:
 - 1. Basis-of-Design Product: Cotton Burr Compost, by Back to Nature, Inc, 5407 East Highway 87, Slaton, TX 79364
 - 2. Feedstock: May include sewage sludge; may include animal waste
 - 3. Reaction: pH of 5.5 to 8
 - 4. Soluble-Salt Concentration: Less than 4 dS/m.
 - 5. Moisture Content: 35 to 55 percent by weight
 - 6. Organic-Matter Content: 30 to 40 percent of dry weight
 - 7. Particle Size: Minimum of 98 percent passing through a 2-inch sieve
- B. Manure: Well-rotted, unleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, debris, and material harmful to plant growth.

2.5 FERTILIZERS

- A. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
- B. For Turf areas provide fertilizer with percentage of nitrogen required to provide not less than 1 pound of actual nitrogen per 1,000 sf of turf area and not less than 4 percent phosphoric acid and 2 percent potassium. Provide nitrogen in a form that will be available to turf during initial period of growth, at least 50 percent of the nitrogen to be organic form.

PART 3 – EXECUTION

3.1 GENERAL

- A. Place planting soil and fertilizers according to requirements in other Specification Sections.
- B. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in planting soil.
- C. **Finish Grading:** The General Contractor shall establish, excavate, and provide all required planting sub-grade elevations for use by the Planting Contractor. Finished subgrade shall take into account the required depth of topsoil or planting soil mix plus mulch or sod thickness. It shall be the responsibility of the Planting Contractor to coordinate required depths of planting with the General Contractor, and to ensure that finish grades of all planting areas slope away from structures and provide adequate drainage and do not extend above finished grade of adjacent pavements. Grade shall assume required thickness of topsoil, prepared soil mix, and mulch materials. Coordinate all finish grading with General Contractor.

3.2 PLACING MANUFACTURED PLANTING SOIL OVER EXPOSED SUBGRADE

- A. **General:** Apply manufactured soil on-site in its final, blended condition. Do not apply materials or till if existing soil or subgrade is frozen, muddy, or excessively wet.
- B. **Subgrade Preparation:** Till subgrade to a minimum depth of 4 inches. Remove stones larger than 1-1/2 inches in any dimension and sticks, roots, clods, waste, and other extraneous matter and legally dispose of them off site.
- C. **Application:** Spread planting soil to total depth indicated on Drawings, but not less than required to meet finish grades after natural settlement. Do not spread if soil or subgrade is frozen, muddy, or excessively wet. For Turf Areas till in 2" of manufactured or amended soil into existing subgrade.
- D. **Finish Grading:** Grade planting soil to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.

3.3 BLENDING PLANTING SOIL IN PLACE (TURF AREAS ONLY)

- A. **General:** Mix amendments with in-place, unamended soil to produce required planting soil. Do not apply materials or till if existing soil or subgrade is frozen, muddy, or excessively wet.
- B. **Preparation:** Till unamended, existing soil in planting areas to a minimum depth of 4 inches. Remove stones larger than 1-1/2 inches in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
- C. **Mixing:** Apply soil amendments and fertilizer, if required, evenly on surface, and thoroughly blend them into full depth of unamended, in-place soil to produce planting soil.

1. Mix fertilizer with planting soil no more than seven days before planting.
- D. **Finish Grading:** Grade planting soil to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.
- 3.4 **APPLYING COMPOST AND OTHER AMENDMENTS TO SURFACE OF PLANTING SOIL (TURF AREAS ONLY)**
- A. **Application:** Apply 2 inches of compost to surface of in-place planting soil. Do not apply materials or till if existing soil or subgrade is frozen, muddy, or excessively wet.
 - B. **Finish Grading:** Grade surface to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.
- 3.5 **PROTECTION AND CLEANING**
- A. **Protection Zone:** Identify protection zones according to Section 01 5639 "Temporary Tree and Plant Protection"
 - B. Protect areas of in-place soil from additional compaction, disturbance, and contamination. Prohibit the following practices within these areas except as required to perform planting operations:
 1. Storage of construction materials, debris, or excavated material.
 2. Parking vehicles or equipment.
 3. Vehicle traffic.
 4. Foot traffic.
 5. Erection of sheds or structures.
 6. Impoundment of water.
 7. Excavation or other digging unless otherwise indicated.
 - C. Remove surplus soil and waste material including excess subsoil, unsuitable materials, trash, and debris and legally dispose of them off Owner's property unless otherwise indicated.
 1. Dispose of excess subsoil and unsuitable materials on-site where directed by Owner.

END OF SECTION

SECTION 329200 - TURF AND GRASSES

PART 1 – GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Seeding (Hydroseeding, hydromulch).
- B. Related Requirements:
 - 1. Section 311000 Site Clearing
 - 2. Section 329113 Soil Preparation

1.2 DEFINITIONS

- A. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. This includes insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. It also includes substances or mixtures intended for use as a plant regulator, defoliant, or desiccant.
- B. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth. See Section 32 9113 "Soil Preparation" and drawing designations for planting soils.
- C. HydroSeeding which is sometimes also called hydraulic mulch seeding, hydro-mulching, or hydraseeding) is a planting process in which a slurry containing seed, hydro seeding mulch, fertilizer and a tackifier (bonding agent) is sprayed onto the ground. The slurry is transported in a truck or trailer mounted tank to the job site and sprayed over prepared ground in a uniform layer

1.3 INFORMATIONAL SUBMITTALS

- A. Certification of grass seed.
 - 1. Certification of each seed mixture for turfgrass seed.
- B. Product certificates.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified landscape Installer whose work has resulted in successful turf establishment.
 - 1. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when work is in progress.

2. Pesticide Applicator: State licensed, commercial.
3. Personnel Certifications: Installer's field supervisor shall have certification in one of the following categories from the Professional Landcare Network:
 - a. Landscape Industry Certified Technician - Exterior.
 - b. Landscape Industry Certified Lawncare Manager.
 - c. Landscape Industry Certified Lawncare Technician.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Seed and Other Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of compliance with state and Federal laws, as applicable.

PART 2 – PRODUCTS

2.1 HYDROSEED (Hydromulch)

- A. Grass Seed: Fresh, clean, dry, new-crop seed complying with AOSA's "Rules for Testing Seeds" for purity and germination tolerances.
- B. Seed Species:
 - I. Quality: State-certified seed of grass species as listed below:
 - a. Sahara Bermuda Grass (*Cynodon dactylon* v. *Numex Sahara*) seed shall be free of Johnson Grass, field bindweed, dodder seed and other weed seed to the limits allowed under the Federal Seed Act and applicable state seed laws. Seed shall have a pure live seed content of 95 percent purity and 90 percent germination. If seeding occurs between March 1st and October 1st, unhulled seed shall be used; if seeding occurs between October 1st and March 1st, hulled seeds shall be used.
 - b. Annual Rye Grass seed shall be free of Johnson Grass, field bindweed, dodder seed and other weed seed to the limits allowed under the Federal Seed Act and applicable state seed laws. Seed shall have a pure live seed content of 95 percent purity and 90 percent germination. Annual Rye Grass will be added to slurry if seeding occurs between October 1 and March 15.

2.2 FERTILIZERS

- A. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
- B. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
 - I. Composition: 20 percent nitrogen, 10 percent phosphorous, and 10 percent potassium, by weight.

- C. For grasses, provide fertilizer with percentage of nitrogen required to provide not less than 1 pound of actual nitrogen per 1,000 sq. ft. of lawn area and not less than 4 percent phosphoric acid and 2 percent potassium. Provide nitrogen in a form that will be available to turf during initial period of growth; at least 50 percent of nitrogen to be organic form.

2.3 PESTICIDES

- A. General: Pesticide, registered and approved by the EPA, acceptable to authorities having jurisdiction, and of type recommended by manufacturer for each specific problem and as required for Project conditions and application. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction.

2.4 MULCHES

- A. Rock Mulch: Reference plan sheets for size and color. Available at Corona Stone 4000 N. County Road 1150, Midland, TX 79705, 432.701.0849.
- B. Geotextile Fabric (weed barrier): Commercial grade, woven polyester, moisture-permeable fabric. Warren's Terra Bond Polyester Geotextile Fabric, tan in color or approved equivalent.
- C. Wood Cellulose Hydroseed Matrix Material: Industry standard for hydroseeding operations.
 - 1. 70/30 Wood/Cellulose Blend Fiber Mulch. Wood/Cellulose blend fiber mulch shall consist of 70% long wood grain fibers produced from grinding clean, whole wood chips and 30% cellulose fiber produced from ground newsprint. Mulch fibers shall be free of abrasive or hard contaminants which would inhibit hydraulic pumping. The mulch fibers must maintain uniform suspension in water under agitation and shall blend with grass seed, fertilizer, and other additives to form homogeneous slurry. Upon application, the mulch material shall form a blotter-like mat covering the ground. This mat shall have the characteristics of water absorption and percolation and shall cover and bond grass seed in contact with the soil. The wood fiber mulch shall be dyed green to aid visual metering during application. The dye shall be biodegradable and not inhibit plant growth. The wood fiber mulch shall also conform to the following requirements:
 - a. Percent moisture content (maximum) 12.5% +/- 3%
 - b. Percent organic matter
 - c. Wood Fiber (minimum) 70% +/- 0.8% Oven Dry Basis
 - d. Paper Fiber (maximum) 1.0% +/- 0.2% Oven Dry Basis
 - e. PH 4.8% +/- 0.5%
 - f. Water holding capacity (minimum) 1,000 Grams of water per 100 grams of fiber
- D. The wood fiber mulch shall be packaged in units no exceeding 100 lbs. and shall be suitable for outdoors storage for up to six months. The package shall contain, on current labels, the manufacturer's name and address, net weight, and customer service telephone number.

- E. Tactifier and Binder: Natural vegetable gum containing gelling and hardening agents that when mixed with water and properly cured, shall form an insoluble network.

PART 3 – EXECUTION

3.1 TURF AREA PREPARATION

- A. General: Prepare planting area for soil placement and mix planting soil according to Section 329113 "Soil Preparation."
- B. Reduce elevation of planting soil to allow for soil thickness of sod.
- C. Moisten prepared area before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.
- D. Before planting, obtain Landscape Architect's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.

3.2 HYDROSEEDING TURF

- A. Spread 2 inches of topsoil over areas to receive hydroseeding and till thoroughly into the subgrade. Planting subcontractor is responsible for maintaining finish grade in these areas. Do not till within the root protection zones of existing trees. Mix seed, fertilizer, and fiber mulch in water, using equipment specifically designed for hydroseeding operations. Continue mixing until uniformly blended into a homogenous slurry suitable for hydraulic application. Mix slurry with non-asphaltic tackifier. Apply mixture uniformly to all areas scheduled for hydroseeding, at a minimum rate of 2500 lb per acre dry weight, but not less than the rate required to obtain 100% coverage.
- B. 100% turf coverage is expected in hydroseeded areas. Once germination has occurred, a subsequent application shall occur, if necessary in the opinion of the Landscape Architect, to cover gaps in turf coverage.

3.3 TURF MAINTENANCE

- A. General: Maintain and establish turf by watering, fertilizing, weeding, mowing, trimming, replanting, and performing other operations as required to establish healthy, viable turf. Roll, regrade, and replant bare or eroded areas and remulch to produce a uniformly smooth turf. Provide materials and installation the same as those used in the original installation.
- B. Mow turf as soon as top growth is tall enough to cut. Repeat mowing to maintain specified height without cutting more than one-third of grass height. Remove no more than one-third of grass-leaf growth in initial or subsequent mowings.
- C. Maintenance Period: 90 days after substantial completion, or until satisfactory coverage has been achieved per this section.

3.4 SATISFACTORY TURF

- A. Turf installations shall meet the following criteria as determined by Landscape Architect:
 - 1. Satisfactory Sodded Turf: At end of maintenance period, a healthy, well-rooted, even-colored, viable turf has been established, free of weeds, open joints, bare areas, and surface irregularities.
 - 2. Satisfactory Seeded Turf: At end of maintenance period, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding 90 percent over any 10 sq. ft. and bare spots not exceeding 5 by 5 inches.
- B. Use specified materials to reestablish turf that does not comply with requirements, and continue maintenance until turf is satisfactory.

END OF SECTION

APPENDIX A
GEOTECHNICAL INVESTIGATION

GEOTECHNICAL INVESTIGATION
LAMESA BOYS AND GIRLS CLUB LAKE PARK
PHASE 1
LAMESA, TEXAS

(BACK OF FRONT COVER)

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GEOTECHNICAL INVESTIGATION
LAMESA BOYS AND GIRLS CLUB LAKE PARK
PHASE 1
LAMESA, TEXAS

prepared for

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MIDLAND, TEXAS

JULY 31, 2015

PROJECT NO. 10190715

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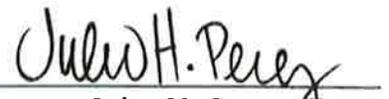

Julie H. Perez, E.I.T.
Graduate Engineer

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**GEOTECHNICAL INVESTIGATION
LAMESA BOYS AND GIRLS CLUB LAKE PARK**

PHASE 1

LAMESA, TEXAS

INTRODUCTION

General: This geotechnical investigation at the site of proposed improvements to a park in Lamesa, Texas, was authorized by signed agreement on June 29, 2015, by Mr. Timothy E. Hair, ASLA, Principal, Mask Landscape Architecture, Midland, Texas, and was performed in general accordance with our letter proposal dated June 4, 2015.

The purpose of this investigation has been to explore subsurface conditions at the site, to conduct field and laboratory tests to characterize the physical soil properties, to provide design and construction recommendations to assist the structural engineer in the design of the foundation systems for the structures, and to provide pavement section and construction recommendations for the pavement areas.

The site is located on the southwest corner of N. Main Street and 9th Street in Lamesa, Texas. The general location of the site is shown on the site vicinity map on Plate I in Appendix A.

Existing Site Conditions: The site previously was used as a baseball/softball field and was covered with grasses at the time of the geotechnical drilling operations. No other previous use of the site was evident or made known to W. C. Hamilton Engineering at the time this report was prepared.

Subsurface Exploration: Subsurface materials at the site were explored by a total of five borings at locations selected by W. C. Hamilton Engineering, Inc. personnel. The borings were

drilled to a maximum depth of 15.0 feet. The approximate boring locations are shown on Plate I in Appendix A. Field drilling operations were completed with the plugging of the holes on July 4, 2015.

The borings were advanced using continuous sampling techniques. At the direction of the geotechnical engineer, the materials were monitored during the drilling operations for any signs of physical changes in the materials. An auger bit was used to advance each boring the entire depth of the hole. These samples were visually examined, identified, wrapped and sealed in plastic, when appropriate, and placed in core boxes for transportation to the laboratory.

The Standard Penetration (SPT) Test, ASTM D1586, was conducted at various intervals of depth during the exploration to aid in strength evaluations. This test procedure drops a 140 pound hammer from a height of 30 inches to advance a split barrel drive point. Depending on the resistance of the materials to penetration by the drive point, either the number of blows required to advance the drive point 12 inches, 50 blows resulting in six inches or less penetration, or the inches of penetration due to 100 blows is recorded. Results of the SPT tests are shown on the left-hand side of the Logs of Boring. The SPT samples were visually examined, identified, and wrapped and sealed in plastic for transportation to the laboratory.

Samples obtained from the field operations that were not utilized in the laboratory testing will be stored for 30 days from the date of this report. After that time they will be discarded unless written notification is received.

Laboratory Testing: The soil samples were returned to the laboratory where they were re-examined and the visual classifications checked by the geotechnical engineer. Selected specimens were chosen for testing to identify their soil classifications and natural moisture contents. The specific tests conducted are summarized as follows:

- Atterberg Limits Tests
- Percent Passing No. 200 Sieve Tests
- Natural Moisture Content Tests

The Atterberg Limits tests, percent passing No. 200-mesh sieve tests, and natural moisture content tests were used to evaluate the basic engineering properties of the soil. The results of these tests and the classifications of the subsurface materials are shown in the summary on Plate II in Appendix A. The soil classifications refer to the Unified Soil Classification System per ASTM D2487.

Summary: The results from the field exploration and the laboratory investigation were utilized in an engineering study to develop recommendations for the design of the foundation systems for the structures and pavement. These evaluations and recommendations are discussed in the following sections.

SUBSURFACE MATERIALS AND CONDITIONS

Stratification: Specific types and depths of the subsurface strata encountered in the borings are shown on the attached Logs of Boring in Appendix B. In general, the subsurface materials encountered from the ground surface down consisted of:

Stratum 1 Dark Brown SANDY LEAN CLAY, CLAYEY SAND, or SILTY SAND at least to the bottoms of the borings.

Material Characteristics: The results of the SPT tests indicate that the SANDY LEAN CLAYS were very soft to medium stiff in consistency. The CLAYEY and SILTY SANDS were very loose to medium dense in relative density.

Subsurface Water Conditions: The borings were advanced to a depth of 15.0 feet using dry sampling techniques. Groundwater was not encountered in the borings during the geotechnical drilling operations. Notes on groundwater observations are contained on the Logs of Boring in Appendix B.

Be aware that these limited observations do not represent a groundwater study which was beyond the scope of this investigation, and that due to the nature of subsurface water and its relationship to climatic influences, the groundwater may be intermittent and of varying quantities and depths due to changes in the seasonal moisture content.

Shrink/Swell Potential: The tendency for a soil to shrink and swell with changes in soil moisture content is a function of the clay content and the type of clay mineral. These are reflected in soil consistency as indicated by the liquid limit and plasticity index of the Atterberg Limits tests. A generalized relationship between shrink/swell potential and the soil plasticity index (P.I.) is shown as follows:

General Relationship Between P.I. and Shrink/Swell Potential

<i>P.I. Range</i>	<i>Shrink/Swell Potential</i>
0 to 15	Low
15 to 25	Medium
25 to 35	High
>35	Very High

The amount of expansion that will actually occur with increases in soil moisture content is inversely related to the overburden pressure; that is, the larger the overburden pressure, the smaller the amount of expansion. Near-surface soils are thus susceptible to shrink/swell behavior because of the low overburden pressures. Shrink/swell behavior is normally considered to be limited to the upper 15 feet (zone of seasonal moisture changes) of the various soil formations. Overall, the materials encountered at this site possess medium shrink/swell potential.

Frost Depth: The published frost depth for the area is six inches.

Seismic Zone: According to the *Uniform Building Code*, the area rests in seismic zone zero. The *International Building Code-03* site classification is D/E.

FOUNDATION DESIGN RECOMMENDATIONS

General: Plans call for the construction of a pavilion, retaining walls, and walkways. The structural loads associated with the project are anticipated to be moderate in intensity.

Potential Soil Movements: McDowell's potential vertical rise (PVR) procedure (Reference 1) has been used to estimate the possible magnitude of shrink/swell movements at the site. The results indicate possible shrink/swell movements over the site to be up to 3/4 inch with the soil moisture changing from a "dry" to a "wet" soil moisture content due to seasonal soil moisture variations. It should be noted that this method utilizes correlations of soil types to swell potential and as such, the results must be considered as giving approximate values of the shrink/swell potential.

The materials encountered in the borings were generally in a state that is not susceptible to classic consolidation settlement. Footings designed using the recommended design values will be subject to settlement of less than one inch total and one-half inch differential settlement.

Also, be aware that these potential soil movement estimates are indicative of the relative magnitude of probable movement under seasonal changes in soil moisture content. Soil movements in excess of these values due to either expansion or consolidation may be expected if increases in soil moisture content occur as a result of broken water and sewer lines, improper drainage of surface water, shrubbery and trees planted near the foundations, excessive lawn or shrubbery irrigation, or ponding of water near the foundations. These movement potentials must be considered in the design of the foundation support systems.

Structural Load Support: Based on the materials encountered in the borings, shallow spread, mat type, or continuous footings will provide satisfactory support for the proposed structures. Footings founded at a minimum depth of 2.0 feet below the existing ground surface at the time of the geotechnical drilling operations may be sized using a net allowable loading intensity of

500 pounds per square foot. This value provides for a factor of safety of three against a general shear failure at this depth.

Should fill material placement be required for site work improvements such that the footing depth becomes relatively deep, footings may be designed using a net value of **500 pounds per square foot** at a minimum depth of 2.0 feet below the finished grade elevation. The footings should be founded on compacted select fill material or the natural subgrade prepared and placed as described in the *Foundation Construction Criteria* section of this report. This value also provides for a factor of safety of three against a general shear failure in the material specified.

Drilled piers will also provide satisfactory support for the proposed structures. Drilled piers founded at a minimum depth of 10.0 feet below the existing ground surface at the time of the geotechnical drilling operations may be sized using a net allowable unit loading intensity of **3,500 pounds per square foot**. The piers may be designed as straight shaft or underreamed. The underreamed design should be limited to a maximum 30° angle from the vertical shaft. This value also provides for a factor of safety of three against a general shear failure.

Interior Floor Slab Considerations: The subsurface materials appear suitable for support of a typical lightly-loaded floor slab system. The *Foundation Construction Criteria* section of this report should be consulted for recommendations for preparation of the subgrade and the addition of fill material, if required.

Floor slab areas subjected to heavy floor loading or forklift traffic will require special consideration. These floor slabs should be designed as pavements. A "cushion sand" is *not* recommended for these type slabs.

Lateral Load Resistance: The structures will impart lateral loads outward from the base of the footings. These lateral loads will be resisted by the weight of the footings, the weight of the soil placed above the footings, frictional resistance between the contact area of the footing base and the soil, and passive earth pressures of the soil against the outer side area of the footings.

The passive earth pressure resistance for each foot of width of the footing may be calculated using the following formula:

$$P_p = 0.5\gamma H^2 + 2CH$$

where P_p = Ultimate resultant force per foot of width of the footing (lbs)
 γ = Unit weight of soil (pcf)
 C = Cohesion (psf)
 H = Soil/footing contact height (ft)

The following are recommended soil values for use:

$$\begin{aligned} \gamma &= 105 \text{ pcf} \\ C &= 100 \text{ psf} \end{aligned}$$

A factor of safety of at least 1.5 is recommended.

Lateral Earth Pressures: Walls below grade will be acted upon by lateral earth pressures. The magnitude of the lateral earth pressures will be a function of the type of materials used as backfill, compaction achieved during placement, placement method, and specifics of the wall design (i.e., smooth wall, rough wall, braced, battered, height of wall, finished grade, etc.).

If the top of the wall is allowed to move slightly, then the "active" Rankine lateral earth pressure case will be developed. If the top of the wall is restrained against movement, then the "at rest" lateral earth pressure case will be developed. The following values are recommended for design purposes and reflect the average or mixed condition for on-site material:

<i>Material Type</i>	<i>At Rest Equivalent Fluid Pressure K_h</i>	<i>Active Equivalent Fluid Pressure K_a</i>
On-site Material	75 lbs/ft ² /lin ft	60 lbs/ft ² /lin ft

These earth pressure values are for horizontal pressures on a vertical wall (not exceeding 15 feet in height) and do *not* include surcharge loading or hydrostatic pressure buildup.

OTHER DESIGN CONSIDERATIONS

Other Design Values: Based on the results of the plasticity index tests, sieve analyses, and correlations of the results with similar materials, the following are recommended design values for the properties of the on-site materials:

Angle of Internal Friction (ϕ):	SANDY LEAN CLAYS:	10°
	CLAYEY and SILTY SANDS:	15°
Modulus of Subgrade Reaction for Mats and Slabs (pci)*:		250
Ultimate Friction Factor between Soil and Base Concrete:	(Unformed) 0.4 to 0.5 (Formed) 0.3	
Unit Weight of Soil:	105 pounds per cubic foot	

*When prepared as recommended in the *Foundation Construction Criteria* section of this report

FOUNDATION CONSTRUCTION CRITERIA

Site Preparation: Prior to starting any work at the site it is recommended that proper construction drainage be provided to maintain a relatively dry condition. This will be very important if any work is attempted during periods of prolonged rainfall which occur seasonally in this area. Ponding of water at the site should be avoided during all phases of construction and post construction grading.

Site preparation should begin by removing all surface vegetation and root systems to a minimum depth of six inches within the building areas and six inches within the pavement areas for a distance of five feet outside the building lines and two feet beyond pavement lines. This material should not be used for structural fill or in the building areas.

Tree stumps, if encountered, should be completely removed and backfilled. Backfilling should be accomplished in maximum eight-inch loose lifts and then compacted to a minimum of 95 percent of maximum density (ASTM D698) at not less than two percentage points of optimum moisture. Compacted select, non-expansive fill material should be used to fill in stump holes.

The exposed surfaces for the building areas (when at proper subgrade) should be compacted to a minimum of 95 percent of ASTM D698 maximum density at not less than two percentage points of the optimum moisture content determined by this test. If any soft or weak areas are revealed, they should be removed and then replaced with compacted select fill prior to placement of fill or base material.

Any areas found not to comply with the compaction requirements should be reworked and retested prior to placing the next lift. A density test frequency of one test for every 2,500 square feet of building area is recommended.

Occasionally, the shallow soils become wet and pump during site preparation, and become difficult to work. This condition generally occurs with trapped moisture in the subgrade. If this

condition occurs during construction, the soils need to be excavated, aerated to dry, and recompacted adequately. At times excavating and replacing with selected soils may be required to achieve an adequate subgrade.

Select Non-Expansive Fill Material: Fill material used should be the on-site material or a select non-expansive material meeting the following general requirements:

Maximum Aggregate Size	3.0 inches
Percent Retained on No. 4 Sieve	25-50
Percent Retained on No. 40 Sieve	50-85
Plasticity Index	15 maximum

Other local materials that do not meet these requirements should be submitted to the geotechnical engineer for evaluation and testing prior to their use.

The fill material should be compacted to a minimum of 95 percent of ASTM D698 maximum density in maximum eight-inch loose lifts and tested for compliance prior to proceeding with subsequent lifts. Should fill material placement exceed 3.5 feet in depth, the density requirement should be increased to 98 percent of ASTM D698 maximum density. The moisture content should be maintained at or near the optimum moisture content as determined by ASTM D698, and should not be less than two percentage points of the optimum moisture content determined by this test.

Vapor Barrier: A vapor barrier below the floor slab should be considered in areas where moisture sensitive floor coverings will be applied. The vapor barrier should be designed according to ACI criteria.

Foundation Construction: It is recommended that all footing excavations be inspected and checked by the owner's authorized representative for proper foundation supporting material and depth, proper dimensions, and proper reinforcement size and placement. Loose material should be removed from the excavation prior to the placement of steel and concrete. Foundation excavations should remain open only the minimum time necessary to permit good quality

construction and in no case should the pier holes remain open overnight. Although caving was not encountered in the drilling operations and is not anticipated, it is recommended that the use of temporary steel casing be included in the bid or contract documents as a separate item should it be required during construction.

Drainage Considerations: Proper drainage should be provided away from the foundation elements during all phases of construction and post-construction grading. Proper drainage is essential to the long-term stability of the structures. Ponding of water near the foundation elements from improper grading, excessive landscape watering, or gutter downspouts should not be permitted.

Backfill Compaction: In the event that *footings* are constructed in such a manner that they require backfilling, the on-site material or a select material may be used as backfill. The material should be compacted to not less than 95 percent of maximum density (ASTM D698) in maximum six-inch lifts. The select material should have a plasticity index of 15 or less. Non-plastic materials should have at least 30 percent by weight passing the No. 200-mesh sieve. The maximum particle size should be less than two inches when hand compacted techniques are used. A three-inch maximum particle size is permissible when large construction equipment is utilized for backfill compaction. Backfill compaction consideration should also be given to any utility trenches within or near the construction area.

PAVEMENT DESIGN AND CONSTRUCTION CRITERIA

Design Criteria: The predominant subgrade providing support for the pavement areas should be the SANDY LEAN CLAYS and CLAYEY SANDS. Based on the laboratory tests and past experience with similar soils, the support strength of these materials has been estimated to have a Texas Triaxial Classification of 4.5 when compacted to at least 95 percent of AASHTO T180 density.

Traffic Conditions and Pavement Thicknesses: The total pavement thickness for any particular paved area will depend on the traffic characteristics as estimated by the number of 18-kip axle load repetitions. For this site, assuming parking areas will be primarily automobile and other light vehicles, the estimated design number of equivalent 18-kip axle load repetitions is 25,000.

The required pavement thicknesses have been selected using the *1993 AASHTO Guide for Design of Pavement Structures*. The required total pavement thickness and individual layer thicknesses for flexible and rigid pavement sections with assumptions are provided below:

FLEXIBLE PAVEMENT

1. 18-Kip ESAL, W_{18}	25,000
Reliability, R	80%
Overall Standard Deviation, S_o	0.45
Soil Resilient Modulus, M_R	8,000 psi
Initial Serviceability, p_o	4.1
Terminal Serviceability, p_t	2.25
Design Structural Number, SN	1.68

2. Layer Coefficients	
Asphaltic Concrete Surface, a_1	0.40
Asphaltic Concrete Base, a_2	0.25
Base, a_3	0.10

Recommended Section

- 1.5 inches of Hot Mix Asphaltic Concrete Surface Course (HMACS)
- 4.5 inches of Hot Mix Asphaltic Concrete Base Course (HMACB)
- 6.0 inches Total Constructed Pavement Thickness, *above*
- 6.0 inches of Compacted Subgrade

or

Alternate Section

- 2.25 inches of Hot Mix Asphaltic Concrete Surface Course (HMACS)
- 8.00 inches of Flexible Base Material
- 10.25 inches Total Constructed Pavement Thickness, *above*
- 6.00 inches of Compacted Subgrade

On truck delivery routes and areas, an additional one inch of HMACS and either one inch of HMACB (recommended section) or two inches of Flexible Base (alternate section) should be added to the selected pavement section.

RIGID PAVEMENT

Assumptions for rigid pavement section are the same as outlined previously except for the following additional assumptions:

1. Load Transfer, $J = 4.1$ (Assuming no load transfer devices in jointed pavement)
 - Concrete Compressive Strength (28 days) = 3,000 psi
 - Concrete Modulus of Elasticity = 3,600,000 psi
 - Modulus of Rupture = 500 psi
 - Overall Standard Deviation, $S_o = 0.35$
 - Modulus of Subgrade Reaction = 250 pci

The following rigid pavement section would be appropriate at this site:

- 5.0 inches of Portland Cement Concrete
- 6.0 inches of Compacted Subgrade

Reinforcing steel consisting of deformed steel re-bars (not wire mesh) should be used in concrete pavement at this site. Thickness selection is based on concrete flexural strength, soil modulus, and traffic volume. Selection of steel is dependent on joint spacing, slab thickness, and other factors as discussed in the Portland Cement Association publications.

Construction Criteria: The pavement should be specified, constructed, and tested to meet the following requirements:

1. Hot Mix Asphaltic Concrete Pavement - Texas Department of Transportation (TxDOT) Item 340, Type C or D, 1993 Specification, compacted to at least 93% of the Rice Specific Gravity (TEX Method 227-F).
2. Hot Mix Asphaltic Concrete Base - TxDOT Item 340, Type B, 1993 Specification, compacted to at least 93% of the Rice Specific Gravity (TEX Method 227-F) in maximum four-inch lifts.
3. Flexible Base Material - TxDOT Item 247, Type A, Grade 3, 1993 Specification. The material should be compacted to a minimum of 95% of AASHTO T180-74 density near optimum moisture content.
4. Compacted Subgrade - The subgrade beneath the pavements should be compacted to a minimum of 95% of AASHTO T180-74 density near optimum moisture content.
5. Portland Cement Concrete - Portland Cement Concrete should be specified to contain a minimum of 5.0 sacks of cement per cubic yard and minimum 3000 psi compressive strength at 28 days. Reinforcing steel is recommended for temperature and expansion control.

Drainage: Proper drainage of the paved areas, including minimization of ponding of water on the pavement surface, is essential to provide maximum pavement life.

LIMITATIONS OF THIS INVESTIGATION

The subsurface materials and conditions are known only at the specific boring locations and within the depths explored. Subsurface conditions have been extrapolated based on known conditions in the borings, and actual field conditions elsewhere at the site may differ from those described in this report due to geological, prior use, or other factors. For this reason, we recommend that the geotechnical engineer be retained through the construction phase to include plan review and to identify variations in subsurface materials and conditions and to confirm that the recommendations contained in this report are applicable to subsurface conditions encountered elsewhere on this site.

This report has been prepared based on a specific site and specific use. The geotechnical engineer must be consulted prior to this report being used for other than the specific project for which this report was written.

This report should not be copied without permission of the geotechnical engineer. When copied with his/her permission, the report should be copied in its entirety and in no case should the boring logs be separated from the body of the report.

It is recommended that the construction materials testing laboratory shall meet the basic requirements of ASTM E329, but as a minimum shall have demonstrated satisfactory performance in the AASHTO Materials Reference Laboratory Proficiency Sample Program in soils and concrete.

REFERENCES

1. McDowell, C., "The Relation of Laboratory Testing to Design for Pavements and Structures on Expansive Soils," *Quarterly of the Colorado School of Mines*, Vol. 54, No. 4, Oct. 1959, pp. 127-153
2. *AASHTO Guide for Design of Pavement Structures*, American Association of State Highway and Transportation Officials, 1993.
3. *Standard Specifications for Construction of Highways, Streets and Bridges*, Texas Department of Transportation (TxDOT), 1993.

APPENDIX A



**SITE VICINITY MAP AND
APPROX. BORING LOCATIONS**

Project No. 10190715

Lamesa Boys and Girls Club Lake Park
Phase I, Lamesa, Texas

PLATE

I

SUMMARY OF SOIL CLASSIFICATION TEST RESULTS

<i>Boring Number</i>	<i>Depth in Feet</i>	<i>Liquid Limit %</i>	<i>Plasticity Index %</i>	<i>% Passing 200-mesh Sieve</i>	<i>Natural Moisture Content %</i>	<i>Classification</i>	<i>Material Description</i>
B-1	2.5-4.0	38	22	69.8	20.4	CL	Dark Brown SANDY LEAN CLAY
B-1	9.0-10.5	34	18	60.6	17.9	CL	Dark Brown SANDY LEAN CLAY
B-2	1.0-2.5	26	12	67.7	16.3	CL	Dark Brown SANDY LEAN CLAY
B-2	5.0-6.5	27	13	39.5	14.6	SC	Dark Brown CLAYEY SAND
B-3	5.0-6.5	39	24	68.6	20.1	CL	Dark Brown SANDY LEAN CLAY
B-3	13.0-14.5	56	30	48.8	26.3	SC	Dark Brown CLAYEY SAND
B-4	1.0-2.5	26	12	41.8	9.8	SC	Dark Brown CLAYEY SAND
B-4	5.0-6.5	NP*	NP*	17.5	7.5	SM	Dark Brown SILTY SAND
B-4	9.0-10.5	20	2	39.5	14.2	SM	Dark Brown SILTY SAND
B-5	1.0-2.5	27	12	41.7	7.8	SC	Dark Brown CLAYEY SAND

*Non-plastic

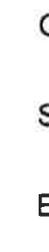
TEST RESULTS	Project No. 10190715	PLATE II
	Lamesa Boys and Girls Club Lake Park Phase I, Lamesa, Texas	

APPENDIX B

KEY TO LOG OF BORING

DEPTH FEET	SYMBOL	SAMPLE	TEST	MATERIAL DESCRIPTION	U D W pcf	U C tsf	M C	L L	P I	% - 2 0 0	S O I L	C L A S S	
5	[Symbol]	[Symbol]	4.5	Push Tube Sample and Pocket Penetrometer Result	115.8	4.35	12.8	25	12	66.3	CL		
			18	Standard Penetration Test Sample and "N" Value									
10	[Symbol]	[Symbol]		Cuttings Sample									
				Core Sample									
			C-5.0 R-4.5 ROD 50.0	Testable Core Sample									
15	[Symbol]	[Symbol]		Unit Dry Weight Test Result, pcf									
				Unconfined Compression Test Result, tsf									
20	[Symbol]	[Symbol]		Moisture Content Test Result, %									
				Atterberg Limits Test Results									
25	[Symbol]	[Symbol]		Passing No. 200-Mesh Sieve Test Result, %									
				Unified Soil Classification									
				Water Surface Level  Water Surface Date 01/01/2020									

SYMBOLS

	LEAN CLAY (CL)		SAND (SP)		CALICHE
	FAT CLAY (CH)		GRAVEL (GP)		LIMESTONE
	CLAYEY SAND (SC)		SILT (ML)		SANDSTONE
	SILTY SAND (SM)		ELASTIC SILT (MH)		SHALE

Groundwater Note: The boring was advanced to a depth of ___ feet below the ground surface without using drilling fluid and groundwater was not encountered above that depth.

LOG OF BORING	Project No.	Date:	Type: Air Rotary	BORING NO.
	Project Name Location			

DEPTH FEET	SYMBOL	SAMPLE	TEST	MATERIAL DESCRIPTION	U D W p c f	U C t s r	M C	L L	P I	% - 2 0 0	S O I L	C L A S S
5	[Hatched]	[X]	6	Dark Brown SANDY LEAN CLAY			20.4	38	22	69.8	CL	
			9									
			8									
10	[Hatched]	[X]	13			17.9	34	18	60.6	CL		
15	[Dotted]	[X]	15	Dark Brown CLAYEY SAND								
				Total Depth of Boring = 15.0 Feet								
20												
25												
30												
35												
40												

Groundwater Note: The boring was advanced to a depth of 15.0 feet below the ground surface without using drilling fluid and groundwater was not encountered above that depth.

LOG OF BORING	Project No. 10190715	Date:	Type:	BORING NO. B-1
	Boys and Girls Club Lake Park Phase 1, Lamesa, Texas	07-04-2015	Auger	

DEPTH FEET	SYMBOL	SAMPLE	TEST	MATERIAL DESCRIPTION	U D W p c f	U C c e r	M C	L L	P I	% - 2 0 0	S O I L	C L A S S
5	[Symbol]	[Sample]	5	Dark Brown SANDY LEAN CLAY			16.3	26	12	67.7	CL	
			6									
10	[Symbol]	[Sample]	4	Dark Brown CLAYEY SAND			14.6	27	13	39.5	SC	
			18									
15	[Symbol]	[Sample]	14	Dark Brown SANDY LEAN CLAY								
				Total Depth of Boring = 15.0 Feet								
20												
25												
30												
35												
40												

Groundwater Note: The boring was advanced to a depth of 15.0 feet below the ground surface without using drilling fluid and groundwater was not encountered above that depth.

LOG OF BORING	Project No. 10190715	Date:	Type:	BORING NO. B-2
	Boys and Girls Club Lake Park Phase 1, Lamesa, Texas	07-04-2015	Auger	

DEPTH FEET	SYMBOL	SAMPLE	TEST	MATERIAL DESCRIPTION	U D W p c f	U C t a r	M C	L L	P I	% - 2 0 0	S O I L	C L A S S
5	[Symbol]	[Sample]	9	Dark Brown SANDY LEAN CLAY			20.1	39	24	68.6	CL	
			7									
			4									
10	[Symbol]	[Sample]	15	Dark Brown CLAYEY SAND			26.3	56	30	48.8	SC	
			13									
Total Depth of Boring = 15.0 Feet												
20												
25												
30												
35												
40												

Groundwater Note: The boring was advanced to a depth of 15.0 feet below the ground surface without using drilling fluid and groundwater was not encountered above that depth.

LOG OF BORING	Project No. 10190715	Date: 07-04-2015	Type: Auger	BORING NO. B-3
	Boys and Girls Club Lake Park Phase 1, Lamesa, Texas			

DEPTH FEET	SYMBOL	SAMPLE	TEST	MATERIAL DESCRIPTION	U D W p e r	U C t e r	M C	L L	P I	% - 2 0 0	S O I L	C L A S S
5	[Symbol]	[Sample]	9	Dark Brown CLAYEY SAND			9.8	26	12	41.8	SC	
			5									
10	[Symbol]	[Sample]	8	Dark Brown SILTY SAND			7.5	NP	NP	17.5	SM	
			9									
15	[Symbol]	[Sample]	20	Dark Brown CLAYEY SAND			14.2	20	2	39.5	SM	
				Total Depth of Boring = 15.0 Feet								
20												
25												
30												
35												
40												

Groundwater Note: The boring was advanced to a depth of 15.0 feet below the ground surface without using drilling fluid and groundwater was not encountered above that depth.

LOG OF BORING	Project No. 10190715	Date:	Type:	BORING NO. B-4
	Boys and Girls Club Lake Park Phase I, Lamesa, Texas	07-04-2015	Auger	

DEPTH FEET	SYMBOL	SAMPLE	TEST	MATERIAL DESCRIPTION	U D W p c f	U C t s r	M C	L L	P I	% - 2 0 0	S O I L	C L A S S
5	[Symbol]	[Sample]	5	Dark Brown CLAYEY SAND			7.8	27	12	41.7	SC	
			2									
10	[Symbol]	[Sample]	11	Dark Brown SANDY LEAN CLAY								
			26									
15	[Symbol]	[Sample]	15	Dark Brown CLAYEY SAND								
				Total Depth of Boring = 15.0 Feet								
20												
25												
30												
35												
40												

Groundwater Note: The boring was advanced to a depth of 15.0 feet below the ground surface without using drilling fluid and groundwater was not encountered above that depth.

LOG OF BORING	Project No. 10190715	Date:	Type:	BORING NO. B-5
	Boys and Girls Club Lake Park Phase I, Lamesa, Texas	07-04-2015	Auger	

GENERAL NOTES

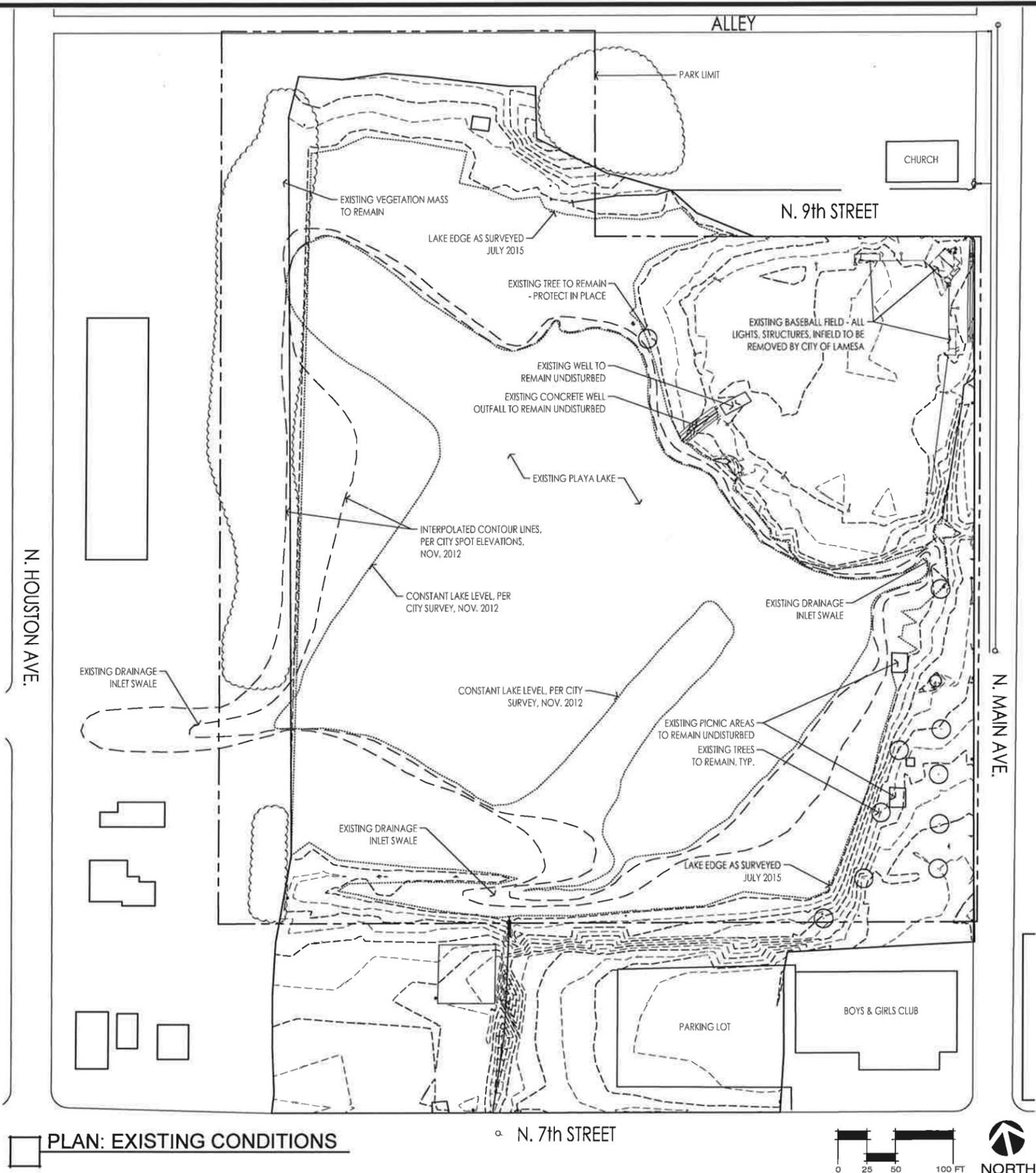
- ALL DEMOLITION, INCLUDING REMOVAL OF BASEBALL FIELD, SCORER'S BOX, DUGOUTS, BLEACHERS, LIGHTING, AND ELECTRICAL TO BE EXECUTED BY CITY OF LAMESA STAFF PRIOR TO COMMENCING CONSTRUCTION.
- CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT OF ANY EXISTING CONDITIONS THAT WILL PREVENT CONSTRUCTION AS DETAILED.
- ALL DIMENSIONS SHALL BE VERIFIED ON SITE. NOTIFY THE LANDSCAPE ARCHITECT IF THERE ARE ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK.
- CONTRACTOR SHALL IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT OF ANY QUESTIONS THAT MAY ARISE CONCERNING THE INTENT, PLACEMENT, OR LIMITS OF DIMENSIONS NECESSARY FOR THE CONSTRUCTION OF THIS PROJECT.
- PRIOR TO MAKING ANY EXCAVATION, CONTACT ALL UTILITY COMPANIES TO LOCATE UNDERGROUND UTILITIES.
- CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO PROTECT EXISTING UTILITIES AT ALL TIMES.
- CONTRACTOR SHALL PREPARE A 10 SF MOCKUP OF STONE VENEER FOR APPROVAL BY OWNER.
- "MATCH EXISTING" SHALL BE UNDERSTOOD TO SIGNIFY BOTH VERTICAL AND HORIZONTAL CONDITIONS.
- ANY EXISTING SITE IMPROVEMENT OR UTILITY REMOVED, DAMAGED OR UNDERCUT BY CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE CONTRACTING OFFICER'S REPRESENTATIVE AND APPROVED BY THE RESPECTIVE UTILITY AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION ANY DAMAGES DONE TO EXISTING FENCES, CONCRETE ISLANDS, STREET PAVING, CURBS, SHRUBS, TREES, DRIVEWAYS, ETC., SCHEDULED TO REMAIN (NO SEPARATE PAY ITEM).
- NO WORK SHALL BEGIN IN AREAS WHERE TREE PRESERVATION AND TREATMENT MEASURES HAVE NOT BEEN COMPLETED AND APPROVED.
- TREES WHICH ARE DAMAGED OR LOST DUE TO THE CONTRACTOR'S NEGLIGENCE DURING CONSTRUCTION SHALL BE MITIGATED AND REPLACED AT 1 INCH CALIPER PER 1 INCH DBH OF TREE REMOVED AT CONTRACTOR'S EXPENSE.
- TREES MUST BE MAINTAINED IN GOOD HEALTH THROUGHOUT THE CONSTRUCTION PROCESS. MAINTENANCE MAY INCLUDE BUT IS NOT LIMITED TO: WATERING THE ROOT PROTECTION ZONE, WASHING FOLIAGE, FERTILIZATION, PRUNING, ADDITIONAL MULCH APPLICATIONS AND OTHER MAINTENANCE AS NEEDED ON THE PROJECT.
- ROOTS SHALL BE CUT WITH A ROCK SAW OR BY HAND, NOT BY AN EXCAVATOR OR OTHER ROAD CONSTRUCTION EQUIPMENT.
- CONTRACTOR SHOULD FAMILIARIZE HIMSELF WITH SITE GRADING, INCLUDING SUBSURFACE LAKE SLOPES, PRIOR TO CONSTRUCTION.
- IN THE EVENT THAT PLANS AND SPECIFICATIONS CONFLICT, INFORMATION NOTED ON PLANS SHALL HAVE AUTHORITY. NOTIFY LANDSCAPE ARCHITECT IF SUCH CONFLICTS ARISE FOR CLARIFICATION PRIOR TO CONSTRUCTION.

HYDROSEED & TEMPORARY IRRIGATION NOTES

- ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE REPAIRED WITH HYDROSEED, REFERENCE SPECIFICATIONS.
- REFERENCE SITE PLAN L2.1 FOR APPROXIMATE LOCATIONS, QUANTITIES, AND SEED MIX.
- ALL HYDROSEED AREAS SHALL RECEIVE TEMPORARY IRRIGATION UNTIL ESTABLISHMENT, UNDER CONSTRUCTION CONTRACT. REFERENCE SPECIFICATIONS FOR ESTABLISHMENT CRITERIA.
- CONTRACTOR TO PROVIDE MAINTENANCE OF SEEDED AREAS UNTIL ESTABLISHMENT. MAINTENANCE INCLUDES, BUT IS NOT LIMITED TO, WEED PULLING, MOWING, MULCHING, AND WATERING.

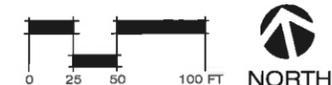
EROSION CONTROL NOTES

- CONTRACTOR SHOULD ERECT EROSION CONTROL MEASURES PER LOCAL, STATE, AND FEDERAL REGULATIONS PRIOR TO ANY CONSTRUCTION ACTIVITY.
- EROSION CONTROL MEASURES SHOULD PREVENT SEDIMENTS, FLOATABLES, AND DEBRIS FROM ENTERING PLAYA LAKE, ADJACENT ROADWAYS, AND NEIGHBORING LOTS.
- EROSION CONTROL MEASURES SHOULD BE INSTALLED PRIOR TO CONSTRUCTION, AND REMAIN IN PLACE FOR THE DURATION OF THE PROJECT.
- REFERENCE SPECIFICATIONS FOR SITE CLEARING, WASTE MANAGEMENT, AND TEMPORARY FACILITIES AND CONTROLS.



PLAN: EXISTING CONDITIONS

N. 7th STREET



LAMESA B&G CLUB LAKE PARK
400 N. 9th STREET
LAMESA, TX 79331

CONSTRUCTION DOCUMENTS

Issue Date 2.4.2017

Revisions

Project Number: 1814

Drawn By: EO

Checked By: TEH

Scale: 1"=60'-0"

Sheet Title

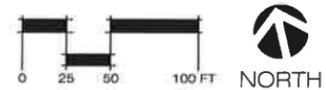
GENERAL NOTES & EXISTING CONDITIONS

Sheet Number

L1.0

LEGEND

- SURVEYED LAKE EDGE
- CONTOURS PER SURVEY
- INTERPOLATED CONTOURS
- AERATION SUPPLY LINE
- AERATION DIFFUSER, REF: AERATION SCHEMATIC



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REGISTERED LANDSCAPE ARCHITECT
 TARRANT COUNTY, TEXAS
 2762
 2/6/17

**LAMESA B&G CLUB LAKE
 PARK**
 400 N. 9th STREET
 LAMESA, TX 79331

CONSTRUCTION DOCUMENTS

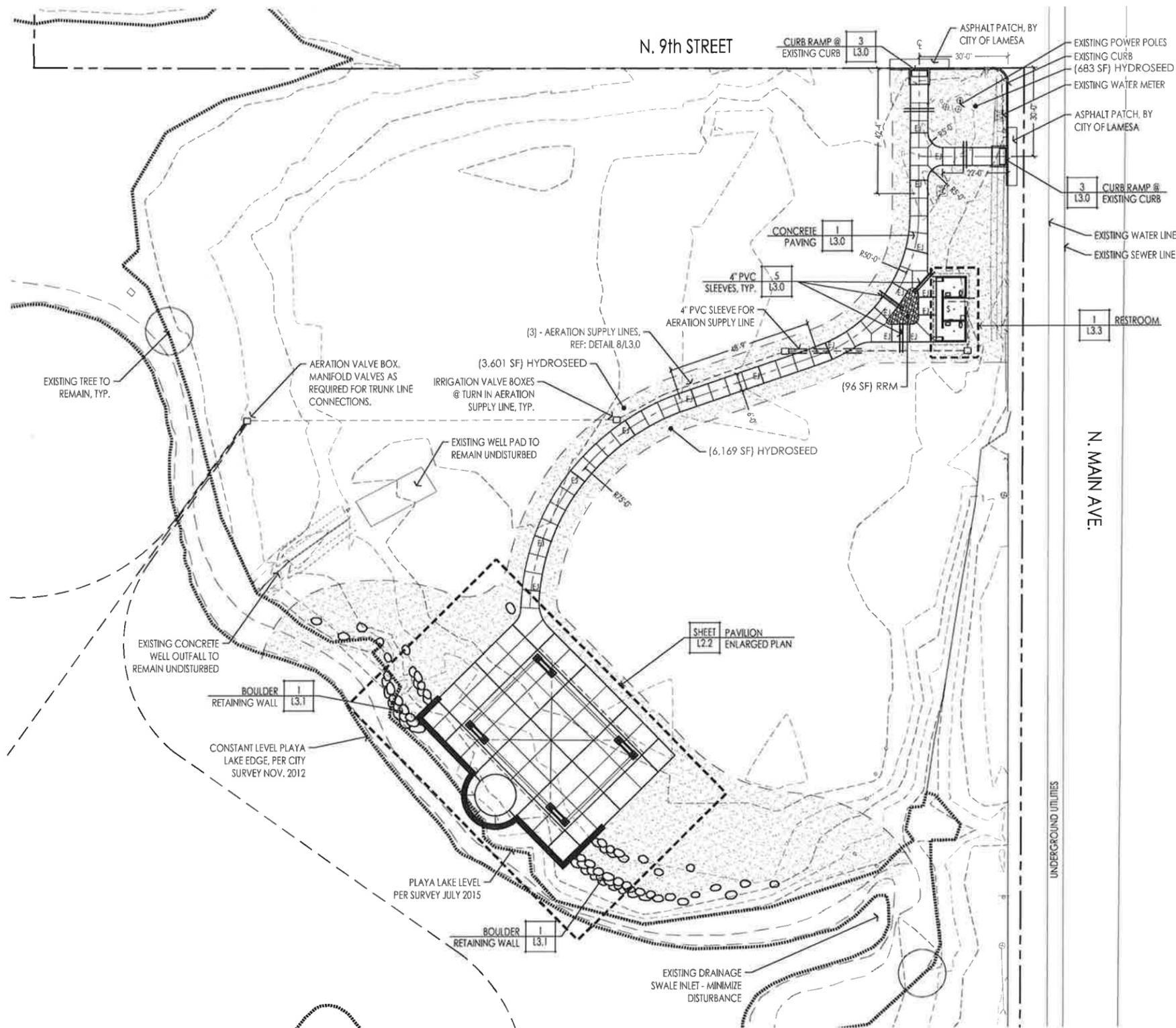
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**SITE
 REFERENCE
 PLAN**

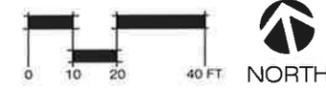
Sheet Number
L2.0

LEGEND

-  BERMUDA GRASS HYDROSEED IN DISTURBED AREAS
-  EXISTING TREE TO REMAIN
-  4" PVC SLEEVE, TYP.
-  LAKE AERATION SUPPLY LINE, REF: SCHEMATIC
-  EXPANSION JOINT, REF: DETAIL 2, L3.0



PLANT MATERIAL SCHEDULE				REMARKS
QTY	UNIT	COMMON NAME	TYPE	
10,453	SF	Bermuda 'Sahara'	Hydroseed	Apply 2,500 lb per acre dry weight of Sahara Bermuda seed in all disturbed areas. Provide viable landscape topsoil prior to installation, ref: specifications
96	SF	Colorado River Rock	Mulch	Size 1"-2"; install @ 4" depth over weed barrier fabric



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REGISTERED LANDSCAPE ARCHITECT
 TERRY EDWARD MASK
 STATE OF TEXAS
 2767
 2/6/17

LAMESA B&G CLUB LAKE PARK
 400 N. 9th STREET
 LAMESA, TX 79331

CONSTRUCTION DOCUMENTS

Issue Date	24.2017
Revisions	
Project Number:	1814
Drawn By	TEH
Checked By	TEH
Scale:	1"=20'-0"

Sheet Title
SITE PLAN

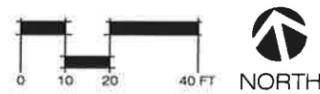
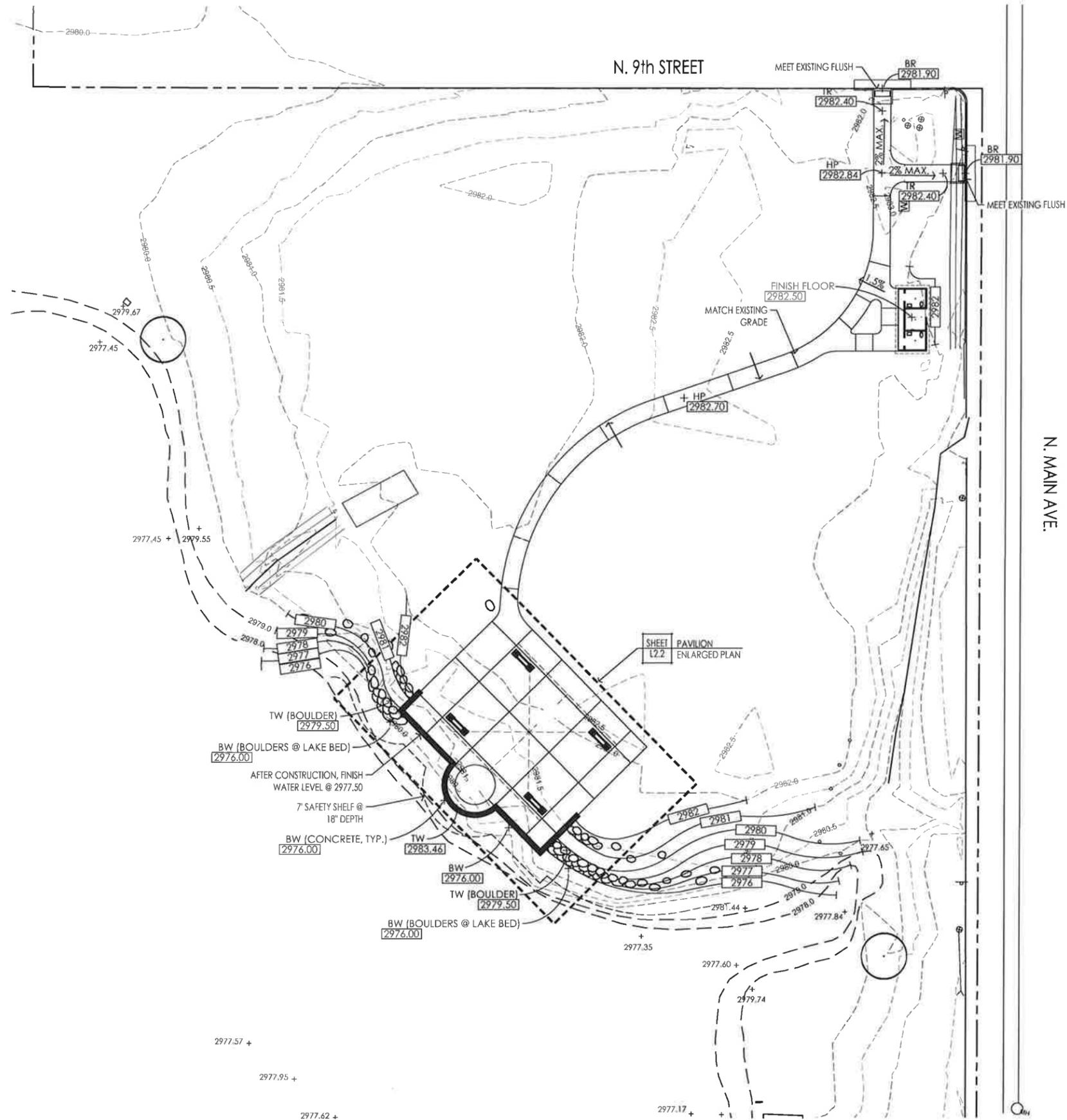
Sheet Number
L2.1

LEGEND

- 2977.70 + SPOT GRADE, PER CITY SURVEY 11/2012
- 2978.0 --- INTERPOLATED CONTOUR, PER CITY SURVEY 11/2012
- 2984.0 --- MAJOR (1') CONTOUR, PER SURVEY 07/2015
- 2980.5 --- MINOR (0.5') CONTOUR, PER SURVEY 07/2015
- 2981 --- PROPOSED MAJOR CONTOUR

GRADING NOTES:

1. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT OF ANY EXISTING CONDITIONS THAT WILL PREVENT CONSTRUCTION AS DETAILED.
2. ALL DIMENSIONS SHALL BE VERIFIED ON SITE. NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES BEFORE PROCEEDING.
3. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT OF ANY QUESTIONS THAT MAY ARISE CONCERNING THE INTENT, PLACEMENT, OR LIMITS OF DIMENSIONS NECESSARY FOR THE CONSTRUCTION OF THIS PROJECT.
4. PRIOR TO MAKING ANY EXCAVATION, CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES TO LOCATE UNDERGROUND UTILITIES.
5. CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO PROTECT EXISTING UTILITIES AT ALL TIMES.
6. POSITIVE DRAINAGE SHALL BE MAINTAINED ON ALL SURFACE AREAS WITHIN THE PROJECT. DRAINAGE SHALL BE DIRECTED AWAY FROM ALL STRUCTURE SLABS AND FOUNDATIONS.
7. LONGITUDINAL SLOPES FOR SIDEWALKS SHALL NOT EXCEED 4.5%, AND CROSS-SLOPES SHALL NOT EXCEED 2% ON ANY LENGTH.
8. REFERENCE PAVILION ENLARGED PLAN, L2.2 FOR WALL & FINISH GRADE ELEVATIONS INSIDE PAVILION.



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LAMESA B&G CLUB LAKE

PARK

400 N. 9th STREET
LAMESA, TX 79331

CONSTRUCTION DOCUMENTS

Issue Date: 2.4.2017

Revisions:

Project Number: 1814

Drawn By: EO

Checked By: TEH

Scale: 1"=20'-0"

Sheet Title
GRADING PLAN

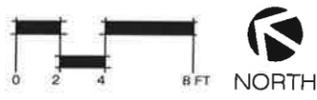
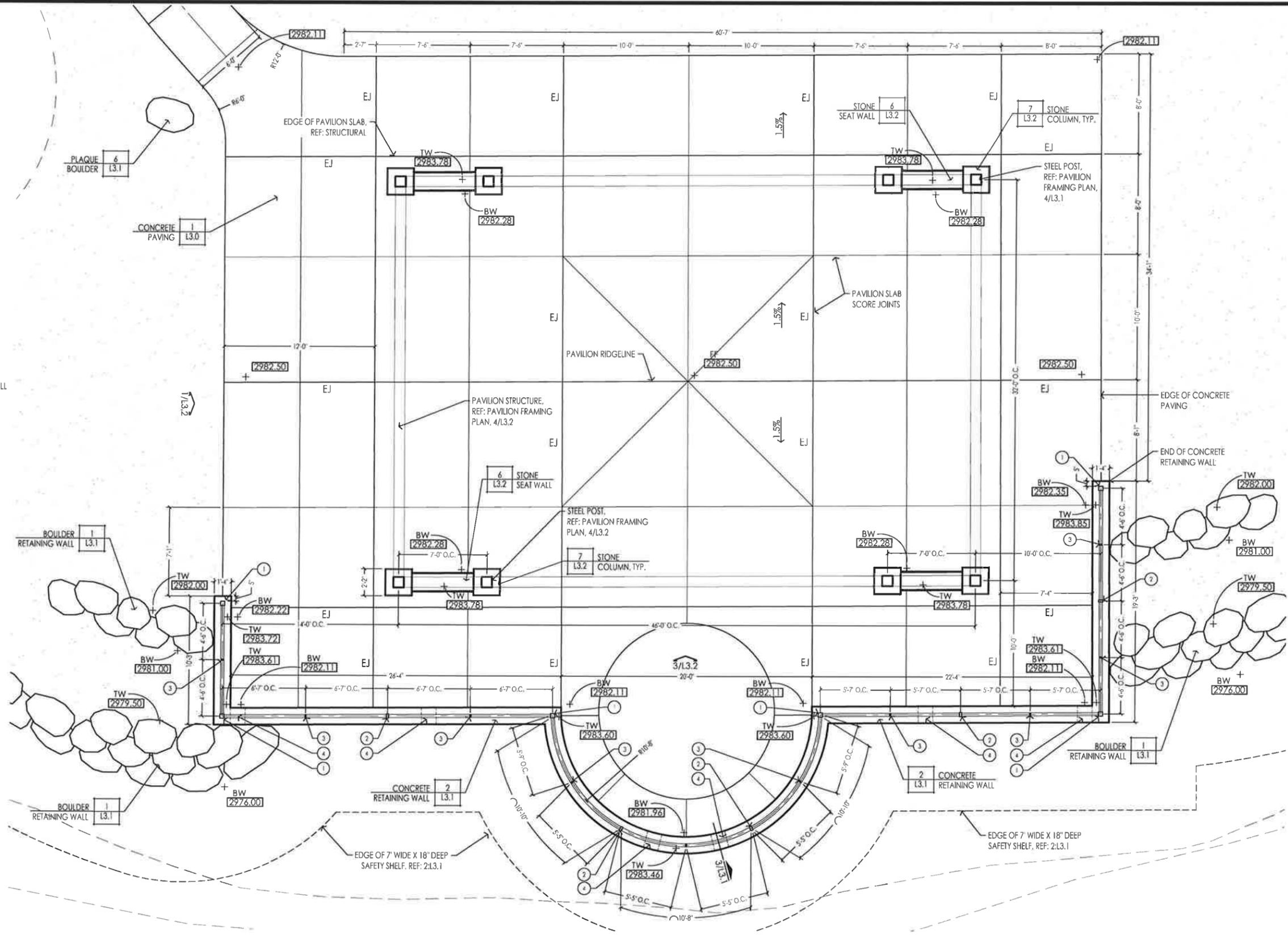
Sheet Number
L2.1G

LEGEND

-  BOULDER RETAINING WALL
-  CONCRETE RETAINING WALL W/ GUARDRAIL
-  PROPOSED SPOT ELEVATION
-  4' X 4' END POST
-  4' X 2' POST
-  2' X 1" INTERMEDIATE SUPPORT
-  8' X 3.5' STEEL TUBE DRAINAGE CHANNEL

PLAN NOTES

1. REFERENCE SHEET L3.2 FOR PAVILION DETAILS.
2. REFERENCE SHEET L3.1 FOR RETAINING WALL DETAILS.



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CONSTRUCTION DOCUMENTS

Issue Date: 2.6.2017

Revisions:

Project Number: 1814

Drawn By: TEH

Checked By: TEH

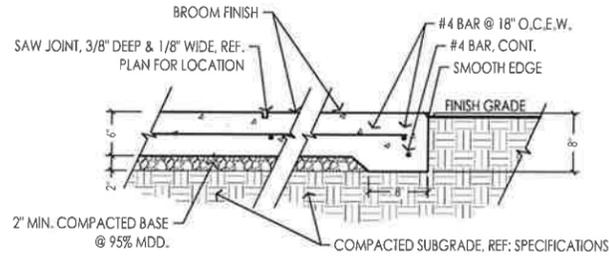
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Sheet Title
PAVILION ENLARGED PLAN

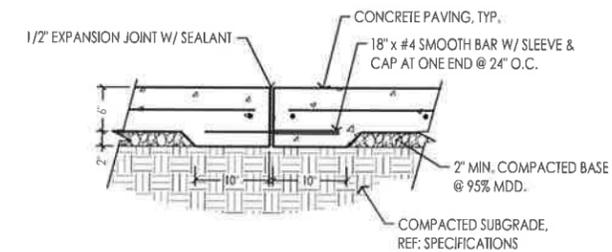
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L2.2

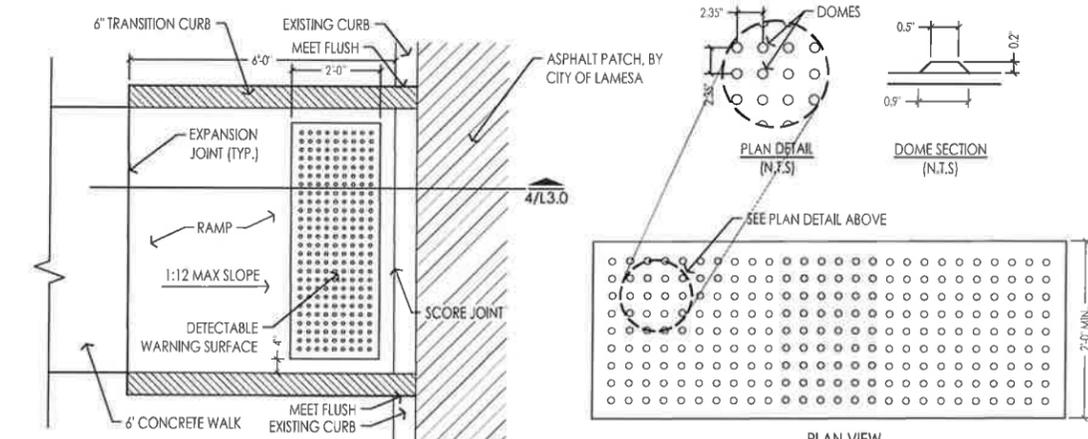
- NOTES:
1. PROVIDE 1% ($\frac{1}{8}$ " PER FOOT) CROSS SLOPE FOR POSITIVE DRAINAGE UNLESS OTHERWISE INDICATED.
 2. PROVIDE 3000 PSI CONCRETE AT 28 DAYS.
 3. SCORE JOINTS @ 6'-0" O.C. (MAX. - UNLESS OTHERWISE INDICATED)
 4. EXPANSION JOINTS @ 30'-0" O.C. (MAX)
 5. EXPOSED CONCRETE TO HAVE HEAVY BROOM FINISH



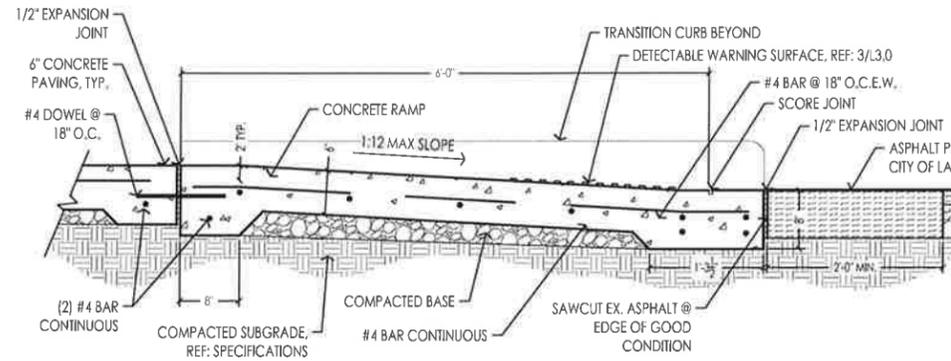
1 DETAIL: CONCRETE PAVING, TYP.
SCALE: 1"= 1'-0"



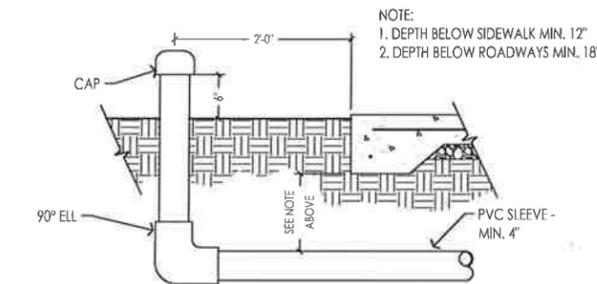
2 DETAIL: EXPANSION JOINT
SCALE: 1"= 1'-0"



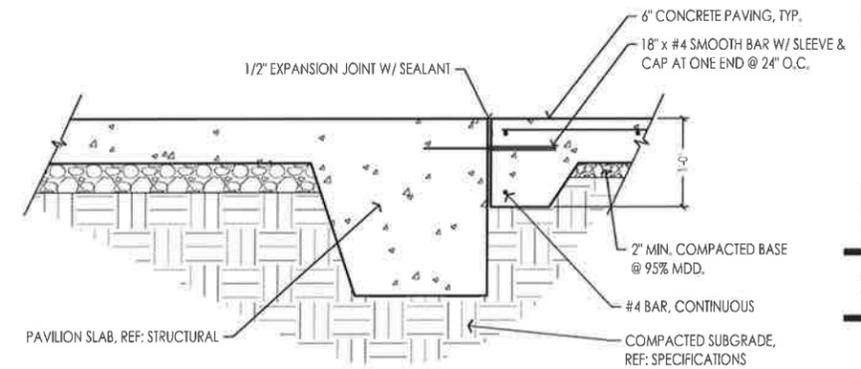
3 PLAN: ACCESSIBLE CURB RAMP
SCALE: 3/4"= 1'-0"



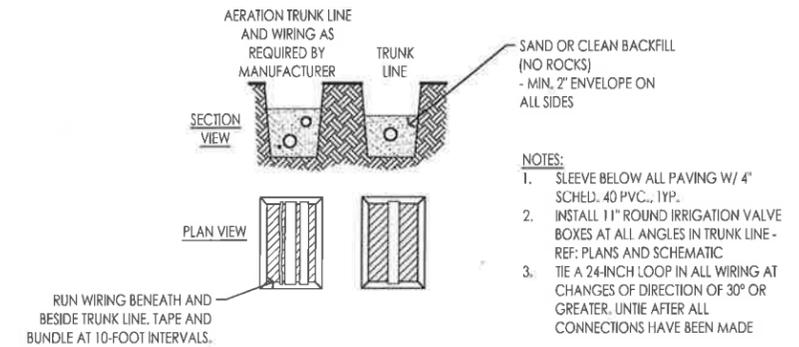
4 SECTION: ACCESSIBLE CURB RAMP
SCALE: 1"= 1'-0"



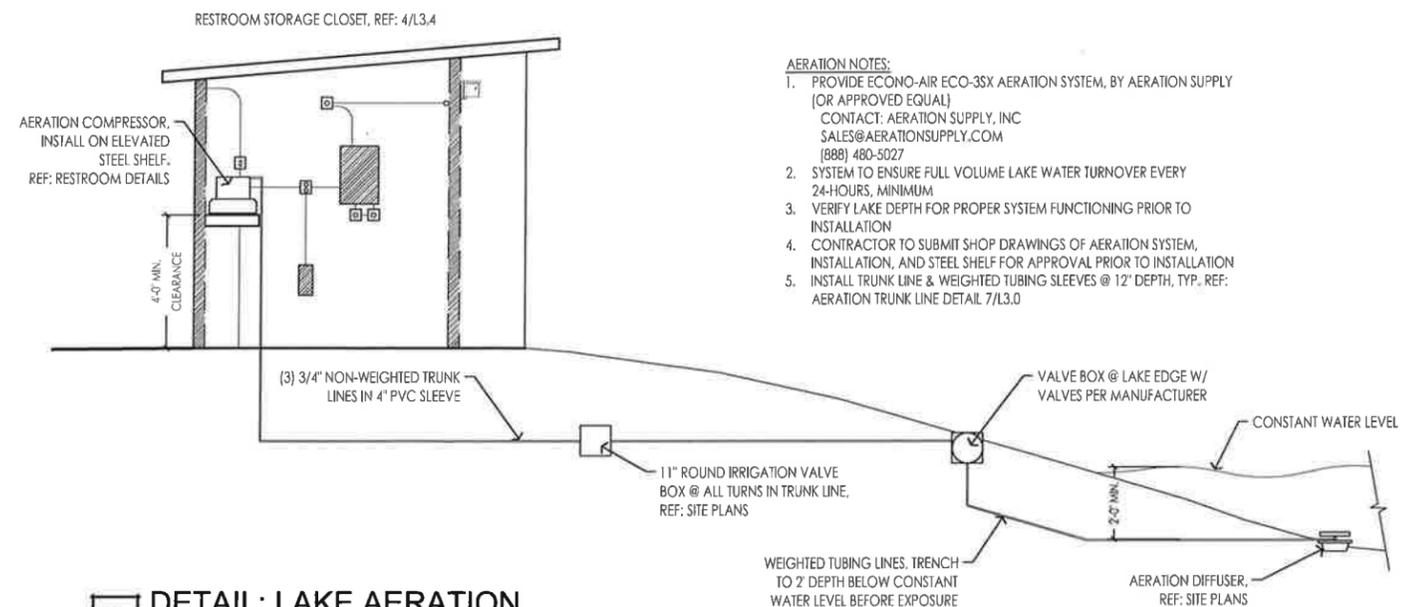
5 DETAIL: SLEEVE UNDER HARDSCAPE
SCALE: 1"= 1'-0"



6 SECTION: CONC. PAVING @ PAVILION SLAB
SCALE: 1"= 1'-0"



7 DETAIL: AERATION TRUNK LINE
N.T.S.



8 DETAIL: LAKE AERATION
NOT TO SCALE

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Midland, TX 79703
432.233.9003
www.mlandarch.com



2/6/17

**LAMESA B&G CLUB LAKE
PARK**
400 N. 9th STREET
LAMESA, TX 79331

CONSTRUCTION
DOCUMENTS

Issue Date: 2.4.2017

Revisions:

Project Number: 1514

Drawn By: EO

Checked By: TEH

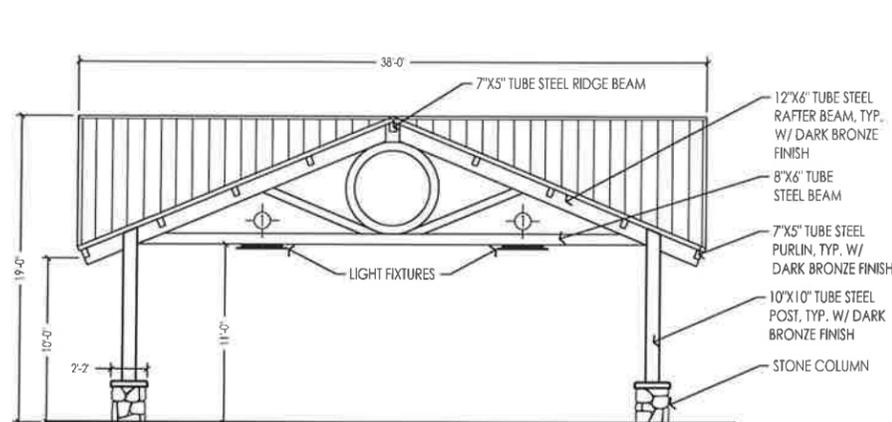
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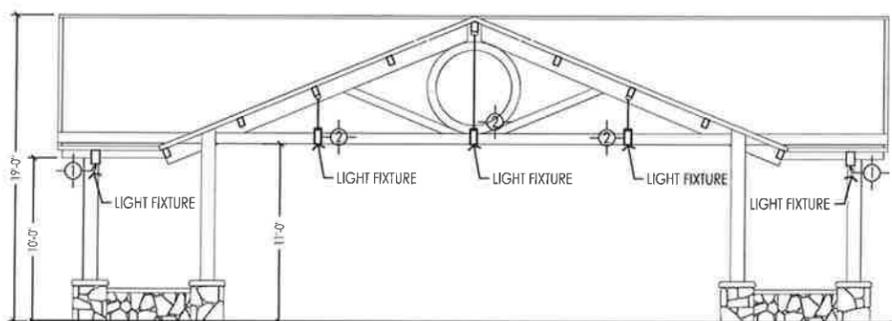
**SITE
DETAILS**

Sheet Number:

L3.0

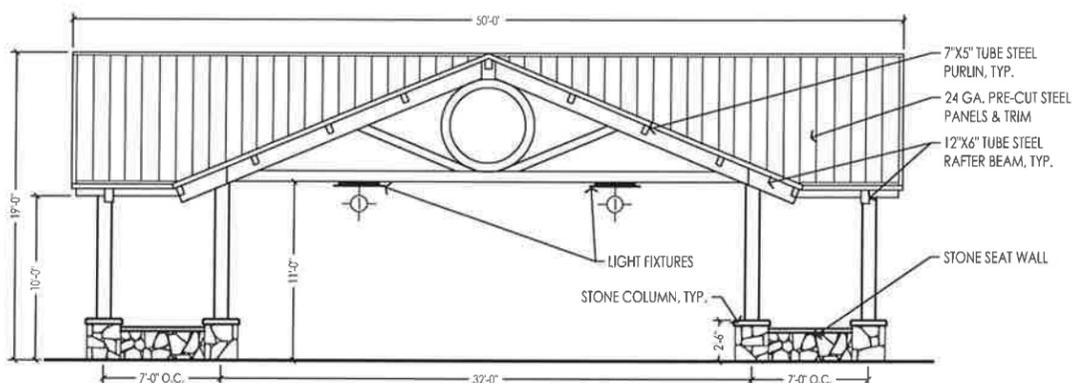


1 ELEVATION: PAVILION (NORTHWEST)
SCALE: 3/16"= 1'-0"

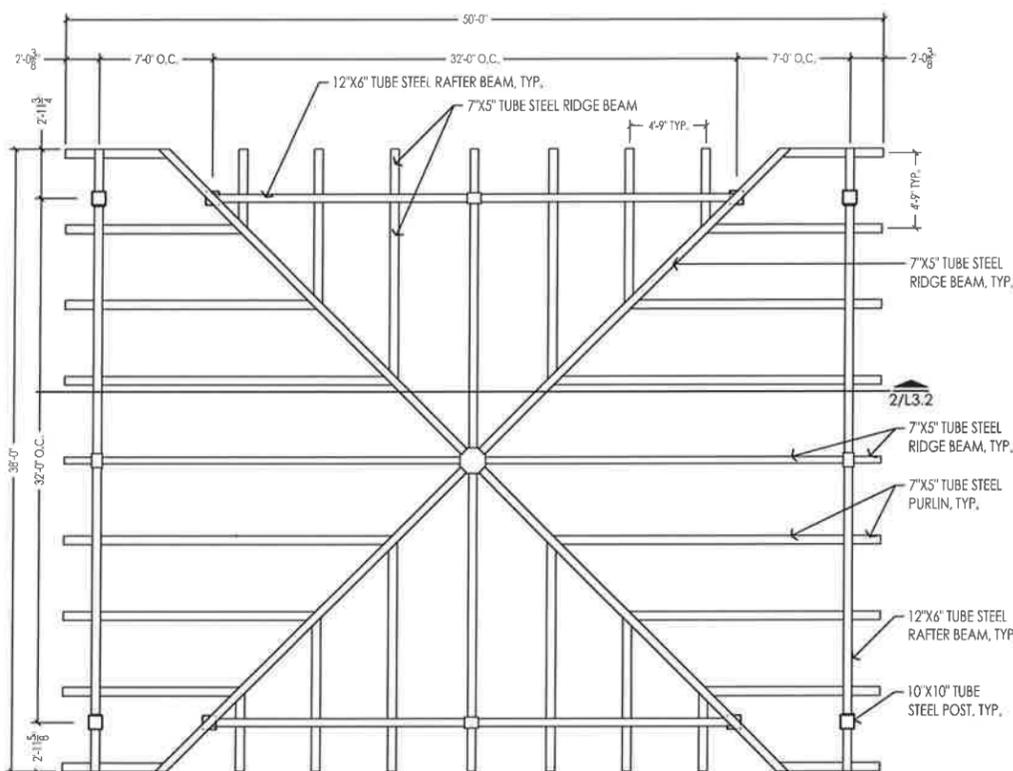


2 SECTION: PAVILION
SCALE: 3/16"= 1'-0"

- LIGHTING NOTES:**
1. PROVIDE DUSK-TIL-DAWN SENSOR & SWITCH FOR LIGHT FIXTURE #1, REF: LIGHTING SCHEDULE, ENLARGED PLAN & PAVILION DETAILS.
 2. PROVIDE MANUAL ON/OFF SWITCH FOR LIGHT FIXTURE #2.

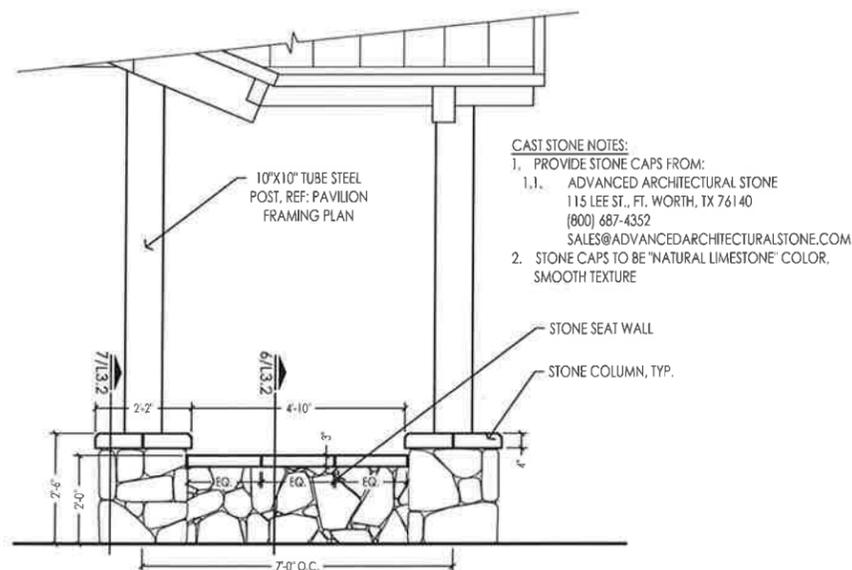


3 ELEVATION: PAVILION SIDE
SCALE: 3/16"= 1'-0"



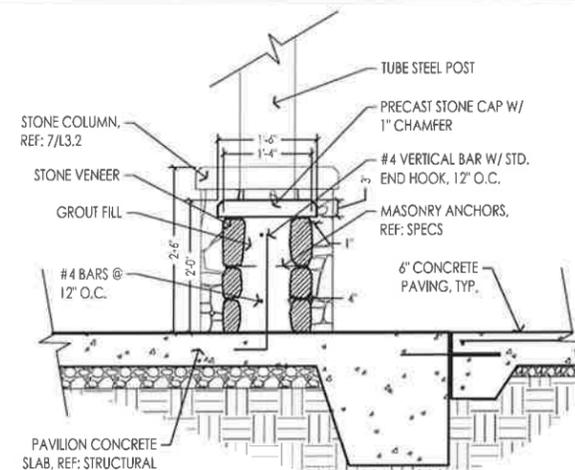
4 PLAN: PAVILION FRAMING
SCALE: 3/16"= 1'-0"

- PAVILION NOTES:**
1. PROVIDE PAVILION STRUCTURE MODEL: STEELWORX CUSTOM CROSSGABLE SHELTER, 38' X 50' MODEL# CGA-3850-SB-SW-C2
 - 1.1. AS MANUFACTURED BY: COVERWORX RECREATIONAL ARCHITECTURE 11800 EAST 9 MILE ROAD WARREN, MI 48089 WWW.COVERWORX.COM
 - 1.2. AS DISTRIBUTED/INSTALLED BY: PAUL E. ALLEN CO., INC CONTACT: DEBRA FINCH PHONE: (972) 355-2509 FAX: (972) 355-1857
 - 1.3. PROVIDE STANDING SEAM ROOF, ASH GREY COLOR
 - 1.4. ALL STEEL TO BE POWDER COATED DARK BRONZE - RAL8019
 2. STONE COLUMNS, SEAT WALLS, RESTROOM NOT SHOWN FOR CLARITY, REF: PAVILION ENLARGED PLAN
 3. ALL ELECTRICAL AND LIGHTING CONDUITS TO BE HIDDEN WITHIN STEEL PAVILION FRAME, REF: LIGHTING DETAILS AND NOTES.



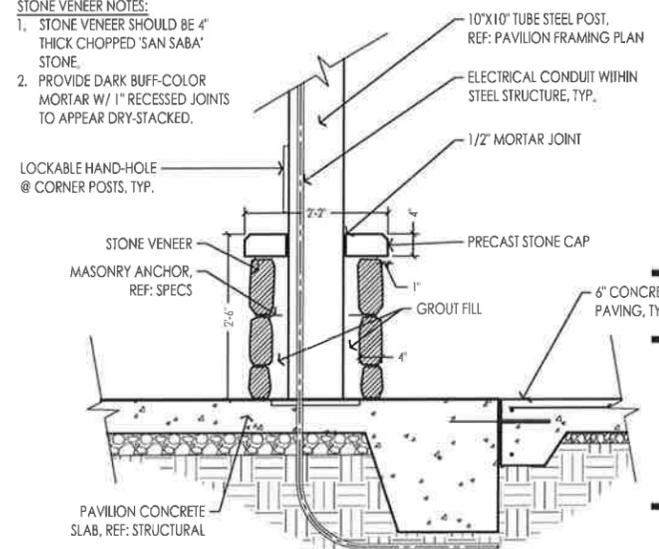
5 ELEVATION: STONE COLUMN & SEAT WALL
SCALE: 1/2"= 1'-0"

- CAST STONE NOTES:**
1. PROVIDE STONE CAPS FROM:
 - 1.1. ADVANCED ARCHITECTURAL STONE 115 LEE ST., FT. WORTH, TX 76140 (800) 687-4352 SALES@ADVANCEDARCHITECTURALSTONE.COM
 2. STONE CAPS TO BE "NATURAL LIMESTONE" COLOR, SMOOTH TEXTURE

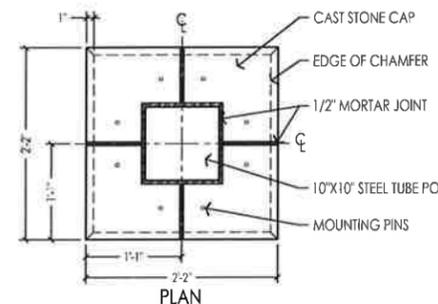
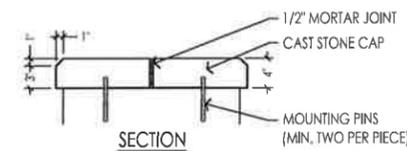


6 SECTION: STONE SEAT WALL (TYP.)
SCALE: 3/4"= 1'-0"

- STONE VENEER NOTES:**
1. STONE VENEER SHOULD BE 4" THICK CHOPPED 'SAN SABA' STONE.
 2. PROVIDE DARK BUFF-COLOR MORTAR W/ 1" RECESSED JOINTS TO APPEAR DRY-STACKED.



7 SECTION: STONE COLUMN (TYP.)
SCALE: 3/4"= 1'-0"



8 DETAIL: 4" STONE COLUMN CAP
SCALE: 1"= 1'-0"

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LAMESA B&G CLUB LAKE

PARK

400 N. 9th STREET
LAMESA, TX 79331

CONSTRUCTION DOCUMENTS

Issue Date 2-4-2017

Revisions

Project Number: 1514

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Checked By TEH

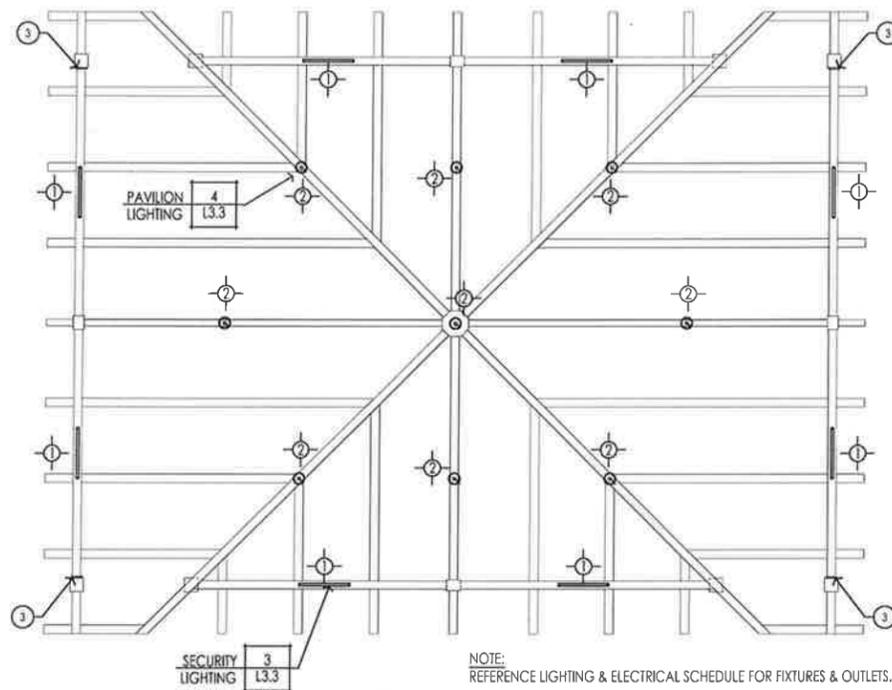
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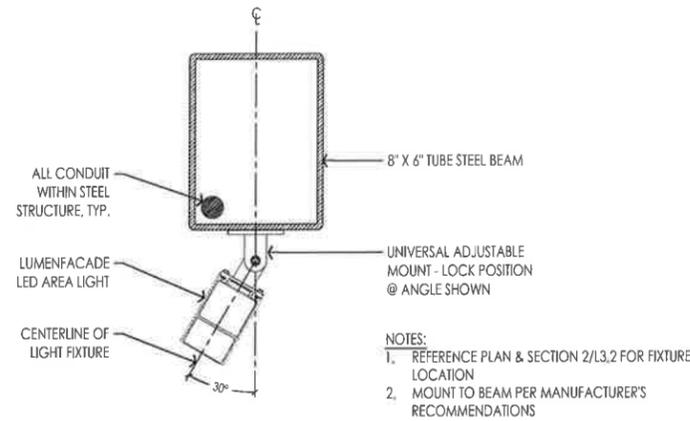
PAVILION DETAILS

Sheet Number

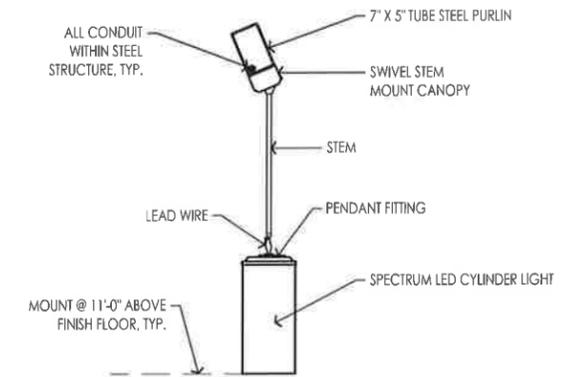
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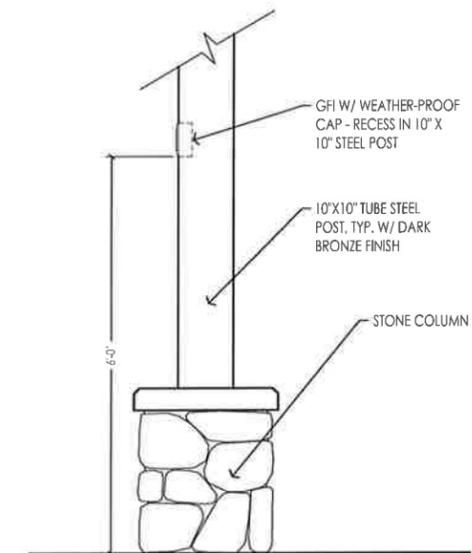
1 PLAN: PAVILION LIGHTING & ELECTRICAL
SCALE: 3/16"= 1'-0"



3 DETAIL: SECURITY LIGHTING FIXTURE
SCALE: 3"= 1'-0"



4 DETAIL: DOWNLIGHT
SCALE: 1"= 1'-0"



5 DETAIL: GFI OUTLET
SCALE: 3/4"= 1'-0"

SYMBOL	QTY	MANUFACTURER	SPECIFICATION	DESCRIPTION	INSTALLATION	CONTROLS
1	8	Lumenpulse	LOG-RO-120-48-35K-60X60-UMAS-RAL809-LT-CRC	LUMENFACADE linear LED lighting - install with LOGRD Radial Louvre, and Lumentalk Dimming.	Provide bronze junction boxes (color to match pavilion) and wiring as recommended by manufacturer. Install with Universal Adjustable Mounting per detail	Provide Lumentalk dimming and photocell sensor for dusk-till-dawn security lighting
2	9	Spectrum Lighting	SPC0812-LEDXT-10L-35K-WD-E1-WL/8454XT-CC-SO-HMAT-CC	LED Cylinder Light, Wet Location, Dark Bronze color (RAL8019)	Hang at true vertical with rigid stem. Secure to pavilion frame with swivel stem mount canopy (5" Diameter max., dark bronze color)	Provide manual on/off switch for event lighting
3	4			GFI Outlet w/ weather-resistant cap/lid w/ Dark Bronze finish	Mount @ 6'-0" above grade per detail	

NOTE: All conduit and power supplies to run through steel pavilion frame. No exposed conduit. All fixtures, junction boxes, and GFI covers to match Dark Bronze - RAL8019 color. All power and control switches to be located in restroom storage closet, ref: Electrical

2 LIGHTING & ELECTRICAL SCHEDULE



LAMESA B&G CLUB LAKE PARK
400 N. 9th STREET
LAMESA, TX 79331

CONSTRUCTION DOCUMENTS

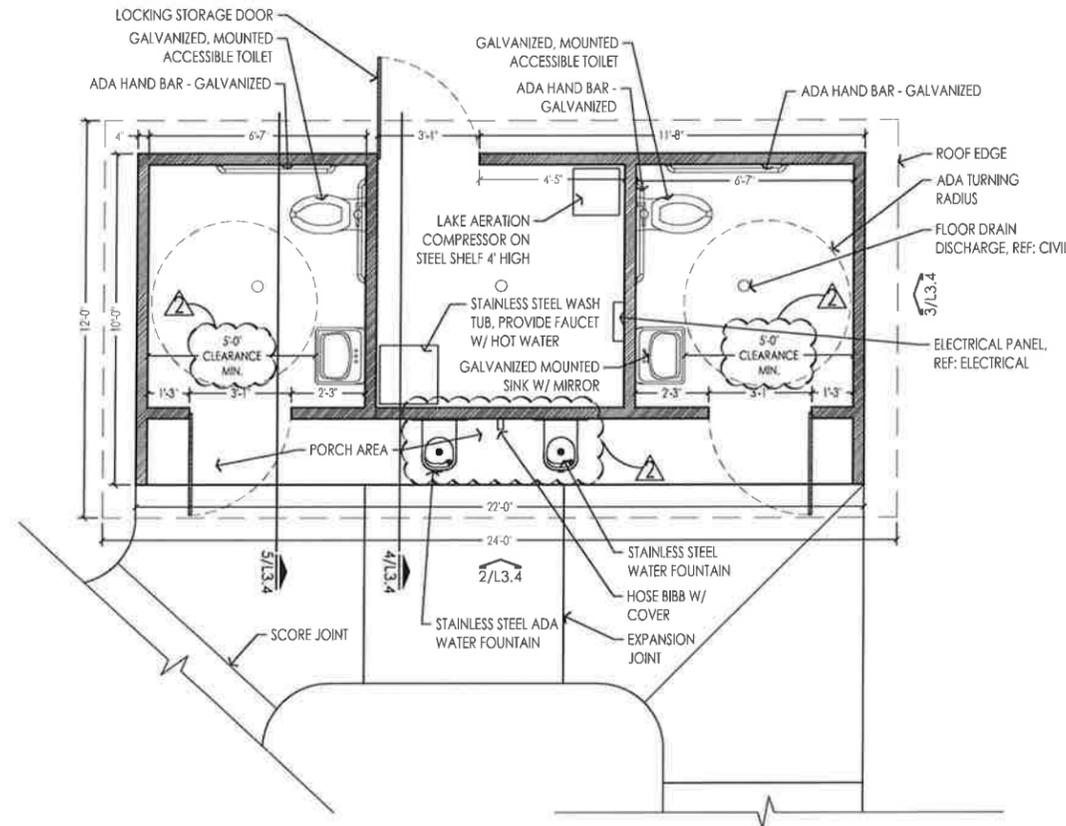
Issue Date	2.6.2017
Revisions	
Project Number	1814
Drawn By	EO
Checked By	TEH
Scale	AS SHOWN

Sheet Title
LIGHTING SCHEDULE & DETAILS

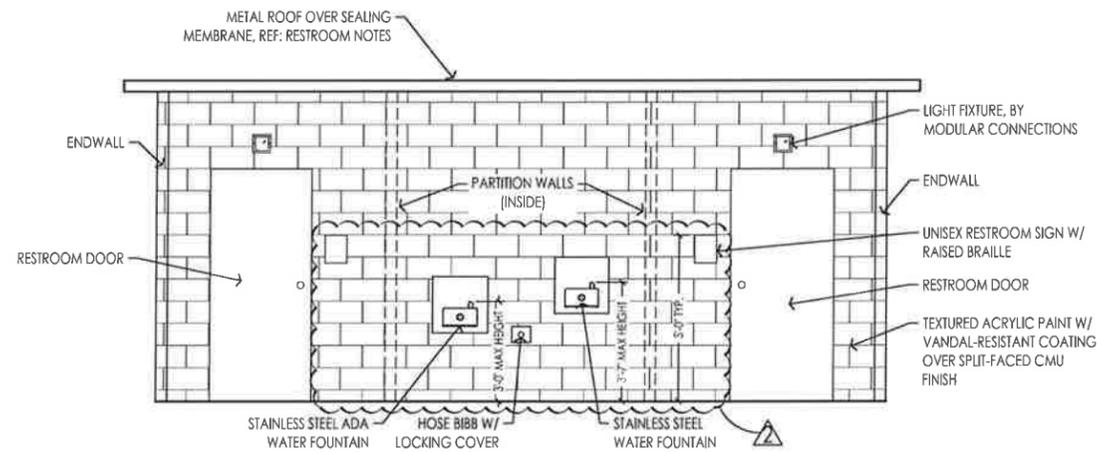
Sheet Number
L3.3

RESTROOM NOTES

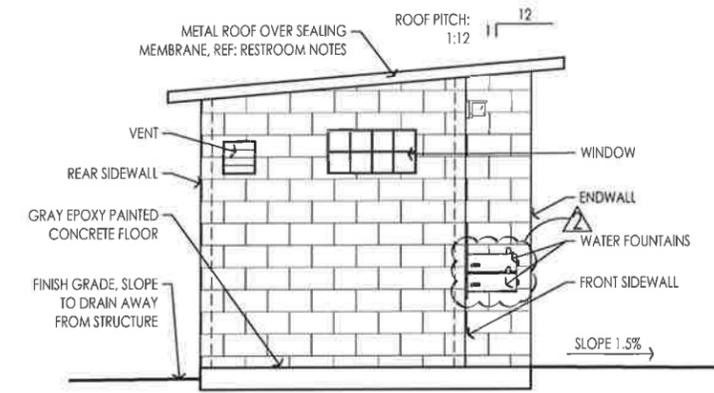
1. PROVIDE PRE-FABRICATED 10' X 22' RESTROOM STRUCTURE
 - 1.1. AS MANUFACTURED/INSTALLED BY:
MODULAR CONNECTIONS
1090 INDUSTRIAL BLVD.
BESSEMER, AL 35022
WWW.MODULARCONNECTIONS.COM
CONTACT: ILLIA AYERS
PHONE: (205) 980-4565 FAX: (877) 903-6335
2. PROVIDE STANDING SEAM METAL SHED ROOF, ASH GRAY COLOR, OVER SEALING MEMBRANE PER SPECIFICATIONS
3. PROVIDE SPLIT-FACE CMU TEXTURED OUTSIDE WALLS, "APACHE" COLOR. CONTRACTOR TO SUBMIT SAMPLE FOR APPROVAL PRIOR TO INSTALLATION. ALL WALLS SHALL HAVE VANDAL-RESISTANT ANTI-GRAFFITI COATING.
4. REFERENCE GRADING PLAN L2.1G FOR FINISH FLOOR ELEVATIONS
5. SLOPE FINISH GRADE AND PAVING TO DRAIN AWAY FROM STRUCTURE @ 1.5% (2% MAX)
6. ALL RESTROOM COMPONENTS TO BE INSTALLED PER ADA AND TAS GUIDELINES.
7. NO ELECTRICAL COMPONENTS SHALL BE INSTALLED LESS THAN 4'-0" ABOVE FINISH FLOOR UNLESS REQUIRED FOR ADA/TAS COMPLIANCE.
8. ALL INTERIOR FIXTURES/APPLIANCES TO BE STAINLESS STEEL.
9. ALL DOORS SHOULD BE LOCKABLE FROM EXTERIOR. PROVIDE CITY OF LAMESA WITH THREE COPIES OF EACH KEY, AND THREE COPIES OF MASTER KEY.
10. CONTRACTOR TO SUBMIT ENGINEERED SHOP DRAWINGS FOR RESTROOM, INCLUDING CONCRETE SLAB, FOUNDATIONS, AND SUB SLAB PREPARATION.



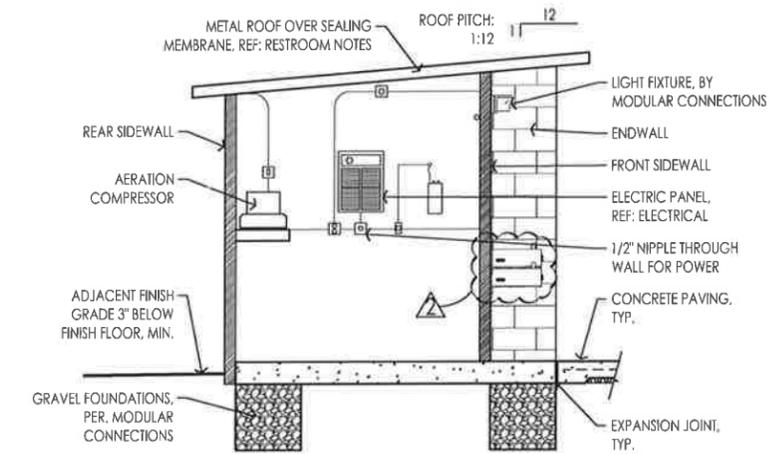
1 PLAN: RESTROOM STRUCTURE
SCALE: 3/8" = 1'-0"



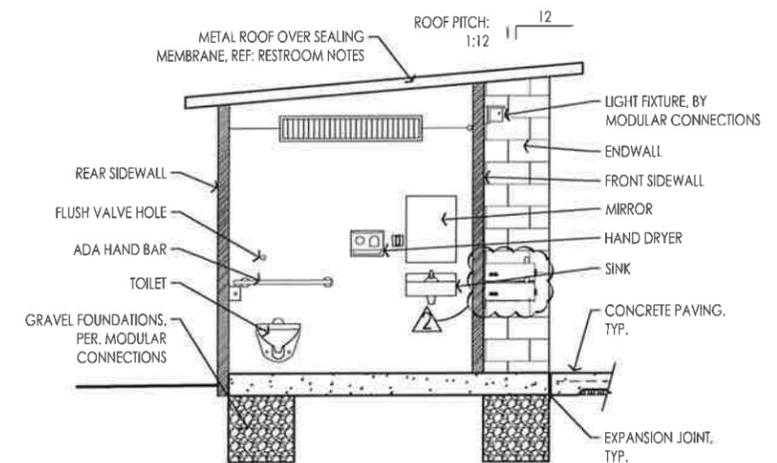
2 ELEVATION: RESTROOM STRUCTURE (FRONT)
SCALE: 3/8" = 1'-0"



3 ELEVATION: RESTROOM STRUCTURE (SIDE)
SCALE: 3/8" = 1'-0"



4 SECTION: STORAGE ROOM
SCALE: 3/8" = 1'-0"



5 SECTION: RESTROOM
SCALE: 3/8" = 1'-0"

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3404 W. Illinois, Suite 208
Midland, TX 79703
432.203.0808
www.mlandlarch.com

REGISTERED LANDSCAPE ARCHITECT
EDWARD HANLEY
2763
OF TEXAS
2/6/17

LAMESA B&G CLUB LAKE PARK
400 N. 9th STREET
LAMESA, TX 79331

CONSTRUCTION DOCUMENTS

Issue Date	2.6.2017
Revisions	
City Review	Feb. 2, 2017
IAS Comments	Apr. 27, 2017

Project Number:	1814
Drawn By	EO
Checked By	TEH
Scale:	AS SHOWN

Sheet Title
RESTROOM DETAILS

Sheet Number
L3.4

GENERAL STRUCTURAL NOTES

APPLY UNLESS OTHERWISE NOTED ON STRUCTURAL DRAWINGS. IN CASE OF CONFLICT BETWEEN GSN, DETAILS AND PLANS, THE MORE STRINGENT REQUIREMENTS GOVERN.

CODE:

COMPLY WITH 2015 INTERNATIONAL BUILDING CODE.
 SEISMIC IMPORTANCE FACTOR: E=1.0
 SITE CLASS: D
 ANALYSIS PROCEDURE USED: SIMPLIFIED METHOD
 BASIC WIND SPEED: 115 MPH PER ASCE7-10
 WIND IMPORTANCE FACTOR: $I_w=1.0$
 BUILDING CATEGORY: ENCLOSED
 EXPOSURE: C
 DESIGN WIND PRESSURE FOR MWFRS:
 END ZONE = 20 PSF
 DEAD LOADS: AS REQUIRED
 LIVE LOADS: 20 PSF
 NET UPLIFT: 15 PSF
 MECHANICAL LOADS: SEE MECHANICAL DRAWINGS. VERIFY ANY LOADS SHOWN ON STRUCTURAL DRAWINGS WITH MECHANICAL DRAWINGS.

FOUNDATIONS:

SOIL REPORT BY: W.CHAMLTON ENGINEERING, INC., PROJECT NO. 10750616, DATED JULY 12, 2016.
 FOOTINGS SHALL BEAR ON ADEQUATELY PLACED AND COMPACTED STRUCTURAL FILL AT 24" MINIMUM BELOW FINISH GRADE. SOIL BENEATH FOOTINGS SHALL BE SCARIFIED TO A DEPTH OF 12 INCHES, MOISTURE CONDITIONED TO -2% TO +3% OPTIMUM MOISTURE CONTENT AND COMPACTED TO A MINIMUM OF 98% MAXIMUM DRY DENSITY AS DETERMINED IN ACCORDANCE WITH ASTM-D-698 PER THE SOILS REPORT. NATIVE SOILS ARE SUITABLE FOR GENERAL FILL. ALL STRUCTURAL FILL SHALL BE FREE OF VEGETATION, DEBRIS AND CONTAIN NO ROCK LARGER THAN 3 INCHES. GRADATION OF THE FILL SHALL BE AS FOLLOWS.

SIEVE SIZE	PERCENT PASSING
3"	100
NO. 4	60-100
NO. 40	15-45

ALL EARTHWORK, FOOTING DEPTHS, AND EXCAVATIONS FOR FOUNDATIONS SHALL BE INSPECTED BY THE SOILS ENGINEER TO VERIFY ALLOWABLE SOIL BEARING AND LOW SETTLEMENT AND SWELL POTENTIAL, AND TO MAKE ADDITIONAL RECOMMENDATIONS. ALLOWABLE BEARING = 500 PSF AT 24 INCHES BELOW GRADE. PER BEARING CAPACITY AT 10 FEET BELOW GRADE = 3500 PSF.

CONCRETE:

SHALL MEET ALL THE REQUIREMENTS OF THE CURRENT ISSUE OF THE ACI MANUAL OF CONCRETE PRACTICE, WITH TYPE I - II CEMENT. MINIMUM 28 DAY STRENGTH, 3000 PSI, EXCEPT AS FOLLOWS:

FOUNDATIONS, GRADE BEAMS, OR ANY OTHER CONCRETE IN CONTACT WITH EARTH.....3000 PSI (MAX W/C = 0.45)
 RETAINING WALL.....4000 PSI (MAX W/C = 0.4)
 MAXIMUM SLUMP.....5"

CONTRACTOR SHALL SUBMIT FOR APPROVAL CONCRETE MIX DESIGNS FOR EACH CLASS OF CONCRETE. THE MIX SUBMITTAL SHALL INDICATE WHICH OF THE FOLLOWING ACI 318 METHODS THE CONCRETE SUPPLIER ALONG WITH HIS TESTING LAB INTENDS TO USE FOR CONCRETE PROPORTIONING - THE FIELD EXPERIENCE METHOD, THE LABORATORY TRIAL MIXTURE METHOD OR A COMBINATION OF BOTH. IF CONSECUTIVE TESTS (15 TO 30) ARE BEING RELIED UPON PER ACI 318, SECTION 5.3 THOSE TESTS SHALL BE SUBMITTED ALONG WITH THE MIX DESIGNS. MIX DESIGNS SHALL BEAR THE STAMP OF AN ENGINEER LICENSED IN THE STATE OF TEXAS.

NO ADMIXTURES SHALL BE USED WITHOUT APPROVAL. NO AIR ENTRAINMENT SHALL BE ALLOWED IN FLAT SLABS. ADMIXTURES CONTAINING CHLORIDES SHALL NOT BE USED. CONCRETE SHALL NOT BE IN CONTACT WITH ALUMINUM. MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED. EXCEPT THAT SLABS ON GRADE NEED BE VIBRATED ONLY AROUND EMBEDDED ITEMS. DO NOT TAMP SLABS. USE ROLLER BUG, VIBRATING SCREED OR BULL FLOAT TO FINISH. SEE SPECIFICATIONS FOR CURING. REVIBRATE TOPS OF COLUMNS SOON AFTER PLACING CONCRETE, TO CLOSE PLASTIC SHRINKAGE CRACKS.

MINIMUM STRENGTH FOR REMOVAL OF FORMS AND SHORING SHALL BE 75% OF SPECIFIED STRENGTH AT 28 DAYS.

FLY ASH (POZZOLAN) IF PERMITTED PER ARCHITECTURAL SPECIFICATIONS SHALL NOT EXCEED 25% REPLACEMENT OF TOTAL CEMENT CONTENT USING A 1:1 REPLACEMENT FACTOR.

CONCRETE FINISHES SHALL BE AS FOLLOWS:
 1. SMOOTH TROWEL FINISH AT WALLS.
 2. HEAVY BROOM FINISH AT PAVILION AND SLABS.

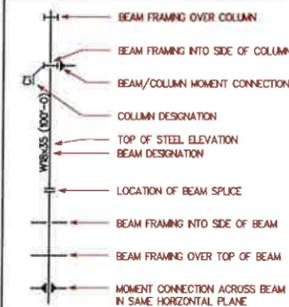
LEGEND:

ABBREVIATIONS	
ARCH. = ARCHITECTURAL	GSN = GENERAL STRUCTURAL NOTES
C.J. = CONTROL JOINT	MEDL = MECHANICAL
CONC. = CONCRETE	SL = STEEL STUD LABEL
CONT. = CONTINUOUS	UNLS = UNLESS NOTED OTHERWISE
EXIST. = EXISTING	T.O.S. = TOP OF STEEL

SHEET INDEX:

GENERAL STRUCTURAL NOTES & DETAILS	S10
FOUNDATION PLAN	S20

STRUCTURAL STEEL LEGEND:



REINFORCING:

LATEST ACI CODE AND DETAILING MANUAL APPLY. ALL REINFORCING BARS DEFORMED EXCEPT #2 BARS AND WIRE MESH.

ALL REINFORCING SHALL BE ASTM A-615 GRADE 60 EXCEPT AS FOLLOWS:

SPIRALS.....GRADE 60 OR COLD DRAWN A-82
 #2 AND #3 BARS.....GRADE 40
 WIRE MESH.....A-185
 WELDED ANCHORS.....GRADE 40 CHEMICAL ANALYSIS LIMITED PER AWS SPECIFICATIONS FOR WELD WITHOUT PREHEAT.
 WELDED ANCHORS #5 AND LARGER.....ASTM A-706

CLEAR CONCRETE COVER TO REINFORCING ARE AS FOLLOWS:

CAST-IN-PLACE CONCRETE (NONPRESTRESSED):
 CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH.....3"

EXPOSED TO EARTH OR WEATHER:
 #6 THROUGH #18.....2"
 #5 AND SMALLER.....1 1/2"

MESH SPLICES: TYPICAL SPACING PLUS 2" (MINIMUM 8") MEASURED BETWEEN CROSS WIRES.

FOR TYPICAL BAR BENDS, SEE DETAIL 5/S-002.

LAP SPLICES SHALL BE CLASS B TENSION LAPS OR 76 BAR DIA. -TOP, 58 BAR DIA. -BOT SPLICE BOTTOM BAR OVER SUPPORTS AND TOP BAR AT MIDSPAN ONLY.

WHERE BARS ARE SHOWN SPLICED, THEY MAY RUN CONTINUOUS AT CONTRACTOR'S OPTION.

PROVIDE SHOP DRAWINGS AND FABRICATE AFTER THE ARCHITECT'S REVIEW. ALL SPLICE LOCATIONS ARE SUBJECT TO APPROVAL. PLACE REBAR PER CRSI STANDARDS.

REBAR SPACING GIVEN IS MAXIMUM ON CENTER AND ALL REBAR IS CONTINUOUS UNLESS OTHERWISE NOTED. PROVIDE BENT CORNER REBAR TO MATCH AND LAP WITH HORIZONTAL REBARS AT CORNERS AND INTERSECTIONS OF WALLS. DOWEL ALL VERTICAL WALL AND COLUMN REBAR TO FOUNDATIONS. SECURELY TIE ALL REBAR, INCLUDING DOWELS, IN LOCATION BEFORE PLACING CONCRETE OR GROUT.

STRUCTURAL CONSTRUCTION OBSERVATION:

IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSPECT ALL STRUCTURAL WORK FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS. ANY STRUCTURAL CONSTRUCTION OBSERVATION PROVIDED BY OTHERS DOES NOT RELIEVE HIM OF THIS RESPONSIBILITY. ANY STRUCTURAL DEVIATIONS FROM THE CONTRACT DOCUMENTS THAT ARE FOUND AT A LATER DATE AND ARE DECLARED TO BE SIGNIFICANT BY THE STRUCTURAL ENGINEER SHALL BE CORRECTED BY THE CONTRACTOR WITH ALL DISPATCH.

THE STRUCTURAL CONSTRUCTION OBSERVER IS NOT AUTHORIZED TO DIRECT OR APPROVE ANY CHANGES FROM THE CONTRACT DOCUMENTS. IF THE CONTRACTOR WISHES TO QUESTION THE STRUCTURAL CONSTRUCTION OBSERVER'S INTERPRETATION OF THE CONTRACT DOCUMENTS, HE MAY DO SO DIRECTLY WITH THE ARCHITECT OR THE STRUCTURAL ENGINEER.

THE STRUCTURAL CONSTRUCTION OBSERVER IS NOT AUTHORIZED TO STOP OR DELAY WORK IF THE CONTRACTOR ELECTS TO CONTINUE WITH A CERTAIN WORK AFTER BEING NOTIFIED BY THE STRUCTURAL CONSTRUCTION OBSERVER THAT SUCH WORK IS UNACCEPTABLE, HE DOES SO AT HIS OWN RESPONSIBILITY AND RISKS CORRECTING THE WORK AT A LESS OPPORTUNE TIME.

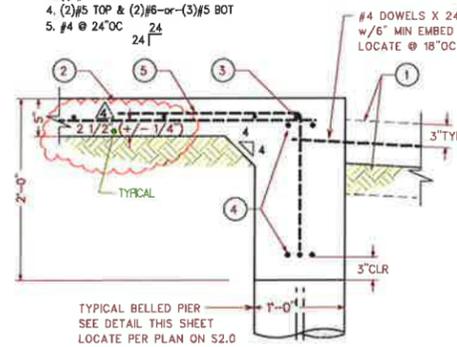
THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATE FACILITIES FOR THE STRUCTURAL CONSTRUCTION OBSERVER, TO ALLOW HIM TO PERFORM HIS WORK SAFELY AND EFFICIENTLY.

SPECIAL INSPECTIONS:

PER SECTION 1704 OF THE INTERNATIONAL BUILDING CODE, SPECIAL INSPECTION IS REQUIRED FOR THE FOLLOWING ITEMS:

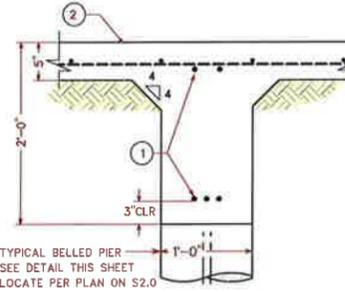
1. CONCRETE AND REINFORCEMENT.
2. EARTHWORK.

1. FIN GR / OP SLAB, SLOPE AWAY FROM BLDG
2. CONCRETE SLAB ON GRADE. (SEE PLAN)
3. (1) #5 CONT
4. (2)#5 TOP & (2)#6-or-(3)#5 BOT
5. #4 @ 24"OC

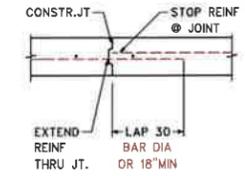


1 PERIMETER GRADE BEAM

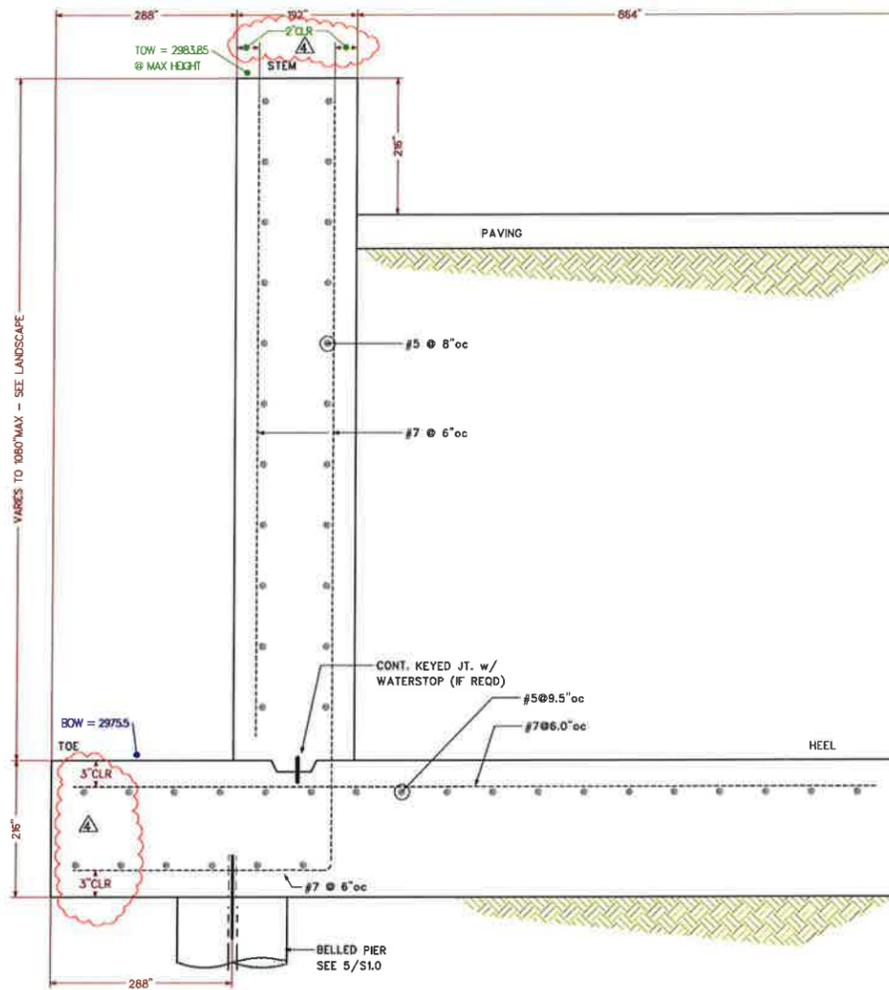
1. (2)#5 TOP & (2)#6-or-(3)#5 BOT
2. CONCRETE SLAB ON GRADE. REINF'D w/#4 @ 12"OC EW



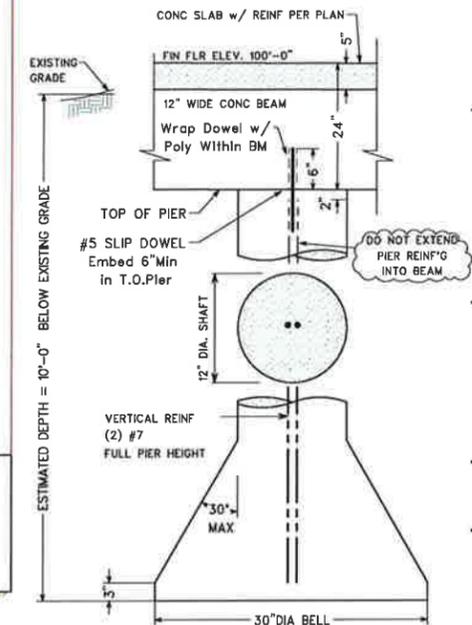
2 INTERIOR GRADE BEAM



3 CONCRETE JOINT DETAILS
NOT TO SCALE



4 TYPICAL SECTION @ RETAINING WALL



5 TYPICAL BELLED PIER DETAIL

Onsite Structural Engineering
 Serving the Permian Basin +
 817*808*3200 doug@onsitestructural.com



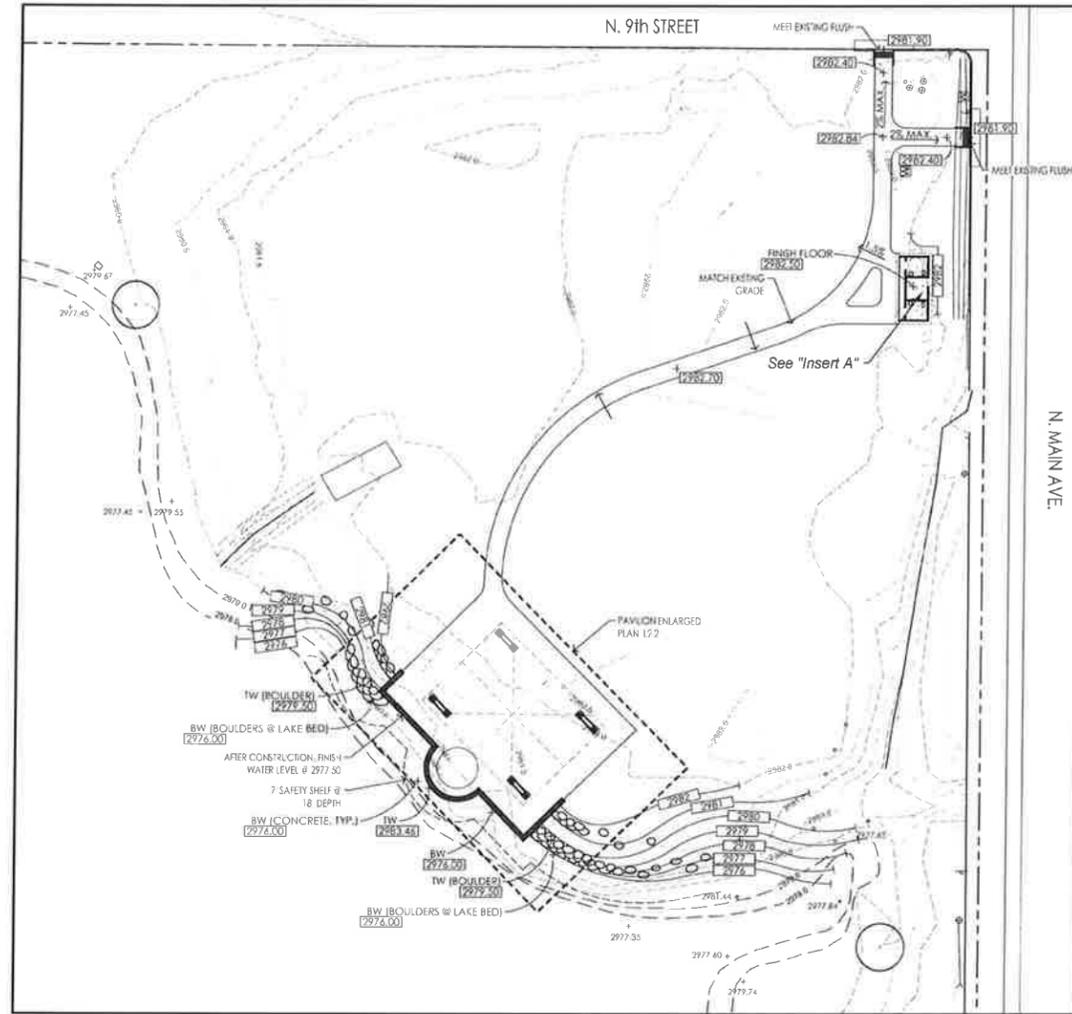
LAMESA B&G CLUB LAKE PARK
 400 N. 9th STREET
 LAMESA, TX 79331

CONSTRUCTION DOCUMENTS

Issue Date	2/6/17
Revisions	
MLA Project Number:	1514
OCF Project Number:	16-004
Drawn By	DBR
Checked By	RBD
Scale:	1"=1'-0" U.N.O.

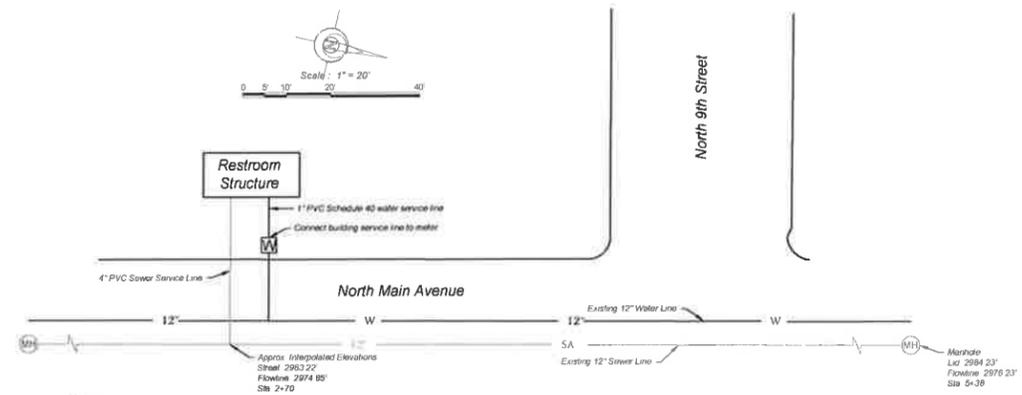
Sheet Title
GENERAL STRUCTURAL NOTES

Sheet Number
S1.0



Site Plan

Insert A - Water & Sewer Services



- Notes:**
1. City will tap water main and install service line from the main to the water meter (3/4" x 5/8" meter).
 2. Contractor shall install sewer service line from the building and connect to sewer main. Contractor shall coordinate tapping of the main, installation of service line, backfill, and pavement repair with City.
 3. All materials and workmanship shall comply with City of Lamesa specifications and codes. All work shall be subject to and pass inspections by City.
 4. Contractor shall obtain all permits, inspections, and pay all fees associated with water and sewer service to the restroom.
 5. Service line and existing water and sewer line locations are schematic only. Actual locations shall be field determined by contractor subject to approval by City.



LAMESA B&G CLUB LAKE PARK
 400 N. 9th STREET
 LAMESA, TX 79331

CONSTRUCTION DOCUMENTS

Issue Date: 2.4.2017

Revisions:

Project Number: 1814

Drawn By: BAW

Checked By: BAW

Scale: NTS

Sheet Title:

WATER & SEWER SERVICES

Sheet Number:

C1.0



THE SEAL APPEARING ON THIS DRAWING WAS AUTHORIZED BY WILFRED WILDE, P.E. NO. 52823 ON 02/08/2017

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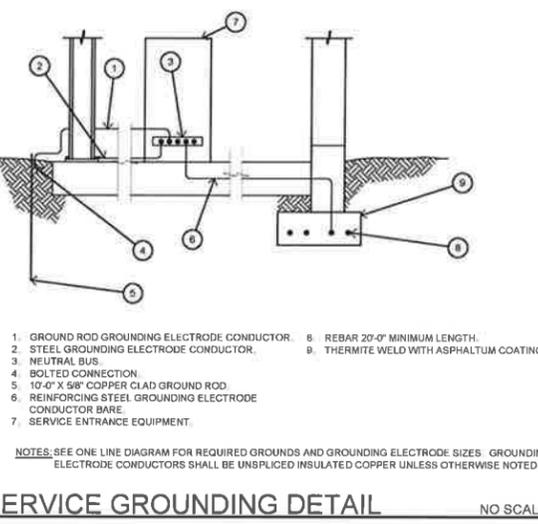
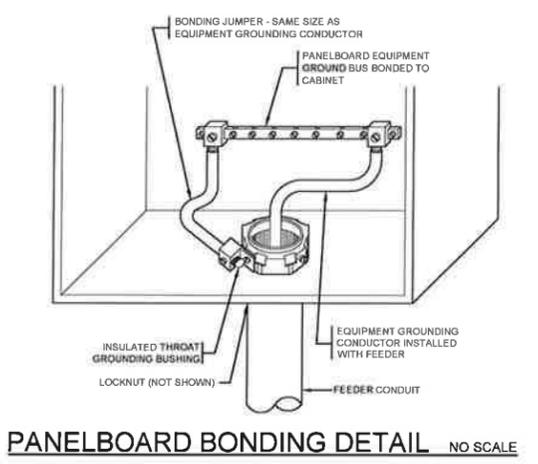
BREAKER	15	20	25	30	35	40	45	50	60	70	80	90	100	125	150	175	200	225	250	300	350	400
PHASE	#12	#12	#10	#10	#8	#8	#8	#8	#6	#4	#4	#2	#2	#1	#1/0	#2/0	#3/0	#4/0	#250 MCM	#350 MCM	#500 MCM	(2) #3/0
NEUTRAL	#12	#12	#10	#10	#8	#8	#8	#8	#6	#4	#4	#2	#2	#1	#1/0	#2/0	#3/0	#4/0	#250 MCM	#350 MCM	#500 MCM	(2) #3/0
GROUND	#12	#12	#10	#10	#10	#10	#10	#10	#8	#8	#8	#8	#6	#6	#6	#6	#6	#4	#4	#4	#3	(2) #3
CONDUIT	1/2"	1/2"	3/4"	3/4"	1"	1"	1"	1"	1-1/4"	1-1/4"	1-1/4"	1-1/4"	1-1/2"	2"	2"	2"	2-1/2"	2-1/2"	3"	4"	(2) 2-1/2"	

NOTE: UNLESS OTHERWISE INDICATED ON THE DRAWINGS, ALL CONDUCTORS AND CONDUIT SHALL BE SIZED FROM THIS CHART
 (*) INDICATES NUMBER OF PARALLEL SETS

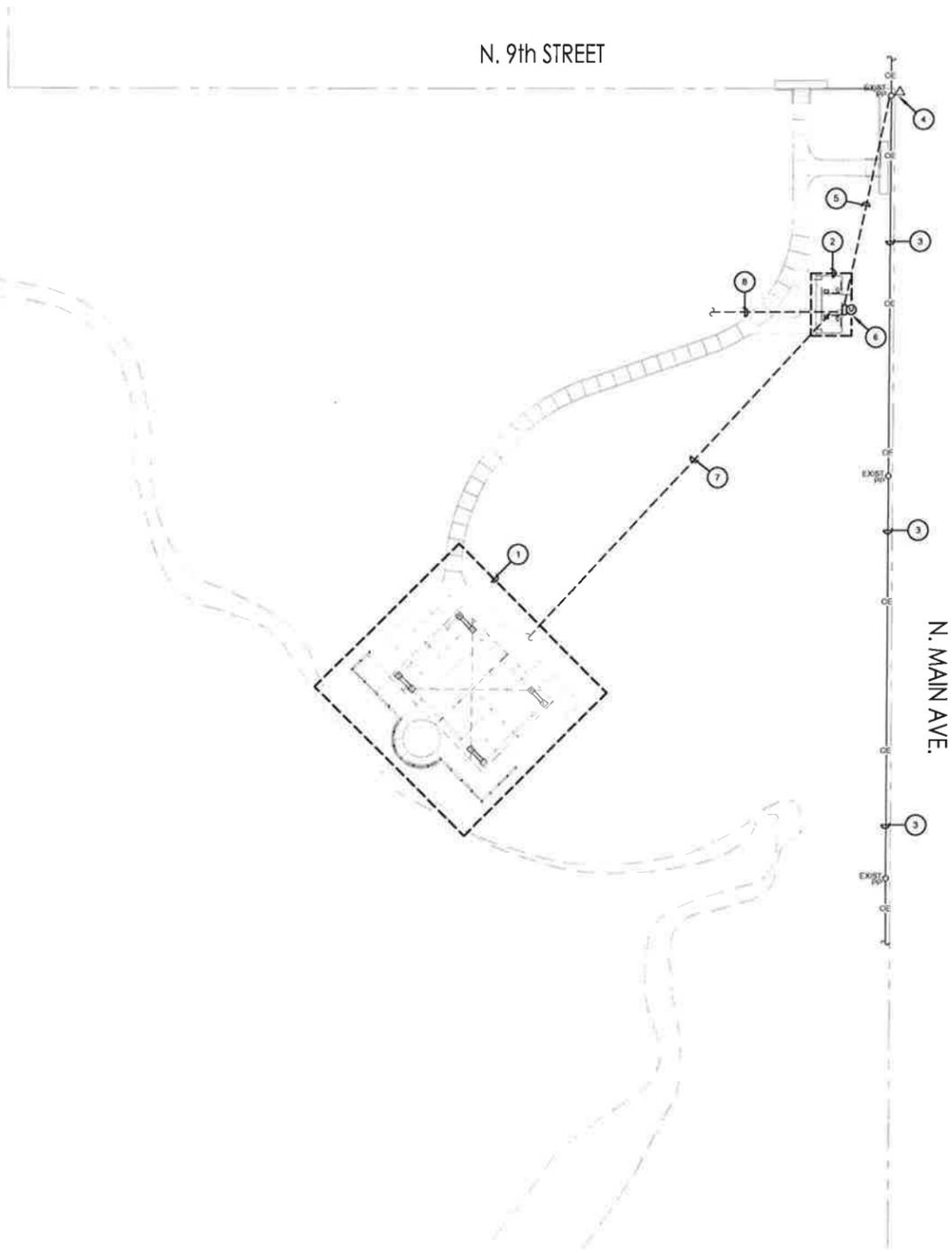


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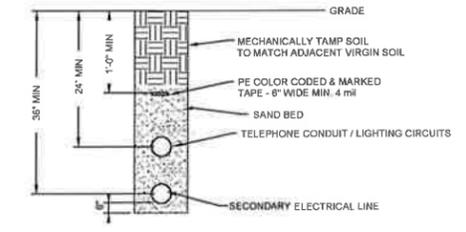
NOTES: SEE ONE LINE DIAGRAM FOR REQUIRED GROUNDS AND GROUNDING ELECTRODE SIZES. GROUNDING ELECTRODE CONDUCTORS SHALL BE UNSPLICED INSULATED COPPER UNLESS OTHERWISE NOTED.



- GENERAL NOTES:**
- A. LOCATE AND FLAG ALL EXISTING UNDERGROUND UTILITIES PRIOR TO BEGINNING ANY EXCAVATION.
 - B. CONTRACTOR SHALL VISIT SITE PRIOR TO BIDDING AND VERIFY ELECTRICAL WORK REQUIRED. REPORT ANY DISCREPANCIES TO ARCHITECT.
 - C. CONTRACTOR SHALL CONTACT POWER COMPANY AND PROVIDE CONNECTED LOADS AS REQUESTED. COORDINATE ANY REQUIREMENTS BY THE POWER CO. FOR CONTRACTOR INSTALLED TRANSFORMER PADS, TRENCHES, BACKFILL AND CONDUIT. INCLUDE THESE AND ANY OTHER POWER COMPANY CHARGES IN ORIGINAL BID.
 - D. CONTRACTOR SHALL COORDINATE ALL GAS, SEWER, ELECTRICAL AND TELEPHONE CONNECTIONS, METER LOCATIONS, ETC. WITH RESPECTIVE UTILITY PROVIDERS.
 - E. ALL WALLBOX OCCUPANCY SENSORS SHALL BE WATT STOPPER #DW-200 OR AN APPROVED EQUAL WITH NO MINIMUM LOAD.
 - F. **NOTE:** REFER TO LANDSCAPE DRAWINGS AND DETAILS FOR EXACT LOCATION AND QUANTITY OF LIGHT FIXTURES, AND MOUNTING HEIGHTS FOR ALL DEVICES.
 - G. **NOTE:** REFER TO "MODULAR CONNECTIONS" SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING THE PRECAST CONCRETE RESTROOMS. COORDINATE WITH RESTROOMS SUPPLIER FOR EXACT REQUIREMENTS AND PROVIDE ALL LABOR AND MATERIALS REQUIRED IN ORIGINAL BID.

- KEYED NOTES:**
- 1 REFER TO SHEET E2 "PAVILION PLAN - ELECTRICAL" FOR ADDITIONAL INFORMATION IN THIS AREA.
 - 2 REFER TO SHEET E2 "RESTROOMS PLAN - ELECTRICAL" FOR ADDITIONAL INFORMATION IN THIS AREA.
 - 3 EXISTING OVERHEAD POWER LINES.
 - 4 EXISTING 120/240V, 1Ø POLE MOUNTED TRANSFORMER TO BE UPGRADED BY POWER COMPANY AS REQUIRED. CONTRACTOR SHALL CONTACT POWER COMPANY AND COORDINATE EXACT REQUIREMENTS AND INCLUDE ALL POWER COMPANY CHARGES IF ANY IN ORIGINAL BID.
 - 5 NEW UNDERGROUND SECONDARY. COORDINATE EXACT REQUIREMENTS WITH POWER COMPANY.
 - 6 WALL MOUNTED 240VAC, 200A SELF CONTAINED METER BASE. METER BASE BY CONTRACTOR, INSTRUMENT BY POWER COMPANY. COORDINATE EXACT REQUIREMENTS WITH POWER COMPANY.
 - 7 TRENCH FOR UNDERGROUND BRANCH CIRCUITS. ALL 120V, 20A BRANCH CIRCUITS SHALL BE PROVIDED WITH (2) #10 & (1) #10 GR. IN 3/4" C. TO ALLOW FOR VOLTAGE DROP.
 - 8 4" PVC BELOW GRADE CONDUIT STUBBED OUT 20' FOR EXTENSION BY OTHERS. REFER TO LANDSCAPE DRAWINGS.

SYMBOL	DESCRIPTION
LP-1	1' X 4' LED LIGHTING FIXTURE - TYPE NOTED. NUMBER NEXT TO FIXTURE INDICATES PANEL AND CIRCUIT NUMBER.
LP-1	PENDANT MOUNTED LIGHTING FIXTURE - TYPE NOTED. NUMBER NEXT TO FIXTURE INDICATES PANEL AND CIRCUIT NUMBER.
SW	SPST, 3-WAY, 4-WAY WALL SWITCH.
WS	DUAL TECHNOLOGY WALL BOX OCCUPANCY SENSOR.
LP-1	DUPLEX RECEPTACLE - 20A, 125V, 3Ø, 5W GROUNDING. NUMBER NEXT TO DEVICE INDICATES PANEL AND CIRCUIT NUMBER.
GF	DUPLEX RECEPTACLE WITH GFI. NUMBER NEXT TO DEVICE INDICATES PANEL AND CIRCUIT NUMBER.
WP	WEATHER PROOF DUPLEX RECEPTACLE. NUMBER NEXT TO DEVICE INDICATES PANEL AND CIRCUIT NUMBER.
M	MOTOR LOCATION.
DS	DISCONNECT SWITCH.
■	ELECTRICAL PANELBOARD.



SITE PLAN - ELECTRICAL
 SCALE: 1" = 30'-0"



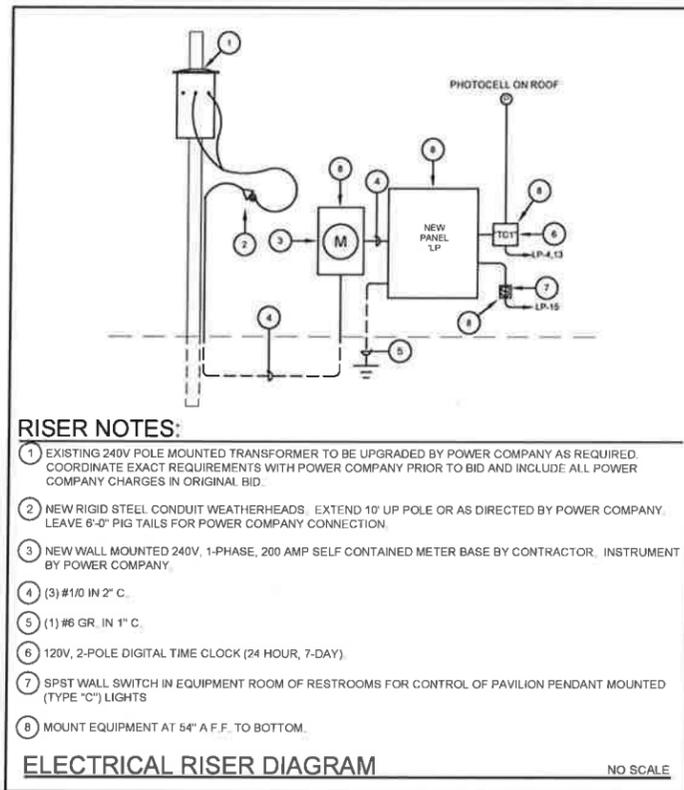
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Issue Date	2.4.2017
Revisions	
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Sheet Title
ELECTRICAL SITE PLAN

Sheet Number
E1



LIGHTING FIXTURE SCHEDULE - LAMESA B&G CLUB LAKE PARK

TYPE	VOLTS	MOUNTING	MANUFACTURER	CATALOG NUMBER	LAMPS	NOTES
A	120V	SURFACE	LITHONIA	2.2N L48 5000LM MDD MVCLT 35K 90CRI WHT	LED	---
A1	120V	SURFACE	LITHONIA	2.2N L48 5000LM MDD MVCLT 35K 90CRI BSL72 WH	LED	1
B	---	SURFACE	---	REFER TO LANDSCAPE DRAWINGS SHEET "L2 2" **TYPE #1	---	---
C	---	PENDANT	---	REFER TO LANDSCAPE DRAWINGS SHEET "L2 2" **TYPE #2	---	---

LIGHTING FIXTURE NOTES:
1. PROVIDE FIXTURE WITH 1100 LUMEN (MINIMUM) EMERGENCY BATTERY PACK.

PANEL 'LP'

MOUNTING SURFACE: 240/120 VOLTS 1 PHASE 3 WIRE + GR. MAINS: 150A MCB (18KAIC) CU. BUS 225 AMPS. MIN. CKT. BKR. I.C. 10,000 AMPS.

DESCRIPTION	LOAD/PHASE		BKR	CKT NO.	NOTES	CKT NO.	BKR	LOAD/PHASE		DESCRIPTION
	A	C						A	C	
AERATOR	1176		20	1		2	20	1000		RR LTS/RECEPT
RR LTS/RECEPT		1000	20	3	1	4	20		1000	RR EXTERIOR LTS
TANK-LESS WATER HEATER	2400		25	5		6	25	2400		TANK-LESS WATER HEATER
		2400		7		8		2400		
HAND DRYER	1500		20	9	3	10	20	800		PAVILION RECEPT
HAND DRYER	1500		20	11	3	12	20	800		PAVILION RECEPT
PAVILION LTS	544		20	13	1,3	14	20	800		PAVILION RECEPT
PAVILION LTS	208		20	15	2,3	16	20	800		PAVILION RECEPT
SPARE	0		20	17		18	20	0		SPARE
SPARE	0		20	19		20	20	0		SPARE
SPACE ONLY	---		20	21		22	---	---		SPACE ONLY
SPACE ONLY	---		20	23		24	---	---		SPACE ONLY

CONNECTED LOAD: 20,728 AMPS **DEMAND LOAD:** 20,728 AMPS
PHASE A: 10620 AMPS **PHASE A:** 10620 AMPS **PHASE B:** 10108 AMPS **PHASE B:** 10108 AMPS

GENERAL NOTES:
A. ALL 120V SINGLE PHASE BRANCH CIRCUITS SHALL BE PROVIDED WITH A DEDICATED NEUTRAL.

NOTES:
1. THIS CIRCUIT TO BE CONTROLLED BY PHOTOCELL THRU 2-POLE DIGITAL TIMECLOCK "TC1"
2. THIS CIRCUIT TO BE CONTROLLED BY SPST WALL SWITCH IN EQUIPMENT ROOM OF RESTROOMS.
3. THIS CIRCUIT TO BE PROVIDED WITH (2) #10 & (1) #10 GR. IN 3/4" C.



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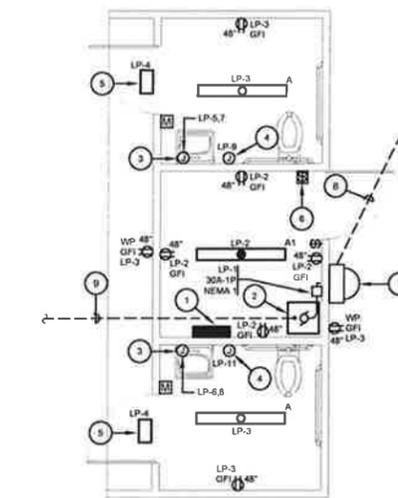
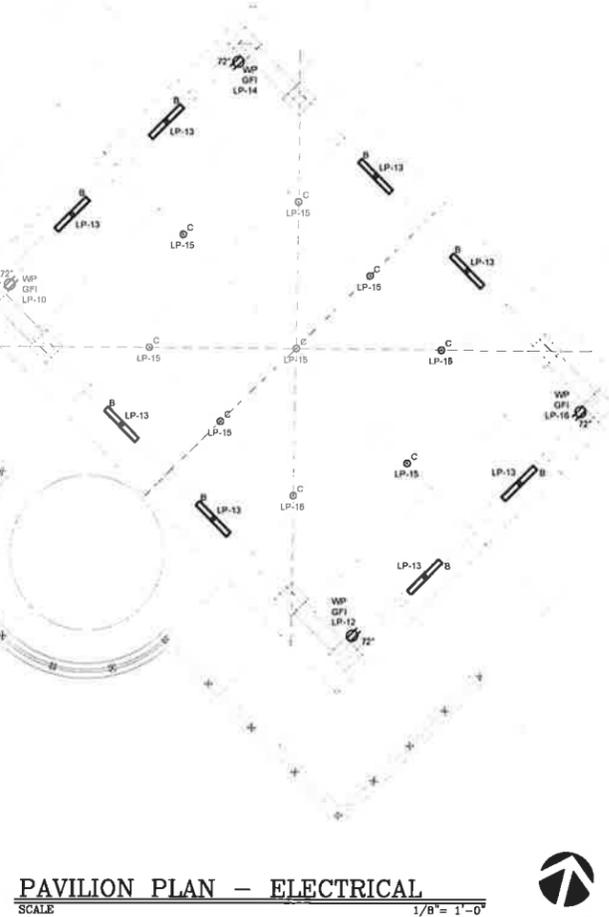
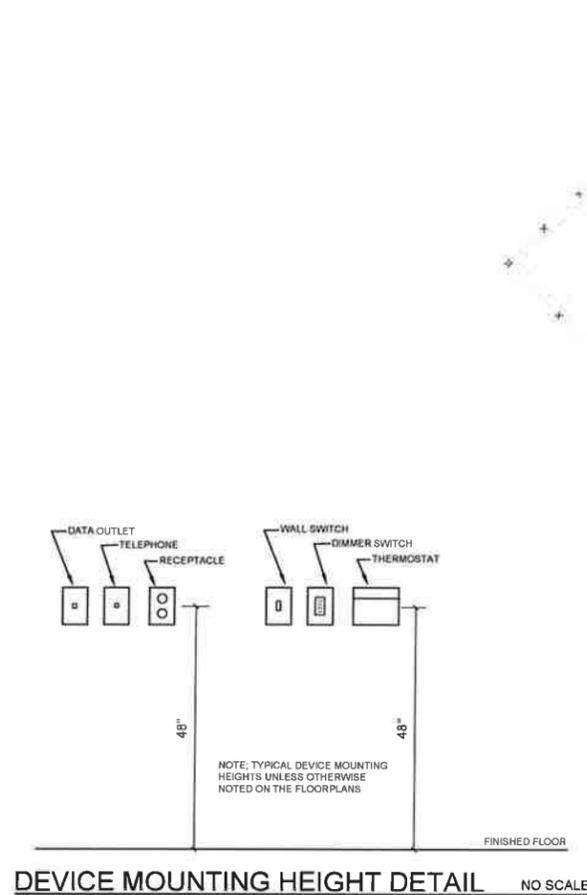


GENERAL NOTES:

- LOCATE AND FLAG ALL EXISTING UNDERGROUND UTILITIES PRIOR TO BEGINNING ANY EXCAVATION.
- CONTRACTOR SHALL VISIT SITE PRIOR TO BIDDING AND VERIFY ELECTRICAL WORK REQUIRED. REPORT ANY DISCREPANCIES TO ARCHITECT.
- CONTRACTOR SHALL CONTACT POWER COMPANY AND PROVIDE CONNECTED LOADS AS REQUESTED. COORDINATE ANY REQUIREMENTS BY THE POWER CO. FOR CONTRACTOR INSTALLED TRANSFORMER PADS, TRENCHES, BACKFILL AND CONDUIT. INCLUDE THESE AND ANY OTHER POWER COMPANY CHARGES IN ORIGINAL BID.
- CONTRACTOR SHALL COORDINATE ALL GAS, SEWER, ELECTRICAL AND TELEPHONE CONNECTIONS, METER LOCATIONS, ETC. WITH RESPECTIVE UTILITY PROVIDERS.
- ALL WALLBOX OCCUPANCY SENSORS SHALL BE WATT STOPPER #DW-200 OR AN APPROVED EQUAL WITH NO MINIMUM LOAD.
- NOTE:** REFER TO LANDSCAPE DRAWINGS AND DETAILS FOR EXACT LOCATION AND QUANTITY OF LIGHT FIXTURES, AND MOUNTING HEIGHTS FOR ALL DEVICES.
- NOTE:** REFER TO "MODULAR CONNECTIONS" SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING THE PRECAST CONCRETE RESTROOMS. COORDINATE WITH RESTROOMS SUPPLIER FOR EXACT REQUIREMENTS AND PROVIDE ALL LABOR AND MATERIALS REQUIRED IN ORIGINAL BID.

KEYED NOTES:

- PANEL 'LP'
- POND AND LAKE AERATOR COMPRESSOR. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH EQUIPMENT SUPPLIER AND PROVIDE ALL LABOR AND MATERIALS AS REQUIRED FOR COMPLETE OPERATION.
- WEATHERPROOF J-BOX FOR CONNECTION OF TANK-LESS WATER HEATER. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH EQUIPMENT SUPPLIER AND PROVIDE ALL LABOR AND MATERIALS AS REQUIRED FOR COMPLETE OPERATION.
- WEATHERPROOF J-BOX FOR CONNECTION OF WALL MOUNTED HAND DRYER. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH EQUIPMENT SUPPLIER AND PROVIDE ALL LABOR AND MATERIALS AS REQUIRED FOR COMPLETE OPERATION.
- WALL MOUNTED EXTERIOR LIGHTING FIXTURE BY OTHERS. CONNECTION AND CONTROLS BY CONTRACTOR.
- SPST WALL SWITCH FOR CONTROL OF PAVILION PENDANT LIGHTS (TYPE "C"). COORDINATE EXACT LOCATION AND REQUIREMENTS WITH LANDSCAPE ARCHITECT AND PROVIDE ALL LABOR AND MATERIALS AS REQUIRED FOR LIGHTING CONTROLS.
- WALL MOUNTED 240VAC, 200A SELF CONTAINED METER BASE BY CONTRACTOR. INSTRUMENT BY POWER COMPANY. COORDINATE EXACT REQUIREMENTS WITH POWER COMPANY.
- NEW UNDERGROUND SECONDARY. COORDINATE EXACT REQUIREMENTS WITH POWER COMPANY.
- 4" PVC BELOW GRADE CONDUIT STUBBED OUT 20' FOR EXTENSION BY OTHERS. REFER TO LANDSCAPE DRAWINGS.



LAMESA B&G CLUB LAKE PARK
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Revisions	
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Drawn By	CBN
Checked By	MDB
Scale	1" = 30'-0"

Sheet Title
PAVILION & RESTROOMS ELECTRICAL

Sheet Number
E2



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DIVISION 16 -ELECTRICAL

SECTION 16A - GENERAL

- The work shall include furnishing and installing all electrical work, including final connections to all devices and placing them in service. All work shall conform to local, state and national codes as interpreted by the authorities having jurisdiction. All material shall be U.L. labeled and listed.
- Comply with requirements of the 2014 National Electrical Code in the construction and installation of all work.
- All major electrical service equipment specified herein shall be Square D. This includes panelboards, disconnect switches and circuit breakers. Obtain Engineer's approval for substitutions.
- All equipment shall be installed in a location and manner that shall allow for convenient access for maintenance and inspection. Access doors and panels in walls and ceilings shall be provided as required for concealed equipment, controls and boxes.
- Make all payments for fees, permits and deposits for electrical work. Coordinate with local electrical utility to provide all equipment and pay all cost required to extend underground service from power company facilities to building including meter bases and conduit for meter conductors, CT meter cabinets, and other equipment deemed necessary by the utility company. Contractor shall be responsible for all coordination with the power company.
- The owner or architect for this project must take the responsibility to submit these drawings to all state and local authorities for required plan reviews. Plans must be submitted for review no later than 5 days after the date appearing on the professional seal.
- All materials and equipment to be installed on this project must be submitted for engineers approval in a single binder. There shall be a tab for each section submitted for review. Sections requiring review shall not be submitted separately. Submittals received that are not formatted correctly will be returned without review.
- The engineer will review submittals twice as part of his obligation to the owner. If submittals have to be reviewed more than twice the contractor will pay the engineer a \$100 per hour fee for each additional review. Additional reviews will be performed upon receipt but will not be released until the engineer has received a check from the contractor.

END OF SECTION

SECTION 16B - MATERIALS

16B.1 CONDUITS

- Rigid Steel Conduit: Rigid, threaded, thick-walled; galvanized inside and outside or galvanized outside with a protective coating inside. U.L. listed and labeled according to Standard UL6, conforming to ANSI Standard C80.1, Pittsburgh, Republic Steel, Robroy or Allied.
- Electrical Metallic Tubing (EMT): Steel tubing, galvanized outside and provided with a slick corrosion resistant interior coating; U.L. listed and labeled according to Standard 797, conforming to ANSI Standard C80.3; Pittsburgh, Republic Steel, Robroy or Allied.
- Flexible Metal Conduit: Spirally wound with hot dip galvanized steel strips (commercial Greenfield), conforming to U.L. Standard UL1 and U.L. listed and labeled; Triangle Conduit and Cable Company, or equivalent.
- Liquidtight Flexible Metal Conduit: Spirally wound, galvanized steel strips, as for flexible metal conduit, with polyvinyl chloride cover extruded over the exterior to make conduit liquidtight; U.L. listed, Electric-flex type "LA" or equivalent.
- Rigid non-metallic: Schedule 80 PVC.

16B.2 CONDUIT FITTINGS

- Couplings and Terminations for Rigid Steel conduit: Factory made steel threaded couplings; bushings at all boxes and cabinets, with locknuts inside and outside box or cabinet.
- Couplings and Terminations for Electrical Metallic Tubing: Join lengths of EMT with steel, compression type couplings and connectors where possible. Otherwise use set-screw fittings. Provide nylon insulated throat, steel connectors at box and cabinet terminations.
- Couplings and Terminations for Flexible Metal Conduit: T&B 440 Series couplings at connections between flexible and rigid conduit, T&B 3110 or 3130 Series nylon insulated throat, steel connectors at box or cabinet terminations.

16B.3 OUTLET BOXES

- Sheet Steel Boxes: Sheet steel not lighter than No. 14 gauge, galvanized after fabrication; Raco, Steel City or Appleton.
- Cast Metal Boxes: Cast iron or Cast alloy with threaded hubs; Crouse-Hinds, Appleton or Pyle National.
- Non-Metallic Boxes: NEMA OS 1.

16B.4 PULL BOXES AND JUNCTION BOXES

- Sheet steel, galvanized inside and outside, with galvanized covers.
- Small boxes: For boxes where the volume required is not over 100 cubic inches, use standard outlet boxes.
- Larger Boxes: For boxes where the volume required is over 100 cubic inches, use cabinets as specified for panelboard cabinets with covers of same gauge as boxes, secured with corrosion resistant bolts or screws.

16B.5 CONDUCTORS (600 VOLTS AND UNDER)

- Type: Soft drawn, annealed copper, U.L. listed, rated at 600 volts, Okonite, Triange, Anaconda or Simplex No. 8 and larger shall be stranded; No. 10 and smaller shall be solid.
- Insulation: Branch circuits shall have type THHN insulation for exterior installations. Service feeders shall be type THHN or THWN in conduit. Feeder circuits shall be Type THHN in Conduit.

16B.6 JOINTS AND SPLICES

- Stranded Copper Conductors: U.L. approved solderless bolted pressure connectors or Thomas and Betts Series 54000 compression connectors. All connectors shall be properly sized to match conductor sizes. All compression connectors shall be applied with properly sized dies and tools.
- Solid Copper Conductors: U.L. approved solderless bolted pressure connectors; or U.L. approved electrical spring connectors of "Scotchlok", Ideal or T&B "Piggy" make.

END OF SECTION

SECTION 16C - COLOR CODING

- Phase conductors shall be black, red and blue for phases A, B & C respectively in the 208Y/120 volt system.
- Neutral conductors shall be white. Grounding conductors shall be green.
- Switch legs shall be black with white, red with white or blue with white depending on phase.
- All wiring No. 8 and larger shall be black and be marked with color banding tape as specified. All phase conductors, neutral and equipment ground conductors shall be marked with colored tape. Apply marking at each termination and every four feet of wiring in raceways.

END OF SECTION

SECTION 16D - WIRING DEVICES

16D.1 WALL SWITCHES

DEVICE	CATALOG NO.
A. Single Pole Wall Switch	Cooper 2221
B. Three-way Wall Switch	Cooper 2223
C. Double Pole Wall Switch	Cooper 2222

16D.2 RECEPTACLES

- Receptacle, 20 Ampere, 125 Volt, 2 Pole, 3 Wire Grounding Duplex: Cooper No. 5352 (NEMA 5-20R).
- Receptacle, 20 Ampere, 125 Volt, 2 Pole, 3 Wire Grounding Duplex with Self-Contained Ground Fault Circuit Interrupter: Cooper No. GF20.
- Receptacle with isolated ground: Cooper No. VGF20.
- Weatherproof boxes shall be cast aluminum with gasketed flip lids.

16D.3 COVERPLATES

- Pass & Seymour Thermoplastic "SRP" series "unbreakable" wall plates shall be used except in unfinished or machinery spaces, where plates shall be galvanized steel if surface mounted. Plate finishes shall be light almond (LA) to match devices. All switches controlling motorized equipment shall have engraved nameplates. Wall plates may be stainless steel at owner's option.

END OF SECTION

SECTION 16E - PANELBOARDS

16E.1 MATERIALS

- Panelboard Cabinets: Furnish and install cabinets to serve the various panelboards, of sizes as required to house the panelboards. Cabinets shall be rigidly constructed of sheet steel of gauges conforming to Underwriters' Laboratories Inc. requirements; corners over-lapped or welded, edges turned over to receive trim.
- Cabinet Fronts: Cut from single sheet of not less than No. 12 gauge cold-rolled sheet steel; fastened in place by adjustable trim clamps which will allow plumbing; same size as the cabinet box if surface mounted; size to overlap the box a minimum of 3/4" on all sides if flush mounted. Provide each door with a substantial flush, cylinder tumblers lock and catch. On doors more than 48" high provide a combination three point catch and lock with T-handle. Provide each lock with two keys, with all locks keyed alike.
- Finish: All back boxes galvanized, all exposed metal, including fronts, primed and finished in gray lacquer.
- Where a circuit protective device is scheduled as a "spare", provide the device complete for operation. Where such a device is scheduled as a "space" or "space only", provide proper space and all necessary connectors for future installation of the size of device scheduled. Where a breaker or switch is scheduled to serve a "future" load, provide the device complete for operation.
- All circuit breakers shall be quick make, quick break, trip free, thermal magnetic, indicating type unless noted otherwise. Branch circuit breakers shall be fully interchangeable without disturbing adjacent units.
- Connect all circuit interrupting devices with sequence phasing.
- Provide each panelboard with a neatly typewritten directory of circuits mounted in a cardholder on the inside of the panelboard cabinet. Cover directory with transparent sheet plastic.
- All panelboards shall be listed by Underwriters' Laboratories Inc.
- Provide each panelboard with a factory engraved nameplate which shall identify the panelboard name.
- Bussing: All panel board bussing shall be copper.
- Remote controlled circuit breaker panels shall be Square 'D' Power-Link or equal.

16E.2 LIGHTING AND APPLIANCE PANELBOARDS

- Panelboards shall have the number and size of bolted-in circuit breakers as scheduled. Panels shall be Square D, type NGOD with bolt-on breakers as required for the interrupting ratings schedules or equivalent.

END OF SECTION

SECTION 16F - LIGHTING FIXTURES

16F.1 MATERIALS

- Provide and install a lighting fixture on each and every lighting outlet shown. Furnish fixtures in accordance with the designations on the drawings and as specified herein. All fixtures specified or scheduled for fixtures shall be provided, even if the catalog number given in the specifications or schedule lacks the required numerals, prefixes or suffixes corresponding to the features called for.
- All lighting fixtures shall bear the label Underwriters' Laboratories Inc.
- Provide electronic ballasts and T-8 lamps for all fluorescent fixtures where possible.
- Fixtures shall comply with ANSI 132.1.
- All fixtures interior and exterior must be submitted to engineer for approval.

16F.2 BALLASTS

- Ballasts shall have a minimum power factor of 85% and total harmonic distortion not to exceed 10%.
- All rapid start ballasts installed in an interior space shall be electronic. The ballast shall be high power factor, U.L. labeled, with automatic reset features and "A" sound rating. Ballasts mounted outside shall be rated for full operation at -20 Degrees F.

16F.3 LAMPS

- Fully equip each fixture with a full set of new lamps at the completion and acceptance of the work. Lamps shall be General Electric, Philips or Osram/Sylvania Incandescent lamps shall be inside frosted unless specified or recommended otherwise by the fixture manufacturer. Fluorescent lamps shall be 3500 degree K lamps for interior fixtures.

END OF SECTION

SECTION 16G - DISCONNECT SWITCHES

- Disconnecting switches shall be manufactured by Square D. Switches shall be heavy duty, enclosed type, rated for 250 volts. Switches used as service switches shall bear a U.L. service entrance label and nameplate shall so indicate.

END OF SECTION

SECTION 16H - EXECUTION

16H.1 INSTALLATION OF BUILDING RACEWAYS

- All wiring of every description shall be run in conduit.
- Types: Above grade interior conduits shall be electrical metallic tubing. Conduits installed below grade in slabs or buried in earth shall be PVC or rigid galvanized steel. EMT is not allowed.
- Connections: Use lengths of flexible metal conduit, not less than 12" long at final connections to all motors, controls and other devices subject to movement because of vibration or mechanical adjustment.

16H.2 CONDUIT SUPPORTS

- Support Spacing: Use minimum spacing as directed by National Electrical Code, but space hangers more closely where required by conditions.
- Individual Conduits: Support conduits running vertically or horizontally with galvanized malleable iron one-hole clamps. Carry individual supported horizontally conduits 1-1/4" and larger on Kindorf No. 150 or Steel City No. C-149 hangers. Use no perforated strap iron as hanger material. Where conduits smaller than 1-1/4" are installed above non-removable type ceilings, they may be supported on ceiling runner channels.
- Multiple Conduits: Where multiple raceways are run horizontally at the same elevations, they may be supported on trapezes formed of sections of Unistrut angle iron or channels suspended on rods or pipes. Size trapeze members including the suspension rods for the number size and loaded weight of the conduits they are to support. Space them as required for the smallest conduit supported.

16H.3 INSTALLATION OF OUTLET BOXES

- Usage: provide at each outlet or device of whatever character a metal outlet box in which conduits shall terminate.
- Boxes Recessed in Construction: Cast metal boxes.
- For Wall Switches, Receptacles and Communications Use: Use 4"x4" size with proper square cornered tile wall cover, plaster cover, or finishing plate, except where construction will not permit or the device requires a larger box.
- Boxes for Exposed Work: Cast metal boxes.
- Boxes for Outdoors: Cast metal boxes with gasketed covers.

16H.4 WIRE PULLING

- Wire Pulling: Provide suitable installation equipment for pulling conductors into raceways or conduits. Use ropes of polyethylene, nylon or other suitable material to pull in conductors. Attach pulling lines to conductors by means of woven basket grips or by pulling eyes attached directly to conductors. All conductors to be installed in a single conduit shall be pulled in together.
- Cable Lubricants: All cable lubricants shall be UL listed, and shall be certified by their manufacturer to be non-injurious to the insulation on which they are used.

16H.5 INSTALLATION OF BUILDING WIRE (600 VOLTS AND UNDER)

- Feeders: Run all feeders their entire length in continuous pieces without joints or splices, insofar as practical.
- Sizes: No wire shall be smaller than No. 12 except for signal or control circuits, and except for individual lighting fixture taps as permitted by the National.
- Identifying Tags: Non-ferrous, stamped to clearly identify each circuit. Securely fasten tags to all cables, feeders and power circuits in pull boxes, lighting, power and distribution panelboards, etc.
- Bundling Conductors: Bundle all conductors in panelboards, cabinets and the like, using marlin twine lacing or nylon straps made for the purpose. Bundle conductors larger than No. 10 in individual circuits. Bundle smaller conductors in larger groups.

16H.6 MOUNTING HEIGHTS

- Where mounting heights are indicated on the drawings, the device shall be installed with the centerline of the device at the indicated height.
 - In general, devices which are shown to be installed at counters or other millwork, unless noted. Wall switches shall be installed on the strike side of the door as finally hung.
 - Unless otherwise noted on the drawings, or directed by the Owner, install devices at the following heights:
- | DEVICE | MOUNTING HEIGHT |
|-------------------------|-----------------|
| Wall Switch | 48" |
| Receptacle | 48" |
| Telephone & Data Outlet | 48" |
- Observe all ADA requirements when mounting devices in areas designated as "handicap" or "accessible".

END OF SECTION

SECTION 16I - SERVICE CONNECTIONS:

- Verify power company service requirements for this project prior to bid.
- Contractor shall pay all power company charges for the underground electrical service. Secure price from local utility company prior to bid.

END OF SECTION

SECTION 16J - LOAD BALANCING:

- The contractor shall carefully balance this electrical loads between the various phases. When the facilities are under use at their heaviest loading periods, test shall be run on the "hot" conductors in each feeder to a panel and any unbalance shall be corrected to a point that no conductor load shall be more than 10% high or low (maximum unbalance of 20%) in amperes.

END OF SECTION

SECTION 16K - SERVICE AND EQUIPMENT GROUNDING:

- Provide adequate and permanent service neutral and equipment grounding in accordance with the National Electrical Code, and subject to the following additional requirements.
- Connect the service ground and equipment to a common point within the metallic enclosure containing the main service disconnecting means. From the common point of connection of the service ground and equipment ground, run in conduit a combined service and equipment grounding conductor without joint of splice to the main water service pipe and connect it thereto with an approved bonded pressure clamp. Clean all contact surfaces thoroughly before connection, to assure good metal to metal contact. Bond the conduit to the grounding conductor at each end. Supplement the water pipe ground with and additional electrode which shall be 10' long by 3/4 inch diameter copper clad steel ground rod. Attach the electrode to the water pipe and to the service/equipment grounding conductor.
- Size grounding conductors in accordance with National Electrical Code Section 250.
- The building structure steel frame shall be grounded to the building service ground electrode, using the conductor size specified in National Electrical Code Section 250.

END OF SECTION

SECTION 16L - GROUNDING RACEWAYS:

- Assure the electrical continuity at all metallic raceway systems, pulling up all conduits and/or locknuts wrench tight. Where the flexible metallic conduit is employed, provide a green-insulated grounding jumper installed in the flexible conduit. Install a separate green-insulated conductor in each non-metallic conduit.
- Provide grounding bushings on all service raceways terminating within panelboards, cabinets, and all other enclosures. Provide grounding conductors from such bushings to the frame of the enclosure and to the ground bus or equipment grounding strap. Size grounding conductors in accordance to NEC Section 250.

END OF SECTION

SECTION 16M - EQUIPMENT GROUNDING CONDUCTORS:

- Provide a separate green-insulated grounding conductor, with insulation of the same rating as phase conductors, for each feeder and for each branch circuit installed. Install the grounding conductor in the same raceway with the related phase and neutral conductors, and connect the grounding conductor to the pull boxes at intervals of 100 feet or less, to each raceway. Connect all grounding conductors to bare grounding bars in panelboards, and to the ground buses in service equipment to the end that there will be an uninterrupted grounding circuit from the point of a ground fault back to the point of connection of the equipment ground and system neutral. Size all these grounding conductors per NEC Section 250.

END OF SECTION

LAMESA B&G CLUB LAKE PARK
 400 N. 9th STREET
 LAMESA, TX 79331

CONSTRUCTION DOCUMENTS

Issue Date **2.6.2017**

Revisions

Project Number: **1514**

Drawn By: **CBN**

Checked By: **MDB**

Scale: **1"=30'-0"**

Sheet Title
ELECTRICAL SPECS

Sheet Number

E3

City Council Agenda

City of Lamesa, Texas

DATE OF MEETING: MAY 2, 2017

AGENDA ITEM: 9

SUBJECT: DISCUSSION / ACTION FOR PLANNING CITY'S 100TH ANNIVERSARY (CITY INCORPORATED - MAY 25, 1917) AND ANY DESIRED RELATED EVENT

PROCEEDING: Action

SUBMITTED BY: City Staff

SUMMARY STATEMENT

City Council to discuss and consider approving event planning desired for the City's 100th Anniversary (City Incorporated – May 25, 1917) and give staff direction.

COUNCIL ACTION

DISCUSSION _____

Motion by Council Member _____ to _____. Motion seconded by Council Member _____ and upon being put to a vote the motion _____.

VOTING: "AYE" _____ "NAY" _____ "ABSTAIN" _____

CITY MANAGER'S MEMORANDUM

Recommend approval.

City Council Agenda

City of Lamesa, Texas

DATE OF MEETING: MAY 2, 2017

AGENDA ITEM: 10

SUBJECT: DESIGNATE REGULARLY SCHEDULED MEETINGS
PROCEEDING: Action
SUBMITTED BY: City Staff

SUMMARY STATEMENT

City Council to take action to designate the regularly scheduled City Council meetings for May 2017.

- **May 9, 2017 (Cancelled – Moved to May 11, 2017)**
- **May 11, 2017 (Canvass Elections)**
- **May 16, 2017 (Regularly Scheduled Meeting)**

COUNCIL ACTION

DISCUSSION _____

Motion by Council Member _____ to designate the regularly scheduled City Council meetings for May 2017, as listed above. Motion seconded by Council Member _____ and upon being put to a vote the motion _____.

VOTING: "AYE" _____ "NAY" _____ "ABSTAIN" _____

CITY MANAGER'S MEMORANDUM

Recommend approval.

City Council Agenda

City of Lamesa, Texas

DATE OF MEETING: MAY 2, 2017

AGENDA ITEM: 11

SUBJECT: EXECUTIVE SESSION
PROCEEDING: Action Item
SUBMITTED BY: City Staff

SUMMARY STATEMENT

Council to consider convening into closed executive session regarding Consultation with Attorney regarding contemplated litigation under the provisions of the Texas Open Meetings Act (Chapter 551.071, Texas Government Code). No action will be taken in closed session. The Council will reconvene into open session after the completion of the executive session.

C. TMLIRP Insurance Claim – Fire Truck Settlement (*City Manager & City Attorney*)

D. May 6, 2017 City election regarding qualification of candidate for office (*City Attorney*)

COUNCIL ACTION

DISCUSSION: _____

Motion by Council Member _____ to convene in closed executive session in accordance with the provisions of the Texas Open Meetings regarding Consultation with Attorney regarding contemplated litigation. Motion seconded by Council Member _____ and upon being put to a vote the motion _____.

VOTING: "AYE" _____ "NAY" _____ "ABSTAIN" _____

CITY MANAGER'S MEMORANDUM

Recommend approval.

**CERTIFIED AGENDA: EXECUTIVE SESSION OF
THE CITY COUNCIL OF THE CITY OF LAMESA, TEXAS**

On this May 2, 2017, at a regularly scheduled meeting of the City Council of the City of Lamesa, Texas the Council adjourned into a closed executive session; notice of said session having been given by a notice posted at the City Hall, 601 South First Street at least seventy-two hours in advance.

A. ANNOUNCEMENT BY PRESIDING OFFICER:

"The City Council will begin its executive session on May 2, 2017, at _____
P.M."

The subject matter of each executive session deliberation is as follows:

Council to consider convening into closed executive session regarding Consultation with Attorney regarding contemplated litigation under the provisions of the Texas Open Meetings Act (Chapter 551.071, Texas Government Code). No action will be taken in closed session. The Council will reconvene into open session after the completion of the executive session.

- A. TMLIRP Insurance Claim – Fire Truck Settlement (*City Manager & City Attorney*)
- B. May 6, 2017 City election regarding qualification of candidate for office (*City Attorney*)

B. ANNOUNCEMENT BY PRESIDING OFFICER:

"The City Council has completed its executive session on May 2, 2017, at
_____ P.M."

C. CERTIFICATION:

I hereby certify that this agenda of an executive session of the City Council of the City of Lamesa, Texas is a true and correct record of the proceedings pursuant Texas Open Meetings Act (Chapter 551, Government Code).

WITNESS my hand this May 2, 2017.

Josh Stevens, Mayor

City Council Agenda

City of Lamesa, Texas

DATE OF MEETING: MAY 2, 2017

AGENDA ITEM: 12

ADJOURNMENT: Announcement by the Mayor - "The next regularly scheduled meeting of the City Council of the City of Lamesa will be **May 11th, 2017** at 5:30 P.M."

PLEASE NOTE: DESIGNATED REGULARLY SCHEDULED MEETINGS:

- ***May 11, 2017***
- ***May 16, 2017***