

AGENDA
BOARD OF CITY COMMISSIONERS
March 21, 2022 AT 6:00 P.M.
COMMISSION CHAMBERS AT CITY HALL
16 WEST 9TH STREET
SHAWNEE, OKLAHOMA

Official action can only be taken on items which appear on the agenda. The public body may adopt, approve, ratify, deny, defer, recommend, amend, strike, or continue any agenda item. When more information is needed to act on an item, the public body may refer the matter to Staff or back to Committee or the recommending body. Under certain circumstances, items are deferred to a future date or stricken from the agenda entirely.

CALL TO ORDER

DECLARATION OF A QUORUM

INVOCATION

FLAG SALUTE

1. Presentation of Certificate of Recognition of Shawnee High School Swim Team's State Championship win.
2. Presentation of Certificate of Recognition of 2022 "If I Were Mayor" Essay 2nd Place Winner.
3. Citizens Participation
(A three minute limit per person)
(A twelve minute limit per topic)
4. Consider approval of Consent Agenda:
 - a. Acknowledge staff will proceed in the instant meeting with the opening and consideration of bids as set forth in Agenda Item No. 12.
 - b. Minutes from the March 7, 2022 regular meeting.
 - c. Acknowledge the following minutes and reports:
 - Planning Commission Minutes from the February 2, 2022 regular meeting
 - License Payment Report for February 2022
 - Project Payment Report for February 2022
 - d. Acceptance of an electric utility easement from OG&E (Oklahoma Gas and Electric Company) to the City of Shawnee/Shawnee Urban Renewal Authority.

e. Mayor's Appointments:

Community Service Contract Review Committee

Monty Porter 1st Partial Term Expires: January 1, 2024

Replaces Erica Bass – Resigned

5. Presentation by Animal Control to present the Pet of the Week.
6. Consideration of an amended contract with Meshek and Associates, LLC for the Right-of-Way Acquisition for the MacArthur Street Sidewalk Project.
7. Public hearing and consideration of an ordinance to rezone property located at 16712 Magnino Road from A-1 (Rural Agricultural District) to A-1 (Rural Agricultural District) with a Conditional Use Permit (CUP) for a guest cottage. Case No. CUP01-22, Applicant: Lora Davis and James Hunter.
8. Public hearing and consideration of an ordinance to rezone property located at 603 West Independence Street from C-3 (Highway Commercial District) to C-3 (Highway Commercial District) with a Conditional Use Permit (CUP) for a crematorium. Case No. CUP02-22, Applicant: Todd Tramel, AE Funeral Services, LLC.
9. Public hearing and consideration of an ordinance to rezone property located near East 45th Street and Sydney Drive from R-1 (Single Family Residential District) to R-3 (Multifamily Residential District). Case No. RZ04-22, Applicant: Brenda Wyatt.
10. Consideration of an ordinance of the City of Shawnee, Oklahoma amending portions of Chapter 16 (Lakes), Article II (Twin Lakes) of the Shawnee Municipal Code; providing for severability, codification, and repealer; and declaring an emergency. *(Deferred from the March 7, 2022 City Commission meeting.)*
11. Consideration of a budget amendment for Fund 106 Hotel/Motel Surcharge Fund to appropriate fund balance for payment on Pottawatomie County Historical Society Agreement – Third Year Annual Fee.
12. Consider Bids:
 - a. Kids Space Park Improvements Project (Open)
13. Acknowledge monthly Sales Tax and Budget Reports.
14. New Business

(Any matter not known or which could not have been reasonably foreseen prior to the posting of the agenda)
15. Commissioners Comments

16. Discussion, consideration, and possible action to enter into executive session for discussion related to the employment of Lowrey Robert Holland in accordance with 25 O.S. § 307(B)(1) "Discussing the employment, hiring, appointment, promotion, demotion, disciplining, or resignation of any individual salaried public officer or employee".
17. Consider matters discussed in executive session for discussion related to the employment of Lowrey Robert Holland in accordance with 25 O.S. § 307(B)(1) "Discussing the employment, hiring, appointment, promotion, demotion, disciplining, or resignation of any individual salaried public officer or employee".
18. Adjournment

Respectfully submitted,

Lisa Lasyone, CMC, City Clerk

The City of Shawnee encourages participation from its citizens in public meetings. If participation is not possible due to a disability, notify the City Clerk, in writing, at least forty-eight hours prior to the scheduled meeting and necessary accommodations will be made. (ADA 28 CFR/36)

Regular Board of Commissioners

4. b.

Meeting Date: 03/21/2022

Minutes

Submitted By: Kacie Eck, City Clerk

Department: City Clerk

Information

Title of Item for Agenda

Minutes from the March 7, 2022 regular meeting.

Attachments

Minutes

BOARD OF CITY COMMISSIONERS PROCEEDINGS

MARCH 7, 2022 AT 6:00 P.M.

The Board of City Commissioners of the City of Shawnee, County of Pottawatomie, State of Oklahoma, met in Regular Session in the Commission Chambers at City Hall, 16 West 9th Street, Shawnee, Oklahoma on, Monday, March 7, 2022 at 6:00 p.m., pursuant to notice duly posted as prescribed by law at 6:42 p.m. on March 3, 2022. Mayor Bolt presided and called the meeting to order. Upon roll call, the following members were in attendance.

Ed Bolt
Mayor

Daniel Matthews
Commissioner Ward 1

Cami Engles
Commissioner Ward 2

Travis Flood
Commissioner Ward 3

Darren Rutherford
Commissioner Ward 4-Vice Mayor

Mark Sehorn
Commissioner Ward 5

Ben Salter
Commissioner Ward 6

ABSENT: None

INVOCATION

Commissioner Matthews

FLAG SALUTE

AGENDA ITEM NO. 1:

Presentation of Certificate of Recognition for the City of Shawnee recognized as No. 1 in Women-owned Businesses.

Commissioner Engles presented Rachael Melot with a Certificate of Recognition for the City of Shawnee's recognition as No. 1 in the State of Oklahoma for Women-owned Businesses.

AGENDA ITEM NO. 2:

Citizens Participation
(A three-minute limit per person)
(A twelve-minute limit per topic)

Ms. Melody Samonte thanked Mayor Bolt, Commissioner Matthews, and Erica Genty for their work with the Warming Shelter during recent winter storms.

Ms. Amy Camarata spoke regarding the Lake Advisory Committee recommendations; specifically, regarding patrol/code enforcement.

Mr. Steven Muzny spoke regarding concerns with the new homes built in the Bentley Oaks Addition.

Mr. Rob Morris spoke regarding the Shawnee Hospital Authority, Investigative Audit, Traffic Commission, and the International Finals Youth Rodeo.

AGENDA ITEM NO. 3:

Consider approval of Consent Agenda:

- a. Minutes from the February 22, 2022 regular meeting.
- b. Approve renewal of an Agreement for Beautification Services for the City of Shawnee with South Central Industries, Inc. for trash removal and janitorial services.
- c. Acknowledge the resignation of Charles Skillings from the Shawnee Hospital Authority.
- d. Acknowledge the resignation of Rt. Rev. Lawrence Stasyszen, O.S.B. from the Shawnee Hospital Authority.
- e. Mayor's Appointments:

Shawnee Hospital Authority

Tina Hanna 1st Partial Term Expires: September 30, 2023
Replaces Mike Adcock – Resigned

Angi Mohr 1st Partial Term Expires: September 30, 2023
Replaces Michelle Briggs – Resigned

Josh Trimble 1st Partial Term Expires: September 30, 2025
Replaces Rt. Rev. Lawrence Stasyszen, O.S.B. – Resigned

A motion was made by Vice Mayor Rutherford, seconded by Commissioner Sehorn, to approve Consent Agenda Item Nos. 3(a-e), less item 3(a). Motion carried 7-0.

A motion was made by Vice Mayor Rutherford, seconded by Commissioner Matthews, to approve Consent Agenda Item No. 3(a). Motion carried 5-0-2.

AGENDA ITEM NO. 4: Presentation by Animal Control to present the Pet of the Week.

Officer Cole advised that the Animal Shelter currently has twenty-two dogs and three cats.

AGENDA ITEM NO. 5: Presentation of the Investigative Audit Report of the City of Shawnee.

City Manager Andrea Weckmueller-Behringer introduced Ms. Melissa Capps, State Auditor. Ms. Capps stated that the investigative audit was requested by District Attorney Allan Grubb. The audit covered July 1, 2013 through June 30, 2020. Ms. Capps detailed the two objectives for the audit and noted there were two compliance issues found. Recommendations were made for the two issues. The audit report is available at sai.ok.gov.

AGENDA ITEM NO. 6:

Consideration of an ordinance amending portions of Chapter 2 (Administration), Article 3 (City Manager), related to purchases of supplies and equipment, and providing for severability, codification, and repealer; and providing for emergency.

Assistant Finance Director Jacob Bussell explained the proposed ordinance is to conform with State Law.

A motion was made by Commissioner Sehorn, seconded by Commissioner Engles, to approve an ordinance amending portions of Chapter 2 (Administration), Article 3 (City Manager), related to purchases of supplies and equipment, and providing for severability, codification, and repealer.

Ordinance No. 2742NS was introduced.

AN ORDINANCE AMENDING PORTIONS OF CHAPTER 2 (ADMINISTRATION), ARTICLE 3 (CITY MANAGER), RELATED TO PURCHASES OF SUPPLIES AND EQUIPMENT, AND PROVIDING FOR SEVERABILITY, CODIFICATION, AND REPEALER; AND PROVIDING FOR EMERGENCY.

Motion carried 7-0.

AYE: Sehorn, Engles, Flood, Bolt, Rutherford, Salter, Matthews

NAY: None

Ordinance No. 2742NS was adopted by the City Commission.

A motion was made by Vice Mayor Rutherford, seconded by Commissioner Matthews, to approve the emergency clause relating to Ordinance No. 2742NS. Motion carried 7-0.

AYE: Rutherford Matthews, Sehorn, Salter, Engles, Flood, Bolt

NAY: None

AGENDA ITEM NO. 7:

Consideration of an ordinance amending portions of Chapter 2 (Administration), Article 5 (Finance), related to purchases of goods, services, and capital, and providing for severability, codification, and repealer; and providing for emergency.

Assistant Finance Director Jacob Bussell explained the proposed ordinance will increase the amount allowed for blanket purchase orders, which will make it easier for Staff to purchase recurring supplies.

A motion was made by Commissioner Matthews, seconded by Vice Mayor Rutherford, to approve an ordinance amending portions of Chapter 2 (Administration), Article 5 (Finance), related to purchases of goods, services, and capital, and providing for severability, codification, and repealer.

Ordinance No. 2743NS was introduced.

AN ORDINANCE AMENDING PORTIONS OF CHAPTER 2 (ADMINISTRATION), ARTICLE 5 (FINANCE), RELATED TO PURCHASES OF GOODS, SERVICES AND CAPITAL, AND PROVIDING FOR SEVERABILITY, CODIFICATION, AND REPEALER; AND PROVIDING FOR EMERGENCY.

Motion carried 7-0.

AYE: Matthews, Rutherford, Sehorn, Salter, Engles, Flood, Bolt
NAY: None

Ordinance No. 2743NS was adopted by the City Commission.

A motion was made by Commissioner Matthews, seconded by Vice Mayor Rutherford, to approve the emergency clause relating to Ordinance No. 2743NS. Motion carried 7-0.

AYE: Matthews, Rutherford, Sehorn, Salter, Engles, Flood, Bolt
NAY: None

AGENDA ITEM NO. 8:

Consideration of a resolution of the governing body of the City of Shawnee setting forth budgeting and financial planning policies.

Assistant Finance Director Jacob Bussell explained the proposed resolution is to update the City's financial planning policies.

A motion was made by Commissioner Sehorn, seconded by Commissioner Flood, to approve a resolution of the governing body of the City of Shawnee setting forth budgeting and financial planning policies.

Resolution No. 6652 was introduced.

A RESOLUTION OF THE GOVERNING BODY OF THE CITY OF SHAWNEE SETTING FORTH BUDGETING AND FINANCIAL PLANNING POLICIES.

Motion carried 7-0.

AYE: Sehorn, Flood, Bolt, Rutherford, Salter, Matthews, Engles

NAY: None

AGENDA ITEM NO. 9:

Consideration of a resolution declaring the intent of the City of Shawnee to allow the Oklahoma Tax Commission to serve as the collection agent of the City of Shawnee occupancy surcharge.

Assistant Finance Director Jacob Bussell explained the proposed resolution will allow the Oklahoma Tax Commission to collect occupancy surcharge revenue. This will save Staff time and conform with revenue compliance.

A motion was made by Commissioner Sehorn, seconded by Commissioner Engles, to approve a resolution declaring the intent of the City of Shawnee to allow the Oklahoma Tax Commission to serve as the collection agent of the City of Shawnee occupancy surcharge.

Resolution No. 6653 was introduced.

A RESOLUTION DECLARING THE INTENT OF THE CITY OF SHAWNEE TO ALLOW THE OKLAHOMA TAX COMMISSION TO SERVE AS THE COLLECTION AGENT OF THE CITY OF SHAWNEE OCCUPANCY SURCHARGE.

Motion carried 7-0.

AYE: Sehorn, Engles, Flood, Bolt, Rutherford, Salter, Matthews

NAY: None

AGENDA ITEM NO. 10:

Consideration of an ordinance amending portions of Chapter 25 related to the City of Shawnee occupancy surcharge and providing for severability, codification, and repealer; and providing for emergency.

Assistant Finance Director Jacob Bussell explained the proposed ordinance is required for the City of Shawnee to pursue an agreement with the Oklahoma Tax Commission to allow for collection of occupancy surcharge.

A motion was made by Commissioner Engles, seconded by Commissioner Sehorn, to approve an ordinance amending portions of Chapter 25 related to the City of Shawnee occupancy surcharge and providing for severability, codification, and repealer.

Ordinance No. 2744NS was introduced.

AN ORDINANCE AMENDING PORTIONS OF CHAPTER 25 RELATED TO THE CITY OF SHAWNEE OCCUPANCY SURCHARGE AND PROVIDING FOR SEVERABILITY, CODIFICATION, AND REPEALER; AND PROVIDING FOR EMERGENCY.

Motion carried 7-0.

AYE: Engles, Sehorn, Salter, Matthews, Flood, Bolt, Rutherford

NAY: None

Ordinance No. 2744NS was adopted by the City Commission.

A motion was made by Commissioner Matthews, seconded by Vice Mayor Rutherford, to approve the emergency clause relating to Ordinance No. 2744NS. Motion carried 7-0.

AYE: Matthews, Rutherford, Sehorn, Salter, Engles, Flood, Bolt

NAY: None

AGENDA ITEM NO. 11:

Consideration of an ordinance amending portions of Chapter 7 (Buildings and Building Regulations) of the Code of Ordinances of the City of Shawnee; providing for severability, codification and repealer; and providing for emergency.

City Manager Andrea Weckmueller-Behringer explained the proposed ordinance is to clean up language in Chapter 7 of the City Code. This will change all reference of the Community Development Director as the enforcement officer to the City Manager or Designee.

A motion was made by Commissioner Engles, seconded by Commissioner Flood, to approve an ordinance amending portions of Chapter 7 (Buildings and Building Regulations) of the Code of Ordinances of the City of Shawnee; providing for severability, codification and repealer.

Ordinance No. 2745NS was introduced.

AN ORDINANCE AMENDING PORTIONS OF CHAPTER 7 (BUILDINGS AND BUILDING REGULATIONS) OF THE CODE OF ORDINANCES OF THE CITY OF SHAWNEE; PROVIDING FOR SEVERABILITY, CODIFICATION AND REPEALER; AND PROVIDING FOR EMERGENCY.

Motion carried 7-0.

AYE: Engles, Flood, Bolt, Rutherford, Sehorn, Salter, Matthews

NAY: None

Ordinance No. 2745NS was adopted by the City Commission.

A motion was made by Commissioner Matthews, seconded by Commissioner Sehorn, to approve the emergency clause relating to Ordinance No. 2754NS. Motion carried 7-0.

AYE: Matthews, Sehorn, Salter, Engles, Flood, Bolt, Rutherford

NAY: None

AGENDA ITEM NO. 12:

Consideration of an ordinance amending portions of Chapter 8 (Building Permits and Licenses) of the Code of Ordinances of the City of Shawnee; providing for severability, codification and repealer; and providing for emergency.

City Manager Andrea Weckmueller-Behringer explained the proposed ordinance is to clean up language in Chapter 8 of the City Code. This will change all reference of the Community Development Director and City Clerk as responsible parties, to the City Manager or Designee.

A motion was made by Commissioner Sehorn, seconded by Vice Mayor Rutherford, to approve an ordinance amending portions of Chapter 8 (Building Permits and Licenses) of the Code of Ordinances of the City of Shawnee; providing for severability, codification and repealer.

Ordinance No. 2746NS was introduced.

AN ORDINANCE AMENDING PORTIONS OF CHAPTER 8 (BUILDINGS PERMITS AND LICENSES) OF THE CODE OF ORDINANCES OF THE CITY OF SHAWNEE; PROVIDING FOR SEVERABILITY, CODIFICATION AND REPEALER; AND PROVIDING FOR EMERGENCY.

Motion carried 7-0.

AYE: Sehorn, Rutherford, Salter, Matthews, Engles, Flood, Bolt

NAY: None

Ordinance No. 2746NS was adopted by the City Commission.

A motion was made by Commissioner Matthews, seconded by Vice Mayor Rutherford, to approve the emergency clause relating to Ordinance No. 2746NS. Motion carried 7-0.

AYE: Matthews, Rutherford, Sehorn, Salter, Engles, Flood, Bolt

NAY: None

AGENDA ITEM NO. 13:

Consideration of an ordinance decommissioning the Traffic Commission, amending, or repealing portions of Chapter 19 related to the creation, terms of office, composition, meetings and officers and powers and duties of the Traffic Commission; and providing for severability, codification, and repealer; and providing for emergency.

City Manager Andrea Weckmueller-Behringer explained that available transportation and traffic data and analysis capabilities have significantly matured since the creation of the Traffic Commission in the 1980's. This information can be used as the standard to guide transportation decision-making and continued community growth.

A motion was made by Commissioner Engles, seconded by Vice Mayor Rutherford, to approve an ordinance decommissioning the Traffic Commission, amending, or repealing portions of Chapter 19 related to the creation, terms of office, composition, meetings and officers and powers and duties of the Traffic Commission; and providing for severability, codification, and repealer.

Ordinance No. 2747NS was introduced.

AN ORDINANCE DECOMMISSIONING THE TRAFFIC COMMISSION, AMENDING OR REPEALING PORTIONS OF CHAPTER 19 RELATED TO THE CREATION, TERMS OF OFFICE, COMPOSITION, MEETINGS AND OFFICERS AND POWERS AND DUTIES OF THE TRAFFIC COMMISSION; AND PROVIDING FOR SEVERABILITY, CODIFICATION, AND REPEALER; AND PROVIDING FOR EMERGENCY.

Motion carried 6-1.

AYE: Engles, Rutherford, Sehorn, Salter, Flood, Bolt

NAY: Matthews

Ordinance No. 2747NS was adopted by the City Commission.

A motion was made by Vice Mayor Rutherford, seconded by Mayor Bolt, to approve the emergency clause relating to Ordinance No. 2747NS. Motion carried 7-0.

AYE: Rutherford, Bolt, Sehorn, Salter, Matthews, Engles, Flood

NAY: None

AGENDA ITEM NO. 14:

Consideration of an ordinance combining the Shawnee Community Beautification Committee and the Shawnee Parks and Recreation Committee into the Shawnee Beautification, Parks, and Recreation Committee, amending portions of Chapter 21 (Parks and Recreation) and Chapter 27 (Vegetation) relating to the composition, appointment and terms of the members and providing for severability, codification, and repealer; and providing an effective date.

City Manager Andrea Weckmueller-Behringer explained the proposed ordinance will decommission the Shawnee Parks and Recreation Committee and the Shawnee Community Beautification Committee and combine both committees to form the Shawnee Beautification, Parks, and Recreation Committee.

A motion was made by Commissioner Flood, seconded by Commissioner Engles, to approve an ordinance combining the Shawnee Community Beautification Committee and the Shawnee Parks and Recreation Committee into

the Shawnee Beautification, Parks, and Recreation Committee, amending portions of Chapter 21 (Parks and Recreation) and Chapter 27 (Vegetation) relating to the composition, appointment and terms of the members and providing for severability, codification, and repealer; and providing an effective date.

Ordinance No. 2748NS was introduced.

AN ORDINANCE COMBINING THE SHAWNEE COMMUNITY BEAUTIFICATION COMMITTEE AND THE SHAWNEE PARKS AND RECREATION COMMITTEE INTO THE SHAWNEE BEAUTIFICATION, PARKS, AND RECREATION COMMITTEE, AMENDING PORTIONS OF CHAPTER 21 AND CHAPTER 27 RELATED TO THE COMPOSITION, APPOINTMENT AND TERMS OF THE MEMBERS AND PROVIDING FOR SEVERABILITY, CODIFICATION, AND REPEALER; AND PROVIDING AN EFFECTIVE DATE.

Motion carried 7-0.

AYE: Flood, Engles, Bolt, Rutherford, Sehorn, Salter, Matthews

NAY: None

Ordinance No. 2748NS was adopted by the City Commission.

AGENDA ITEM NO. 15:

Consideration of an ordinance of the City of Shawnee, Oklahoma amending portions of Chapter 16 (Lakes), Article II (Twin Lakes) of the Shawnee Municipal Code; providing for severability, codification, and repealer; and declaring an emergency. *(Deferred from the February 22, 2022 City Commission meeting.)*

City Attorney Joe Vorndran explained this item was deferred from the previous City Commission meeting. Staff requests the proposed ordinance be deferred again to the March 21, 2022 City Commission meeting to allow staff additional time to review the Oklahoma State Statutes for clarity.

A motion was made by Commissioner Sehorn, seconded by Commissioner Matthews, to defer this item to the March 21, 2022 City Commission meeting. Motion carried 7-0.

AYE: Sehorn, Matthews, Engles, Flood, Bolt, Rutherford, Salter

NAY: None

AGENDA ITEM NO. 16:

Consideration of a resolution updating the City Fee Schedule by: (1) setting the water rates for residential and commercial use, both inside and outside the city limits, pursuant to Subsections (a) and (b), Section 26-26, Article II, Chapter 26 of the City Code; and (2) setting the sanitary sewer rates for residential and commercial use, both inside and outside the city limits, pursuant to Subsections (b) and (c), Section 26-27, Article II, Chapter 26 of the Code of the City of Shawnee; and amend residential deposit rates in Section 26-132(a), Article III, Division 2, Subdivision II of Chapter 26 of the City Code.

City Clerk Lisa Lasyone advised the City may conduct an annual review of water and sewer rates for possible adjustments per the Consumer Price Index (CPI). The last increase was in 2020. Staff is requesting to increase water and sewer rates three percent (3%) to align with the United States Bureau of Labor Statistics CPI as of December 31, 2021.

Ms. Lasyone also advised that Staff is requesting to increase the residential deposit amount from Seventy-Five Dollars (\$75.00) to One Hundred Dollars (\$100.00). This increase is approximately one and one-half (1½) times the minimum bill.

After discussion among the Commission, a suggestion to increase water and sewer rates and delay the residential deposit amount was agreed upon.

A motion was made by Commission Matthews, seconded by Commissioner Engles, to approve the resolution as amended by interlineation striking Section 5 and causing renumbering; updating the City Fee Schedule by: (1) setting the water rates for residential and commercial use, both inside and outside the city limits, pursuant to Subsections (a) and (b), Section 26-26, Article II, Chapter 26 of the City Code; and (2) setting the sanitary sewer rates for residential and commercial use, both inside and outside the city limits, pursuant to Subsections (b) and (c), Section 26-27, Article II, Chapter 26 of the Code of the City of Shawnee.

Resolution No. 6654 was introduced.

A RESOLUTION UPDATING THE CITY FEE SCHEDULE BY: (1) SETTING THE WATER RATES FOR RESIDENTIAL AND COMMERCIAL USE, BOTH INSIDE AND OUTSIDE THE CITY

LIMITS, PURSUANT TO SUBSECTIONS (a) AND (b), SECTION 26-26, ARTICLE II, CHAPTER 26 OF THE CITY CODE; AND (2) SETTING THE SANITARY SEWER RATES FOR RESIDENTIAL AND COMMERCIAL USE, BOTH INSIDE AND OUTSIDE THE CITY LIMITS, PURSUANT TO SUB-SECTIONS (b) AND (c), SECTION 26-27, ARTICLE II, CHAPTER 26 OF THE CODE OF THE CITY OF SHAWNEE.

Motion carried 7-0.

AYE: Matthews, Engles, Flood, Bolt, Rutherford, Sehorn, Salter

NAY: None

AGENDA ITEM NO. 17:

Consideration of a resolution updating the City Fee Schedule by setting the monthly rates and fees for solid waste services pursuant to Subsections (a), Section 23-38, Article II, Chapter 23 of the City Code; and providing for the re-adoption of the City Fee Schedule in whole.

City Clerk Lisa Lasyone stated the City of Shawnee has a contract with Central Disposal for solid waste collection, recycling, and disposal. The contract includes a provision that allows Central Disposal to an annual increase based on the Consumer Price Index (CPI). The City of Shawnee received a letter from Central Disposal requesting an increase based on the CPI rate of three and one-half percent (3.5%).

Ms. Lasyone also advised that per the current contract with Central Disposal, a hazardous waste collection service is provided for residential customers once a year, at a monthly rate of Seventy-Five Cents (.75¢). This fee was not included in the added to the residential customer's monthly bills at the time. Staff is requesting to incorporate a fee of One Dollar (\$1.00) for this hazardous waste collection service, to monthly residential bills.

A motion was made by Commissioner Sehorn, seconded by Commissioner Matthews, to approve a resolution updating the City Fee Schedule by setting the monthly rates and fees for solid waste services pursuant to Subsections (a), Section 23-38, Article II, Chapter 23 of the City Code; and providing for the re-adoption of the City Fee Schedule in whole.

Resolution No. 6655 was introduced.

A RESOLUTION UPDATING THE CITY FEE SCHEDULE BY SETTING THE MONTHLY RATES AND FEES FOR SOLID WASTE SERVICES PURSUANT TO SUBSECTIONS (a), SECTION 23-38,

ARTICLE II, CHAPTER 23 OF THE CITY CODE; AND PROVIDING FOR THE RE-ADOPTION OF THE CITY FEE SCHEDULE IN WHOLE.

Motion carried 7-0.

AYE: Sehorn, Matthews, Engles, Flood, Bolt, Rutherford, Salter

NAY: None

AGENDA ITEM NO. 18:

Consideration of a resolution calling and providing for the holding of nonpartisan general and general runoff elections in the City of Shawnee, Oklahoma for the purpose of nominating and electing candidates for offices of City Commissioner of the First Ward, City Commissioner of the Fifth Ward, City Commissioner of the Sixth Ward, and the unexpired term of the office of City Commissioner of the Second Ward; establishing a filing period and qualifications for such offices; designating the manner of electing the various city offices named herein; providing for said elections to be conducted by the Pottawatomie County Election Board; providing for voting by absentee ballot.

City Manager Andrea Weckmueller-Behringer explained the proposed resolution is requesting a general election and runoff election be held for the purposes of electing City Commission members. This election will be for offices of City Commissioner of the First Ward, City Commissioner of the Fifth Ward, City Commissioner of the Sixth Ward, and the unexpired term of the office of City Commissioner of the Second Ward.

A motion was made by Commissioner Engles, seconded by Commissioner Matthews, to approve a resolution calling and providing for the holding of nonpartisan general and general runoff elections in the City of Shawnee, Oklahoma for the purpose of nominating and electing candidates for offices of City Commissioner of the First Ward, City Commissioner of the Fifth Ward, City Commissioner of the Sixth Ward, and the unexpired term of the office of City Commissioner of the Second Ward; establishing a filing period and qualifications for such offices; designating the manner of electing the various city offices named

herein; providing for said elections to be conducted by the Pottawatomie County Election Board; providing for voting by absentee ballot.

Resolution No. 6656 was introduced.

A RESOLUTION CALLING AND PROVIDING FOR THE HOLDING OF NONPARTISAN GENERAL AND GENERAL RUNOFF ELECTIONS IN THE CITY OF SHAWNEE, OKLAHOMA, FOR THE PURPOSE OF NOMINATING AND ELECTING CANDIDATES FOR THE OFFICES OF CITY COMMISSIONER OF THE FIRST WARD, CITY COMMISSIONER OF THE FIFTH WARD, CITY COMMISSIONER OF THE SIXTH WARD, AND THE UNEXPIRED TERM OF THE OFFICE OF CITY COMMISSIONER OF THE SECOND WARD; ESTABLISHING A FILING PERIOD AND QUALIFICATIONS FOR SUCH OFFICES; DESIGNATING THE MANNER OF ELECTING THE VARIOUS CITY OFFICES NAMED HEREIN; PROVIDING FOR SAID ELECTIONS TO BE CONDUCTED BY THE POTTAWATOMIE COUNTY ELECTION BOARD; PROVIDING FOR VOTING BY ABSENTEE BALLOT.

Motion carried 7-0.

AYE: Engles, Matthews, Flood, Bolt, Rutherford, Sehorn, Salter

NAY: None

AGENDA ITEM NO. 19:

Consideration of a resolution declaring it to be a matter of public necessity to acquire certain easements for the purpose of construction of the Force Main Project which will connect the North and South Water Treatment Plants, describing said easements and authorizing the City Manager and the City Attorney to acquire said easements by purchase or by way of eminent domain.

City Engineer Seth Barkhimer explained the City of Shawnee/Shawnee Municipal Authority is preparing to make improvements to two Wastewater Treatment plants. In order for this project to progress, the City must acquire several easements from private landowners. The proposed resolution will declare said project a matter of public necessity and authorize staff to pursue the necessary easements.

A motion was made by Commissioner Sehorn, seconded by Commissioner Matthews, to approve a resolution declaring it to be a matter of public necessity to acquire certain easements for the purpose of construction of the Force Main Project which will connect the North and South Water Treatment Plants, describing said

easements and authorizing the City Manager and the City Attorney to acquire said easements by purchase or by way of eminent domain.

Resolution No. 6657 was introduced.

A RESOLUTION DECLARING IT TO BE A MATTER OF PUBLIC NECESSITY TO ACQUIRE CERTAIN EASEMENTS FOR THE PURPOSE OF CONSTRUCTION OF THE FORCE MAIN PROJECT WHICH WILL CONNECT THE NORTH AND SOUTH WATER TREATMENT PLANTS, DESCRIBING SAID EASEMENTS AND AUTHORIZING THE CITY MANAGER AND THE CITY ATTORNEY TO ACQUIRE SAID EASEMENTS BY PURCHASE OR BY WAY OF EMINENT DOMAIN.

Motion carried 7-0.

AYE: Sehorn, Matthews, Engles, Flood, Bolt, Rutherford, Salter
NAY: None

AGENDA ITEM NO. 20:

Consideration of a budget amendment for Fund 001 General Fund to appropriate federal grant revenue received for the purchase of supplies.

Assistant Finance Director Jacob Bussell provided a Staff report.

A motion was made by Commissioner Sehorn, seconded by Commissioner Engles, to approve the budget amendments for Fund 001 General Fund. Motion carried 7-0.

AYE: Sehorn, Engles, Flood, Bolt, Rutherford, Salter, Mathews
NAY: None

AGENDA ITEM NO. 21:

Administrative Reports:

- a. Quarterly One-Half Cent Sales Tax Overview – Jacob Foos, Assistant City Manager

Assistant City Manager Jacob Foos provided updates on the one-half (1/2) cent sale tax.

b. ARPA Funding Update – Andrea Weckmueller-Behringer, City Manager

City Manager Andrea Weckmueller-Behringer provided an update on the ARPA funding.

AGENDA ITEM NO. 22:

New Business (Any matter not known, or which could not have been reasonably foreseen prior to the posting of the agenda.)

There was no New Business.

AGENDA ITEM NO. 23:

Commissioners Comments

Commissioner Matthews congratulated all women-owned businesses. He also spoke regarding the warming shelter, patrol at the Shawnee Twin Lakes, the audit, and the mediation between the City of Shawnee, Pottawatomie County, and the Shawnee Civic and Cultural Development Authority.

Commissioner Matthews and Commissioner Flood asked Staff to report on Mr. Muzny's concern from Citizens Participation.

Commissioner Engles thanked the volunteers who had served on the various advisory boards.

Commissioner Flood thanked Erica Genty, C3 Church, and volunteers of the warming shelter. He also thanked those that had volunteered on the Traffic Commission, Shawnee Community Beautification Committee, and the Parks and Recreation Committee.

Commissioner Flood also commented on patrol at the Shawnee Twin Lakes.

Commissioner Rutherford spoke regarding the utility rate increases.

Commissioner Sehorn spoke regarding ARPA funding and the Water Treatment Plant projects.

Commissioner Salter spoke regarding the Investigative Audit and thanked the State Auditor's Office.

Mayor Bolt spoke regarding the Investigative Audit, the warming shelter, ARPA funding, mediation with the City of Shawnee, Pottawatomie County, and

the Shawnee Civic and Cultural Development Authority, the Shawnee Hospital Authority, and Franklin School.

AGENDA ITEM NO. 24:

Adjournment

There being no further business to be considered, the meeting was adjourned by power of the Chair. 8:32 p.m.)

ED BOLT, MAYOR

ATTEST:

LISA LASYONE, CMC, CITY CLERK

Regular Board of Commissioners**4. c.**

Meeting Date: 03/21/2022

Reports & Minutes

Submitted By: Kacie Eck, City Clerk

Department: City Clerk

Information

Title of Item for Agenda

Acknowledge the following minutes and reports:

- Planning Commission Minutes from the February 2, 2022 regular meeting
- License Payment Report for February 2022
- Project Payment Report for February 2022

Attachments

Minutes

License Payment Report

Project Payment Report

REGULAR PLANNING COMMISSION MINUTES

DATE: February 2, 2022

The Planning Commission of the City of Shawnee, County of Pottawatomie, State of Oklahoma, met in person for a regular meeting on February 2, 2022, at 1:30 p.m., according to notice duly posted as prescribed by law.

Item 1. Roll Call

Chair Deem called the meeting to order at 1:32 p.m. City Planner, Rachel Clyne, called roll and stated a quorum was present.

The following Commissioners were present:

Present: Loftis-Walton, Johnson, Deem, Mew-Palmer, Reese

Absent: Walker, Rowell

Item 2. Approval of Minutes – Regular meeting

Consideration of approval of the minutes from the regular meeting of January 5, 2022. Chair Deem asked the Planning Commissioners for questions or corrections to the minutes.

Commissioner Loftis-Walton made a motion to Approve the minutes as presented, which Commissioner Reese seconded.

Motion passed 5-0-0.

Aye: Loftis-Walton, Johnson, Deem, Mew-Palmer, Reese

Nay: None

Abstain: None

Item 3. RZ02-22

Public hearing and consideration of a request to rezone property located west of 190 W Shawnee Mall Drive from CP (Planned Shopping Center District) to C-3 (Highway Commercial District).

Case No. RZ02-22, Applicant: Muhammad Khan, PE, SMC Consulting

Chairperson Deem asked for a staff report. Planner Clyne provided background information on the application request. The subject property is located west of 190 W. Shawnee Mall Drive in what is currently parking spaces of the Shawnee Mall. This application requests the subject property be rezoned from CP (Planned Shopping Center District) to C-3 (Highway Commercial District).

The area requested for rezoning is also undergoing the platting process to become Striker Equities at Shawnee Mall subdivision. The proposed plat is approximately 0.4364 acres and will be located directly west of The Garage restaurant, which is at 190 W. Shawnee Mall Drive.

Chair Deem open the public hearing. The applicant, Muhammad Khan, PE, SMC Consulting, was

present and available for questions. With no other speakers, the public hearing was closed.

Staff recommended that the Planning Commission recommend to the City Commission APPROVAL of RZ02-22 a request to rezone property located west of 190 W Shawnee Mall Drive from CP (Planned Shopping Center District) to C-3 (Highway Commercial District). It was announced the item would be heard at the February 22, 2022, City Commission meeting.

Commissioner Loftis-Walton made a motion to recommend APPROVAL of Case No. RZ02-22 to the City Commission, which Commissioner Reese seconded.

Following any discussion, the motion passed 5-0-0.

Aye: Loftis-Walton, Johnson, Deem, Mew-Palmer, Reese

Nay: None

Abstain: None

Item 4. PPL01-22 Consideration of an application for Preliminary Plat of Striker Equities at Shawnee Mall subdivision located west of 190 W. Shawnee Mall Drive.

Case No. PPL01-22, Applicant: Muhammad Khan, PE, SMC Consulting

Chairperson Deem asked for a staff report. Planner Clyne provided background information by stating the subject property is located west of 190 W. Shawnee Mall Drive. The proposed subdivision has one (1) lot and approximately 0.4364-acres.

Clyne stated that the proposed plat is located in an existing parking lot. At the request of the City Engineer, the applicant has noted that a separate instrument will be filed to ensure cross-access parking and cross-access easement on the plat.

Staff recommended that the Planning Commission recommend to the City Commission APPROVAL of PPL01-22 for the Preliminary Plat of Striker Equities at Shawnee Mall subdivision as presented. It was announced the item would be heard at the February 22, 2022, City Commission meeting.

Commissioner Johnson made a motion to recommend APPROVAL of Case No. PPL01-22 to the City Commission, which Commissioner Loftis-Walton seconded.

Following any discussion, the motion passed 5-0-0.

Aye: Loftis-Walton, Johnson, Deem, Mew-Palmer, Reese

Nay: None

Abstain: None

Item 5. FPL01-22 Consideration of an application for Final Plat of Striker Equities at Shawnee Mall subdivision located west of 190 W. Shawnee Mall
Case No. FPL01-22, Applicant: Muhammad Khan, PE, SMC Consulting

Chairperson Deem asked for a staff report. Clyne provided background information by stating the subject property is located west of 190 W. Shawnee Mall Drive. The proposed subdivision has one (1) lot and approximately 0.4364-acres.

Clyne stated that the proposed plat will be situated in an existing parking lot within the mall development. At the request of the City Engineer, the applicant has noted that a separate instrument will be filed to ensure cross-access parking and cross-access easement on the plat.

Staff recommended that the Planning Commission recommend to the City Commission APPROVAL of FPL01-22 for the Final Plat of Striker Equities at Shawnee Mall subdivision as presented. It was announced the item would be heard at the February 22, 2022, City Commission meeting.

Commissioner Loftis-Walton made a motion to recommend APPROVAL of Case No. FPL01-22 to the City Commission, which Commissioner Reese seconded. Following any discussion, the motion passed 5-0-0.

Aye: Loftis-Walton, Johnson, Deem, Mew-Palmer, Reese

Nay: None

Abstain: None

Item 5. Community Development Department Update

Community Development Director Rian Harkins updated the Commissioners on the recent activities with planning and the programs for CDBG (Community Development Block Grant), the Homeless Coordinator, and the Love Your Neighborhood.

Director Harkins stated that CDBG continued using HUD grants for residential home maintenance and working with COVID-related relief funds. He also explained that the Love Your Neighborhood program's focus was ongoing neighborhood revitalization by looking for blighted areas and coordinating groups to work together for positive change.

Director Harkins discussed the activities surrounding the annual census count for the homeless or near homeless in Shawnee. The City staff and volunteers counted 200 individuals. He explained that HUD typically considered the "on the ground count" to represent one-quarter of a community's homeless population, which suggests the actual number is closer to 800 individuals, both adults and children.

During the recent winter weather event, the City worked with C-3 Church to offer meals and a warm place to sleep. The Homeless Program Coordinator and City staff quickly organized the donations and volunteers.

Director Harkins provided information regarding the recently approved contract for zoning code

update—the Unified Development Code. He stated that staff, elected and appointed officials, stakeholders, and citizens would all participate in developing the new code. He advised the Lake Advisory Committee was making recommendations to the City Commission regarding short-term rentals, which would be incorporated into the draft documents presented to the City Commission. The goal for creating a draft for short-term rentals was 30 days.

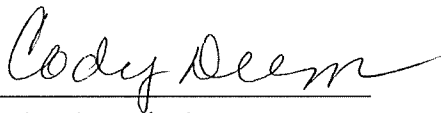
The last topic Director Harkin discussed was the Santa Fe Depot. The Planning division had recently been tasked with creating a visioning process for the depot. It would require public input and development options, so the entire community benefits and plays a role in determining the depot's future.

Item 7. Planning Commissioners' Comments

Commissioner Johnson stated her thanks for prompt action addressing the winter weather event.

Item 8. Adjournment

Chair Deem announced the meeting adjourned at 1:56 p.m.



Chair/Vice-Chair

/s/ Rachel Clyne

City Planner



02/01/2022 - 02/28/2022

Payment Date	Name	Payment Type	Receipt #	Payment Amount
2/28/2022	MARK AND DANA BAYS	Check	1040	15.00
2/28/2022	JERRY NEWSOM	Check	1039	15.00
2/28/2022	PS DEMOLITION	Check	1038	75.00
2/28/2022	ALLIED REFRIGERATION LLC	Check	1037	75.00
2/28/2022	KENNETH WEST & LORA DAVIS	Check	1036	761.00
2/28/2022	ALPINE MECHANICAL	IBX CC	1035	100.00
2/28/2022	MYCON GENERAL CONTRACTORS, INC	IBX CC	1034	75.00
2/28/2022	JASON STANFIELD	IBX CC	1033	100.00
2/25/2022	MICHAEL & REBEKAH WAHKINNEY	Check	1032	761.00
2/25/2022	BOSS ELECTRIC	Check	1031	75.00
2/25/2022	WEC ELECTRICAL CONTRACTORS, INC	Check	1030	75.00
2/25/2022	JERRY L MUSE	Cash	1029	15.00
2/24/2022	JIMS PLUMBING	Check	1028	75.00
2/23/2022	OKIE SOLAR	IBX CC	1027	100.00

Entity Payment Report

Payment Date	Name	Payment Type	Receipt #	Payment Amount
2/22/2022	LARRY MITCHELL & MATHEW CASSEL	Check	1026	761.00
2/22/2022	STEVEN D WOTHERSPON	Check	1025	15.00
2/22/2022	JOHN COWENS	Check	1024	15.00
2/22/2022	LAKE SIDE WEDDING VENUE	Check	1023	761.00
2/22/2022	ED & BRENDA DODEN	Check	1022	15.00
2/18/2022	RICHARD & ROBIN GARREN	Check	1021	15.00
2/18/2022	LINN'S PLUMBING, LLC	Check	1020	75.00
2/18/2022	ALL PHASE ELECTRIC	Check	1019	75.00
2/18/2022	BOTTOMS UP LIQUOR	Check	1018	15.00
2/18/2022	MOSE AND APRIL LOWE	Cash	1017	15.00
2/18/2022	WAGGONER'S HEAT & AIR	IBX CC	1016	75.00
2/17/2022	STEPHEN YOUNG	Check	1014	75.00
2/17/2022	CRACKERBARRELL OLD COUNTRY STORE INC.	IBX CC	1015	450.00
2/16/2022	CL Electric	IBX CC	1013	100.00
2/15/2022	STERLING AND SONS ELECTRIC	Check	1012	100.00
2/14/2022	WORLD ACCEPTANCE CORP	Check	1011	50.00

Payment Date	Name	Payment Type	Receipt #	Payment Amount
2/14/2022	AARON SALES & LEASE #C0661	Check	1010	15.00
2/14/2022	BRIAN BURTON	Check	1009	15.00
2/14/2022	STARKS ELECTRIC CO	Check	1008	75.00
2/14/2022	TERRELL ELECTRIC	Check	1007	75.00
2/14/2022	JONIAS L SHEAFFER	Cash	1006	9.00
2/11/2022	BEDWELL TREE SERVICE	Check	1005	25.00
2/10/2022	KANDY LICKER CANDY COMPANY	IBX CC	1004	50.00
2/9/2022	CROWN ELECTRIC	Check	1003	75.00
2/9/2022	CAROL HOPKINS	Check	1002	761.00
2/9/2022	NAMAH, LLC	Check	1001	15.00
2/9/2022	FIRESTORM SEPTICS AND SHLETERS	Check	1000	75.00
2/9/2022	FIRESTORM SEPTICS AND SHELTERS	Check	999	75.00
2/8/2022	SIMCO INVESTMENT S, LTD	IBX CC	998	761.00
2/8/2022	FRANK SIMS	IBX CC	997	761.00
2/7/2022	CASEY ELECTRIC	Check	996	75.00
2/7/2022	ELITE PIPING CONTRACTORS, INC	Check	995	75.00
2/7/2022	STEVEN A TAYDUS	Check	994	15.00
2/7/2022	HOBBY LOBBY #635	Check	993	15.00

Payment Date	Name	Payment Type	Receipt #	Payment Amount
2/7/2022	QUALITY PLUMBING	Check	992	75.00
2/7/2022	LET THERE BE LIGHT ELECTRICAL, LLC	IBX CC	991	100.00
2/4/2022	LAYNIES TREEHOUSE LLC	Check	990	50.00
2/4/2022	WILLIAM DAVIS	IBX CC	989	15.00
2/2/2022	FRANK BURTON	Check	987	15.00
2/2/2022	CHRISTINA DAVIS	Check	986	15.00
2/2/2022	GROUND ZERO SHELTERS	IBX CC	988	75.00
2/1/2022	MARY SPENCER	Check	985	15.00
2/1/2022	LINDA MACK REEVES	Check	983	15.00
2/1/2022	SHAWNEE PRESBYTERIAN CHURCH	Check	982	50.00
2/1/2022	VIP PLUMBING OK	IBX CC	984	75.00
				8,396.00

Total Records: 59

3/1/2022



Monthly - City Clerk

02/01/2022 - 02/28/2022

Permit #	Permit Date	Permit Type	Parcel Address	Applicant Name	Description	Project Cost	Square Feet	Total Fees
20220176	2/25/2022	B - Accessory Structure	1136 E 39TH ST	SANDLIN STEEL CONSTRUCTION	NEW CONSTRUCTION	20,000	1,200	\$259.50
20220173	2/23/2022	B - Accessory Structure	1011 E FARRALL ST	HUDSON POST FRAME, LLC	NEW CONSTRUCTION	33,000	1,800	\$387.00
20220143	2/15/2022	B - Accessory Structure	42 SERENADA CT	BJ PHILLIPS CONSTRUCTION	NEW CONSTRUCTION	35,000	672	\$147.30
20220111	2/2/2022	B - Accessory Structure	16101 HART RD	JOHN BRACKLEIN	NEW CONSTRUCTION	25,000	720	\$157.50
20220171	2/22/2022	B - Commercial - Remodel	1152 N HARRISON	JOHN WINTERRINGER	REMODEL	30,000	1,100	\$238.25
20220166	2/18/2022	B - Commercial - Remodel	6200 N HARRISON AVE	6200 N HARRISON STREET, LLC	REMODEL	50,000	13,680	\$3,424.50
20220138	2/15/2022	B - Commercial - Remodel	7811 N KICKAPOO	GREG CULLISON CONSTRUCTION	REMODEL	22,000	500	\$129.50
20220115	2/7/2022	B - Flood Plain		JOHNSON & ASSOCIATES	3 ROAD BORE	0	0	
20220117	2/8/2022	B - Residential - Add On	606 N MCKINLEY	ACTS 29 ROOFING	add on	10,100	2,800	\$29.50
20220108	2/1/2022	B - Residential - Add On	33807 BELCHER RD	BRYCE HOLLAND CONSRTUCTION	NEW CONSTRUCTION	43,000	288	\$65.70
20220164	2/17/2022	B - Residential - New	613 S POTTENGER	ACOCK PROPERTIES, LLC	NEW CONSTRUCTION	180,000	887	\$542.91
20220163	2/17/2022	B - Residential - New	611 S POTTENGER	ACOCK PROPERTIES, LLC	NEW CONSTRUCTION	180,000	887	\$542.91
20220162	2/17/2022	B - Residential -	609 S POTTENGER	ACOCK PROPERTIES.	NEW CONSTRUCTION	180,000	887	\$542.91

		New		LLC				
20220161	2/17/2022	B - Residential - New	4525 RED BIRD RD	BRYAN LITTLE HOMES	NEW CONSTRUCTION	185,000	2,501	\$1,260.96
20220133	2/14/2022	B - Residential - New	4309 ELOISE DR	BRYAN LEE BUILDS	NEW CONSTRUCTION	190,000	2,463	\$1,252.89
20220132	2/14/2022	B - Residential - New	4307 ELOISE DR	BRYAN LEE BUILDS	NEW CONSTRUCTION	195,000	2,396	\$1,238.65
20220165	2/17/2022	B - Residential - Remodel	512 N UNION AVE	FRANCISCO TELLEZ	REMEDIATE	75,000	1,077	\$233.36
20220149	2/15/2022	B - Residential - Remodel	735 N MARKET	BREWER & ASSOCIATES	REMODEL	63,000	2,015	\$432.69
20220127	2/10/2022	B - Residential - Remodel	502 N CHAPMAN	CLINTON LATHAM	REMODEL	45,000	1,602	\$344.93
20220181	2/28/2022	B - Roof Redeck	2328 FAITH BLVD	ACTS 29	RE-DECK	11,500	2,625	\$54.50
20220177	2/25/2022	B - Solar Panels	705 N LOUISA	SUNPRO SOLAR	NEW INSTALLATION	31,712	240	\$55.50
20220125	2/9/2022	B - Solar Panels	1136 E 39TH ST	SUNPRO SOLAR	NEW INSTALLATION	49,163	552	\$121.80
20220167	2/18/2022	B - Storm Shelter	1116 HYATT CT	PREFERED SHELTERS	NEW INSTALLATION	5,000	48	\$29.50
20220110	2/2/2022	B - Storm Shelter	1510 CEDAR BEND CT	SHIRLEY CAMPBELL	STORM SHELTER	2,995	11	\$29.50
20220106	2/1/2022	B - Swimming Pool		TRIBAL CUSTOM POOLS	NEW INSTALLATION	80,000	760	\$64.50
20220178	2/25/2022	E - Electrical	705 N LOUISA	SUNPRO SOLAR	NEW INSTALLATION	0	0	
20220170	2/22/2022	E - Electrical	7811 N KICKAPOO	ABOVE ALL ELECTRIC SOLUTIONS	REMODEL	0	0	\$54.50
20220160	2/17/2022	E - Electrical	1904 KATIE RD	GENERATOR SUPERCENTER	NEW INSTALLATION	0	0	\$54.50
20220157	2/16/2022	E - Electrical	1228 N PENNSYLVANIA	CHRISTOPHER UNRUH	NEW SERVICE	0	0	\$104.50
20220154	2/16/2022	E - Electrical	1152 N HARRISON	FULL SPEED ELECTRIC LLC	COMMERCIAL REMODEL	0	0	\$154.50
20220151	2/15/2022	E - Electrical	1414 LAVERNE AVE	SOLID STATE ELECTRIC	REMODEL	0	0	\$104.50
20220148	2/15/2022	E - Electrical	4799 N HARRISON AVE	STERLING AND SONS ELECTRIC	FINISH OUT	0	0	\$154.50

20220147	2/15/2022	E - Electrical	4797 N HARRISON AVE	STERLING AND SONS ELECTRIC	REMODEL	0	0	\$54.50
20220146	2/15/2022	E - Electrical	4795 N HARRISON AVE	STERLING AND SONS ELECTRIC	REMODEL	0	0	\$54.50
20220145	2/15/2022	E - Electrical	4793 N HARRISON AVE	STERLING AND SONS ELECTRIC	FINISH OUT	0	0	\$104.50
20220144	2/15/2022	E - Electrical	4799 N HARRISON AVE	STERLING AND SONS ELECTRIC	FINISH OUT	0	0	\$104.50
20220136	2/14/2022	E - Electrical	1136 E 39TH ST	SUNPRO SOLAR	NEW SERVICE	0	0	\$54.50
20220131	2/14/2022	E - Electrical	4601 KELLYE GREEN	GENERATOR SUPERCENTER	INSTALLATION	0	0	\$54.50
20220126	2/14/2022	E - Electrical	14702 PATTERSON RD	GENERATOR SUPERCENTER	INSTALLATION	0	0	\$54.50
20220123	2/9/2022	E - Electrical	32 E DUNLOUP RD	OCEAN AIR LLC	NEW INSTALLATION	0	0	\$54.50
20220118	2/8/2022	E - Electrical	202 W 33RD ST	Wilson electric	electric service	0	0	\$54.50
20220113	2/7/2022	E - Electrical	4901 N KICKAPOO	TREK ELECTRIC	BRANCH CIRCUIT WIRING	0	0	\$104.50
20220112	2/7/2022	E - Electrical	1012 E FARRALL ST	LET THERE BE LIGHT ELECTRIC	REMODEL	0	0	\$54.50
20220174	2/24/2022	E - Engineering Project		GEORGE FISCHER CENTRAL PLASTICS	LAND DISTURBANCE	0	0	\$50.00
20220183	2/28/2022	M - Mechanical	4205 BLAINE RD	WARNER HEAT & AIR	CHANGE OUT	0	0	\$79.50
20220172	2/22/2022	M - Mechanical	4601 KELLYE GREEN	ALPINE MECHANICAL	GAS LINE EXTENSION	0	0	\$54.50
20220155	2/16/2022	M - Mechanical	4901 N KICKAPOO	WAGGONERS HEATING AND AIR		0	0	\$329.50
20220153	2/16/2022	M - Mechanical	236 S MINNESOTA	B COOL REF	NEW SYSTEM	0	0	\$79.50
20220142	2/15/2022	M - Mechanical	813 E ROSA	METRO HVAC	CHANGE OUT	0	0	\$67.00
20220124	2/9/2022	M - Mechanical	32 E DUNLOUP RD	OCEAN AIR LLC	NEW INSTALLATION	0	0	\$54.50
20220121	2/8/2022	M - Mechanical	322 N PARK	B-Cool	new	0	0	\$79.50
20220120	2/8/2022	M - Mechanical	242 S MINNESOTA	B COOL REF	change out	0	0	\$79.50
20220182	2/28/2022	O -	1910 W	P SOLINGER	DEMOLITION	0	0	\$50.00

		Demolition and Moving	BENEDICT					
20220105	2/1/2022	O - Demolition and Moving	1 W MAIN	2G1B LLC	DEMOLITION	0	0	\$50.00
20220141	2/15/2022	O - Paving Cut and Boring		B&H CONSTRUCTION, LLC	FOR ONG/ EAST SIDE OF HOBSEN AVE	0	0	
20220140	2/15/2022	O - Paving Cut and Boring		B&H CONSTRUCTION, LLC	FOR ONG/ EAST SIDE OF BROADWAY	0	0	
20220139	2/15/2022	O - Paving Cut and Boring		B&H CONSTRUCTION, LLC	FOR ONG/ WEST SIDE OF UNION AVE	0	0	
20220114	2/7/2022	O - Paving Cut and Boring	107 W GEORGIA	TSU ONE	ROAD BORE	0	0	
20220179	2/25/2022	O - Sign	228 N BROADWAY	BLACK WILLOW SALON		960	64	
20220168	2/22/2022	O - Sign	4848 N KICKAPOO AVE	CLOVER SIGNS	REPLACE EXISTING	1,000	60	
20220130	2/10/2022	O - Sign	4850 MARKETPLACE BL	ASAP EVENT ADVERTISING	SHOE SENSATION	0	0	\$54.50
20220184	2/28/2022	P - Plumbing	1113 MORNING SIDE CT	LIBERTY PLUMBING & GAS	GENERATOR	0	0	\$54.50
20220180	2/28/2022	P - Plumbing	217 E BANNOCK	STANFIELD PLUMBING	REPAIR	0	0	\$54.50
20220175	2/25/2022	P - Plumbing	4205 BLAINE RD	CHAMPION PLUMBING	GAS METER	0	0	\$54.50
20220169	2/22/2022	P - Plumbing	511 N KIMBERLY AVE	STANLEY PLUMBING SERVICES LLC	GAS LINE EXTENSION	0	0	\$54.50
20220159	2/17/2022	P - Plumbing	4001 N CHAPMAN AVE	AIRCO SERVICE	CHANGE OUT	0	0	\$54.50
20220158	2/16/2022	P - Plumbing	22 RED ROCK RD	DALES PLUMBING	REPLACE SEWER LINE	0	0	\$54.50
20220156	2/16/2022	P - Plumbing	1921 E 11th St	STANLEY PLUMBING SERVICES LLC	MISC PLUMBING	0	0	\$54.50
20220152	2/15/2022	P - Plumbing		STANLEY PLUMBING SERVICES	PRESSURE TEST	0	0	\$54.50
20220150	2/15/2022	P - Plumbing	404 N POTTENGER AVE	GREGORY W SMITH PLUMBING	W/H CHANGE OUT	0	0	

20220137	2/14/2022	P - Plumbing	1134 E FAY ST	ALL ABOUT PLUMBING	REMODEL	0	0	\$54.50
20220135	2/14/2022	P - Plumbing	1933 ASPEN PL	AIRCO SERVICE	CHANGE OUT	0	0	\$54.50
20220134	2/14/2022	P - Plumbing	4797 N HARRISON AVE	BRAD'S PLUMBING	FINISH OUT	0	0	\$54.50
20220122	2/9/2022	P - Plumbing	328 S CHAPMAN AVE	ROTO-ROOTER	REPAIR	0	0	\$54.50
20220119	2/8/2022	P - Plumbing	3700 N KICKAPOO AVE	Harrison orr	plumbing remodel	0	0	\$54.50
20220109	2/2/2022	P - Plumbing	928 E WILSON ST	SOUTHEASTERN PLG CO	REPAIR	0	0	\$54.50
20220107	2/1/2022	P - Plumbing	221 West Georgia	VIP PLUMBING	REPAIR	0	0	\$54.50
20220129	2/10/2022	PC - Deed Approval	1218 E 9TH ST	CHRIS HARDEN	DEED APPROVAL	0	0	\$50.00
20220128	2/10/2022	PC - Deed Approval	1216 E 9TH ST	CHRIS HARDEN	DEED CORRECTION	0	0	\$25.00
								\$14,883.26

Total Records: 79

3/1/2022

Regular Board of Commissioners

4. d.

Meeting Date: 03/21/2022

Easement

Submitted By: Kacie Eck, City Clerk

Department: City Clerk

Information

Title of Item for Agenda

Acceptance of an electric utility easement from OG&E (Oklahoma Gas and Electric Company) to the City of Shawnee/Shawnee Urban Renewal Authority.

Attachments

Memo

Easement



Community Development

222 N. Broadway Ave.
Shawnee, OK 74801
ShawneeOK.org

Date: March 21, 2022
To: City Commission
From: Rian Harkins, Community Development Director
Subject: Acceptance of an electric utility easement from OG&E to the City of Shawnee/Shawnee Urban Renewal Authority

Background: The subject property is located on a parcel of land owned by the Shawnee Urban Renewal Authority/City of Shawnee and part of the area where the construction of the new Pottawatomie County Administration Building is taking place.

The service line was installed during the early stages of construction. The omission of the dedicated easement was discovered recently, and this action corrects the omission of the easement.

The acceptance of the easement has no fiscal cost to the City.

Attachment: Easement documents and survey

Recommendation: Staff recommends acceptance of the easement, subject to concurrent approval by the SURA Board of Directors.

AFTER RECORDING RETURN TO:
OGE ELECTRIC SERVICES
ATTN: SHAWN DAVIS
RIGHT-OF-WAY AGENT
PO BOX 742
Meeker, OK 74855

Work Order #7705865

EASEMENT

KNOW ALL MEN BY THESE PRESENTS: THAT **S.U.R.A. /City of Shawnee**, Grantor, in consideration of the sum of Ten or more dollars in hand paid, the receipt of which is hereby acknowledged, and other good and valuable consideration, does hereby grant and warrant unto **OKLAHOMA GAS AND ELECTRIC COMPANY**, an Oklahoma corporation, Grantee, its successors and assigns, the right, privilege and authority to enter upon and install, erect, construct, operate, maintain, and reconstruct underground and/or above ground a system of poles, anchors, guy wires, conduits, wires, cables, vaults, junction boxes, switches, fuses, transformers, service connection boxes and other fixtures for the transmission and distribution of electrical current and communication messages, including the right of ingress and egress to and from said system across adjoining lands of Grantor, together with the authority to cut down, control the growth of, or trim and keep trimmed any trees that may in the judgment of the Grantee interfere with or endanger said line or its maintenance and operation.

The real property covered by this easement is situated in **Pottawatomie** County, State of Oklahoma, and is described as follows:

An Easement in Lots One (1) Two (2) Three (3) and Four (4), Block Eleven (11) of The Amended Plat Shawnee O.T., being part of the Northwest Quarter (NW1/4) of Section Nineteen (19), Township Ten (10) North, Range Four (4) East of the Indian Meridian, Pottawatomie County, Oklahoma. Said easement being Ten (10) feet in width, Five (5.00) feet each side of a centerline described in EXHIBIT "A" and shown on EXHIBIT "B", attached hereto and hereby made part of this easement.

Grantor further covenants agrees that no building or other structure shall ever be erected nor shall any excavation or other removal of soil, so as to change the grade of terrain, be accomplished by Grantor, its heirs or assigns, within the above described easement area unless the written consent of the Grantee is first obtained. Grantor further acknowledges the requirements of 63 Oklahoma Statutes (2011) Section 142.1, et. seq. (One-call statute).

Grantor hereby consents to permit Grantee to trim and keep trimmed any trees and foliage on Grantor's property immediately adjacent to the easement granted herein and Grantee shall have the right to enter upon Grantor's property for this purpose.

Signed and delivered this _____ day of _____, 2022

S.U.R.A. /City of Shawnee

Mayor: Ed Bolt _____

ACKNOWLEDGMENT

STATE OF OKLAHOMA, COUNTY OF _____, SS;
Before me, the undersigned, a Notary Public, in and for said County and State, on this _____ day of _____, 2022,
personally appeared **Ed Bolt** to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument as
its **Mayor** and acknowledged to me that he executed the same as his free and voluntary act and deed of such **City**, for the uses and purposes therein
set forth.

My Commission Expires: _____

Commission # _____

Notary Public

EXHIBIT "A"

OG&E EASEMENT

An Easement in Lots One (1) Two (2) Three (3) and Four (4), Block Eleven (11) of The Amended Plat Shawnee O.T., being part of the Northwest Quarter (NW1/4) of Section Nineteen (19), Township Ten (10) North, Range Four (4) East of the Indian Meridian, Pottawatomie County, Oklahoma, **written by Timothy G. Pollard, PLS 1474, on March 01, 2022. Bearings are Based on an arbitrary bearing of S89°00'38"W on the North Line of said NW1/4** and as shown on attached **Easement Sketch**, said easement further described as: being Ten (10) feet in width, Five (5.00) feet each side of a centerline described as:

COMMENCING at the NE corner of said NW1/4;

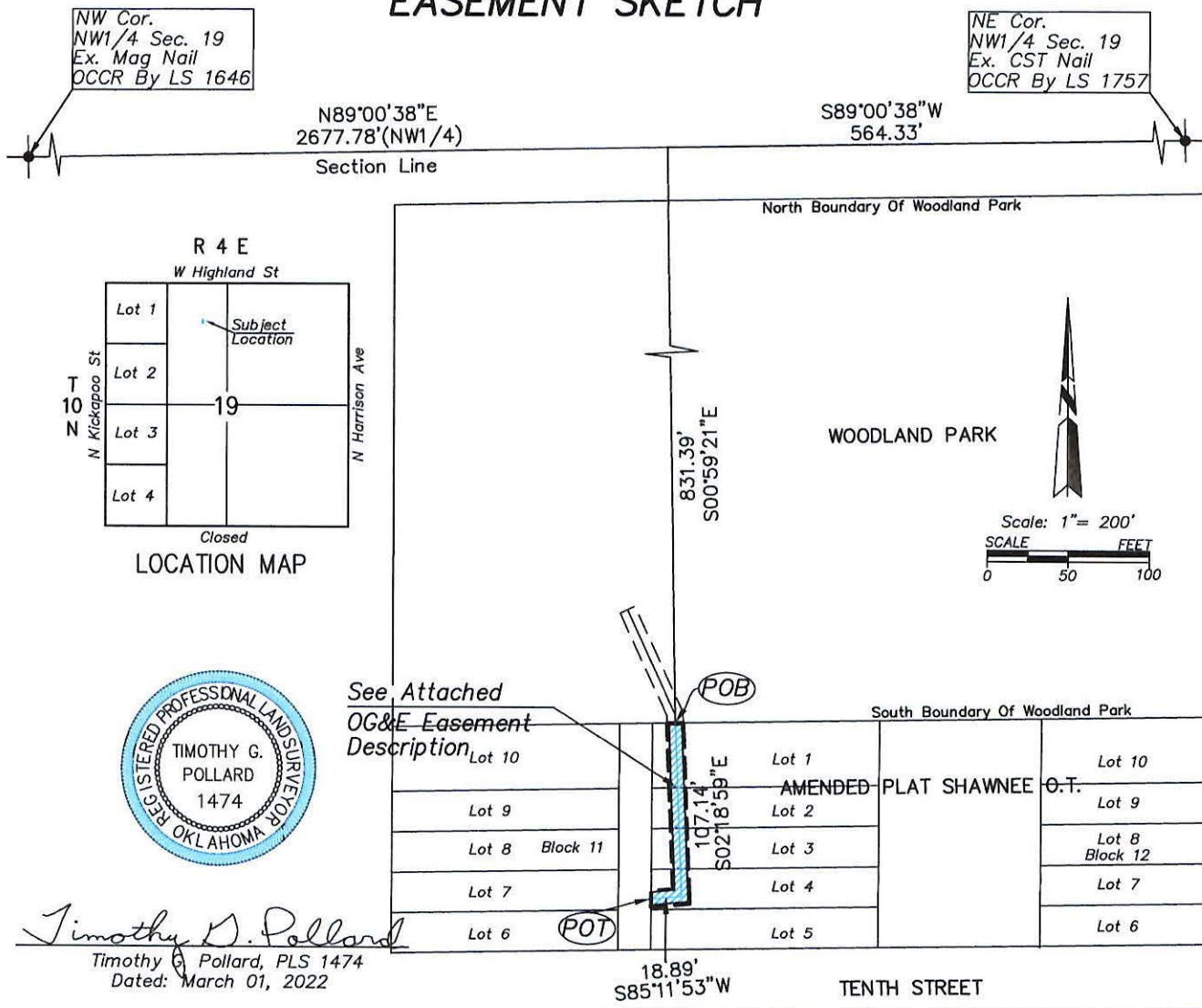
Thence S89°00'38"W, on the North Line of said NW1/4, for a distance of 564.33 feet;

Thence S00°59'21"E, for a distance of 831.39 feet to the North boundary of said Lot 1, Block 11, being the **POINT OF BEGINNING**;

Thence S02°18'59"E, on said centerline for a distance of 107.14 feet;

Thence S85°11'53"W, on said centerline for a distance of 18.89 feet to the **POINT OF TERMINATION**.

EXHIBIT "B" EASEMENT SKETCH



Note: Bearings Are Based On An Arbitrary Bearing Of S89°00'38"W Between Existing Monuments On The North Line Of The NE1/4 Of Section 19, T10N, R4E, Cleveland County, OK

(●) - Indicates Existing Monument as Noted.

(OCCR) - Indicates Oklahoma Certified Corner Record on file with the Oklahoma Department of Libraries, Archives Division.

I, Timothy G. Pollard, a Professional Land Surveyor, hereby certify that the attached drawing is a true and accurate representation of the attached easement description and is subject to all notes and qualifying statements.

OKLAHOMA GAS AND ELECTRIC COMPANY

POLLARD & WHITED SURVEYING INC. 2514 TEE DRIVE, NORMAN, OKLAHOMA 73069 CA#2380 EXP 06-30-23 405-366-0001	OG&E EASEMENT SKETCH WO# 7705865 PART OF THE NW1/4 OF SECTION 19, T10N, R4E, I.M. POTTAWATOMIE COUNTY, OKLAHOMA	REVISIONS: _____ _____ _____
DRAWN BY: J. THOMAS DATE: March 01, 2022	FILE #: 19-10N4E.ASC DATE: Aug. 28, 2020	SCALE: 1" = 100'
APPROVED BY: D. MEES DATE: March 01, 2022	DRWG #: 19-10N4E.DGN DATE: Aug. 31, 2020	SHEET 1 OF 1

Regular Board of Commissioners

4. e.

Meeting Date: 03/21/2022

Mayor's Appointment

Submitted By: Kacie Eck, City Clerk

Department: City Clerk

Information

Title of Item for Agenda

Mayor's Appointments:

Community Service Contract Review Committee

Monty Porter 1st Partial Term Expires: January 1, 2024

Replaces Erica Bass – Resigned

Attachments

Application



PRESENTED TO CITY COMMISSION

Date _____

Action _____

APPLICATION TO SERVE
Boards, Committees and Commissions

- ☐ Appointment
☐ Reappointment – Partial/First/Second Term

Name: <u>Monty Porter</u>	Application Date: <u>3/8/2022</u>
Address: <u>2 Castle Creek Place, Shawnee, 74804</u>	Date of Birth: <u>07/17/1968</u>
Mailing Address: <u>SAME</u>	
Daytime Phone: <u>4058088812</u> Fax: <u>none</u>	Email: <u>montyaporter@sbcglobal.net</u>
Profession: <u>Ecologist/Manager</u>	
Business Name: <u>Oklahoma Water Resources Board</u>	
Business Address: <u>3800 N. Classen Blvd., OKC, OK 73118</u>	
Business Phone: <u>4055308933</u> Fax: <u>none</u>	Email: <u>monty.porter@owrb.ok.gov</u>

Do you live within the City Limits of the City of Shawnee? Yes ☒ No ☐

Do you currently serve on a City board, committee, or commission? Yes ☒ No ☐

If so, please list the board/committee: Traffic Commission

How many years have you lived in Shawnee? 21

Select the Board/Committee/Commission you are interested in serving on: (please check)

- ☐ Airport Advisory Board
- ☐ Arts and Culture Commission
- ☐ Beautification Committee
- ☐ Board of Adjustment (Zoning)
- ☐ Civic and Cultural Development Authority
- ☒ Community Service Contract Review Committee
- ☐ Housing Authority
- ☐ Library Board

- ☐ Oklahoma Baptist University Trust Authority
- ☐ Parks and Recreation Committee
- ☐ Planning Commission
- ☐ Senior Citizens of Shawnee Board
- ☐ Shawnee Hospital Authority
- ☐ Shawnee Urban Renewal Authority
- ☐ Traffic Commission
- ☐ Other _____

Why are you interested in serving on the Board/Committee/Commission selected above?

Community Service

What will make you a good board member and what skills or knowledge do you have that would be relevant to this board/committee/commission?

25 years of contract review and creation experience

What civic or volunteer activities (if any) are you currently involved in?

church, school, civic

List education, including degree(s) earned:

BS Biology, MS Biology

Have you ever served on a City-appointed board/committee/commission before? If so, which ones and for how long did you serve?

Traffic Commission--2 Years

Have you ever been charged and/or convicted of a felony? no

If so, please explain the circumstances and the current status of the charge(s) and/or conviction(s):

Have you ever declared personal or business bankruptcy? no

If so, please explain:

Please include up to three personal or professional references:

Name	Relationship	Telephone Number
Gerard Nsabimana	Pastor/Friend	405-519-1483
Tasha Loveless	Friend	405-962-9800
Derek Smithee	Colleague	405-388-2805

PLEASE READ CAREFULLY:

Appointment by the Commission is for one term and individuals may not serve more than two consecutive full terms. Appointment to a second term remains at the discretion of the City Commission.

My signature affirms that all information contained herein is true to the best of my knowledge, and that I understand that any misstatement of fact or misrepresentation of credentials may result in disqualification from further consideration.

Signature Monty Porter

Date 3/8/2022

Applications are retained on file for one (1) year. Applicants are encouraged to include a letter of interest with this application. Thank you for your interest in serving Shawnee.

Send completed application to:

Shawnee City Clerk
PO Box 1448
Shawnee OK 74802
Phone 405-878-1605
Fax 405-878-1581
CityClerk@shawneeok.org

Regular Board of Commissioners

6.

Meeting Date: 03/21/2022

Contract

Submitted By: Kacie Eck, City Clerk

Department: City Clerk

Information

Title of Item for Agenda

Consideration of an amended contract with Meshek and Associates, LLC for the Right-of-Way Acquisition for the MacArthur Street Sidewalk Project.

Attachments

Memo

Contract



Office of Engineering

222 N. Broadway Ave.
Shawnee, OK 74801
ShawneeOK.org

Date: March 21, 2022
To: City Commission
From: Seth Barkhimer
Subject: Contract with Meshek and Associates, LLC for ROW acquisition on the MacArthur Street Sidewalk Project.

Background: On August 19, 2021, the City of Shawnee and Meshek entered a contract for right-of-way acquisition services on the MacArthur Street Sidewalk Project. The contract was originally for forty-nine thousand dollars (\$49,000), and covered staking, title investigation and general acquisition management.

The MacArthur Street Sidewalk project is being partially funded through an Oklahoma Department of Transportation TAP grant. With State and Federal funding involved in the project, when there is a parcel that exceeds ten thousand dollars in fair market value, an appraisal and appraisal review must be completed by a certified appraiser.

During the title investigation and preparation of the City's initial offers, the project team realized multiple parcels exceed the ten-thousand-dollar threshold and require appraisals to be completed. With that in mind, Meshek requests an amendment to their original contract in the amount of twelve thousand three hundred dollars. This will cover the appraisal, the appraisal review, and the additional coordination, making the amended contract total sixty-one thousand three hundred dollars (\$61,300).

Financial Impact: Total amendment cost \$12,300.00; Project Number 20S-001; Account 302-5-0810-5

Attachment: Agreement Amendment

Staff Recommendation: Approval of the Amendment



SERVICE AGREEMENT BETWEEN OWNER AND CONSULTANT

Amendment to original agreement dated 08/19/21

OWNER INFORMATION:

Owner name: City of Shawnee
Address: 222 N. Broadway
City: Shawnee State: Oklahoma Zip: 74802
Contact: Seth Barkhimer Title: City Engineer
Telephone: 405-878-1760 Fax: N/A Email: seth.barkhimer@shawneeok.org

Nature of Owner:

☐ Individual/Sole Proprietorship ☐ Corporation ☐ Limited Liability Company ☐ Limited Partnership ☐ Partnership ☒ Other: City

State of formation (if an entity) or residence (if an individual): Oklahoma

Tax ID/SSN: _____

CONSULTANT INFORMATION:

Consultant (company) name: Meshek & Associates, LLC
Address 1437 South Boulder Avenue, Suite 1550
City: Tulsa State: OK Zip: 74119
Contact: Gretchin Fisher Title: ROW Project Manager
Telephone: 918-392-5620 Fax: 918-392-5621 Email: gfisher@meshekengr.com

Nature of Consultant:

☐ Individual/Sole Proprietorship ☐ Corporation ☒ Limited Liability Company ☐ Limited Partnership ☐ Partnership ☐ Other: _____

State of formation (if an entity) or residence (if an individual): Oklahoma

Tax ID/SSN: 73-1322397

All invoices must be addressed and delivered to "Attn: Accounts Payable" at the appropriate address.

TERM/TERMINATION:

THIS IS AN AGREEMENT effective as of _____ (“Effective Date”) between
City of Shawnee _____ (“Owner”) and
Meshek & Associates, LLC _____ (“Consultant”).

Owner's Project, of which Consultant's services under this Agreement are a part, is generally identified as follows:

J3-2996(004); Pottawatomie County; McArthur Street Sidewalk

Consultant's Services under this Agreement are generally identified as follows:

Project Management; Acquisition, Appraisal, Title Research, ROW staking

AGREEMENT:

Owner and Consultant further agree as follows:

1.01 *Basic Agreement and Period of Service*

- A. Consultant shall provide, or cause to be provided, the services set forth in this Agreement. If authorized by Owner, or if required because of changes in the Project, Consultant shall furnish services in addition to those set forth above and in Exhibit “A”, any additional work agreed upon shall be approved in writing. Owner shall pay Consultant for its services as set forth in Paragraphs 7.01 and 7.02.
- B. Consultant shall complete its services within a reasonable time.

2.01 *Payment Procedures*

A. *Invoices:* Consultant shall prepare invoices in accordance with its standard invoicing practices and submit the invoices to Owner on a milestone basis. Invoices are due and payable within 30 days of receipt. Milestones shall include: Invoice shall be submitted to the Owner after each task is complete with the exception of Acquisition, for which 50% of fee shall be submitted following offer presentation per parcel and balance submitted upon completion and submission of packet. If Owner fails to make any payment due Consultant for services and expenses within 90 days after receipt of Consultant's invoice, Consultant may, after giving seven days written notice to Owner, suspend services under this Agreement until Consultant has been paid in full all amounts due for services, expenses, and other related charges. Owner waives any and all claims against Consultant for any such suspension.

3.01 *Termination*

- A. The obligation to continue performance under this Agreement may be terminated:

1. For cause,
 - a. By either party upon 30 days written notice in the event of substantial failure by the other party to perform in accordance with the Agreement's terms through no fault of the terminating party.
 - b. By Consultant:
 - 1) upon seven days written notice if Owner demands that Consultant furnish or perform services contrary to Consultant's responsibilities as a licensed professional; or
 - 2) upon seven days written notice if the Consultant's services for the Project are delayed for more than 90 days for reasons beyond Consultant's control.

Consultant shall have no liability to Owner on account of a termination by Consultant under Paragraph 3.01.A.1.b.

- c. Notwithstanding the foregoing, this Agreement will not terminate as a result of a substantial failure under Paragraph 3.01.A.1.a if the party receiving such notice begins, within seven days of receipt of such notice, to correct its substantial failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of notice; provided, however, that if and to the extent such substantial failure cannot be reasonably cured within such 30 day period, and if such party has diligently attempted to cure the same and thereafter continues diligently to cure the same, then the cure period provided for herein shall extend up to, but in no case more than, 60 days after the date of receipt of the notice.
 2. For convenience, by Owner effective upon Consultant's receipt of written notice from Owner.
- B. The terminating party under Paragraph 3.01.A may set the effective date of termination at a time up to 30 days later than otherwise provided to allow Consultant to complete tasks whose value would otherwise be lost, to prepare notes as to the status of completed and uncompleted tasks, and to assemble Project materials in orderly files.
- C. In the event of any termination under Paragraph 3.01, Consultant will be entitled to invoice Owner and to receive just payment for all services performed and furnished in accordance with this Agreement and all reimbursable expenses incurred through the effective date of termination.

4.01 *Successors, Assigns, and Beneficiaries*

- A. Owner and Consultant are hereby bound and the successors, executors, administrators, and legal representatives of Owner and Consultant (and to the extent permitted by Paragraph 4.01.B the assigns of Owner and Consultant) are hereby bound to the other party to this Agreement and to the successors, executors, administrators, and legal representatives (and said assigns) of such other party, in respect of all covenants, agreements, and obligations of this Agreement.
- B. Neither Owner nor Consultant may assign, sublet, or transfer any rights under or interest (including, but without limitation, moneys that are due or may become due)

in this Agreement without the written consent of the other, except to the extent that any assignment, subletting, or transfer is mandated or restricted by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement.

- C. Unless expressly provided otherwise, nothing in this Agreement shall be construed to create, impose, or give rise to any duty owed by Owner or Consultant to any contractor, subcontractor, supplier, other individual or entity, or to any surety for or employee of any of them. All duties and responsibilities undertaken pursuant to this Agreement will be for the sole and exclusive benefit of Owner and Consultant and not for the benefit of any other party.

5.01 ***General Considerations***

- A. The standard of care for all professional consulting and related services performed or furnished by Consultant under this Agreement will be the care and skill ordinarily used by members of the subject profession practicing under similar circumstances at the same time and in the same locality. Consultant makes no warranties, express or implied, under this Agreement or otherwise, in connection with Consultant's services. Subject to the foregoing standard of care, Consultant and its consultants may use or rely upon design elements and information ordinarily or customarily furnished by others, including, but not limited to, specialty contractors, manufacturers, suppliers, and the publishers of technical standards.
- B. This Agreement is to be governed by the law of the state or jurisdiction in which the Project is located.
- C. Owner shall have a limited license to use the documents on the Project, extensions of the Project, and for related uses of the Owner, subject to receipt by Consultant of just payment for all services relating to preparation of the documents and subject to the following limitations: (1) Owner acknowledges that such documents are not intended or represented to be suitable for use on the Project unless completed by Consultant, or for use or reuse by Owner or others on extensions of the Project, on any other project, or for any other use or purpose, without written verification or adaptation by Consultant; (2) any such use or reuse, or any modification of the documents, without written verification, completion, or adaptation by Consultant, as appropriate for the specific purpose intended, will be at Owner's sole risk and without liability or legal exposure to Consultant or to its officers, directors, members, partners, agents, employees, and consultants; (3) Owner shall indemnify and hold harmless Consultant and its officers, directors, members, partners, agents, employees, and consultants from all claims, damages, losses, and expenses, including attorneys' fees, arising out of or resulting from any use, reuse, or modification of the documents without written verification, completion, or adaptation by Consultant; and (4) such limited license to Owner shall not create any rights in third parties.
- D. To the fullest extent permitted by law, Owner and Consultant (1) waive against each other, and the other's employees, officers, directors, agents, insurers, partners, and consultants, any and all claims for or entitlement to special, incidental, indirect, or

consequential damages arising out of, resulting from, or in any way related to the Project, and (2) agree that Consultant's total liability to Owner under this Agreement shall be limited to \$50,000 or the total amount of compensation received by Consultant, whichever is greater.

- E. The parties acknowledge that Consultant's scope of services does not include any services related to a Hazardous Environmental Condition (the presence of asbestos, PCBs, petroleum, hazardous substances or waste as defined by the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq., or radioactive materials). If Consultant or any other party encounters a Hazardous Environmental Condition, Consultant may, at its option and without liability for consequential or any other damages, suspend performance of services on the portion of the Project affected thereby until Owner: (1) retains appropriate specialist consultants or contractors to identify and, as appropriate, abate, remediate, or remove the Hazardous Environmental Condition; and (2) warrants that the Site is in full compliance with applicable Laws and Regulations.
- F. Owner and Consultant agree to negotiate each dispute between them in good faith during the 30 days after notice of dispute. If negotiations are unsuccessful in resolving the dispute, then the dispute shall be mediated. If mediation is unsuccessful, then the parties may exercise their rights at law.

6.01 ***Total Agreement***

- A. This Agreement (including any expressly incorporated attachments), constitutes the entire agreement between Owner and Consultant and supersedes all prior written or oral understandings. This Agreement may only be amended, supplemented, modified, or canceled by a duly executed written instrument.

7.01 ***Basis of Payment—Milestones***

Milestones shall include: Invoice shall be submitted to the Owner after each task is complete with the exception of Acquisition, for which 50% of fee shall be submitted following offer presentation per parcel and the remaining balance to be submitted upon completion of the parcel packet.

Total compensation for services and reimbursable expenses is estimated to be \$61,300.00 (Amended- original total compensation was \$49,000.00)

- 7.02 ***Additional Services:*** For additional services of Consultant's employees engaged directly on the Project, Owner shall pay Consultant an amount to be determined dependent on the additional service and with prior approval in writing.

SIGNATURES:

By signing below, each undersigned acknowledges that it has read and understands, and agrees to be legally bound by this Professional Services Agreement. If a person is signing below on behalf of an entity or another person, the person signing represents and warrants that he or she has been properly authorized and empowered to sign this Professional Services Agreement on behalf of that entity or other person and to bind that entity or other person to this Professional Services Agreement. This Agreement may be executed in any number of

counterparts, each of which will be considered an original but all of which will constitute one and the same instrument.

City of Shawnee

Meshek & Associates, LLC

By: _____

By: _____

Printed Name: _____

Printed Name: _____

Title: _____

Title: _____

Date: _____

Date: _____

Consultant's License No: _____

Consultant's License No.: 1487 (OK)

"Exhibit A"
Amended Fee Schedule

Services	No. of Parcels	Fee per Parcel	Total
R/W Staking	14	\$300.00	\$4,200.00
Appraisal Amended	3	\$3,200.00	\$9,600.00
Acquisition Project Management	12	\$1,000.00	\$12,000.00
R/W Acquisition	12	\$2,500.00	\$30,000.00
Personal Property Moves	*	\$3,200.00	*
Title Investigation Report	14	\$200.00	\$2,800.00
Appraisal Review Amended	3	\$900.00	\$2,700.00
Total			\$49,000.00
Amended Total			\$61,300.00

Exhibit B

Required Insurance Limits and Coverages for Consultants

Before commencing work, Consultants must provide a Certificate of Insurance certifying that the insurance limits and coverages, with the appropriate endorsements, all as outlined below are in effect.

Commercial General Liability	\$1,000,000 Each Occurrence \$1,000,000 General Aggregate * Must include coverage for blanket contractual liability for the obligations assumed under contract
Comprehensive Automobile Liability	\$1,000,000 Combined Single Limit Each Occurrence * Coverage must extend to all owned, non-owned, leased, hired or borrowed vehicles and must include coverage for blanket contractual liability for the obligations assumed under contract
Workers' Compensation	Statutory Limits where Services are to be performed * Must include coverage for Longshoremen's and Harbor Workers' Compensation, if applicable, and coverage for Federal Employers' Liability Act, if applicable
Employer's Liability	\$1,000,000 Each Occurrence \$1,000,000 Disease per Employee * * An Umbrella liability policy, which follows form, may be used to obtain the aforementioned limits
Professional Liability (If applicable)	\$1,000,000 Each Occurrence \$2,000,000 General Aggregate

Certificate Holder and Endorsement Requirements

- Owner shall be listed as Certificate Holder.
- Consultant and the Consultants identified in the Purchase Order for a Specific Project shall be listed on Owner's general liability policies of insurance as additional insureds.

Other Requirements

- All policies required shall be written by a reputable insurance company reasonably acceptable to Company or with a Best's Guide Rating of A- and Class VII or better, and authorized to do business in the state(s) in which Consultant is performing for Company.
- Failure to provide evidence as required shall entitle, but not require, Owner to terminate immediately. Acceptance of a certificate that does not comply with this document shall not operate as a waiver of Consultant's obligations hereunder.

Regular Board of Commissioners**7.**

Meeting Date: 03/21/2022

CUP01-22

Submitted By: Kacie Eck, City Clerk

Department: City Clerk

Information**Title of Item for Agenda**

Public hearing and consideration of an ordinance to rezone property located at 16712 Magnino Road from A-1 (Rural Agricultural District) to A-1 (Rural Agricultural District) with a Conditional Use Permit (CUP) for a guest cottage. Case No. CUP01-22, Applicant: Lora Davis and James Hunter.

Attachments

Staff Report

Ordinance



Community Development

222 N. Broadway Ave.
Shawnee, OK 74801
ShawneeOK.org

Date: March 7, 2022
To: City Commission
From: Rian Harkins, Community Development Director
Subject: Public hearing and consideration of a request for a Conditional Use Permit (CUP) for a guest cottage at 16712 Magnino Road.
Case No. CUP01-22
Applicants: Lora Davis and James Hunter

Background: The subject property is located at 16712 Magnino Road and has an existing single-family residence and existing workshop. The Conditional Use Permit (CUP) allows for an Accessory Dwelling Unit (ADU), which will require the remodeling of the existing shop.

In the Zoning Code, Section 22-120. – Permitted uses. (8) *"... may be approved as an accessory use to an existing single-family residence with an approved conditional use permit, provided that ...a guest cottage shall not be sublet and shall share a common driveway with the main residence..."*

Planning staff recommended approval of Case No. CUP01-22 to the Planning Commission with the following conditions:

- The guest cottage shall not exceed 600 square feet.
- It shall not be sublet.
- It shall share a common driveway with the principal residence.
- A building permit shall be issued before any guest cottage modifications to the existing structure.
- The guest cottage shall not serve as a residential use until a Certificate of Occupancy is issued.

Planning Commission recommended **Approval** of the application CUP01-22 with conditions at its regular March 2, 2022 meeting.

Attachment: Application and supporting documents

Recommendation: Staff recommends approval based on the information and conditions outlined in this report, and upon the recommendation of the Planning Commission.



Planning Commission Meeting – 03.2.2022 – City of Shawnee, Oklahoma

Staff Report | CUP01-22 | CUP Application for an ADU | 16712 Magnino Road

To: Shawnee Planning Commission

From: Rachel Clyne, City Planner

Date: February 18, 2022

Subject: CUP01-22 – Staff Report - Public hearing and consideration of a request for a Conditional Use Permit (CUP) for an Accessory Dwelling Unit (ADU) at 16712 Magnino Road.

Background

The subject property is located at 16712 Magnino Road and has an existing single-family residence and existing workshop. The Conditional Use Permit (CUP) allows for an Accessory Dwelling Unit (ADU), which will require the remodeling of the existing shop. The applicants for this CUP request are Lora Davis and James Hunter.

Discussion

Referencing the City of Shawnee Zoning Code (Code) DIVISION 14. – Administration. Section 22-605. – Conditional Use Permit. *"The uses designated under the various districts herein as "conditional uses" are so classified because they could more intensely dominate the area in which they are located..."* The conditional uses shall be reviewed and authorized or rejected with or without special conditions placed on the project.

In the Code, Section 22-120. – Permitted uses. (8) *"... may be approved as an accessory use to an existing single-family residence with an approved conditional use permit, provided that ...a guest cottage shall not be sublet and shall share a common driveway with the main residence..."*

Recommendation

Staff recommends that the Planning Commission recommend to the City Commission APPROVAL of CUP01-22, which is for a Conditional Use Permit (CUP) at 16712 Magnino Road to allow an Accessory Dwelling Unit (ADU), specifically a detached structure for use as a guest cottage with the following conditions.

- The guest cottage shall not exceed 600 square feet.
- It shall not be sublet.

- It shall share a common driveway with the principal residence.
- A building permit shall be issued before any guest cottage modifications to the existing structure.
- The guest cottage shall not serve as a residential use until a Certificate of Occupancy is issued.

This Conditional Use Permit (CUP) application will be heard at the City Commission meeting on Monday, March 21, 2022, at 6:00 pm.

PLANNING COMMISSION APPLICATION



City of Shawnee Planning Department

222 N. Broadway
Shawnee, OK 74801
(405) 878-1616 Fax (405) 878-1587
www.ShawneeOK.org

For Office Use Only

Case Number: CUP01-22

Project Number: _____

Date Filed: 1/14/2022

RC

Planning Commission Secretary

REQUEST:

☐ Rezoning

☒ Conditional Use Permit

☐ Rezoning w/Conditional Use Permit

☐ Planned Unit Development

MARCH 22nd RC Mtg

I, the undersigned, do hereby respectfully make application and petition to the City Commission to amend the zoning map, and to change the zoning district of the Shawnee area, from A1 Conditional use for B&B District to A1 Conditional Use w/cabin District, as hereinafter requested, and in support of this application, the following facts are shown:

PROPERTY LOCATION (STREET ADDRESS): 16712 Maguire Rd

LEGAL DESCRIPTION: Lot 5, Johnston Tract

PROPERTY OWNER (S): Lora Davis and James Hunter

PROPERTY AGENT (APPLICANT): Same

APPLICANT'S ADDRESS: same

CITY: Shawnee STATE: Ok. ZIP: 74801

EMAIL ADDRESS: lorajo.davis@gmail.com

TELEPHONE NUMBER: (405) 275 4017 CONTACT NUMBER: () same

DIMENSIONS OF PROPERTY: AREA: 6 acre approx WIDTH: 300 ft on west

LENGTH: 402 North side FRONTAGE: 64 ft

416 South side

CURRENT ZONING: A1/LPZ

CURRENT USE: Residence & B&B

PROPOSED ZONING: A1/LPZ

PROPOSED USE: Residence with B&B/cabin inside home only for family

With the filing of this application, I acknowledge that I have been informed of off-street parking, fencing and paving requirements in regard to the zoning I have requested as witnessed by my signature.

COMPLETED APPLICATION AND ALL CORRESPONDING DOCUMENTS MUST BE RECEIVED 30 DAYS PRIOR TO MEETING TO MAKE THE AGENDA.

Jo Davis
SIGNATURE OF APPLICANT

FOR STAFF USE ONLY

REZONING &/OR C.U.P FEE \$ 280.00

PLANNED UNIT DEVELOPMENT FEE \$ 550.00

RECEIPT NO. n/a

NOTIFICATION SIGN \$ 50.00

PLANNING COMMISSION ACTION: _____

DATE: 3/2/22

CITY COMMISSION ACTION: _____

DATE: 3/22/22

PLACE ON ZONING MAP: _____

ORDINANCE NO.: _____

no fee per Rian Harkins - advrd app 1/18/22 - RC

see attach

*I am requesting permission to remodel 600 square foot of my 930 sq ft shop into a small cabin. The shop is on the south side of my home and 21 foot from my back door. My husband died in 2012 and the shop area is now virtually unused except for the small portion where lawn tools are stored. I already have a concrete walkway to the shop. My home is only two bedroom and my family has expanded since my home was built 21 years ago. I have 5 grandchildren and 2 children all living in other towns and states with families of their own and I want to be able to have them in my home when they have time to visit. I am 79 years old and hope to be able to have them visit more often.

I have chosen the option of using my very unused shop area for the addition because it is more economical to remodel and the best option for considering the environmental requirements of a lakeside lot. Because I will be using an existing building, my project will not increase my footprint on the lake lot.

My lot has a very pronounced slope toward the lake and the lakeside part of my house has a 4 foot retaining wall. Expanding in the direction of the lake would require extensive site preparation and consequently a lot of dirt upheaval which would be detrimental to the lake. I have planted ground cover instead of grass in that area to provide greater runoff absorption and protection for the water quality of the lake. Expansion to the north is not possible due to the septic system. Expansion to the east would cover the water, electric lines and the Geo Thermal wells used to heat and cool my home. . Expansion to the south would at a minimum require a change in the roof or removal of the existing shop.

I have done my best to protect the lake from undue pollution. I have never used fertilizers, pesticides or herbicides within 100 foot of the lake even though my lease allows it within 25 feet. The attached pictures will make that obvious to you. I was an active member of Sustainable Shawnee when it was active and working towards an environmentally sustainable community. During that time I was one of the appointees to represent Shawnee at the Governor's Annual Water Quality Conference.

4 years ago I received the legal right to use my spare bedroom for a B&B. I think I am the only legal B&B on the lake. No one has ever complained about my B&B. I do not host anyone without visiting with them first and have had very nice guests. The city receives hotel and motel taxes from each customer so it has helped the city as well as me.

A few weeks ago I went to a lake lease holder meeting and the leaseholders who had been upset about the illegal Airbnbs visited with me and agreed that my B&B was not the kind to cause problems. Absent owners illegally renting their cabins for wild parties was the problem. I initially wanted to use the proposed cabin for use as the B&B location but learned that is against the Lake Protection Zone Ordinance even though it is not spelled out in my actual lease. I have adapted my request to using the cabin for my family instead since the initial purpose was to find a way for them to visit me more easily.

WEST ↑

Legend.

1. House

2. Shop

3. Aerobic
Septic Tanks

4. Geo Thermal
Wells

5. Water Well

6. Dock

7. Privy

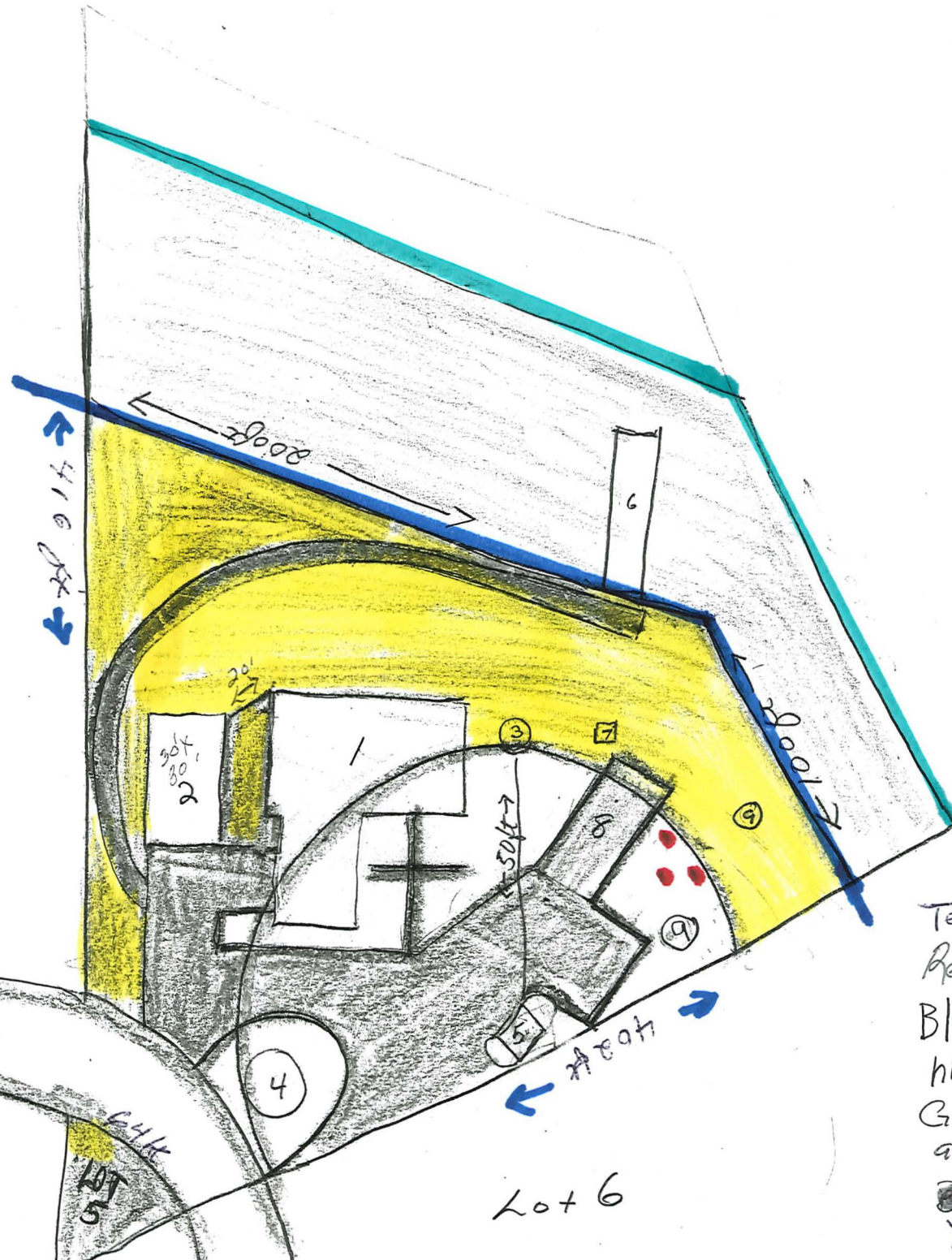
8. R.V. Port

9. Aerobic
Sprinklers

10. Green
Line is
50 ft
protection
for well

11. Aerobic
spray

South ↑



Lot 4

Magnino Rd

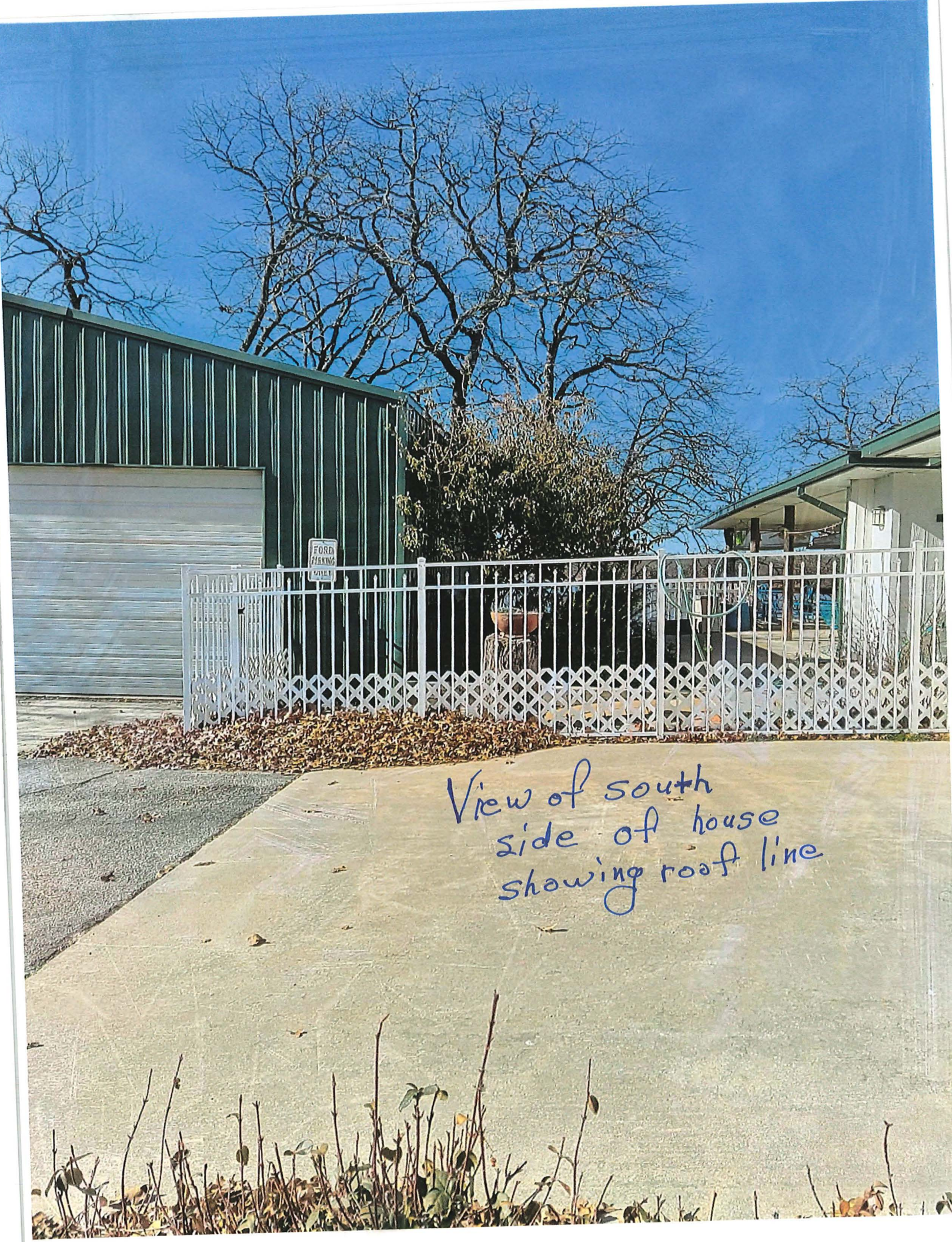
Lot 6

Teal is low-water mark
Red - Aerobic Spray

Blue Line is
high water mark

Grey = pavement
and gravel

 Downwind
Yellow Slope



View of south
side of house
showing roof line



For more information

Community Development **405-878-1672**
Annex Building
222 N. Broadway Avenue
Shawnee, OK



PUBLIC HEARING

Planning Commission

Wednesday, March 2, 2022

City Hall at 16 W. 9th Street, Commission Chambers
1:30 PM

City Commission

Monday, March 21, 2022

City Hall at 16 W. 9th Street, Commission Chambers
6:00 PM

Project Information

Request: Request for a Conditional Use Permit (CUP) for an Accessory Dwelling Unit (ADU) for use as a Guest Cottage

Applicants: Lora Davis and James Hunter

Location: 16712 Magnino Road

Case #: CUP01-22



Frequently Asked Questions

What is a Conditional Use Permit (CUP)?

A Conditional Use Permit (CUP) is a request for a particular use that has been classified in the Zoning Code as requiring a CUP. These uses require a thorough review because some uses could more intensely affect the area in which it is located.

Why did I receive a letter?

You own property within 300 feet of the subject property.

How do I make comment on the request?

Try to attend the public hearing if you are able. Staff will also accept written comments for those who cannot attend.

What if I have questions?

Call the Community Development Dept. at 405-878-1672 or contact the City Planner at rachel.clyne@shawneeok.org.

What if I cannot attend the hearing?

Staff will accept written comments. You may also have a neighbor or friend attend the hearing to represent your interests at the meeting.

How will this request affect me?

Every property is different. Contact the Community Development Department for more information if you have concerns about any impact on you.

I am not in favor of the request, what do I do?

Attend the meetings or provide written comments if you cannot attend. Property owners within 300 feet of the subject property may also prepare a protest petition. Staff can supply information about the protest petition requirements.

Legal Description:

Lot 5, Johnson Tract (Lake Lot Lease)
Incode License No. 030483

CUP01-22

ORDINANCE NO. _____

AN ORDINANCE CONCERNING THE ZONING CLASSIFICATION OF THE FOLLOWING DESCRIBED PROPERTY LOCATED WITHIN THE CORPORATE LIMITS OF THE CITY OF SHAWNEE, POTTAWATOMIE COUNTY, OKLAHOMA, TO-WIT: LOT FIVE (5), JOHNSTON TRACT (LAKE LOT LEASE); FROM ZONING CLASSIFICATION A-1 (RURAL AGRICULTURAL DISTRICT) TO A-1 (RURAL AGRICULTURAL DISTRICT) WITH A CONDITIONAL USE PERMIT (CUP) AND AMENDING THE OFFICIAL ZONING MAP OF THE CITY OF SHAWNEE ACCORDINGLY.

WHEREAS, pursuant to notice duly given as required by law, a public hearing conducted by the Board of Commissioners of the City of Shawnee, Oklahoma on the 21st day of March, 2022, upon an application to rezone certain properties located in the City of Shawnee, Oklahoma, from zoning classification A-1 (Rural Agricultural District) to A-1 (Rural Agricultural District) with a Conditional Use Permit (CUP).

WHEREAS, the Planning Commission of the City of Shawnee has conducted one or more public hearings on said application pursuant to notice as required by law and has submitted its final report and recommendation upon said application to the Board of Commissioners; and,

WHEREAS, it appears to be in the best interest of the City of Shawnee and the inhabitants thereof for said properties to be rezoned to A-1 (Rural Agricultural District) with a Conditional Use Permit (CUP).

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF COMMISSIONERS OF THE CITY OF SHAWNEE, OKLAHOMA:

SECTION 1: That the following described property located in the City of Shawnee, Oklahoma, to-wit: LOT FIVE (5), JOHNSTON TRACT (LAKE LOT LEASE); FROM ZONING CLASSIFICATION A-1 (RURAL AGRICULTURAL DISTRICT) TO A-1 (RURAL AGRICULTURAL DISTRICT) WITH A CONDITIONAL USE PERMIT (CUP) AND AMENDING THE OFFICIAL ZONING MAP OF THE CITY OF SHAWNEE ACCORDINGLY.

PASSED AND APPROVED this ____ day of _____, 2022.

(SEAL)
ATTEST:

ED BOLT, MAYOR

LISA LASYONE, CMC, CITY CLERK

Approved as to form and legality this ____ day of _____, 2022.

JOSEPH M. VORNDRAN,
CITY ATTORNEY

Regular Board of Commissioners**8.**

Meeting Date: 03/21/2022

CUP02-22

Submitted By: Kacie Eck, City Clerk

Department: City Clerk

Information

Title of Item for Agenda

Public hearing and consideration of an ordinance to rezone property located at 603 West Independence Street from C-3 (Highway Commercial District) to C-3 (Highway Commercial District) with a Conditional Use Permit (CUP) for a crematorium. Case No. CUP02-22, Applicant: Todd Tramel, AE Funeral Services, LLC.

Attachments

Staff Report

Ordinance



Community Development

222 N. Broadway Ave.
Shawnee, OK 74801
ShawneeOK.org

Date: March 7, 2022
To: City Commission
From: Rian Harkins, Community Development Director
Subject: Public hearing and consideration of a request for a Conditional Use Permit (CUP) for a crematorium at 603 W. Independence Street.
Case No. CUP02-22,
Applicant: Todd Tramel, AE Funeral Services, LLC

Background: The subject property is located at 603 W. Independence Street and contains a commercial business, AE Funeral Services, LLC. The property is zoned C-3 (Highway Commercial District). A Conditional Use Permit (CUP) allows for constructing a crematorium in the existing building.

In the Code, Section 22-331. Table 22-331. Permitted uses in Commercial Zoning Districts. The table indicates that in zoning district C-3, the cremation facilities use "is permitted subject to acquiring a conditional use permit (CUP)."

Planning staff recommended approval of Case No. CUP02-22 to the Planning Commission with the following conditions:

- Compliance with the Oklahoma Funeral Licensing Act and all related regulations is required.
- A building permit shall be issued before installing cremation facilities in the existing structure.
- Before functioning as a crematorium, the construction must be inspected and receive final approval from the City's Building Inspectors, including a Certificate of Occupancy.

Planning Commission recommended **Approval** of the application CUP02-22 with conditions at its regular March 2, 2022 meeting.

Attachment: Application and supporting documents

Recommendation: Staff recommends approval based upon the recommendation of the Planning Commission and conditions outlined in this report.



Planning Commission Meeting – 03.2.2022 – City of Shawnee, Oklahoma

Staff Report | CUP02-22 | 603 W. Independence St.

To: Shawnee Planning Commission

From: Rachel Clyne, City Planner

Date: February 18, 2022

Subject: CUP01-22 – Staff Report - Public hearing and consideration of a request for a Conditional Use Permit (CUP) for a crematorium at 603 W. Independence Street.

Background

The subject property is located at 603 W. Independence Street and contains a commercial business, AE Funeral Services, LLC. The property is zoned C-3 (Highway Commercial District). A Conditional Use Permit (CUP) allows for constructing a crematorium in the existing building. The applicant for this CUP request is Tod Tramel.

Discussion

Referencing the City of Shawnee Zoning Code (Code) DIVISION 14. – Administration. Section 22-605. – Conditional Use Permit. *"The uses designated under the various districts herein as "conditional uses" are so classified because they could more intensely dominate the area in which they are located...."* The conditional uses shall be reviewed and authorized or rejected with or without special conditions placed on the project.

In the Code, Section 22-331. Table [22-331](#). Permitted uses in Commercial Zoning Districts. The table indicates that in zoning district C-3, the cremation facilities use "is permitted subject to acquiring a conditional use permit (CUP)."

Recommendation

Staff recommends that the Planning Commission recommend to the City Commission APPROVAL of CUP02-22, which is for a Conditional Use Permit (CUP) at 603 W. Independence Street, to allow the construction of a crematorium inside the existing commercial structure with the following conditions.

- Compliance with the Oklahoma Funeral Licensing Act and all related regulations is required.
- A building permit shall be issued before installing cremation facilities in the existing structure.
- Before functioning as a crematorium, the construction must be inspected and receive final approval from the City's Building Inspectors, including a Certificate of Occupancy.

This Conditional Use Permit (CUP) application will be heard at the City Commission meeting on Monday, March 21, 2022, at 6:00 pm.

PLANNING COMMISSION APPLICATION



City of Shawnee Planning Department

222 N. Broadway
Shawnee, OK 74801
(405) 878-1616 Fax (405) 878-1587
www.ShawneeOK.org

For Office Use Only

Case Number: _____

Project Number : _____

Date Filed: _____

Planning Commission Secretary

REQUEST:

____ Rezoning
☒ Conditional Use Permit

____ Rezoning w/Conditional Use Permit
____ Planned Unit Development

I, the undersigned, do hereby respectfully make application and petition to the City Commission to amend the zoning map, and to change the zoning district of the Shawnee area, from _____ District to _____ District, as hereinafter requested, and in support of this application, the following facts are shown:

PROPERTY LOCATION (STREET ADDRESS): 603 W. Independence St.; Shawnee, Oklahoma 74804

LEGAL DESCRIPTION: Lot Two (2), Block One (1), SHAWNEE INDUSTRIAL PARK ADDITION, to the City of Shawnee, Pottawatomie County, Oklahoma

PROPERTY OWNER (S): Mark W. Sehorn

PROPERTY AGENT (APPLICANT): AE Funeral Services LLC (Donald Todd Tramel) Owner

APPLICANT'S ADDRESS: 603 W. Independence Street

CITY: Shawnee **STATE:** Oklahoma **ZIP:** 74804

EMAIL ADDRESS: aefuneralservices@gmail.com

TELEPHONE NUMBER: (405) 915-0160 **CONTACT NUMBER:** (405) 795-3138

DIMENSIONS OF PROPERTY: **AREA:** 8160 SQFT **WIDTH:** 48 FT
LENGTH: 170FT **FRONTAGE:** 90FT

CURRENT ZONING: C3 **CURRENT USE:** Funeral Home

PROPOSED ZONING: Conditional Use Permit **PROPOSED USE:** Addition of a Crematory to current building

With the filing of this application, I acknowledge that I have been informed of off-street parking, fencing and paving requirements in regard to the zoning I have requested as witnessed by my signature.

COMPLETED APPLICATION AND ALL CORRESPONDING DOCUMENTS MUST BE RECEIVED 30 DAYS PRIOR TO MEETING TO MAKE THE AGENDA.

SIGNATURE OF APPLICANT

FOR STAFF USE ONLY

REZONING &/OR C.U.P FEE \$ 280.00

RECEIPT NO. _____

PLANNED UNIT DEVELOPMENT FEE \$ 550.00

NOTIFICATION SIGN \$ 50.00

PLANNING COMMISSION ACTION: _____ **DATE:** _____

CITY COMMISSION ACTION: _____ **DATE:** _____

PLACE ON ZONING MAP: _____ **ORDINANCE NO.:** _____

Affidavit

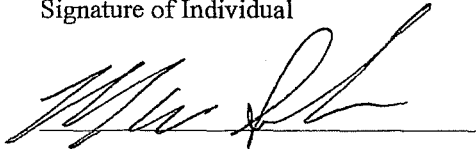
State of Oklahoma

County of Pottawatomie

I Mark W. Sehorn, property owner of 603 W. Independence St., Shawnee, Oklahoma 74804 do hereby grant permission to the current tenants AE Funeral Services LLC located at 603 W. Independence St.; Shawnee, Oklahoma 74804 to file for a "Conditional Use Permit" through the City of Shawnee, Oklahoma for the addition of a human crematory.

I hereby state that the information above is true, to the best of my knowledge. I also confirm that the information here is both accurate and complete, and relevant information has not been omitted.

Signature of Individual



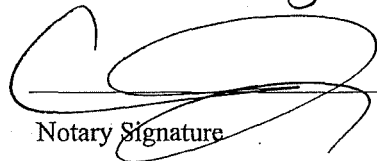
Date

1-27-2022

State of Oklahoma

County of Pottawatomie

This instrument was signed and sworn before me on this 27th day of January, 2022
by Mark W. Sehorn.


Notary Signature

(Seal)



Candace Jennings

Notary Printed Name

My Commission expires: Nov. 15, 2023

AE Funeral Services Synopsis

Over the past two years our world has been greatly impacted by the unexpected COVID19 pandemic and the affects it has had on the death industry. Overall death rates have increased nation wide with Oklahoma trending in the same direction. As traditional ground burial has become less desirable, the overwhelming desire of many families has become cremation. As with many trends in the United States, the cremation movement started on the east and west coasts but has steadily moved inward to the central region of our country to include our home state of Oklahoma and specifically our hometown of Shawnee and the surrounding communities. According to the Cremation Association of North America, the current cremation rates show that cremation is the chosen type of disposition with 56.1% of American families and Oklahoma's rate falls in line with the national average. Furthermore, these rates are much higher in metropolitan areas. Most projections believe cremation trends will cap off within the next twenty years around the 90% mark, making cremation the predominant disposition option for American families. Currently, we do not believe there to be an operating crematory in the Shawnee area or Pottawatomie County. This leaves many families choosing other locations that own and operate their own crematory outside of our town, or their loved ones being transported to facilities in Oklahoma City, Tulsa or other out of area communities. In addition, the increased call volume due to the pandemic has caused delays which do not allow us to provide the type of customer services that our families and community are entitled to. As a locally owned and operated business that places ministering to families first and foremost, owning and operating our own crematory will allow us to provide local services with the highest level of customer service all while controlling and offering economical prices for the Shawnee community and surrounding areas.

Attached you will find information on the newest state of the art type retort we plan on purchasing. As we explored options, we sought out an American made, energy efficient, low emissions machine which will meet the demands of our business both today and in the future.

We look forward to being a part of and serving this community for years to come.

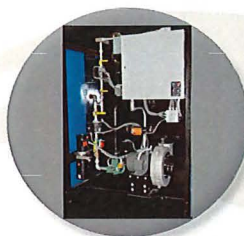
Kindest regards,

AE Funeral Services



The "Classic PLUS" is U.S. Cremation Equipment's newest addition to its All-Star lineup of human cremators. This user-friendly, high-performance, mid-size unit substantially improves combustion efficiency through the addition of roof arch air ports and an enlarged pollution control chamber. The result is increased daily throughput, faster cremation cycles and lower fuel consumption.

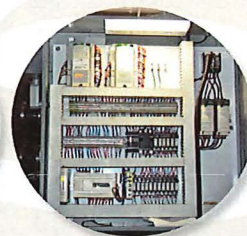
STANDARD FEATURES OF THE CLASSIC PLUS



REAR COMPARTMENT



TOUCH SCREEN



CONTROL PANEL

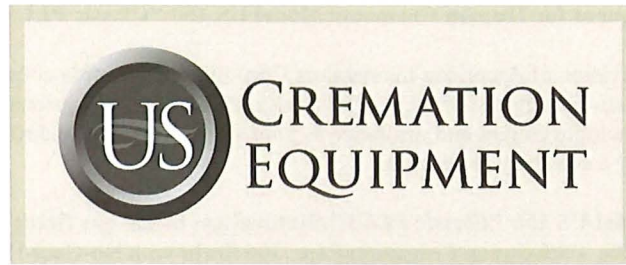
Equipped with a 46 inch-wide primary chamber the PLUS is capable of completing a cremation every 75 to 90 minutes when operated in a production mode and can accommodate cases up to 1000 pounds. As with all Classic models the PLUS has been tested for safety and listed by Underwriters Laboratories, Inc. (UL) and requires no extended cool-down beaten cremations.

- **Primary Chamber** – 46" wide opening for easy loading of large and obese cases.
- **View Port** – Enables Operator to safely observe each stage of the process.
- **10-inch Color Touch Screen** – Each stage of the process along with various screens indicating time, chamber temperatures, air settings and other functions.
- **Rear Compartment** – Virtually all major components are housed in the rear compartment for easy access when performing service and routine maintenance.
- **Fully Automatic** – Programmable Logic Controller (PLC) controls each stage of the process from start to finish.
- **Remote Monitoring** – Access through an Ethernet connection is standard for the PLUS

The Classic PLUS is the mid-size cremator of choice. Give us a call and we'll put you in touch with the people who use our product every day. Contact the cremation professionals, 321.282.7357.

Assistance is always a phone call away.





Equipment Proposal

Valid Through December 22, 2021

Human Cremator Model US 150 *Classic Plus*

1000 lb. Capacity • 46" Wide Chamber

AE Funeral Services

**603 W Independence St.
Shawnee, OK 74804**

Prepared by:

Nathan Blackstock

U.S. CREMATION EQUIPMENT

October 22, 2021

Re: Proposal/Purchase Agreement for Human Cremator Model US 150 "Classic PLUS" - UL Listed

U. S. Cremation Equipment, a division of American Incinerators Corporation, a Florida corporation is pleased to submit this proposal to supply One (1) Human Cremator Model US 150 "Classic PLUS" including stacking and ancillary equipment as outlined below. This proposal includes freight and insurance to your facility, start-up and training in the operation and maintenance of the equipment by a company technician.

One (1) Human Cremator Model US 150 "Classic PLUS" (Natural gas or LP gas fired)

- Maximum Load: 1000 lbs. - Maximum Cremation Rate: 300 lbs/hr with No-Cool-Down operation
- Powder Coat Exterior Finish with Stainless Steel Trim
- Power Charging Door with Safe Dual Hydraulic Seal system
- Primary and Secondary Chamber View Ports
- Primary & Secondary Chamber Temperature Displays
- 8 Feet (2.4m) Refractory Lined Stack (Two 4 Foot Sections) with Rain Collar
- 3000° F Castable Refractory "Hot Hearth"
- Refractory Lined Draft Inducer
- 5 HP Combustion Air Blower
- 2,000,000 BTU Secondary Burner
- 1,000,000 BTU Cremation Burner
- Burner Flame Safeguard with Ultra-Violet Flame Detector (Both Burners)
- Environmental Pollutant Control System (After-Burner) and Opacity Sensor
- Operating (Clean-Out) Tools – Brushes & Rakes and Trigger Hand Magnet - Starter Supplies
- Installation manual and Operating & Maintenance Manual

	Sub Total	\$ [REDACTED]
• PLC Based Operating System with 6" Color Touch Screen Interface		[REDACTED]
• Dual Pen Temperature Chart Recorder (OK State Requirement)	\$	[REDACTED]
• US300PS Processing Station	\$	[REDACTED]
• US1000HLB Battery Lift Table	\$	[REDACTED]
• Start-Up & Training		[REDACTED]
• Preparation of State Air Permit Forms		[REDACTED]
• Freight (Current Rate To Shawnee, OK)	\$	[REDACTED]
	Total Contract Price	\$ [REDACTED]

Additional Costs if Applicable:

Single Phase Electrical Set Up	\$ [REDACTED]
Single Pen Temperature Chart Recorder	\$ [REDACTED]
Dual Pen Temperature Chart Recorder	\$ [REDACTED]
Strip Machine for Low Entrance Height	\$ [REDACTED]

Ancillary Equipment Pricing:

US3000PPC Processing and Packaging Ctr.	\$ [REDACTED]
US300PS Processing Station	\$ [REDACTED]
US30SSP Processor	\$ [REDACTED]
US1000HL Lift Table	\$ [REDACTED]
US1000HLB Battery Table	\$ [REDACTED]
US1000HLBS Battery Table w/ Scale	\$ [REDACTED]

Important Notes:

1. Additional stack required beyond the included standard 8-Ft length, will be invoiced at \$300.00 per linear foot.
2. Freight estimate based on quotes received on date of this proposal. Customer will be billed/credited per actual cost.
3. Starter supplies (human): 1 box Temporary Containers, 1 box Cardboard Rollers, 100 Stainless Steel ID Tags.



For more information

Community Development **405-878-1672**
Annex Building
222 N. Broadway Avenue
Shawnee, OK



PUBLIC HEARING

Planning Commission

Wednesday, March 2, 2022

City Hall at 16 W. 9th Street, Commission Chambers
1:30 PM

City Commission

Monday, March 21, 2022

City Hall at 16 W. 9th Street, Commission Chambers
6:00 PM

Project Information

Request: Request for a Conditional Use Permit (CUP) for a crematorium installed on site.

Applicants: Todd Tramel for AE Funeral Services, LLC

Location: 603 W. Independence Street

Case #: CUP02-22



Frequently Asked Questions

What is a Conditional Use Permit (CUP)?

A Conditional Use Permit (CUP) is a request for a particular use that has been classified in the Zoning Code as requiring a CUP. These uses require a thorough review because some uses could more intensely affect the area in which it is located.

Why did I receive a letter?

You own property within 300 feet of the subject property.

How do I make comment on the request?

Try to attend the public hearing if you are able. Staff will also accept written comments for those who cannot attend.

What if I have questions?

Call the Community Development Dept. at 405-878-1672 or contact the City Planner at rachel.clyne@shawneeok.org.

What if I cannot attend the hearing?

Staff will accept written comments. You may also have a neighbor or friend attend the hearing to represent your interests at the meeting.

How will this request affect me?

Every property is different. Contact the Community Development Department for more information if you have concerns about any impact on you.

I am not in favor of the request, what do I do?

Attend the meetings or provide written comments if you cannot attend. Property owners within 300 feet of the subject property may also prepare a protest petition. Staff can supply

Legal Description:

Lot Two (2), Block One (1), Shawnee Industrial Park Addition

CUP02-22

ORDINANCE NO. _____

AN ORDINANCE CONCERNING THE ZONING CLASSIFICATION OF THE FOLLOWING DESCRIBED PROPERTY LOCATED WITHIN THE CORPORATE LIMITS OF THE CITY OF SHAWNEE, POTTAWATOMIE COUNTY, OKLAHOMA, TO-WIT: LOT TWO (2), BLOCK ONE (1), SHAWNEE INDUSTRIAL PARK ADDITION; FROM ZONING CLASSIFICATION C-3 (HIGHWAY COMMERCIAL DISTRICT) TO C-3 (HIGHWAY COMMERCIAL DISTRICT) WITH A CONDITIONAL USE PERMIT (CUP) AND AMENDING THE OFFICIAL ZONING MAP OF THE CITY OF SHAWNEE ACCORDINGLY.

WHEREAS, pursuant to notice duly given as required by law, a public hearing conducted by the Board of Commissioners of the City of Shawnee, Oklahoma on the 21st day of March, 2022, upon an application to rezone certain properties located in the City of Shawnee, Oklahoma, from zoning classification C-3 (Highway Commercial District) to C-3 (Highway Commercial District) with a Conditional Use Permit (CUP).

WHEREAS, the Planning Commission of the City of Shawnee has conducted one or more public hearings on said application pursuant to notice as required by law and has submitted its final report and recommendation upon said application to the Board of Commissioners; and,

WHEREAS, it appears to be in the best interest of the City of Shawnee and the inhabitants thereof for said properties to be rezoned to C-3 (Highway Commercial District) with a Conditional Use Permit (CUP).

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF COMMISSIONERS OF THE CITY OF SHAWNEE, OKLAHOMA:

SECTION 1: That the following described property located in the City of Shawnee, Oklahoma, to-wit: LOT TWO (2), BLOCK ONE (1), SHAWNEE INDUSTRIAL PARK ADDITION; FROM ZONING CLASSIFICATION C-3 (HIGHWAY COMMERCIAL DISTRICT) TO C-3 (HIGHWAY COMMERCIAL DISTRICT) WITH A CONDITIONAL USE PERMIT (CUP) AND AMENDING THE OFFICIAL ZONING MAP OF THE CITY OF SHAWNEE ACCORDINGLY.

PASSED AND APPROVED this ____ day of _____, 2022.

(SEAL)
ATTEST:

ED BOLT, MAYOR

LISA LASYONE, CMC, CITY CLERK

Approved as to form and legality this ____ day of _____, 2022.

JOSEPH M. VORNDRAN,
CITY ATTORNEY

Regular Board of Commissioners

9.

Meeting Date: 03/21/2022

RZ04-22

Submitted By: Kacie Eck, City Clerk

Department: City Clerk

Information

Title of Item for Agenda

Public hearing and consideration of an ordinance to rezone property located near East 45th Street and Sydney Drive from R-1 (Single Family Residential District) to R-3 (Multifamily Residential District). Case No. RZ04-22, Applicant: Brenda Wyatt.

Attachments

Staff Report

Ordinance



Community Development

222 N. Broadway Ave.
Shawnee, OK 74801
ShawneeOK.org

Date: March 7, 2022
To: City Commission
From: Rian Harkins, Community Development Director
Subject: Public hearing and consideration of a request to rezone property located near E. 45th Street and Sydney Drive from R-1 (Single-Family Residential District) to R-3 (Multifamily Residential District).
Case No. RZ04-22
Applicant: Brenda Wyatt

Background: The subject property is located near E. 45th Street and Sydney Drive. The parcel is ± 1.8 acres and is vacant. This application requests the subject property be rezoned from R-1 (Single-Family Residential District) to R-3 (Multifamily Residential District).

Per 11 O.S. 43-106 and City of Shawnee Zoning Code Sec. 22-645, a notice of public hearing was published and posted for this rezoning request. Typically, notification of a public hearing to property owners is 300' from the perimeter of the subject property; however, a request for multifamily rezoning requires an increase to 1320' for notification.

The 2040 Comprehensive Plan Future Land Use Map (FLUM) indicates that the subject property has the Medium Density Residential land use designation, which is compatible with R-3 zoning.

Planning Commission recommended **Approval** of the application RZ04-22 at its regular March 2, 2022 meeting.

Attachment: Application and supporting documents

Recommendation: Planning staff recommends approval of Case No. RZ04-22 to the City Commission based on the factors outlined in the staff report and the recommendation of the Planning Commission.



Planning Commission Meeting – 03.02.2022 – City of Shawnee, Oklahoma

Staff Report | Rezoning Application RZ04-22 | near E. 45th Street and Sydney Drive

To: Shawnee Planning Commission

From: Rachel Clyne, City Planner

Date: February 23, 2022

Subject: RZ04-22 – Staff Report - Public hearing and consideration of a request to rezone property located near E. 45th Street and Sydney Drive from R-1 (Single-Family Residential District) to R-3 (Multifamily Residential District).

Background

The subject property is located near E. 45th Street and Sydney Drive. The parcel is ±1.8 acres and is vacant. This application requests the subject property be rezoned from R-1 (Single-Family Residential District) to R-3 (Multifamily Residential District). Adjacent to the property is a similar-sized parcel that is zoned RE (Residential Estate District). Further east and north parcels are zoned R-1 (Single-Family Residential District). To the south, the zoning district is C-2 (Limited Office District). Directly west of the property is land zoned R-1 (Single-Family Residential District).

Discussion

Referencing the City of Shawnee Zoning Code (Code) DIVISION 15. - Amendments; Procedures. Section 22-645. – Planning commission recommendation required. This section gives authority to the Planning Commission to make changes (amendments) to the official Zoning Map. *“...be amended, supplemented, changed, modified, or repealed by ordinance, but no change shall be made until the planning commission, after notice and public hearing, files with the city commission a report and recommendation on the proposed change.”*

Staff completed the required public hearing notifications for this application. The typical distance for notification of a public hearing is 300' from the perimeter of the subject property. When the rezoning request is for a Multifamily Residential district, notice is extended to 1320' from the property borders. The 2040 Comprehensive Plan Future Land Use Map (FLUM) indicates that the

subject property has the Medium Density Residential land use designation. Medium Density Residential designation is compatible with R-3 zoning.

Recommendation

Staff recommends that the Planning Commission recommend to the City Commission APPROVAL of RZ04-22 a request to rezone property located near E. 45th Street and Sydney Drive from R-1 (Single-Family Residential District) to R-3 (Multifamily Residential District).

This rezoning application will be heard at the City Commission meeting on Monday, March 21, 2022, at 6:00 pm.

2/1/22 Admized with
contact w/ # for
mailings

PLANNING COMMISSION APPLICATION



City of Shawnee Planning Department

222 N. Broadway
Shawnee, OK 74801
(405) 878-1616 Fax (405) 878-1587
www.ShawneeOK.org

For Office Use Only	
Case Number:	<u>RZ04-22</u>
Project Number:	<u>Salazar 45th St.</u>
Date Filed:	<u>1/31/22</u>
<u>RC</u> Planning Commission Secretary	

REQUEST:

☒ Rezoning
☐ Conditional Use Permit
☐ Rezoning w/Conditional Use Permit
☐ Planned Unit Development

I, the undersigned, do hereby respectfully make application and petition to the City Commission to amend the zoning map, and to change the zoning district of the Shawnee area, from R-1 Single Family Residential District to R-3 Multifamily Residential District, as hereinafter requested, and in support of this application, the following facts are shown:

PROPERTY LOCATION (STREET ADDRESS): E 45th Street & Sydney Drive

LEGAL DESCRIPTION: (See attached documents)

PROPERTY OWNER (S): Mike Salazar

PROPERTY AGENT (APPLICANT): Brenda Wyatt

APPLICANT'S ADDRESS: 209 E Main St - Yukon, OK 73099

CITY: Yukon **STATE:** Oklahoma **ZIP:** 73099

EMAIL ADDRESS: bwyatt@salazarroofing.com

TELEPHONE NUMBER: (405) 350.6558 **CONTACT NUMBER:** (405) 350.6558

DIMENSIONS OF PROPERTY: AREA: 80,816 s.f. or 1.86 ac. WIDTH: ~ 132.89 feet
LENGTH: ~ 625.40 feet FRONTAGE: 625.30 feet

CURRENT ZONING: R-1 Single Family Residential **CURRENT USE:** Single Family Housing

PROPOSED ZONING: R-3 Multifamily Residential **PROPOSED USE:** Multifamily Housing

With the filing of this application, I acknowledge that I have been informed of off-street parking, fencing and paving requirements in regard to the zoning I have requested as witnessed by my signature.

COMPLETED APPLICATION AND ALL CORRESPONDING DOCUMENTS MUST BE RECEIVED 30 DAYS PRIOR TO MEETING TO MAKE THE AGENDA.

Brenda Wyatt
SIGNATURE OF APPLICANT

FOR STAFF USE ONLY

REZONING &/OR C.U.P FEE \$ 280.00
RECEIPT NO. _____

PLANNED UNIT DEVELOPMENT FEE \$ 550.00
NOTIFICATION SIGN \$ 50.00

PLANNING COMMISSION ACTION: _____ **DATE:** _____

CITY COMMISSION ACTION: _____ **DATE:** _____

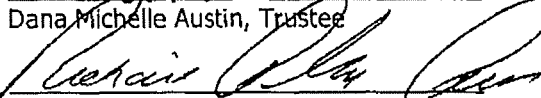
PLACE ON ZONING MAP: _____ **ORDINANCE NO.:** _____

TO HAVE AND TO HOLD said described premises unto the Grantee, and to the heirs, successors and assigns, forever, free, clear and discharged of and from all former grants, charges, taxes, judgments, mortgages and other liens and encumbrances of whatsoever nature.

Signed and delivered this **July 06, 2018**.

Dana Michelle Austin and Richard Allen Austin,
Trustees of the Austin 2008 Revocable Trust


Dana Michelle Austin, Trustee


Richard Allen Austin, Trustee

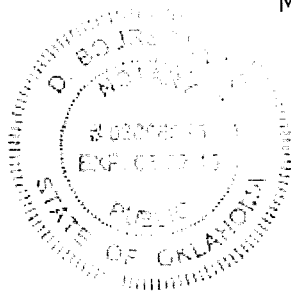
STATE OF **Oklahoma** }
COUNTY OF **Pottawatomie** } **SS.**

This Instrument was acknowledged before me on **July 06, 2018**, by **Richard Allen Austin and Dana Michelle Austin** as **Trustees** of , on behalf of **Dana Michelle Austin and Richard Allen Austin, Trustees of the Austin 2008 Revocable Trust**.


NOTARY PUBLIC **D. Bourbonnais**

My Commission Expires: **5/2/2019**

Mail Tax Statements To:



Surveyor's Notes

- The survey correctly shows the location of buildings, structures and other improvements situated on the subject property;
- Except as shown, there are no encroachments onto adjoining properties, streets or alleys by buildings, structures or other improvements, and no encroachments onto said property by buildings, structures or other improvements situated on adjoining properties;
- The subject property is located within an area having a Zone Designation, Zone X, areas of minimal flood hazard, by the Secretary of Housing and Urban Development, on Flood Insurance Rate Map No. 40125C0070 J, with an Effective Date of May 16, 2019, for Community Number 400178 in the City of Shawnee, Pottawatomie County, Oklahoma, which is the current Flood Insurance Rate Map for the subject property.
- The subject property has direct physical access to East 45th Street a public street or highway;
- This Survey meets the requirements of the Oklahoma Minimum Standards for the Practice of Land Surveying which was adopted by the Board of Registration for Professional Engineers and Land Surveyors September 14, 2018.
- Notes corresponding to Schedule "B-II" below only apply to the subject property shown hereon.

Notes Corresponding to Schedule "B-II"

- Statutory right-of-way along all section lines. This item is plotted and affects the subject property.
- Right-of-Way in favor of Stanolind Pipe Line Company, recorded Book 187, Page 291 and Assignment in Book 300, Page 302. This item is not plotted and affects the subject property because it is blanket in nature.
- Right-of-Way in favor of Stanolind Pipe Line Company, recorded Book 193, Page 169. This item is not plotted and affects the subject property because it is blanket in nature.
- Right-of-Way in favor of Oklahoma Natural Gas Company, recorded Book 204, Page 340. This item is not plotted and does not affect the subject property.
- Easement in favor of State of Oklahoma recorded Book 230, page 187; Book 237, Page 239 and Book 165, Page 51. This item is not plotted and does not affect the subject property.
- Right-of-Way in favor of Stanolind Pipe Line Company, recorded Book 193, Page 170 and Assignment in Book 3002, Page 302. This item is not plotted and affects the subject property because it is blanket in nature.
- Right-of-Way in favor of Oklahoma Natural Gas Company, recorded Book 201, Page 119. This item affects the south portion of the subject property and is not plotted because the exact location of easement is not provided in the recorded instrument.
- Right-of-Way in favor of Stanolind Pipe Line Company, recorded Book 225, Page 306 and Assignment in Book 3002, Page 302. This item is not plotted and affects the subject property because it is blanket in nature.
- Right-of-Way in favor of Gulf Oil Corporation, recorded Book 261, Page 8. This item is not plotted and does not affect the subject property.
- Dedication Deed for highway purposes in favor of State of Oklahoma, recorded Book 164, Page 106. This item is not plotted and does not affect the subject property.
- Right of Ways and Utility Easements recorded as Instrument No. 201700004875. This item is plotted and affects the subject property.
- Easement in favor of State of Oklahoma recorded Book 165, Page 553. This item is not plotted and does not affect the subject property.
- Easement in favor of Oklahoma Natural Gas Company recorded Book 186, Page 689. This item affects the subject property and is not plotted because the exact location is not provided in the recorded instrument.
- Easement in favor of Oklahoma Gas and Electric Company recorded Book 892, Page 476. This item is not plotted and does not affect the subject property.
- Easement in favor of City of Shawnee recorded Book 731, Page 63 and Book 1670, page 92. This item is not plotted and does not affect the subject property.



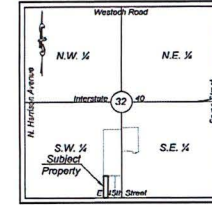
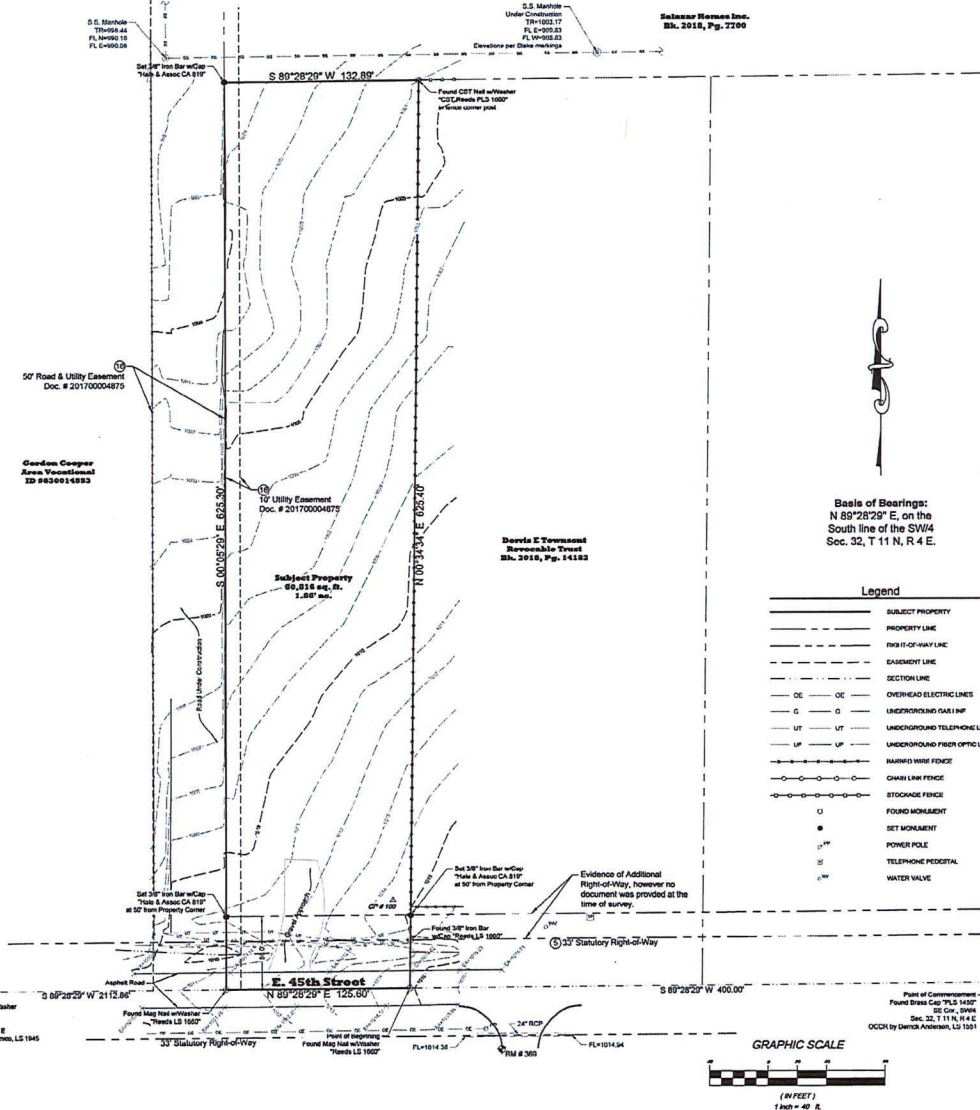
THE UTILITIES ARE SHOWN ON THIS DRAWING WERE DEVELOPED FROM THE INFORMATION AVAILABLE. THIS IS NOT A GUARANTEE OR WARRANTY TO BE THE COMPLETE INVENTORY OF UTILITIES IN THIS AREA. IT IS THE CLIENT'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES WHETHER SHOWN OR NOT AND PROTECT AND UTILITIES FROM ANY DAMAGE.

ALTA/NSPS Land Title Survey

Part of the Southwest Quarter of

Section 32, Township 11 North, Range 4 East

City of Shawnee, Pottawatomie County, Oklahoma



Vicinity Map
Section 32, Township 11N, Range 4E
Not To Scale

Title Commitment

Commitment No.: 2325569-SH01
Effective Date: May 8, 2018 at 7:30 AM
First American Title Insurance Company
123 West Highland
Shawnee, Oklahoma 74801
Phone: (405) 275-0268
Fax: (866) 721-6217

Legal Description

A tract of land described as beginning 400.00 feet S89°28'29\"W of the Southeast corner of the Southwest Quarter (SE/4 SW/4) of Section Thirty-two (32), Township Eleven (11) North, Range Four (4) East of the Indian Meridian, Pottawatomie County, Oklahoma, thence N00°34'34\"E a distance of 625.40 feet; thence S89°28'29\"W a distance of 132.89 feet; thence S00°05'29\"E a distance of 625.30 feet to the South line of said SW/4; thence N89°28'29\"E along said South line a distance of 125.00 feet to the point of beginning.

Benchmark

- Control Point #100
Found 3/8\" Iron Bar Crafton Tull Control Cap located approximately 10.3\" North and 16\" West of the monument set at 50\" from the Southwest property corner.
Elev.=1014.47
- BM #363
Cut \"X\" on the corner of 6\" x 6\" box approximately 240.4\" West and 26.7\" South of the Southwest property corner.
Elev.=1010.35
- BM #309
Cut \"X\" on the Southwest South curb return at the property entrance on the South side of East 45th Street located approximately 41.4\" South and 62.8\" East of the Southwest property corner.
Elev.=1019.15

Surveyor's Certificate

To Salazar Homes, Inc., First American Title Insurance Company.

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 1, 2, 3, 4, 7(a), 8, 9, 11(a), and 13 of Table A thereof. The field work was completed on April 19, 2021.

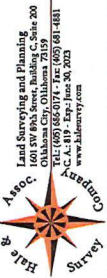
8-10-21
Date of Plat or Map

Curtis Lee Hale, LS 1084



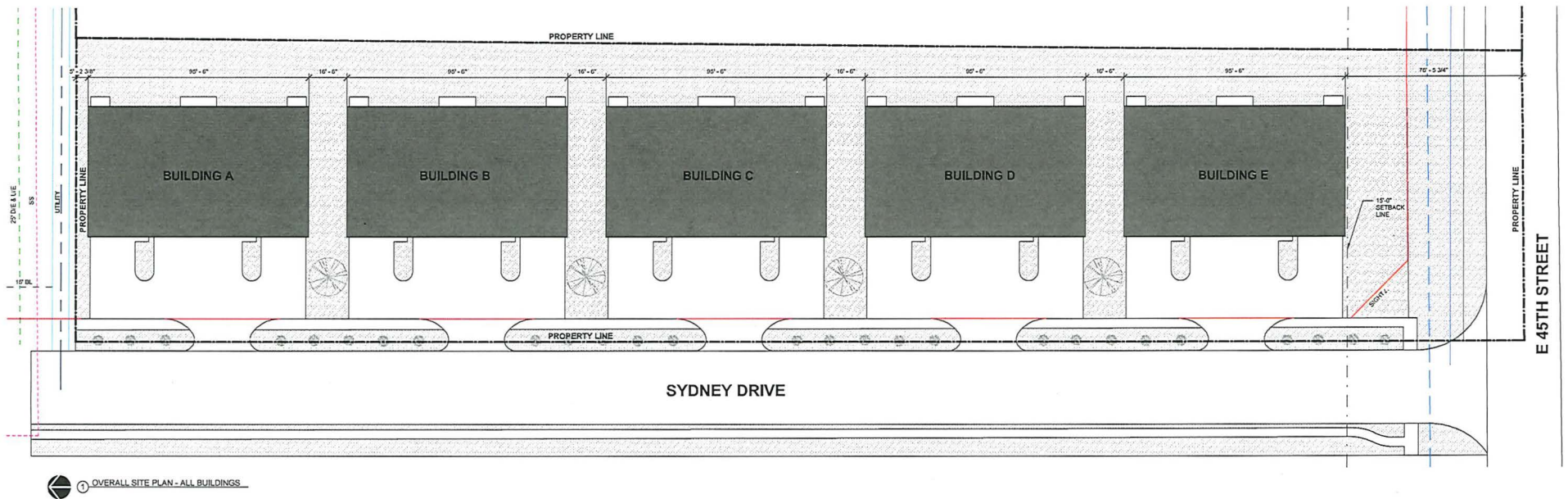
NO.	REVISION/ISSUE	DATE

Mitscher & Associates Architects
c/o Salazar Homes, Inc.
209 E. Main Street
Yukon, Oklahoma 73099



Part of the Southwest Quarter
Section 32, Township 11 North
Range 4 East of the Indian Meridian
Shawnee, Oklahoma
ALTA/NSPS Land Title Survey

PROJECT NO.	6645-1
FILE	6645-1.dwg
DATE	7/30/2021
DRAWN BY	JMS
CHECKED BY	CLH
FIELD CHECK	CH, ML
SHEET	1



Shawnee Lofts - Salazar Properties

Shawnee, OK 74804





PUBLIC HEARING

For more information

Community Development **405-878-1672**
Annex Building
222 N. Broadway Avenue
Shawnee, OK

Planning Commission

Wednesday, March 2, 2022

City Hall at 16 W. 9th Street, Commission Chambers
1:30 PM

City Commission

Monday, March 21, 2022

City Hall at 16 W. 9th Street, Commission Chambers
6:00 PM

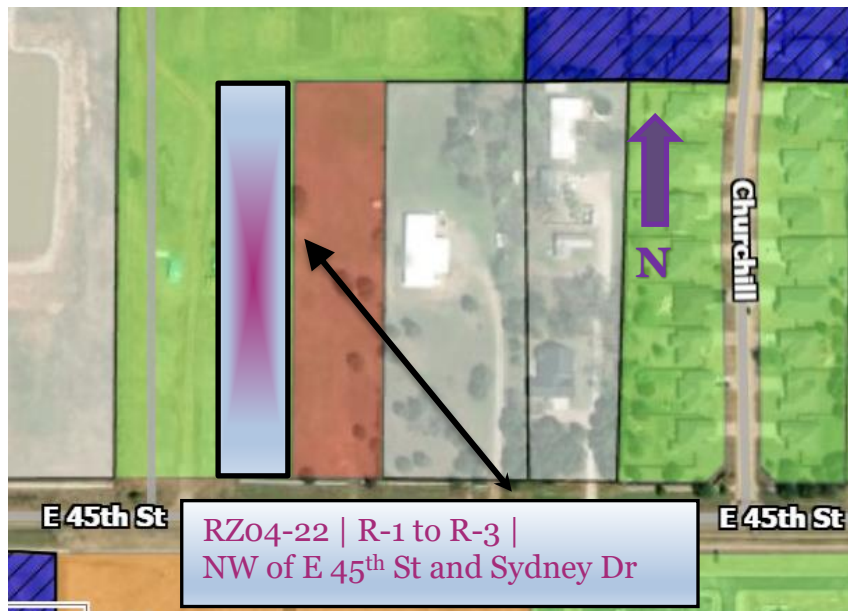
Project Information

Request: Request to rezone from R-1 (Single-Family Residential District) to R-3 (Multifamily Residential District)

Applicant: Brenda Wyatt

Location: Northwest corner of E. 45th Street and Sydney Drive

Case #: RZ04-22





Frequently Asked Questions

What is a Rezoning?

A Rezoning is a request to change the zoning of a property to a different zoning district. The zoning of a property determines many of the allowed uses available for development.

Why did I receive a letter?

You own property within 1,320 feet of the subject property.

How do I make comment on the request?

Try to attend the public hearing if you are able. Staff will also accept written comments for those who cannot attend.

What if I have questions?

Call the Community Development at 405-878-1672 or contact the City Planner at rachel.clyne@shawneeok.org.

What if I cannot attend the hearing?

Staff will accept written comments. You may also have a neighbor or friend attend the hearing to represent your interests at the meeting.

How will this request affect me?

Every property is different.

Contact the Community Development for more information if you have concerns about any impact on you.

I am not in favor of the request, what do I do?

Attend the meetings or provide written comments if you cannot attend. Property owners within 1,320 feet of the subject property may also prepare a protest petition. Staff can supply additional information about the protest petition requirements.

Legal Description:

A tract of land described as beginning 400.00 feet S89°28'29"W of the Southeast corner of the Southwest Quarter (SE/C SW/4) of Section Thirty-two (32), Township Eleven (11) North, Range Four (4), East of the Indian Meridian, Pottawatomie County, Oklahoma; thence N00°34'34"E a distance of 625.40 feet; Thence S89°28'29"W a distance of 132.89 feet; thence S00°05'29"E a distance of 625.30 feet to the South line of said SW/4; thence N89°28'29"E along said South line a distance of 125.00 feet to the point of beginning.

RZ04-22

ORDINANCE NO. _____

AN ORDINANCE CONCERNING THE ZONING CLASSIFICATION OF THE FOLLOWING DESCRIBED PROPERTY LOCATED WITHIN THE CORPORATE LIMITS OF THE CITY OF SHAWNEE, POTTAWATOMIE COUNTY, OKLAHOMA, TO-WIT: A TRACT OF LAND DESCRIBED AS BEGINNING 400.00 FEET S89°28'29"W OF THE SOUTHEAST CORNER OF THE SOUTHWEST QUARTER (SE/C SW/4) OF SECTION THIRTY-TWO (32), TOWNSHIP ELEVEN (11) NORTH, RANGE FOUR (4), EAST OF THE INDIAN MERIDIAN, POTTAWATOMIE COUNTY, OKLAHOMA; THENCE N00°34'34"E A DISTANCE OF 625.40 FEET; THENCE S89°28'29"W A DISTANCE OF 132.89 FEET; THENCE S00°05'29"E A DISTANCE OF 625.30 FEET TO THE SOUTH LINE OF SAID SW/4; THENCE N89°28'29"E ALONG SAID SOUTH LINE A DISTANCE OF 125.00 FEET TO THE POINT OF BEGINNING; FROM ZONING CLASSIFICATION R-1 (SINGLE FAMILY RESIDENTIAL DISTRICT) TO R-3 (MULTIFAMILY RESIDENTIAL DISTRICT) AND AMENDING THE OFFICIAL ZONING MAP OF THE CITY OF SHAWNEE ACCORDINGLY.

WHEREAS, pursuant to notice duly given as required by law, a public hearing conducted by the Board of Commissioners of the City of Shawnee, Oklahoma on the 21st day of March, 2022, upon an application to rezone certain properties located in the City of Shawnee, Oklahoma, from zoning classification R-1 (Single Family Residential District) to R-3 (Multifamily Residential District).

WHEREAS, the Planning Commission of the City of Shawnee has conducted one or more public hearings on said application pursuant to notice as required by law and has submitted its final report and recommendation upon said application to the Board of Commissioners; and,

WHEREAS, it appears to be in the best interest of the City of Shawnee and the inhabitants thereof for said properties to be rezoned to R-3 (Multifamily Residential District).

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF COMMISSIONERS OF THE CITY OF SHAWNEE, OKLAHOMA:

SECTION 1: That the following described property located in the City of Shawnee, Oklahoma, to-wit: A TRACT OF LAND DESCRIBED AS BEGINNING 400.00 FEET S89°28'29"W OF THE SOUTHEAST CORNER OF THE SOUTHWEST QUARTER (SE/C SW/4) OF SECTION THIRTY-TWO (32), TOWNSHIP ELEVEN (11) NORTH, RANGE FOUR (4), EAST OF THE INDIAN MERIDIAN, POTTAWATOMIE COUNTY, OKLAHOMA; THENCE N00°34'34"E A DISTANCE OF 625.40 FEET; THENCE S89°28'29"W A DISTANCE OF 132.89 FEET; THENCE S00°05'29"E A DISTANCE OF 625.30 FEET TO THE SOUTH LINE OF SAID SW/4; THENCE N89°28'29"E ALONG SAID SOUTH LINE A DISTANCE OF 125.00 FEET TO THE POINT OF BEGINNING; FROM ZONING CLASSIFICATION R-1 (SINGLE FAMILY RESIDENTIAL DISTRICT) TO R-3 (MULTIFAMILY RESIDENTIAL DISTRICT) AND AMENDING THE OFFICIAL ZONING MAP OF THE CITY OF SHAWNEE ACCORDINGLY.

PASSED AND APPROVED this ____ day of _____, 2022.

(SEAL)
ATTEST:

ED BOLT, MAYOR

LISA LASYONE, CMC, CITY CLERK

Approved as to form and legality this ____ day of _____, 2022.

JOSEPH M. VORNDRAN,
CITY ATTORNEY

Regular Board of Commissioners

10.

Meeting Date: 03/21/2022

Ordinance

Submitted By: Kacie Eck, City Clerk

Department: City Clerk

Information

Title of Item for Agenda

Consideration of an ordinance of the City of Shawnee, Oklahoma amending portions of Chapter 16 (Lakes), Article II (Twin Lakes) of the Shawnee Municipal Code; providing for severability, codification, and repealer; and declaring an emergency. *(Deferred from the March 7, 2022 City Commission meeting.)*

Attachments

Memo

Ordinance



City Attorney

130 N. Broadway Ave., Suite 100
Shawnee, OK 74801
ShawneeOK.org

Date: March 21, 2022
To: City Commission
From: Joe Vorndran, City Attorney
Subject: Twin Lakes – Watercraft Ordinance

Background: In August 2021, the City Commission authorized the creation of a Lake Advisory Committee to investigate and make recommendations regarding certain matters at the Shawnee Twin Lakes.

On February 7, 2022, the Committee presented its report to the City Commission. Included in the report was a draft ordinance which provided substantial updates to the Code of Ordinances relating to the Twin Lakes. Due to the complexity of the Committee's ordinance, City Staff has itemized the changes, providing for an incremental update to the Code. The first of the associated ordinance updates to be considered focused on watercraft regulations. The items addressed included:

- General Operation Requirements
- Sizes and Types of Watercrafts Permitted
- Prohibition of Watercraft Operation while Intoxicated
- Water Skiing Restrictions
- Operation of Personal Watercrafts
- Definitions Pertaining to Watercraft

The draft ordinance was brought to the February 22, 2022, meeting of the Board of Commissioners, at which time, the City Commission deferred the item until the following meeting. At the March 7, 2022 meeting, a further deferral was approved by the City Commission to provide more time for a review of potential overlap and/or conflict with State statute (74 O.S. 4200 et seq.).

Having completed this review, the ordinance update proposes to adopt the State statute, which addresses the above listed items, alongside Twin Lakes specific regulations and restrictions.

Financial Impact: None at this time.

Attachment: Ordinance.

Staff Recommendation: Approval of the item.

ORDINANCE NO. _____

AN ORDINANCE OF THE CITY OF SHAWNEE, OKLAHOMA CREATING, AMENDING, AND REPEALING PORTIONS OF CHAPTER 16 (LAKES), ARTICLE II (TWIN LAKES) OF THE SHAWNEE MUNICIPAL CODE; PROVIDING FOR SEVERABILITY, CODIFICATION, AND REPEALER; AND DECLARING AN EMERGENCY.

WHEREAS, from time to time the City Commission finds it necessary to review and modify ordinances to align them with the goals and interests of the citizens; and

WHEREAS, the City Commission has determined that such modification and amendment is necessary and in the best interest of the citizens of the City of Shawnee, and for the efficient operations of municipal governance.

BE IT ORDAINED BY THE CITY COMMISSION OF THE CITY OF SHAWNEE, OKLAHOMA:

SECTION 1. REPEALER. That Division 6 of Article II of Chapter 16 of the Code of the City of Shawnee, Oklahoma, Sections 16-216, 16-217, 16-218, 16-219, 16-220, 16-221, 16-222, 16-223, 16-224, and 16-225 are hereby repealed.

SECTION 2. CREATION. That Article II of Chapter 16 of the Code of the City of Shawnee, Oklahoma, Sections 16-226, 16-227, 16-228, and 16-229 are hereby created to read as follows:

§ 16-226. Oklahoma Boating Safety Regulation Act- Adoption.

A certain act, the Oklahoma Boating Safety Regulation Act, as amended and modified in 63 O.S. §§ 4200-4219 is hereby adopted. Such act shall be in full force and effect within the City to the same extent as if set forth in full in this Code; provided, however, that in the event of a conflict between any provision of such statute and any provision of the ordinances of the city, the latter shall govern.

§ 16-227. Kyle Williams Boating Safety Education Act- Adoption.

A certain act, the Kyle Williams Boating Safety Education Act, as amended and modified in 63 O.S. §§ 4231-4236 is hereby adopted. Such act shall be in full force and effect within the City to the same extent as if set forth in full in this Code; provided, however, that in the event of a conflict between any provision of such statute and any provision of the ordinances of the city, the latter shall govern.

§ 16-228. Sizes and types of Vessels.

(a) "Vessel" means every device, other than a seaplane on the water, used or capable of being used as a means of transportation on water.

(Reference 63 O.S. § 4002(38))

(b) No Vessel shall be operated or permitted to be used upon Twin Lakes Nos. 1 and 2 in excess of 8.5 feet wide and 30 feet in length.

(c) Manually powered Vessels such as kayaks, canoes, paddleboats, and other pedal-craft and paddle-craft are expressly permitted to be used upon Twin Lakes Nos. 1 and 2 and shall be subject to the requirements of this Chapter.

(d) All Vessels shall be subject to inspection by law enforcement officers, or any other person designated by the city manager or designee.

§ 16-229. Additional Restrictions.

(a) No houseboat shall be operated or permitted to be used on the waters of Twin Lakes Nos. 1 and 2, and no person shall be permitted to live in any boat operated upon the waters of the lakes.

- (b) Parasailing is prohibited on the waters of Twin Lakes Nos. 1 and 2. (Reference 63 O.S. § 4201(11))
- (c) Water skiing is prohibited on the waters of Twin Lakes No. 2.
- (d) No Personal Watercraft shall be operated or permitted to be used on the waters of Twin Lakes No. 2. (Reference 63 O.S. § 4201(14))

SECTION 3: REPEALER. All sections, subsections, clauses, and sentences of existing law in conflict with this ordinance are repealed.

SECTION 4: CODIFICATION. This Ordinance shall be codified in the Shawnee Municipal Code, and the codifier is authorized to set out the ordinance as appropriate.

SECTION 5: SEVERABILITY. The provisions of this ordinance are severable and, if any sentence, provision, or other part of this Ordinance shall be held invalid, the decision of the court so holding shall not affect or impair any of the remaining parts or provisions of this ordinance.

SECTION 6: EMERGENCY. It being immediately necessary for the preservation of the peace, health, safety, and public good of the City of Shawnee, Oklahoma and the inhabitants thereof that the provisions of this Ordinance be put into full force and effect, an emergency is hereby declared to exist, by reason whereof, this ordinance shall take effect and be in full force and effect after its passage, as provided by law.

PASSED AND APPROVED this ____ day of _____, 2022.

ED BOLT, MAYOR

ATTEST:
(SEAL)

LISA LASYONE, CMC, CITY CLERK

PASSED AND APPROVED and the emergency clause voted on separately this ____ day of _____, 2022.

ED BOLT, MAYOR

ATTEST:
(SEAL)

LISA LASYONE, CMC, CITY CLERK

Approved as to form and legality this ____ day of _____, 2022

JOSEPH M. VORNDRAN
CITY ATTORNEY

Regular Board of Commissioners

11.

Meeting Date: 03/21/2022

Budget Amendment

Submitted By: Kacie Eck, City Clerk

Department: City Clerk

Information

Title of Item for Agenda

Consideration of a budget amendment for Fund 106 Hotel/Motel Surcharge Fund to appropriate fund balance for payment on Pottawatomie County Historical Society Agreement – Third Year Annual Fee.

Attachments

Memo

Budget Amendment



Finance

16 W. 9th St.
Shawnee, OK 74801
ShawneeOK.org

Date: March 21, 2022
To: City Commission
From: Jacob Bussell, Assistant Finance Director
Subject: Consideration of budget amendments to appropriate funds for 3rd year annual fee on agreement with Pottawatomie County Historical Society.

Background: In March 2020, the City of Shawnee signed an agreement with the Pottawatomie County Historical Society (Museum) in order to promote and support tourism and benefit the local economy. The agreement states that the Museum will provide a tourist destination, furnish a full-time fundraising and marketing staff member, work toward self-sustainability, and provide and furnish tourism activities. In consideration for tourism activities provided, the City agreed to compensate the Museum with the following:

- A one-time lump sum payment of \$150,000 due upon execution of the agreement
- An annual fee of \$50,000 due by March 31, 2020
- An annual fee of \$40,000 due by March 31, 2021
- An annual fee of \$30,000 due by March 31, 2022
- An annual fee of \$20,000 due by March 31, 2023
- An annual fee of \$10,000 due by March 31, 2024

City staff is requesting that funds be appropriated to fulfil the contract obligation of paying the 3rd Annual Fee of \$30,000. The funding source used for these appropriations is fund balance which has a sufficient balance to cover the cost.

Financial Impact: See Budget Amendment Attached

Attachment: Amendment.

Staff Recommendation: Approval of the item.

Posted By _____ Date _____ BA# _____ Pkt.# _____

Regular Board of Commissioners

12. a.

Meeting Date: 03/21/2022

Bid Open

Submitted By: Kacie Eck, City Clerk

Department: City Clerk

Information

Title of Item for Agenda

Kids Space Park Improvements Project (Open)

Attachments

Advertisement

Plan Holders List

Specs

Addendum No. 1

Addendum No. 2

ADVERTISEMENT FOR BIDS

Kids Space Park Improvements Project

FOR

CITY OF SHAWNEE, OKLAHOMA

Separate sealed bids for the **Kids Space Park Improvements Project**, for the City of Shawnee, Oklahoma will be received by the City of Shawnee, Oklahoma at City Hall, 16 West 9th Street, Shawnee, Oklahoma 74801, until **4:00 P.M., March 21, 2022** for furnishing tools, materials and labor, and performing the work necessary to be done in the construction of the above.

All bids that have been duly received will be publicly opened and read aloud by the designated representative, in the Commission Chambers of the City of Shawnee, Oklahoma, at the time and date shown above.

The information for Bidders, Bid Forms, Contract, Plans, Specifications, Bond Forms and other Contract Documents (and addenda, if any) may be examined at the following locations:

1. City of Shawnee, Oklahoma, 16 West 9th Street, Shawnee, Oklahoma 74801
2. Bid News/iSqFt
3. Southwest Construction News
4. ePlan

Plans and Specifications for this project may be obtained from Planning Design Group through a digital download file. Download will contain PDF files of the plans and specifications.

Pre-Bid Conference: A **"MANDATORY"** Pre-Bid Conference will be held, March 10, 2022, at 10:00am, at the Shawnee Commission Chambers, 16 West 9th Street, Shawnee, Oklahoma 74801 which is a prequalification.

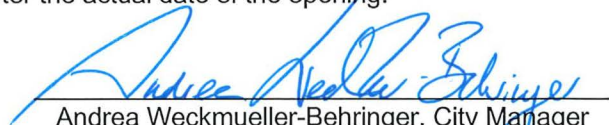
The Owner reserves the right to waive any informality or to reject any or all bids.

The sealed proposal of each bidder shall be accompanied by a Noncollusion Affidavit, Business Relationship Affidavit, Experience and Equipment Questionnaire and a Certified or Cashier's Check or Bidder's Surety Bond in the sum of five percent (5%) of the amount of the bid will be required from each bidder to be retained as liquidated damages in the event the successful bidder fails, neglects, or refuses to enter into said contract for the construction of said public improvements for said project, and furnish the necessary bonds within ten (10) days from and after the date the award is made.

Bids received more than ninety-six hours, excluding Saturdays, Sundays and holidays, before the time set for opening of bids, as well as bids received after the time set for opening of bids, will not be considered and will be returned unopened.

No bidder may withdraw his bid within sixty (60) days after the actual date of the opening.

February 21, 2022
Date


Andrea Weckmueller-Behringer, City Manager

Plan Holder's List			
CITY OF SHAWNEE - KID'S SPACE PARK IMPROVEMENTS			
	Company	Address	Contact Information
	SW Construction News	5031 South 33rd West Avenue, Suite #210 Tulsa, OK 74107 918-493-5066	Thressie Terrell thressie@swcnews.com
	(iSQft)	Construct Connect 30 Technology Parkway South Ste 100 Norcross, GA 30092	Nikki Diggs nikki.diggs@cmdgroup.com
	ePlan	1400 Forum Blvd. Suite 7B Columbia, MO 65203 Phone: (573)447-7130	Sharon Picard eplanadmin@eplanbidding.com
1	Downey Contracting, LLC	405-478-5277	Day Zimbelman dzimbelman@downeycontracting.com
2	Bruce Johnson Construction	405-922-5000	Bruce Johnson brucejohnsonconst@att.net
3	Lambert Construction	405-372-1444	Stephen Mitchell stephen@lambertconstructionco.com
4	Wynn Construction	405-753-1120	Derek Robbins bid@wynnconstruction.com
5	Rudy Construction	405-481-3117	Jacob Schooler jschooler@rudyconstruction.com
6	PTI Sports and Recreation	806-570-9829	Phil Guerra phil@ptiexperts.com
7	C4L	405-314-0802	Mike Young kirk@c4lokc.com
8	Shiloh Enterprises	405-341-5500	Steve Preston estimating@shiloh-inc.com
9	RJR Enterprises	479-936-1092	Ryan Brown ryanbrown@nwarjr.com
10	Foreverlawn	214-405-3096	Ross Spencer ross@tulsa.foreverlawn.com
11	Play By Design	918-809-2293	Cheryl Sumners cheryl@playbydesigninc.com
12	Oakley Fence Co.	405-372-6542	Doug Stover doug@oakleyfence.com
13	GameTime / CRI	620-440-9831	Justin Long justin@cunninghamrec.com
14	Happy Playgrounds	918-851-9518	Kelli Collins kellicolins@happyplaygrounds.com
15	ACS Playgrounds	405-406-9670	Bryan Montgomery bryanm@acsplay.com

**CONTRACT DOCUMENTS
AND
TECHNICAL SPECIFICATIONS**

FOR

KIDS SPACE PARK IMPROVEMENTS



**CITY OF SHAWNEE
Department of Engineering
Seth Barkhimer, Director**

Prepared By

Planning Design Group
5314 South Yale Ave, Suite 510
Tulsa, Oklahoma 74135
918/628-1255

**CONTRACT DOCUMENTS
AND
TECHNICAL SPECIFICATIONS**

FOR

Kids Space Park Improvements Project

FOR

THE CITY OF SHAWNEE

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TECHNICAL SPECIFICATIONS

ADVERTISEMENT FOR BIDS

Kids Space Park Improvements Project

FOR

CITY OF SHAWNEE, OKLAHOMA

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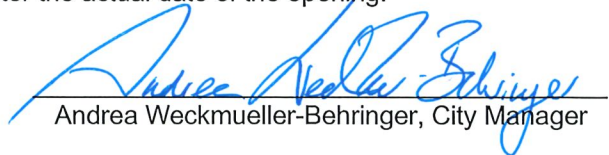
The Owner reserves the right to waive any informality or to reject any or all bids.

The sealed proposal of each bidder shall be accompanied by a Noncollusion Affidavit, Business Relationship Affidavit, Experience and Equipment Questionnaire and a Certified or Cashier's Check or Bidder's Surety Bond in the sum of five percent (5%) of the amount of the bid will be required from each bidder to be retained as liquidated damages in the event the successful bidder fails, neglects, or refuses to enter into said contract for the construction of said public improvements for said project, and furnish the necessary bonds within ten (10) days from and after the date the award is made.

Bids received more than ninety-six hours, excluding Saturdays, Sundays and holidays, before the time set for opening of bids, as well as bids received after the time set for opening of bids, will not be considered and will be returned unopened.

No bidder may withdraw his bid within sixty (60) days after the actual date of the opening.

February 21, 2022
Date


Andrea Weckmueller-Behringer, City Manager

INSTRUCTIONS TO BIDDERS

1. Receipt and Opening of Bids

The City of Shawnee (herein called the "Owner"), invites bids on the form attached hereto. All blanks must be appropriately filled in. Bids will be received by the Owner at the office of the City Clerk until **4:00 P.M., March 21, 2022**. The envelopes containing the bids must be sealed, addressed to the City of Shawnee, 16 West 9th Street, Shawnee, Oklahoma, and designated as Bid for the **Kids Space Park Improvements Project**. All bids that have been duly received will be publicly opened and read aloud by the City in the City Hall Commission Chambers of the City of Shawnee.

The Owner may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids. Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. The awarding of a contract to the lowest responsible bidder or bidders shall be made within sixty (60) days after the opening of bids unless the governing body of the awarding public agency, by formal recorded action and for good cause shown, provides for a reasonable extension of that period, which extension period shall not in any event exceed fifteen (15) days where only state or local funds are involved, or not to exceed ninety (90) days on any award of contract for the construction of a public improvement where funds are utilized which are furnished by an agency of the United States Government.

2. Pre-Bid Conference

A mandatory pre-bid conference for prospective bidders will be held on March 10, 2022, at 10:00 A.M., in the Commission Chambers, City Hall, 16 West 9th Street, Shawnee, Oklahoma 74801. The purpose of this conference is to afford the prospective bidders the opportunity to ask questions relative to the project. The fact that a prospective bidder does not choose to attend will in no way affect his bid and the City of Shawnee (Owner) will in no way be bound by any statement made at this conference.

3. Preparation of Bids

Each bid must be submitted in a sealed, opaque envelope bearing on the outside the name of the bidder, his address and the name of the project for which the bid is submitted. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed as specified in the bid form.

The following documents shall be submitted in the bid package:

- a. Proposal (including acknowledging of any/all addenda)
- b. Bid Bond
- c. Noncollusion Affidavit 74 92 85.22 (Bid)
- d. Nondiscrimination Certificate
- e. Anti-kickback Affidavit
- f. Business Relationships Affidavit

4. Subcontracts

The bidder is specifically advised that any person, firm or other party to whom it is proposed to award a subcontract under this contract must be acceptable to the Owner.

5. Telegraphic Modification

Shall not be accepted.

6. Method of Bidding

The Owner invites the following bid:

Completed Proposal Form for the Kids Space Park Improvements Project for the City of Shawnee.

7. Qualifications of Bidders

Each Bidder shall be prepared, as requested by the Owner, to present evidence of experience, qualifications and financial ability to execute the terms of the Bid / Contract Documents. In determining the lowest, qualified, and best responsible Bid, the following elements shall be considered:

- A. Whether the Contractor(s) maintains a permanent place of business.
- B. Whether the Contractor(s) and/or their subcontractor(s) has adequate staffing, manpower and equipment to do the Work promptly and properly.
- C. Whether the Contractor(s) has suitable financial ability to meet the obligations incidental to the Work.
- D. Whether the Contractor(s) and/or their Subcontractor(s) has appropriate training and technical experience.
- E. Whether the Contractor(s) and/or their subcontractor(s) has a past record appropriate to the responsibilities and scope of the project.
- F. The Contractor(s) project references.
- G. The Contractor(s) bonding capacity and status.
- H. The Contractor(s) and/or their subcontractor(s) ability, capacity, and skill to perform the level of service required.
- I. Whether the Contractor(s) and/or their subcontractor(s) can perform the scope of work and/or provide the service promptly or within the time specified, without delay or interference, including but not limited to, past experience with the Owner or any duly constituted authority thereof.
- J. The character, integrity, reputation, judgment, experience and efficiency of the Contractor(s).
- K. The quality of performance of previous contracts or services.
- L. The previous and existing compliance by the Contractor(s) and/or their Subcontractor(s) with any laws and ordinances (Federal, State and/or local) relating to the scope of work or level of services required.
- M. The quality, suitability, availability, and adaptability of the goods, products, supplies, equipment, or contractual services to the particular use required.
- N. The operating cost, maintenance requirements, and performance data of major items of materials and equipment proposed by the Bidder.
- O. The ability of the Contractor(s) and/or their subcontractor(s) to provide future maintenance and service for the use of the subject of the Contract.
- P. The complexity, number, and scope of conditions of the Contract.
- Q. The bidders conformance to the Bid / Contract Documents.
- R. The Bidder's warranties, bonds, terms, and conditions.
- S. Whether the bid complies with the specifications, drawings, and other requirements herein.

8. Execution of the Contract

- A. The Owner reserves the right to accept any bid or portions thereof, or to reject any and all Bids or portions thereof, to waive any and all informalities not involving price, time or changes in the scope of work and to negotiate contract terms with the successful Bidder, and the right to disregard all nonconforming, non-responsive, unbalanced, or conditional Bids. The Owner also reserves the right to reject the Bid of any Bidder if the Owner believes that it would be in their best interest.
- B. Upon the request of the Owner, a Bidder(s) whose Bid is under consideration for award of Contract shall submit promptly to the Owner, satisfactory evidence indicating the Bidder's financial resources, construction experience and organization available for the performance of the Contract and the name of any alternate subcontractor(s) proposed for Owner approval.
- C. Notwithstanding any delay in the preparation and execution of the formal Contract(s), each Bidder shall be prepared, upon written Notice of Award, to commence Work following the Owner's issuance of the Notice to Proceed.

9. Bid Security

Each bid must be accompanied by cash, certified check of the Bidder or a bid bond duly executed by

the Bidder as principal and having as surety thereon a surety company approved by the Owner, in the amount of five percent (5%) of the bid. Such cash, checks or bid bonds will be returned to all except the three lowest bidders within three (3) days after the opening of bids and the remaining cash, checks, or bid bonds will be returned promptly after the Owner and the accepted Bidder have executed the contract. The awarding of a contract to the lowest responsible bidder or bidders shall be made within sixty (60) days after the opening of bids unless the governing body of the awarding public agency, by formal recorded action and for good cause shown, provides for a reasonable extension of that period, which extension period shall not in any event exceed fifteen (15) days where only state or local funds are involved, or not to exceed ninety (90) days on any award of contract for the construction of a public improvement where funds are utilized which are furnished by an agency of the United States Government.

10. Liquidated Damages for Failure to Enter into Contract

The successful bidder, upon his failure or refusal to execute and deliver the contract and bonds required within ten (10) days after he has received notice of the acceptance of his bid, shall forfeit to the Owner, as liquidated damages for such failure or refusal, the security deposited with his bid.

11. Time of Completion and Liquidated Damages

Bidder must agree to commence work on or before a date to be specified in a written "Notice to Proceed" of the Owner and to fully complete the project within 300 consecutive calendar days thereafter. Bidder must also agree to pay liquidated damages for each consecutive calendar day thereafter as hereinafter provided in General Conditions 208.07.

12. Conditions of Work

Each bidder must inform himself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of his obligation to furnish all material and labor necessary to carry out the provisions of his contract. Insofar as possible, the contractor, in carrying out his work, must employ all methods or means as will not cause any interruptions of or interference with the work of any other contract.

13. Addenda and Interpretations

No interpretation of the meaning of the plans, specifications or other pre-bid documents will be made to any bidder orally.

- A. Should a Bidder find discrepancies in or omissions from the Bid Documents, or be in doubt as to their meaning or intent, he must notify and request a clarification from the Owner in writing. All interpretations and clarifications considered necessary by the Owner shall be issued to all Bidders of record as Addenda to the Bid Documents and shall become part of the Contract. All questions are to be received from the Bidders by March 16, 2022, by 5:00pm. Any questions received after this date, shall not be answered. The Owner shall not be responsible for oral clarification. All Addenda items issued during the time of bidding shall be covered in the Bid and acknowledged on the proposal.
- B. If any person contemplating submitting a Bid for the proposed Contract is in doubt as to the meaning of any part of the Contract Documents shall submit questions, in writing, to the Owner for clarification or interpretation. The Owner shall log this request, obtain the appropriate answer, and if necessary, issue a response in the form of an Addendum to all bidders of record. The Bidder shall submit all requests to the following person:

Mr. Geoff Evans
Planning Design Group
5314 South Yale Ave., Suite 510
Tulsa, Oklahoma 74135
Phone: (918) 628-1255
Email: gevans@pdgtulsa.com

Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which, if issued, will be emailed with return receipt requested to all prospective bidders (at the respective email addresses furnished for such purposes). Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under this bid as submitted. All addenda so issued shall become part of the contract documents and shall be acknowledged on the proposal form.

14. Security for Faithful Performance

Simultaneously with his delivery of the executed contract, the Contractor shall furnish a surety bond or bonds as security for faithful performance of this contract and for the payment of all persons performing labor on the project under this contract and furnishing materials in connection with this contract, as specified in the General Conditions included herein. The surety on such bond or bonds shall be a duly authorized surety company satisfactory to the Owner.

15. Power of Attorney

Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified and effectively dated copy of this power of attorney.

16. Notice of Special Conditions

Attention is particularly called to those parts of the contract documents and specifications that deal with the following:

- a. Inspection and testing of materials
- b. Insurance requirements

17. Laws and Regulations

The bidder's attention is directed to the fact that all applicable State laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included in the contract the same as though herein written out in full.

18. Obligation of Bidder

At the time of the opening of bids, each bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the plans and contract documents (including all addenda). The failure or omission of any bidder to examine any form, instrument or documents shall in no way relieve any bidder from any obligation in respect to his bid.

19. Disqualification of Bidders

No contract will be awarded to any persons, firm, partnership, company, or corporation in arrears to the City of Shawnee upon a debt or contract, or in default as surety or otherwise upon any obligation to the City of Shawnee.

20. Exemption from State and Local Sales Tax

Omit sales tax on this project in compliance with provisions set forth in Sections 1356(A), 1356(B) and 1356(I) of Title 68 of the Oklahoma Statutes. Both the named Contractor and subcontractors, in accordance with such Statutes and consistent with the Oklahoma Tax Commission Decision No. M8700147 in the execution of a public contract will be exempt after having been duly appointed as purchasing agents by the public entity. The Owner will appoint the Contractor and subcontractor as agents for the City of Shawnee for this project on a state and local sales tax exempt basis in accordance with the foregoing authorities. A copy of the Appointment of Agent form is included in the Contract Documents.

21. Noncollusion Affidavits:

- A. The Bidder shall be required to execute and submit as a part of his bid the Owner's Noncollusion Affidavit. Refer to the enclosed form 74 OS 85.22 (Bid)
- B. The Contractor (successful bidder) shall be required to execute and submit as a part of executing the Contract, the Owner's Noncollusion Affidavit. Refer to the enclosed form 74 OS 85-23 (Contract).

22. Nondiscrimination Certificate

The bidder shall be required to execute and submit as a part of their bid the Owner's Nondiscrimination Certificate. Refer to the enclosed form.

23. Anti-Kickback Affidavit

The bidder shall be required to execute and submit as a part of their bid the Owner's Anti-Kickback Affidavit. Refer to the enclosed form.

24. Proposal

Before submitting the Proposal, carefully examine all Bid Documents, visit the site, examine existing conditions and limitations, and include a sum to cover the cost of all items included in the Bid Documents. Failure or omission of the Bidder to receive or examine any form, instrument, Addendum or other documents, or visit the site and acquaint himself with existing conditions shall not relieve the Bidder from obligations with respect to his Bid or to Contract requirements. Submission of the Proposal shall be taken as prima facie evidence of the Contractor's acceptance of and intent to comply with the Bid Documents.

- A. Proposals shall be made only on the form provided in these specifications. All blank spaces on the form shall be completed (fully filled out), bids stated both in writing (words) and numerically, signatures signed in longhand, and form completed without interlineations, alteration or erasure. Oral, telegraphic or telephonic proposal or modifications shall no be accepted.
- B. Proposals may contain pre-approved alternate proposals in accordance with the conditions outlined in these Specifications.
- C. Proposals shall be delivered to the place designated, on or before the day and hour set for the opening of Bids. It is the sole responsibility of the Bidder to deliver the Proposal before the scheduled closing time. Bids received after the scheduled closing time shall be returned unopened.
- D. In the event of a discrepancy between prices quoted in writing (words) and those quoted numerically, writing shall govern. Unit Prices shall govern over totals. All prices shall include the furnishing of materials equipment, tools and all other facilities and performance of labor and services necessary for proper completion of the Work specified herein.
- E. Proposals shall not contain any recapitulation of the Work to be done.
- F. The Bid shall contain an acknowledgment of receipt of all Addenda issued by the Owner. The Bidder must fill in the number and date of each addendum.
- G. Failure of the Bidder to properly fill out the Form of Proposal, provide proper bonding, or provide all necessary documents and affidavits as required by these Contract Documents, shall be grounds for rejection of the Bid by the Owner.

25. Bonds

- A. The Contractor(s) shall furnish and pay for a Performance Bond, Statutory Bond and Maintenance Bond in accordance with these documents. Furnish bonds in such form as the Owner may prescribe and with a surety company licensed to conduct business in the State of Oklahoma and acceptable to the Owner. The Bidder shall deliver said bonds to the Owner, no

later than fifteen (15) business days after the date of the Notice to Award. Failure or neglecting to deliver said bonds, as specified, shall be considered as having abandoned the Contract and the bid security shall be retained as liquidated damages.

- B. In lieu of the required Bonds, the Contractor(s) may provide an irrevocable letter of credit complying with the provisions of Sections 1 and 2, Title 61 of the Oklahoma Statutes: and containing such terms as may be prescribed by the Department of Central Services issued by a solvent financial institution insured by the Federal Deposit Insurance Corporation for the Benefit of the State of Oklahoma, on behalf of the awarding public agency, in a sum equal to the bond price, to ensure the proper and prompt completion of the Work in accordance with the provisions of the contract and bidding documents and to protect the awarding public agency against defective workmanship and materials for a period of two (2) years after final acceptance of the Project by the Owner.

26. Subcontractors, Suppliers, and Others

- A. If the Owner, after due investigation, has a reasonable objection to any proposed subcontractor or supplier, other person or organization, the Owner will request the apparent successful bidder to submit an acceptable substitute without an increase in the Bid Price. Prior to the Notice of Award, if the apparent successful bidder declines to provide the acceptable substitute for the project, the Owner may, at their option, award the contract to the next qualified bidder. If the Owner awards the contract to another bidder, the bid security will be returned to the original apparent successful bidder.
- B. No Contractor shall be required to employ a subcontractor, supplier, or other person and/or organization against whom the Contractor has reasonable objection.

27. Surface and Subsurface Conditions

The bidder shall exercise due diligence in making determinations which would concern any complications or difficulties due to surface or sub-surface conditions. Accordingly, based upon Contractor's due diligence, the City of Shawnee is indemnified from any additional work, additional costs whatsoever incurred arising out of sub-surface water, clay conditions, soil conditions, or other difficulties or hardships which might arise as a result of surface or sub-surface conditions of a geographical or hydrological nature.

28. METHOD OF PAYMENT

- A. The Contractor(s) shall be paid for installed materials (Work completed in place), which have been approved by the Owner, based upon the prices identified on the Proposal.
- B. The Contractor(s) shall submit monthly invoices for consideration by the Owner. The invoices shall be submitted on a form approved by the Owner. The invoices will clearly itemize the amount of each material installed, the prices, the total for each item, and the total amount.
- C. The Owner will withhold five (5%) percent retainage from each invoice until completion of the project and final written approval by the Owner (acceptance of the installed Work).

29. Affidavit of Claimant

With each pay estimate the Contractor shall execute a copy of the Affidavit of Claimant included in the Contract Documents.

PROPOSAL

**KIDS SPACE PARK IMPROVEMENTS PROJECT
CITY OF SHAWNEE, OKLAHOMA**

Date _____

Proposal of _____

(hereinafter called "Bidder"), organized and existing under the laws of the State of _____,

doing business as _____.*

To the **City of Shawnee, Oklahoma** (hereinafter called "Owner").

Gentlemen:

The Bidder, in compliance with your invitation for bids for the **Kids Space Park Improvements Project** having examined the Plans and Specifications with related documents and the site of the proposed work, and being familiar with all of the conditions surrounding the construction of the proposed project, including the availability of materials and labor, hereby proposes to furnish all labor, materials and supplies, and to construct the project in accordance with the contract documents, within the time set forth therein, and at the unit prices stated below. These prices are to cover all expenses incurred in performing the work required under the contract documents, of which this Proposal is a part.

Bidder hereby agrees to commence work under this contract on or before a date to be specified in a written "Notice to Proceed" of the Owner and to fully complete the project within **300 consecutive calendar days** thereafter as stipulated in the specifications. **Bidder further agrees to pay as liquidated damages in accordance with section 208.07.**

Each unit Price space provided herein shall be filled out by the bidder and shall become a part of the Base Proposal. Prices quoted herein shall include all amounts that would be payable to the Contractor in case of additions to the Contract, or would be deducted from the Contract sum by the Owner in case of reductions. Unit Prices shall include all expenses incurred in performing all of the work required under the Contract Documents as applicable to the unit item, including taxes payable, labor, material, equipment, supplies, supervision, overhead and profit. It is expressly stated that the Contract Sum is derived from the entire work as called for in the Contract Documents and while these Unit Prices may or may not have been used in the computing the Contract Sum, their inclusion here is for the purpose herein described, and the Owner reserves the right to deduct from the Base Proposal or add to the Base Proposal any of the item's prices or portions thereof at the price quoted herein either before or after Contract awarding.

This proposal is based on the Contract Documents, Technical Specifications and Drawings as listed in the Table of Contents and any addendum issued.

Bidder acknowledges receipt of the following addendum:

NUMBER:	DATE:	NUMBER:	DATE:
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

* Insert "a corporation", "a partnership" or an "individual", as applicable.

Bidder agrees to perform all the construction described in the specifications and shown on the Plans for the following unit prices: (NOTE: Bids shall include applicable taxes and fees.)

Unit prices in Base Bid and Add Alternates must contain the same Unit Price when Bid Items Identical. If Unit Prices vary from Base Bid and Alternate Bid Items, the lower of the Unit Prices will be used for all Identical Bid Items.

BID FORM

BASE BID PAY ITEMS

Item	Description	Unit	Quantity	Amount
1	General Conditions/Bonds/Insurance @_____ Dollars	LS (\$_____)	1 =	\$ _____
2	Earthwork-Excavation/Embankment/Compaction/Grading - CIP @_____ Dollars	LS (\$_____)	1 =	\$ _____
3	Demolition - CIP @_____ Dollars	LS (\$_____)	1 =	\$ _____
4	Filter Fabric/Silt Fence - CIP @_____ Dollars	LF (\$_____)	2,000 =	\$ _____
5	Site Electrical Including Lighting - CIP @_____ Dollars	LS (\$_____)	1 =	\$ _____
6	Site Water Line Renovations - CIP @_____ Dollars	LS (\$_____)	1 =	\$ _____
7	Imported Select Fill/Topsoil as Needed - CIP @_____ Dollars	CY (\$_____)	300 =	\$ _____
8	Pond Outlet Structure - CIP @_____ Dollars	LS (\$_____)	1 =	\$ _____
9	Flexamat - CIP @_____ Dollars	SF (\$_____)	124 =	\$ _____
10	Parking Lot - Curb and Gutter - CIP @_____ Dollars	LF (\$_____)	198 =	\$ _____
11	Parking Lot - S4 Asphalt Paving - CIP @_____ Dollars	TONS (\$_____)	30 =	\$ _____
12	Parking Lot - S3 Asphalt Paving - CIP @_____ Dollars	TONS (\$_____)	49 =	\$ _____
13	Parking Lot - Tack Coat Application - CIP @_____ Dollars	GAL (\$_____)	17 =	\$ _____
14	Parking Lot - ODOT Type A - CIP @_____ Dollars	CY (\$_____)	87 =	\$ _____
15	Parking Lot - Striping - CIP @_____ Dollars	LF (\$_____)	320 =	\$ _____
16	4" Thick Concrete Pavement - CIP @_____ Dollars	SF (\$_____)	23,580 =	\$ _____
17	4" Thick Concrete Pavement (Perimeter Trail) - CIP @_____ Dollars	SF (\$_____)	8,927 =	\$ _____
18	Rubberized Safety Surface w/ Concrete Base-CIP @_____ Dollars	SF (\$_____)	12,170 =	\$ _____
19	Synthetic Turf (flat) - CIP @_____ Dollars	SF (\$_____)	13,315 =	\$ _____
20	Synthetic Turf (berm) - CIP @_____ Dollars	SF (\$_____)	4,735 =	\$ _____
21	12' X 12' Shade Structure - CIP @_____ Dollars	EA (\$_____)	5 =	\$ _____
22	16' X 16' Shade Structure - CIP @_____ Dollars	EA (\$_____)	2 =	\$ _____

Item	Description	Unit	Quantity	Amount
23	Architectural Pavilion - CIP @_____ Dollars	EA (\$_____)	1 =	\$_____
24	Restroom Building - CIP @_____ Dollars	LS (\$_____)	1 =	\$_____
25	Cantilevered Shade Structure - CIP @_____ Dollars	EA (\$_____)	1 =	\$_____
26	Large T Type frame Fabric Stucture - CIP @_____ Dollars	EA (\$_____)	1 =	\$_____
27	Playground Equipment with Installation - CIP @_____ Dollars	LS (\$_____)	1 =	\$_____
28	Playground Drainage - CIP @_____ Dollars	LS (\$_____)	1 =	\$_____
29	Pickleball Court (2 Total) - CIP @_____ Dollars	EA (\$_____)	2 =	\$_____
30	Multi-Use Court 60'x94' - CIP @_____ Dollars	EA (\$_____)	1 =	\$_____
31	Basketball Goal - CIP @_____ Dollars	EA (\$_____)	2 =	\$_____
32	Horseshoe Court - CIP (with Synthetic Turf) @_____ Dollars	EA (\$_____)	2 =	\$_____
33	Outdoor Metal Ping Pong Table - CIP @_____ Dollars	EA (\$_____)	2 =	\$_____
34	Stainless Steel Cornhole Boards - CIP (Per Set) @_____ Dollars	EA (\$_____)	2 =	\$_____
35	Jumbo Size Chess/Checker Board - CIP @_____ Dollars	EA (\$_____)	1 =	\$_____
36	1"W. Concrete Curb (For Pickleball Fence) - CIP @_____ Dollars	LF (\$_____)	234 =	\$_____
37	6"W. Concrete Curb - CIP @_____ Dollars	LF (\$_____)	825 =	\$_____
38	Lounge Chairs - CIP @_____ Dollars	EA (\$_____)	12 =	\$_____
39	Square Picnic Tables - CIP @_____ Dollars	EA (\$_____)	11 =	\$_____
40	ADA Sq. Picnic Tables - CIP @_____ Dollars	EA (\$_____)	7 =	\$_____
41	Benches - CIP @_____ Dollars	EA (\$_____)	15 =	\$_____
42	Landscape Stone - CIP @_____ Dollars	EA (\$_____)	22 =	\$_____
43	12' X 12' Fabric Umbrella - CIP @_____ Dollars	EA (\$_____)	9 =	\$_____
44	Trash Receptacles - CIP @_____ Dollars	EA (\$_____)	10 =	\$_____
45	Outdoor Grill - CIP @_____ Dollars	EA (\$_____)	6 =	\$_____

Item	Description		Unit	Quantity	Amount
46	Jumbo Size Park Signage - CIP @_____ Dollars		LS	1	= \$ _____
47	Rules Signage - CIP @_____ Dollars		EA	1	= \$ _____
48	4'H. Wireworks Plus Fence - CIP @_____ Dollars		LF	1,995	= \$ _____
49	Trees - CIP @_____ Dollars		EA	72	= \$ _____
50	U-3 Bermuda Solid Sod - CIP @_____ Dollars		SF	60,000	= \$ _____
51	Construction Allowance @_____ Dollars		LS	1	= \$ _____
					(\$ 75,000.00) = \$ 75,000.00

TOTAL BASE BID ITEMS _____ **Dollars (\$ _____)**

BASE BID PAY ITEMS

Item	Description		Unit	Quantity	Amount
A-1a	Demo and Removal of Existing Fencing - CIP @_____ Dollars		LS	1	= \$ _____
A-1b	5' HT Chain Link Fence - CIP @_____ Dollars		LF	1,167	= \$ _____
A-2	Basketball Sports Lighting - CIP @_____ Dollars		LS	1	= \$ _____
A-3	Pickleball Sports Lighting - CIP @_____ Dollars		LS	1	= \$ _____

TOTAL ALTERNATE BID ITEMS _____ **Dollars (\$ _____)**

TOTAL BASE & ALTERNATE BID _____ **Dollars (\$ _____)**

CIP = COMPLETE IN PLACE

Lowest and best bidder will be determined by the sum of the Base Bid and all, some, or none of the Add Alternates. The City reserves the right to award all, some, or none of the Add Alternates.

The Owner reserves the right to waive any informality or to reject any or all bids.

Amounts are to be shown in both words and figures. In case of discrepancy, the amount shown in words for unit prices will govern.

The above unit prices shall include all labor, materials, overhead, profit, insurance, etc. to cover the finished work of the several kinds called for.

Bidder understands that the Owner reserves the right to reject any or all bids in accordance with their best interests.

The Bidder agrees that this bid shall be good and may not be withdrawn for a period of sixty (60) calendar days after the scheduled closing time for receiving bids.

Upon receipt of written notice of the acceptance of this Bid, Bidder will execute the formal contract attached within ten (10) days and deliver a Surety Bond or Bonds as required by the General Conditions. The bid security attached in the sum of _____Dollars

(\$_____) is to become the property of the Owner in the event the contract and bonds are not executed within the time above set forth, as liquidated damages for the delay and additional expense to the Owner caused thereby.

Respectfully submitted,

By:_____

Type or Print Name

Title:_____

Business Address

(S E A L - if bid is by a corporation)

**NONCOLLUSION AFFIDAVIT
74 92 85.22 (BID)**

STATE OF OKLAHOMA)
COUNTY OF _____)

_____, of lawful age, being first duly sworn, on oath says:

1. He/she is the duly authorized agent of _____, the BIDDER submitting the competitive Bid which is attached to this statement for the purpose of certifying the facts pertaining to the existence of collusion among bidders and between bidders and City officials or employees, as well as facts pertaining to the giving or offering of things of value to government personnel in return for special consideration in the letting of any contract pursuant to the bid to which this statement is attached.
2. He/she is fully aware of the facts and circumstances surrounding the making of the bid to which this statement is attached and has been personally and directly involved in the proceedings leading to the submission of such bid; and
3. Neither the bidder nor anyone subject to the bidder's direction or control has been a party:
 - a. To any collusion among bidders in restraint of freedom of competition by agreement to bid at a fixed price or to refrain from bidding,
 - b. To any collusion with any City official or employee as to quantity, quality or price in the prospective contract, or as to any other terms of such prospective contract, nor
 - c. In any discussions between bidders and any City official concerning exchange of money or other thing of value for special consideration in the letting of a contract.

Authorized Agent

SUBSCRIBED AND SWORN to before me this _____ day of _____, 202__.

Notary Public

My Commission Expires: _____

NONDISCRIMINATION CERTIFICATE

STATE OF OKLAHOMA)
COUNTY OF _____)

I, _____ do here by certify that I am
the _____ of the _____, a
corporation, partnership, or sole proprietorship.

I further certify that I have this date, submitted a bid to the **City of Shawnee, Oklahoma**
pursuant to the solicitation for bids dated _____, 202__.

I certify that if I am the successful Bidder on the Project, I will not discriminate against anyone in
the employment or employment practices because of race, creed, color, sex, national, origin,
religion, handicap or age. I will comply with all federal and state laws and executive orders
concerning the subject of nondiscrimination.

By: _____

Title

SUBSCRIBED AND SWORN to before me this ____ day of _____, 202__.

Notary Public

My Commission Expires: _____

ANTI-KICKBACK AFFIDAVIT

STATE OF OKLAHOMA
COUNTY OF _____

_____, of lawful age, being first duly sworn, on oath says:

1. He/she is the duly authorized agent of _____, the CONTRACTOR under the contract which is attached to this statement for the purpose of certifying the facts pertaining to the offering or giving of money or other things of value directly or indirectly to government personnel in order to procure said contract..
2. He/she is fully aware of the facts and circumstances surrounding the making of the contract to which this statement is attached and has been personally and directly involved in the proceedings leading to the procurement of said contract; and
3. Neither the Contractor nor anyone subject to the Contractor's direction or control has paid, given or donated or agreed to pay, give or donate to any officer or employee of The City of Shawnee or the Shawnee Public Works Authority, any money or other things of value, either directly or indirectly, in procuring the contract to which this statement is attached.

Authorized Agent

SUBSCRIBED AND SWORN to before me this _____ day of _____, 202__.

Notary Public

My Commission Expires: _____

BUSINESS RELATIONSHIPS AFFIDAVIT

STATE OF _____ }
COUNTY OF _____ } SS

_____, of lawful age, being first duly sworn, on oath, says that (he/she) is the agent authorized by the Bidder to submit the attached Bid.

Affiant further states that the nature of any partnership, joint venture, or other business relationship presently in effect, or which existed within one (1) year prior to the date of this statement with the architect, engineer, or other party to the project is as follows:

Affiant further states that any such business relationship presently in effect, or which existed within one (1) year prior to the date of this statement between any officer or director of the Bidding company and any officer or director of the architectural or engineering firm or other party to the project, is as follows:

Affiant further states that the names of all persons having any such business relationships and the positions they hold with their respective companies or firms are as follows:

(If none of the business relationships hereinabove mentioned exist, Affiant should so state.)

SUBSCRIBED AND SWORN TO before me this _____ day of _____, 202_____.

My Commission Expires:

Notary Public

CONTRACT

Kids Space Park Improvements Project

THIS CONTRACT AND AGREEMENT, made and entered into this _____ day of _____, 202____, by and between **The City of Shawnee, Oklahoma**, Party of the First Part, hereinafter termed "Owner" and _____ Party of the Second Part, hereinafter termed "Contractor".

WITNESSETH:

WHEREAS, The City of Shawnee, Oklahoma (Owner) has caused to be prepared in accordance with law, certain Plans, Specifications, and other Bidding Documents for The Work hereinafter described and has approved and adopted all of said Bidding Documents, and has caused Solicitation for Bids to be given and advertised as required by law, and has received sealed Proposals for the furnishing of all labor and materials for _____ as outlined and set out in the Bidding Documents and in accordance with the terms and provisions of said Contract; and,

WHEREAS, Contractor, in response to said Solicitation for Bids, has submitted to Owner in the manner and at the time specified, a sealed Proposal in accordance with the terms of this Contract; and,

WHEREAS, the Owner, in the manner provided by law, has publicly opened, examined, and canvassed the Proposals submitted and has determined and declared the above-named Contractor to be the lowest responsible Bidder on the above-described project, and has duly Awarded this Contract to said Contractor, for the sum name in the Proposal, to-wit: _____ Dollars (\$_____):

NOW, THEREFORE, for and in consideration of the mutual agreements and covenants herein contained, the parties to this Contract have agreed, and hereby agree, as follows:

1. The Contractor shall, in a good and first-class, workmanlike manner, at his own cost and expense, furnish all labor, materials, tools, and equipment required to perform and complete said Work in strict accordance with this Contract and the following Contract Documents:

_____ all of which documents are on file in the office of the Owner: **The City of Shawnee, Oklahoma at 16 West 9th Street, Shawnee, Oklahoma 74801**, and are made a part of this Contract as fully as if the same were herein set out at length, with the following additions and exceptions: (If none, so state) _____

2. The Owner shall make payments to the Contractor in the following manner: On or before the last working day of each month, the agency engineer, or other appropriate person, will make accurate estimates of the value, based on contract prices, of work done and materials incorporated in The Work and of materials suitably stored at the site thereof during the preceding calendar month. The Contractor shall furnish to the agency engineer, or other appropriate person, such detailed information as he may request to aid him as a guide in the preparation of the monthly estimates.

Each monthly estimate for payment must contain or have attached an affidavit as required by Senate Bills 469 and 565 of the 1974 Legislature.

- 2-a. Contractor expects to store during the construction period certain materials and equipment on site. Contractor assumes full responsibility for any theft, loss or damage to materials stored on site. The City of Shawnee assumes no responsibility for any loss, damage or theft of any equipment, tools or supplies occurring during period of construction.

3. On completion of The Work, but prior to the acceptance thereof by the Owner, it shall be the duty of the agency engineer, or other appropriate person, to determine that said Work has been completely and fully performed in accordance with said Contract Documents; and upon making such determination said official shall make his final certificate to the Owner. The Contractor shall furnish proof that all claims and obligations incurred by him in connection with the performance of said Work have been fully paid and settled; said information shall be in the form of an affidavit, which shall bear the approval of the Surety on the Contract Bonds for payment of the final estimate to the Contractor; thereupon, the final estimate (including retainages) will be approved and paid.
4. The sworn, notarized statement below must be signed and notarized before this Contract will become effective.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed, in four (4) duplicate originals, the day and year first above written.

PARTY OF THE SECOND PART:

CONTRACTOR: _____

By _____
Title: _____

ATTEST:

Title: _____

(SEAL)

PARTY OF THE FIRST PART:

OWNER: City of Shawnee, Oklahoma

By _____
Mayor

ATTEST:

City Clerk

(SEAL)

STATE OF _____ }
COUNTY OF _____ } SS

_____, of lawful age, being first duly sworn, on oath says that (he/she) is the agent authorized by Contractor to submit the above Contract to the Owner.

Affiant further states that Contractor has not paid, given, or donated or agreed to pay, give, or donate to any officer or employee of Owner any money or other thing of value, either directly or indirectly, in the procuring of the Contract.

Title: _____

SUBSCRIBED AND SWORN TO BEFORE ME, this ____ day of _____, 202__.

Notary Public

My Commission Expires:

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

THAT _____, as Principal, and _____, a corporation organized under the laws of the State of _____ Oklahoma and authorized to transact business in the State of Oklahoma, as Surety, are held and firmly bound unto **The City of Shawnee, Oklahoma** (Owner) in the penal sum of _____ Dollars (\$ _____) in lawful money of the United States of America, for the payment of which, well and truly to be made, we bind ourselves and each of us, our heirs, executors, administrators, trustees, successors and assigns, jointly and severally, firmly by these presents.

Dated this _____ day of _____, 202____.

The condition of this obligation is such that:

WHEREAS, said Principal entered into a written Contract with **The City of Shawnee, Oklahoma** (Owner), dated this _____ day of _____, 202____, for the **Kids Space Park Improvements Project** in compliance with the Plans and Specifications therefore, made a part of said Contract and on file in the office of **The City of Shawnee, Oklahoma** (Owner) at 16 West 9th Street, Shawnee, Oklahoma 74801.

NOW, THEREFORE, if said Principal shall, in all particulars well, truly, and faithfully perform and abide by said Contract and each and every covenant, condition and part thereof and shall fulfill all obligations resting upon said Principal by the terms of said Contract and said Specifications; and if said Principal shall promptly pay, or cause to be paid, all labor, materials and/or repairs and all bills for labor performed on said Work, whether by subcontract or otherwise; and if said Principal shall protect and save harmless said **The City of Shawnee, Oklahoma** (Owner) from all loss, damage, and expense to life or property suffered or sustained by any person, firm, or corporation caused by said Principal or his or its agents, servants, or employees in the construction of said Work, or by or in consequence of any negligence, carelessness or misconduct in guarding and protecting the same, or from any act or omission of said Principal or his or its agents, servants, or employees, and if said Principal shall protect and save **The City of Shawnee, Oklahoma** (Owner) harmless from all suits and claims of infringement or alleged infringement or patent rights or processes, then this obligation shall be null and void, otherwise to be and remain in full force and effect.

It is further expressly agreed and understood by the parties hereto that no changes or alterations in said Contract and no deviations from the plan or mode of procedure herein fixed shall have the effect of releasing the sureties, or any of them, from the obligations of this Bond.

IN WITNESS WHEREOF, the said Principal has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its duly authorized officers, and the said Surety has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its attorney-in-fact, duly authorized so to do, the day and year first above written.

PRINCIPAL:

ATTEST:

By _____

SURETY:

By _____
Attorney-in-Fact

STATUTORY BOND

KNOW ALL MEN BY THESE PRESENTS:

THAT _____, as principal, and _____ a Corporation organized under the laws of the State of Oklahoma, and authorized to transact business in the State of Oklahoma as Surety, are held and firmly bound unto the **State of Oklahoma**, in the penal sum of _____ Dollars (\$_____) lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our successors and assigns, jointly and severally, firmly by these presents.

Signed, sealed and delivered this _____ day of _____, 202__.

THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH THAT WHEREAS, the said

has on this _____ day of _____, 202__, entered into a written contract with **The City of Shawnee, Oklahoma** for the **Kids Space Park Improvements Project** according to the plans and specifications attached to said contract, which include the furnishing of all necessary labor, tools, equipment and materials, in accordance with the plans and specifications contained in said contract and made a part thereof, which contract, plans and specifications are by reference thereto made a part of this Bond.

NOW, THEREFORE, if said _____ shall pay all indebtedness incurred for labor, tools, equipment or materials furnished or consumed in connection with the construction of the said contract work, then this obligation shall become null and void; otherwise, to be in full force and effect.

PRINCIPAL

By: _____
Signature & Title

ATTEST:

SURETY:

By: _____
Attorney-in-Fact

MAINTENANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

THAT _____
as Principal, and _____
a corporation organized under the laws of the State of _____
and authorized to transact business in the State of Oklahoma, as Surety, are held and firmly bound unto
The City of Shawnee, Oklahoma (Owner) in the penal sum of _____ Dollars
(\$ _____) in lawful money of the United States of America for the payment of which, well and truly
to be made, we bind ourselves and each of us, our heirs, executors, administrators, trustees, successors,
and assigns, jointly and severally, firmly by these presents.

Dated this _____ day of _____, 202__.

The condition of this obligation is such that:

WHEREAS, said Principal entered into a written Contract with **The City of Shawnee, Oklahoma**
(Owner) dated _____ 202__, for the **Kids Space Park Improvements Project** all in
compliance with the plans and specifications therefore, made a part of said Contract, and on file in the office
of **The City of Shawnee, Oklahoma** (Owner) at **16 West 9th Street, Shawnee, Oklahoma 74801**.

NOW, THEREFORE, if said Principal shall pay or cause to be paid **The City of Shawnee, Oklahoma**
(Owner) all damage, loss and expense which may result by reason of defective materials and/or
workmanship in connection with said work, occurring within a period of two (2) years for all projects, from
and after acceptance of said project by **The City of Shawnee, Oklahoma** (Owner); and if Principal shall
pay or cause to be paid all labor and materials, including the prime contractor and all subcontractors; and if
Principal shall save and hold **The City of Shawnee, Oklahoma** (Owner) harmless from all damages, loss
and expense occasioned by or resulting from any failure whatsoever of said Principal, then this obligation
shall be null and void, otherwise to be and remain in full force and effect.

It is further expressly agreed and understood by the parties hereto that no changes or alterations in
said Contract and no deviations from the plan or mode of procedure herein fixed shall have the effect of
releasing the sureties, or any of them, from the obligations of this Bond.

IN WITNESS WHEREOF, the said Principal has caused these presents to be executed in its name
and its corporate seal to be hereunto affixed by its duly authorized officers, and the said Surety has caused
these presents to be executed in its name and its corporate seal to be hereunto affixed by its attorney-in-
fact, duly authorized so to do, the day and year first above written.

PRINCIPAL:

By: _____
Signature & Title

ATTEST:

SURETY:

By _____
Attorney-in-Fact

**NONCOLLUSION AFFIDAVIT
74 92 85.22 (CONTRACT)**

STATE OF OKLAHOMA)
COUNTY OF _____)

_____, of lawful age, being first duly sworn, on oath says:

1. He/she is the duly authorized agent of _____, the CONTRACTOR under the contract which is attached to this statement for the purpose of certifying the facts pertaining to the giving or offering or giving of things of value to government personnel in order to procure said contract; and,
2. He/she is fully aware of the facts and circumstances surrounding the making of the contract to which this statement is attached and has been personally and directly involved in the proceedings leading to the procurement of said contract; and
3. Neither the Contractor nor anyone subject to the Contractor's direction or control has paid, given or donated or agreed to pay, give or donate to any officer or employee of The City of Shawnee, any money or other things of value, either directly or indirectly, in procuring the contract to which this statement is attached.

Authorized Agent

SUBSCRIBED AND SWORN to before me this _____ day of _____, 202__.

Notary Public

My Commission Expires: _____

CLAIM or INVOICE AFFIDAVIT

STATE OF OKLAHOMA)

) SS

COUNTY OF _____)

The undersigned Contractor, of lawful age, being first duly sworn, on oath says that his invoice or claim is true and correct. Affiant further states that the work and materials as shown by this claim have been completed in accordance with the Plans, Specifications, orders or requests furnished the affiant. Affiant further states that (s)he has made no payment, given or donated or agreed to pay, give or donate, either directly or indirectly, to any elected official, officer or employee of the State, County, City or Authority of money or any other thing of value to obtain payment or the Award of this Contract.

Contractor

Subscribed and sworn to before me this _____ day of _____, 202__.

Notary Public

My Commission Expires:

APPOINTMENT OF AGENT

The City of Shawnee, Oklahoma hereafter referred to as the "City" does hereby appoint _____, (an individual, partnership, or corporation) doing business in Oklahoma acting through its officers and employees, hereafter referred to as "Agent" of the City for the sole purpose of completing **Kids Space Park Improvements Project** under a contract dated the _____ day of _____, 202__, being constructed in Shawnee, Oklahoma, hereafter referred to as the "Project" for the use of the City. Agent agrees to act as Agent for the City subject to the provisions of this Appointment.

Legal title to all tangible personal property purchased, and the right to direct the use of all tangible personal property rented, by the Agent pursuant to this Appointment shall pass directly from the vendor to the City. Agent shall designate on its purchase orders and elsewhere as appropriate when it is making purchases pursuant to this appointment, following legend:

_____ has been appointed Agent for the City of Shawnee, Oklahoma for the purpose of the property described herein. Upon passage of title all of such property will be included in the project owned by the City. Title to all such property shall pass to said City from the vendor F.O.B. place specified in this purchase order. All such property is exempt from Oklahoma sales and use taxes and /or City sales tax."

Rental agreements relating to such property shall contain suitable provisions which disclose the Agent's agency and indicate that no Oklahoma sales or use tax or City sales tax is payable.

Agent agrees no to purchase or rent any tangible personal property pursuant to this Appointment unless such property is authorized for inclusion in or exclusive use in the construction of the Project described above. Agent shall not have the power to appoint any other person or entity as Agent for the City.

Agent shall be responsible in a separate capacity for payment of the purchase price or other consideration for the property purchased or rented as Agent and shall not have the power to bind the City to any financial or other commitments or obligations. Agent shall hold the City harmless from any liability for or arising out of the purchase, rental or use of the property purchased or rented hereunder.

This Appointment shall be effective upon execution by the City acting through the City Manager and by the Agent and shall be binding upon the successors of the parties hereto.

Executed by the undersigned Manager of the City of Shawnee, State of Oklahoma, on behalf of the City of Shawnee, on this _____ day of _____, 202__.

CITY OF SHAWNEE, OKLAHOMA

BY: _____
City Manager

Tax Exemption Number

ATTEST: _____
City Clerk

AGENT'S MAILING ADDRESS: Company Name: _____

Address: _____.

City, State, Zip: _____

SPECIAL PROVISIONS

101 EXISTING UTILITIES

Contractor shall be responsible for locating existing utilities in the area of construction prior to any work being done. All conflicts should be reported to the Engineer. Any work done in the area of a conflict without the Engineer's knowledge shall be at the Contractor's own risk.

102 SALVAGEABLE MATERIALS

All materials which are salvageable, as determined by the Engineer and/or Owner, shall remain the property of the Owner. Those materials deemed to be unsalvageable shall be properly disposed of by the contractor.

103 TESTING

The Owner will have performed and pay for the costs of all tests required by the Engineer such as densities and concrete strength. Contractor shall assist as required, in the performance of these tests.

Re-testing required by the failure of original tests not meeting the specifications will be required by the Owner to be paid for by the contractor.

104 CONSTRUCTION LINES AND GRADES

The new fence shall be located on the same alignment as the existing fence where an existing fence exists. If an existing fence does not exist the new fence shall be located at a location established by the Owner.

It shall be the responsibility of the Contractor to set, protect and maintain basic control points to define the existing fence location until the new fence is installed.

105 UNDERGROUND INSTALLATIONS AND STRUCTURES

Pipelines and other existing underground installations and structures in the vicinity of the work to be done hereunder are indicated on the drawings according to information available to the Engineer; however, all lines actually existing may not be shown. The Contractor shall make every effort to locate all underground pipelines, conduits, and structures by contacting owners of underground utilities and by prospecting in advance of trench excavation.

106 UNFORESEEN CONDITIONS

The bidder shall exercise due diligence in making determinations which would concern any complications or difficulties due to surface or sub-surface conditions. Accordingly, based upon Contractor's due diligence, the City of Shawnee is indemnified from any additional work, additional costs whatsoever incurred arising out of sub-surface water, clay conditions, soil conditions, or other difficulties or hardships which might arise as a result of surface or sub-surface conditions of a geographical or hydrological nature.

107 WORKING DAYS

The calendar days in this contract have been established based on the average number of working days each month base on ODOT standards. The Contractor is to submit a request for adverse weather days with each Pay Application. The City of Shawnee and the Design Consultant, will provide a response including acceptance or denial of adverse weather days.

108 PAY ITEMS

Any work shown on the plans or required for a complete project and not covered by a bid item shall be considered incidental to the project and included in the price for listed bid items.

GENERAL CONDITIONS

SECTION 201 - DEFINITION OF TERMS

201.1 DEFINITIONS:

Wherever the words, forms or phrases herein defined, or pronouns used in their stead, occur in these Specifications in the Contract, or in the Advertisement, or any Document, or instrument herein contemplated, or to which these Specifications apply, the intent and meaning shall be interpreted as follows:

AASHTO - The American Association of State Highway and Transportation Officials.

Act of God - An earthquake, flood, cyclone or other cataclysmic phenomenon of nature. Rain, wind, flood or other natural phenomenon of normal intensity for the locality shall not be construed as an Act of God.

Advertisement - All of the legal publications pertaining to The Work contemplated or under Contract.

AGA - The American Gas Association

ANSI - The American National Standards Institute (formerly the American Standards Association).

Architect, Landscape Architect or Engineer – Architect, Landscape Architect or Engineering Company or their duly authorized agents.

ASA - The American Standards Association. (Now designated as the American National Standards Institute.) ASA and ANSI, where used in these Specifications, shall denote the American National Standards Institute.

ASTM - The American Society for Testing Materials.

Award - The decision of the Owner to accept the Proposal of the lowest and best Bidder for The Work, subject to the execution and approval of a satisfactory Contract and the required Bonds therefore, and to such other conditions as may be specified or otherwise required by law.

AWWA - The American Water Works Association.

Beneficial Occupancy - A period in time determined by the Engineer when the Owner permanently occupies The Work or a portion thereof. The Contractor will be required to furnish a release from his Surety and from his insurance carrier prior to the establishment of beneficial occupancy.

Bidder - Any person or persons, partnership, company, firm or corporation acting directly or through a duly authorized representative submitting a Proposal for The Work contemplated.

Change of Address - It shall be the duty of each party to advise the other parties to the Contract as to any change in his business address until completion of the Contract.

Contract - The Agreement covering the performance of The Work described in the Contract Documents including all supplemental agreements thereto and all General and Special Conditions pertaining to The Work or materials thereof.

Contract Documents - The Contract Documents comprise the following documents, including all additions, deletions and modifications incorporated therein:

- A. Legal and Procedural Documents
 - 1. Advertisement
 - 2. Instructions to Bidders
 - 3. Proposal
 - 4. Proposal Guaranty
 - 5. Contract
 - 6. Performance Bond
 - 7. Statutory Bond
 - 8. Maintenance Bond
 - 9. Experience and Equipment Questionnaire (if required)
 - 10. Special Equipment Questionnaire (if required)
 - 11. Addenda
 - 12. Change Orders
- B. Special Conditions of the Contract
- C. General Conditions of the Contract
- D. Detailed Specification Requirements
- E. Drawings - Bound separately or with the Specifications

Contractor - The person or persons, partnership, company, firm or corporation entering into Contract for the execution of The Work, acting directly or through a duly authorized representative.

Drawings - Those listed in the Index to Specifications and Drawings with all Addenda thereto.

Engineer - The City of Shawnee Engineers or their duly authorized agents.

Furnish - To supply.

Maintenance Bond - The approved form of security furnished by the Contractor and his surety as a guarantee that he will maintain The Work constructed by him in good condition for the period of time required.

Owner - The Owner named in the Contract Documents.

Performance Bond - The approved form of security furnished by the Contractor and his Surety as a guaranty of good faith on the part of the Contractor to execute The Work in accordance with the terms of the Contract.

Plan or Plans - All of the Drawings pertaining to the Contract and made a part thereof, including such supplementary Drawings as the Engineer may issue from time to time, in order to elucidate other Drawings for the purpose of showing changes in The Work as authorized under the Section, "Changes and Alterations", or for showing details not shown thereon.

Proposal - The offer of a Bidder to perform The Work described by the Contract Documents when made out and submitted on the prescribed Proposal Form, properly signed and guaranteed.

Proposal Guaranty - The cashier's check or Bidder's Bond accompanying the Proposal submitted by the Bidder, as a guarantee that the Bidder will enter into a Contract with the Owner for the Construction of The Work, if the Contract is awarded to him.

Provide - To furnish and erect or install.

Special Conditions - The special clauses setting forth conditions or requirements peculiar to the specific project involved, supplementing the Standard Specifications and taking precedence over any conditions or requirements of the Standard Specifications with which they are in conflict.

Specifications - The Legal and Procedural Documents, General Conditions of the Contract, together with the modifications thereof, and the detailed Technical Specification requirements, with all Addenda thereto.

Statutory Bond - The approved form of Surety set up and furnished by the Contractor and his Surety as a guarantee that he will pay, in full all bills and accounts for materials and labor used in the construction of The Work, as provided by law.

Subcontractor - Any person, firm or corporation with a direct contract with the Contractor who acts for or on behalf of the Contractor in executing any part of the Contract, but does not include one who merely furnishes material.

Surety - The person, firm or corporation who executes the Contractor's Performance Bond.

The Work - All work, including the furnishing of labor, materials, tools, equipment and incidentals, to be performed by the Contractor under the terms of the Contract.

Working Day - Any day, other than a legal holiday, Saturday or Sunday, on which the approximate normal working forces of the Contractor may proceed with regular work in a manner satisfactory to the Engineer for at least six (6) hours, toward completion of The Work. When it is desirable for any cause to increase the normal working schedule beyond there herein defined, the Contractor shall provide the Engineer with at least twenty-four (24) hours prior notice so that the Engineer and/or Owner may provide for inspection to The Work of the Contractor during such abnormal circumstances.

Written Notice - Written notice shall be considered as served when delivered in person or sent by registered mail to the individual, firm or corporation or to the last business address of such known to him who serves the notice.

SECTION 202 - PROPOSAL REQUIREMENTS AND CONDITIONS

202.01 CONTENTS OF PROPOSAL FORM

The Owner will furnish Bidders with Proposal Forms which will state the general location and description of the contemplated Work and which will contain a list of the items of Work to be done or materials to be furnished and upon which Bid prices are asked. The Contract Form will state the time limits for commencing and for completing The Work and will provide for entering the amount of the Proposal Guaranty. The Proposal Form will contain a Non-Collusion Affidavit.

202.02 INTERPRETATION OF PLANS AND SPECIFICATIONS

If any person contemplating submitting a Bid for the proposed Contract is in doubt as to the true meaning of any part of the Plans, Specifications or other proposed Contract Documents, he may submit to the Engineer a written request for an interpretation thereof. The person submitting such request will be responsible for its prompt delivery. An interpretation of the proposed Documents will be made only by Addendum duly issued and a copy of such Addendum will be mailed or delivered to each person receiving a set of such Documents. The Owner will not be responsible for any other explanations or interpretations of the proposed Documents.

The Drawings are not intended to be scaled for dimensions, and if dimensions not shown on the Drawings are

required, the Contractor shall request them from the Engineer. Where existing utility lines or other sub-surface obstructions are shown on the Drawings, the same have been located as nearly as practicable from information furnished by owners of such, and from such surface indications as may exist at the work site. Such obstructions are shown for the purpose of advising the Contractor that they may interfere with the work to be done hereunder, but not for the purpose of indicating that the work can be performed without such interference.

202.03 EXAMINATION OF DOCUMENTS AND SITE OF WORK

Bidders are required, prior to submitting any Proposal, to read carefully the Specifications, the Proposal, Contract and Bid Forms, to examine carefully all Plans on file with the Owner; to visit the site of The Work; to examine carefully local conditions; to inform themselves by their independent research of the difficulties to be encountered and judge for themselves of the accessibility of The Work and all attending circumstances affecting the cost of doing The Work or the time required for its completion and obtain all information required to make an intelligent Proposal. Bidders shall rely exclusively upon their own estimates, investigations and other data which are necessary for full and complete information upon which the Proposal may be based. It is mutually agreed that submission of a Proposal will be evidence that the Bidder has made the examinations and investigations required herein.

Where soundings are shown on the drawings, the depths are determined by driving a drill rod, using the chum method with water lubrication, to a maximum depth of nine feet or to refusal, whichever is lesser in depth. By showing soundings on the drawings, the City represents only that material of hardness and character which could be penetrated by a drill rod found above the depth of sounding as shown at the point where the drill rod was driven.

Where exploratory drilling is indicated to have been performed on the plans, boring logs will be available for review at the office of the Engineer. The logs will be furnished for information purposes only, and are not to be construed as a true representation of actual subsurface conditions.

202.04 PREPARATION OF PROPOSAL

The Bidder shall submit his Proposal on the Forms furnished by the Owner or the Engineer. All blank spaces in the Proposal Forms shall be correctly filled in and the Bidder shall state the prices, written in ink or typewritten, both in words and numerals, for which he proposes to do The Work contemplated or furnish the materials required.

The Contractor shall include in his Proposal the cash allowances that may be stated in the Special Conditions. The Contractor shall purchase the "Allowed Materials" by soliciting bids, as directed by the Engineer or Owner. If the actual price for purchasing the "Allowed Materials" is more or less than the "Cash Allowance", the Contract price shall be adjusted accordingly. The adjustment in Contract price shall be made on the basis of the purchase price without additional charges for overhead, profit, insurance, or any other incidental expenses. The cost of installation of the "Allowed Materials" shall be included in the applicable sections of the Contract Specifications covering this work.

Wherever the estimated quantities of Work to be done and materials to be furnished under this Contract are shown in any of the Documents including the Proposal, they are given for use in comparing Bids and the right is especially reserved except as herein otherwise specifically limited, to increase or diminish them as may be deemed reasonably necessary or desirable by the Owner to complete The Work contemplated by this Contract, and such increase or diminution shall in no way vitiate this Contract, nor shall any such increase or diminution give cause for claims or liability for damages.

All prices shall be written distinctly and legibly. In case of conflict between words and numerals, the words will govern. If the Proposal is submitted by an individual, his name must be signed by him or his duly authorized agent and his post office address given. If the Proposal is submitted by a firm or partnership, the name and post office address of each member must be given and the Proposal signed by a member of the firm or partnership as a person duly authorized. If the Proposal is made by a company or corporation, the company or corporate name

and the state under the laws of which said company or corporation is chartered and the business address must be given and one Proposal signed by an official or agent duly authorized. Powers of Attorney, authorizing agents or others to sign Proposals must be properly certified and must be in writing and on file with the Owner.

202.05 PROPOSAL AFFIDAVIT

Each Proposal or copy thereof shall be accompanied by a sworn statement in writing that the person signing the Proposal executed said Proposal in behalf of the Bidder therein named and that he had lawful authority to do so and that said Bidder has not directly or indirectly entered into any agreement, expressed or implied, with any other Bidder or Bidders having for its object the controlling of the amount of such Bid or any Bids, the limiting of Bids or Bidders, the parceling or farming out to any Bidder or Bidders or other persons of any part of the Contract or any Bid or the subject matter of the Bid or of the profits thereof, and that he has not and will not divulge said sealed Bid to any person whatever except those having a partnership or other financial interest with him in said Bid, until after the said sealed Bids are opened.

202.06 PROPOSAL GUARANTY

Proposals will not be considered unless the original filed with the Owner is accompanied by a Bidder's Bond or certified or cashier's check in the required amount, made payable to the Owner. The guaranty shall be in the amount as designated in the Advertisement. The Proposal Guaranty is required as evidence of good faith and as a guarantee that, if awarded the Contract, the Bidder will execute the Contract and furnish the required Bonds within the required time.

202.07 QUESTIONNAIRES

Experience and Equipment Questionnaire are not required for this project.

202.08 FILING OF PROPOSALS

Proposals shall be submitted in accordance with the requirements of the "Notice to Bidders" and the "Instructions to Bidders". Each proposal shall be plainly marked on the envelope with the word "Proposal" and the name of the project.

202.09 WITHDRAWAL OF PROPOSALS

Permission will not be granted to withdraw or modify any Proposal after it has been filed and before the time set for opening Proposals. Request for non-consideration of Proposals must be made in writing, addressed to the Owner and filed with the Owner or his duly authorized representative before the time set for opening Proposals. After other Proposals are opened and read, the Proposal for which withdrawal is properly requested will be returned unopened.

202.10 OPENING OF PROPOSALS

The original Proposals filed with the designated Owner's representative shall be opened in the presence of the Owner at the time stated in the Advertisement and shall thereafter remain on file in the office of said Owner's representative forty-eight (48) hours before any Contract will be entered into based on such Proposals.

Bidders are invited to attend the meeting for opening Proposals at the time set.

202.11 IRREGULAR PROPOSALS

Proposals will be considered irregular if they show any omissions, alterations of forms, additions or conditions not called for, unauthorized alternate Bids or irregularities of any kind. However, the Owner reserves the right to waive technicalities as to changes, alterations or reservations and make the Award in his best interest.

202.12 REJECTION OF PROPOSALS

The Owner reserves the right to reject any or all Proposals, and all Proposals submitted are subject to this reservation. Proposals may be rejected for any of the following specific reasons:

- A. Proposal received after the time limit for receiving Proposals as stated in the Advertisement.
- B. Proposal prices obviously unbalanced.
- C. Summation of Proposal prices on any one project above the Engineer's estimate of cost for such project.
- D. Proposal containing any irregularities.

202.13 DISQUALIFICATION OF BIDDERS

Bidders will be disqualified and their Proposals not considered for any of the following specific reasons:

- A. Where more than one Proposal for an individual, firm, partnership or corporation is filed under the same or different names and where such Proposals are not identical in every respect.
- B. Reasonable grounds for believing that any Bidder is interested in more than one Proposal for The Work contemplated or materials to be furnished.
- C. Reason for believing that collusion exists among the Bidders.
- D. The Bidder being in arrears on any existing contracts, interested in any litigation against the Owner or having defaulted on a previous contract.
- E. Lack of competency, as revealed by the Financial Statement, Experience and Equipment Questionnaires, etc.
- F. Uncompleted work which, in the judgment of the Owner, will hinder or prevent the prompt completion of additional Work, if Awarded.

SECTION 203 - AWARD AND EXECUTION OF CONTRACT

203.01 CONSIDERATION OF PROPOSALS

After the Proposals are opened, those Proposals containing unit prices will be tabulated for comparison on the basis of the quantities shown in the approximate estimate. Until the final award of the Contract, the Owner reserves the right to reject any or all Proposals, to waive irregularities and to advertise for new Proposals or proceed to do The Work otherwise when the best interests of the Owner will be promoted thereby.

203.02 AWARD OF CONTRACT

The Owner reserves the right to withhold the Award of the Contract for a reasonable period of time from the date of opening the Proposals and no Award will be made until the necessary investigations are made as to the responsibility of the low Bidder. No Contract will be Awarded until at least forty-eight (48) hours after opening the Proposals. The Awarding of the Contract shall give the Bidder no right of action or claim against the Owner upon such Contract until the execution of the Contract shall have been completed and the Contract delivered to the Contractor. The Owner reserves the right to Award all or any portion or portions of The Work.

203.03 RETURN OF PROPOSAL GUARANTY

As soon as the Proposal prices have been compared, the Owner may, at his discretion return the Proposal Guaranties accompanying those Proposals which, in his judgment, would not be considered in making the Award. After the Award is made, only the successful Bidder's Proposal Guaranty will be retained until the required Contract and Bonds have been executed, after which it will be returned to the Bidder. Should the Awarding of the Contract be delayed more than thirty (30) days, all Bidders' Guaranties will be returned, unless such delay is from causes beyond the control of the Owner and in such event, the Proposal and Bidder's Guaranty, of any Bidder, will be returned at the Bidder's option.

203.04 SURETY BONDS

With the execution and delivery of the Contract, the Contractor shall furnish and file with the Owner in the amounts required, the following Surety Bonds:

- A. A Performance Payment Bond in an amount equal to one hundred percent (100%) of the approximate total amount of the Contract, guaranteeing the full and faithful execution of The Work and performance of the Contract and for the protection of the Owner and all property owners interested against any damage by reason of negligence of the Contractor, or the improper execution of The Work or the use of inferior materials.
- B. A good and sufficient Statutory Bond in an amount equal to one hundred percent (100%) of the approximate total amount of the Contract, guaranteeing payment for all labor, materials and equipment used in the construction of the improvements.
- C. A good and sufficient Maintenance Bond in an amount equal to one hundred (100%) of the total amount of the Contract, guaranteeing the maintenance in good condition of such improvements for a period of one (1) year from and after the time of the completion and acceptance by the Owner of said improvements.

No Surety will be accepted who is now in default or delinquent on any Bond or who is interested in any litigation against the Owner. All Bonds shall be made on forms furnished by the Owner and shall be executed by Surety companies licensed to do business in the State of Oklahoma, and who are acceptable to the Owner. Each Bond shall be executed by the Contractor and the Surety.

Should any Surety on the Contract be determined unsatisfactory at any time by the Owner, notice will be given to the Contractor to that effect, and the Contractor shall forthwith substitute a new Surety or Sureties satisfactory to the Owner.

No payment will be made under the Contract until the new Surety or Sureties, as required, have qualified and have been accepted by the Owner. The Contract shall not be operative, nor shall any payments be due until approval of the Bonds has been made by the Owner.

203.05 EXECUTION OF CONTRACT

The person or persons, partnership, company, firm or corporation to whom a Contract is Awarded shall within ten (10) days after such Award sign the necessary agreements entering into the required Contract with the Owner and execute and deliver the required Bonds.

No Contract shall be binding on the Owner until it has been approved by the Owner's Attorney, executed by the Owner and delivered to the Contractor.

203.06 FAILURE TO EXECUTE CONTRACT

Upon failure of the Bidder to execute the required Bonds or to sign the required Contract within ten (10) days after the Contract is Awarded, he will be considered to have abandoned his Proposal and the Owner may annul the Award. By reason of the uncertainty of market prices of the materials and labor, and it being impracticable and extremely difficult to fix the amount of damages to which the Owner would be put by reason of Bidder's failure to execute said Bonds and Contract within ten (10) days, the Proposal Guaranty accompanying the Proposal shall be the agreed amount of damages which the Owner will suffer by reason of such failure on the part of the Bidder and shall thereupon be retained by the Owner as liquidated damages. The filing of a Proposal will be considered as an acceptance of this provision.

SECTION 204 - SCOPE OF WORK

204.01 INTENT OF PLANS AND SPECIFICATIONS

The intent of the Plans and Specifications is that the Contractor furnish all labor and materials, equipment and transportation necessary for the proper execution of The Work unless specifically noted otherwise. The Contractor shall do all The Work shown on the Plans and described in the Specifications and all incidental work considered necessary to complete the project in a substantial and acceptable manner, and to fully complete the work or improvement, ready for use, occupancy and operation by the Owner.

204.02 CONFLICT

If there be conflicting variance between the Plans and the Specifications, the provisions of the Specifications shall control. In case of conflict between the General Conditions of the Contract, or any modifications thereof, and the Detailed Technical Specification Requirements, the Detailed Specification Requirements shall control.

Where a standard American Society for Testing Materials, American Concrete Institute, American Standards Association, American Water Works Association, or other agency designation is specified for a material, that designation shall be the current revision, either tentative or adopted. If a referenced specification is in disagreement with these specifications, the City of Shawnee specifications shall govern.

204.03 DISCREPANCIES IN PLANS

Any discrepancies found between the Plans and Specifications and site conditions or any errors or omissions in the Plans or Specifications shall be immediately reported to the Engineer, who shall promptly correct such error or omission in writing. Any Work done by the Contractor after his discovery of such discrepancies, errors, or omissions shall be done at the Contractor's own risk.

204.04 ADEQUACY OF PLANS AND SPECIFICATIONS

Responsibility for adequacy of the design and for sufficiency of the Drawings and Specifications shall be borne by the Owner. The complete requirements of The Work to be performed under the Contract shall be set forth in Plans and Specifications to be supplied by the Owner through the Engineer or by the Engineer as representative of the Owner. Plans and Specifications furnished shall be in accordance with the Contract Documents and shall be true and accurate developments thereof.

The Plans show the location of certain existing surface and subsurface structures. The Owner assumes no responsibility for failure to show any or all structures on the Plans, or to show them in their exact location. It is mutually agreed such failure will not be considered sufficient basis for claims for extra work or for increasing the pay quantities in any manner whatsoever, unless the obstruction encountered is such as to necessitate substantial changes in the lines or grades or requires the building of a special structure, provision for which is not made in the Plans, in which case the provisions in these Specifications for "Extra Work" will apply.

The cost of adjusting water mains or services to grade shall be included in the prices Bid for other items of work, except where a specific item for this work is included in the Proposal.

Contractor shall be responsible for locating existing utilities, underground installations, and structures in the vicinity of construction prior to any Work being done. All conflicts should be reported to the Engineer. Any work done in the area of a conflict without the Engineer's knowledge shall be at the Contractor's own risk.

204.05 ADDITIONAL INSTRUCTIONS

Further instructions may be issued by the Engineer during the progress of The Work by means of Drawings or otherwise to make more clear or specific the Plans and Specifications, or as may be necessary to explain or illustrate changes in The Work to be done.

204.06 COPIES OF DRAWINGS AND SPECIFICATIONS FURNISHED

Except as provided for otherwise, all required copies of Plans and Specifications necessary for the execution of The Work shall be furnished to the Contractor without charge.

One complete set of all Plans and Specifications shall be maintained at the job site and shall be available to the Engineer at all times.

All original or duplicated Plans and Specifications and other data prepared by the Engineer shall remain the property of the Engineer, and they shall not be re-used on other work, but shall be returned to him upon completion of The Work.

204.07 DIMENSIONS

Figured dimensions on the Plans will be used in preference to scaling the Plans. Where The Work of the Contractor is affected by finish dimensions, these shall be determined by the Contractor at the site, and he shall assume the responsibility therefore.

204.08 SAMPLES

All samples called for in the Specifications or required by the Engineer shall be furnished by the Contractor and shall be submitted to the Engineer for his approval. Samples shall be furnished so as not to delay fabrication, allowing the Engineer reasonable time for the consideration of the samples submitted.

The Contractor shall furnish such samples of material as may be required for examination and test. All materials and workmanship shall be in accordance with approved samples. All samples of materials for tests shall be taken according to methods provided in the Specifications.

204.09 SHOP DRAWINGS

The Contractor shall provide shop drawings, settings, schedules and such other drawings as may be necessary for the prosecution of The Work in the shop and in the field as required by the Plans, Specifications or Engineer's instructions. Deviations from the Plans and Specifications shall be called to the attention of the Engineer at the time of the first submission of shop drawings and other drawings for approval. The Engineer's approval of any drawings shall not release the Contractor from responsibility for such deviations. Shop drawings shall be submitted according to the following schedule:

- A. Four (4) copies shall be submitted at least thirty (30) days before the materials indicated thereon are to be needed, or earlier if required to prevent delay of The Work.
- B. The Engineer shall, within fourteen (14) days of the submittal of any shop drawings, return one copy to the Contractor marked with all corrections and changes.

- C. The Contractor shall then correct the shop drawings to conform to the corrections and changes requested by the Engineer.
- D. Following completion of such corrections and changes, the Contractor shall furnish the Engineer three (3) copies of the shop drawings conforming to the required corrections and changes.

204.10 "OR EQUAL" CLAUSE

Whenever a material or article required is specified or shown on the Plans by using the name of the proprietary product or of a particular manufacturer or vendor, any material or article which will perform adequately the duties imposed by the general design will be considered equal and satisfactory providing the material or article so proposed is of equal substance and function in the Architect/Engineer's opinion. It shall not be purchased or installed without the Engineer's written approval.

204.11 SUBMITTALS

The Contractor shall furnish four copy's of complete catalog data for every manufactured item of equipment and all components to be used in The Work, including specific performance data, material description, rating, capacity, working pressure, material gage or thickness, brand name, catalog number and general type as appropriate:

- A. This submission shall be compiled by the Contractor and approved by the Engineer before any of the equipment is ordered.
- B. After written approval, this submission shall become a part of the Contract, and may not be deviated from except upon written approval of the Engineer.
- C. Catalog data for equipment approved by the Engineer does not in any case supersede the Engineer's Contract Documents. The approval of the Engineer shall not relieve the Contractor from responsibility for deviations from Plans or Specifications, nor shall it relieve him from responsibility for errors of any sort in the items submitted. The Contractor shall check The Work described by the catalog data with the Engineer's Contract Documents for deviations and errors.
- D. It shall be the responsibility of the Contractor to ensure that items to be furnished fit the space available. He shall make necessary field measurements to ascertain space requirements, including those for connections, and shall order such sizes and shapes of equipment that the final installation shall suit the true intent and meaning of the Plans and Specifications.
- E. Where equipment requiring different arrangement of connections from those shown is approved, it shall be the responsibility of the Contractor to install the equipment to operate properly, and in harmony with the intent of the Drawings and Specifications, and to make all changes in The Work required by the different arrangements of connections.

204.12 SURVEYS

Unless otherwise specified, the Owner shall establish all base lines for the location of the principal component parts of The Work together with a suitable number of bench marks adjacent to The Work. Based upon the information provided by the Owner, the Contractor shall develop and make all detail surveys necessary for construction, including slope stakes, batter boards, stakes for pile locations and other working points, lines and elevations. The Contractor shall have the responsibility to carefully preserve bench marks, reference points and stakes, and, in the case of destruction thereof by the Contractor or resulting from his negligence the Contractor shall be charged with the expense and damage resulting therefrom and shall be responsible for any mistakes that may be caused by the unnecessary loss or disturbance of such bench marks, reference points and stakes.

The Contractor shall provide an experienced instrument man, competent assistants, and such instruments, tools, stakes, and other materials as required to complete the survey, layout, measurement work. In addition, the

Contractor shall furnish, without charge, competent men from his force and such tools, stakes, and other materials as the Engineer may require in establishing or designating control points or in checking survey, layout, and measurement work performed by the Contractor.

The Contractor shall keep the Engineer informed, a reasonable time in advance, of the times and places at which he wishes to do work, so that horizontal and vertical control points may be established and any checking deemed necessary by Engineer may be done with minimum inconvenience to the Engineer and minimum delay to the Contractor.

204.13 SPECIAL CONDITIONS

Should any work or any conditions which are not thoroughly or satisfactorily stipulated or covered by the general or standard specifications be anticipated on any proposed work, "Special Conditions" for such work may be prepared and shall be considered as a part of the Specifications and Contract.

204.14 INCREASED OR DECREASED QUANTITIES OF WORK

The Owner reserves the right to alter the quantities of The Work to be performed or to extend or shorten the improvement at any time when and as found necessary, and the Contractor shall perform The Work as altered, increased or decreased, at the Contract unit prices. No allowance will be made for any change in anticipated profits nor shall such changes be considered as waiving or invalidating any condition or provisions of the Contract.

204.15 ALTERATIONS OF PLANS AND SPECIFICATIONS

The Owner reserves the right to make such changes in the Plans and in the character of The Work as may be necessary or desirable to insure completion of The Work in the most satisfactory manner, provided such changes do not materially alter the original Plans and Specifications or change the general nature of The Work as a whole. Such changes shall not be considered as waiving or invalidating any condition or provision of the Contract.

SECTION 205 - ENGINEER - OWNER - CONTRACTOR RELATIONS

205.01 ENGINEER'S RESPONSIBILITY AND AUTHORITY

All Work shall be done under the general engineering supervision of the Engineer to his satisfaction.

The Engineer shall decide all questions which arise as to the quality and acceptability of materials furnished, Work performed, manner of performance, rate of progress of The Work, interpretation of the Plans and Specifications, acceptable fulfillment of the Contract, compensation, mutual rights between Contractors under these Specifications and suspension of Work. The Engineer shall have the right to establish any sequence or priority of operation in the interest of desirable cooperation with other work. He shall determine the amount and quality of Work performed and materials furnished and his decisions and estimates shall be final. His estimate in such event shall be a condition precedent to the right of the Contractor to receive money due him under the Contract.

The authority of the Engineer shall to be construed to include the authority to waive, revise or modify Specifications, as herein set forth, either as to kind, type or quality of materials or manner or quality of construction.

205.02 SUSPENSION OF WORK

The Engineer shall have the authority to suspend The Work, wholly or in part, for such period or periods, based on his judgment, as he may deem necessary. Reasons for such suspension shall be given to the Contractor or his superintendent and can include, but shall not be restricted to, inclement weather, non-compliance with Plans or Specifications, improper or insufficient safety precautions, or improper sequencing of Work.

205.03 INSPECTION OF WORK

All materials and each part or detail of The Work shall be subject at all times to inspection by the Engineer, and the Contractor will be held strictly to the true intent of the Specifications in regard to quality of materials, workmanship, and the diligent execution of the Contract. Such inspection may include mill, plant or shop inspection, and any material furnished under these Specifications is subject to such inspection. The Engineer shall be allowed access to all parts of The Work and shall be furnished with such information and assistance by the Contractor as is required to make a complete and detailed inspection.

205.04 EXAMINATION OF COMPLETED WORK

At the Engineer's request, the Contractor, at any time before acceptance of The Work, shall remove or uncover such portions of the finished Work as may be directed. After examination, the Contractor shall restore said portions of The Work to the standard required by the Specifications. Should The Work thus exposed or examined prove acceptable, the uncovering or removing, and the replacing of the covering or making good of the parts removed shall be paid for as Extra Work, but should The Work so exposed or examined prove unacceptable, the uncovering, removing and replacing shall be at the Contractor's expense.

205.05 CONTRACTOR'S SUPERINTENDENT

A qualified superintendent, who is acceptable to the Engineer, shall be maintained on The Work and give efficient supervision to The Work until its completion. The superintendent shall have full authority to act in behalf of the Contractor, and all directions given to the superintendent shall be considered given to the Contractor. In general, the Engineer's instructions shall be confirmed in writing and always upon written request from the Contractor.

205.06 LANDS BY OWNER

The Owner shall provide the lands shown on the Plans upon which The Work under the Contract is to be performed and to be used for right-of-way for access. Any delay in furnishing these lands by the Owner shall be deemed proper clause for adjustment in the time of completion.

205.07 LANDS BY CONTRACTOR

Any additional land and access thereto not shown on the Plans that may be required for temporary construction facilities or for storage of materials shall be provided by the Contractor with no liability to the Owner. The Contractor shall confine his apparatus and storage of materials and operation of his workmen to those areas described in the Plans and Specifications and such additional areas which he may provide as approved by the Engineer.

205.08 PRIVATE PROPERTY

The Contractor shall not enter upon private property for any purpose without obtaining permission, and he shall be responsible for the preservation of all public property, trees, monuments, etc. along and adjacent to the street and/or right-of-way, and shall use every precaution necessary to prevent damage or injury thereto. He shall use suitable precautions to prevent damage to pipes, conduits and other underground structures, and shall protect carefully from disturbance or damage all monuments and property marks until an authorized agent has witnessed or otherwise referenced their location and shall not remove them until directed.

205.09 ASSIGNMENT OF CONTRACT

Neither the Contractor nor the Owner shall sublet, sell, transfer, assign or otherwise dispose of the Contract or any portion thereof, or of his right, title or interest therein, or his obligations thereunder, without written consent of the other party.

205.10 REMOVAL OF CONSTRUCTION EQUIPMENT, TOOLS AND SUPPLIES

At the termination of this Contract, before acceptance of The Work by the Engineer, the Contractor shall remove all of his equipment, tools and supplies from the property of the Owner. Should the Contractor fail to remove such equipment, tools, and supplies, the Owner shall have the right to remove them at the Contractor's expense.

205.11 SUSPENSION OF WORK BY OWNER FOR CAUSE

The Work or any portion thereof may be suspended at any time by the Owner for good and valid cause provided that he gives the Contractor five (5) days written notice of suspension, which shall set forth the date on which Work is to be resumed. The Contractor shall resume The Work upon written notice from the Owner and within ten (10) days after the date set forth in the notice of suspension. If the Owner does not give written notice to resume Work within ten (10) days of the date fixed in the notice of suspension, the Contractor may abandon that portion of The Work so suspended and shall be entitled to payment in accordance with Section 209.10.

205.12 OWNER'S RIGHT TO CORRECT DEFICIENCIES

Upon failure of the Contractor to perform The Work in accordance with the Contract Documents, including any requirements with respect to the Schedule of Completion, and after five (5) days written notice to the Contractor, and receipt of written approval from the Engineer, the Owner may, without prejudice to any other remedy he may have, correct such deficiencies.

205.13. OWNER'S RIGHT TO TERMINATE CONTRACT AND COMPLETE THE WORK

The Owner shall have the right to terminate the employment of the Contractor after giving ten (10) days written notice of termination to the Contractor in the event of any default by the Contractor. In the event of such termination, the Owner may take possession of The Work and all materials, tools and equipment thereon and may finish The Work by whatever method and means he may select. It shall be considered a default by the Contractor whenever he shall:

- A. Declare bankruptcy, become insolvent or assign his assets for the benefit of his creditors.
- B. Disregard or violate important provisions of the Contract Documents or Engineer's instructions, or fail to prosecute The Work according to the agreed schedule of completion, including extensions thereof.
- C. Fail to provide a qualified superintendent, competent workmen or subcontractors, or proper materials, or fail to make prompt payment therefore.

205.14 SEPARATE CONTRACTS

The Owner may let other Contracts in connection with The Work of the Contractor. The Contractor shall cooperate with other Contractors with regard to storage of materials and execution of their Work. It shall be the Contractor's responsibility to inspect all Work by other Contractors affecting his Work and to report to the Engineer any irregularities which will not permit him to complete his Work in a satisfactory manner. His failure to notify the Engineer of such irregularities shall indicate the Work of other Contractors has been satisfactorily completed to receive his Work. The Contractor shall not be responsible for defects of which he could not have known, which develop in the work of others after the work is completed. It shall be the responsibility of the Contractor to measure the completed Work in place and report to the Engineer immediately any difference between contemplated Work by others and the Plans.

205.15 SUBCONTRACTS

At the time specified by the Contract Documents or when requested by the Engineer, the Contractor shall submit in writing to the Owner for approval of the Engineer the names of the subcontractors proposed for The Work. Sub-contractors may not be changed except at the request or with the approval of the Engineer. The Contractor

is responsible to the Owner for the acts and omissions of his subcontractors, and of their direct and indirect employees, to the same extent as he is responsible for the acts and omissions of his employees. The Contract Documents shall not be construed as creating any contractual relation between any subcontractor and the Owner. The Contractor shall bind every subcontractor by the terms of the Contract Documents.

For convenience of reference and to facilitate the letting of contracts and subcontracts, the Specifications are separated into titled sections. Such separations shall not, however, operate to make the Engineer an arbiter to establish limits to the contracts between Contractor and subcontractors.

205.16 WORK DURING AN EMERGENCY

The Contractor shall perform any Work and shall furnish and install any materials and equipment necessary during an emergency endangering life or property. In all cases he shall notify the Engineer of the emergency and its nature as soon as practicable and he shall proceed to properly protect both life and property.

205.17 ORAL AGREEMENTS

No oral order, objection, claim or notice by any party to the others shall affect or modify any of the terms or obligations contained in any of the Contract Documents, and none of the provisions of the Contract Documents shall be held to be waived or modified by reason of any act whatsoever, other than by a definitely agreed waiver or modification thereof in writing, and no evidence shall be introduced in any proceeding of any other waiver or modification.

SECTION 206 - MATERIALS AND WORKMANSHIP

206.01 MATERIALS FURNISHED BY THE CONTRACTOR

All materials used in The Work shall meet the requirements of the respective Specifications, and no material shall be used until it has been approved by the Engineer. All materials not otherwise specifically indicated shall be furnished by the Contractor. Other materials shall be immediately removed from the job site at the request of the Engineer.

All materials furnished by the Contractor shall be manufactured within the United States and shall be new and unused, unless otherwise specified or approved in writing by the Engineer.

206.02 MATERIALS FURNISHED BY THE OWNER

Materials specifically indicated shall be furnished by the Owner. The fact that the Owner is to furnish material is conclusive evidence of its acceptability for the purpose intended, and the Contractor may continue to use it until otherwise directed. If the Contractor discovers any defect in material furnished by the Owner, he shall notify the Engineer. Unless otherwise noted or specifically stated, materials furnished by the Owner, which are not of local occurrence, are considered to be f.o.b. the nearest railroad station. The Contractor shall be prepared to unload and properly protect all such material from damage or loss. The Contractor shall be responsible for material loss or damage after receipt of material at the point of delivery.

206.03 STORAGE OF MATERIALS

Materials shall be so stored as to insure the preservation of their quality and fitness for The Work. When considered necessary, they shall be placed on wooden platforms or other hard, clean surfaces, and not on the ground, and/or they shall be placed under cover. Stored materials shall be located so as to facilitate prompt inspection. Private property shall not be used for storage purposes without the written permission of the Owner or Lessor.

206.04 CHARACTER OF WORKMEN

The Contractor shall at all times be responsible for the conduct and discipline of his employees and/or any subcontractor or persons employed by subcontractors. All workmen must have sufficient knowledge, skill and experience to perform properly the work assigned to them. Any foreman or workman employed by the Contractor or subcontractor who, in the opinion of the Engineer, does not perform his Work in a skillful manner, or appears to be incompetent or to act in a disorderly or intemperate manner shall, at the written request of the Engineer, be discharged immediately and shall not be employed again in any portion of The Work without the approval of the Engineer.

206.05 REJECTED WORK AND MATERIALS

All materials which do not conform to the requirements of the Contract Documents, are not equal to samples approved by the Engineer, or are in any way unsatisfactory or unsuited to the purpose for which they are intended, shall be rejected. Any defective Work whether the result of poor workmanship, use of defective materials, damage through carelessness or any other cause, shall be removed within ten (10) days after written notice is given by the Engineer, and The Work shall be re-executed by the Contractor. The fact that the Engineer may have previously overlooked such defective Work shall not constitute an acceptance of any part of it.

Should the Contractor fail to remove rejected Work or materials within ten (10) days after written notice to do so, the Owner may remove them and may store the materials and the cost of such removal to be taken out of the money that may be due or may become due the Contractor on account of or by virtue of this Contract

Correction of faulty Work after final payment shall be in accordance with the requirements of Section 209.17.

206.06 MANUFACTURER'S DIRECTIONS

Manufactured articles, material and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer unless herein specified to the contrary.

206.07 CUTTING AND PATCHING

The Contractor shall do all necessary cutting and patching of The Work that may be required to properly receive The Work of the various trades or as required by the Plans and Specifications to complete the structure. He shall restore all such cut or patched work as directed by the Engineer. Cutting of existing structure that shall endanger The Work, adjacent property, workmen or the public shall not be done unless approved by the Engineer and under his direction.

206.08 CLEANING UP

The Contractor shall remove from the Owner's property, and from all public and private property, all temporary structures, rubbish and waste materials resulting from his operation or caused by his employees, and shall remove all surplus materials leaving the site smooth, clean and true to line and grade.

206.09 GUARANTY PERIOD

The Contractor shall warrant all equipment furnished and Work performed by him for a period of two (2) years from the date of written acceptance or beneficial occupancy of The Work, whichever is earlier.

206.10 SALVAGEABLE MATERIALS

All materials which are salvageable, as determined by the Engineer and/or Owner, shall remain the property of the Owner. Those materials deemed to be unsalvageable shall be properly disposed of by the Contractor.

SECTION 207 - INSURANCE, LEGAL RESPONSIBILITY AND PUBLIC SAFETY

207.01 INSURANCE

The Contractor shall secure and maintain such insurance from an insurance company authorized to write casualty insurance in the State where The Work is located as will protect himself, his subcontractors and the Owner from claims for bodily injury, death or property damage which may arise from operations under this Contract. The Contractor shall not commence Work under this Contract until he has obtained all insurance required under this paragraph and shall have filed the certificate of insurance or the certified copy of the insurance policy with the Owner. Each insurance policy shall contain a clause providing that it shall not be cancelled by the insurance company without ten (10) days written notice to the Owner of intention to cancel. The amounts of such insurance shall not be less than the following:

A. Workmen's Compensation and Employer's Liability Insurance

shall be secured and maintained as required by the State where The Work is located.

B. Public Liability, Bodily Injury and Property Damage:

- | | |
|---|--------------|
| 1. Personal Injury, each person | \$ 100,000 |
| 2. Personal Injury, each accident | \$ 1,000,000 |
| 3. Property Damage, each occurrence | \$ 100,000 |

C. Automobile and Truck Public Liability, Bodily Injury and Property Damage:

- | | |
|---|--------------|
| 1. Personal Injury, each person | \$ 100,000 |
| 2. Personal Injury, each accident | \$ 1,000,000 |
| 3. Property Damage, each accident | \$ 100,000 |

207.02 INDEMNITY

The Contractor shall indemnify and save harmless the Owner from and against all losses and all claims, demands, payments, suits, actions, recoveries and judgments of every nature and description brought or recovered against him by reason of any omission or act of the Contractor, his agents or employees in the execution of The Work or in the guarding of it. The Contractor shall obtain in the name of the Owner and shall maintain and pay the premiums for such insurance in such amount and with such provisions as will protect the Owner from contingent liability under this Contract and a copy of such insurance policy or policies shall be delivered to the Owner. Full compliance by the Owner with the terms and provisions of such insurance policy or policies shall be a condition precedent to the Owner's right to enforce against the Contractor any provisions of this article.

207.03 OTHER INSURANCE

In addition to such other insurance as the Contractor elects to carry for his own protection and the insurance requirements of 207.01, he shall secure and maintain in the name of the Owner policies upon such structures and material and in such amounts as shall be designated in the Special Conditions, if applicable. The policies shall be secured from a company which is satisfactory to the Owner and delivered to the Owner.

207.04 PATENTS AND ROYALTIES

If any design, device, material or process covered by letters, patent or copy right is used by the Contractor, he shall provide for such use by legal agreement with the owner of the patent or a duly authorized licensee of such owner, and shall save harmless the Owner from any and all loss or expense on account thereof, including its use by the Owner.

207.05 PERMITS

All permits and licenses necessary for the prosecution of The Work not furnished by the Owner or Engineer shall be secured by the Contractor. All permit fees will be waived by the City of Shawnee for this project.

207.06 LAWS TO BE OBSERVED

The Contractor shall give all notices and comply with all Federal, State and local laws, ordinances and regulations in any manner affecting the conduct of The Work, and all such orders and decrees as exist, or may be enacted by bodies or tribunals having any jurisdiction or authority over The Work, and shall indemnify and save harmless the Owner against any claim or liability arising from, or based on, the violation of any such law, ordinance, regulation, order or decree, whether by himself or his employees.

207.07 WARNING SIGNS AND BARRICADES

The Contractor shall provide adequate signs, barricades, red lights and watchmen and take all necessary precautions for the protection of The Work and the safety of the public. All barricades and obstructions shall be protected at night by red signal lights which shall be kept burning from sunset to sunrise. Barricades shall be of substantial construction and shall be painted white or whitewashed to increase their visibility at night. Suitable warning signs shall be so placed and illuminated at night as to show in advance where construction, barricade or detours exist.

207.08 PUBLIC SAFETY AND CONVENIENCE

Danger Signals and Protection: When the Contractor is performing any type of construction or excavation work, or is stockpiling or storing any materials or equipment upon or adjacent to any street, alley, sidewalk, residence, public ground, or other location that is likely to be subject to pedestrian or vehicular traffic, he shall furnish, erect, and maintain substantial guard rails, safety fencing, lights, and traffic control devices around the project to protect pedestrians, animals, and vehicles from injury or damage. All traffic control shall be in accordance with the Oklahoma Department of Transportation Standards and Procedures for Street Use and Temporary Traffic Control. Safety and traffic control devices shall be installed and removed only at the direction of the Engineer. The Contractor shall provide sufficient proper signals and flagmen for warning during blasting operations.

Interference with Traffic: The Contractor shall construct and maintain adequate and safe bridges or crosswalks over excavations, where required. When a roadway or sidewalk is not closed, the Contractor shall provide a safe substitute route for any portion obstructed by his operations. If a roadway or sidewalk is closed to traffic, the Contractor shall provide and make detours. As directed by the Engineer, construction across roadways or sidewalks may be done by open excavation.

Excavations: The Contractor shall adequately shore, or sheet, and brace the excavation, or shall slope the sides of the trench in accordance with the State of Oklahoma Department of Labor requirements.

The Contractor shall at all times so conduct his work as to insure the least possible obstruction to traffic and inconvenience to the general public and the residents in the vicinity of The Work, and to insure the protection of persons and property in a manner satisfactory to the Engineer. No road or street shall be closed to the public except with the permission of the Engineer and proper governmental authority. Fire hydrants on or adjacent to the work shall be kept accessible to firefighting equipment at all times. Temporary provisions shall be made by the Contractor to ensure the use of sidewalks and the proper functioning of all gutters, sewer inlets, drainage ditches, and irrigation ditches, which shall not be obstructed except as approved by the Engineer.

207.09 CROSSING UTILITIES

Pipelines and other existing underground installations and structures in the vicinity of the work to be done hereunder are indicated on the drawings according to information available to the Engineer; however, all lines actually existing may not be shown. The Contractor shall make every effort to locate all underground pipelines, conduits, and structures by contacting owners of underground utilities and by prospecting in advance of trench excavation.

When new construction crosses highways, streets or utilities under the jurisdiction of State, County, City or other public agency, public utility or private entity, written permission from the proper authority shall be secured before executing such new construction. A copy of this written permission must be filed with the Owner before any work is done. The contractor will be required to furnish a release from the proper authority before final acceptance of The Work.

When The Work encroaches upon the right-of-way of any railway, the Owner will secure for the Contractor, all the necessary contracts, easements or authority to enter upon such right-of-way for the prosecution and completion of The Work. All construction shall be in strict accord with the pertinent provisions of the railway authority. The Contractor shall take such special precautions for the safety of The Work and the travelling public as may be necessary by sheeting, bracing and thoroughly supporting the sides of any excavation and supporting and protecting any adjacent structures, so as not to interfere with the operation of the railroad.

207.10 SANITARY PROVISION

The Contractor shall provide and maintain such sanitary accommodations for the use of his employees and those of his subcontractors as may be necessary to comply with the requirements and regulations of the local and State departments of health and as directed by the Engineer.

207.11 USE OF EXPLOSIVES

No Explosives are to be allowed on this project without gaining approval from City of Shawnee

207.12 PUBLIC UTILITIES AND PUBLIC PROPERTY TO BE CHANGED

In case it is necessary to change or move the property of any owner of a public utility, such owner will, upon proper application by the Contractor, be notified by the Engineer to change or move such property within a specified time, and the Contractor shall not interfere with such property until ordered to do so by the Engineer. The right is reserved to the Owner of public utilities to enter upon the limits of the Contract for the purpose of making such repairs or changes of their property that may be necessary by performance of the Contract. The municipality in which the performance of the Contract is to be executed shall have the privilege of entering upon the limits of the Contract for the purpose of repairing or relaying sewer and water lines and appurtenances, repairing culverts or storm drains, and for making other repairs, changes or extensions to any property owned by the municipality.

207.13 TEMPORARY SEWER AND DRAIN CONNECTIONS

When existing sewers have to be taken up or removed, the Contractor, at his own expense, shall provide and maintain temporary outlets and connections for all private or public drains, sewers or sewer inlets. He shall also take care of all sewage and drainage which will be received from these drains, sewers and sewer inlets; and for this purpose he shall provide and maintain at his own expense adequate pumping facilities and temporary outlets or diversions. He shall construct such troughs, pipes or other structures necessary and be prepared at all times to dispose of drainage and sewage received from these temporary connections until such time as the permanent connections are built and in service. The sewers and connections shall be kept in service and maintained under the contract save where specified or ordered to be abandoned by the Engineer.

All water and sewage shall be disposed of in a satisfactory manner so that nuisance is created and that The Work under construction will be adequately protected.

207.14 ARRANGEMENT AND CHARGE FOR WATER FURNISHED BY A MUNICIPALITY

If the Contractor desires to use municipal water he shall pay the rate established by Municipal Ordinances for such service and he shall make complete and satisfactory arrangements with the Municipal Water Department for so doing. Meters will be used and the Contractor shall deposit the cost of the water meter with the Water Department and will pay for all repairs and maintenance of the meter for the period which he has the meter in use or in his possession.

207.15 USE OF FIRE HYDRANTS

The Contractor or his employees shall not open, turn off, interfere with, attach pipe or hose to or connect anything with any fire hydrant, stop valve or stop cock or tap any water main belonging to the municipality, unless duly authorized to do so by the municipality.

SECTION 208 - PROGRESS AND COMPLETION OF WORK

208.01 NOTICE TO PROCEED

Following the execution of the Contract by the Owner, written Notice to Proceed with The Work shall be given to the Contractor. The Contractor shall begin and shall prosecute The Work regularly and uninterruptedly thereafter (unless otherwise directed in writing by the Owner) with such force as to secure the completion of The Work within the time stated in the Proposal.

208.02 CONTRACT TIME

The Contractor shall complete, in an acceptable manner, all of The Work Contracted for in the time stated in the Proposal. Computation of Contract time shall commence on the date specified on the Notice to Proceed. If no date is specified, Contract time shall commence on the tenth (10th) day following the date of mailing, by regular mail, of the Notice to Proceed. Every calendar day following, except as herein provided, shall be counted as a working day.

208.03 SCHEDULE OF COMPLETION

The Contractor shall submit, at such times as may reasonably be requested by the Engineer, schedules which shall show the order in which the Contractor proposes to carry on The Work, with dates at which the Contractor will start the several parts of The Work, and estimated dates of completion of the several parts.

208.04 CHANGES IN THE WORK

The Owner may, as the need arises, order changes in The Work through additions, deletions or modifications without invalidating the Contract. Compensation and time of completion affected by the change shall be adjusted at the time of ordering such change.

208.05 EXTRA WORK

New and unforeseen items of work found to be necessary and which cannot be covered by any item or combination of items for which there is a Contract price shall be classed as Extra Work. The Contractor shall do such Extra Work and furnish such materials as may be required for the proper completion for construction of the whole Work contemplated upon written order from the Owner as approved by the Engineer. In the absence of such written order, no claim for Extra Work shall be considered. Extra Work shall be performed in accordance with these Specifications where applicable and work not covered by the Specifications or Special Conditions shall be done in accordance with the best practice as approved by the Engineer. Extra Work required in an emergency to protect life and property shall be performed by the Contractor as required.

208.06 EXTENSION OF CONTRACT TIME

A delay beyond the Contractor's control occasioned by an Act of God, or act or omission on the part of the Owner, or by strikes, lockouts, fire, etc., may entitle the Contractor to an extension of time on which to complete The Work as determined by the Engineer, provided, however, that the Contractor shall immediately give written notice to the Engineer of the cause of such delay.

208.07 FAILURE TO COMPLETE WORK ON TIME

The time of completion is the essence of the Contract. For each working day that any Work shall remain uncompleted after the time agreed upon in the Proposal and the Contract, or as automatically increased by additional Work or materials ordered after the Contract is signed, or the increased time granted by the Owner for the completion of said Work, the sum per day given in the following schedule, unless otherwise specified in the Proposal or Special Conditions, will be deducted from the monies due the Contractor, not as a penalty but as liquidated damages:

<u>Amount of Contract</u>	<u>Amount of Liquidated Damages per Day</u>
Less than \$25,000.00	50.00
\$25,000.00 and less than \$50,000.00.	100.00
\$50,000.00 and less than \$100,000.00	200.00
\$100,000.00 and less than \$250,000.00.	300.00
\$250,000.00 and less than \$500,000.00.	400.00
\$500,000.00 and less than \$1,000,000.00.	500.00
Over \$1,000,000.00	1,000.00

The sum of money thus deducted for such delay, failure or non-completion is not to be considered as a penalty, but should be deemed taken and treated as reasonable liquidated damages since it would be impracticable and extremely difficult to fix the actual damages.

208.08 USE OF A SECTION OR PORTION OF THE WORK

Whenever, at the request of the Owner and in the opinion of the Engineer, any portion of The Work has advanced sufficiently, it may be put into use by the Owner through the written order of the Engineer. This beneficial occupancy by the Owner will be permitted only after receipt of written notice of release by the Contractor's Surety and Insurance carrier. The Guaranty Period, as defined elsewhere in these Specifications, for all Work covered by the Engineer's written order shall commence at the start of beneficial occupancy by the Owner.

SECTION 209 - MEASUREMENT AND PAYMENT

209.01 DETAILED BREAKDOWN OF CONTRACT AMOUNT

Except in cases where unit prices form the basis for payment under the Contract, the Contractor shall within ten (10) days of receipt of Notice to Proceed, submit a complete breakdown of the Contract Amount showing the value assigned to each part of The Work, including an allowance for profit and overhead. Upon approval of the breakdown of the Contract Amount by the Engineer, it shall be used as the basis for all Requests for Payment.

209.02 REQUESTS FOR PAYMENT

The Contractor may submit periodically but not more than once each month a Request for Payment for work done and materials delivered and stored on the site. The Contractor shall furnish the Engineer all reasonable facilities required for obtaining the necessary information relative to the progress and execution of The Work. Payment for materials stored on the site will be conditioned upon evidence submitted to establish the Owner's title to such materials. Each Request for Payment shall be computed from the work completed on all items listed in the Detailed Breakdown of Contract Amount, less ten percent (10%) to be retained until final completion and acceptance of The Work, and less previous payments, provided that any time after fifty percent (50%) of the work has been satisfactorily completed, the Owner may reduce the percentage retainage. Where unit prices are specified, the Request for Payment shall be based on the quantities completed.

209.03 ENGINEER'S ACTION ON A REQUEST FOR PAYMENT

Within ten (10) days of submission of any Request for Payment by the Contractor the Engineer shall:

- A. Approve the Request for Payment, as submitted.
- B. Approve such other amount as he shall decide is due the Contractor, informing the Contractor in writing of his reasons for approving the amended amount.
- C. Withhold the Request for Payment, informing the Contractor in writing of his reasons for withholding it.

209.04 OWNER'S ACTION ON AN APPROVED REQUEST FOR PAYMENT

Within thirty (30) days from the date of approval of a Request for Payment by the Engineer, the Owner shall:

- A. Pay the Request for Payment as approved.
- B. Pay such other amount in accordance as herein provided as he shall decide is due the Contractor, informing the Contractor and the Engineer in writing of his reasons for paying the amended amount.
- C. Withhold payment in accordance as herein provided informing the Contractor and the Engineer of his reasons for withholding payment.

209.05 OWNER'S RIGHT TO WITHHOLD PAYMENT OF AN APPROVED REQUEST FOR PAYMENT

The Owner may withhold payment in whole or in part on an approved Request for Payment to the extent necessary to protect himself from loss on account of any of the following causes discovered subsequent to approval of a Request for Payment by the Engineer:

- A. Defective work.
- B. Evidence indicating the probable filing of claims by other parties against the Contractor.
- C. Failure of the Contractor to make payments to subcontractors, material suppliers or labor.
- D. Damage to another contractor.

209.06 RESPONSIBILITY OF THE CONTRACTOR

Unless specifically noted otherwise, the Contractor shall furnish all materials and services, and perform all The Work described by the Contract Documents or shall have all materials and services furnished and all The Work performed at his expense. It shall also be the Contractor's responsibility to pay for:

- A. Replacement of survey bench marks, reference points and stakes provided by the Owner under Section 204.12.
- B. Lands by Contractor provided in accordance with Section 205.07.
- C. Insurance obtained in accordance with Sections 207.01 and 207.02.
- D. Other insurance obtained in accordance with Section 207.03.
- E. Performance Payment Bond obtained in accordance with Section 203.04.
- F. Statutory Bond obtained in accordance with Section 203.04.
- G. Maintenance Bond obtained in accordance with Section 203.04.

H. Royalties required under Section 207.04.

I. Permits and licenses required of the Contractor and all subcontractors.

209.07 PAYMENT FOR UNCORRECTED WORK

If, in the opinion of the Engineer, it is undesirable to replace any defective or damaged material or to reconstruct or correct any portion of The Work injured or not performed in accordance with the Contract Documents, the compensation to be paid the Contractor hereunder shall be reduced by such amount as in the judgment of the Architect/Engineer shall be equitable.

209.08 PAYMENT FOR REJECTED WORK AND MATERIALS

The removal of work and materials rejected under Section 206.05 and the re-execution of acceptable work by the Contractor shall be at the expense of the Contractor, and he shall pay the cost of replacing The Work of other contractors destroyed or damaged by the removal of the rejected work or materials and the subsequent replacement of acceptable work.

Removal of rejected Work or materials and storage of materials by the Owner shall be paid by the Contractor within thirty (30) days after written notice to pay is given by the Owner. If the Contractor does not pay the expenses of such removal and after ten (10) days written notice being given by the Owner of his intent to sell the materials, the Owner may sell the materials at auction or at private sale, and shall pay to the Contractor the net proceeds therefrom after deducting all the costs and expenses that should have been borne by the Contractor.

209.09 PAYMENTS FOR EXTRA WORK

Written notice of claims for payments for Extra Work shall be given by the Contractor within ten (10) days after receipt of instructions from the Owner as approved by the Engineer to proceed with the Extra Work, and also before any work is commenced, except in emergency endangering life or property. No claim shall be valid unless so made. In all cases, the Contractor's itemized estimate sheets showing all labor and material shall be submitted to the Engineer. The Owner's order for Extra Work shall specify any extension of the Contract time and one of the following methods of payment:

- A. Unit prices or combinations of unit prices which formed the basis of the original Contract.
- B. A lump sum based on the Contractor's estimate, accepted by the Owner, and approved by the Engineer.
- C. Actual cost-plus fifteen percent (15%) for overhead and profit.

209.10 PAYMENT FOR WORK SUSPENDED BY THE OWNER

If The Work or any part thereof shall be suspended by the Owner and abandoned by the Contractor, as provided in Section 205.11, the Contractor will then be entitled to payment for all work done on the portions so abandoned, plus fifteen percent (15%) of the value of the abandoned work to compensate for overhead, plant expense and anticipated profit.

209.11 PAYMENT FOR WORK BY THE OWNER

The cost of The Work performed by the Owner in removing construction equipment, tools and supplies in accordance with Section 205.10 and in correcting deficiencies in accordance with Section 205.12 shall be paid by the Contractor.

209.12 PAYMENT FOR WORK BY THE OWNER FOLLOWING HIS TERMINATION OF THE CONTRACT

Upon termination of the Contract by the Owner in accordance with Section 205.13, no further payments shall be due the Contractor until The Work is completed. If the unpaid balance of the Contract Amount shall exceed the cost of completing the work including all overhead costs, the excess shall be paid to the Contractor. If the cost of completing the work shall exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The cost incurred by the Owner, as herein provided, and the damage incurred through the Contractor's default, shall be certified by the Owner and approved by the Engineer.

209.13 PAYMENT FOR SAMPLES AND TESTING OF MATERIALS

Samples furnished in accordance with Section 204.08 shall be furnished by the Contractor at his expense.

Testing of samples and materials furnished in accordance with Section 204.08 shall be arranged and paid for by the Owner. Contractor shall assist as required, in the performance of tests.

Re-testing required by the failure of the original tests not meeting the Specifications will be paid for by the Contractor.

209.14 RELEASE OF LIENS

The Contractor shall deliver to the Owner a complete release of all liens arising out of this Contract before the retained percentage or before the final Request for Payment is paid. If any lien remains unsatisfied after all payments are made, the Contractor shall refund to the Owner such amounts as the Owner may have been compelled to pay in discharging such liens including all costs and a reasonable attorney's fee.

209.15 ACCEPTANCE AND FINAL PAYMENT

When the Contractor shall have completed The Work in accordance with the terms of the Contract Documents, the Engineer shall certify his acceptance to the Owner and his approval of the Contractor's final Request for Payment, which shall be the Contract Amount plus all approved additions less all approved deductions and less previous payments made. The Contractor shall furnish evidence that he has fully paid all debts for labor, materials and equipment incurred in connection with The Work, following which the Owner shall accept The Work and release the Contractor except as to the conditions of the Performance Bond, any legal rights of the Owner, required guarantees, and Correction of Faulty Work after Final Payment, and shall authorize payment of the Contractor's final Request for Payment. The Contractor must allow sufficient time between the time of completion of The Work and approval of the final Request for Payment for the Engineer to assemble and check the necessary data.

209.16 TERMINATION OF CONTRACT

The Contract will be considered fulfilled, save as provided in any Bond or Bonds or by law, when all The Work has been completed, the final inspection made by the Engineer, and final acceptance and Final Payment have been made by the Owner.

209.17 CORRECTION OF FAULTY WORK AFTER FINAL PAYMENT

The approval of the final Request for Payment by the Engineer and 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 Owner shall promptly give notice of faulty materials or workmanship and the Contractor shall promptly replace any such defects discovered within one year from the date of written acceptance of The Work. The Engineer shall decide all questions arising under this paragraph.

SECTION 210 - INTENTION OF CONTRACTING PARTIES

The Contract, and all Documents incorporated therein by reference or executed in connection therewith, are intended solely to govern the relationship between the Contractor and Owner and their mutual obligations in respect to the subject of the Contract. To that end, no provision of the Contract or of any such Documents above mentioned shall be interpreted or given legal effect to create an obligation on the part of the Owner to third persons, including by way of illustration but not of exclusion, Sureties upon Performance Bonds, Payment Bonds or other Bonds, assignees of the Contractor, subcontractors, and persons performing labor, furnishing material or in any other way contributing to or assisting in the performance of the obligations of the Contractor; nor, shall any such provision be interpreted or given legal effect to afford a defense against any obligation owed or assumed by such third person to the Owner, or in any way to restrict the freedom of the Owner to exercise full discretion in its dealing with the Contractor.

END OF DIVISION

TO COMPLY WITH TITLE 74, SEC. 3109, YOU MUST COMPLETE THIS AFFIDAVIT AND RETURN IT
TO OUR FINANCE DEPARTMENT BEFORE PAYMENT CAN BE MADE

Shawnee, Oklahoma 74801

NOTE: THIS AFFIDAVIT MUST BE RETURNED TO ABOVE ADDRESS.

TECHNICAL SPECIFICATIONS TABLE OF CONTENTS KIDS SPACE PARK IMPROVEMENTS PROJECT

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

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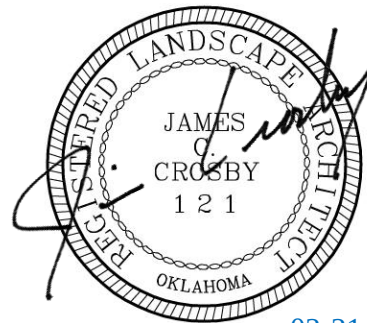
03100	Concrete Formwork
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07900	Sealants
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02-21-2022

**SECTION 01050
FIELD ENGINEERING**

PART I - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Provide and pay for field engineering services required for project.
 - 1. Survey work required in execution of project.
 - 2. Civil, structural or other professional engineering services specified, or required to execute Contractor's construction methods.
 - 3. Record drawings.
- B. Owner's Representative will identify existing control points indicated on the drawings as required.

1.02 QUALIFICATIONS OF SURVEYOR OR ENGINEER

- A. Qualified engineer or registered land surveyor, acceptable to Contractor and Owner.
- B. Registered professional engineer in the State of Oklahoma, of the discipline required for the specific service required.

1.03 SURVEY REFERENCE POINTS

- A. Existing basic horizontal and vertical control points for the project are those designated on drawings.
- B. Locate and protect control points prior to starting site work and preserve all permanent reference points during construction.
 - 1. Make no changes or relocations without prior written notice to Owner.
 - 2. Report to Owner's Representative when any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations.

1.04 PROJECT SURVEY REQUIREMENTS

- A. Establish a minimum of one permanent bench mark on each site, referenced to data established by survey control points.
 - 1. Record locations with horizontal and vertical data on project record documents.
- B. Establish lines and levels, locate and lay out, by instrumentation and similar appropriate means.
 - 1. Site improvements:

SECTION 01050
FIELD ENGINEERING

- a. Stakes for grading, fill and topsoil placement.
 - b. Utility slopes for invert elevations.
 - 2. Batter boards for structures.
 - 3. Building foundation, column locations and floor levels.
 - 4. Controlling lines and levels required for Divisions 15 and 16.
- C. From time to time, verify layouts by same methods.

1.05 RECORDS

- A. Maintain a complete, accurate log of all control and survey work as it progresses.

1.06 SUBMITTALS

- A. Submit name and address of surveyor and professional engineer to Owner's Representative.
- B. Submit certificates signed by registered surveyor certifying that elevations and locations of improvements are in conformance or non-conformance with contract documents.

PART 2 - PRODUCTS

Not used

PART 3 - EXECUTION

Not used

END OF SECTION

**SECTION 01152
APPLICATION FOR PAYMENT**

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Work included: Comply with procedures described in this Section when applying for progress payment and final payment under the Contract.
- B. Related work:
 - 1. Proposal and contract documents.

1.02 QUALITY ASSURANCE

- A. Prior to start of construction, secure the Owner's Representative's approval of the schedule of values required to be submitted.
- B. During progress of the work, modify the schedule of values as approved by the Owner's Representative to reflect changes in the contract sum due to change orders or other modifications of the Contract.
- C. Base requests for payment on the approved schedule of values.

1.03 SUBMITTALS

- A. Formal submittal: Unless otherwise directed by the Owner's Representative:
 - 1. Make formal submittal of request for payment by filling in the agreed data, by typewriter or neat lettering in ink, on AIA Document G702, "Application and Certificate for Payment", plus continuation sheet or sheets, or other form as approved by Owner.
 - 2. Sign and notarize the Application and Certificate for Payment and the City "Uniform Voucher and Invoice for Construction Services".
 - 3. Submit the original of the Application and Certificate of Payment plus three (3) identical copies of the continuation sheet or sheets to the Owner's Representative.
 - 4. The Owner's Representative will sign the Application and Certificate for Payment, and distribute:
 - a. One original and two copies to Owner;

END OF SECTION

SECTION 01200 PROJECT MEETINGS

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Work included: To enable orderly review during progress of the work and to provide for systematic discussion of problems, the Owner's Representative will conduct project meetings throughout the construction period.
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, Proposal and Contract Documents and Sections in Division 1 of these Specifications.
 - 2. The Contractor's relations with his subcontractors and materials suppliers, and discussions relative thereto, are not the Owner's Representative responsibility and normally are not part of project meetings content.

1.02 QUALITY ASSURANCE

- A. For those persons designated by the Contractor to attend and participate in project meetings, provide required authority to commit the Contractor to solutions agreed upon in the project meetings.

1.03 SUBMITTALS

- A. Job notes:
 - 1. The Owner's Representative will compile job notes of each project meeting and will furnish copies to the Contractor and to the Owner.
 - 2. Recipients of copies may make and distribute such other copies as they wish.

PART 2 - PRODUCTS

No products are required in this Section.

PART 3 - EXECUTION

3.01 MEETING SCHEDULE

- A. Except as noted below for Pre-construction Meeting, project meetings will be held monthly or as requested by the City or contractor.
- B. Coordinate as necessary to establish mutually acceptable schedule for meetings.

3.02 MEETING LOCATION

SECTION 01200
PROJECT MEETINGS

- A. The Owner's Representative will establish meeting location. To the maximum extent practicable, meetings will be held at the job site.

3.03 PRECONSTRUCTION MEETING

- A. A Pre-construction meeting will be scheduled after issuing the Notice to Proceed.
 - 1. Provide attendance by authorized representatives of the Contractor and major subcontractors.
 - 2. The Owner will advise other interested parties, including the Owner's Representative, and request their attendance.
- B. Minimum agenda: Data will be distributed and discussed on at least the following items.
 - 1. Organizational arrangement of Contractor's forces and personnel, and those of subcontractors, materials suppliers and Owner's Representative.
 - 2. Channels and procedures for communication.
 - 3. Construction schedule, including sequence of critical work and closing of any facilities.
 - 4. Contract documents, including distribution of required copies of original documents and revisions.
 - 5. Processing of shop drawings and other data submitted to Owner's Representative for review.
 - 6. Rules and regulations governing performance of the work.
 - 7. Procedures for safety and first aid, security, quality control, housekeeping and related matters.
 - 8. Location of underground utilities.
 - 9. Notification procedures for adjacent property owners.

3.04 PROJECT MEETINGS

- A. Attendance:
 - 1. To the maximum extent practicable, assign the same person or persons to represent the Contractor at project meetings throughout progress of the work.
 - 2. Subcontractors, materials suppliers, and others may be invited to attend those project meetings in which their aspect of the work is involved.
- B. Minimum agenda:
 - 1. Review, revise and approve job notes of previous meetings.
 - 2. Review progress of the work since last meeting, including status of submittals for approval.
 - 3. Identify problems which impede planned progress.
 - 4. Develop corrective measures and procedures to regain planned schedule.
 - 5. Complete other current business.

END OF SECTION

SECTION 01340 SUBMITTALS

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Procedures:
 - 1. Wherever possible throughout the Contract Documents the minimum acceptable quality of workmanship and materials has been defined by manufacturer's name and catalog number, reference to recognized industry and government standards, or description of required attributes and performance.
 - 2. To ensure that the specified products are furnished and installed in accordance with design intent, procedures have been established for advance submittal of design data and for their review by the Owner's Representative.
 - 3. Make all submittals required by the Contract Documents and revise and resubmit as necessary to establish compliance with the specified requirements.
- B. Construction progress schedules.
- C. Schedule of values.
- D. Shop drawings, product data and samples.
- E. Manufacturer's instructions and certificates.
- F. Submittal log.

1.02 RELATED REQUIREMENTS

- A. Individual requirements for submittals are described in pertinent sections of these Specifications.
- B. Related work:
 - Section 01700: Contract Closeout: Project Record Documents, Operating and Maintenance Data, Warranties and Bonds.

1.03 QUALITY ASSURANCE/CONTRACTOR RESPONSIBILITIES

- A. Coordination of submittals: Before each submittal, carefully review and coordinate all aspects of each item being submitted and verify that each item, and the submittal for it, conforms in all respects with the requirements of the Contract Documents. Coordinate with other trades as required. By affixing the

**SECTION 01340
SUBMITTALS**

Contractor's signature to each submittal, certify that this coordination has been performed.

- B. Grouping of submittals: Unless otherwise specified, make all submittals in groups containing all associated items to ensure that information is available for checking each item when it is received. Partial submittals may be rejected as not complying with the provisions of the Contract Documents and the Contractor shall be strictly liable for all delays so occasioned.
- C. Timing: Make all submittals far enough in advance of scheduled dates for installation to provide all time required for reviews, for securing necessary approvals, for possible revisions and resubmittals, and for placing orders and securing deliveries.
- D. Notify Owner's Representative in writing with submittal of any deviations in submittals from Contract Document requirements.
- E. Do no fabrication or work which requires submittals until accepted by the Owner's Representative.

1.04 SUBMITTAL SCHEDULE

- A. Compile a complete and comprehensive schedule of all submittals anticipated to be made during progress of the work. Include a list of each type of item for which Contractor's drawings, shop drawings, certificates of compliance, material samples, guarantees or other types of submittals are required. Adhere to the schedule except when specifically otherwise permitted. Submittal log is for Owner's Representative to track review.
- B. Coordinate the schedule with all necessary subcontractors and materials suppliers to ensure their ability to adhere. Coordinate as required to ensure the grouping of submittals.
- C. Revise and update the schedule on a monthly basis to reflect conditions and sequences. Promptly submit revised schedules to Owner's Representative for review and comment.

1.05 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

- A. Shop Drawings:
 - 1. Present in clear and thorough manner, with details referenced to sheet, detail, schedule or room numbers shown on Contract Drawings. Provide quantity directed by Owner's Representative.

SECTION 01340
SUBMITTALS

- B. Product Data:
 - 1. Preparation: Clearly mark each copy to identify pertinent products or models. Show performance characteristics and capacities, dimensions and clearances required, and wiring or piping diagrams and controls.
 - 2. Modify manufacturer's standard drawings, diagrams and literature to delete information not applicable to work and supplement information specifically applicable to the work.
- C. Samples:
 - 1. Office samples: Provide in quantity and size directed, complete with integrally related parts and attachment devices and illustrating functional characteristics of product and full range of color, texture and pattern.
 - 2. Field samples/mock-ups: Erect at project site at location acceptable to Owner's Representative in size or area specified in other specification sections. Fabricate to be complete and finished. Remove at conclusion of work or when directed.
- D. Make submittals promptly and in such sequence as to cause no delay in work.
- E. Submission Requirements:
 - 1. Quantity required:
 - a. Shop drawings: Submit digital copies each..
 - b. Submit index brochures of mechanical and electrical submittals (manufacturer's literature and drawings) for final approval and distribution.
 - c. Product data: Complete catalogs will not be acceptable. Manufacturer's regular catalog sheets will be acceptable if they indicate completely all specification requirements. When manufacturer's catalog sheets are submitted, material not directly connected with subject shall be completely lined out. Where drawings cover several sizes or types of construction they shall clearly indicate size or type of construction to be used including a schedule identifying each piece of equipment. Submittals containing more than five different items of equipment shall be assembled with a table of contents.
 - 2. Submittal contents:
 - a. Submission date and dates of any previous submissions.
 - b. Project title and number.
 - c. Names of Contractor, supplier and manufacturer.
 - d. Identification of product, with specification section number.
 - e. Field dimensions, clearly identified as such.
 - f. Applicable standards, such as ASTM, Federal Spec numbers, etc.
 - g. Relation to adjacent or critical features of work or materials.
 - h. Identification of deviations from Contract Documents.
 - i. Identification of revisions on resubmittals.

**SECTION 01340
SUBMITTALS**

- j. Contractor certification of submittal review, to include product verification, field measurements, quantities, coordination with adjacent equipment structural members, or architectural features, and coordination of information within submittal with requirements of work and Contract Documents. Certification may be by stamp of approval or a letter of transmittal containing a statement to the effect that they have been reviewed. Uncertified submittals will be rejected.
- F. Resubmission Requirements:
- 1. Make corrections or changes required by Owner's Representative and resubmit until accepted.
 - 2. Shop drawings and product data: Revise and resubmit as specified for initial submittal; indicate any changes which have been made other than those requested by Owner's Representative.
 - 3. Samples: Submit new samples as required for initial submittal.
 - 4. Resubmission of structural shop drawings and product data: Resubmit finalized drawings and product data. File copy to Owner's Representative and Owner; field copy to field office. Resubmit all subsequent changes with changes and dates noted.
- G. Distribution:
- 1. Distribute reproductions of shop drawings and product data which carry Owner's Representative and Owner's stamp of approval to job site and record documents file, other affected contractors, subcontractors and supplier or fabricator.
 - 2. Distribute samples with Owner's Representative and Owner's stamp of approval as directed by Owner's Representative.

1.06 SUBSTITUTIONS AND PRODUCT OPTIONS

Not Used

1.07 MANUFACTURER'S CERTIFICATES

- A. Submit certificates in accordance with requirements of each specification section.

1.08 PROJECT RECORD DOCUMENTS

- A. Submit in accordance with Section 01720 Project Record Documents.

PART 2 - PRODUCTS

Not used

PART 3 - EXECUTION

3.01 GENERAL PROCEDURES

- A. Deliver submittals to Owner's Representative.
- B. Transmit each item under Contractor's Standard Letter of Transmittal. Identify project, contractor, subcontractor, major supplier, pertinent drawing sheet and detail number and specification section number as appropriate. Identify deviations from Contract Documents.
- C. Submit initial progress and submittal schedules within 15 days after execution of Contract and schedule of values with first application for payment. Update with each Application for Payment reflecting changes since previous submittal.
- D. Comply with progress schedule for submittals related to work progress.
- E. After Owner's Representation and Owner's review of submittal, revise and resubmit as required, identifying changes made since previous submittal.
- F. Distribute copies of review submittals to concerned persons. Instruct recipients to promptly report any inability to comply with provisions.

3.02 OWNER'S REPRESENTATIVE REVIEW

- A. Owner's Representative duties:
 - 1. Review submittals with reasonable promptness.
 - 2. Affix stamp and initials or signature and indicate re-submittal requirements or approval of submittal.
 - 3. Submit to Owner for approval.
 - 4. Return submittals to Contractor for distribution or for resubmission.
- B. Review by the Owner's Representative shall not be construed as a complete check, but only that the general method of construction and detailing is satisfactory. Review shall not relieve the Contractor from responsibility for errors which may exist.
- C. Authority to Proceed: The notations "Approved" or "Approved as Corrected" authorizes the Contractor to proceed with fabrication, purchase, or both, of the items so noted, subject to the revisions, required by the Owner's Representative review comments.
- D. Revisions: Make only those revisions directed or approved by the Owner's Representative and Owner.

SECTION 01340
SUBMITTALS

- E. Revisions after approval: When a submittal has been reviewed by the Owner, re-submittal for substitution of materials or equipment will not be considered unless accompanied by an acceptable explanation as to why the substitution is necessary.

END OF SECTION

SECTION 01500
TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Work included: Provide temporary facilities and controls needed for the work including, but necessarily limited to:
 - 1. Temporary utilities such as heat, water, electricity and telephone;
 - 2. Field office for Contractor's personnel;
 - 3. Sanitary facilities;
 - 4. Enclosures such as tarpaulins, barricades and canopies;
 - 5. Temporary fencing of the construction site;
 - 6. Project sign.
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, Proposal and Contract Documents and Sections in Division 1 of these Specifications.
 - 2. Except that equipment furnished by Subcontractors shall comply with requirements pertinent safety regulations, such equipment normally furnished by the individual trades in execution of their own portions of the work are not part of this Section.
 - 3. Permanent installation and hookup of the various utility lines are described in other Sections of these Specifications.

1.02 PRODUCT HANDLING

- A. Maintain temporary facilities and controls in proper and safe condition throughout progress of the work.

PART 2 - PRODUCTS

2.01 UTILITIES

- A. Water:
 - 1. Provide as necessary temporary piping and water supply and, upon completion of the work, remove such temporary facilities.
- B. Electricity:
 - 1. Provide necessary temporary wiring and, upon completion of the work, remove such temporary facility.
 - 2. Provide and pay for electricity used in construction.
- C. Heating: Provide and maintain heat necessary for proper conduct of operations needed in the work.

SECTION 01500
TEMPORARY FACILITIES AND CONTROLS

- D. Telephone and Fax:
 - 1. Contractor and superintendent to have cellular telephones accessible during normal business hours.
 - 2. Contractor to maintain telephone and fax service at the Contractor's primary office to receive job correspondence. On-site fax not required.

2.02 FIELD OFFICES AND SHEDS

- A. Contractor's facilities:
 - 1. Contractor may at his discretion provide a field office building and sheds adequate in size and accommodation for Contractor's offices, supply and storage.
 - 2. Within the Contractor's facilities, provide enclosed space, for holding project meetings. Furnish with table, chairs and utilities.
- B. Sanitary facilities:
 - 1. Provide temporary sanitary facilities in the quantity required for use by all personnel.
 - 2. Maintain in a sanitary condition at all times.

2.03 ENCLOSURES

- A. Provide and maintain for the duration of construction all scaffolds, tarpaulins, canopies, warning signs, steps, platforms, bridges and other temporary construction necessary for proper completion of the work in compliance with pertinent safety and other regulations.

2.04 TEMPORARY FENCING

- A. Provide and maintain for the duration of construction a temporary safety barricade of design and type needed to prevent entry onto the work by the public.

PART 3 - EXECUTION

3.01 MAINTENANCE AND REMOVAL

- A. Maintain temporary facilities and controls as long as needed for safe and proper completion of the work.
- B. Remove such temporary facilities and controls as rapidly as progress of the work will permit, or as directed by the Owner's Representative.

END OF SECTION

**SECTION 01510
SITE ACCESS**

PART 1 - GENERAL

1.01 REQUIREMENTS

- A. Work included: this information applies to situations in which a Contractor or his representatives including, but not limited to, suppliers, subcontractors, employees and field engineers enter upon The Project property.
- B. Related work:
 - Section 02000: Site Work.
 - Section 02070: Selective Demolition.
 - Section 02100: Site Preparation.
 - Section 02220: Excavating, Backfilling & Compacting.

1.02 QUALITY ASSURANCE

- A. Upon approval by Owner for access, notify all pertinent personnel regarding requirements of this information.
- B. Require that all personnel who will enter upon property certify their awareness of and familiarity with the requirements of the Owner.
- C. Tree protection in accordance with Section 02100.

1.03 SUBMITTALS

- A. Maintain an accurate record of the names and identification of all persons entering upon Park property and permit periodic review of record by Owner and/or Owner's Representative.
- B. Pre-construction photographs per Paragraph 1.07.

1.04 TRANSPORTATION FACILITIES

- A. Vehicle and equipment access:
 - 1. Provide protection for curbs, sidewalks, roads, parking, utilities and amenities over which trucks and equipment pass to reach work areas.
- Contractor's vehicles:
Limit the access of vehicles belonging to employees and all other vehicles entering upon Park property to use only the access route shown on the drawings.
Do not permit vehicles to park on any other area of the property except in the areas so designated at the pre-construction meeting.

1.05 NOTIFICATION BY CONTRACTOR

- A. The Contractor shall notify the Owner, in writing, two weeks in advance of any proposed construction activity on Owner's property. Said notice does not constitute authority to proceed with work in the Park. Official notice of approval will be at the discretion of the Owner.

1.06 PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPE

- A. The Contractor shall be responsible for the preservation of all property and shall protect carefully from disturbance or damage all said property witnessed or otherwise referenced their location and shall not move any item until directed.
- B. The Contractor shall be responsible for all damage or injury to property of any character, during the prosecution of the work, resulting from any act, omission, neglect, or misconduct in his manner or method of executing the work, or at any time due to defective work or materials.
- C. The Contractor shall consult with the Owner regarding his work activities and shall install any and all barriers, warning signs, fencing, property protection, access control or other devices to the satisfaction of the Owner and needed to provide for public safety and protection of Property.
- D. When or where any direct or indirect damage or injury is done to property by or on account of any act, omission, neglect, or misconduct in the execution of the work or in consequence of the non-execution thereof by the Contractor, he shall restore, at his own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, rebuilding or otherwise restoring as may be directed by the Owner or he shall make good such damage or injury in an acceptable manner to the Owner.
- E. Tree protection in accordance with Section 02100.
- F. The contractor will work out a mutually acceptable plan with the Owner to provide access to the existing tennis courts and existing parking lot to accommodate league play.

1.07 PRE-CONSTRUCTION PHOTOGRAPHS OR VIDEO

- A. The Contractor shall provide digital photographs or video tapes of the specified work area one day prior to any work starting, but after appropriate construction staking and protection.

- B. Photographs shall be 3" x 5" color prints with information on the back of each print as follows: Show the job name, location of photograph, date of photograph and photographer's name, address and photograph number.
- C. Photographs shall be from a minimum of twenty-four (24) diversified overall views of the work area and of any pertinent Park property within construction limits. Additional photos may be required in unusual or extremely large sites.
- D. Each photograph shall be clear, in focus, with high resolution and sharpness and with minimum distortion.

1.08 CLEANING

- A. Progress cleaning:
 - 1. Daily, and more often if necessary, inspect the site and pick up all scrap, debris, packaging and shipping material. Remove such items from premises weekly.
 - 2. Weekly, and more often if necessary, inspect all materials stored on site, re-stack, tidy, or otherwise arrange in safe condition.
- B. Final cleaning:
 - 1. Completely remove resultant construction debris, particularly any loose rock or stone imported or uncovered during construction.
 - 2. Broom clean paved areas on site.
 - 3. Mow grass areas as directed which had not been under normal maintenance.
 - 4. Repair any areas of turfing that have been damaged by construction operations in accordance with Section 02934 Sodding.
 - 5. Alleviate compacted turf areas if access has been over turf, but no turf has to be placed. Compaction should be alleviated by a coring implement with 6" O.C. minimum coverage of 3" deep. Drag cores until leveled.
 - 6. Often when fences are erected for protection, holes are left when fence posts are pulled. Holes should be filled with appropriate top soil and settled with water to grade.

1.09 RECORD DOCUMENTS

- A. Submit to Owner a complete record drawing clearly indicating all work both concealed and visible.
- B. Information shall be tied to base line control data of the Owner and so noted on the Owner's field books.

1.10 FINAL APPROVAL

- A. Upon the completion of all work a final inspection must be made by the Owner to determine whether the work has been completed in accordance with the contract, plans and/or specifications.
- B. When the work has been so completed the Owner will provide certification of same and forward to appropriate contracting authorities.
- C. Acceptance by Owner shall not restrict or prohibit the rights provided for in regard to latent defects, frauds or such gross mistakes as may amount to fraud or as regards the rights under any warranty guarantee.

PART 2 - PRODUCTS

Not used

PART 3 - EXECUTION

Not used

END OF SECTION

**SECTION 01700
CONTRACT CLOSEOUT**

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Work included: Provide an orderly and efficient transfer of the completed work to the Owner.
- B. Related work:
 - 1. Proposal and contract documents.

1.02 QUALITY ASSURANCE

- A. Prior to requesting inspection by the Owner's Representative, use adequate means to assure that the work is completed in accordance with the specified requirements and is ready for the requested inspection.

1.03 PROCEDURES

- A. Substantial Completion:
 - 1. Contractor:
 - a. Submit written certification through Owner's Representative to the Owner that project is substantially complete in accordance with the construction contract.
 - b. Submit list of major items to be completed or corrected. The failure to include any items on such list does not alter the responsibility of the contractor to complete all work in accordance with the contract documents.
 - 2. Owner's Representative will make an inspection within seven (7) days after receipt of certification together with the Owner.
 - 3. Should Owner's Representative consider that work is substantially complete in accordance with the construction contract:
 - a. Contractor shall prepare a punch list of items to be completed or corrected as determined by the inspection.
 - b. The Owner will prepare a Certificate of Substantial Completion for the Contractor for their written acceptance of the responsibilities assigned to them in such Certificate. The Certificate of Substantial Completion shall contain the following:
 - (1) Date of Substantial Completion;
 - (2) Punch list of items to be completed or corrected.
 - (3) The time within which Contractor shall complete or correct work of listed items.
 - (4) Date and time Owner will assume possession of work or designated portion thereof.

**SECTION 01700
CONTRACT CLOSEOUT**

- c. Contractor shall:
 - (1) Complete work listed for completion or correction within the designated time.
 - (2) Refer to Construction Contract for post substantial completion requirements.
 - 4. Should Owner's Representative consider that work is not substantially completed:
 - a. He shall immediately notify Contractor in writing stating reasons.
 - b. Contractor: Complete work and send second written notice through Owner's Representative to Owner certifying that the project is substantially complete.
 - c. Owner's Representative will re-inspect work.
- B. Final Completion:**
- 1. Contractor shall submit written certification that:
 - a. Contract documents have been reviewed;
 - b. Project has been inspected for compliance with contract documents.
 - c. Work has been completed in accordance with the construction contract.
 - d. Equipment and systems have been tested in presence of Owner and are operational.
 - (1) Equipment and systems shall be operated in a normal mode for a minimum period of three (3) weeks prior to final inspection.
 - e. Owner's personnel have been instructed in operation of all systems, mechanical, electrical and other equipment.
 - f. Project is completed, ready for final inspection.
 - 2. Owner's Representative will make final inspection within seven (7) days after receipt of certification.
 - 3. Should Owner's Representative consider that work is finally complete in accordance with contract documents, contractor shall submit final Application for Payment.
 - 4. Should Owner's Representative consider that work is not finally complete:
 - a. He shall notify contractor, in writing, stating reasons.
 - b. Contractor shall take immediate steps to remedy the stated deficiencies and send second written notice through Owner's Representative to Owner certifying that work is complete.
 - c. Owner's Representative will re-inspect work.

1.04 REINSPECTION COSTS

SECTION 01700
CONTRACT CLOSEOUT

- A. Should Owner's Representative be required to perform more than two (2) inspections for project substantial completion and project final completion, respectively because of failure of work to comply with original certifications of contractor, the contractor will compensate Owner's Representative for additional services to include time and reimbursable expenses incurred by the Owner's Representative and his consultants. This amount will be deducted from final payment to the Contractor.

1.05 RETURN OF CONTRACT DOCUMENTS

- A. Return of Drawings: Drawings, details, sketches and specifications are property of Owner, and are issued to contractor as instruments of service only. If required, contractor shall return same to Owner.

PART 2 - PRODUCTS

Not used

PART 3 - EXECUTION

Not used

END OF SECTION

SECTION 01720
PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Work included:
 - 1. Throughout progress of the work, maintain an accurate record of changes in the Contract Documents as described in Article 3.01 below.
 - 2. Upon completion of the work, transfer the recorded changes to a set of Record Documents, as described in Article 3.02 below.
- B. Related work:
 - 1. Proposal and contract documents.
 - 2. Other requirements affecting Project Record Documents may appear in pertinent other Sections of these Specifications.

1.02 QUALITY ASSURANCE

- A. Delegate the responsibility for maintenance of Record Documents to one person on the Contractor's staff as approved by the Owner's Representative.
- B. Accuracy of records:
 - 1. Thoroughly coordinate changes within the Record Documents, making adequate and proper entries on each page of Specifications and each sheet of Drawings and other Documents where such entry is required to show the change properly.
 - 2. Accuracy of records shall be such that future search for items shown in the Contract Documents may rely reasonably on information obtained from the approved Project Record Documents.
- C. Make entries within 24 hours after receipt of information that the change has occurred.

1.03 SUBMITTALS

- A. Comply with pertinent provisions of Section 01340.
- B. The Owner's Representative's approval of the current status of Project Record Documents may be a prerequisite to the Owner's Representative approval of requests for progress payment and request for final payment under the Contract.
- C. Prior to submitting each request for progress payment, secure the Owner's Representative's approval of the current status of the Project Record Documents.

- D. Prior to submitting request for final payment, submit the final Project Record Documents to the Owner's Representative and secure his approval.

1.04 PRODUCT HANDLING

- A. Maintain the job set of Record Documents completely protected from deterioration and from loss and damage until completion of the work and transfer all recorded data to the final Project Record Documents.
- B. In the event of loss of recorded data, use means necessary to again secure the data to the Owner's Representative's approval.
 - 1. Such means shall include, if necessary in the opinion of the Owner's Representative, removal and replacement of concealing materials.
 - 2. In such case, provide replacements to the standards originally required by the Contract Documents.

PART 2 - PRODUCTS

2.01 RECORD DOCUMENTS

- A. Job set: Promptly following receipt of the Owner Notice to Proceed, secure from the Owner's Representative at no charge to the Contractor one complete set of all Documents comprising the Contract.
- B. Final Record Documents: At the time of completion of the work, deliver all job as-built plans to the Owner's Representative clearly marked and legible.

PART 3 - EXECUTION

3.01 MAINTENANCE OF JOB SET

- A. Immediately upon receipt of the job set described in Paragraph 2.01 above, identify each of the Documents with the title, "RECORD DOCUMENTS - JOB SET."
- B. Preservation:
 - 1. Considering the Contract completion time, the probable number of occasions upon which the job set must be taken out for new entries and for examination, and the conditions under which these activities will be performed, devise a suitable method for protecting the job set to the approval of the Owner's Representative.
 - 2. Do not use the job set for any purpose except entry of new data and for review by the Owner's Representative until start of transfer of data to final Project Record Documents.
 - 3. Maintain the job set at the site of work as that site is designated by the Owner's Representative.

- C. Making entries on Drawings:
 - 1. Using an erasable colored pencil (not ink or indelible pencil), clearly describe the change by graphic line and note as required.
 - 2. Date all entries.
 - 3. Call attention to the entry by a "cloud" drawn around the area or areas affected.
 - 4. In the event of overlapping changes, use different colors for the overlapping changes.
- D. Make entries in the pertinent other Documents as approved by the Owner's Representative.
- E. Conversion of schematic layouts:
 - 1. In some cases on the Drawings, arrangements of conduits, circuits, piping, ducts and similar items is shown schematically and is not intended to portray precise physical layout.
 - a. Final physical arrangement is determined by the Contractor, subject to the Owner's Representative's approval.
 - b. However, design of future modifications of the facility may require accurate information as to the final physical layout of items which are shown only schematically on the Drawings.
 - 2. Show on the job set of Record Drawings, by dimension accurate to within one inch, the centerline of each run of items such as are described in subparagraph 3.01 E. 1. above.
 - a. Clearly identify the item by accurate note such as "cast iron drain", "galv. water" and the like.
 - b. Show, by symbol note, the vertical location of the item ("under slab", "in ceiling plenum", "exposed" and the like).
 - c. Make all identification sufficiently descriptive that it may be related reliably to the Specifications.
 - 3. The Owner's Representative may, subject to Owner approval, waive the requirements for conversion of schematic layouts where, in the Owner's Representative's judgement, conversion serves no useful purpose. However, do not rely upon waivers being issued except as specifically issued in writing by the Owner.

3.02 FINAL PROJECT RECORD DOCUMENTS

- A. The purpose of the final Project Record Documents is to provide factual information regarding all aspects of the work, both concealed and visible, to enable future modification of the work to proceed without lengthy and expensive site measurement, investigation and examination.
- B. Approval of recorded data prior to transfer:

1. Secure the Owner's Representative's approval that all recorded data is clearly marked and legible.
 2. Make required revisions requested by the Owner's Representative.
- C. Transfer of data to other Documents:
1. If the Documents other than Drawings have been kept clean during progress of the work, and if entries thereon have been orderly to the approval of the Owner's Representative, the job set of those Documents other than Drawings will be accepted as final Record Documents.
 2. If any such Document is not so approved by the Owner's Representative, secure a new copy of that Document from the Owner's Representative at the Owner's Representative's usual charge for reproduction and handling and carefully transfer the change data to the new copy to the approval of the Owner's Representative.
- D. Review and submittal:
1. Submit the completed set of Project Record Documents to the Owner's Representative.
 2. Participate in review meetings as required.
- E. Final Record Documents: At the time of completion of the work, deliver all job as-built plans to the Owner's Representative clearly marked and legible. The Owner's Representative will transfer the contractor's information electronically to the original contract documents.
1. The Contractor is responsible for the accuracy of all information contained within the Record Documents. The Owner's Representative is not responsible for the accuracy of the information and is responsible only for entering the information into the original Construction Documents.
 2. The Owner's Representative will be responsible for delivering the final Record Documents to the Owner.

END OF SECTION

SECTION 01730
OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Work included: To aid the continued instruction of operating and maintenance personnel and to provide a positive source of information regarding the products incorporated into the work, furnish and deliver the data described in this Section and in pertinent other Sections of these Specifications.
- B. Related work:
 - 1. Proposal and construction documents.
 - 2. Required contents of submittals also may be amplified in pertinent other Sections of these Specifications.

1.02 QUALITY ASSURANCE

- A. In preparing data required by this Section, use only personnel who are thoroughly trained and experienced in operation and maintenance of the described items, completely familiar with the requirements of this Section and skilled in technical writing to the extent needed for communicating the essential data.

1.03 SUBMITTALS

- A. Comply with pertinent provisions of Section 01340.
- B. Submit two copies of a preliminary draft of the proposed Manual or Manuals to the Owner's Representative for review and comments.
- C. Unless otherwise directed in other Sections, or in writing by the Owner's Representative, submit four copies of the final Manual to the Owner's Representative prior to indoctrination of operation and maintenance personnel.

PART 2 - PRODUCTS

2.01 INSTRUCTION MANUALS

- A. Where instruction Manuals are required to be submitted under other Sections of these Specifications, prepare in accordance with the provisions of this Section.
- B. Format:
 - 1. Size: 8-1/2" x 11".
 - 2. Paper: White bond, at least 20 lb. Wt.
 - 3. Text: Neatly written or printed.

4. Drawings: 11' in height; bind in with text; foldout acceptable, not to exceed 11x17".
 5. Flysheets: Separate each portion of the Manual with neatly prepared flysheets briefly describing contents of the ensuing portion; flysheets may be in color.
 6. Binding: Use heavy-duty plastic or fiberboard covers with binding mechanism concealed inside the Manual; 3-ring binders will be acceptable; all binding is subject to Owner's Representative's approval.
 7. Measurements: Provide all measurements in U.S. standard units such as feet and inches, lbs, and cfm.
- C. Provide front and back covers for each Manual, using durable material approved by the Owner's Representative and clearly identified on or through the cover with at least the following information:

OPERATING AND MAINTENANCE INSTRUCTIONS

Name and address of work
Name of Contractor
General Subject of this Manual

Owner's Representative

- D. Contents: Include at least the following:
1. Neatly typewritten index near the front of the Manual.
 2. For architectural products, applied materials and finishes:
 - a. Manufacturer's data, giving full information on finishes:
 - (1) Catalog number, size, composition.
 - (2) Color and texture designations.
 - (3) Information required for reordering special manufactured products.
 - b. Instructions for care and maintenance:
 - (1) Manufacturer's recommendations for types of cleaning agents and methods.
 - (2) Cautions against cleaning agents and method which are detrimental to product.
 - (3) Recommended schedule for cleaning and maintenance.
 - c. All approved submittals.
 3. For moisture protection and weather exposed products:
 - a. Manufacturer's data, giving full information on products.
 - (1) Applicable standards.
 - (2) Chemical composition.
 - (3) Details of installation.
 - b. Instructions for inspection, maintenance and repair.
 - c. All approved submittals.

4. For each electric and electronic system and mechanical system as appropriate:
 - a. Description of system and component parts. Function, normal operating characteristics and limiting conditions. Complete nomenclature and commercial number of replaceable parts.
 - b. Circuit directories of panel boards: Electrical service, controls and communications.
 - c. Operating procedures: Routine and normal operating instructions, sequences required and special operating instructions.
 - d. Maintenance procedures: Routine operations, guide to "trouble-shooting", disassembly, repair and re-assembly and adjustment and checking.
 - e. Manufacturer's printed operating and maintenance instructions.
 - f. List of original manufacturer's spare parts, manufacturer's current prices and recommended quantities to be maintained in storage.
 - g. Other data as required under pertinent sections of specifications.
 - h. All approved submittals.
5. Certificate of substantial completion.
6. Master list of extended warranty items.

PART 3 - EXECUTION

3.01 INSTRUCTION MANUALS

- A. Preliminary:
 1. Prepare a preliminary draft of each proposed Manual.
 2. Show general arrangement, nature of contents in each portion, probable number of drawings and their size, and proposed method of binding and covering.
 3. Secure the Owner's Representative's approval prior to proceeding.
- B. Final:
 1. Complete the Manuals in strict accordance with the approved preliminary drafts and the Owner's Representative's review comments.
- C. Revisions:
 1. Following the indoctrination and instruction of operation and maintenance personnel, review all proposed revisions of the Manual with the Owner's Representative.

END OF SECTION

**SECTION 02000
SITE WORK**

PART 1 - GENERAL

1.01 DESCRIPTION

- A. These general site work requirements apply to all site work operations. Refer to Division 2 specification sections for specific general, product and execution requirements.
- B. Related work:
 - Section 01510: Site Access.
 - Section 02070: Selective Demolition.
 - Section 02100: Site Preparation.
 - Section 02220: Excavating, Backfilling and Compacting.

1.02 QUALITY ASSURANCE

- A. Comply with all applicable local, state and federal requirements regarding materials, methods of work and disposal of excess and waste materials.

1.03 PROJECT CONDITIONS

- A. Locate and identify existing underground and overhead services and utilities within contract limit work areas. Provide adequate means of protection of utilities and services designated to remain. Repair utilities damaged during site work operations at Contractor's expense.
- B. Arrange for disconnection, disconnect and seal or cap all utilities and services designated to be removed before start of site work operations. Perform all work in accordance with the requirements of the applicable utility company or agency involved.
- C. When uncharted or incorrectly charted underground piping or other utilities and services are encountered during site work operations, notify the applicable utility company immediately to obtain procedure directions. Cooperate with the applicable utility company in maintaining active services in operation. If the services are Owner maintained, notify Owner's Representative immediately.
- D. Locate, protect and maintain bench marks, monuments, control points and project engineering reference points. Re-establish disturbed or destroyed items at Contractor's expense.
- E. Perform site work operations and the removal of debris and waste materials to assure minimum interference with streets, walks and other adjacent facilities.

- F. Give the owner 24 hour advanced notice to close or obstruct street, walks and adjacent facilities. Provide alternate routes around closed or obstructed traffic ways.
- G. Control dust caused by the work. Dampen surfaces as required. Comply with pollution control regulations of governing authorities.
- H. Protect existing buildings, paving and other services or facilities on site and adjacent to the site from damage caused by site work operations. Cost of repair and restoration of damaged items at Contractor's expense.
- I. Protect and maintain street lights, utility poles and services, traffic signal control boxes, curb boxes, valves and other services, except items designated for removal. Remove or coordinate the removal of traffic signs, parking meters and postal mail boxes with the applicable governmental agency. Provide for temporary relocation when required to maintain facilities and services in operation during construction work.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Examine the areas and conditions under which site work is performed. Do not proceed with the work until unsatisfactory conditions are corrected.
- B. Consult the records and drawings of adjacent work and of existing services and utilities which may affect site work operations.

END OF SECTION

**SECTION 02070
SELECTIVE DEMOLITION**

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Work included: Carefully demolish and remove from the site those items scheduled to be demolished and removed.
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to Proposal and Contract Documents and Sections in Division 1 of these Specifications.
 - 2. Section 01510: Site Access.

1.02 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

3.01 SURFACE CONDITIONS

- A. By careful study of the Contract Documents, determine the location and extent of selective demolition to be performed.
- B. Visit the site and verify the extent and location of selective demolition required.
 - 1. Carefully identify limits of selective demolition.
 - 2. Mark interface surfaces as required to enable workmen also to identify items to be removed and items to be left in place intact.
- C. Prepare and follow an organized plan for demolition and removal of items.
 - 1. Shut off, cap and otherwise protect existing public utility lines in accordance with the requirements of the public agency or utility having jurisdiction.
 - 2. Completely remove items scheduled to be so demolished and removed, leaving surfaces clean, solid and ready to receive new materials specified elsewhere.

- 3. In all activities, comply with pertinent regulations of governmental agencies having jurisdiction.
- D. Demolished material shall be considered to be property of the Contractor and shall be completely removed from the job site unless otherwise specified.
- E. Use means necessary to prevent dust becoming a nuisance to the public, to neighborhoods and to other work being performed on or near the site.

3.02 REPLACEMENTS

- A. In the event of demolition of items not so scheduled to be demolished, promptly replace such items to the approval of the Owner at no additional cost to the Owner.

END OF SECTION

**SECTION 02100
SITE PREPARATION**

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Perform site preparation work as shown and specified. The work includes:
 - 1. Protecting existing trees to remain.
 - 2. Removing trees and other vegetation.
 - 3. Removing designated site improvements.
- B. Related work:
Section 01510: Site Access.

1.02 QUALITY ASSURANCE

- A. Comply with Section 02000 Site Work requirements.
- B. Notify all contractor employees and subcontractors of provisions of this Section.
- C. Council of Tree and Landscape Appraisers

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Materials and equipment: As selected by the contractor except as noted.
- B. Tree protection:
 - 1. Wood fencing, snow fencing.

PART 3 - EXECUTION

3.01 TREE PROTECTION

- A. Protect existing trees scheduled to remain against injury or damage, including cutting, breaking or skinning of roots, trunks or branches; smothering by stockpiled construction materials, excavated materials or vehicular traffic within branch spread.
 - 1. Protect designated trees with temporary wood or vinyl snow fence enclosure. Provide a minimum 12'-0" radius from center of tree trunk. Increase enclosure size as directed for large trees up to and including the drip line.

2. Erect temporary fencing before commencing site preparation work. Maintain fencing during full construction period. Remove temporary fencing when acceptable to Owner's Representative.
4. Repair trees scheduled to remain and damaged by construction operations in a manner acceptable to the Owner's Representative. Repair damaged trees promptly to prevent progressive deterioration caused by damage.
5. Replace trees scheduled to remain and damaged beyond repair by construction operations as determined by the Owner's Representative with trees of similar size and species of equal dollar value. Cost for tree replacement shall be determined in accordance with the "Guide for Establishing The Value of Trees and Other Plants", published by the Council of Tree and Landscape Appraisers.
6. Tree replacement as required by paragraph 5 shall be in accordance with Specification Section 02900 Trees, Plants and Ground Covers.
7. Replacement of trees scheduled to remain and damaged by construction operations during construction operations, and securing an opinion as to the tree or plant's health and its value, shall be at contractor's expense.
8. Tree loss appraisal shall be in accordance with the "Guide for Establishing the Values of Trees and Other Plants", by the Council of Tree and Landscape Appraisers.

3.02 CLEARING

- A. Locate and suitably identify trees and improvements indicated to remain.
- B. Clear and grub areas within contract limits as required for site and execution of the work.
- C. Remove trees as designated on the plans with the approval of the Owner's Representative.

3.03 STRIPPING TOPSOIL

- A. Strip topsoil to its full depth at all areas to be re-graded, resurfaced or paved within contract limit work area.
- B. Stockpile topsoil in a location acceptable to the Owner's Representative for use in finish grading and preparation of lawns and planting beds.
 1. Grade and slope stockpiles for proper drainage and to prevent erosion.
 2. No topsoil shall be removed from the site.
- C. Protect all areas which are not to be resurfaced or re-graded and adjacent areas outside of the contract limits from damage due to site preparation work.

3.04 SITE IMPROVEMENTS

- A. Existing Utilities
 - 1. Information on the drawings relating to existing utility lines and services is from the best sources presently available. All such information is furnished only for information and is not guaranteed. Excavate test pits as required to determine exact locations of existing utilities.
 - 2. Call Okie for utility staking not County owned.
 - 3. Call Owner's Representative to coordinate County maintained utility staking.

3.05 DISPOSAL OF WASTE MATERIALS

- A. Stockpile, haul from site and legally dispose of waste materials and debris. Accumulation is not permitted.
- B. Maintain disposal routes clear, clean and free of debris.
- C. On-site burning of combustible cleared materials is allowed with proper permit and burn pit.

3.06 CLEANING

- A. Upon completion of site preparation work, clean area within contract limits, remove tools and equipment. Provide site clear, clean and free of materials and debris and suitable for site work operations.

END OF SECTION

**SECTION 02211
ROUGH GRADING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Removal and stockpiling of topsoil and subsoil.
- B. Cutting, grading, filling and rough contouring the site.

1.02 RELATED SECTIONS

- A. Section 021010 - Site Preparation.
- B. Section 02220 - Excavating, Backfilling & Compaction.
- C. Section 02265 - Finish Grading: Finish grading with topsoil to contours.

1.03 REFERENCES

- A. Relations of soils and Soil-Aggregate Mixtures, Using 5.5 lb Rammer and 12 inch Drop.
- B. ANSI/ASTM D 1556 - Test Method for Density of Soil in Place by the Sand-Cone Method.
- C. ANSI/ASTM D1557 - Test Methods for Moisture-Density Relations of soils and Soil-Aggregate Mixtures Using 10 lb. Rammer and 18 inch Drop.

1.04 PROJECT RECORDS DOCUMENTS

- A. Submit under provisions of section 01700.
- B. Accurately record actual locations of utilities remaining, by horizontal dimensions, elevations or inverts, and slopes gradients.

PART 2 PRODUCTS

2.01 SOIL MATERIALS

- A. Off-Site Fill: Off-site fill shall be material with plasticity index less than 18 and shall contain at least 15% fines (material passing #200 sieve.)

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify site conditions.
- B. Verify that survey benchmark and intended elevations for the work are as indicated.

3.02 PREPARATION

- A. Identify required lines, levels, contours, and datum.
- B. Identify known underground, above ground, and aerial utilities. Stake and flag locations.
- C. Notify utility company as necessary to remove and relocate utilities.
- D. Protect above and below grade utilities which are to remain.
- E. Protect plant life, lawns, rock outcropping and other features remaining as portion of final landscaping.
- F. Protect bench marks, existing structures, fences, sidewalks, paving, and curbs from excavation equipment and vehicular traffic.

3.03 TOPSOIL EXCAVATION

- A. Excavate topsoil from areas to be further excavated, re-landscaped, or re-graded.
- B. Stockpile in area designated on site. Remove excess topsoil not being reused, from site.
- C. Do not excavate wet topsoil.
- D. Stockpile to depth not exceeding 8 feet. Cover to protect from erosion.

3.04 SUBSOIL EXCAVATION

- A. Excavate subsoil from areas to be further excavated, re-landscaped, or re-graded.
- B. Stockpile in area designated on site. Remove excess subsoil not being reused, from site.
- C. Do not excavate wet subsoil.
- D. Stockpile subsoil to depth not exceeding 8 feet. Cover to protect from erosion.
- E. When excavation through roots is necessary, perform work by hand and cut roots with sharp axe.

3.05 FILLING

- A. Fill areas to contours and elevations with unfrozen materials
- B. Granular Fill: Place and compact materials in continuous layers not exceeding 8 inches compacted depth, compacted to 95 percent.
- C. Subsoil and Topsoil Fill: Place and compact material in continuous layers not exceeding 9 inches compacted depth compacted to 95 percent.
- D. Maintain optimum moisture content of fill materials to attain required compaction density.
- E. Slope grade away from building minimum 2 inches in 10 ft, unless noted otherwise.
- F. Make grade changes gradual. Blend slope into level areas.
- G. Remove surplus fill materials from site.

3.06 TOLERANCES

- A. Top Surface of Subgrade: Plus or minus 1/10 foot.

3.07 FIELD QUALITY CONTROL

- A. Field inspection and testing will be performed under provisions of Section 01410.
- B. Tests and analysis of fill materials will be performed in accordance with ANSI/ASTM D698 D1557 and with Section 01410.
- C. Compaction testing will be performed in accordance with ANSI/ASTM D968 and with Section 01410.
- D. If test indicate Work does not meet specified requirements, remove work, replace and retest at no cost to owner.
- E. Frequency of Test: 50 feet on center.

END OF SECTION

**SECTION 02220
EARTHWORK**

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Work included: Excavate, backfill, compact and grade the site to the elevations shown on the drawings as specified herein and as needed to meet the requirements of the construction shown in the Contract Documents.
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, Proposal and Contract Documents and Sections in Division 1 of these Specifications.
 - 2. Section 01510: Site Access.

1.02 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Use equipment adequate in size, capacity and numbers to accomplish the work of this Section in a timely manner.

PART 2 - PRODUCTS

2.01 SOIL MATERIALS

- A. Fill and backfill materials:
 - 1. Provide soil materials free from organic matter and deleterious substances, containing no rocks or lumps over 6" in greatest dimension and with not more than 15% of the rocks or lumps larger than 2-1/2" in their greatest dimension.
 - 2. Fill material is subject to the approval of the Owner's Representative and is that material removed from excavations or imported from off-site borrow areas, predominantly granular, non-expansive soils free from roots and other deleterious matter.
 - 3. Do not permit rocks having a dimension greater than 1" in the upper 12" of fill or embankment.
 - 4. Where fill material is required to build up a building pad and/or under building slabs, provide select low PI material. Select fill material used should be free of organic or other deleterious matters, have a maximum particle size of three (3) inches, and have a liquid limit less than thirty-five

(35) and a plasticity index between six (6) and twelve (12) and consist of sandy clays or clayey sands.

5. Where granular base is called for under building slabs, provide aggregate complying with requirements of Section 03300 of these Specifications.

2.02 TOPSOIL

- A. Where shown on the drawings or otherwise required, provide topsoil consisting of friable fertile soil of loamy character containing a minimum of 2% decayed organic matter (humus) normal to the region, capable of sustaining healthy plant life and reasonably free from subsoil, roots, heavy or stiff clay, stones larger than 1" in greatest dimension, noxious weeds, sticks, brush, litter and other deleterious matter.
- B. Obtain topsoil from sources within the project limits or provide imported topsoil obtained from sources outside the project limits or from both sources.

2.03 OTHER MATERIALS

- A. Provide other materials not specifically described but required for complete and proper installation as selected by the Contractor subject to the approval of the Owner's Representative.

PART 3 - EXECUTION

3.01 SURFACE CONDITIONS

- A. Utilities: Refer to Section 2000 Site Work.
- B. Protection of persons and property:
 1. Barricade open holes and depressions occurring as part of the work and post warning lights on property adjacent to or with public access.
 2. Operate warning lights during hours from dusk to dawn each day and as otherwise required.
 3. Protect structures, utilities, sidewalks, pavements and other facilities from damage caused by settlement, lateral movement, washout and other hazards created by operations under this Section.
- C. De-watering:
 1. Remove all water, including rain water, encountered during trench and sub-structure work to an approved location by pumps, drains and other approved methods.
 2. Keep excavations and site construction area free from water.
- D. Use means necessary to prevent dust becoming a nuisance to the public, to neighbors and to other work being performed on or near the site.
- E. Maintain access to adjacent areas at all times.

3.02 EXCAVATING

- A. Perform unclassified excavating of every type of material encountered within the limits of the work to the lines, grades and elevations indicated and specified herein.
- B. Excavation of rock:
 - 1. Where rocks, boulders, or similar material is encountered and where such material cannot be removed or excavated by conventional earth moving or ripping equipment, take required steps to proceed with the general grading operations of the work and remove or excavate such material by means which will neither cause additional cost to the Owner nor endanger buildings or structures whether on or off the site.
 - 2. Do not use explosives without written permission from the Owner's Representative.
 - 3. The definition of "Rock Excavation" will apply as stated in the "Standard Specifications for Highway Construction", Oklahoma Department of Transportation, edition of 1988 or latest revision.
- C. Excavate and backfill in a manner and sequence that will provide proper drainage at all times.
- D. Borrow:
 - 1. Obtain material required for fill or embankment in excess of that produced within the grading limits of the work from borrow areas selected and paid for by the Contractor and approved by the Owner's Representative.
 - 2. Grade borrow areas upon completion to provide complete surface drainage and to blend with surrounding contours.
 - 3. Contractor is required to excavate sufficient material to construct contours and features as per plans. Payment of all excavation will be paid as a lump sum.
- E. Surplus material:
 - 1. Owner's Representative will direct contractor in the placement of surplus excavated material.
 - 2. Surplus material will be used on the project or stored on site at a location approved by the Owner's Representative.
- F. Swales, ditches and gutters:
 - 1. Cut accurately to the cross sections, grades and elevations shown on the grading plans.
 - 2. Maintain excavations free from detrimental quantities of leaves, sticks, trash and other debris until completion of the work.
 - 3. Swales and ditches shall be smooth in nature to accommodate standard mowing practices and equipment.
- G. Unauthorized excavation:
 - 1. Unauthorized excavation consists of removal of materials beyond indicated sub-grade elevations or dimensions without specific instruction from the Owner's Representative.

2. Under footings, foundations or retaining walls:
 - a. Fill unauthorized excavations by extending the indicated bottom elevation of the footing or base to the excavation bottom without altering the required top elevation.
 - b. When acceptable to the Owner's Representative, lean concrete fill may be used to bring the bottom elevation to proper position.
 3. Elsewhere, backfill and compact unauthorized excavations as specified for authorized excavations, unless otherwise directed by the Owner's Representative.
- H. Stability of excavations:
1. Slope sides of excavations to 1:1 or flatter, unless otherwise directed by the Owner's Representative.
 2. Shore and brace where sloping is not possible because of space restrictions or stability of the materials being excavated.
 3. Maintain sides and slopes of excavations in a safe condition until completion of backfilling.
- I. Excavating for structures:
1. Conform to elevations and dimensions shown within a tolerance of 0.10 ft and extending a sufficient distance from footings and foundations to permit placing and removing concrete formwork, installation of services, other construction required and for inspection.
 2. In excavating for footings and foundations, take care not to disturb bottom of excavation:
 - a. Excavate by hand tools to final grade just before concrete is placed.
 - b. Trim bottoms to required lines and grades to leave solid base to receive concrete.
 3. Excavate for footings and foundations only after general site excavating, filling and grading are complete.
- J. Cold weather protection:
1. Protect excavation bottoms against freezing when atmospheric temperature is less than 35 degrees F.
- K. Excavating for detention ponds:
1. The exposed sub-grade of pond areas shall be scarified to a minimum depth of 8 inches. Before compaction, the scarified soils shall be adjusted to within a moisture content range of plus or minus 2 percent of optimum moisture content.

3.03 FILLING AND BACKFILLING

- A. General:

1. For each classification listed below, place acceptable soil material in layers to required sub-grade elevations.
 2. In excavations:
 - a. Use satisfactory excavated or borrow material.
 3. Building pads and/or under building slabs:
 - a. Provide Select low PI material to build up building pad and slab to elevations called out on the drawings. If the material on site is not suitable, the select material will need to be imported from off site.
 - b. Use granular fill, if so called for on the drawings or soils report, complying with aggregate acceptable under Section 03300 of these Specifications.
- B. Ground surface preparation:
1. Remove vegetation, debris, unsatisfactory soil materials, obstructions and deleterious matter from ground surface prior to placement of fills.
 2. Plow, strip or break up sloped surfaces steeper than one vertical to four horizontal so that fill material will bond with existing surface.
 3. When existing ground surface has a density less than that specified under “compacting” for the particular area, break up the ground surface, pulverize, moisture-condition to the optimum moisture content and compact to required depth and percentage of maximum density.
- C. Placing and compacting:
1. Place backfill and fill materials in layers not more than 8” in loose depth.
 2. Before compacting, moisten or aerate each layer as necessary to provide the optimum moisture content.
 3. Compact each layer to required percentage of maximum density for area. Compact per paragraph 3.05 A., B. and C. this Section.
 4. Do not place backfill or fill material on surfaces that are muddy, frozen or containing frost or ice.
 5. Place backfill and fill materials evenly adjacent to structure’s required elevations.
 6. Take care to prevent wedging action of backfill against structures by carrying the material uniformly around the structure to approximately the same elevation in each lift.

3.04 GRADING

- A. General:
1. Uniformly grade the areas within limits of grading under this Section, including adjacent transition areas.
 2. Smooth the finished surface within specified tolerance.

3. Compact with uniform levels or slopes between points where elevations are shown on the drawings or between such points and existing grades.
 4. Where a change of slope is indicated on the drawings, construct a rolled transition section having a minimum radius of approximately 8'-0" unless adjacent construction will not permit such a transition or if such a transition defeats positive control of drainage.
- B. Grading outside building lines:
1. Grade adjacent to buildings to achieve drainage away from the structures and to prevent ponding.
 2. Finish the surfaces to be free from irregular surface changes, and:
 - a. Shape the surface of areas scheduled to be under walks to line, grade and cross-section with finished surface not more than 0.10 ft above or below the required sub-grade elevation.
 - b. Shape the surface of areas scheduled to be under pavement to line, grade and cross-section, with finished surface not more than 0.05 ft above or below the required sub-grade elevation.

3.05 COMPACTING

- A. Control soil compaction during construction to provide the minimum percentage of density specified for each area as determined according to ASTM D1557. All areas are to achieve a 95% proctor density minimum, and an 85% proctor density for the final lift in sod and planting areas only.
- B. Provide not less than the following maximum density of soil material compacted at optimum moisture content for the actual density of each layer of soil material in place and/or as specified by the Soil Engineer's report.
1. Structures:
 - a. Compact the top 8" of sub-grade and each layer of fill material or backfill material at 98% of maximum density unless otherwise called out in the plans or soils report.
 2. Lawn and unpaved areas:
 - a. Compact the top 8" of sub-grade at 85% of maximum density, all other layers of fill material or backfill material are to be 95% of maximum density. The top 8" of sub-grade in lawn areas is not to exceed 90% of maximum density.
 3. Walks
 - a. Compact the top 8" of sub-grade and each layer of fill material or backfill material at 95% of maximum density unless otherwise called out in the plans or soils report.
 4. Pavements:
 - a. Compact the top 8" of sub-grade and each layer of fill material or backfill material at 95% of maximum density unless otherwise called out in the plans or soils report.

- C. Moisture control:
 - 1. Soil material that has been removed because it is too wet to permit compacting may be stockpiled or spread and allowed to dry. Assist drying by disking, harrowing or pulverizing until moisture content is reduced to a satisfactory value as determined by moisture-density relation tests approved by the Owner's Representative.

3.06 TREATED SUBGRADE

- A. All parking lot pavement sub-grade shall be treated in accordance the plans and Engineers Soils Report.

3.07 FIELD QUALITY CONTROL

- A. Secure Owner's Representative's inspection and approval of sub-grades and fill layers before subsequent construction is permitted thereon.
- B. Provide at least the following tests to the approval of the Owner's Representative.
 - 1. At paved areas, a minimum of one field density test for every 7,500 square feet, but a minimum of three tests for all areas or as requested by the Owner's Representative. Testing to be paid for by the City.
 - 2. At lawn and unpaved areas, at least one field density test for every 20,000 square feet, but a minimum of three test for all areas or as requested by the Owner's Representative. Testing to be paid for by the City.
 - 3. Sub-grade shall be checked for stability even though it may meet the compaction requirements. The check for stability shall be proof rolling with a large roller or loaded dump truck and visual observation to insure that there is no pumping of the sub-grade.
- C. If, in the Owner's Representative's opinion based on reports of the testing laboratory, sub-grade or fills which have been placed are below specified density, provide additional compacting and testing under the provisions of Section 01410 of these Specifications. Re-testing of areas that failed and have to be re-tested to be paid for by the contractor.

3.08 MAINTENANCE

- A. Protection of newly graded areas:
 - 1. Protect newly graded areas from traffic and erosion and keep free from trash and weeds.
 - 2. Repair and reestablish grades in settled, eroded and rutted areas to the specified tolerances.

- B. Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify the surface, reshape and compact to the required density prior to further construction.

3.09 CERTIFICATION

- A. Upon completion of this portion of the work and as a condition of its acceptance, deliver to the Owner's Representative a written report certifying that the compaction requirements have been obtained. State in the report the area or fill or embankment, the compaction density obtained and the type or classification of fill material placed.

END OF SECTION

**SECTION 02265
FINISH GRADING**

PART 1 GENERAL

1.01 WORK INCLUDED

- A. Finish grade subsoil.
- B. Place, level, and compact topsoil.

1.02 RELATED WORK

- A. Section 02211 - Rough grading subsoil to site contours.
- B. Section 03300 – Cast In Place Concrete

1.03 PROTECTION

- A. Protect landscaping and other features remaining as final work.
- B. Protect existing structures, fences, sidewalks, paving and curbs.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Topsoil: Imported, see Section 02220 – Excavating, Backfilling and Compaction; and 02934 – Sodding.

PART 3 EXECUTION

3.01 INSPECTION

- A. Verify site conditions and note irregularities affecting work of this Section.
- B. Beginning work of this Section means acceptance of existing conditions.

3.02 SUBSOIL PREPARATION

- A. Eliminate uneven areas and low spots. Remove debris, roots, branches, and stones, in excess of ½ inch in size. Remove subsoil contaminated with petroleum products.

3.03 PLACING TOPSOIL

- A. Place topsoil in areas where earth or no other building or paving is scheduled on the drawings.

- B. Use topsoil in relatively dry state. Place during dry weather.
- C. Fine grade topsoil eliminating rough or low areas. Maintain levels, profiles, and contours of subgrade.
- D. Remove stone, roots, grass, weeds, debris, and foreign material while spreading.
- E. Manually spread topsoil around trees, plants, building, and concrete curbs to prevent damage.
- F. Remove surplus subsoil and topsoil from site.
- G. Leave stockpile area and site clean and raked, ready to receive landscaping.

3.04 TOLERANCES

- A. Top of Topsoil: Plus or minus 1/10 ft.

END OF SECTION

**SECTION 02400
SITE DRAINAGE**

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Provide site drainage as shown and specified. The work includes:
 - 1. Drainage structures and piping.
 - 2. Excavating and backfilling site drainage work.
- B. Related work:
 - Section 01510: Site Access.
 - Section 02200: Earthwork

1.02 QUALITY ASSURANCE

- A. Comply with Section 02000 Site Work requirements.
- B. Materials and methods of construction shall comply with the following:
 - 1. Oklahoma Department of Transportation Standards and Specifications.
 - 2. American Society for Testing and Materials ASTM).
 - 3. American Association of State Highway and Transportation Officials (AASHTO).
 - 4. American Concrete Pipe Association (ACPA).
- C. Excavating, backfilling and compacting operations: Comply with Section 02220 requirements and as specified.
- D. Obtain acceptance of Owner's Representative of installed and tested site drainage system prior to installing backfill materials.
- E. Identify all existing underground utilities and their location.

1.03 SUBMITTALS

- A. Comply with Provisions of Section 01340.
- B. Provide site drainage record drawings:
 - 1. Legibly mark drawings to record actual construction.
 - 2. Indicate horizontal and vertical locations, referenced to permanent surface improvements.
 - 3. Identify field changes of dimension and detail and changes made by Change Order.

- C. Provide manufacturer's product data for each type of pipe material.

1.04 PROJECT CONDITIONS

- A. Known underground and surface utility lines are indicated on the drawings.
- B. Protect existing trees, plants, lawns and other features designated to remain as part of the landscape work.
- C. Protect excavations by shoring, bracing, sheeting, underpinning or other methods as required to prevent cave-ins or loose dirt from entering excavations. Barricade open excavations and post warning lights at work adjacent to public streets and walks in accordance with OSHA requirements.
- D. Underpin adjacent structure(s) including utility service lines which may be damaged by excavation operations.
- E. Promptly repair damage to adjacent facilities caused by site drainage earthwork operations. Cost of repair at Contractor's expense.
- F. Promptly notify the Owner's Representative of unexpected subsurface conditions.

PART 2 - PRODUCT

2.01 MATERIALS

- A. Site drainage piping: Provide types and sizes indicated. Provide matching couplings, fittings and accessory components to ensure continuity of the site drainage system.
 - 1. Reinforced concrete pipe fittings: ASTM C76, Class IV pipe or of equal strength sufficient to attain D-load, 0.01" of 2,000 lbs. with ASTM C443 "O" ring seals or compression type rubber gasket joints. Sizes to 10" diameter may be non-reinforced with equivalent strength.
 - 2. Corrugated Polyethylene Tubing: ASTM F405 and F667. A product which meets this specification is ADS N-12 perforated corrugated polyethylene tubing by Advanced Drainage Systems, Inc., Columbus, Ohio or conform to AASHTO M252.
- B. Trench drains, manholes, catch basins, inlets: Provide type and sizes indicated.
 - 1. Frames, grates and covers: ASTM A48 grey cast iron, asphalt coated.
 - 2. Concrete masonry units: ASTM C139.
 - 3. Brick: ASTM C32, grade MS.
 - 4. Precast concrete manhole barrels and cones: ASTM C478, 5" wall thickness with ASTM C443 "O" ring gasket joints.

- 5. Mortar:
 - a. Mortar for jointing concrete pipe and for laying and parging concrete masonry:
1 part Portland cement and 2 parts sand.
 - b. Mortar for brickwork: 1 part Portland Cement, 1/2 part hydrated lime and 4-1/2 parts sand.
- C. Fine granular fill: Clean natural sand.
- D. Course granular fill: 3/4" crushed limestone.
- E. Concrete: 3,000 psi air entrained concrete complying with requirements of Section 03300 Cast-In-Place Concrete.
- F. Earth fill: Natural sandy-clay subsoil, soil-rock mixtures, or approved excavated materials, free of foreign matter, organic material and debris.
 - 1. Excavated materials removed in site drainage trenching operation may be used as backfill when acceptable to the Owner's Representative.
- G. Soil separator: Rot resistant polypropylene filter fabric, permeable and unaffected by freezing and thawing.

PART 3 - EXECUTION

3.01 DESCRIPTION

- A. Lay out site drainage work and establish extent of excavation by area and elevation. Designate and identify datum elevation and project engineering reference points. Set required lines, levels and elevations.
- B. Do not cover or enclose work of this Section before obtaining required inspections, tests, approvals and location recording.
- C. Remove existing paving, including base material, as required to accommodate site drainage work. Saw cut existing paving to provide uniform straight transition at intersection of new to existing paving.

3.02 EXISTING UTILITIES

- A. Conform to Section 02000 Site Work.

3.03 INSTALLATION

- A. Perform excavating and backfilling as required to install site drainage work.

- B. Provide trench wall support and pumping of surface and ground water as required to provide suitable conditions.
- C. Excavate trenches to accommodate indicated bedding conditions and material. Trim and shape trench bottoms to proper line and grade, free of irregularities. Remove unstable material and replace with compacted fill.
- D. Install site drainage system true to grade and alignment indicated.
 - 1. Provide necessary equipment for lowering pipe safely into trenches. Handle pipe and accessories to prevent damage. Damaged materials replaced at Contractor's expense.
 - 2. Do not place pipe in water, nor when trench or weather is unsuitable for site drainage.
 - 3. Remove all dirt and foreign material from pipe before installation. Provide bulkheads as required to prevent entrance of dirt or water after installation.
 - 4. Lay and fit pipe sections to provide a smooth, uniform invert, with sealed joints and full bearing in bedding material. Provide continuous fall in flow direction.
 - 5. Excavate bell holes under each bell to ensure uniform bedding for all types of bell and spigot piping.
 - 6. Install pipe joint gaskets in accordance with manufacturer's instructions. Install concrete pipe in accordance with ACPA "Concrete Pipe Field Manual".
 - 7. Cut pipe ends entering structures flush with inner face of structures.
 - 8. Provide soil separator over granular backfill at perforated site drainage piping.
 - 9. Extend site drainage system to outfall indicated and make required connection.
 - 10. Obtain required inspections and perform testing prior to backfilling. Remove obstructions, replace damaged components and retest as required. Provide a satisfactory free flowing drainage system.
 - 11. Sub-drain pipe installation: Conform to AASHTO M252-851.
- E. Backfill trenches with an approved backfill material, free from large clods, stones and debris.
 - 1. Backfill trenches in 8" compacted layers until there is a cover of not less than 24" over piping. Place remaining backfill material in 12" compacted layers.
 - 2. Backfill evenly on both sides of piping for full depth. Provide thorough compaction of fill under pipe haunches.
 - 3. Provide granular backfill at all paved areas.
 - 4. Provide concrete encasement where indicated.

- F. Mechanically compact backfill. Water settling, puddling and jetting as a compaction method are not acceptable.
- G. Fill, compact and restore to original level and condition all settlement.
- H. Replace paving, lawns and finished surfaces removed to accommodate the site drainage system, except where new surfaces are provided as part of the work.
- I. Construct trench drains, catch basins, manholes, inlets and other drainage structures as indicated.
 - 1. Install drainage structures on a sound cast-in-place or pre-cast segmented concrete base.
 - 2. Lay radial and batter concrete masonry with full mortar joints completely filled with Portland cement mortar. Strike joints flush with surface of concrete masonry.
 - 3. Horizontal joints shall not exceed 1/2". Vertical joints shall not exceed 1/4" on their interior surface.
 - 4. Provide headers where required to adjust frames to grade, breaking joints between courses.
 - 5. Parge inside and outside face of masonry structure walls with 1/4" mortar.
 - 6. Construct flow channels with concrete or brick conforming to the inside diameter of connecting lines. Make changes in grade gradually and make changes in line with true curves.
 - 7. Set frames and covers to required grade and bed in place with mortar.
 - 8. Cold weather protection: Provide all necessary means for heating concrete, masonry materials and mortar to protect concrete and masonry work during and after installation from damaged by frost and freezing.
 - 9. Perform no work when the temperature is below 25 degrees F. (ambient).

3.04 DISPOSAL OF WASTE MATERIALS

- A. Transport excess excavated materials, including rock, to designated disposal area on Owner's property. Stockpile or spread as directed. Remove from site and legally dispose of trash and debris.

3.05 CLEANING

- A. Maintain site drainage piping and structures in workable condition during construction operations.
- B. Flush site drainage system with water in sufficient volume to obtain free flow through each line. Remove all silt, trash and debris just prior to acceptance of work.

SECTION 02400
SITE DRAINAGE

- C. Upon completion of site drainage work, remove tools and equipment. Provide site clear, clean, free of debris and suitable for site work operations.

END OF SECTION

**SECTION 02800
PLAYGROUND EQUIPMENT**

PART 1 -- GENERAL

1.01 DESCRIPTION

- A. Provide and install play equipment as shown on the schematic drawings and as specified herein, complete in place, tested and approved, including but not limited to:
 - (1) Playground equipment
 - (2) Concrete footings

1.02 QUALITY ASSURANCE

- A. All playground equipment, safety surfacing and installation of equipment and safety surfacing shall be manufactured to conform to the guidelines of the most recent U.S. Consumers Product Safety Commission Guidelines and ASTM F1487 Standard for playground safety and accessibility.
- B. Manufacturers shall provide an insurance certificate on both product and General liability of not less than one million dollars. The issuing underwriter Insurer shall have a current Best's Key Rating Guide Policyholders Rating of "A" or above, and Best's Financial Size Group must be indicated. The Manufacturer's Insurer shall comply with the general laws and duly constituted authorities of the State of Oklahoma. Proof of Insurance Certificates shall be submitted with playground equipment submittals prior to purchase and installation of equipment.
- C. Manufacturers shall provide a minimum one-year warranty from the date of final acceptance on materials and workmanship, with an additional ten-year warranty on post and deck integrity.
- D. The General Contractor shall be required to provide a Warranty Validation Certificate made out to the Owner from the Manufacturer of both the playground equipment and the safety surfacing which states the installation of all playground equipment and safety surfacing meets or exceeds the most recent Consumer Products Safety Commission's (CPSC) Playground Equipment Guidelines and ASTM F1487, Safety and Accessibility Standard.
- E. All playground equipment shall be constructed to meet or exceed the most recent U.S. Consumer Products Safety Commission Guidelines and ASTM standards for protrusions. All nuts and bolts shall be recessed.
- B. Manufacturer shall provide maintenance schedule and estimate the frequency with which inspection and maintenance should be performed.

G. Installer's Qualifications:

1. The playground equipment and safety surface installation shall be done by a Manufacturer's Certified installer or workmen supervised by a representative of the playground equipment manufacturer. See 1.02 (D) for certification requirements for installation. Equipment will not be accepted without certification being submitted prior to request for acceptance by General Contractor.
2. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the requirements and the methods needed for proper performance of the work of this section.

1.03 SUBMITTALS

- A. Prior to installation, submit manufacturer's installation instructions.
- B. Prior to installation, submit manufacturer's checklist for site verification that equipment is installed in accordance with manufacturer's requirements.
- C. Prior to ordering equipment, submit manufacturer's plan view drawing of the equipment with the manufacturer's recommendations for depth of surfacing for each event and the minimum fall zone for all play components or systems. All playground equipment, components, swings, spring animals and free-standing climbers or other incidental equipment shall be shown to scale and must fit within the area shown on the drawings including ASTM fall zones and the perimeter clear zone. Modifications to the playground during installation to make the equipment fit into the concrete border will be at the expense of the contractor. **The playground layout submittal of the equipment, as it fits in the designed perimeter border, must be approved by the Landscape Architect and City prior to any sitework beginning.**
- D. After installation, submit touch-up paint of each color specified. Color of materials to be selected by Parks and Recreation Department from those available from the Manufacturer.

PART 2-- PRODUCTS

2.01 MATERIALS

METAL EQUIPMENT

- A. Deck support posts shall be of 5" O.D. round posts constructed from galvanized steel, powder coated at the factory. They shall have caps that are factory installed and secured. All steel pipe shall be hot dipped in zinc for a

uniform galvanizing. The interior of pipes shall be sprayed with a zinc-rich cold galvanizing compound or otherwise treated with a galvanizing process. The components shall be free of excess weld splatter and shall be cleaned in a three-bath system which shall include a rust-inhibitive iron phosphate wash prior to painting.

- B. All steel components (excluding slides) shall be painted with an electrostatically applied polyester powder coating which shall be cured at temperatures between 400 and 500 degrees Fahrenheit.
- C. Decks shall be constructed from steel plate, coated with a U.V. stabilized, poly-vinyl-chloride and oven cured coating. Center dimension of deck width shall not be less than 46 inches.
- D. All platform protective barriers and safety rails shall be made of vertical metal tubing. Plastic Panels must be approved by Representatives of the Parks and Recreation Department.
- E. All slides shall be plastic (see below for description). Owner will allow the spiral slide to be proposed as a steel slide beds. If proposed, they shall be constructed of 16 gauge reinforced stainless steel with more than one part being connected with lap joints. The orientation of the slide shall not be facing south in any manner. **All tunnel slides shall be 30 inch diameter or larger.**
- F. Chains may be used in playground components, climbers, tire swings or belt swings. All chain used in playground components shall be 5/0 steel welded links, with no vinyl coating.
- G. All moving joints shall be constructed using bearings. Metal-to-metal "S" hooks are not acceptable.
- H. Belt swings shall be made of heavy molded rubber with metal insert and reinforcing metal cables.
- I. Posts, decks or other components made of wood are not acceptable.
- J. The deck heights shown on the drawings are schematic. Final heights may vary slightly according to manufacturer. However, the separation between decks shall be 8 inches or less (unless otherwise shown) and must provide a kick barrier to meet current CPSC and ASTM F-1487 standards for entrapment.
- K. All spring play events shown on plans shall be constructed of aluminum.

PLASTIC EQUIPMENT

- A. All rotationally molded plastic parts shall be molded of a linear low density polyethylene that is U.V. and color stabilized. Wall thickness may vary by product from .187"(3/16") to .312" (5/16"). Rotationally molded products shall meet or exceed tensile strength of 2200 psi.
- B. Plastic slides are to be constructed of rotationally molded polyethylene with ultraviolet (UV) light stabilizers with the color molded in. All dimensions for slide sides, exits, and protrusions shall meet, or exceed, CPSC and ASTM F-1487 guidelines.

KNOWN ACCEPTABLE PLAYGROUND EQUIPMENT :

- A. See Construction Drawings
- C. Other playground equipment manufacturers may be considered if they meet the basic specification as described above. Contractor must submit manufacturers' product data a minimum of 7 days prior to the bid date to be considered as meeting the intent of the specifications. See "Instruction to Bidders", Section 3.3, or contact City Engineer's Office for substitutions.

PART 3-- EXECUTION

3.01 INSPECTION

- A. Verify gradients and elevations of sub-base, base, curbs and drainage are correct
- B. Beginning of installation means acceptance of sub-base, curbs and drainage by City. **The playground equipment for each location shall be completely installed with safety surface placed, within 20 working days, once installation begins, barring weather delays.**

3.02 INSTALLATION

- A. Install play equipment with a minimum setback of seven feet from the edge of playground surfacing material. Install higher and moving equipment with setbacks per manufacturer's recommendations and the most recent U.S. Consumer Products Safety Commission guidelines.
- B. Tops of playground footings shall be smooth with a radius where the top transitions to the sides of the footing. Footings shall be covered with the same depth of playground surfacing material as the rest of the play area.

- C. Playground equipment shall have light colored grab bars located at corners or positioned to help children enter a new play area or event. Grab bars shall be provided at every transfer point.
- D. Play equipment shall be configured so that children with hearing or visual disabilities can see potential hazards and other children playing on the equipment. Any change from the playground layout concept provided in the details shall be submitted and approved by the City Parks and Recreation Department.
- E. Playground materials and construction shall conform to the most current U.S. Consumer Products Safety Commission Guidelines and ASTM F1487 Safety and Accessibility Standard. Surface material must meet the peak deceleration requirements in accordance with procedures described in ASTM F1292 "A Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment".
- F. In the event the play equipment and the playground surfacing materials are not installed and completed on the same day, the play equipment shall be barricaded and signed sufficiently to prevent play, or access by the public, until the playground surfacing materials are completely installed. Acceptable fence includes T-posts with four-foot height orange snow fence attached completely encircling play area.
- G. Contractor is responsible for receiving, storing and protecting play equipment as it is delivered from the manufacturer. Mistakes in shipping shall be remedied by the Contractor prior to installation. Equipment damaged or improperly stored at the site during installation is the responsibility of the Contractor. Contractor shall be responsible for replacing damaged equipment vandalized during installation.
- H. The play area subbase shall have positive drainage to the underdrain and to accommodate the specific site grading. Decks shall be level and uprights plumb. No equipment will be accepted if improperly installed.
- I. Playground Equipment (decks, slides, climbers, uprights, ramps, etc.) installed incorrectly or at improper heights (according to the submittals) shall be reinstalled at the Contractor's expense. The heights shall be based on the approved submittals with the finish grade of the safety surface two inches below the level of the perimeter border (see plan details). Slide exits shall meet the manufacturer's requirements for clearance and be based upon the finish grade of the safety surface in relation to the border.

3.03 REPLACEMENTS

- A. In the event equipment delivered to the site is damaged or improperly installed, the Contractor shall be responsible for replacing such equipment to the satisfaction of the City Engineer at no additional cost to the City.
- B. Contractor is responsible, during installation, for providing temporary safety fencing around playground equipment components, climbers, etc. sufficient to keep children from playing on unfinished or unsecured play equipment. Partially installed equipment scarred or damaged due to lack of protection during installation will be replaced to the manufacturers' requirements at the expense of the Contractor with no additional expense to the City.

END OF SECTION

**SECTION 02806
POURED IN PLACE PLAYGROUND SURFACE MATERIAL**

PART 1 -GENERAL

1.01 DESCRIPTION

- A. Provide and install rubber playground surfacing material as shown on the Drawings and as specified herein, complete in place, tested and approved, including but not limited to:
- (1) poured-in-place playground surface
 - (2) cast-in-place concrete
 - (3) playground equipment

1.02 RELATED WORK:

Section 02220:	Earthwork.
Section 02800:	Playground Equipment
Section 02805:	Playground Surfacing.
Section 03300:	Cast-in-place Concrete

1.03 QUALITY ASSURANCE

- A. Manufacturers shall be required to provide a Manufacturer's Certificate of Compliance with the most recent Consumer Products Safety Commission's Playground Equipment Guidelines, in accordance with Procedure C of ASTM F-355, 'Shock Absorbing Properties of Play Surface Systems and Materials'. Playground surfacing materials and construction shall conform to the most current U.S. Consumer Products Safety Commission Guidelines and ASTM F1487 Safety and Accessibility Standard. Surface material must meet the peak deceleration requirements of the CPSC Guidelines in accordance with procedures described in ASTM F1292 "A Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment.' Manufacturer shall provide proof of Product Liability Insurance of at least one million dollars.
- B. Installer's Qualifications:
- (1.) Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts, and who are completely familiar with the requirements and the methods needed from proper performance of the work of this section.

1.04 SUBMITTALS

- A. Contractor shall submit the following samples, certificates or test results prior to use on the project.
 - 1. Product data on rubber surface.
 - 2. Product data on binder.
 - 3. Product data on primer.
- B. Other manufacturer's may be considered if they meet the basic specification as described in this section. Contractor must submit manufacturers' product data and product sample to the Parks and Recreation Department a minimum of 7 days prior to bid date to be considered as meeting the intent of the specifications.

PART 2 – PRODUCTS

A.01 MATERIALS

- A. Color of base mat to be black and color of top surface to be indicated by Parks and Recreation Department plans during submittal stage of project. The top surface, shall be a maximum of 25% black unless otherwise approved by the Landscapae Architect.
- B. Warranty, Two(minimum) year warranty from manufacturer.
- C. Concrete shall conform to Section 03300, Cast-in-Place Concrete (3500 psi).

PART 3 – EXECUTION

3.01 INSPECTION

- A. Verify that gradients and elevations of sub-base are correct. Subgrade shall provide a 2% slope in the direction indicated on the plans.
- B. Verify that the Concrete base has been allowed to cure a minimum of 28 days prior to applying the poured-in-place surfacing.
- C. Beginning of installation means acceptance of sub-base.

3.02 INSTALLATION

- A. Stake layout for concrete base. This shall occur after the installation of the play structure. If adjustments in the layout are required as a result of the play structure location, notify owner prior to installation.
- B. Refer to Section 03100 Cast-in-Place Concrete for construction methods of the base. Pavement shall be width and extent shown on the plans.

SECTION 02806
POURED IN-PLACE PLAYGROUND SURFACE MATERIAL

- C. All joints that occur under Pour-in-Place surfacing shall not be edged.
- D. At the expansion joints, trim preformed expansion joint filter with sharp chisel ¼" below the concrete surface.
- E. Install Poured-in-Place resilient surface as per manufacturer's instructions and to the patterns, colors and dimensions shown on the plans.
- F. Contractor shall place temporary barricades and fencing to prevent the public from using the play equipment while the concrete pavement is curing. The contractor shall inspect the barricades and fences daily to ensure they are not damaged or altered by the public and shall be adjusted by the contractor as needed.

END OF SECTION

Accompanying the Shop Drawings, submit samples of all finishes including actual materials on suitable substrates for true representation of color and textures of products called out under this Section.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to the site in Manufacturer's original, unopened packaging.
- B. Components should be covered or otherwise protected to prevent any use until after final inspection.

PART 2 - PRODUCTS

2.01 PICNIC TABLES

- A. Vinyl Clad Picnic Table (6'0"): Overall size to be 59-1/4" wide x 29" high x 6 ft. long. Seat height above ground to be 17". Table top width to be 29". Picnic table leg frame shall be fabricated from 2-3/8" O.D. iron pipe and shall be electrically welded into a one piece end frame. Frame shall be walk-through design. All bends are to be on a 4-13/16" inside radius. No pipe or metal parts shall extend past the outside edge of the seat. All table top and seat mounting brackets shall be fabricated from 3/16" x 6" steel plate bent at 90 degrees to form a 4" x 2" angle. All table top and seat mounting brackets shall be precision punched. For safety, all mounting brackets shall be rounded to a 1 1/2" radius on all corners of surfaces in a vertical plane. Cross braces shall consist of 1-5/16" O. D. galvanized iron pipe with ends flattened, punched and rounded to a 1-1/2" radius.

Frame shall be finished with a dry polyester powder, baked to a high gloss finish. Seats and tops shall be fabricated on 9 GA unflattened, expanded galvanized steel sheets. Framing for seats and tops shall consist of 10 GA angle steel, electrically welded to the expanded steel sheet. Seats and tops shall be coated with polyvinyl chloride to a thickness of no less than 1/8", oven cured for a durable, easily cleaned finish. Manufacturer and model as called out on plans. Color to be selected from Manufacturer's standard colors as directed by Owner's Representative.

- B. Handicap Accessible Vinyl Clad Picnic Table (8'-0"): Overall size to be 59-1/4" wide x 29" high x 8 ft. long, benches 6 ft. long. All other specifications equal to paragraph 2.01 A. Manufacturer and model as called out on plans. Color to be selected from Manufacturer's standard colors as directed by Owner's Representative.

- C. Single Pedestal Four Seat Picnic Table: Overall size shall be 30" high x 76" square. Table top, 46" square. Seat height shall be 18". Pedestal column shall consist of one 4" x 4" x 1/4" wall x 48" square steel tubing. All bench and table supports, made from 2-1/2" square steel tubing and 2-1/2" x 3" x 3/6" angle, shall be electrically welded in horizontal components and shall also be electrically welded together with vertical column into a one piece unit. For safety, all mounting brackets shall be rounded on a 1-1/2" radius on all corners of surfaces in a vertical plane.

**SECTION 02870
SITE FURNISHINGS**

Finish for the frame shall be a high gloss black finish. Seats and tops shall be fabricated of 9 GA unflattened, expanded galvanized steel sheets. Framing for seats and tops shall consist of 10 GA angle steel, electrically welded to the expanded steel sheet. Seats and tops shall be coated with polyvinyl chloride to a thickness of not less than 1/8", oven cured for a durable, easily cleaned finish. Manufacturer and model as called out on plans. Color for seats and tops to be selected from Manufacturer's standard colors as directed by Owner's Representative.

- D. Acceptable Manufacturers:
 - 1. Refer to Construction Drawings for Specified Products

2.02 LITTER RECEPTACLES

- A. 32 gallon, 30" high x 24" diameter receptacle and accessories. Manufacturer and model as called out on plans. Color to be selected from Manufacturer's standard colors as directed by Owner's Representative.

2.03 GRILLS

- A. No grills to be used for this project.

2.04 BENCHES

- A. Park Benches: As called out on the drawings. Average seat height above ground shall be 18" (unless designated otherwise on the drawings). All frame components shall be electrically welded together such that sharp corners and edges are eliminated. Seats and backs shall be 3/4" x 9 gauge un-flattened expanded galvanized steel and shall be coated with polyvinyl chloride to a thickness of no less than 1/8", oven cured for a durable, easily cleaned finish (in accordance with Section 02870) (unless designated otherwise on the drawings). Frame finish shall be electrostatically applied dry polyester powder, baked to a high gloss finish. Single benches are to be in ground mounted as shown on the drawings. Manufacturer and model as called out on plans. Color to be selected from Manufacturer's standard colors as directed by Owner's Representative.
- B. Acceptable Manufacturer's:
 - 1. Refer to Construction Drawings for Specified Products

PART 3 - EXECUTION

3.01 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper execution of the work. Do not proceed until unsatisfactory conditions are corrected.

3.02 INSTALLATION

- A. Coordinate as required with other trades to assume proper interface with the work of this Section.
- B. Install the work of this Section in strict accordance with the design, approved shop drawings and the Manufacturer's recommendations,
- C. Upon completion of the installation, touch-up all scratches and abrasions to be completely invisible to the unaided eye from a distance of five feet.

END OF SECTION

**SECTION 02900
PLANTING**

1.01 SCOPE:

- A. Perform all work required to complete the planting as described herein and shown on accompanying drawings.

1.02 RELATED WORK SPECIFIED ELSEWHERE:

- A. General Conditions
- B. General Requirements - Division 1

1.03 REFERENCE STANDARDS:

- A. American Joint Committee on Horticultural Nomenclature: 1942 Edition of Standard Plant Names.
- B. American Standard for Nursery Stock (ANSI 260), latest edition, American Association of Nurserymen.

1.04 QUALITY ASSURANCE:

- A. All work shall be performed by skilled personnel within the industry in a workmanlike manner and supervised by an experienced foreman.
- B. The contractor, when required, will submit samples of all trees, for the Landscape Architect and/or Owners approval. When approved, these will be tagged and maintained as representative samples for all future plant materials. Rejected material shall be removed from the site immediately. The Landscape Architect reserves the right to reject any material he deems unsatisfactory.
- C. When required, the contractor shall also submit for approval sufficient quantities of loam, manure, peat moss and fertilizer as to be representative. All samples must be approved by the Landscape Architect before use in the job.

1.05 DELIVERY, STORAGE, AND HANDLING:

- A. Deliver all packaged material in original unopened and undamaged containers bearing manufacturer's label identifying name, weight, analysis and any other pertinent data.
- B. Protect plant material during delivery to prevent damage to root ball and desecration of leaves. Damaged material will be rejected.

1.06 WARRANTY PERIOD AND REPLACEMENT:

- A. All trees and shrubs shall be warranted for one (1) years after Final Acceptance. Plants shall be in full leaf for a minimum of 30 days at the end of the warranty period. Termination of the warranty period will be extended as necessary to comply.
- B. Plants used for replacement shall be of the same kind and size as those originally specified. All work, including materials, labor and equipment used in replacements, shall be at no cost to the owner. Any damage, including ruts in lawn or bed areas, incurred in making replacements, shall be immediately repaired.
- C. Plant material will be replaced once at the owners request and at the end of the twelfth (12th) month. A list of material to be replaced shall be submitted to the Landscape Architect and/or Owner prior to any replacements being made.

1.07 ACCEPTANCE:

- A. Substantial completion and contract close-out shall be in accordance with Division 1.
- B. Final acceptance shall be when the contractor has completed to the Landscape Architect's satisfaction, the final punch list.

1.08 MAINTENANCE:

- A. The contractor shall maintain all plant materials under this contract by watering, cultivating, weeding, spraying and replacing as necessary to keep plants in a vigorous, healthy condition until final acceptance.

PART II PRODUCTS

2.01 MATERIAL:

- A. Plants (general): All plants shall be well-formed No. 1 grade or better nursery stock and shall meet the applicable standards noted herein for nursery stock and shall be subject to rejection by the Landscape Architect. All plants shall remain the property of the contractor until final acceptance.
- B. Ornamental trees: Plants shall be healthy, vigorous, bushy, well-branched, of normal habit of growth for the species, and shall be free from disease, insect eggs and larvae. The specified sizes shall be before pruning, and the plants shall be measured with their branches in normal position.
- C. Shade trees: Shall be healthy, vigorous, full-branches, well-shaped, and shall meet trunk diameter and height requirements of the plant list. Balls shall be

firm, neat, slightly tapered and well burlapped. Any tree loose in the ball or with broken ball at the time of planting will be rejected. Any trees are subject to approval by the Landscape Architect.

- D. Topsoil: Where additional topsoil is needed, it shall be fertile, sandy loam of natural occurrence, free of rubble, stones, lumps and perennial plant root stocks. The presence of noxious weeds will be cause for rejection.
- E. Mulch: Shredded cedar bark.
- F. Compost: Back to Nature, composed cotton seed hulls with iron sulfate as manufactured by Back to Nature Resources, Inc., Dallas, Texas, or approved equal.
- G. Fertilizer: Osmocote 18-6-12, or approved equal. To be paid as part of the installed plant cost.
- H. Steel bed Edging: Ryerson Steel Bed Edging, 3/16" x 4" steel landscape edging with steel stakes as manufactured by Joseph Ryerson, Dallas, Texas.

2.02 ACCESSORIES:

- A. Tree Wrap: Not used on this project.
- B. Tree Stakes: Split tee metal fence post, green.
- C. Wire, eye bolts: Non corrosive of sufficient strength.
- D. Straps for staking: 2" Flexible Tree Strap

PART III EXECUTION

3.01 PREPARATION:

- A. Verify grades and conditions prior to accepting any portion of the site from general contractor before commencing with work. Beginning work under this section indicates acceptance of existing site conditions.
- B. All planting beds should have a minimum of 6" of amended topsoil.
- C. Outline all planting beds for approval by the Landscape Architect. Prior to commencing with bed preparation.
- D. Stake all tree locations for approval by the Landscape Architect prior to digging tree pits.

- E. Remove all weeds and grasses from planting beds. If Bermuda grass is present,
it shall be eradicated by approved means.
- F. Within approved bed lines prepare soil by roto-tilling two inches (2") of
compost over entire bed area to a depth of six inches (6").
- G. Azaleas and rhododendron shall be planted in 100% pure sphagnum peat moss.
Place peat moss to a height of 4" above surrounding bed grade, (12" total
depth).
 - 1. Excavate entire area to be planted to a depth of 8" and backfill with peat
 - 2. Peat moss shall be thoroughly wetted with water prior to planting.
 - 3. Scarify root balls so plants will not become root bound.
- H. Position plants and groundcover on prepared beds prior to planting for
approval of Landscape Architect.

3.02 INSTALLATION:

- A. Plant in Landscape Architect's approved location, setting plant with top of ball
even with top of bed, and compact soil carefully around each plant ball. Water
each plant thoroughly with hose to eliminate air pockets. Plants shall be
carefully pruned to remove dead or broken branches, and entire bed area shall
be hand raked to a smooth, even surface.
- B. Spread an even 2" layer of mulch over entire planting bed.
- C. Shade Trees: Will be planted in tree pits twenty four inches (24") greater in
diameter than the size of the ball or root system. Scarify sides and slope pit
bottom.
- D. Ornamental Trees: Will be planted in tree pits eighteen inches (18") greater in
diameter than the size of the ball or root system. Scarify sides and slope pit
bottom.
- E. All trees are to be set so that top of ball is even with finish grade or if poor soil
conditions and with the architect's approval 1/4 of the root ball above finish
grade.
- F. On all trees the top 6" of backfill shall consist of a 1:1 mixture of compost to
soil.
- G. On all trees thoroughly water to eliminate air pocket and future settling.
- H. Around all trees form a circular ring free of any vegetation. For trees 3" and
greater in caliper form a 5' diameter ring and for trees less than 3" caliper form
a 3'-6" diameter ring. Circle shall be true in form and centered on tree.

- I. Cut all strings and wires, etc. from around the top of the root balls and tree trunks.
- J. Spread an even 2" layer of mulch within all tree rings.
- K. Prune all trees after planting to remove dead and broken branches.
- L. All trees shall be staked with two (2) metal split tee green fence posts and tied north and south with wire through tree straps.
- M. Apply Osmocote at a rate of 1/2 pound per tree and as per the manufacture's Recommendations for all shrub and groundcover planting beds.

3.03 CLEANING:

- A. During the work, the premises are to be kept neat and orderly at all times. Storage areas for planting and other materials shall be organized so that they, too, are neat and orderly. All trash, including debris from removing weeds or rocks from planting areas, preparing beds, or planting plants, shall be removed from the site daily as the work progresses. All walk and driveway areas shall be kept clean by sweeping or hosing.

END OF SECTION

**SECTION 02934
SODDING**

PART 1 - GENERAL

1.01 SCOPE:

- A. Provide and install sodded lawns as indicated on drawings and specified herein.

1.02 RELATED WORK SPECIFIED ELSEWHERE:

- A. General Requirements

1.03 QUALITY ASSURANCE:

- A. Comply with American Sod Producers Association (ASPA) guideline specifications to sodding.

1.04 DELIVERY, STORAGE AND HANDLING:

- A. Deliver sod on pallets and protect from sun, wind and dehydration prior to installation.
- B. Do not cut or deliver more sod than can be laid within 24 hours.

1.05 SUBMITTALS:

- A. Submit name, address and phone number of sod supplier.
- B. Manufacturer's label with analysis data on lawn fertilizer.

1.06 MAINTENANCE:

- A. Maintain sod after installation to achieve a well rooted and vigorous growing lawn or until final acceptance, whichever is longer. If sodded areas need to be mowed during construction operations, this is the responsibility of the contractor.

PART 2 - PRODUCTS

2.01 MATERIAL:

- A. Sod shall be U-3 Bermuda (Cynodon dactylon "U-3") or of type as indicated on drawings and shall be well rooted, healthy, free of weeds, disease, nematodes, and soil borne insects. Sod shall also be uniform in color, leaf texture, and density.

- B. Fertilizer shall be granular or pellet 13-13-13 or as determined by soil testing.
- C. Water shall be free of substances harmful to sod growth.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Examine finish surfaces, grades, topsoil quality and depth. Do not start sodding work until unsatisfactory conditions are corrected. Beginning of installation indicates acceptance of existing site conditions.

3.02 PREPARATION:

- A. Loosen topsoil of lawn areas to be planted. Remove existing vegetation, sticks, roots, rubbish, foreign matter and stones over one inch (1") in any dimension from the top two inches (2") of the sod bed. Areas where the finish grade has sat for extended periods of time will need to be tilled or disked to remove vegetation and to loosen compacted soil to 85% maximum density.
- B. Fine grade lawn areas to smooth, even surface with a loose, uniformly fine texture. Float smooth to remove ridges and fill depressions as required to drain.
- C. Finish grade shall be smooth and approximately one inch (1") below curbs, walks and other paved surfaces.
- D. Apply fertilizer on finish grade prior to sod installation at a rate of one (1) pound of actual nitrogen per 1000 square feet.
- E. Restore prepared areas to specified condition if eroded, settled, or otherwise disturbed after fine grading and prior to sodding.

3.03 SOD INSTALLATION:

- A. Work within seasonal limitations of the sod type specified. Install sod between April 15 and August 30. Deviation from these dates shall be submitted by the contractor for approval by the owner or the owner's representative before installation.
- B. Large roll sod will be allowed only if netting is removed during the installation of the sod. All sod netting is to be removed on any size sod rolls.
- C. Lay sod to form a solid mass tightly-fitted joints. Do not overlay edges. Stagger strips to offset joints in adjacent courses.
- D. Sod shall be placed so that top of sod is flush with adjoining grass areas if any, curbs, walks, and other paved surfaces.

- E. Do not install sod on saturated or frozen soil.
- F. Water sod lightly then roll with a water filled commercial lawn roller to ensure contact with subgrade and to insure a smooth surface free of lumps and depressions.
- G. Immediately following rolling, water sod thoroughly and continue to water after installation to achieve a well rooted and vigorous growing lawn or until final acceptance, whichever is longer. Contractor to provide watering equipment as required for areas not covered by an irrigation system.
- H. Repeat sod rolling as needed after one week to achieve a smooth level surface.
- I. On 3:1 slopes or greater sod shall be secured with sod staples as needed to prevent sod from sloughing off slopes.
- J. Replace dead sod as required prior to final acceptance.

3.04 CLEANING:

- A. During the work, the premises are to be kept neat and orderly at all times. Storage areas for materials shall be organized so that they are neat and orderly. All trash, including debris from removing weeds or rocks from sodded areas, shall be removed from the site daily as the work progresses. All walk and driveway areas shall be kept clean by sweeping or hosing.

END OF SECTION

**SECTION 03100
CONCRETE FORMWORK**

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Work included: Provide formwork in accordance with provisions of this Section for cast-in-place concrete shown on the drawings or required by other Sections of these Specifications.
- B. Related work:
 - Section 03210: Steel Reinforcement
 - Section 03300: Cast-in-place Concrete

1.02 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Design of formwork is the Contractor's responsibility.
- C. Standards: in addition to complying with pertinent regulations of governmental agencies having jurisdiction, comply with pertinent provisions of ACI 347.

1.03 SUBMITTALS

- A. Comply with pertinent provisions of Section 01340.
- B. Product data: After the Contractor has received the Owner's Notice to Proceed, submit manufacturer's data and installation instructions for proprietary materials including form coatings, ties, and accessories, and manufactured form systems if used.

PART 2 PRODUCTS

2.01 FORM MATERIALS

- A. Except for metal forms, use new materials. Materials may be reused during progress of the work, provided they are completely cleaned and reconditioned, re-coated for each use, and capable of producing formwork of the required quality.
- B. For footings and foundations, use boards or planks secured to wood or steel stakes, substantially constructed to shapes indicated and to support the required loads.

2.02 FORM TIES

- A. Hold inner and outer forms for vertical concrete together with combination steel ties and spreaders approved by the Owner's Representative:
 - 1. Space ties symmetrically in tiers and rows, each tier plumb from top to bottom and each row level.
 - 2. At horizontal pour lines, locate ties not more than 6" below the pour lines. Tighten after concrete has set and before the next pour is made.
 - 3. For exposed concrete surfaces, provide form ties of removable type with the bolts equipped with permanent plugs and a system approved by the Owner's Representative for fixing the plugs in place.

2.03 DESIGN OF FORMWORK

- A. General:
 - 1. Design, erect, support, brace, and maintain formwork so it will safely support vertical and lateral loads that might be applied, until such loads can be supported by the concrete structure.
 - 2. Carry vertical and lateral loads to ground by formwork system and in-place construction that has attained adequate strength for that purpose.
 - 3. Construct formwork so concrete members and structures are of correct size, shape, alignment, elevation, and position.
 - 4. Design forms and formwork to include assumed values of live load, dead load, weight of moving equipment operated on the formwork, concrete mix, height of concrete drop, vibrator frequency, ambient temperature, foundation pressures, stresses, lateral stability, and other factors pertinent to safety of the structure during construction.
 - 5. Provide trussed supports when adequate foundations for shores and struts cannot be secured.
 - 6. Support form materials by structural members spaced sufficiently close to prevent objectionable deflection.
 - 7. Fit forms placed in successive units for continuous surfaces to accurate alignment, free from irregularities, and within the allowable tolerances.
 - 8. Provide formwork sufficiently tight to prevent leakage of cement paste during concrete placement. Solidly butt joints, and provide backup material at joints as required to prevent leakage and prevent fins.
 - 9. Provide camber in formwork as required for anticipated deflections due to weight and pressure of fresh concrete and construction loads.

2.04 EARTH FORMS

- A. Side forms for footings may be omitted, and concrete may be placed directly against excavation only when requested by the Contractor and approved by the Owner's Representative.
- B. When omission of forms is accepted, provide additional concrete 1" on each side of the minimum design profiles and dimensions shown on the drawings.

PART 3 - EXECUTION

3.01 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the work. Do not proceed until unsatisfactory conditions are corrected.

3.02 FORM CONSTRUCTION

- A. General:
 - 1. Construct forms complying with ACI 347 to the exact sizes, shapes, lines and dimensions shown, and as required to obtain accurate alignment, location, grades and level and plumb work in the finished structure.
 - 2. Provide for openings, offsets, keyways, recesses, moldings, reglets, chambers, blocking, screens, bulkheads, anchorages, inserts, and other features as required.
- B. Fabrication:
 - 1. Fabricate forms for easy removal without hammering or prying against concrete surfaces.
 - 2. Provide crush plates or wrecking plates where stripping may damage cast concrete surfaces.
 - 3. Kerf wood inserts for forming keyways, reglets, recesses, and the like to prevent swelling and assure ease of removal.
 - 4. Provide top forms for inclined surfaces where so directed by the Owner's Representative.
- C. Forms for exposed concrete:
 - 1. Drill forms to suit ties being used, and to prevent leakage of cement paste around tie holes. Do not splinter forms by driving ties through improperly prepared holes.
 - 2. Provide sharp, clean corners at intersection planes, without visible edges or offsets. Back the joints with extra studs or girts to maintain true, square intersections.
 - 3. Use extra studs, walls and bracing to prevent objectionable bowing of forms between studs, and to avoid bowed appearance in concrete. Do not use narrow strips of form material which will produce bow.
- D. Corner treatments:
 - 1. Unless shown otherwise, form chamfers with 3/4" x 3/4" strips, accurately formed and surfaced to produce uniformly straight lines and tight edges.
 - 2. Extend terminal edges to required limit, and miter the chamfer strips at changes in direction.
- E. Locate control joints as indicated on the drawings and as approved by the Owner's Representative.
- F. Provisions for other trades:
 - 1. Provide openings in concrete formwork to accommodate work of other trades.
 - 2. Verify size and location of openings, recesses, and chases with the trade

requiring such items.

3. Accurately place and securely support items to be built into the concrete.

3.03 REMOVAL OF FORMS

A. General:

1. Do not disturb or remove forms until the concrete has hardened sufficiently to permit form removal with complete safety.
2. Do not remove shoring until the member has acquired sufficient strength to support its own weight, the load upon it, and the added load of construction.
3. Do not strip floor slabs in less than two days.
4. Do not strip vertical concrete in less than seven days.

B. Finished surfaces:

1. Exercise care in removing forms from finished concrete surfaces so that surfaces are not marred or gouged, and that corners are true, sharp, and unbroken.
2. Release sleeve nuts or clamps, and pull the form ties neatly.
3. Do not permit steel spreaders, form ties, or other metal to project from, or be visible on, any concrete surface except where so shown on the drawings.
4. Solidly pack form tie holes, rod holes, and similar holes in the concrete. For packing, use the cement grout specified in Section 03300, flushing the holes with water before packing, screeding off flush, and grinding to match adjacent surfaces.

END OF SECTION

**SECTION 03210
STEEL REINFORCEMENT**

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Work included: Provide concrete reinforcement where shown on the drawings specified herein, and as needed for a complete and proper installation.
- B. Related Work:
 - Section 03100: Concrete Formwork.
 - Section 03300: Cast-in-place Concrete.
 - Section 03345: Concrete Finishing.

1.02 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Comply with pertinent provisions of the following, except as may be modified herein:
 - 1. ACI 318.
 - 2. CRSI "Manual of Standard Practice."

1.03 SUBMITTALS

- A. Comply with pertinent provisions of Section 01340.
- B. Product data: After the Contractor has received the Owner's Notice to proceed, submit:
 - 1. Materials list of items proposed to be provided under this Section.
 - 2. Manufacturer's specifications and other data needed to prove compliance with the specified requirements.
 - 3. Shop Drawings showing details of bars, anchors, and other items, if any, provided under this Section.

1.04 PRODUCT HANDLING

- A. Delivery and Storage:
 - 1. Use necessary precautions to maintain identification.
 - 2. Store in a manner to prevent excessive rusting and fouling with dirt, grease, and other bond-breaking coatings.

PART 2 - PRODUCTS

2.01 REINFORCEMENT MATERIALS AND ACCESSORIES

- A. Bars:
 - 1. Provide deformed billet steel bars complying with ASTM A615. Using grades shown on the Drawings.
- B. Steel Wire:
 - 1. Comply with ASTM A82.
 - 2. For tie wire, comply with Fed Spec QQ-W-461, annealed steel, black, 16 gage minimum.
- C. Welded Wire Fabric:
 - 1. Provide welded steel, complying with ASTM A185, 6" x 6" x 10" x 10".
- D. Bolsters, chairs, spacers, and other devices for spacing, supporting and fastening reinforcement in place:
 - 1. Use wire bar type supports complying with CRSI recommendations, unless otherwise shown on the Drawings.
 - 2. Do not use wood, brick, or other non-complying material.
 - 3. For slabs on grade, use supports with sand plates or horizontal runners where base material will not support chair legs.

2.02 FABRICATION

- A. General:
 - 1. Fabricate reinforcing bars to conform to the required shapes and dimensions, with fabrication tolerances complying with the CRSI Manual.
 - 2. In case of fabricating errors, do not straighten or re-bend reinforcement in a manner that will weaken or injure the material.
 - 3. Reinforcement with any of the following defects will not be acceptable:
 - a. Bar lengths, depths, and/or bends exceeding the specified fabrication tolerances.
 - b. Bends and/or kinks not shown on the Drawings.
 - c. Bars with reduced cross-section due to excessive rusting or other cause.

PART 3 - EXECUTION

3.01 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the work. Do not proceed until unsatisfactory conditions are corrected.

3.02 INSTALLATION

- A. General:
 - 1. Comply with the specified standards for detail and method of placing reinforcement and supports, except as may be modified herein.
 - 2. Clean reinforcement to remove loose rust and mill scale, earth, and other materials which reduce or destroy bond with concrete.
 - 3. Position, support, and secure reinforcement against displacement by formwork, construction, and concrete placing operations.
 - 4. Locate and support reinforcement by metal chairs, runners, bolsters, spacers, and hangers, as required.
 - 5. Place reinforcement to obtain minimum coverage's for concrete protection.
 - 6. Arrange, space, and securely tie bars and bar supports together with the specified tie wire.
 - 7. Set wire ties so twisted ends are directed away from exposed concrete surfaces.
- B. Install welded wire fabric in as long lengths as practicable, lapping adjoining pieces at least one full mesh.
- C. Provide sufficient numbers of supports, and of strength to carry the reinforcement.
- D. Do not place reinforcing bars more than 2" beyond last leg of any continuous bar support.
- E. Do not use supports as bases for runways for concrete conveying equipment and similar construction loads.

3.03 SPLICES

- A. Lap Splices:
 - 1. Tie securely with the specified wire to prevent displacement of splices during placement of concrete.
- B. Splice Devices:
 - 1. Obtain the Owner's Representative approval prior to using splice devices.
 - 2. Install in accordance with manufacturer's written instructions.
 - 3. Splice in a manner developing at least 125% of the yielding strength of the bar.
- C. Welding:
 - 1. Perform in accordance with AWS D1.4-79.
- D. Do not splice bars except at locations shown on the drawings, or as otherwise specifically approved by the Owner's Representative.

3.04 TESTING

- A. Samples:
 - 1. Materials to be sampled at the building site shall have been delivered thereto at least 72 hours before it is needed.

END OF SECTION

SECTION 03300
CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.01 DESCRIPTION

- A. The extent of cast-in-place concrete is shown on drawings.
- B. Related work specified elsewhere:
 - Section 03100: Concrete Formwork.
 - Section 03210: Steel Reinforcement.
 - Section 03345: Concrete Finishing.

1.02 TESTING

- A. Owner to employ and pay for an independent testing laboratory, to perform specified testing.
- B. Tests required for aggregate:
 - 1. Test for conformance to ASTM C-33.
 - 2. Make one test for each 100 cubic yards of fine aggregate.
 - 3. Make one test for each 250 cubic yards of coarse aggregate.
- C. Tests required for concrete:
 - 1. Make and store test specimens in conformance with ASTM C-31.
 - 2. Compressive strength tests: ASTM C-39:
 - a. Make four (4) cylinders for each test.
 - b. Break two cylinders at seven days and two at 28 days unless otherwise directed by Owner's Representative.
 - 3. Make one compressive strength test for each day's placement or each 50 cubic yards of concrete of each specified strength.
 - 4. If test strength of concrete does not comply with strength requirements of these specifications and is sufficiently low that, in opinion of Owner's Representative, performance of structure is jeopardized, the Owner's Representative may require that drilled core test specimens be cut from structure at location at which the questionable concrete was placed. Cores shall be secured and tested in accordance with ASTM C-42. If results of these tests show that actual strength of concrete is sufficiently low as to jeopardize performance of structure, the Owner's Representative may require that concrete be removed from structure, and replaced at no additional cost to Owner.
 - 5. Perform slump test at point of placement immediately prior to placing concrete. Test in accordance with ASTM C-143.
 - 6. Test for percentage of entrained air in accordance with ASTM C-231 at time of slump testing.
- D. Inspection of batch plant:

1. Batch plant operation will be inspected as required to insure that concrete delivered to the job complies with specifications. Testing laboratory engaged by Contractor will provide this service as directed by Owner's Representative.
2. Plant inspection reports shall include:
 - a. Location of plant.
 - b. Job location.
 - c. Concrete design mix number and strength.
 - d. Concrete design proportion, source, type and amount of cement, aggregates and admixtures used, surface water added and total water used.
 - e. Slump.
 - f. Air content.
 - g. Temperature of heated concrete.
 - h. Capacity and condition of mixing truck.
 - i. Percent of capacity loaded.
 - j. Condition of batching installation.
 - k. Condition of heating installation.
 - l. Period of inspection.
 - m. Number and sizes of batches delivered.

1.04 REFERENCE STANDARDS

- A. The following codes and manuals form a part of this specification:
 1. Standard Specifications for Structural Concrete for Buildings (ACI 301-72; Rev 81).
 2. Recommended Practice for Selecting Proportions for Concrete (ACI 211-77).
 3. Concrete production facilities shall have a current "National Ready Mixed Concrete Association Certificate of Conformance for Concrete Production Facilities".
 4. Building Code Requirements for Reinforced Concrete (ACI 318-77).

1.05 SUBMITTALS

- A. Submit proposed mix design to Owner's Representative for review. Include certification required in admixture specification.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Cement: Portland Cement (ASTM C-150, Type I). Use high early strength Portland Cement (Serial designation C-150, Type III) where specified and elsewhere at Contractor's option and at no additional cost to Owner.
- B. Fine aggregate: Sand particles shall be coarse, sharp, clean and conforming to ASTM C-33.
- C. Coarse aggregate:

1. Crushed limestone conforming to ASTM C-33 for normal weight concrete.
 2. Light weight conforming to ASTM C-330 for semi-light weight concrete. Minimum Fsp (splitting ratio) of 6.0.
- D. Water: Clean and free from injurious amounts of oil, acids, alkalines, organic materials or other deleterious substances.
- E. Admixtures:
1. Water reducing admixture: ASTM C-494, Type A, containing no more chloride ions than are present in municipal drinking water.
 - a. Acceptable products:
 - (1) Eucone WR-75; The Euclid Chemical Co.
 - (2) Pozzolith ZOON; Master Builders.
 - (3) Plastocrete 160; Sika Chemical Corp.
 2. Water reducing, retarding admixture: ASTM C 494, Type D, containing no more chloride ions than are present in municipal drinking water.
 - a. Acceptable products:
 - (1) Eucone Retarder-75; Euclid Chemical Co.
 - (2) Pozzolith 100XR; Master Builders.
 - (3) Plastiment; Sika Chemical Co.
 3. High range water reducing admixture (Superplasticizer): ASTM C-494, Type F or G, containing no more chloride ions than are present in municipal drinking water.
 - a. Acceptable products:
 - (1) Eucon 37; The Euclid Chemical Co.
 - (2) Sikament; Sika Chemical Corp.
 4. Non-chloride accelerator: ASTM C-494, Type C or E, containing no more chloride ions than are present in municipal drinking water.
 - a. Acceptable products:
 - (1) Accelguard 80; The Euclid Chemical Co.
 - (2) Darex Set Accelerator; W. R. Grace.
 5. Air entraining admixture: ASTM C-260.
 6. No calcium chloride or admixtures containing more than 0.1% chloride ions will be permitted.
 7. Written certification of conformance to specified requirements and the chloride ion content will be required from admixture manufacturer prior to mix design review.
- F. Curing compound: ASTM C-309 for cast-in-place slabs, except those receiving concrete staining products cementitious topping, or tennis court surfacing. No concrete treatment shall be used without Owner's Representative's approval.
1. Acceptable products:
 - a. West Concrete Floor Treatment.
 - b. Guardian Clear Bond.
 - c. TRI-KOTE Concrete Treatment.
 - d. Horn Clear Seal.
 - e. Master Builders Master Seal.
 - f. Conspec No. 1" by Conspec Marketing & Mfg. Co.

- G. Furnish concrete in accordance with ASTM C-94, Alternate No. 3, Specification for Ready Mixed Concrete. Design concrete in accordance with ACI Standard Recommended Practice for the Design of Concrete Mixes (ACI 211-77) to produce strength of concrete with slumps and maximum sizes of coarse aggregate specified. Design concrete so the concrete materials will not segregate and excessive bleeding will not occur.
- H. Reinforcing: As specified in Division 3.
- I. Floor underlayment: Ardex K-15; Ardex, Inc., 630 Stoops Ferry Road, Corapolis, Pa. 15108, (412) 264-4240.

Note: Curing agents or hardeners are not allowed for tennis courts, sport courts, playground or spraygrounds surfaces to receive color finish.

2.02 CONCRETE MIX REQUIREMENTS

- A. Use a testing laboratory acceptable to Owner's Representative for preparing and reporting proposed mix designs. Submit written reports to Owner's Representative of each proposed mix at least 28 days prior to start of work. Do not place concrete until mixes have been reviewed and approved by Owner's Representative. The specified minimum strengths are to be exceeded in accordance with Paragraph 4.3 of Building Code Requirements for Reinforced Concrete (ACI 318-83).
- B. Minimum compressive strength 28 day: 3000 psi footings; 3500 psi, all other unless specifically called out on the plans.
- C. Minimum cement content: 5 sacks per cu. yd. for footings; 6 sacks per cu. yd. for other unless otherwise approved in submittals.
- D. Slump: 4" plus or minus 1".
- E. Maximum size aggregate: Generally 3/4".

2.03 WATER STOP

- A. Acceptable manufacturers: Williams Products, Inc.
- B. Flat, natural rubber, dumbbell type, 5" wide, 1/4" minimum center thickness, 3500 psi minimum tensile strength, 525% minimum elongation to break.

2.04 COLORING

- A. NOT USED

PART 3 - EXECUTION

3.01 PLACING

- A. Notify Owner's Representative of intent to pour at least twenty-four (24) hours prior to placing concrete.
- B. Before placing concrete, clean equipment for mixing and transporting concrete. Remove debris and ice from spaces to be occupied by concrete. Forms to be removed shall be thoroughly wetted or oiled. Sprinkle sub-grade sufficiently to prevent suction, where waterproof membrane is not required. Remove excess water from place of deposit. Reinforcement, forms, membrane, fillers and ground with which concrete is to come in contact shall be free from frost. Do not deposit concrete during rain unless it is adequately protected. In that case, be prepared to protect newly placed concrete from rain until it has hardened sufficiently so that it will not be damaged. Minimum of 2 hours between placing columns and floors.
- C. Before placing concrete, verify installation of all reinforcements, sleeves, waterproof membrane, forms for openings, fill materials, anchors and items related to mechanical, plumbing and electrical trades.
- D. Convey from mixer to place of final deposit by methods which will prevent separation or loss of materials. Do not permit concrete to drop freely any distance greater than 4 feet. Where longer drops are necessary, use a chute, tremie or other approved conveyance to assist concrete into place without separation. Chutes shall be metal and have maximum slope of 1 vertical to 2 horizontal; minimum of 1 vertical to 3 horizontal. Chutes greater than 20 feet long will not be permitted.
- E. Place concrete at a rate to keep concrete plastic and flowing readily into spaces between bars. Concrete temperature shall be 60-80°F. No concrete that is partially hardened or has been contaminated by foreign materials shall be deposited, nor shall re-tempered concrete be used.
- F. Thoroughly compact concrete by suitable means during placing and work around reinforcement and into corners and recesses of forms. Use vibrators under competent supervision to aid in placement of concrete. Insert vibrators and withdraw vertically at 18" to 30" spacing for 5 to 15 seconds duration.

3.02 HOT WEATHER CONCRETING

- A. Conform to ACI 305 when concreting during hot weather.

3.03 COLD WEATHER CONCRETING

- A. Conform to ACI 306 when concreting during cold weather.

3.04 FINISH FOR FORMED CONCRETE

- A. After removal of forms, if any honeycomb places or rock pockets exist, notify Owner's Representative and repair in accordance with his instructions. In general, remove all loose material, wet surface thoroughly, and fill all voids with a stiff mixture of one part cement to two parts sand. In exposed construction, mix white Portland Cement with standard to blend patch with surrounding surface.
- B. On exposed concrete, smooth off joint marks and fins and leave surface smooth, dense and free from honeycomb, prominent grain markings and bulges or depressions more than 3/16" in 4'.
- C. Cork floated finish (on exposed concrete, except omit at round columns):
 - 1. Remove forms at an early stage, within 2 to 3 days of placement where possible. Remove ties. Remove all burrs and fins.
 - 2. Mix one part Portland Cement and one part fine sand with sufficient water to produce a stiff mortar. Dampen wall surface. Apply mortar with firm rubber float or with trowel, filling all surface voids. Compress mortar into voids using a slow-speed grinder or stone. If the mortar surface dries too rapidly to permit proper compaction and finishing, apply a small amount of water with a fog-sprayer. Produce the final texture with a cork float.

3.05 FINISH FOR SLABS

- A. After suitable bulkheads, screens and, if specified, jointing materials have been positioned, concrete shall be placed continuously between construction joints, beginning at a bulkhead edge form or corner. Place each batch into the edge of previously placed concrete to avoid stone pockets and segregations. If there is a delay in casting, thoroughly spade concrete placed after the delay and consolidate at edge of that previously placed to avoid cold joints. Distribute concrete by shovels and consolidate by other suitable means. Bring concrete to correct level with a wood straightedge and strike off. Do not use wood bullfloats or darbies to smooth the surface.
- B. Roughen slabs to receive toppings with stiff brushes or rakes before the final set.
- C. After concrete has been properly placed, struck off and darbied or bullfloated, it shall not be worked until ready for floating. The off time between darbying and power floating may vary from 2 to 8 hours or more depending on the weather conditions, concrete temperature and concrete mixture. Begin power floating when water sheen has disappeared and mix has stiffened sufficiently that weight of a man standing on it leaves only a slight imprint on surface. If two power floating operations are necessary to bring surface to desired state, allow concrete to stiffen or become harder before beginning second floating operation.

- D. Float finish: After power floating is complete, use wood float by hand to tighten the surface and achieve a medium coarse finish. Hand wood float in a circular motion. Float sufficiently to remove cement paste from surface.
- E. Trowel finish: Both power and hand troweling shall be required. Begin power troweling as soon as little or no cement paste clings to blades. Continue troweling until surface is dense, smooth and free of all minor blemishes, such as trowel marks.
 - 1. Final hand troweling shall be required to remove slight imperfections left by troweling machines and to bring surface to a dense, smooth polished finish. Final hand troweling shall be continued until a ringing sound is heard as trowel passes over surface.
- F. Give platforms and steps a light broom finish following sufficient troweling to seal the surface and remove all minor blemishes such as trowel marks.
- G. Pitch all slabs to drain as indicated on drawings; finish exposed slab edges; stair nosings with 1/2" round radius.
- H. Finishes shall be true to planes to match requirements of Section 02514-3.01-C. If variations greater than this exist, the Owner's Representative may direct contractor to grind floor to bring surface within the requirements. Grind as soon as possible, preferably within three (3) days, but not without Owner's Representative's direction and not until concrete is sufficiently strong to prevent dislodging coarse aggregate particles. Grinding will be considered only where slabs will be covered by finish materials. Patching of low spots will not be permitted.
 - 1. Sprinkling of dry cement or a mixture of dry cement and sand on the surface of fresh concrete to absorb water or to stiffen the mix will not be permitted during any stage of floor construction. If bleeding is excessive, remove by dragging hose just ahead of floating operation.

3.06 CURING

- A. Protect freshly deposited concrete from premature drying and excessively hot or cold temperatures. Maintain without drying at a relatively constant temperature for the period of time necessary for hydration of cement and proper hardening of concrete.
- B. Initial curing shall immediately follow finishing operation. Keep concrete continuously moist at least overnight.
 - 1. On slabs, use one of the following:
 - a. Ponding or continuous sprinkling.
 - b. Absorptive mat or fabric kept continuously wet.
 - c. Sand or other covering kept continuously wet.
- C. Immediately following initial curing and before concrete has dried, additional curing shall be accomplished by one of the following materials or methods:
 - 1. Continuing the method used in initial curing.

2. Waterproof paper conforming to "Specifications for Waterproof Paper for Curing Concrete" (ASTM C-171).
 3. Other moisture-retaining coverings approved.
- D. Continue final curing until the cumulative number of days or fractions thereof, not necessarily consecutive, during which temperature of air in contact with concrete is above 50°F has totaled seven (7) days. Prevent rapid drying at end of curing period.
- E. Excessive temperature changes: Changes in temperature of concrete shall be as uniform as possible and shall not exceed 5 Deg. F in any one (1) hour or 50 Deg. F in any twenty-four (24) hour period.
- F. Steel forms heated by sun and all wood forms in contact with concrete during final curing period shall be kept wet. If forms are to be removed during curing period, immediately employ one of above curing materials or methods. Continue such curing for remainder of curing period.
- G. On completion of construction, clean all exposed slabs and apply a coat of curing compound at rate of 600 sq. ft. per gallon.

3.07 LEVELING EXISTING SLABS

- A. Mix floor underlayment with water and apply to existing slab in accordance with manufacturer's instructions. Level floor to a tolerance of 1/8" in ten feet in any direction.

END OF SECTION

**SECTION 03345
CONCRETE FINISHING**

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Work included: provide finishes on cast-in-place concrete as called for on the drawings, specified herein, and needed for a complete and proper installation.
- B. Related work:
Section 03300: Cast-in-place Concrete

1.02 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

1.03 SUBMITTALS

- A. Comply with pertinent provisions of Section 01340.
- B. Product data: After the Contractor has received the Owner's Notice to Proceed, submit:
 - 1. Materials list of items proposed to be provided under this section.
 - 2. Manufacturer's recommended installation procedures which, when approved by the Owner's Representative, will become the basis for accepting or rejecting actual installation procedures used on the work.

PART 2 PRODUCTS

2.01 MATERIALS

- A. General:
 - 1. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the work. Do not proceed until conditions are correct.

PART 3 - EXECUTION

3.01 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the work. Do not proceed until conditions are correct.

3.02 FINISHING SLABS

- A. Definition of Finishing Tolerances:
 - 1. Class “B”: True plane within tolerances described in Section 02514-3.01-C as determined by a ten foot straightedge placed anywhere on the slab in any direction.
 - 2. Unless otherwise directed by the Owner's Representative, provide the texturing in one direction only.
 - 3. Provide “medium” texturing as directed by the Owner's Representative or otherwise called for on the drawings.

3.03 CURING AND PROTECTION

- A. Beginning immediately after placement, protect concrete from premature drying, excessively hot and cold temperatures, and mechanical injury.
- B. Temperature, Wind, and Humidity:
 - 1. Cold Weather:
 - a. When the mean daily temperature outdoors is less than 40 degrees F, maintain the temperature of the concrete between 50 degrees F and 70 degrees F for the required curing period.
 - b. When necessary, provide proper and adequate heating system capable of maintaining the required heat without injury due to concentration of heat.
 - c. Do not use combustion heaters during the first 24 hours unless precautions are taken to prevent exposure of the concrete to exhaust gases which contain carbon dioxide.
 - 2. Hot Weather: When necessary, provide wind breaks, fog spraying, shading, sprinkling, ponding, or wet covering with a light colored material, applying as quickly as concrete hardening and finishing operations will allow.
 - 3. Rate of temperature change: Keep the temperature of the air immediately adjacent to the concrete during and immediately following the curing period as uniform as possible and not exceeding a change of 5 degrees F in any one hour period, or 50 degrees F in any 24 hour period.
- C. Protection From Mechanical Injury:
 - 1. During the curing period, protect the concrete from damaging mechanical disturbances such as heavy shock, load stresses, and excessive vibration.
 - 2. Protect finished concrete surfaces from damage from construction equipment, materials, and methods, by application of curing procedures, and by rain and running water.
 - 3. Do not load self-supporting structures in such a way as to over stress the concrete.

END OF SECTION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract apply to work specified in this section as well as all codes and standards referenced.

1.02 DESCRIPTION

- A. These specifications cover the furnishing of all labor, material, services, supplies and equipment required in conjunction with or properly incidental to the pre-stressing of concrete by the post-tensioning method as shown on the plans and as specified herein.
- B. Related work not included in this Section include:
 - Section 03100: Concrete Formwork.
 - Section 03210: Steel Reinforcement.
 - Section 03300: Cast-in-Place Concrete.

1.03 TERMS DEFINED

- A. Post-tensioning shall refer to a method of pre-stressing concrete in which the post-tensioning tendon is tensioned after concrete has been placed and cured to the minimum specified strength.
 - 1. Tendon: The complete assembly consisting of anchorage, pre-stressing steel and sheathing. The tendon imparts pre-stressing forces to the concrete.
 - 2. Anchorage: The means by which the pre-stressing force is permanently transmitted from the pre-stressing steel to the concrete.
 - 3. Pre-stressing: That element of a post-tensioning tendon which is elongated and anchored to provide the necessary permanent pre-stressing force.
 - 4. Sheathing: Enclosure around the pre-stressing steel to avoid temporary bond between the pre-stressing steel and the surrounding concrete.

1.04 QUALITY ASSURANCE

- A. Materials and Procedures: The following post-tensioning materials and design procedure specifications apply and are part of this Specification.
 - 1. ASTM A416.
 - 2. PTI "Tentative Specification for Post-Tensioning Materials".
 - 3. ACI 318 "Building Code Requirements for Reinforced Concrete".
 - 4. ACI 301 "Specifications for Structural Concrete for Buildings".
- B. Post-Tensioning Installer-Experience: Post-tensioning concrete work specified in this Section shall be performed only by an installer having not less than 3 years experience in post-tensioning work and who has successfully completed at least 5 installations of nature and magnitude similar to this project.

Work is to be completed under immediate and continual control of installer's Superintendent with adequate previous experience.

1.05 SUBMITTALS

- A. Comply with provisions of Section 01340.
- B. Shop Drawings:
 - 1. Shop drawings showing any additional details of tendon profile, anchorage components and stressing procedures not shown on the drawings shall be submitted for approval by the Owner's Representative.
- C. Data Reports and Tests:
 - 1. Field reports of elongation and tension applied for each tendon and each stressing operation are to be compiled and submitted to the Owner's Representative by an independent qualified individual or subcontractor.

1.06 DELIVERY, HANDLING AND STORAGE

- A. Deliver post-tensioning steel in prefabricated coils, tagged and marked. Use metal tags indicating location, length and other information corresponding to placement drawings.
- B. Store post-tensioning steel off the ground and in a manner to prevent rust, damage and accumulation of dirt.

PART 2 - MATERIALS

2.01 PRODUCTS

- A. Unbonded Tendons: Pre-stressing steel shall be uncoated seven-wire low-relaxation strand for pre-stressed concrete manufactured in accordance with ASTM A416, Grade 270.
- B. Anchorages: The anchorages of unbonded tendons shall develop the minimum specified ultimate strength of the pre-stressing steel. Elongation under ultimate load of the tendon shall not be less than 2 percent measured in a minimum gauge length of 10 feet.
- C. Sheathing, Unbonded Strand:
 - 1. Coat strands to protect them permanently against corrosion and rust. Strand shall be completely shop coated with a non-volatile, low friction mineral oil base grease with a rust preventing additive having a uniform viscosity under temperature ranges of 20 degrees F to 120 degrees F.
 - 2. Provide continuous coating that will remain ductile and free from cracks without becoming fluid over anticipated range of temperatures, chemically stable and non-reactive to cement and material used for sheathing.
 - 3. The sheathing for the unbonded strand shall have tensile strength and water-resistance sufficient to resist un-repairable damage and deterioration during transport, storage at the jobsite and installation. The sheathing shall prevent the intrusion of cement paste and the escape of the coating material. The sheathing shall be extruded polyethylene or polypropylene tube. Damage in the sheathing shall be repaired by re-sheathing prior to concreting as recommended and directed by the manufacturer. Except where repaired and approved by Owner's Representative, damaged sheathing shall be rejected and new strands with no damage shall be installed.

- D. Anchorages:
1. All anchorages shall meet the minimum requirements as set forth in the "Tentative Specification for Post-Tensioning Materials" as prepared by the Post-Tensioning Institute.
 2. The load from the anchoring device shall be uniformly distributed to the concrete by means of approved devices. Such approved devices shall conform to the following requirements.
 - a. Provide anchor plates of sufficient size to keep concrete bearing stresses within allowable limit of ACI 318 for the specified concrete strength at stressing.
 - b. Enclose splices in housings long enough to permit necessary movements.
- E. Grout Materials for Stressing Pockets:
1. Mixture of cement, sand, and water. Aggregate and/or mix shall not contain any metallic materials. Slump shall be as low as practical for application.
 2. Bonding agent for grouting stress pockets: Aqueous phase film forming freeze-thaw resistant compound suitable for brush or spray application and complying with Mil-B-19235, Chem-Master Corporation; "Polyweld", Larsen Products Corporation; "Welder", W. R. Grace; "Daraweld-PBA" or approved equal.

2.02 DESIGN CRITERIA

- A. Strand: Base selection on required spacing indicated and per project requirements.
1. Maximum working stress in strands at 70% of minimum guaranteed ultimate strength of strand immediately after anchoring strand. Temporary stress in strands is not to exceed 80% of minimum guaranteed ultimate strength of strand without approval of the Owner's Representative.

2.03 MANUFACTURE

- A. Post-tensioning tendons shall be fabricated in accordance with detailed construction drawings as provided by the Owner's Representative, unless otherwise noted on the plans.
- B. Precaution shall be taken to prevent rust through prolonged exposure of the pre-stressing steel. Contractor shall coordinate deliveries and provide storage to keep exposure of strands to corrosion to a minimum.
- C. Remove and replace strands having broken wires and/or strands showing fabrication defects.
- D. Tag pre-stressing steel with assigned heat number.

2.04 EQUIPMENT

- A. Fabricating and Placing: All equipment used for fabricating, handling and placing tendons shall be such that it does not damage or deteriorate the pre-stressing steel or the anchorages.
- B. Stressing: All hydraulic jacks shall be equipped with calibrated hydraulic pressure gauges to permit the stress in pre-stressing steel to be computed at any time. A calibration chart shall accompany each jack-pump-gauge unit. If inconsistencies

between the measured elongation and the jack gauge reading occur, the jack and gauge shall be recalibrated. An agreement of within $\pm 5\%$ shall be satisfactory. Check jack chucks for uneven wear before each use and replace if such wear is evident.

PART 3 - EXECUTION

3.01 PLACING

- A. Installation:
 - 1. The installation of post-tensioned tendons shall be performed by an organization that has successfully completed previous installations of a major nature similar to the one involved in this contract.
 - 2. All post-tensioning shall be under the immediate control of a person experienced in this type of work. He shall exercise close check and rigid control of all operations as necessary for full compliance with all requirements.
 - 3. Post-tensioning strands have priority over the other reinforcement, conduit and embedded items for location.
 - 4. Location of pre-stressing tendons in the field must be in accordance with the approved shop drawings. Any changes due to interference with other trades must be approved by the Owner's Representative.
- B. Profile: Provide suitable horizontal and vertical spacers and/or chairs as required to hold strands in true position and in required profile. Placing tolerance: $\pm \frac{1}{2}$ inch in vertical direction.
- C. Fabrication: Fabricate all strands in given pour full length without splices or couplers unless accepted by the Owner's Representative.
- D. Horizontal Deviation:
 - 1. Strands shall clear openings and drains by at least 6 inches. Slight deviation in spacing of strands is permitted where required to avoid openings and inserts which are specifically located on drawings.
 - 2. Keep horizontal plane deviations to a radius of curvature of not less than 21 ft.
- E. Blockouts/Sleeves/Openings: Provide blockouts or sleeves prior to the concrete pour for all openings required by Owner's Representative through the pre-stressed slabs. Any openings not provided for shall be located to miss pre-stressing tendons and locations shall be submitted for approval prior to cutting any opening.
- F. Concrete Placement:
 - 1. Concrete shall be placed in such a manner as to ensure that alignment or post-tensioning tendons remains unchanged. Special provision shall be made to ensure proper vibration of concrete around tendon bearing plates.
 - 2. Where the end of a post-tensioned assembly will not be covered by concrete, the anchoring devices shall be recessed so that the ends of the pre-stressing steel and all parts of the anchoring devices will be at least 2 inches inside of the end surface of the members. Unless a greater embedment is shown on the plans. Following post-tensioning, the recesses shall be filled with non-metallic, non-shrink grout and finished flush.

3.02 STRESSING

- A. Concrete Strength: Do not commence tensioning until concrete has reached a strength of at least $f'_c = 2,100$ psi or as otherwise specified on the drawings, as evidenced by test results of field cured cylinders and until approval has been given by the Owner's Representative. Perform testing by approved independent testing laboratory in accordance with ANSI/ASTM C31. Minimum of three field cured cylinders are required for each break.
- B. Tendon Position: If tendons move out of their designed positions during concreting operations, adjust tendons to their correct position.
- C. Records: Keep records of elongation and tension applied to each tendon and submit them to the Owner's Representative promptly upon completion of each slab.
- D. Procedure: At the time of stressing, check individual strand to establish procedure for ensuring uniform results.
- E. Recheck: Owner's Representative shall have the right to order a recheck at any time it appears that design stresses are not being attained.
- F. Sheathing Check: Do not tension unless the stressing steel is reasonably free and unbonded in enclosure. All tears and holes in the enclosure shall be repaired before concreting begins.
- G. Record Review: Do not cut or cover strand ends until tensioning records have been received and reviewed by the Owner's Representative and his permission given to proceed.

3.03 GROUTING OF STRESSING POCKETS

- A. Coat exposed tensioning recesses with an approved bonding agent and then fill flush with specified grout. Perform this work as soon as practical after completion of stressing.

END OF SECTION

**SECTION 07900
SEALANTS**

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. The general provisions of the Contract, including Standard Requirements for Contract Work, Special Provisions and General Requirements, apply to the work specified in this Section.

1.02 SCOPE

- A. Work under this Section consists of furnishing everything necessary for and incidental to the execution and completion of all sealant work, as indicated on the Drawings and specified herein.

1.03 DESCRIPTION OF WORK

- A. The extent of sealant work is indicated on the Drawings.
- B. The required applications of sealants includes, but are not necessarily limited to the following general locations:
 - 1. New Sidewalk Expansion Joints.
 - 2. Between Courts and Fence Bands.

1.04 QUALITY ASSURANCE

- A. Obtain sealant materials only from manufacturers who will, if required, send a qualified technical representative to the project site, for the purpose of advising the installer of proper procedures and precautions for the use of the materials.
- B. Installer: A firm with a minimum of five (5) years successful experience in the application of the types of materials required.

1.05 SUBMITTALS

- A. Comply with Section 01340.
- B. Samples, Sealants and Caulking: Submit three (3), 12" long samples of each color required (except black) for each type of sealant or caulking compound exposed to view. Install sample between 2 strips of material similar to or representative of typical surfaces where sealant or compound will be used, held apart to represent typical joint widths. Samples will be reviewed by Owner's Representative for color and texture only. Compliance with all other requirements is the exclusive responsibility of the Contractor.

- C. Guarantee, Sealants: Submit four (4) copies of written guarantee agreeing to repair or replace sealants which fail to perform as air-tight and water-tight joints; or fail in joint adhesion, cohesion, abrasion resistance, weather resistance, extrusion resistance, migration resistance, stain resistance, or general durability; or appear to deteriorate in any other manner not clearly specified by submitted manufacturer's data, as an inherent quality of the material for the exposure indicated. Provide guarantee signed by the Installer and Contractor.
- 1. Guarantee period of one (1) year from and after acceptance of the project by the Owner.

1.06 JOB CONDITIONS

- A. Pre-Installation Meeting: At the Contractor's direction, the Installer, Owner and/or the Owner's Representative, sealant manufacturer's technical representative, and other trades involved in coordination with sealant work shall meet with the Contractor at the project site to review the procedures and time schedule proposed for installation of sealants in coordination with other work. Review each major sealant application required on the project.
- B. Condition of Other Work: The Installer must examine the joint surfaces, backing, and anchorage of units forming sealant rabbet, and the conditions under which the sealant work is to be performed, and notify the Contractor and the Owner's Representative in writing of conditions detrimental to the proper and timely completion of the work and performance of the sealants. Do not proceed with the sealant work until unsatisfactory conditions have been corrected in a manner acceptable to the Installer.
- C. Weather Conditions: Do not proceed with installation of sealants under adverse weather conditions, or when temperatures are below or above manufacturer's recommended limitation for installation. Proceed with the work only when forecasted weather conditions are favorable for proper cure and development of high early bond strength. Wherever joint width is affected by ambient temperature variations, install elastomeric sealants only when temperatures are in the lower third of manufacturer's recommended installation temperature so that sealant will not be subjected to excessive elongation and bond stress at subsequent low temperatures. Coordinate time schedule with Contractor to avoid delay of project.

PART 2 - PRODUCTS

2.01 MATERIALS, GENERAL

- A. Colors: Provide manufacturer's standard colors plus thirty (30) additional Fastpak, as selected by Owner's Representative.
- B. Compatibility: Before purchase of each specified sealant, investigate it's compatibility with the joint surfaces, joint fillers, sealers and other materials in the system. Provide only materials (manufacturer's recommended variation of the specified materials) which are known to be fully compatible with the actual installation condition, as shown by

manufacturer's published data or certification.

- C. Provide size and shape of preformed sealant units as shown or, if not shown, as recommended by the manufacturer, either in the published data or upon consultation with technical representative.

2.02 SELF-LEVELING JOINT SEALANT

- A. Materials shall be Tremco THC-900 multi-component, chemically curing, self-leveling polyurethane joint sealant as manufactured by Tremco, 10701 Shaker Blvd., Cleveland, Ohio 44104, or approved equal.

2.03 GENERAL PURPOSE SEALANT

- A. Materials shall be Tremco Dymeric, epoxidized polyurethane terpolymer general purpose sealant as manufactured by Tremco, 10701 Shaker Blvd., Cleveland, Ohio 44104, or approved equal.

2.04 MISCELLANEOUS MATERIALS

- A. Joint Cleaner: Provide the type of joint cleaning compound recommended by the sealant or caulking compound manufacturer, for the joint surfaces to be cleaned.
- B. Joint Primer/Sealer: Provide the type of joint primer/sealer recommended by the sealant manufacturer, for the joint surfaces to be primed or sealed.
- C. Bond Breaker Tape: Polyethylene tape or other plastic tape as recommended by sealant manufacturer, to be applied to sealant-contact surfaces where bond to the substrate or joint filler must be avoided for proper performance of sealant. Provide self-adhesive tape wherever applicable.
- D. Sealant Backer Rod: Compressible rod stock polyethylene foam, polyethylene jacketed polyurethane foam, butyl rubber foam, neoprene foam or other flexible, permanent, durable non-absorptive material as recommended for compatibility with sealant by the sealant manufacturer. Provide size and shape of rod which will control the joint depth for sealant placement, break bond of sealant at bottom of joint, form optimum shape of sealant bead on back side, and provide a highly compressible backer to minimize the possibility of sealant extrusion when joint is compressed.

2.05 APPLICATIONS

- A. Tremco THC-900 Sealant: Provide at all exterior horizontal slab or paving joints.
- B. Tremco Dymeric Sealant: Provide at all other joints noted on the Drawings and around steel handrail base plates where handrail has been raised.

PART 3 - EXECUTION

3.01 JOINT SURFACE PREPARATION

- A. Clean joint surfaces immediately before installation of sealants. Remove dirt, insecure coatings, moisture and other substances which would interfere with bond of sealants. All joint surface preparation shall be in accordance with sealant manufacturer's printed instructions.

3.02 INSTALLATION

- A. Comply with sealant manufacturer's printed instructions except where more stringent requirements are shown or specified and except where manufacturer's technical representative directs otherwise.
- B. Prime or seal the joint surfaces wherever shown or recommended by the sealant manufacturer. Do not allow primer/sealer to spill or migrate onto adjoining surfaces.
- C. Install sealant backer rod for liquid elastomeric sealants, except where shown to be omitted or recommended to be omitted by sealant manufacturer for the application shown.
- D. Install bond breaker tape wherever required by manufacturer's recommendations to ensure that elastomeric sealants will perform properly.
- E. Employ only proven installation techniques, which will ensure that sealants will be deposited in uniform, continuous ribbons without gaps or air pockets, with complete "wetting" of joint bond surfaces equally on opposite sides. Except as otherwise indicated, fill sealant rabbet to a slightly concave surface, slightly below adjoining surfaces. Where horizontal joints are between a horizontal surface and a vertical surface, fill joint to form a slight cove, so that joint will not trap moisture and dirt.
- F. Install sealants to depths as shown or, if not shown, as recommended by the sealant manufacturer but within the following general limitations, measured at the center (thin) section of the bead.
- G. Spillage: Do not allow sealants or compounds to overflow or spill onto adjoining surfaces, or to migrate into the voids of adjoining surfaces including rough textures such as exposed aggregate panels. Use masking tape or other precautionary devices to prevent staining of adjoining surfaces, by either the primer/sealer or the sealant/caulking compound.
- H. Remove excess and spillage of compounds promptly as the work progresses. Clean the adjoining surfaces by whatever means may be necessary to eliminate evidence of spillage, without damage to the adjoining surfaces or finishes.

3.03 CURE AND PROTECTION

- A. Cure sealants and caulking compounds in compliance with manufacturer's instructions and recommendation, to obtain high early bond strength, internal cohesive strength and surface durability.
- B. The Installer shall advise the Contractor of procedures required for the curing and protection of sealants and caulking compounds during the construction period, so that they will be without deterioration or damage (other than normal wear and weathering) at the time of Owner's acceptance.

END OF SECTION

SECTION 032000
CONCRETE REINFORCING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Reinforcing steel for cast-in-place concrete.
- B. Supports and accessories for steel reinforcement.

1.02 RELATED REQUIREMENTS

- A. Section 033000 - Cast-in-Place Concrete.

1.03 REFERENCE STANDARDS

- A. ACI 301 - Specifications for Structural Concrete; 2016.
- B. ACI 318 - Building Code Requirements for Structural Concrete and Commentary; 2014 (Errata 2018).
- C. ACI SP-66 - ACI Detailing Manual; 2004.
- D. ASTM A184/A184M - Standard Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement; 2019.
- E. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement; 2020.
- F. ASTM A1064/A1064M - Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete; 2018a.
- G. CRSI (DA4) - Manual of Standard Practice; 2009.
- H. CRSI (P1) - Placing Reinforcing Bars; 2011.

1.04 SUBMITTALS

- A. Shop Drawings: Comply with requirements of ACI SP-66. Include bar schedules, shapes of bent bars, spacing of bars, and location of splices.

1.05 QUALITY ASSURANCE

- A. Perform work of this section in accordance with ACI 301.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Do not store reinforcing materials in contact with ground.

PART 2 PRODUCTS

2.01 REINFORCEMENT

- A. Reinforcing Steel: ASTM A615/A615M, Grade 60 (60,000 psi).
 - 1. Plain billet-steel bars.
 - 2. Unfinished.
- B. Steel Welded Wire Reinforcement (WWR): Galvanized, deformed type; ASTM A1064/A1064M.
 - 1. Form: Flat Sheets.
- C. Reinforcement Accessories:
 - 1. Tie Wire: Annealed, minimum 16 gauge, 0.0508 inch.
 - 2. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for adequate support of reinforcement during concrete placement.
 - 3. Provide stainless steel components for placement within 1-1/2 inches of weathering surfaces.

2.02 FABRICATION

- A. Fabricate concrete reinforcing in accordance with CRSI (DA4) - Manual of Standard Practice.
- B. Welding of reinforcement is not permitted.

- C. Locate reinforcing splices not indicated on drawings at point of minimum stress.

PART 3 EXECUTION

3.01 PLACEMENT

- A. Comply with requirements of ACI 301. Clean reinforcement of loose rust and mill scale.
- B. Place, support and secure reinforcement against displacement. Do not deviate from required position.
- C. Do not displace or damage vapor barrier.
- D. Accommodate placement of formed openings.
- E. Comply with applicable code for concrete cover over reinforcement.
- F. Bond and ground all reinforcement to requirements of Section 260526.

3.02 FIELD QUALITY CONTROL

- A. An independent testing agency will inspect installed reinforcement for compliance with contract documents before concrete placement.

END OF SECTION

SECTION 033000
CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Concrete formwork.
- B. Floors and slabs on grade.
- C. Concrete shear walls, elevator shaft walls, and foundation walls.
- D. Concrete foundations and anchor bolts for pre-engineered building.
- E. Joint devices associated with concrete work.
- F. Miscellaneous concrete elements, including equipment pads, light pole bases, and flagpole bases.
- G. Concrete curing.

1.02 RELATED REQUIREMENTS

- A. Section 032000 - Concrete Reinforcing.

1.03 REFERENCE STANDARDS

- A. ACI 117 - Specifications for Tolerances for Concrete Construction and Materials; 2010 (Reapproved 2015).
- B. ACI 211.1 - Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete; 1991 (Reapproved 2009).
- C. ACI 301 - Specifications for Structural Concrete; 2016.
- D. ACI 302.1R - Guide to Concrete Floor and Slab Construction; 2015.
- E. ACI 304R - Guide for Measuring, Mixing, Transporting, and Placing Concrete; 2000 (Reapproved 2009).
- F. ACI 305R - Guide to Hot Weather Concreting; 2010.
- G. ACI 306R - Guide to Cold Weather Concreting; 2016.
- H. ACI 308R - Guide to External Curing of Concrete; 2016.
- I. ACI 318 - Building Code Requirements for Structural Concrete and Commentary; 2014 (Errata 2018).
- J. ACI 347R - Guide to Formwork for Concrete; 2014, with Errata (2017).
- K. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement; 2020.
- L. ASTM A1064/A1064M - Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete; 2018a.
- M. ASTM C33/C33M - Standard Specification for Concrete Aggregates; 2018.
- N. ASTM C39/C39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens; 2020.
- O. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete; 2020.
- P. ASTM C109/C109M - Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or (50-mm) Cube Specimens); 2020a.
- Q. ASTM C143/C143M - Standard Test Method for Slump of Hydraulic-Cement Concrete; 2015a.
- R. ASTM C150/C150M - Standard Specification for Portland Cement; 2020.
- S. ASTM C171 - Standard Specification for Sheet Materials for Curing Concrete; 2016.
- T. ASTM C173/C173M - Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method; 2016.

- U. ASTM C260/C260M - Standard Specification for Air-Entraining Admixtures for Concrete; 2010a (Reapproved 2016).
- V. ASTM C309 - Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete; 2019.
- W. ASTM C494/C494M - Standard Specification for Chemical Admixtures for Concrete; 2019.
- X. ASTM C618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete; 2019.
- Y. ASTM C685/C685M - Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing; 2017.
- Z. ASTM C827/C827M - Standard Test Method for Change in Height at Early Ages of Cylindrical Specimens of Cementitious Mixtures; 2016.
- AA. ASTM C881/C881M - Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete; 2015.
- AB. ASTM C1059/C1059M - Standard Specification for Latex Agents for Bonding Fresh to Hardened Concrete; 2013.
- AC. ASTM C1107/C1107M - Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink); 2017.
- AD. ASTM C1240 - Standard Specification for Silica Fume Used in Cementitious Mixtures; 2020.
- AE. ASTM C1315 - Standard Specification for Liquid Membrane-Forming Compounds Having Special Properties for Curing and Sealing Concrete; 2019.
- AF. ASTM C1602/C1602M - Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete; 2012.
- AG. ASTM D2103 - Standard Specification for Polyethylene Film and Sheeting; 2015.
- AH. ASTM E1643 - Standard Practice for Selection, Design, Installation and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs; 2018a.
- AI. ASTM E1745 - Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs; 2017.
- AJ. COE CRD-C 513 - COE Specifications for Rubber Waterstops; 1974.
- AK. NSF 61 - Drinking Water System Components - Health Effects; 2019.
- AL. NSF 372 - Drinking Water System Components - Lead Content; 2016.

1.04 SUBMITTALS

- A. Product Data: Submit manufacturers' data on manufactured products showing compliance with specified requirements and installation instructions.
 - 1. For curing compounds, provide data on method of removal in the event of incompatibility with floor covering adhesives.
- B. Mix Design: Submit proposed concrete mix design.
 - 1. Indicate proposed mix design complies with requirements of ACI 301, Section 4 - Concrete Mixtures.
 - 2. Indicate proposed mix design complies with requirements of ACI 318, Chapter 5 - Concrete Quality, Mixing and Placing.
- C. Samples: Submit samples of underslab vapor retarder to be used.
- D. Test Reports: Submit report for each test or series of tests specified.
- E. Manufacturer's Installation Instructions: For concrete accessories, indicate installation procedures and interface required with adjacent construction.
- F. Project Record Documents: Accurately record actual locations of embedded utilities and components that will be concealed from view upon completion of concrete work.

1.05 QUALITY ASSURANCE

- A. Perform work of this section in accordance with ACI 301 and ACI 318.
- B. Follow recommendations of ACI 305R when concreting during hot weather.
- C. Follow recommendations of ACI 306R when concreting during cold weather.

PART 2 PRODUCTS

2.01 FORMWORK

- A. Formwork Design and Construction: Comply with guidelines of ACI 347R to provide formwork that will produce concrete complying with tolerances of ACI 117.
- B. Form Materials: Contractor's choice of standard products with sufficient strength to withstand hydrostatic head without distortion in excess of permitted tolerances.
 - 1. Earth Cuts: Earth cuts may be used for foundation elements only with approval from Geotechnical Engineer and Structural Engineer of Record.

2.02 REINFORCEMENT MATERIALS

- A. Comply with requirements of Section 032000.

2.03 CONCRETE MATERIALS

- A. Cement: ASTM C150/C150M, Type I - Normal, Type II - Moderate, or Type I/II - Blended
 - 1. Acquire cement for entire project from same source.
- B. Fine and Coarse Aggregates: ASTM C33/C33M.
 - 1. Acquire aggregates for entire project from same source.
- C. Fly Ash: ASTM C618, Class C or F.
- D. Silica Fume: ASTM C1240, proportioned in accordance with ACI 211.1.
- E. Water: ASTM C1602/C1602M; clean, potable, and not detrimental to concrete.

2.04 ADMIXTURES

- A. Do not use chemicals that will result in soluble chloride ions in excess of 0.1 percent by weight of cement.
- B. Air Entrainment Admixture: ASTM C260/C260M.
- C. High Range Water Reducing and Retarding Admixture: ASTM C494/C494M Type G.
- D. High Range Water Reducing Admixture: ASTM C494/C494M Type F.
- E. Water Reducing and Accelerating Admixture: ASTM C494/C494M Type E.
- F. Water Reducing and Retarding Admixture: ASTM C494/C494M Type D.
- G. Accelerating Admixture: ASTM C494/C494M Type C.
- H. Retarding Admixture: ASTM C494/C494M Type B.
- I. Water Reducing Admixture: ASTM C494/C494M Type A.

2.05 ACCESSORY MATERIALS

- A. Underslab Vapor Retarder:
 - 1. Sheet Material: ASTM E1745, Class A; stated by manufacturer as suitable for installation in contact with soil or granular fill under concrete slabs. Single ply polyethylene is prohibited.
 - 2. Accessory Products: Vapor retarder manufacturer's recommended tape, adhesive, mastic, prefabricated boots, etc., for sealing seams and penetrations.
- B. Non-Shrink Cementitious Grout: Premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents.
 - 1. Grout: Comply with ASTM C1107/C1107M.
 - 2. Height Change, Plastic State; when tested in accordance with ASTM C827/C827M:
 - a. Maximum: Plus 4 percent.

- b. Minimum: Plus 1 percent.
- 3. Minimum Compressive Strength at 48 Hours: 2,000 pounds per square inch.
- 4. Minimum Compressive Strength at 28 Days: 7,000 pounds per square inch.

2.06 BONDING AND JOINTING PRODUCTS

- A. Latex Bonding Agent: Non-redispersable acrylic latex, complying with ASTM C1059/C1059M, Type II.
- B. Epoxy Bonding System:
 - 1. Complying with ASTM C881/C881M and of Type required for specific application.
- C. Waterstops: Rubber, complying with COE CRD-C 513.
- D. Waterstops: Bentonite and butyl rubber, complying with NSF 61 and NSF 372.
- E. Slab Isolation Joint Filler: 1/2 inch thick, height equal to slab thickness, with removable top section that will form 1/2 inch deep sealant pocket after removal.
- F. Slab Contraction Joint Device: Preformed linear strip intended for pressing into wet concrete to provide straight route for shrinkage cracking.

2.07 CURING MATERIALS

- A. Evaporation Reducer: Liquid thin-film-forming compound that reduces rapid moisture loss caused by high temperature, low humidity, and high winds; intended for application immediately after concrete placement.
- B. Curing Compound, Naturally Dissipating: Clear, water-based, liquid membrane-forming compound; complying with ASTM C309.
- C. Curing and Anti-Spalling Compound: Boiled linseed oil compound.
- D. Curing and Sealing Compound, Moisture Emission-Reducing, Membrane-Forming: Liquid, membrane-forming, clear sealer, for application to newly-placed concrete; capable of providing adequate bond for flooring adhesives, initially and over the long term; with sufficient moisture vapor impermeability to prevent deterioration of flooring adhesives due to moisture emission.
 - 1. Use this product to cure and seal all slabs to receive adhesively applied flooring or roofing.
 - 2. Comply with ASTM C309 and ASTM C1315 Type I Class A.
 - 3. VOC Content: Less than 100 g/L.
- E. Moisture-Retaining Sheet: ASTM C171.
- F. Polyethylene Film: ASTM D2103, 4 mil, 0.004 inch thick, clear.
- G. Water: Potable, not detrimental to concrete.

2.08 CONCRETE MIX DESIGN

- A. Proportioning Normal Weight Concrete: Comply with ACI 211.1 recommendations.
- B. Concrete Strength: Establish required average strength for each type of concrete on the basis of field experience or trial mixtures, as specified in ACI 301.
 - 1. For trial mixtures method, employ independent testing agency acceptable to Architect or Engineer for preparing and reporting proposed mix designs.
- C. Admixtures: Add acceptable admixtures as recommended in ACI 211.1 and at rates recommended or required by manufacturer.
- D. Normal Weight Concrete:
 - 1. Compressive Strength, when tested in accordance with ASTM C39/C39M at 28 days: As indicated on drawings.
 - 2. Water-Cement Ratio: Maximum 40 percent by weight.
 - 3. Maximum Aggregate Size: 5/8 inch.

2.09 MIXING

- A. On Project Site: Mix in drum type batch mixer, complying with ASTM C685/C685M. Mix each batch not less than 1-1/2 minutes and not more than 5 minutes.
- B. Transit Mixers: Comply with ASTM C94/C94M.

- C. Adding Water: If concrete arrives on-site with slump less than suitable for placement, do not add water that exceeds the maximum water-cement ratio or exceeds the maximum permissible slump.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify lines, levels, and dimensions before proceeding with work of this section.

3.02 PREPARATION

- A. Formwork: Comply with requirements of ACI 301. Design and fabricate forms to support all applied loads until concrete is cured, and for easy removal without damage to concrete.
- B. Verify that forms are clean and free of rust before applying release agent.
- C. Coordinate placement of embedded items with erection of concrete formwork and placement of form accessories.
- D. Where new concrete is to be bonded to previously placed concrete, prepare existing surface by cleaning and applying bonding agent in according to bonding agent manufacturer's instructions.
 - 1. Use epoxy bonding system for bonding to damp surfaces, for structural load-bearing applications, and where curing under humid conditions is required.
 - 2. Use latex bonding agent only for non-load-bearing applications.
- E. Interior Slabs on Grade: Install vapor retarder under interior slabs on grade. Comply with ASTM E1643. Lap joints minimum 6 inches. Seal joints, seams and penetrations watertight with manufacturer's recommended products and follow manufacturer's written instructions. Repair damaged vapor retarder before covering.

3.03 PLACING CONCRETE

- A. Place concrete in accordance with ACI 304R.
- B. Place concrete for floor slabs in accordance with ACI 302.1R.
- C. Notify Architect or Engineer not less than 24 hours prior to commencement of placement operations.
- D. Maintain records of concrete placement. Record date, location, quantity, air temperature, and test samples taken.
- E. Ensure reinforcement, inserts, waterstops, embedded parts, and formed construction joint devices will not be disturbed during concrete placement.
- F. Place concrete continuously without construction (cold) joints wherever possible; where construction joints are necessary, before next placement prepare joint surface by removing laitance and exposing the sand and sound surface mortar, by sandblasting or high-pressure water jetting.
- G. Finish floors level and flat, unless otherwise indicated, within the tolerances specified below.

3.04 SLAB JOINTING

- A. Locate joints as indicated on drawings.
- B. Anchor joint fillers and devices to prevent movement during concrete placement.
- C. Isolation Joints: Use preformed joint filler with removable top section for joint sealant, total height equal to thickness of slab, set flush with top of slab.

3.05 FLOOR FLATNESS AND LEVELNESS TOLERANCES

- A. Maximum Variation of Surface Flatness:
 - 1. Exposed Concrete Floors: 1/4 inch in 10 feet.
 - 2. Under Seamless Resilient Flooring: 1/4 inch in 10 feet.
 - 3. Under Carpeting: 1/4 inch in 10 feet.
- B. Correct the slab surface if tolerances are less than specified.

- C. Correct defects by grinding or by removal and replacement of the defective work. Areas requiring corrective work will be identified. Re-measure corrected areas by the same process.

3.06 CONCRETE FINISHING

- A. Repair surface defects, including tie holes, immediately after removing formwork.
- B. Unexposed Form Finish: Rub down or chip off fins or other raised areas 1/4 inch or more in height.
- C. Exposed Form Finish: Rub down or chip off and smooth fins or other raised areas 1/4 inch or more in height. Provide finish as follows:
- D. Concrete Slabs: Finish to requirements of ACI 302.1R, and as follows:
 - 1. Surfaces to Receive Thin Floor Coverings: "Steel trowel" as described in ACI 302.1R; thin floor coverings include carpeting, resilient flooring, seamless flooring, resinous matrix terrazzo, thin set quarry tile, and thin set ceramic tile.
 - 2. Other Surfaces to Be Left Exposed: Trowel as described in ACI 302.1R, minimizing burnish marks and other appearance defects.
- E. In areas with floor drains, maintain floor elevation at walls; pitch surfaces uniformly to drains at 1:100 nominal, unless indicated otherwise on drawings.

3.07 CURING AND PROTECTION

- A. Comply with requirements of ACI 308R. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
- B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.
- C. Formed Surfaces: Cure by moist curing with forms in place for full curing period.
- D. Surfaces Not in Contact with Forms:
 - 1. Slabs and Floors To Receive Adhesive-Applied Flooring: Curing compounds and other surface coatings are usually considered unacceptable by flooring and adhesive manufacturers. If such materials must be used, either obtain the approval of the flooring and adhesive manufacturers prior to use or remove the surface coating after curing to flooring manufacturer's satisfaction.
 - 2. Initial Curing: Start as soon as free water has disappeared and before surface is dry. Keep continuously moist for not less than three days by water ponding, water-saturated sand, water-fog spray, or saturated burlap.
 - 3. Final Curing: Begin after initial curing but before surface is dry.

3.08 FIELD QUALITY CONTROL

- A. An independent testing agency will perform field quality control tests.
- B. Provide free access to concrete operations at project site and cooperate with appointed firm.
- C. Submit proposed mix design of each class of concrete to inspection and testing firm for review prior to commencement of concrete operations.
- D. Tests of concrete and concrete materials may be performed at any time to ensure compliance with specified requirements.
- E. Compressive Strength Tests: ASTM C39/C39M, for each test, mold and cure three concrete test cylinders. Obtain test samples for every 100 cubic yards or less of each class of concrete placed.
- F. Take one additional test cylinder during cold weather concreting, cured on job site under same conditions as concrete it represents.
- G. Perform one slump test for each set of test cylinders taken, following procedures of ASTM C143/C143M.

3.09 DEFECTIVE CONCRETE

- A. Test Results: The testing agency shall report test results in writing to Architect or Engineer and Contractor within 24 hours of test.
- B. Defective Concrete: Concrete not complying with required lines, details, dimensions, tolerances or specified requirements.
- C. Repair or replacement of defective concrete will be determined by the Architect or Engineer. The cost of additional testing shall be borne by Contractor when defective concrete is identified.
- D. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of Architect or Engineer for each individual area.

3.10 PROTECTION

- A. Do not permit traffic over unprotected concrete floor surface until fully cured.

END OF SECTION

SECTION 040511
MORTAR AND MASONRY GROUT

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Mortar for masonry.
- B. Grout for masonry.

1.02 RELATED REQUIREMENTS

- A. Section 042000 - Unit Masonry: Installation of mortar and grout.

1.03 REFERENCE STANDARDS

- A. TMS 402/602 - Building Code Requirements and Specification for Masonry Structures; 2016.
- B. ASTM C5 - Standard Specification for Quicklime for Structural Purposes; 2018.
- C. ASTM C91/C91M - Standard Specification for Masonry Cement; 2018.
- D. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete; 2020.
- E. ASTM C144 - Standard Specification for Aggregate for Masonry Mortar; 2018.
- F. ASTM C150/C150M - Standard Specification for Portland Cement; 2020.
- G. ASTM C207 - Standard Specification for Hydrated Lime for Masonry Purposes; 2018.
- H. ASTM C270 - Standard Specification for Mortar for Unit Masonry; 2019.
- I. ASTM C387/C387M - Standard Specification for Packaged, Dry, Combined Materials for Concrete and High Strength Mortar; 2017.
- J. ASTM C404 - Standard Specification for Aggregates for Masonry Grout; 2018.
- K. ASTM C476 - Standard Specification for Grout for Masonry; 2020.
- L. ASTM C780 - Standard Test Method for Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry; 2019.
- M. ASTM C1019 - Standard Test Method for Sampling and Testing Grout for Masonry; 2019.
- N. ASTM C1072 - Standard Test Methods for Measurement of Masonry Flexural Bond Strength; 2019.
- O. ASTM C1142 - Standard Specification for Extended Life Mortar for Unit Masonry; 1995 (Reapproved 2013).
- P. ASTM C1314 - Standard Test Method for Compressive Strength of Masonry Prisms; 2018.
- Q. ASTM E518/E518M - Standard Test Methods for Flexural Bond Strength of Masonry; 2015.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Include design mix and indicate whether the Proportion or Property specification of ASTM C270 is to be used. Also include required environmental conditions and admixture limitations.
- C. Reports: Submit reports on mortar indicating compliance of mortar to property requirements of ASTM C270 and test and evaluation reports per ASTM C780.
- D. Reports: Submit reports on grout indicating compliance of component grout materials to requirements of ASTM C476 and test and evaluation reports to requirements of ASTM C1019.
- E. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

1.05 QUALITY ASSURANCE

- A. Comply with provisions of TMS 402/602, except where exceeded by requirements of Contract Documents.

1.06 FIELD CONDITIONS

- A. Cold and Hot Weather Requirements: Comply with requirements of TMS 402/602 or applicable building code, whichever is more stringent.

PART 2 PRODUCTS

2.01 MORTAR AND GROUT APPLICATIONS

- A. At Contractor's option, mortar and grout may be field-mixed from packaged dry materials, made from factory premixed dry materials with addition of water only, or ready-mixed.
- B. Mortar Color: Natural gray unless otherwise indicated.
- C. Mortar Mix Designs: ASTM C270, Property Specification.
 - 1. Masonry below grade and in contact with earth: Type S.
 - 2. Engineered Masonry: Type M.

2.02 MATERIALS

- A. Packaged Dry Material for Mortar for Unit Masonry: Premixed Portland cement, hydrated lime, and sand; complying with ASTM C387/C387M and capable of producing mortar of the specified strength in accordance with ASTM C270 with the addition of water only.
 - 1. Color: Standard gray.
- B. Packaged Dry Material for Grout for Masonry: Premixed cementitious materials and dried aggregates; capable of producing grout of the specified strength in accordance with ASTM C476 with the addition of water only.
- C. Portland Cement: ASTM C150/C150M.
 - 1. Type: Type I - Normal; ASTM C150/C150M.
 - 2. Color: Standard gray.
- D. Masonry Cement: ASTM C91/C91M.
 - 1. Type: Type N; ASTM C91/C91M.
- E. Hydrated Lime: ASTM C207, Type S.
- F. Quicklime: ASTM C5, non-hydraulic type.
- G. Mortar Aggregate: ASTM C144.
- H. Grout Aggregate: ASTM C404.
- I. Water: Clean and potable.
- J. Bonding Agent: Latex type.

2.03 MORTAR MIXING

- A. Ready Mixed Mortar: ASTM C1142, Type equivalent to that specified according to ASTM C270.
- B. Thoroughly mix mortar ingredients using mechanical batch mixer, in accordance with ASTM C270 and in quantities needed for immediate use.
- C. Maintain sand uniformly damp immediately before the mixing process.
- D. Do not use anti-freeze compounds to lower the freezing point of mortar.
- E. If water is lost by evaporation, re-temper only within two hours of mixing.

2.04 GROUT MIXING

- A. Mix grout in accordance with ASTM C94/C94M.
- B. Thoroughly mix grout ingredients in quantities needed for immediate use in accordance with ASTM C476 for fine and coarse grout.

PART 3 EXECUTION

3.01 PREPARATION

- A. Verify that field conditions are acceptable and are ready to receive masonry.

- B. Apply bonding agent to existing concrete surfaces.
- C. Plug clean-out holes for grouted masonry with brick masonry units. Brace masonry to resist wet grout pressure.

3.02 INSTALLATION

- A. Install mortar and grout to requirements of section(s) in which masonry is specified.
- B. Work grout into masonry cores and cavities to eliminate voids.
- C. Do not install grout in lifts greater than 16 inches without consolidating grout by rodding.
- D. Do not displace reinforcement while placing grout.
- E. Remove excess mortar from grout spaces.

3.03 GROUTING

- A. Use either high-lift or low-lift grouting techniques, at Contractor's option, subject to other limitations of Contract Documents.
- B. Low-Lift Grouting:
 - 1. Limit height of pours to 12 inches.
 - 2. Limit height of masonry to 16 inches above each pour.
 - 3. Pour grout only after vertical reinforcing is in place; place horizontal reinforcing as grout is poured. Prevent displacement of bars as grout is poured.
 - 4. Place grout for each pour continuously and consolidate immediately; do not interrupt pours for more than 1-1/2 hours.
- C. High-Lift Grouting:
 - 1. Verify that horizontal and vertical reinforcement is in proper position and adequately secured before beginning pours.
 - 2. Hollow Masonry: Limit lifts to maximum 4 feet and pours to maximum height of 24 feet.
 - 3. Place grout for spanning elements in single, continuous pour.

3.04 FIELD QUALITY CONTROL

- A. An independent testing agency will perform field tests, in accordance with provisions of Section 014000 - Quality Requirements.
- B. Test and evaluate mortar in accordance with ASTM C780 procedures.
- C. Test and evaluate grout in accordance with ASTM C1019 procedures.
- D. Prism Tests: Test masonry and mortar panels for compressive strength in accordance with ASTM C1314, and for flexural bond strength in accordance with ASTM C1072 or ASTM E518/E518M; perform tests and evaluate results as specified in individual masonry sections.

END OF SECTION

SECTION 040511
MORTAR AND MASONRY
GROUT

**SECTION 042000
UNIT MASONRY**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Concrete block.
- B. Mortar and grout.
- C. Reinforcement and anchorage.
- D. Accessories.

1.02 RELATED REQUIREMENTS

- A. Section 032000 - Concrete Reinforcing: Reinforcing steel for grouted masonry.
- B. Section 040511 - Mortar and Masonry Grout.

1.03 REFERENCE STANDARDS

- A. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2016a.
- B. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement; 2020.
- C. ASTM A641/A641M - Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire; 2019.
- D. ASTM A951/A951M - Standard Specification for Steel Wire for Masonry Joint Reinforcement; 2016, with Editorial Revision (2018).
- E. ASTM A1064/A1064M - Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete; 2018a.
- F. ASTM C90 - Standard Specification for Loadbearing Concrete Masonry Units; 2016a.
- G. ASTM C129 - Standard Specification for Nonloadbearing Concrete Masonry Units; 2017.
- H. ASTM C140/C140M - Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units; 2020.
- I. ASTM C144 - Standard Specification for Aggregate for Masonry Mortar; 2018.
- J. ASTM C270 - Standard Specification for Mortar for Unit Masonry; 2019.
- K. ASTM C780 - Standard Test Method for Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry; 2019.
- L. BIA Technical Notes No. 7 - Water Penetration Resistance – Design and Detailing; 2017.
- M. BIA Technical Notes No. 13 - Ceramic Glazed Brick Exterior Walls; 2017.
- N. TMS 402/602 - Building Code Requirements and Specification for Masonry Structures; 2016.

1.04 SUBMITTALS

- A. Product Data: Provide data for masonry units, fabricated wire reinforcement, mortar, and masonry accessories.
- B. Shop Drawings: Indicate pertinent dimensions, materials, anchorage, size and type of fasteners, and accessories for brickwork support system.
- C. Manufacturer's Certificate: Certify that masonry units meet or exceed specified requirements.
- D. Test Reports: Concrete masonry manufacturer's test reports for units with integral water repellent admixture.

1.05 QUALITY ASSURANCE

- A. Comply with provisions of TMS 402/602, except where exceeded by requirements of Contract Documents.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, handle, and store masonry units by means that will prevent mechanical damage and contamination by other materials.

PART 2 PRODUCTS

2.01 CONCRETE MASONRY UNITS

- A. Concrete Block: Comply with referenced standards and as follows:
 - 1. Size: Standard units with nominal face dimensions of 16 by 8 inches and nominal depths as indicated on drawings for specific locations.
 - 2. Special Shapes: Provide non-standard blocks configured for corners.
 - 3. Load-Bearing Units: ASTM C90, normal weight.
 - a. Hollow block, as indicated.
 - 4. Non-Loadbearing Units: ASTM C129.
 - a. Hollow block, as indicated.
 - b. Lightweight.

2.02 MORTAR AND GROUT MATERIALS

- A. Mortar and Grout: As specified in Section 040511.

2.03 REINFORCEMENT AND ANCHORAGE

- A. Reinforcing Steel: ASTM A615/A615M, Grade 60 (60,000 psi), deformed billet bars; galvanized.
- B. Joint Reinforcement: Use ladder type joint reinforcement where vertical reinforcement is involved and truss type elsewhere, unless otherwise indicated.
- C. Single Wythe Joint Reinforcement: ASTM A951/A951M.
 - 1. Material: ASTM A1064/A1064M steel wire, mill galvanized to ASTM A641/A641M, Class 3.
 - 2. Size: 0.1875 inch side rods with 0.1875 inch cross rods; width as required to provide not less than 5/8 inch of mortar coverage on each exposure.
- D. Masonry Veneer Anchors: 2-piece anchors that permit differential movement between masonry veneer and structural backup, hot dip galvanized to ASTM A 153/A 153M, Class B.
 - 1. Anchor plates: Not less than 0.075 inch thick, designed for fastening to structural backup through sheathing by two fasteners; provide design with legs that penetrate sheathing and insulation to provide positive anchorage.
 - 2. Wire ties: Manufacturer's standard shape, 0.1875 inch thick.
 - 3. Vertical adjustment: Not less than 3-1/2 inches.

2.04 ACCESSORIES

- A. Preformed Control Joints: Rubber material. Provide with corner and tee accessories, fused joints.
- B. Joint Filler: Closed cell polyvinyl chloride; oversized 50 percent to joint width; self expanding; in maximum lengths available.
- C. Cavity Mortar Control: Semi-rigid polyethylene or polyester mesh panels, sized to thickness of wall cavity, and designed to prevent mortar droppings from clogging weeps and cavity vents and allow proper cavity drainage.
- D. Weeps:
 - 1. Type: Polyester mesh.
 - 2. Color(s): As indicated on drawings.
- E. Cleaning Solution: Non-acidic, not harmful to masonry work or adjacent materials.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive masonry.
- B. Verify that related items provided under other sections are properly sized and located.

- C. Verify that built-in items are in proper location, and ready for roughing into masonry work.

3.02 PREPARATION

- A. Direct and coordinate placement of metal anchors supplied for installation under other sections.
- B. Provide temporary bracing during installation of masonry work. Maintain in place until building structure provides permanent bracing.

3.03 COLD AND HOT WEATHER REQUIREMENTS

- A. Comply with requirements of TMS 402/602 or applicable building code, whichever is more stringent.

3.04 COURSING

- A. Establish lines, levels, and coursing indicated. Protect from displacement.
- B. Maintain masonry courses to uniform dimension. Form vertical and horizontal joints of uniform thickness.
- C. Concrete Masonry Units:
 - 1. Bond: Running.
 - 2. Coursing: One unit and one mortar joint to equal 8 inches.
 - 3. Mortar Joints: Concave.

3.05 PLACING AND BONDING

- A. Lay solid masonry units in full bed of mortar, with full head joints, uniformly jointed with other work.
- B. Lay hollow masonry units with face shell bedding on head and bed joints.
- C. Buttering corners of joints or excessive furrowing of mortar joints is not permitted.
- D. Remove excess mortar and mortar smears as work progresses.
- E. Do not shift or tap masonry units after mortar has achieved initial set. Where adjustment must be made, remove mortar and replace.
- F. Perform job site cutting of masonry units with proper tools to provide straight, clean, unchipped edges. Prevent broken masonry unit corners or edges.

3.06 WEEPS/CAVITY VENTS

- A. Install weeps in veneer and cavity walls at 24 inches on center horizontally on top of through-wall flashing above shelf angles and lintels and at bottom of walls.

3.07 CAVITY MORTAR CONTROL

- A. Do not permit mortar to drop or accumulate into cavity air space or to plug weep/cavity vents.

3.08 REINFORCEMENT AND ANCHORAGE - MASONRY VENEER

- A. Masonry Back-Up: Embed anchors to bond veneer at maximum 16 inches on center vertically and 36 inches on center horizontally. Place additional anchors at perimeter of openings and ends of panels, so maximum spacing of anchors is 8 inches on center.
- B. Stud Back-Up: Secure veneer anchors to stud framed back-up and embed into masonry veneer at maximum 16 inches on center vertically and 24 inches on center horizontally. Place additional anchors at perimeter of openings and ends of panels, so maximum spacing of anchors is 8 inches on center.

3.09 MASONRY FLASHINGS

- A. Whether or not specifically indicated, install masonry flashing to divert water to exterior at all locations where downward flow of water will be interrupted.

3.10 GROUTED COMPONENTS

- A. Lap splices minimum 24 bar diameters.
- B. Support and secure reinforcing bars from displacement. Maintain position within 1/2 inch of dimensioned position.

- C. Place and consolidate grout fill without displacing reinforcing.

3.11 CONTROL AND EXPANSION JOINTS

- A. Do not continue horizontal joint reinforcement through control or expansion joints.
- B. Install preformed control joint device in continuous lengths. Seal butt and corner joints in accordance with manufacturer's instructions.
- C. Form expansion joint as detailed on drawings.

3.12 BUILT-IN WORK

- A. As work progresses, install built-in metal door frames and glazed frames and other items to be built into the work and furnished under other sections.
- B. Install built-in items plumb, level, and true to line.
- C. Do not build into masonry construction organic materials that are subject to deterioration.

3.13 TOLERANCES

- A. Install masonry within the site tolerances found in TMS 402/602.
- B. Maximum Variation From Unit to Adjacent Unit: 1/16 inch.
- C. Maximum Variation from Plane of Wall: 1/4 inch in 10 ft and 1/2 inch in 20 ft or more.
- D. Maximum Variation from Plumb: 1/4 inch per story non-cumulative; 1/2 inch in two stories or more.
- E. Maximum Variation from Level Coursing: 1/8 inch in 3 ft and 1/4 inch in 10 ft; 1/2 inch in 30 ft.
- F. Maximum Variation of Mortar Joint Thickness: Head joint, minus 1/4 inch, plus 3/8 inch.
- G. Maximum Variation from Cross Sectional Thickness of Walls: 1/4 inch.

3.14 CUTTING AND FITTING

3.15 FIELD QUALITY CONTROL

- A. An independent testing agency will perform field quality control tests, as specified in Section 014000 - Quality Requirements.
- B. Concrete Masonry Unit Tests: Test each variety of concrete unit masonry in accordance with ASTM C140/C140M for compliance with requirements of this specification.
- C. Mortar Tests: Test each type of mortar in accordance with ASTM C780, testing with same frequency as masonry samples.

3.16 CLEANING

- A. Remove excess mortar and mortar droppings.
- B. Replace defective mortar. Match adjacent work.
- C. Clean soiled surfaces with cleaning solution.
- D. Use non-metallic tools in cleaning operations.

3.17 PROTECTION

- A. Without damaging completed work, provide protective boards at exposed external corners that are subject to damage by construction activities.

END OF SECTION

SECTION 051200
STRUCTURAL STEEL FRAMING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Structural steel framing members.
- B. Base plates, shear stud connectors and expansion joint plates.
- C. Grouting under base plates.

1.02 RELATED REQUIREMENTS

- A. Section 053100 - Steel Decking: Support framing for small openings in deck.

1.03 REFERENCE STANDARDS

- A. AISC (MAN) - Steel Construction Manual; 2017.
- B. AISC 303 - Code of Standard Practice for Steel Buildings and Bridges; 2016.
- C. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2014.
- D. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2018.
- E. ASTM A108 - Standard Specification for Steel Bar, Carbon and Alloy, Cold Finished; 2018.
- F. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2016a.
- G. ASTM A307 - Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength; 2014, with Editorial Revision (2017).
- H. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes; 2020.
- I. ASTM A501/A501M - Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing; 2014.
- J. ASTM A563 - Standard Specification for Carbon and Alloy Steel Nuts; 2015.
- K. ASTM A563M - Standard Specification for Carbon and Alloy Steel Nuts (Metric); 2007 (Reapproved 2013).
- L. ASTM A992/A992M - Standard Specification for Structural Steel Shapes; 2011 (Reapproved 2015).
- M. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength; 2018a.
- N. ASTM C827/C827M - Standard Test Method for Change in Height at Early Ages of Cylindrical Specimens of Cementitious Mixtures; 2016.
- O. ASTM E164 - Standard Practice for Contact Ultrasonic Testing of Weldments; 2019.
- P. ASTM F3125/F3125M - Standard Specification for High Strength Structural Bolts and Assemblies, Steel and Alloy Steel, Heat Treated, Inch Dimensions 120 ksi and 150 ksi Minimum Tensile Strength, and Metric Dimensions 830 MPa and 1040 MPa Minimum Tensile Strength; 2019.
- Q. ASTM F436/F436M - Standard Specification for Hardened Steel Washers Inch and Metric Dimensions; 2019.
- R. ASTM F1554 - Standard Specification for Anchor Bolts, Steel, 36, 55, and 105-ksi Yield Strength; 2018.
- S. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination; 2012.
- T. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2015, with Errata (2016).

- U. RCSC (HSBOLT) - Specification for Structural Joints Using High-Strength Bolts; Research Council on Structural Connections; 2014, with Errata (2015).
- V. SSPC-Paint 15 - Steel Joist Shop Primer/Metal Building Primer; 1999 (Ed. 2004).

1.04 SUBMITTALS

- A. Shop Drawings:
 - 1. Indicate profiles, sizes, spacing, locations of structural members, openings, attachments, and fasteners.
 - 2. Indicate welded connections with AWS A2.4 welding symbols. Indicate net weld lengths.
- B. Manufacturer's Mill Certificate: Certify that products meet or exceed specified requirements.
- C. Fabricator Test Reports: Comply with ASTM A1011/A1011M.
- D. Welders Certificates: Certify welders employed on the Work, verifying AWS qualification within the previous 12 months.

1.05 QUALITY ASSURANCE

- A. Fabricate structural steel members in accordance with AISC (MAN) "Steel Construction Manual."
- B. Design connections not detailed on drawings under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed in the State in which the Project is located.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Steel Angles and Plates: ASTM A36/A36M.
- B. Steel W Shapes and Tees: ASTM A992/A992M.
- C. Rolled Steel Structural Shapes: ASTM A992/A992M.
- D. Cold-Formed Structural Tubing: ASTM A500/A500M, Grade B.
- E. Hot-Formed Structural Tubing: ASTM A501/A501M, seamless or welded.
- F. Pipe: ASTM A53/A53M, Grade B, Finish black.
- G. Shear Stud Connectors: Made from ASTM A108 Grade 1015 bars.
- H. Structural Bolts and Nuts: Carbon steel, ASTM A307, Grade A and galvanized in compliance with ASTM A153/A153M, Class C.
- I. High-Strength Structural Bolts, Nuts, and Washers: ASTM F3125/F3125M, Type 1, with matching compatible ASTM A563 or ASTM A563M nuts and ASTM F436/F436M washers.
- J. Tension Control Bolts: Twist-off type; ASTM F3125/F3125M.
- K. Unheaded Anchor Rods: ASTM F1554, Grade 36, plain, with matching ASTM A563 or ASTM A563M nuts and ASTM F436/F436M Type 1 washers.
- L. Welding Materials: AWS D1.1/D1.1M; type required for materials being welded.
- M. Grout: ASTM C1107/C1107M; Non-shrink; premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents.
 - 1. Minimum Compressive Strength at 48 Hours: 2,000 pounds per square inch.
 - 2. Minimum Compressive Strength at 28 Days: 7,000 pounds per square inch.
 - 3. Height Change, Plastic State; when tested according to ASTM C827/C827M:
 - a. Maximum: Plus 4 percent.
 - b. Minimum: Plus 1 percent.
- N. Shop and Touch-Up Primer: Fabricator's standard, complying with VOC limitations of authorities having jurisdiction.
- O. Touch-Up Primer for Galvanized Surfaces: Fabricator's standard, complying with VOC limitations of authorities having jurisdiction.

2.02 FABRICATION

- A. Shop fabricate to greatest extent possible.
- B. Continuously seal joined members by continuous welds. Grind exposed welds smooth.
- C. Fabricate connections for bolt, nut, and washer connectors.

2.03 FINISH

- A. Shop prime structural steel members. Do not prime surfaces that will be fireproofed, field welded, in contact with concrete, or high strength bolted.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that conditions are appropriate for erection of structural steel and that the work may properly proceed.

3.02 ERECTION

- A. Erect structural steel in compliance with AISC 303.
- B. Allow for erection loads and provide sufficient temporary bracing to maintain structure in safe condition, plumb, and in true alignment until completion of erection and installation of permanent bracing.
- C. Field weld components and shear studs indicated on shop drawings.
- D. Use carbon steel bolts only for temporary bracing during construction, unless otherwise specifically permitted on drawings. Install high-strength bolts in accordance with RCSC (HSBOLT) "Specification for Structural Joints Using High-Strength Bolts".
- E. Do not field cut or alter structural members without approval of Architect or Engineer.
- F. After erection, prime welds, abrasions, and surfaces not shop primed, except surfaces to be in contact with concrete.
- G. Grout solidly between column plates and bearing surfaces, complying with manufacturer's instructions for nonshrink grout. Trowel grouted surfaces smooth, splaying neatly to 45 degrees.

3.03 TOLERANCES

- A. Maximum Variation From Plumb: 1/4 inch per story, non-cumulative.
- B. Maximum Offset From True Alignment: 1/4 inch.

3.04 FIELD QUALITY CONTROL

- A. An independent testing agency will perform field quality control tests, as specified in Section 014000 - Quality Requirements.

END OF SECTION

SECTION 053100
STEEL DECKING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Roof deck.
- B. Supplementary framing for openings up to and including 18 inches.
- C. Bearing plates and angles.

1.02 RELATED REQUIREMENTS

- A. Section 051200 - Structural Steel Framing: Support framing for openings larger than 18 inches and shear stud connectors.
- B. Section 051200 - Structural Steel Framing: Placement of embedded steel anchors for bearing plates in cast-in-place concrete.
- C. Section 052100 - Steel Joist Framing: Support framing for openings larger than 18 inches and shear stud connectors.
- D. Section 052100 - Steel Joist Framing: Placement of embedded steel anchors for bearing plates and joist seats in cast-in-place concrete.

1.03 REFERENCE STANDARDS

- A. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2014.
- B. ASTM A510/A510M - Standard Specification for General Requirements for Wire Rods and Coarse Round Wire, Carbon Steel, and Alloy Steel; 2018.
- C. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2020.
- D. ASTM B633 - Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel; 2019.
- E. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2015, with Errata (2016).
- F. AWS D1.3/D1.3M - Structural Welding Code - Sheet Steel; 2018.
- G. ICC-ES AC43 - Acceptance Criteria for Steel Deck Roof and Floor Systems; 2016.
- H. ICC-ES AC70 - Acceptance Criteria for Fasteners Power Driven into Concrete, Steel and Masonry Elements; 2016.
- I. SDI (DM) - Publication No.30, Design Manual for Composite Decks, Form Decks, and Roof Decks; 2007.
- J. SSPC-Paint 15 - Steel Joist Shop Primer/Metal Building Primer; 1999 (Ed. 2004).
- K. SSPC-Paint 20 - Zinc-Rich Primers (Type I, "Inorganic," and Type II, "Organic"); 2002 (Ed. 2004).

1.04 SUBMITTALS

- A. Product Data: Provide deck profile characteristics, dimensions, structural properties, and finishes.
- B. Shop Drawings: Indicate deck plan, support locations, projections, openings, reinforcement, pertinent details, and accessories.
- C. Certificates: Certify that products furnished meet or exceed specified requirements.
- D. Submit manufacturer's installation instructions.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Cut plastic wrap to encourage ventilation.
- B. Separate sheets and store deck on dry wood sleepers; slope for positive drainage.

PART 2 PRODUCTS

2.01 STEEL DECK

- A. Roof Deck: Non-composite type, fluted steel sheet:
 - 1. Galvanized Steel Sheet: ASTM A653/A653M, Structural Steel (SS) Grade 33/230, with G90/Z275 galvanized coating.
 - 2. Primer: Shop coat of manufacturer's standard primer paint over cleaned and phosphatized substrate.

2.02 ACCESSORY MATERIALS

- A. Bearing Plates and Angles: ASTM A36/A36M steel, galvanized per ASTM A123/A123M.
- B. Welding Materials: AWS D1.1/D1.1M.
- C. Fasteners: Galvanized hardened steel, self tapping.
- D. Powder Actuated Mechanical Fasteners: Steel; with knurled shank and forged ballistic point. Comply with applicable requirements of ICC-ES AC70.
 - 1. Design Requirements: Provide number and type of fasteners that comply with the applicable requirements of SDI (DM) design method for roof deck and floor deck applications and ICC-ES AC43.
 - 2. Material: Steel; ASTM A510/A510M.
- E. Mechanical Fasteners: Steel; hex washer head, self-drilling, self-tapping.
 - 1. Fasteners for Steel Roof Decks Protected with Waterproofing Membrane: ASTM B633, SC1, Type III zinc electroplate.
 - 2. Fasteners for Exposed Steel Roof Deck Application: Manufacturer's standard stainless steel with bonded neoprene washer.
- F. Weld Washers: Mild steel, uncoated, 3/4 inch outside diameter, 1/8 inch thick.
- G. Shop and Touch-Up Primer: SSPC-Paint 15, complying with VOC limitations of authorities having jurisdiction.
- H. Touch-Up Primer for Galvanized Surfaces: SSPC-Paint 20, complying with VOC limitations of authorities having jurisdiction.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions prior to beginning work.

3.02 INSTALLATION

- A. Erect metal deck in accordance with SDI Design Manual and manufacturer's instructions. Align and level.
- B. On concrete and masonry surfaces provide minimum 4 inch bearing.
- C. On steel supports provide minimum 1-1/2 inch bearing.
- D. Fasten deck to steel support members at ends and intermediate supports at 12 inches on center maximum, parallel with the deck flute and at each transverse flute using methods specified.
- E. At mechanically fastened male/female side laps fasten at 24 inches on center maximum.
- F. Drive mechanical sidelap connectors completely through adjacent lapped sheets; positively engage adjacent sheets with minimum three-thread penetration.
- G. At welded male/female side laps weld at 18 inches on center maximum.
- H. Weld deck in accordance with AWS D1.3/D1.3M.
- I. At deck openings from 6 inches to 18 inches in size, provide 2 by 2 by 1/4 inch steel angle reinforcement. Place angles perpendicular to flutes; extend minimum two flutes beyond each side of opening and fusion weld to deck at each flute.

- J. At deck openings greater than 18 inches in size, provide steel angle reinforcement. as specified in Section 051200.
- K. Where deck (other than cellular deck electrical raceway) changes direction, install 6 inch minimum wide sheet steel cover plates, of same thickness as deck. Fusion weld 12 inches on center maximum.
- L. At floor edges, install concrete stops upturned to top surface of slab, to contain wet concrete. Provide stops of sufficient strength to remain stationary without distortion.
- M. At openings between deck and walls, columns, and openings, provide sheet steel closures and angle flashings to close openings.
- N. Position roof drain pans with flange bearing on top surface of deck. Fusion weld at each deck flute.
- O. Immediately after welding deck and other metal components in position, coat welds, burned areas, and damaged surface coating, with touch-up primer.

END OF SECTION

KIDS SPACE PARK
SHAWNEE, OKLAHOMA

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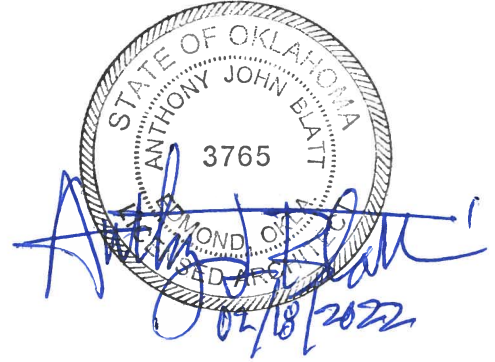
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2.15 DIVISION 21 -- FIRE SUPPRESSION

2.16 DIVISION 22 -- PLUMBING

2.17 DIVISION 23 -- HEATING, VENTILATING, AND AIR-CONDITIONING (HVAC)

2.18 DIVISION 26 -- ELECTRICAL

2.19 DIVISION 27 -- COMMUNICATIONS

2.20 DIVISION 28 -- ELECTRONIC SAFETY AND SECURITY

2.21 DIVISION 31 -- EARTHWORK

A. 313116 - Termite Control

2.22 DIVISION 32 -- EXTERIOR IMPROVEMENTS

2.23 DIVISION 33 -- UTILITIES

2.24 DIVISION 46 -- WATER AND WASTEWATER EQUIPMENT

END OF SECTION

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**SECTION 055000
METAL FABRICATIONS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Shop fabricated steel items.
- B. Steel framing and supports for mechanical and electrical equipment.
- C. Shelf angles

1.02 RELATED REQUIREMENTS

- A. Section 042000 - Unit Masonry: Placement of metal fabrications in masonry.
- B. Section 099113 - Exterior Painting: Paint finish.
- C. Section 099123 - Interior Painting: Paint finish.

1.03 REFERENCE STANDARDS

- A. ASTM A36/A36M - Standard Specification for Carbon Structural Steel 2019.
- B. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless 2020.
- C. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products 2017.
- D. ASTM A283/A283M - Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates 2018.
- E. ASTM A307 - Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength 2021.
- F. ASTM A501/A501M - Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing 2021.
- G. ASTM F3125/F3125M - Standard Specification for High Strength Structural Bolts and Assemblies, Steel and Alloy Steel, Heat Treated, Inch Dimensions 120 ksi and 150 ksi Minimum Tensile Strength, and Metric Dimensions 830 MPa and 1040 MPa Minimum Tensile Strength 2021.
- H. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination 2020.
- I. AWS D1.1/D1.1M - Structural Welding Code - Steel 2020, with Errata (2021).
- J. IAS AC172 - Accreditation Criteria for Fabricator Inspection Programs for Structural Steel AC172 2019.
- K. SSPC-Paint 20 - Zinc-Rich Coating (Type I - Inorganic, and Type II - Organic) 2019.
- L. SSPC-SP 2 - Hand Tool Cleaning 2018.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable.
 - 1. Indicate welded connections using standard AWS A2.4 welding symbols. Indicate net weld lengths.
- C. Welders' Certificates: Submit certification for welders employed on the project, verifying AWS qualification within the previous 12 months.
- D. Fabricator's Qualification Statement: Provide documentation showing steel fabricator is accredited under IAS AC172.

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1.05 QUALITY ASSURANCE

- A. Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel".
- B. Project Conditions: Verify actual locations of walls and other construction contiguous with metal fabrications by field measurements before fabrication.

PART 2 PRODUCTS

2.01 MATERIALS - STEEL

- A. Steel Sections: ASTM A36/A36M.
- B. Steel Tubing: ASTM A501/A501M hot-formed structural tubing.
- C. Plates: ASTM A283/A283M.
- D. Pipe: ASTM A53/A53M, Grade B Schedule 40, black finish.
- E. Bolts, Nuts, and Washers: ASTM A307, Grade A, plain.
- F. Bolts, Nuts, and Washers: ASTM F3125/F3125M, Type 1, plain.
- G. Welding Materials: AWS D1.1/D1.1M; type required for materials being welded.
- H. Touch-Up Primer for Galvanized Surfaces: SSPC-Paint 20, Type I - Inorganic, complying with VOC limitations of authorities having jurisdiction.

2.02 FABRICATION

- A. Fit and shop assemble items in largest practical sections, for delivery to site.
- B. Fabricate items with joints tightly fitted and secured.
- C. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.
- D. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.

2.03 FABRICATED ITEMS

- A. Lintels: As detailed; galvanized finish.
 - 1. All lintels supporting masonry veneer and CMU systems shall be shop galvanized and field painted to match adjacent masonry color.

2.04 MISCELLANEOUS FRAMING AND SUPPORTS

- A. General: Provide steel framing and supports not specified in other Sections as needed to complete the work.
- B. Fabricate units from steel shapes, plates and bars of welded construction unless otherwise indicated.
- C. Miscellaneous framing and supports shall be shop galvanized.

2.05 SHELF ANGLES

- A. Fabricate shelf angles from steel angles of sizes indicated and for both loose laid installation and attachment to wood framing. Where attached, provide horizontally slotted holes to receive 3/4-inch (19-mm) bolts, spaced not more than 6 inches (150 mm) from ends and 24 inches (600 mm) o.c., unless otherwise indicated.
- B. Galvanize shelf angles in exterior walls.
 - 1. All lintels supporting masonry veneer and CMU systems shall be shop galvanized and field painted to match adjacent masonry color.

2.06 FINISHES - STEEL

- A. Prepare surfaces to be primed in accordance with SSPC-SP2.
- B. Clean surfaces of rust, scale, grease, and foreign matter prior to finishing.

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- C. Galvanizing of Structural Steel Members: Galvanize after fabrication to ASTM A123/A123M requirements. Provide minimum 1.7 oz/sq ft galvanized coating. (Provide minimum 530 g/sq m galvanized coating.)
- D. Galvanizing of Non-structural Items: Galvanize after fabrication to ASTM A123/A123M requirements.

2.07 FABRICATION TOLERANCES

- A. Squareness: 1/8 inch (3 mm) maximum difference in diagonal measurements.
- B. Maximum Offset Between Faces: 1/16 inch (1.5 mm).
- C. Maximum Misalignment of Adjacent Members: 1/16 inch (1.5 mm).
- D. Maximum Bow: 1/8 inch (3 mm) in 48 inches (1.2 m).
- E. Maximum Deviation From Plane: 1/16 inch (1.5 mm) in 48 inches (1.2 m).

PART 3 EXECUTION

3.01 PREPARATION

- A. Clean and strip primed steel items to bare metal where site welding is required.
 - 1. After completion of welding, bare steel shall be field galvanized as required to meet the hot dipped galvanized performance.
- B. Supply setting templates to the appropriate entities for steel items required to be cast into concrete or embedded in masonry.

3.02 INSTALLATION

- A. Install items plumb and level, accurately fitted, free from distortion or defects.
- B. All items shall be installed in strict accordance with manufacturers written recommendations.
- C. Provide for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.
- D. Obtain approval prior to site cutting or making adjustments not scheduled.

3.03 TOLERANCES

- A. Maximum Variation From Plumb: 1/4 inch (6 mm) per story, non-cumulative.
- B. Maximum Offset From True Alignment: 1/4 inch (6 mm).
- C. Maximum Out-of-Position: 1/4 inch (6 mm).

END OF SECTION

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**SECTION 061000
ROUGH CARPENTRY**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Roofing nailers.
- B. Preservative treated wood materials.

1.02 RELATED REQUIREMENTS

- A. Section 076200 - Sheet Metal Flashing and Trim: Sill flashings.

1.03 REFERENCE STANDARDS

- A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials 2021a.
- B. AWPA U1 - Use Category System: User Specification for Treated Wood 2021.
- C. PS 20 - American Softwood Lumber Standard 2020.
- D. SPIB (GR) - Grading Rules 2014.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.

1.05 QUALITY ASSURANCE

1.06 DELIVERY, STORAGE, AND HANDLING

- A. General: Cover wood products to protect against moisture. Support stacked products to prevent deformation and to allow air circulation.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
 - 1. If no species is specified, provide any species graded by the agency specified; if no grading agency is specified, provide lumber graded by any grading agency meeting the specified requirements.
 - 2. Grading Agency: Any grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee (www.alsc.org) and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.
- B. Lumber fabricated from old growth timber is not permitted.

2.02 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

- A. Grading Agency: Southern Pine Inspection Bureau, Inc; SPIB (GR).
- B. Sizes: Nominal sizes as indicated on drawings, S4S.
- C. Moisture Content: Kiln-dry or MC15.
- D. Stud Framing (2 by 2 through 2 by 6 (50 by 50 mm through 50 by 150 mm)):
 - 1. Species: Douglas Fir-Larch.
 - 2. Grade: No. 1.
- E. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
 - 1. Lumber: S4S, No. 1 or Construction Grade.
 - 2. Boards: Standard or No. 3.

2.03 FACTORY WOOD TREATMENT

- A. Treated Lumber and Plywood: Comply with requirements of AWPA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.

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1. Preservative-Treated Wood: Provide lumber and plywood marked or stamped by an ALSC-accredited testing agency, certifying level and type of treatment in accordance with AWP standards.
- B. Preservative Treatment:
 1. Preservative Pressure Treatment of Lumber Above Grade: AWP U1, Use Category UC3B, Commodity Specification A using waterborne preservative.
 - a. Kiln dry lumber after treatment to maximum moisture content of 19 percent.
 - b. Treat lumber in contact with roofing, flashing, or waterproofing.
 - c. Treat lumber in contact with masonry or concrete.

PART 3 EXECUTION

3.01 INSTALLATION - GENERAL

- A. Select material sizes to minimize waste.
- B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.
- C. Where treated wood is used on interior, provide temporary ventilation during and immediately after installation sufficient to remove indoor air contaminants.

3.02 BLOCKING, NAILERS, AND SUPPORTS

- A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.
- B. In framed assemblies that have concealed spaces, provide solid wood fireblocking as required by applicable local code, to close concealed draft openings between floors and between top story and roof/attic space; other material acceptable to code authorities may be used in lieu of solid wood blocking.
- C. In metal stud walls, provide continuous blocking around door and window openings for anchorage of frames, securely attached to stud framing.

3.03 ROOF-RELATED CARPENTRY

- A. Coordinate installation of roofing carpentry with deck construction, framing of roof openings, and roofing assembly installation.

3.04 CLEANING

- A. Waste Disposal: Comply with the requirements of Section 017419 - Construction Waste Management and Disposal.
 1. Comply with applicable regulations.
 2. Do not burn scrap on project site.
 3. Do not burn scraps that have been pressure treated.
 4. Do not send materials treated with pentachlorophenol, CCA, or ACA to co-generation facilities or "waste-to-energy" facilities.
- B. Do not leave any wood, shavings, sawdust, etc. on the ground or buried in fill.
- C. Prevent sawdust and wood shavings from entering the storm drainage system.

END OF SECTION

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**SECTION 072100
THERMAL INSULATION**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Board insulation at perimeter foundation wall.
- B. Batt insulation for filling crevices in exterior wall and roof.

1.02 RELATED REQUIREMENTS

- A. Section 060573 - Wood Treatment: Field-applied termiticide for wood.
- B. Section 061000 - Rough Carpentry: Supporting construction for batt insulation.

1.03 REFERENCE STANDARDS

- A. ASTM C578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation 2019.
- B. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing 2017.
- C. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials 2021a.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.

1.05 QUALITY ASSURANCE

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Thermal Insulation:

2.02 APPLICATIONS

- A. Insulation at Perimeter of Foundation: Extruded polystyrene (XPS) board.

2.03 FOAM BOARD INSULATION MATERIALS

- A. Extruded Polystyrene (XPS) Board Insulation: Complies with ASTM C578 with either natural skin or cut cell surfaces.
 - 1. Flame Spread Index (FSI): Class A - 0 to 25, when tested in accordance with ASTM E84.
 - 2. Smoke Developed Index (SDI): 450 or less, when tested in accordance with ASTM E84.
 - 3. Type and Thermal Resistance, R-value (RSI-value): Type IV, 5.0 (0.88) per 1 inch (25.4 mm) thickness at 75 degrees F (24 degrees C) mean temperature.
 - 4. Board Edges: Square.

2.04 BATT INSULATION MATERIALS

- A. Mineral Fiber Batt Insulation: Flexible or semi-rigid preformed batt or blanket, complying with ASTM C665; friction fit; unfaced flame spread index of 0 (zero) when tested in accordance with ASTM E84.
 - 1. Flame Spread Index: 25 or less, when tested in accordance with ASTM E84.
 - 2. Smoke Developed Index: 0 (zero), when tested in accordance with ASTM E84.
 - 3. Thickness: 3 inches.
 - 4. Manufacturers:
 - a. Johns Manville; MinWool Sound Attenuation Fire Batts: www.jm.com/#sle.
 - b. Knauf Insulation; EcoBatt Insulation: www.knaufinsulation.com/#sle.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that substrate, adjacent materials, and insulation materials are dry and that substrates are ready to receive insulation.

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- B. Verify substrate surfaces are flat, free of honeycomb, fins, irregularities, or materials or substances that may impede adhesive bond.

3.02 BOARD INSTALLATION AT FOUNDATION PERIMETER

- A. Install boards vertically on foundation perimeter.
 - 1. Butt edges and ends tightly to adjacent boards and to protrusions.
- B. Extend boards over expansion joints, unbonded to foundation on one side of joint.
- C. Cut and fit insulation tightly to protrusions or interruptions to the insulation plane.

3.03 BATT INSTALLATION

- A. Install insulation in accordance with manufacturer's instructions.
- B. Install in exterior wall spaces without gaps or voids. Do not compress insulation.
- C. Trim insulation neatly to fit spaces. Insulate miscellaneous gaps and voids.
- D. Fit insulation tightly in cavities and tightly to exterior side of mechanical and electrical services within the plane of the insulation.
- E. Tape insulation batts in place.

3.04 FIELD QUALITY CONTROL

- A. See Section 014000 - Quality Requirements, for additional requirements.

3.05 PROTECTION

- A. Do not permit installed insulation to be damaged prior to its concealment.

END OF SECTION

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**SECTION 076100
SHEET METAL ROOFING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Sheet metal roofing, associated flashings, and underlayment.
- B. Gutters and downspouts.
- C. Integral fascias.
- D. Sealants for joints within sheet metal fabrications.

1.02 REFERENCE STANDARDS

- A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process 2020.
- B. ASTM C920 - Standard Specification for Elastomeric Joint Sealants 2018.
- C. ASTM D1970/D1970M - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection 2021.
- D. ASTM E96/E96M - Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials 2021.

1.03 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on metal types, finishes, characteristics.
- C. Shop Drawings: Indicate material profile, fastening methods, flashings, terminations, and installation details.
- D. Color Samples for Sheet Metal Roofing and Roof Screen Panels:
 - 1. Provide colors as selected by Architect, one for the sheet metal roofing.
 - 2. Color Selection Samples: Submit selection samples of all available colors and finishes.
 - 3. Verification Color Samples: Submit two samples in appropriate size illustrating metal finish color.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Stack material to prevent twisting, bending, or abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
- B. Prevent contact with materials that could cause discoloration or staining.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Sheet Metal Roofing Manufacturers:
 - 1. Berridge Manufacturing Company: Doublelock Zee-Lock www.berridge.com/#sle
 - 2. Fabral Metal Wall and Roof Systems: Powerseam II www.fabral.com/#sle
 - 3. Petersen Aluminum Corporation; Tite-Loc Plus: www.pac-clad.com/#sle.
 - 4. Sheffield Metals International; SMI 2.0" Mechanical Seam Panel: www.sheffieldmetals.com/#sle.
 - 5. Substitutions: See Section 016000 - Product Requirements.
 - a. Available colors requirement: Manufacturer shall provide the range of color and finish options described in Subpart 2.04 below.

2.02 SHEET MATERIALS

- A. Pre-Finished Galvanized Steel Sheet: ASTM A653/A653M, with G90/Z275 zinc coating; 24 gauge, 0.0239 inch (0.61 mm) minimum base metal thickness, shop pre-coated with PVDF (polyvinylidene fluoride) coating; color as selected.

2.03 FABRICATION OF SHEET METAL ROOFING

- A. Form sections true to shape, accurate in size, square, and free from distortion or defects.
- B. Fabricate cleats of same material as sheet, thickness to match roofing sheet, and at least 4 inch (101.6 mm) wide, interlockable with sheet.
- C. Fabricate starter strips, interlockable with sheet.
- D. Form pieces in longest practical lengths.
- E. Hem exposed edges on underside 1/2 inch (13 mm); miter and seam corners.
- F. Fabricate corners from single piece with minimum 18 inches (457 mm) long legs; seam for rigidity, seal with sealant.
- G. Fabricate vertical faces with bottom edge formed outward 1/4 inch (6 mm) and hemmed to form drip.

2.04 FINISHES

- A. Architect to select colors from the manufacturer's full range with the following systems:
- B. Color: As selected by Architect from manufacturer's full colors.
 - 1. Manufacturer's full line of colors shall include at least 25 standard solid colors and four metallic colors.

2.05 ACCESSORIES

- A. Fasteners: Stainless steel, with soft neoprene washers. All fasteners shall be concealed.
- B. Underlayment: Self-adhering butyl-rubber sheet complying with ASTM D1970/D1970M; strippable release film.
 - 1. Top Sheet: Woven polypropylene top surface.
 - 2. Sheet Thickness: 40 mil (1 mm), minimum.
 - 3. Self Sealability: Passing nail sealability test specified in ASTM D1970/D1970M.
 - 4. Low Temperature Flexibility: Passing test specified in ASTM D1970/D1970M.
 - 5. Water Vapor Permeance: 0.05 perm (0.30 ng/(Pa s sq m)), maximum, when tested in accordance with ASTM E96/E96M, Procedure A (desiccant method).
 - 6. Functional Temperature Range: Minus 45 degrees F (42.8 C) to 250 degrees F (121 C).
 - 7. Ultraviolet (UV) Resistance and Weatherability: Approved in writing by manufacturer for exposure to weather for minimum of three months.
 - 8. Manufacturers:
 - a. GCPT; grace ice and water shield HT: www.gcpt.com.
 - b. Protecto Wrap Company; Jiffy Seal Ice and Water Guard HT: www.protectowrap.com/#sle.
- C. Concealed Sealants: Non-curing butyl sealant.
- D. Exposed Sealants: ASTM C920 elastomeric sealant, with minimum movement capability as recommended by manufacturer for sealed substrates; color to match adjacent material.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Inspect roof deck to verify deck is clean and smooth, free of depressions, waves, or projections, properly sloped to gutters.
- B. Verify deck is dry and free of snow or ice. Verify joints in wood deck are solidly supported and fastened.
- C. Verify roofing termination and base flashings are in place, sealed, and secure.

3.02 PREPARATION

- A. Install starter and edge strips, and cleats before starting installation.
- B. Back paint concealed metal surfaces and surfaces in contact with dissimilar metals with protective backing paint to a minimum dry film thickness of 15 mil (0.4 mm).

3.03 INSTALLATION - ROOFING

- A. Apply underlayment over entire roof area.
- B. Apply slip sheet in one layer, laid loose.
- C. Cleat and seam all joints.
- D. Use plastic cement for joints between metal and bitumen and for joints between metal and felts.
- E. Provide gutters.

3.04 INSTALLATION - STANDING SEAM ROOFING

- A. Lay sheets with long dimension perpendicular to eaves. Apply pans beginning at eaves.
- B. Lock cleats into seams and flatten.
- C. Stagger transverse joints of roofing sheets.
- D. At eaves and gable ends, terminate roofing by hooking over edge strip.
- E. Bend up one side edge 1-1/2 inches (38 mm) and other edge 1-3/4 inches (44 mm).
- F. Make first fold 1/4 inch (6 mm) wide single fold and second fold 1/2 inch (13 mm) wide, providing locked portion of standing seam, 5 plies in thickness.
- G. Fold lower ends of seams at eaves over at 45 degree angle.

3.05 INSTALLATION - BUILT-IN GUTTERS AND DOWNSPOUTS

- A. Secure gutter lining to substrate with cleats spaced minimum 12 inches ([] mm) on center along edges of gutters.
- B. Longitudinal joints not acceptable.
- C. At roof edges, extend gutter lining under metal roofing 6 inches (152 mm) minimum and terminate in 3/4 inch (19 mm) folded edge secured by cleats; hook lower end of roofing into lock strip to form 3/4 inch (19 mm) wide loose-lock seam.
- D. Seal gutters watertight, and seal joint of gutter to drain.

3.06 INSTALLATION - FLASHINGS

- A. Secure flashings in place using concealed fasteners, and use exposed fasteners only where permitted.
- B. Cleat and seam all joints.
- C. Apply plastic cement compound between metal flashings and felt flashings.
- D. Fit flashings tight in place, and make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- E. Seal metal joints watertight.

3.07 PROTECTION

- A. Do not permit traffic over unprotected roof surface.

END OF SECTION

SECTION 076200
SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fabricated sheet metal items, including flashings, counterflashings, gutters, and downspouts.
- B. Sealants for joints within sheet metal fabrications.

1.02 RELATED REQUIREMENTS

- A. Section 042000 - Unit Masonry: Metal flashings embedded in masonry.
- B. Section 061000 - Rough Carpentry: Wood nailers for sheet metal work.

1.03 REFERENCE STANDARDS

- A. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix) 2020.
- B. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process 2020.
- C. ASTM C920 - Standard Specification for Elastomeric Joint Sealants 2018.
- D. ASTM D4586/D4586M - Standard Specification for Asphalt Roof Cement, Asbestos-Free 2007 (Reapproved 2018).
- E. CDA A4050 - Copper in Architecture - Handbook current edition.
- F. SMACNA (ASMM) - Architectural Sheet Metal Manual 2012.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Preinstallation Meeting: Convene one week before starting work of this section.

1.05 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations, and installation details.

1.06 QUALITY ASSURANCE

- A. Perform work in accordance with SMACNA (ASMM) and CDA A4050 requirements and standard details, except as otherwise indicated.
- B. Maintain one copy of each document on site.
- C. Fabricator and Installer Qualifications: Company specializing in sheet metal work with 5 years of documented experience.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
- B. Prevent contact with materials that could cause discoloration or staining.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Sheet Metal Flashing and Trim Manufacturers:
 - 1. Petersen Aluminum Corporation: www.pac-clad.com/#sle.
 - 2. Substitutions: See Section 016000 - Product Requirements.

2.02 SHEET MATERIALS

- A. Pre-Finished Galvanized Steel: ASTM A653/A653M, with G90/Z275 zinc coating; minimum 24 gage, (0.0239) inch (0.61 mm) thick base metal, shop pre-coated with PVDF coating.

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1. PVDF (Polyvinylidene Fluoride) Coating: Superior Performance Organic Finish, AAMA 2605; multiple coat, thermally cured fluoropolymer finish system.
2. Color (for items concealed from public view): Selected from full range of manufacturers options..
3. Color (for items exposed to public view): Color as selected by the Design Team. Shall match the color of the standing seam metal roof.

2.03 FABRICATION

- A. Form sections true to shape, accurate in size, square, and free from distortion or defects.
- B. Fabricate cleats of continuous galvanized type sheet metal, interlocking with sheet.
- C. Form pieces in longest possible lengths.
- D. Hem exposed edges on underside 1/2 inch (13 mm); miter and seam corners.
- E. Form material with flat lock seams, except where otherwise indicated; at moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.
- F. Fabricate corners from one piece with minimum 18 inch (450 mm) long legs; seam for rigidity, seal with sealant.
- G. Fabricate vertical faces with bottom edge formed outward 1/4 inch (6 mm) and hemmed to form drip.
- H. Fabricate flashings to allow toe to extend 2 inches (50 mm) over roofing gravel. Return and brake edges.

2.04 GUTTER AND DOWNSPOUT FABRICATION

- A. Gutters: Profile as indicated.
- B. Downspouts: Rectangular profile.
- C. Gutters and Downspouts: Size indicated.
- D. Accessories: Profiled to suit gutters and downspouts.
 1. Anchorage Devices: In accordance with SMACNA (ASMM) requirements.
 2. Gutter Supports: Brackets.
 3. Downspout Supports: Brackets.
- E. Downspout Extenders: Same material and finish as downspouts.
- F. Seal metal joints.

2.05 ACCESSORIES

- A. Fasteners: Galvanized steel, with soft neoprene washers.
- B. Primer: Zinc chromate type.
- C. Concealed Sealants: Non-curing butyl sealant.
- D. Exposed Sealants: ASTM C920; elastomeric sealant, with minimum movement capability as recommended by manufacturer for substrates to be sealed; color to match adjacent material.
- E. Plastic Cement: ASTM D4586/D4586M, Type I.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify roof openings, curbs, pipes, sleeves, ducts, and vents through roof are solidly set, reglets in place, and nailing strips located.
- B. Verify roofing termination and base flashings are in place, sealed, and secure.

3.02 PREPARATION

- A. Install starter and edge strips, and cleats before starting installation.
- B. Back paint concealed metal surfaces with protective backing paint to a minimum dry film thickness of 15 mil (0.4 mm).

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3.03 INSTALLATION

- A. Comply with drawing details.
- B. Insert flashings into reglets to form tight fit; secure in place with lead wedges; pack remaining spaces with lead wool; seal flashings into reglets with sealant.
- C. Secure flashings in place using concealed fasteners, and use exposed fasteners only where permitted..
- D. Apply plastic cement compound between metal flashings and felt flashings.
- E. Fit flashings tight in place; make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- F. Secure gutters and downspouts in place with concealed fasteners.

3.04 FIELD QUALITY CONTROL

- A. See Section 014000 - Quality Requirements, for field inspection requirements.
- B. Inspection will involve surveillance of work during installation to ascertain compliance with specified requirements.

END OF SECTION

**SECTION 079200
JOINT SEALANTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Nonsag gunnable joint sealants.
- B. Self-leveling pourable joint sealants.
- C. Joint backings and accessories.

1.02 REFERENCE STANDARDS

- A. ASTM C794 - Standard Test Method for Adhesion-In-Peel of Elastomeric Joint Sealants 2018.
- B. ASTM C920 - Standard Specification for Elastomeric Joint Sealants 2018.
- C. ASTM C1087 - Standard Test Method for Determining Compatibility of Liquid-Applied Sealants with Accessories Used in Structural Glazing Systems 2016.
- D. ASTM C1193 - Standard Guide for Use of Joint Sealants 2016.
- E. ASTM C1248 - Standard Test Method for Staining of Porous Substrate by Joint Sealants 2018.
- F. ASTM C1330 - Standard Specification for Cylindrical Sealant Backing for Use with Cold Liquid-Applied Sealants 2018.
- G. ASTM C1521 - Standard Practice for Evaluating Adhesion of Installed Weatherproofing Sealant Joints 2019 (Reapproved 2020).

1.03 SUBMITTALS

- A. Product Data for Sealants: Submit manufacturer's technical data sheets for each product to be used, that includes the following.
 - 1. Physical characteristics, including movement capability, VOC content, hardness, cure time, and color availability.
 - 2. List of backing materials approved for use with the specific product.
 - 3. Substrates that product is known to satisfactorily adhere to and with which it is compatible.
 - 4. Substrates the product should not be used on.
 - 5. Sample product warranty.
- B. Product Data for Accessory Products: Submit manufacturer's technical data sheet for each product to be used, including physical characteristics, installation instructions, and recommended tools.
- C. Samples for Verification: Where custom sealant color is specified, obtain directions from Architect and submit at least two physical samples for verification of color of each required sealant.
- D. Preconstruction Laboratory Test Reports: Submit at least four weeks prior to start of installation.
- E. Installation Plan: Submit at least four weeks prior to start of installation.
- F. Preinstallation Field Adhesion Test Plan: Submit at least two weeks prior to start of installation.
- G. Preinstallation Field Adhesion Test Reports: Submit filled out Preinstallation Field Adhesion Test Reports log within 10 days after completion of tests; include bagged test samples and photographic records.
- H. Installation Log: Submit filled out log for each length or instance of sealant installed.

1.04 QUALITY ASSURANCE

- A. Maintain one copy of each referenced document covering installation requirements on site.
- B. Installer Qualifications: Company specializing in performing the work of this section and with at least three years of documented experience.
- C. Preconstruction Laboratory Testing: Arrange for sealant manufacturer(s) to test each combination of sealant, substrate, backing, and accessories.

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1. Adhesion Testing: In accordance with ASTM C794.
 2. Compatibility Testing: In accordance with ASTM C1087.
 3. Allow sufficient time for testing to avoid delaying the work.
 4. Deliver to manufacturer sufficient samples for testing.
 5. Report manufacturer's recommended corrective measures, if any, including primers or techniques not indicated in product data submittals.
 6. Testing is not required if sealant manufacturer provides data showing previous testing, not older than 24 months, that shows satisfactory adhesion, lack of staining, and compatibility.
- D. Installation Plan: Include schedule of sealed joints, including the following.
1. Joint width indicated in Contract Documents.
 2. Joint depth indicated in Contract Documents; to face of backing material at centerline of joint.
 3. Method to be used to protect adjacent surfaces from sealant droppings and smears, with acknowledgement that some surfaces cannot be cleaned to like-new condition and therefore prevention is imperative.
 4. Installation Log Form: Include the following data fields, with known information filled out.
 - a. Date of installation.
 - b. Name of installer.
 - c. Actual joint width; provide space to indicate maximum and minimum width.
 - d. Actual joint depth to face of backing material at centerline of joint.
 - e. Air temperature.
- E. Preinstallation Field Adhesion Test Plan: Include destructive field adhesion testing of one sample of each combination of sealant type and substrate, except interior acrylic latex sealants, and include the following for each tested sample.
1. Identification of testing agency.
 2. Preinstallation Field Adhesion Test Log Form: Include the following data fields, with known information filled out.
 - a. Test date.
 - b. Copy of test method documents.
 - c. Age of sealant upon date of testing.
 - d. Test results, modeled after the sample form in the test method document.
 - e. Indicate use of photographic record of test.
- F. Field Adhesion Test Procedures:
1. Allow sealants to fully cure as recommended by manufacturer before testing.
 2. Have a copy of the test method document available during tests.
 3. Record the type of failure that occurred, other information required by test method, and the information required on the Field Quality Control Log.
 4. When performing destructive tests, also inspect the opened joint for proper installation characteristics recommended by manufacturer, and report any deficiencies.
 5. Deliver the samples removed during destructive tests in separate sealed plastic bags, identified with project, location, test date, and test results, to Owner.
 6. If any combination of sealant type and substrate does not show evidence of minimum adhesion or shows cohesion failure before minimum adhesion, report results to Architect.
- G. Destructive Field Adhesion Test: Test for adhesion in accordance with ASTM C1521, using Destructive Tail Procedure.
1. Sample: At least 18 inch (457 mm) long.
 2. Minimum Elongation Without Adhesive Failure: Consider the tail at rest, not under any elongation stress; multiply the stated movement capability of the sealant in percent by two; then multiply 1 inch (25 mm) by that percentage; if adhesion failure occurs before the "1 inch mark" is that distance from the substrate, the test has failed.
 3. If either adhesive or cohesive failure occurs prior to minimum elongation, take necessary measures to correct conditions and re-test; record each modification to products or installation procedures.

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1.05 WARRANTY

- A. Correct defective work within a five year period after Date of Substantial Completion.
- B. Warranty: Include coverage for installed sealants and accessories that fail to achieve watertight seal , exhibit loss of adhesion or cohesion, or do not cure.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Non-Sag Sealants: Permits application in joints on vertical surfaces without sagging or slumping.
 - 1. Dow Chemical Company: consumer.dow.com/en-us/industry/ind-building-construction.html/#sle.
 - 2. Pecora Corporation: www.pecora.com/#sle.
 - 3. Sika Corporation: www.usa-sika.com/#sle.
 - 4. Tremco Commercial Sealants & Waterproofing: www.tremcosealants.com/#sle.
- B. Self-Leveling Sealants: Pourable or self-leveling sealant that has sufficient flow to form a smooth, level surface when applied in a horizontal joint.
 - 1. Bostik Inc: www.bostik-us.com/#sle.
 - 2. Pecora Corporation: www.pecora.com/#sle.
 - 3. Sika Corporation: www.usa-sika.com/#sle.
 - 4. Tremco Commercial Sealants & Waterproofing: www.tremcosealants.com/#sle.

2.02 JOINT SEALANT APPLICATIONS

- A. Scope:
 - 1. Exterior Joints: Seal open joints, whether or not the joint is indicated on drawings, unless specifically indicated not to be sealed. Exterior joints to be sealed include, but are not limited to, the following items.
 - a. Wall expansion and control joints.
 - b. Joints between door, window, and other frames and adjacent construction.
 - c. Joints between different exposed materials.
 - d. Openings below ledge angles in masonry.
 - e. Other joints indicated below.
 - 2. Interior Joints: Do not seal interior joints unless specifically indicated to be sealed. Interior joints to be sealed include, but are not limited to, the following items.
 - a. Joints between door, window, and other frames and adjacent construction.
 - b. Other joints indicated below.
 - 3. Do not seal the following types of joints.
 - a. Intentional weepholes in masonry.
 - b. Joints indicated to be treated with manufactured expansion joint cover or some other type of sealing device.
 - c. Joints where sealant is specified to be provided by manufacturer of product to be sealed.
 - d. Joints where installation of sealant is specified in another section.
 - e. Joints between suspended panel ceilings/grid and walls.
- B. Exterior Joints: Use non-sag non-staining silicone sealant, unless otherwise indicated.
- C. Interior Joints: Use non-sag polyurethane sealant, unless otherwise indicated.
 - 1. Use mildew resistant silicone sealant adjacent to plumbing fixtures. Use type in compliance with adjacent materials.

2.03 JOINT SEALANTS - GENERAL

2.04 NONSAG JOINT SEALANTS

- A. Type JS-1 - Non-Staining Silicone Sealant: ASTM C920, Grade NS, Uses M and A; not expected to withstand continuous water immersion or traffic.
 - 1. Movement Capability: Plus 100 percent, minus 50 percent, minimum.

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2. Non-Staining To Porous Stone: Non-staining to light-colored natural stone when tested in accordance with ASTM C1248.
3. Dirt Pick-Up: Reduced dirt pick-up compared to other silicone sealants.
4. Color: Match adjacent finished surfaces.
5. Cure Type: Single-component, neutral moisture curing.
6. Service Temperature Range: Minus 65 to 180 degrees F (Minus 54 to 82 degrees C).
7. Manufacturers:
 - a. Dow Chemical Company; DOWSIL 795: Silicone Building Sealant: consumer.dow.com/en-us/industry/ind-building-construction.html/#sle.
- B. Type JS-2 - Mildew-Resistant Silicone Sealant: ASTM C920, Grade NS, Uses M and A; single component, mildew resistant; not expected to withstand continuous water immersion or traffic.
 1. Color: Selected from Manufacturers full range.
 2. Manufacturers:
 - a. Pecora Corporation; 898: www.pecora.com/#sle.
 - b. Sika Corporation; Sikasil GP: www.usa-sika.com/#sle.
 - c. Substitutions: See Section 016000 - Product Requirements.
- C. Type JS-3 - Polyurethane Sealant: ASTM C920, Grade NS, Uses M and A; single or multi-component; not expected to withstand continuous water immersion or traffic.
 1. Movement Capability: Plus and minus 25 percent, minimum.
 2. Color: Match adjacent finished surfaces.
 3. Service Temperature Range: Minus 40 to 180 degrees F (Minus 40 to 82 degrees C).
 4. Manufacturers:
 - a. Pecora Corporation; Dynatred: www.pecora.com/#sle.
 - b. Sika Corporation; Sikaflex-2c NS: www.usa-sika.com/#sle.
 - c. Tremco Commercial Sealants & Waterproofing; Vulkem 116: www.tremcosealants.com/#sle.
 - d. Substitutions: See Section 016000 - Product Requirements.

2.05 SELF-LEVELING SEALANTS

- A. Type JS-4 - Self-Leveling Polyurethane Sealant: ASTM C920, Grade P, Uses M and A; single or multi-component; explicitly approved by manufacturer for traffic exposure; not expected to withstand continuous water immersion .
 1. Movement Capability: Plus and minus 25 percent, minimum.
 2. Color: To be selected by Architect from manufacturer's standard range.
 3. Service Temperature Range: Minus 40 to 180 degrees F (Minus 40 to 82 degrees C).
 4. Manufacturers:
 - a. Pecora Corporation Urexpan NR-201: www.pecora.com/#sle.
 - b. Sika Corporation; Sikaflex-1c SL: www.usa-sika.com/#sle.
 - c. Tremco; Vulkem 45.

2.06 ACCESSORIES

- A. Backer Rod: Cylindrical cellular foam rod with surface that sealant will not adhere to, compatible with specific sealant used, and recommended by backing and sealant manufacturers for specific application.
 1. Type for Joints Not Subject to Pedestrian or Vehicular Traffic: ASTM C1330; Type O - Open Cell Polyurethane.
 2. Type for Joints Subject to Pedestrian or Vehicular Traffic: ASTM C1330; Type B - Bi-Cellular Polyethylene.
 3. Open Cell: 40 to 50 percent larger in diameter than joint width.
 4. Closed Cell and Bi-Cellular: 25 to 33 percent larger in diameter than joint width.
- B. Backing Tape: Self-adhesive polyethylene tape with surface that sealant will not adhere to and recommended by tape and sealant manufacturers for specific application.
- C. Masking Tape: Self-adhesive, nonabsorbent, non-staining, removable without adhesive residue, and compatible with surfaces adjacent to joints and sealants.

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- D. Joint Cleaner: Non-corrosive and non-staining type, type recommended by sealant manufacturer; compatible with joint forming materials.
- E. Primers: Type recommended by sealant manufacturer to suit application; non-staining.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that joints are ready to receive work.
- B. Verify that backing materials are compatible with sealants.
- C. Verify that backer rods are of the correct size.
- D. Preinstallation Adhesion Testing: Install a sample for each test location indicated in the test plan.
 - 1. Test each sample as specified in PART 1 under QUALITY ASSURANCE article.
 - 2. Notify Architect of date and time that tests will be performed, at least 7 days in advance.
 - 3. Record each test on Preinstallation Adhesion Test Log as indicated.
 - 4. If any sample fails, review products and installation procedures, consult manufacturer, or take whatever other measures are necessary to ensure adhesion; re-test in a different location; if unable to obtain satisfactory adhesion, report to Architect.
 - 5. After completion of tests, remove remaining sample material and prepare joint for new sealant installation.

3.02 PREPARATION

- A. Remove loose materials and foreign matter that could impair adhesion of sealant.
- B. Clean joints, and prime as necessary, in accordance with manufacturer's instructions.
- C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.
- D. Mask elements and surfaces adjacent to joints from damage and disfigurement due to sealant work; be aware that sealant drips and smears may not be completely removable.
- E. Concrete Floor Joints That Will Be Exposed in Completed Work: Test joint filler in inconspicuous area to verify that it does not stain or discolor slab.

3.03 INSTALLATION

- A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Perform installation in accordance with ASTM C1193.
- C. Install bond breaker backing tape where backer rod cannot be used.
- D. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.
- E. Do not install sealant when ambient temperature is outside manufacturer's recommended temperature range, or will be outside that range during the entire curing period, unless manufacturer's approval is obtained and instructions are followed.
- F. Nonsag Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface.

3.04 FIELD QUALITY CONTROL

- A. Perform field quality control inspection/testing as specified in PART 1 under QUALITY ASSURANCE article.
- B. Remove and replace failed portions of sealants using same materials and procedures as indicated for original installation.

END OF SECTION

SECTION 081113
HOLLOW METAL DOORS AND FRAMES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Non-fire-rated hollow metal doors and frames.
- B. Thermally insulated hollow metal doors with frames.

1.02 RELATED REQUIREMENTS

- A. Section 087100 - Door Hardware.
- B. Section 099113 - Exterior Painting: Field painting.
- C. Section 099123 - Interior Painting: Field painting.

1.03 REFERENCE STANDARDS

- A. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design 2010.
- B. ANSI/SDI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames and Frame Anchors 2018.
- C. ANSI/SDI A250.8 - Specifications for Standard Steel Doors and Frames (SDI-100) 2017.
- D. ANSI/SDI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames 2020.
- E. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process 2020.
- F. ASTM A1008/A1008M - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Required Hardness, Solution Hardened, and Bake Hardenable 2021a.
- G. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength 2018a.
- H. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials 2021a.
- I. BHMA A156.115 - Hardware Preparation In Steel Doors And Steel Frames 2016.
- J. ICC A117.1 - Accessible and Usable Buildings and Facilities 2017.
- K. NAAMM HMMA 830 - Hardware Selection for Hollow Metal Doors and Frames 2002.
- L. NAAMM HMMA 831 - Hardware Locations for Hollow Metal Doors and Frames 2011.
- M. NAAMM HMMA 840 - Guide Specifications For Receipt, Storage and Installation of Hollow Metal Doors and Frames 2007.

1.04 SUBMITTALS

- A. Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and any indicated finish requirements.
 - 1. Shop drawings shall designate shop preparation of all hardware. Construction Manager shall coordinate between door/frame supplier and hardware supplier prior to submission of shop drawings.
- B. Installation Instructions: Manufacturer's published instructions, including any special installation instructions relating to this project.
- C. Manufacturer's Certificate: Certification that products meet or exceed specified requirements.
- D. Manufacturer's Qualification Statement.
- E. Installer's Qualification Statement.

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1.05 QUALITY ASSURANCE

- A. Maintain at project site copies of reference standards relating to installation of products specified.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Comply with NAAMM HMMA 840 or ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.
- B. Protect with resilient packaging; avoid humidity build-up under coverings; prevent corrosion and adverse effects on factory applied painted finish.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Hollow Metal Doors and Frames:
 - 1. Ceco Door, an Assa Abloy Group company: www.assaabloydss.com/#sle.
 - 2. Curries, an Assa Abloy Group company: www.assaabloydss.com/#sle.
 - 3. Steelcraft, an Allegion brand: www.allegion.com/#sle.

2.02 PERFORMANCE REQUIREMENTS

- A. Requirements for Hollow Metal Doors and Frames:
 - 1. Steel Sheet: Comply with one or more of the following requirements; galvanized steel complying with ASTM A653/A653M, cold-rolled steel complying with ASTM A1008/A1008M, or hot-rolled pickled and oiled (HRPO) steel complying with ASTM A1011/A1011M, commercial steel (CS) Type B, for each.
 - 2. Accessibility: Comply with ICC A117.1 and ADA Standards.
 - 3. Exterior Door Top Closures: Flush end closure channel, with top and door faces aligned.
 - 4. Door Edge Profile: Manufacturers standard for application indicated.
 - 5. Typical Door Face Sheets: Flush.
 - 6. Hardware Preparations, Selections and Locations: Comply with NAAMM HMMA 830 and NAAMM HMMA 831 or BHMA A156.115 and ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.
 - a. All hollow metal doors and frames shall be shop prepped for hardware.
 - 7. Zinc Coating for Typical Interior and/or Exterior Locations: Provide metal components zinc-coated (galvanized) and/or zinc-iron alloy-coated (galvanized) by the hot-dip process in accordance with ASTM A653/A653M, with manufacturer's standard coating thickness, unless noted otherwise for specific hollow metal doors and frames.
- B. All Metal Door Frames shall be provided with a wrought box, strike cover and hinge reinforcement cover.
- C. All Metal Frames shall have hinge reinforcement fabricated from plate stock, 1/4"x9" C1018 steel 160 scale Brinell hardness. Reinforcement is to be securely attached to frame with minimum of four (4) contacts each side of the opening. Reinforcing for holders and closers shall be bow type or double channel of not less than ten gauge steel for three bolt attachment. Reinforcing for field attachment of corner brackets is to be not less than eight gauge steel.
- D. All Door frames shall be anchored to the wall with a minimum of three anchors.
- E. Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with the specified requirements for each type; for instance, an exterior door that is also indicated as being sound-rated must comply with the requirements specified for exterior doors and for sound-rated doors; where two requirements conflict, comply with the most stringent.

2.03 HOLLOW METAL DOORS

- A. Door Finish: Factory primed and field finished.
- B. Exterior Doors: Thermally insulated.
 - 1. Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).
 - a. Level 3 - Extra Heavy-duty.

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- b. Physical Performance Level A, 1,000,000 cycles; in accordance with ANSI/SDI A250.4.
- c. Model 1 - Full Flush.
- d. Door Face Metal Thickness: 16 gage, 0.053 inch (1.3 mm), minimum.
- e. Zinc Coating: A60/ZF180 galvanized coating; ASTM A653/A653M.
- 2. Door Core Material: Polyisocyanurate, 2 lbs/cu ft minimum density.
 - a. Foam Plastic Insulation: Manufacturer's standard board insulation with maximum flame spread index (FSI) of 75, and maximum smoke developed index (SDI) of 450 in accordance with ASTM E84, and completely enclosed within interior of door.
- 3. Door Thermal Resistance: R-Value of 6.0 minimum, for installed thickness of polystyrene.
- 4. Door Thickness: 1-3/4 inch (44.5 mm), nominal.
- 5. Weatherstripping: Refer to Section 087100.
- C. Interior Doors, Non-Fire-Rated:
 - 1. Door Thickness: 1-3/4 inch (44.5 mm), nominal.

2.04 HOLLOW METAL FRAMES

- A. Comply with standards and/or custom guidelines as indicated for corresponding door in accordance with applicable door frame requirements.
- B. Frame Finish: Factory primed and field finished.
- C. Exterior Door Frames: Full profile/continuously welded type.
 - 1. Weatherstripping: Separate, see Section 087100.
- D. Interior Door Frames, Non-Fire Rated: Full profile/continuously welded type.
 - 1. Frame Metal Thickness: 18 gage, 0.042 inch (1.0 mm), minimum.

2.05 FINISHES

- A. Primer: Rust-inhibiting, complying with ANSI/SDI A250.10, door manufacturer's standard.

2.06 ACCESSORIES

- A. Louvers: Roll formed steel with overlapping frame; finish same as door components ; factory-installed.
 - 1. Style: Standard straight slat blade.
 - 2. Fasteners: Concealed fasteners.
 - 3. Size: 18x18 minimum - coordinate with engineer of record prior to preparation of shop drawings.
- B. Silencers: Resilient rubber, fitted into drilled hole; provide three on strike side of single door, three on center mullion of pairs, and two on head of pairs without center mullions.
- C. Temporary Frame Spreaders: Provide for factory- or shop-assembled frames.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that opening sizes and tolerances are acceptable.
- C. Verify that finished walls are in plane to ensure proper door alignment.

3.02 PREPARATION

- A. Coat inside of frames to be installed in masonry or to be grouted, with bituminous coating, prior to installation.
- B. All hollow metal doors and frames shall be shop for hardware before delivery to the jobsite.

3.03 INSTALLATION

- A. Install doors and frames in accordance with manufacturer's instructions and related requirements of specified door and frame standards or custom guidelines indicated.
- B. Coordinate frame anchor placement with wall construction.

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- C. Install door hardware as specified in Section 087100.
- D. Coordinate installation of electrical connections to electrical hardware items.
- E. Touch up damaged factory finishes.

3.04 TOLERANCES

- A. Maximum Diagonal Distortion: 1/16 inch (1.6 mm) measured with straight edge, corner to corner.

3.05 ADJUSTING

- A. Adjust for smooth and balanced door movement.

3.06 SCHEDULE

- A. Refer to Door and Frame Schedule on the drawings.

END OF SECTION

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**SECTION 083100
ACCESS DOORS AND PANELS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Wall and ceiling mounted access units.

1.02 RELATED REQUIREMENTS

- A. Section 042000: Openings in masonry.
- B. Section 099123 - Interior Painting: Field paint finish.

1.03 SUBMITTALS

- A. List of required access doors: Based on mechanical, plumbing, and electrical drawings and specifications, prepare a comprehensive list of all required access doors, with sizes and locations.
- B. Product Data: Provide sizes, types, finishes, hardware, scheduled locations, and details of adjoining work.
- C. Shop Drawings: Indicate exact position of each access door and/or panel unit.

PART 2 PRODUCTS

2.01 ACCESS DOORS AND PANELS ASSEMBLIES

- A. Wall-Mounted Units in Wet Areas (including toilet rooms):
 - 1. Panel Material: Aluminum with gasketing.
 - 2. Size: 12 by 12 inches (305 by 305 mm), and other sizes as required.
 - 3. Door/Panel: Hinged, standard duty, with tool-operated spring or cam lock and no handle.
 - 4. Masonry Mounting Criteria: Provide surface-mounted frame with door surface flush with frame surface.
- B. Ceiling-Mounted Units :
 - 1. Size - Other Ceilings: 12 by 12 inches (305 by 305 mm), or as required.
 - 2. Door/Panel: Hinged, standard duty, with tool-operated spring or cam lock and no handle.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that rough openings are correctly sized and located.
- B. Begin installation only after substrates have been properly prepared, and if the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 PREPARATION

- A. Clean surfaces thoroughly prior to proceeding with this work.
- B. Prepare surfaces using methods recommended by manufacturer for applicable substrates in accordance with project conditions.

3.03 INSTALLATION

- A. Install units in accordance with manufacturer's instructions.
- B. Install frames plumb and level in openings, and secure units rigidly in place.
- C. Position units to provide convenient access to concealed equipment when necessary.

END OF SECTION

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**SECTION 087100
DOOR HARDWARE**

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 includes commercial door hardware for the following:
1. Swinging doors.
 2. Other doors to the extent indicated.
- B. Door hardware includes, but is not necessarily limited to, the following:
1. Mechanical door hardware.
- C. Related Sections:
1. Division 08 Section "Hollow Metal Doors and Frames".
- D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
 2. ICC/IBC - International Building Code.
 3. NFPA 70 - National Electrical Code.
 4. NFPA 80 - Fire Doors and Windows.
 5. NFPA 101 - Life Safety Code.
 6. NFPA 105 - Installation of Smoke Door Assemblies.
 7. State Building Codes, Local Amendments.
- E. Standards: All hardware specified herein shall comply with the following industry standards:
1. ANSI/BHMA Certified Product Standards - A156 Series
 2. UL10C – Positive Pressure Fire Tests of Door Assemblies

1.3 SUBMITTALS

- A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.
- B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door

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Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.

1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
 2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.
 3. Content: Include the following information:
 - a. Type, style, function, size, label, hand, and finish of each door hardware item.
 - b. Manufacturer of each item.
 - c. Fastenings and other pertinent information.
 - d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
 - e. Explanation of abbreviations, symbols, and codes contained in schedule.
 - f. Mounting locations for door hardware.
 - g. Door and frame sizes and materials.
 - h. Warranty information for each product.
 4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.
- C. Keying Schedule: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.
- D. Informational Submittals:
1. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.
- E. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Submittals.

1.4 QUALITY ASSURANCE

- A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.

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- B. Installer Qualifications: A minimum 3 years documented experience installing both standard and electrified door hardware 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.
- C. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.
- D. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.
- E. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.
- F. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:
 - 1. Function of building, purpose of each area and degree of security required.
 - 2. Plans for existing and future key system expansion.
 - 3. Requirements for key control storage and software.
 - 4. Installation of permanent keys, cylinder cores and software.
 - 5. Address and requirements for delivery of keys.
- G. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.
 - 1. Prior to installation of door hardware, conduct a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware (including electromechanical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.
 - 2. Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.
 - 3. Review sequence of operation narratives for each unique access controlled opening.
 - 4. Review and finalize construction schedule and verify availability of materials.
 - 5. Review the required inspecting, testing, commissioning, and demonstration procedures
- H. At completion of installation, provide written documentation that components were applied to manufacturer's instructions and recommendations and according to approved schedule.

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1.5 DELIVERY, STORAGE, AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.
- B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.
- C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

1.6 COORDINATION

- A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.
- B. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

1.7 WARRANTY

- A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
- B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:
 - 1. Structural failures including excessive deflection, cracking, or breakage.
 - 2. Faulty operation of the hardware.
 - 3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
 - 4. Electrical component defects and failures within the systems operation.
- C. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.
- D. Special Warranty Periods:
 - 1. Ten years for mortise locks and latches.
 - 2. Five years for exit hardware.

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1.8 MAINTENANCE SERVICE

- A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

- A. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.
- B. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:
1. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.
- C. Substitutions: Requests for substitution and product approval for inclusive mechanical and electromechanical door hardware in compliance with the specifications must be submitted in writing and in accordance with the procedures and time frames outlined in Division 01, Substitution Procedures. Approval of requests is at the discretion of the architect, owner, and their designated consultants.

2.2 HANGING DEVICES

- A. Hinges: ANSI/BHMA A156.1 certified butt hinges with number of hinge knuckles and other options as specified in the Door Hardware Sets.
1. Quantity: Provide the following hinge quantity:
 - a. Two Hinges: For doors with heights up to 60 inches.
 - b. Three Hinges: For doors with heights 61 to 90 inches.
 - c. Four Hinges: For doors with heights 91 to 120 inches.
 - d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.
 2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:
 - a. Widths up to 3'0": 4-1/2" standard or heavy weight as specified.
 - b. Sizes from 3'1" to 4'0": 5" standard or heavy weight as specified.
 3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:
 - a. Exterior Doors: Heavy weight, non-ferrous, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.

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- b. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.
 - 4. Hinge Options: Comply with the following:
 - a. Non-removable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the all out-swinging lockable doors.
 - 5. Manufacturers:
 - a. Hager Companies (HA).
 - b. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK).
- B. Continuous Geared Hinges: ANSI/BHMA A156.26 Grade 1-600 certified continuous geared hinge. with minimum 0.120-inch thick extruded 6060 T6 aluminum alloy hinge leaves and a minimum overall width of 4 inches. Hinges are non-handed, reversible and fabricated to template screw locations. Factory trim hinges to suit door height and prepare for electrical cut-outs.
 - 1. Manufacturers:
 - a. Pemko Products; ASSA ABLOY Architectural Door Accessories (PE).

2.3 DOOR OPERATING TRIM

- A. Door Push Plates and Pulls: ANSI/BHMA A156.6 certified door pushes and pulls of type and design specified in the Hardware Sets. Coordinate and provide proper width and height as required where conflicting hardware dictates.
 - 1. Push/Pull Plates: Minimum .050 inch thick, size as indicated in hardware sets, with beveled edges, secured with exposed screws unless otherwise indicated.
 - 2. Fasteners: Provide manufacturer's designated fastener type as indicated in Hardware Sets.
 - 3. Manufacturers:
 - a. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).

2.4 CYLINDERS AND KEYING

- A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.
- B. Source Limitations: Obtain each type of keyed cylinder and keys from the same source manufacturer as locksets and exit devices, unless otherwise indicated.
 - 1. Manufacturers:
 - a. Stanley Best (BE). Peaks

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- b. No Substitution.
- C. Cylinders: Original manufacturer cylinders complying with the following:
- 1. Mortise Type: Threaded cylinders with rings and cams to suit hardware application.
 - 2. Rim Type: Cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
 - 3. Bored-Lock Type: Cylinders with tailpieces to suit locks.
 - 4. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
 - 5. Keyway: Match Facility Restricted Keyway.
- D. Permanent Cores: Manufacturer's standard; finish face to match lockset; complying with the following:
- 1. Interchangeable Cores: Core insert, removable by use of a special key; usable with other manufacturers' cylinders.
- E. Keying System: Each type of lock and cylinders to be factory keyed.
- 1. Conduct specified "Keying Conference" to define and document keying system instructions and requirements.
 - 2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
 - 3. Existing System: Key locks to Owner's existing system.
- F. Key Quantity: Provide the following minimum number of keys:
- 1. Change Keys per Cylinder: Two (2)
 - 2. Master Keys (per Master Key Level/Group): Five (5).
 - 3. Final key quantity to be determined between the owner and Best.
- G. Key Registration List (Bitting List):
- 1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
 - 2. Provide transcript list in writing or electronic file as directed by the Owner.
- H. Key Control Cabinet: Provide a key control system including envelopes, labels, and tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet. Key control cabinet shall have expansion capacity of 150% of the number of locks required for the project.
- 1. Manufacturers:
 - a. Lund Equipment (LU).
 - b. Telkee (TK).

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2.5 MECHANICAL LOCKS AND LATCHING DEVICES

- A. Mortise Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.13, Series 1000, Operational Grade 1 certified. Locksets are to be manufactured with a corrosion resistant steel case and be field-reversible for handing without disassembly of the lock body.
1. Manufacturers:
- a. Corbin Russwin Hardware (RU) – ML2000 Series.
 - b. No Substitution.

2.6 LOCK AND LATCH STRIKES

- A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:
- 1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
 - 2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
 - 3. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
 - 4. Double-lipped strikes: For locks at double acting doors. Furnish with retractable stop for rescue hardware applications.
- B. Standards: Comply with the following:
- 1. Strikes for Mortise Locks and Latches: BHMA A156.13.
 - 2. Strikes for Bored Locks and Latches: BHMA A156.2.
 - 3. Strikes for Auxiliary Deadlocks: BHMA A156.36.
 - 4. Dustproof Strikes: BHMA A156.16.

2.7 CONVENTIONAL EXIT DEVICES

- A. General Requirements: All exit devices specified herein shall meet or exceed the following criteria:
- 1. At doors not requiring a fire rating, provide devices complying with NFPA 101 and listed and labeled for "Panic Hardware" according to UL305. Provide proper fasteners as required by manufacturer including sex nuts and bolts at openings specified in the Hardware Sets.
 - 2. Where exit devices are required on fire rated doors, provide devices complying with NFPA 80 and with UL labeling indicating "Fire Exit Hardware". Provide devices with the proper fasteners for installation as tested and listed by UL. Consult manufacturer's catalog and template book for specific requirements.
 - 3. Except on fire rated doors, provide exit devices with hex key dogging device to hold the pushbar and latch in a retracted position. Provide optional keyed cylinder dogging on devices where specified in Hardware Sets.

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4. Devices must fit flat against the door face with no gap that permits unauthorized dogging of the push bar. The addition of filler strips is required in any case where the door light extends behind the device as in a full glass configuration.
 5. Lever Operating Trim: Where exit devices require lever trim, furnish manufacturer's heavy duty escutcheon trim with threaded studs for thru-bolts.
 - a. Lock Trim Design: As indicated in Hardware Sets, provide finishes and designs to match that of the specified locksets.
 - b. Where function of exit device requires a cylinder, provide a cylinder (Rim or Mortise) as specified in Hardware Sets.
 6. Vertical Rod Exit Devices: Where surface or concealed vertical rod exit devices are used at interior openings, provide as less bottom rod (LBR) unless otherwise indicated. Provide dust proof strikes where thermal pins are required to project into the floor.
 7. Narrow Stile Applications: At doors constructed with narrow stiles, or as specified in Hardware Sets, provide devices designed for maximum 2" wide stiles.
 8. Dummy Push Bar: Nonfunctioning push bar matching functional push bar.
 9. Rail Sizing: Provide exit device rails factory sized for proper door width application.
 10. Through Bolt Installation: For exit devices and trim as indicated in Door Hardware Sets.
- B. Conventional Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 certified panic and fire exit hardware devices furnished in the functions specified in the Hardware Sets. Exit device latch to be stainless steel, pullman type, with deadlock feature.
1. Manufacturers:
 - a. Von Duprin (VD) - 35A/98 XP Series.
 - b. No Substitution.

2.8 DOOR CLOSERS

- A. All door closers specified herein shall meet or exceed the following criteria:
1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers including installation and adjusting information on inside of cover.
 2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.
 3. Cycle Testing: Provide closers which have surpassed 15 million cycles in a test witnessed and verified by UL.
 4. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of

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use. Where closers are indicated for doors required to be accessible to the physically handicapped, provide units complying with ANSI ICC/A117.1.

5. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
 6. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.
 7. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation. Provide through-bolt and security type fasteners as specified in the hardware sets.
- B. Door Closers, Surface Mounted (Large Body Cast Iron): ANSI/BHMA A156.4, Grade 1 surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control.
1. Manufacturers:
 - a. LCN Closers (LC) - 4040XP Series. Exterior Openings
 - b. No Substitution.
- C. Door Closers, Surface Mounted (Commercial Duty): ANSI/BHMA 156.4, Grade 1 certified surface mounted, institutional grade door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck, closing sweep, and latch speed control valves. Provide non-handed units standard.
1. Manufacturers:
 - a. Sargent Manufacturing (SA) - 1461 Series. Interior Openings

2.9 ARCHITECTURAL TRIM

A. Door Protective Trim

1. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.
2. Size: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side of single doors and 1" LDW on stop side of pairs of doors, and not more than 1" less than door width on pull side. Coordinate and provide proper width and height as required where conflicting hardware dictates. Height to be as specified in the Hardware Sets.
3. Where plates are applied to fire rated doors with the top of the plate more than 16" above the bottom of the door, provide plates complying with NFPA 80. Consult manufacturer's catalog and template book for specific requirements for size and applications.

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4. Protection Plates: ANSI/BHMA A156.6 certified protection plates (kick, armor, or mop), fabricated from the following:
 - a. Stainless Steel: 300 grade, 050-inch thick.
5. Options and fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.
6. Manufacturers:
 - a. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).

2.10 DOOR STOPS AND HOLDERS

- A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.
- B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 certified door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.
 1. Manufacturers:
 - a. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).
- C. Overhead Door Stops and Holders: ANSI/BHMA A156.6, Grade 1 certified overhead stops and holders to be surface or concealed types as indicated in Hardware Sets. Track, slide, arm and jamb bracket to be constructed of extruded bronze and shock absorber spring of heavy tempered steel. Provide non-handed design with mounting brackets as required for proper operation and function.
 1. Manufacturers:
 - a. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).

2.11 ARCHITECTURAL SEALS

- A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.
- B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.
 1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.

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- C. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL-10C.
 - 1. Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and NPFA 252, Standard Methods of Fire Tests of Door Assemblies.
- D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.
- E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.
- F. Manufacturers:
 - 1. Pemko Products; ASSA ABLOY Architectural Door Accessories (PE).

2.12 FABRICATION

- A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

2.13 FINISHES

- A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.
- B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware
- C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.
- B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

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3.2 PREPARATION

- A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.
- B. Wood Doors: Comply with ANSI/DHI A115-W series.

3.3 INSTALLATION

- A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.
 - 1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.
- B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
 - 1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
 - 2. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
 - 3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
 - 4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.
- C. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.
- D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."
- E. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

3.4 FIELD QUALITY CONTROL

- A. Field Inspection: Supplier will perform a final inspection of installed door hardware and state in report whether work complies with or deviates from requirements, including whether door hardware is properly installed, operating and adjusted.

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3.5 ADJUSTING

- A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

3.6 CLEANING AND PROTECTION

- A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.
- B. Clean adjacent surfaces soiled by door hardware installation.
- C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

3.7 DEMONSTRATION

- A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

3.8 DOOR HARDWARE SETS

- A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.
- B. The supplier is responsible for handing and sizing all products and providing the correct option for the appropriate door type and material where more than one is presented in the hardware sets. Quantities listed are for each pair of doors, or for each single door.
- C. Manufacturer's Abbreviations:

- 1. MK - McKinney
- 2. PE - Pemko
- 3. VD - Von Duprin
- 4. RU - Corbin Russwin
- 5. BE - dormakaba Best
- 6. RO - Rockwood
- 7. RF - Rixson
- 8. LC - LCN Closers

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9. OT - OTHER

Hardware Sets

Set: 1.0

Doors: 101

1 Continuous Hinge	CFM83HD1		PE
1 Storeroom Lock	ML2057 NSN CLS7	626	RU
1 7 Pin Small Format Core	Best Peaks		BE
1 Door Closer	4040XP SCUSH TBSRT	AL	LC
1 Threshold	2009APK		PE
1 Gasketing	312CR		PE
1 Rain Guard	346C		PE
1 Sweep	315CN		PE

Set: 2.0

Doors: 100, 102

3 Hinge (heavy weight)	T4A3786 4-1/2" x 4-1/2"	US26D	MK
1 Cylindrical Deadbolt	CR DL3200	US26D	CR
1 Push Plate	70C-RKW	US32D	RO
1 Pull Plate	107x70C	US32D	RO
1 Surface Closer w/ Stop	1461 SCUSH TBSRT	AL	LC
1 Kick Plate	K1050 10" x Width Req'd CSK	US32D	RO
3 Silencer	608-RKW		RO

END OF SECTION 087100

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**SECTION 088300
MIRRORS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Polished stainless steel mirrors.

1.02 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data on Mirror Types: Submit structural, physical and environmental characteristics, size limitations, special handling and installation requirements.
- C. Samples: Submit two samples, illustrating mirrors design, edging, coloration, and [_____].
- D. Manufacturer's Certificate: Certify that mirrors, meets or exceeds specified requirements.
- E. Warranty: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.
- F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 016000 - Product Requirements, for additional provisions.

1.03 QUALITY ASSURANCE

- A. Fabricate, store, transport, receive, install, and clean mirrors in accordance with manufacturer's recommendations.

1.04 FIELD CONDITIONS

- A. Do not install polished stainless steel mirrors when ambient temperature is less than 50 degrees F (10 degrees C).
- B. Maintain minimum ambient temperature before, during and 24 hours after installation of glazing compounds.

1.05 WARRANTY

- A. See Section 017800 - Closeout Submittals, for additional warranty requirements.
- B. Provide five year manufacturer warranty for reflective coating on mirrors and replacement of same.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Polished Stainless Steel Mirrors:
 - 1. Vandal Stop Products (530) 894-7867.
 - 2. Size: 24x48 - refer drawings for additional information.

2.02 MATERIALS

- A. Polished stainless steel Mirror:
 - 1. #8 non directional mirror polished stainless steel.
 - 2. Type 304 Stainless Steel
 - 3. 16 ga material (.0595 inches)

2.03 ACCESSORIES

- A. Glazing Clips: Provide in conjunction with mirror adhesive.
 - 1. Stainless J Trim:
 - a. Manufacturers: Stainless J Trim
- B. Stainless Steel Mirror Adhesive: Manufacturers recommended highest performing mirror adhesive - provided in conjunction with mirror glazing clips/trim.
 - 1. Install in strict accordance with manufacturers written instructions.

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PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that surfaces of mirror frames or recesses are clean, free of obstructions, and ready for installation of polished stainless steel mirrors.

3.02 PREPARATION

- A. Clean contact surfaces with solvent and wipe dry.
- B. Seal porous polished stainless steel mirrors frames or recesses with substrate compatible primer or sealer. Prime surfaces scheduled to receive sealant.
- C. Prepare installation in accordance with ASTM C1193 for solvent release sealants, and install sealant in accordance with manufacturer's instructions.

3.03 INSTALLATION

- A. Install polished stainless steel mirrors in accordance with manufacturer's recommendations.
- B. Set polished stainless steel mirrors plumb and level, and free of optical distortion.
- C. Set polished stainless steel mirrors with edge clearance free of surrounding construction including countertops or backsplashes.
- D. Installation in Frames:
 - 1. Install in strict accordance with manufacturers written recommendations, including both mechanical fasteners and adhesive installation systems.

3.04 CLEANING

- A. Remove labels after work is complete.
- B. Clean polished stainless steel mirrors and adjacent surfaces.

END OF SECTION

**SECTION 092116
GYPSUM BOARD ASSEMBLIES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Metal channel ceiling framing.
- B. Gypsum wallboard.
- C. Joint treatment and accessories.
- D. Textured finish system.

1.02 REFERENCE STANDARDS

- A. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board 2017.
- B. ASTM C645 - Standard Specification for Nonstructural Steel Framing Members 2018.
- C. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing 2017.
- D. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products 2020.
- E. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board 2020.
- F. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs 2020.
- G. ASTM C1047 - Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base 2019.
- H. ASTM C1396/C1396M - Standard Specification for Gypsum Board 2017.
- I. GA-216 - Application and Finishing of Gypsum Panel Products 2016, with Errata.

1.03 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing gypsum board installation and finishing, with minimum five (5) years of experience.

PART 2 PRODUCTS

2.01 GYPSUM BOARD ASSEMBLIES

- A. Provide completed assemblies complying with ASTM C840 and GA-216.

2.02 METAL FRAMING MATERIALS

- A. Non-Loadbearing Framing System Components: ASTM C645; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 for the spacing indicated, with maximum deflection of wall framing of L/120 at 5 psf (L/120 at 240 Pa).
 - 1. Studs: "C" shaped with flat or formed webs with knurled faces.
 - 2. Runners: U shaped, sized to match studs.
 - 3. Ceiling Channels: C-shaped.

2.03 BOARD MATERIALS

- A. Manufacturers - Gypsum-Based Board:
 - 1. CertainTeed Corporation: www.certainteed.com/#sle.
 - 2. Georgia-Pacific Gypsum: www.gpgypsum.com/#sle.
 - 3. USG Corporation: www.usg.com/#sle.
- B. Gypsum Wallboard: Glass Mat-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
 - 1. Application: Use for ceilings, unless otherwise indicated.
 - 2. Thickness:
 - a. Ceilings: 1/2 inch (13 mm).

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- 3. Glass Mat Faced Products:
 - a. Georgia-Pacific Gypsum; DensArmor Plus
 - 1) Ceilings in exterior locations and toilet areas.

2.04 GYPSUM WALLBOARD ACCESSORIES

- A. Acoustic Insulation: ASTM C665; preformed glass fiber, friction fit type, unfaced. Thickness: 3 inch (77 mm).
- B. Acoustic Sealant: Acrylic emulsion latex or water-based elastomeric sealant; do not use solvent-based non-curing butyl sealant.
- C. Beads, Joint Accessories, and Other Trim: ASTM C1047, rigid plastic, galvanized steel, or rolled zinc, unless noted otherwise.
 - 1. Edge Trim:
 - a. Products: USG No. 200A Edge Trim.
 - 2. Expansion Joints:
 - a. Type: V-shaped metal with factory-installed protective tape.
 - b. Products:
 - 1) Phillips Manufacturing Co; 093 Expansion Control Joint:
www.phillipsmfg.com/#sle.
- D. Joint Materials: ASTM C475/C475M and as recommended by gypsum board manufacturer for project conditions.
 - 1. Paper Tape: 2 inch (50 mm) wide, creased paper tape for joints and corners, except as otherwise indicated.
 - 2. Joint Compound: Drying type, vinyl-based, ready-mixed.
 - a. Products:
 - 1) CertainTeed Corporation; Extreme All-Purpose Joint Compound:
www.certainteed.com/#sle.
 - 2) Substitutions: See Section 016000 - Product Requirements.
- E. Finishing Compound: Surface coat and primer, takes the place of skim coating.
 - 1. Products:
 - a. CertainTeed Corporation; Quick Prep Plus Interior Prep Coat:
www.certainteed.com/#sle.
- F. High Build Drywall Surfer: Vinyl acrylic latex-based coating for spray application, designed to take the place of skim coating and separate paint primer in achieving Level 5 finish.
- G. Textured Finish Materials: Latex-based compound; plain.
- H. Screws for Fastening of Gypsum Panel Products to Cold-Formed Steel Studs Less than 0.033 inch (0.84 mm) in Thickness and Wood Members: ASTM C1002; self-piercing tapping screws, corrosion resistant.
- I. Screws for Fastening of Gypsum Panel Products to Steel Members from 0.033 to 0.112 inch (0.84 to 2.84 mm) in Thickness: ASTM C954; steel drill screws, corrosion resistant.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that project conditions are appropriate for work of this section to commence.

3.02 FRAMING INSTALLATION

- A. Metal Framing: Install in accordance with ASTM C754 and manufacturer's instructions.
- B. Suspended Ceilings: Space framing and furring members as indicated.
 - 1. Level ceiling system to a tolerance of 1/1200.
 - 2. Laterally brace entire suspension system.
 - 3. Install bracing as required at exterior locations to resist wind uplift.
- C. Basis of Design System: 6' DGS Cross Tee Drywall Grid System.
- D. Studs: Space studs at 16 inches on center (at 406 mm on center).

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1. Extend partition framing to structure where indicated and to ceiling in other locations.
2. Partitions Terminating at Ceiling: Attach ceiling runner securely to ceiling track in accordance with manufacturer's instructions.

3.03 ACOUSTIC ACCESSORIES INSTALLATION

- A. Acoustic Insulation: Place tightly within spaces, around cut openings, behind and around electrical and mechanical items within partitions, and tight to items passing through partitions.
- B. Acoustic Sealant: Install in accordance with manufacturer's instructions.
 1. Place one bead continuously on substrate before installation of perimeter framing members.
 2. Place continuous bead at perimeter of each layer of gypsum board.
 3. Seal around all penetrations by conduit, pipe, ducts, and rough-in boxes, except where firestopping is provided.

3.04 BOARD INSTALLATION

- A. Comply with ASTM C840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.
- B. Single-Layer Non-Rated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.
 1. Exception: Tapered edges to receive joint treatment at right angles to framing.
- C. Exposed Gypsum Board in Interior Wet Areas: Seal joints, cut edges, and holes with water-resistant sealant.

3.05 INSTALLATION OF TRIM AND ACCESSORIES

- A. Control Joints: Place control joints consistent with lines of building spaces and as indicated.
 1. Not more than 30 feet (10 meters) apart on walls and ceilings over 50 feet (16 meters) long.
 2. At exterior soffits, not more than 30 feet (10 meters) apart in both directions.
- B. Corner Beads: Install at external corners, using longest practical lengths.
- C. Edge Trim: Install at locations where gypsum board abuts dissimilar materials.

3.06 JOINT TREATMENT

- A. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:
 1. Level 4: Walls and ceilings to receive paint finish or wall coverings, unless otherwise indicated.
 2. Level 1: Wall areas above finished ceilings, whether or not accessible in the completed construction.
- B. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
 1. Feather coats of joint compound so that camber is maximum 1/32 inch (0.8 mm).
 2. Taping, filling, and sanding is not required at surfaces behind adhesive applied ceramic tile and fixed cabinetry.
- C. Where Level 5 finish is indicated, spray apply high build drywall surfacer over entire surface after joints have been properly treated; achieve a flat and tool mark-free finish.

3.07 TEXTURE FINISH

- A. Apply finish texture coating by means of spraying apparatus in accordance with manufacturer's instructions and to match approved sample.

3.08 TOLERANCES

- A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet (3 mm in 3 m) in any direction.

END OF SECTION

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**SECTION 096700
FLUID-APPLIED FLOORING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fluid-applied flooring and base.

1.02 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on specified products, describing physical and performance characteristics; sizes, patterns and colors available.
- C. Samples: Submit two samples, 12"x12" in size illustrating color and pattern for each floor material for each color specified.
 - 1. Sample shall show overall system thickness and slip-resistant system for both flooring and cove base.

1.03 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum three years documented experience.
- B. Applicator Qualifications: Company specializing in performing the work of this section.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Store resin materials in a dry, secure area.

PART 2 PRODUCTS

2.01 FLUID-APPLIED FLOORING SYSTEMS

- A. Fluid-Applied Flooring: Epoxy, two component, thermosetting, colored with mineral filler, with aggregate broadcast on base coat.
 - 1. Base Coat: Thickness as specified by manufacturer; color as selected by the Owner and Architect.
 - 2. Aggregate: Small quartz chips, multiple colors as selected. Aggregate shall be a combination of 1/8" and 1/16" chips in percentages as selected by Owner and Architect.
 - 3. Top Coat: Epoxy, two component, thermosetting; 1/16" thick; clear. Total system shall be 1/8" thick.
 - 4. Color: Selected by Owner and Architect.
 - 5. Basis of Design Product: FloroChip Epoxy Flake Flooring as manufactured by Flork, system documented as follows:..
 - a. Floropoxy Primer
 - b. Floropoxy Pigmented epoxy system
 - c. 1st Broadcast Florochips
 - d. Floropoxy Clear epoxy system
 - e. High Performance Topcoat Clear
 - f. Additional Slip Resistance
 - g. Provide integral 4" base with same material as floor system.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that sub-floor surfaces are smooth and flat within the tolerances specified for that type of work and are ready to receive flooring.
- B. Verify that sub-floor surfaces are dust-free and free of substances that could impair bonding of materials to sub-floor surfaces.
- C. Verify that concrete sub-floor surfaces are ready for flooring installation by testing for moisture emission rate and alkalinity; obtain instructions if test results are not within limits recommended by flooring materials manufacturer.

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- D. Verify that required floor-mounted utilities are in correct location.

3.02 INSTALLATION - FLOORING

- A. Apply in accordance with manufacturer's instructions.
- B. Apply each coat to minimum thickness required by manufacturer.
- C. Finish to smooth level surface with Owner provided slip resistance.

3.03 PROTECTION

- A. Barricade area to protect flooring until fully cured.

END OF SECTION

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**SECTION 099113
EXTERIOR PAINTING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surface preparation.
- B. Field application of paints.
- C. Scope: Finish exterior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated, including the following:
 - 1. Exposed surfaces of steel lintels and ledge angles.
- D. Do Not Paint or Finish the Following Items:
 - 1. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
 - 2. Items indicated to receive other finishes.
 - 3. Items indicated to remain unfinished.
 - 4. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment.
 - 5. Floors, unless specifically indicated.
 - 6. Brick, glass unit masonry, architectural concrete, cast stone, integrally colored plaster and stucco.
 - 7. Glass.
 - 8. Concealed pipes, ducts, and conduits.

1.02 RELATED REQUIREMENTS

- A. Section 055000 - Metal Fabrications: Shop-primed items.
- B. Section 099123 - Interior Painting.

1.03 REFERENCE STANDARDS

- A. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual Current Edition.
- B. SSPC-SP 1 - Solvent Cleaning 2015, with Editorial Revision (2016).
- C. SSPC-SP 2 - Hand Tool Cleaning 2018.
- D. SSPC-SP 6 - Commercial Blast Cleaning 2007.

1.04 SUBMITTALS

- A. Product Data: Provide complete list of products to be used, with the following information for each:
 - 1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
 - 2. MPI product number (e.g. MPI #47).
 - 3. Cross-reference to specified paint system(s) product is to be used in; include description of each system.
 - 4. Manufacturer's installation instructions.
 - 5. If proposal of substitutions is allowed under submittal procedures, explanation of substitutions proposed.
- B. Samples: Submit three paper "draw down" samples, 8-1/2 by 11 inches (216 by 279 mm) in size, illustrating range of colors available for each finishing product specified.
 - 1. Where sheen is specified, submit samples in only that sheen.
 - 2. Paint color submittals will not be considered until color submittals for major materials not to be painted, such as masonry, have been approved.
- C. Certification: By manufacturer that paints and finishes comply with VOC limits specified.
- D. Manufacturer's Instructions: Indicate special surface preparation procedures.

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- E. Maintenance Data: Submit data including finish schedule showing where each product/color/finish was used, product technical data sheets, material safety data sheets (MSDS), care and cleaning instructions, touch-up procedures, repair of painted and finished surfaces, and color samples of each color and finish used.
- F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 016000 - Product Requirements, for additional provisions.
 - 2. Extra Paint and Finish Materials: 5 gallons (20 L) of each color; from the same product run, store where directed.
 - 3. Label each container with color in addition to the manufacturer's label.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified, with minimum three years documented experience.
- B. Applicator Qualifications: Company specializing in performing the type of work specified with minimum 5 years experience and approved by manufacturer.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Paint Materials: Store at minimum ambient temperature of 45 degrees F (7 degrees C) and a maximum of 90 degrees F (32 degrees C), in ventilated area, and as required by manufacturer's instructions.

1.07 FIELD CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
- B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- C. Do not apply exterior paint and finishes during rain or snow, or when relative humidity is outside the humidity ranges required by the paint product manufacturer.
- D. Provide lighting level of 80 ft candles (860 lx) measured mid-height at substrate surface.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Provide paints and finishes used in any individual system from the same manufacturer; no exceptions.
- B. Paints:
 - 1. Tnemec Company: www.tnemec.com.
- C. Primer Sealers: Same manufacturer as top coats.
- D. Substitutions: See Section 016000 - Product Requirements.

2.02 PAINTS AND FINISHES - GENERAL

- A. Paints and Finishes: Ready mixed, unless required to be a field-catalyzed paint.
 - 1. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
 - 2. Supply each paint material in quantity required to complete entire project's work from a single production run.
 - 3. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.

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2.03 PAINT SYSTEMS - EXTERIOR

- A. Paint E-OP - Exterior Surfaces to be Painted, Unless Otherwise Indicated: Including primed metal.
 - 1. Two top coats and one coat primer.
 - a. Top coats: HDP Acrylic Polymer. Basis of Design: Series 1029 Enduratone as manufactured by Tnemec.
 - b. Primer: Manufacturers recommended high performance primer for specific application and top coat material.

2.04 ACCESSORY MATERIALS

- A. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of painted surfaces.
- B. Patching Material: Latex filler.
- C. Fastener Head Cover Material: Latex filler.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not begin application of paints and finishes until substrates have been properly prepared.
- B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially effect proper application.
- D. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- E. Test shop-applied primer for compatibility with subsequent cover materials.

3.02 PREPARATION

- A. Clean surfaces thoroughly and correct defects prior to application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces for finishing.
- D. Seal surfaces that might cause bleed through or staining of topcoat.
- E. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- F. Galvanized Surfaces:
 - 1. Remove surface contamination and oils and wash with solvent according to SSPC-SP 1.
 - 2. Prepare surface according to SSPC-SP 2.
- G. Ferrous Metal:
 - 1. Solvent clean according to SSPC-SP 1.
 - 2. Shop-Primed Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces. Re-prime entire shop-primed item.
 - 3. Remove rust, loose mill scale, and other foreign substances using using methods recommended in writing by paint manufacturer and blast cleaning according to SSPC-SP 6 "Commercial Blast Cleaning". Protect from corrosion until coated.
- H. Metal Doors to be Painted: Prime metal door top and bottom edge surfaces.

3.03 APPLICATION

- A. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.

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- B. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".
- C. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- D. Apply each coat to uniform appearance.
- E. Dark Colors and Deep Clear Colors: Regardless of number of coats specified, apply additional coats until complete hide is achieved.
- F. Sand metal surfaces lightly between coats to achieve required finish.
- G. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
- H. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.
- I. All metal doors and door frames shall be spray painted. Brushed on paint shall not be allowed. Repairs or corrections to paint on Metal Doors and Door Frames shall be spray painted.
- J. All Electrical disconnects supplying fire alarm power shall be painted red (final color to be selected by the Architect).

3.04 CLEANING

- A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

3.05 PROTECTION

- A. Protect finishes until completion of project.
- B. Touch-up damaged finishes after Substantial Completion.

3.06 COLOR SCHEDULE

- A. Provide Custom Color:

END OF SECTION

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**SECTION 099123
INTERIOR PAINTING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surface preparation.
- B. Field application of paints.
- C. Scope: Finish interior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated.
 - 1. Mechanical and Electrical:
 - a. In finished areas, paint insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, mechanical equipment, and electrical equipment, unless otherwise indicated.
- D. Do Not Paint or Finish the Following Items:
 - 1. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
 - 2. Items indicated to receive other finishes.
 - 3. Items indicated to remain unfinished.
 - 4. Fire rating labels, equipment serial number and capacity labels, bar code labels, and operating parts of equipment.
 - 5. Floors, unless specifically indicated.
 - 6. Glass.
 - 7. Concealed pipes, ducts, and conduits.
 - 8. Do not paint aluminum, brass, bronze, stainless steel and chrome plated steel.
 - 9. Do not paint code required labels, UL and FM and equipment identification, performance rating, name and nomenclature plates.

1.02 REFERENCE STANDARDS

- A. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual Current Edition.

1.03 SUBMITTALS

- A. Product Data: Provide complete list of products to be used, with the following information for each:
 - 1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
 - 2. MPI product number (e.g. MPI #47).
 - 3. Cross-reference to specified paint system(s) product is to be used in; include description of each system.
 - 4. Manufacturer's installation instructions.
 - 5. If proposal of substitutions is allowed under submittal procedures, explanation of substitutions proposed.
- B. Samples: Submit three paper "draw down" samples, 8-1/2 by 11 inches (216 by 279 mm) in size, illustrating range of colors available for each finishing product specified.
 - 1. Where sheen is specified, submit samples in only that sheen.
 - 2. Paint color submittals will not be considered until color submittals for major materials not to be painted, such as masonry, have been approved.
- C. Certification: By manufacturer that paints and finishes comply with VOC limits specified.
- D. Manufacturer's Instructions: Indicate special surface preparation procedures.
- E. Maintenance Data: Submit data including finish schedule showing where each product/color/finish was used, product technical data sheets, material safety data sheets (MSDS), care and cleaning instructions, touch-up procedures, repair of painted and finished surfaces, and color samples of each color and finish used.

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1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified, with minimum three years documented experience.
- B. Applicator Qualifications: Company specializing in performing the type of work specified with minimum 5 years experience and approved by manufacturer.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Paint Materials: Store at minimum ambient temperature of 45 degrees F (7 degrees C) and a maximum of 90 degrees F (32 degrees C), in ventilated area, and as required by manufacturer's instructions.

1.06 FIELD CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
- B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- C. Do not apply materials when relative humidity exceeds 85 percent; at temperatures less than 5 degrees F (3 degrees C) above the dew point; or to damp or wet surfaces.
- D. Minimum Application Temperatures for Paints: 50 degrees F (10 degrees C) for interiors unless required otherwise by manufacturer's instructions.
- E. Provide lighting level of 80 ft candles (860 lx) measured mid-height at substrate surface.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Provide paints and finishes used in any individual system from the same manufacturer; no exceptions.
- B. Paints:
 - 1. PPG Paints: www.ppgpaints.com/#sle.
 - 2. Benjamin Moore: www.benjaminmoore.com
- C. Substitutions: See Section 016000 - Product Requirements.

2.02 PAINTS AND FINISHES - GENERAL

- A. Paints and Finishes: Ready mixed, unless intended to be a field-catalyzed paint.
 - 1. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
 - 2. Provide materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
 - 3. For opaque finishes, tint each coat including primer coat and intermediate coats, one-half shade lighter than succeeding coat, with final finish coat as base color.
 - 4. Supply each paint material in quantity required to complete entire project's work from a single production run.
 - 5. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.
- B. Colors: full range of colors including custom color.
 - 1. Allow for minimum of five colors for each system, unless otherwise indicated, without additional cost to Owner.
 - 2. Extend colors to surface edges; colors may change at any edge as directed by Architect.

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3. In finished areas, finish pipes, ducts, conduit, and equipment the same color as the wall/ceiling they are mounted on/under.

2.03 PAINT SYSTEMS - INTERIOR

- A. Paint I-OP - Interior Ceiling Surfaces to be Painted, Unless Otherwise Indicated: Including high performance gypsum board.
 1. Two top coats and one coat manufacturer recommended primer.
 2. Top Coat(s): High Performance Architectural Interior Latex; MPI #138, 139, 140, or 141.
 - a. Products:
 - 1) Benjamin Moore Ultra Spec 500 Interior Paint
 - 2) Substitutions: Section 016000 - Product Requirements.
 3. Primer: As recommended by top coat manufacturer for specific substrate.
- B. Paint I-OP-MD-DT - Medium Duty Door/Trim: For surfaces subject to frequent contact by occupants, including metals:
 1. Medium duty applications include doors and door frames.
 2. Two top coats and one coat manufacturer recommended primer.
 3. Top Coat(s): High Performance Architectural Interior Latex; MPI #139, 140, or 141.
 - a. Products:
 - 1) PPG Paints Pitt-Glaze WB1 Pre-Catalyzed Water-Borne Acrylic Epoxy, 16-510 Series, Semi-Gloss.
 4. Primer: As recommended by top coat manufacturer for specific substrate.
- C. Paint I-OP-MD-WC - Medium Duty Vertical and Overhead: Including concrete masonry units.
 1. Two top coats and one coat manufacturer recommended primer.
 2. Top Coat(s): High Performance Architectural Interior Latex; MPI #138, 139, 140, or 141.
 - a. Products:
 - 1) PPG Paints Pitt-Glaze WB1 Pre-Catalyzed Water-Borne Acrylic Epoxy, 16-310 Series, Eggshell.
 3. Primer: As recommended by top coat manufacturer for specific substrate.

2.04 ACCESSORY MATERIALS

- A. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of painted surfaces.
- B. Patching Material: Latex filler.
- C. Fastener Head Cover Material: Latex filler.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not begin application of paints and finishes until substrates have been properly prepared.
- B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially effect proper application.
- D. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- E. Test shop-applied primer for compatibility with subsequent cover materials.
- F. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
 1. Gypsum Wallboard: 12 percent.
 2. Masonry, Concrete, and Concrete Masonry Units: 12 percent.

3.02 PREPARATION

- A. Clean surfaces thoroughly and correct defects prior to application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

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- C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.
- D. Seal surfaces that might cause bleed through or staining of topcoat.
- E. Masonry:
- F. Gypsum Board: Fill minor defects with filler compound. Spot prime defects after repair.
- G. Wood Doors to be Field-Finished: Seal wood door top and bottom edge surfaces with clear sealer.
- H. Metal Doors to be Painted: Prime metal door top and bottom edge surfaces.
 - 1. Metal Doors and Frames shall be spray painted. Brushed on paint shall not be allowed. Repairs or corrections to paint on Metal Doors and Door Frames shall be spray painted.

3.03 APPLICATION

- A. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
- B. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".
- C. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- D. Apply each coat to uniform appearance in thicknesses specified by manufacturer.
- E. Sand wood and metal surfaces lightly between coats to achieve required finish.
- F. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
- G. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.04 FIELD QUALITY CONTROL

- A. See Section 014000 - Quality Requirements, for general requirements for field inspection.

3.05 CLEANING

- A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

3.06 PROTECTION

- A. Protect finishes until completion of project.
- B. Touch-up damaged finishes after Substantial Completion.

END OF SECTION

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**SECTION 101400
SIGNAGE**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Room and door signs.
- B. Each door visible to the public shall be provided with signage.

1.02 RELATED REQUIREMENTS

- A. Division 26: Exit signs required by code.

1.03 REFERENCE STANDARDS

- A. 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines current edition.
- B. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design 2010.
- C. ICC A117.1 - Accessible and Usable Buildings and Facilities 2017.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's printed product literature for each type of sign, indicating sign styles, font, foreground and background colors, locations, overall dimensions of each sign.
- C. Signage Schedule: Provide information sufficient to completely define each sign for fabrication, including room number, room name, other text to be applied, sign and letter sizes, fonts, and colors.
 - 1. When room numbers to appear on signs differ from those on drawings, include the drawing room number on schedule.
 - 2. When content of signs is indicated to be determined later, request such information from Owner through Architect at least 2 months prior to start of fabrication; upon request, submit preliminary schedule.
 - 3. Submit for approval by Owner through Architect prior to fabrication.
- D. Samples: Submit two samples of each type of sign, of size similar to that required for project, illustrating sign style, font, and method of attachment.
- E. Selection Samples: Where colors are not specified, submit two sets of color selection charts or chips.
- F. Verification Samples: Submit samples showing colors specified.
- G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 016000 - Product Requirements, for additional provisions.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Package signs as required to prevent damage before installation.
- B. Package room and door signs in sequential order of installation, labeled by floor or building.
- C. Store tape adhesive at normal room temperature.

1.07 FIELD CONDITIONS

- A. Do not install tape adhesive when ambient temperature is lower than recommended by manufacturer.
- B. Maintain this minimum temperature during and after installation of signs.

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PART 2 PRODUCTS

2.01 SIGNAGE APPLICATIONS

- A. Accessibility Compliance: Signs are required to comply with ADA Standards and ICC A117.1, unless otherwise indicated; in the event of conflicting requirements, comply with the most comprehensive and specific requirements.
- B. Room and Door Signs: Provide a sign for every doorway, whether it has a door or not, not including corridors, lobbies, and similar open areas.
 - 1. Sign Type: Flat signs-with injection molded panel media as specified .
 - 2. Provide "tactile" signage, with letters raised minimum 1/32 inch (0.8 mm) and Grade II braille.
 - 3. Character Height: 1 inch (25 mm).
 - 4. Sign Height: 3 inches (75 mm), unless otherwise indicated. .
 - 5. Service Rooms: Identify with the room names and numbers indicated on drawings.
 - 6. Rest Rooms: Identify with pictograms, the names "MEN" and "WOMEN", and braille.

2.02 SIGN TYPES

- 1. Wall Mounting of One-Sided Signs: Tape adhesive.
- B. Color and Font: Unless otherwise indicated:
 - 1. Character Font: Helvetica, Arial, or other sans serif font.
 - 2. Character Case: Upper case only.
 - 3. Background Color: As scheduled.
 - 4. Character Color: Contrasting color selected by the architect.—

2.03 TACTILE SIGNAGE MEDIA

- A. Engraved Panels: Laminated colored plastic; engraved through face to expose core as background color:
- B. Injection Molded Panels: One-piece acrylic plastic, with raised letters and braille.
 - 1. Total Thickness: 1/8 inch.

2.04 ACCESSORIES

- A. Concealed Screws: Stainless steel, galvanized steel, chrome plated, or other non-corroding metal.
- B. Tape Adhesive: Double sided tape, permanent adhesive.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that substrate surfaces are ready to receive work.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install neatly, with horizontal edges level.
- C. Locate signs and mount at heights indicated on drawings and in accordance with ADA Standards and ICC A117.1.
- D. Protect from damage until Date of Substantial Completion; repair or replace damaged items.

END OF SECTION

SECTION 102113.13
METAL TOILET COMPARTMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Stainless Steel toilet compartments.

1.02 RELATED REQUIREMENTS

- A. Section 102800 - Toilet, Bath, and Laundry Accessories.

1.03 REFERENCE STANDARDS

- A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process 2020.
- B. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar 2015.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination: Coordinate the work with placement of support framing and anchors in walls.

1.05 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate partition plan, elevation views, dimensions, details of wall, floor, and ceiling supports, door swings.
- C. Product Data: Provide data on panel construction, hardware, and accessories.
- D. Manufacturer's Installation Instructions: Indicate special procedures.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Stainless Steel Toilet Compartments:
 - 1. Basis of Design: Subject to compliance with the requirements, provide products, Sentinel, Series 400, of The Mills Company, Marion, OH 43302
 - 2. Contact Information: 1(800) 272-3539; www.bradleycorp.com
- B. Accepted alternate manufacturers.
 - 1. ASI Accurate Partitions; Stainless Steel: www.asi-accuratepartitions.com/#sle.
 - 2. ASI Global Partitions; Stainless Steel: www.asi-globalpartitions.com/#sle.
 - 3. Substitutions: Section 016000 - Product Requirements.

2.02 MATERIALS

- A. Steel Sheet: Hot-dipped galvanized steel sheet, ASTM A653/A653M, with G90/Z275 coating.
- B. Stainless Steel Sheet: ASTM A666, Type 304.

2.03 COMPONENTS

- A. Toilet Compartments: Powder coated steel, floor-mounted unbraced.
- B. Doors, Panels, and Pilasters: Sheet steel faces, pressure bonded to sound deadening core, formed and closed edges; corners made with corner clips or mitered, welded, and ground smooth.
 - 1. Panel Faces: 20 gauge, 0.0359 inch (0.91 mm).
 - 2. Door Faces: 22 gauge, 0.0299 inch (0.76 mm).
 - 3. Pilaster Faces: 20 gauge, 0.0359 inch (0.91 mm).
 - 4. Reinforcement: 12 gauge, 0.1046 inch (2.66 mm).
 - 5. Internal Reinforcement: Provide in areas of attached hardware and fittings. Mark locations of reinforcement for partition mounted washroom accessories.
- C. Door and Panel Dimensions:
 - 1. Thickness: 1 inch (25 mm).

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2. Door Width: 24 inch (610 mm).
3. Door Width for Handicapped Use: 36 inch (915 mm) , out-swinging.
4. Height: 58 inch (1473 mm).

D. Pilasters: 1-1/4 inch (32 mm) thick, of sizes required to suit compartment width and spacing.

2.04 ACCESSORIES

- A. Pilaster Shoes: Formed ASTM A666 Type 304 stainless steel with No. 4 finish, 3 inch (175 mm) high, concealing floor fastenings.
 1. Provide adjustment for floor variations with screw jack through steel saddles integral with pilaster.
- B. Head Rails: Hollow anodized aluminum tube, 1 by 1-5/8 inch (25 by 41 mm) size, with anti-grip strips and cast socket wall brackets.
- C. Brackets: Full height Satin stainless steel.
- D. Attachments, Screws, and Bolts: Stainless steel , tamper proof type.
- E. Hardware: Polished stainless steel:
 1. Self closing continuous spring loaded type adjustable to hold doors open at any angle up to 90 degrees..
 2. Thumb turn or sliding door latch with exterior emergency access feature.
 3. Door strike and keeper with rubber bumper; mounted on pilaster in alignment with door latch.
 4. Coat hook with rubber bumper; one per compartment, mounted on door.
 5. Provide door pull on both sides of outswinging doors. Provide pulls on outside of inswinging doors.
- F. Note: All fasteners shall be tamper resistant and stainless steel.

2.05 FINISHING

- A. Stainless Steel Compartments: No. 4 finish or textured finish at Owners option.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that field measurements are as indicated.
- C. Verify correct spacing of and between plumbing fixtures.
- D. Verify correct location of built-in framing, anchorage, and bracing.

3.02 INSTALLATION

- A. Install partitions secure, rigid, plumb, and level in accordance with manufacturer's instructions.
- B. Maintain 3/8 to 1/2 inch (9 to 13 mm) space between wall and panels and between wall and end pilasters.
- C. Attach panel brackets securely to walls using anchor devices.
- D. Attach panels and pilasters to brackets. Locate head rail joints at pilaster center lines.

3.03 TOLERANCES

- A. Maximum Variation From True Position: 1/4 inch (6 mm).
- B. Maximum Variation From Plumb: 1/8 inch (3 mm).

3.04 ADJUSTING

- A. Adjust and align hardware to uniform clearance at vertical edge of doors, not exceeding 3/16 inch (5 mm).
- B. Adjust hinges to position doors in partial opening position when unlatched. Return out swinging doors to closed position.

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- C. Adjust adjacent components for consistency of line or plane.

END OF SECTION

SECTION 102800
TOILET, BATH, AND LAUNDRY ACCESSORIES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Commercial toilet accessories.
- B. Under-lavatory pipe supply covers.
- C. Utility room accessories.

1.02 RELATED REQUIREMENTS

- A. Section 102113.13 Metal Toilet Compartments

1.03 REFERENCE STANDARDS

- A. ASTM C1036 - Standard Specification for Flat Glass 2021.
- B. ASTM C1503 - Standard Specification for Silvered Flat Glass Mirror 2018.
- C. ASTM G21 - Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi 2015, with Editorial Revision (2021).

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate the work with the placement of internal wall reinforcement, concealed ceiling supports, and reinforcement of toilet partitions to receive anchor attachments.

1.05 SUBMITTALS

- A. Product Data: Submit data on accessories describing size, finish, details of function, and attachment methods.
- B. Manufacturer's Installation Instructions: Indicate special procedures and conditions requiring special attention.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Commercial Toilet, Shower, and Bath Accessories:
 - 1. Bradley Corporation: www.bradleycorp.com/#sle.
- B. Under-Lavatory Pipe Supply Covers:
 - 1. Truebro LAV GUARD2.

2.02 MATERIALS

- A. Accessories - General: Shop assembled, free of dents and scratches and packaged complete with anchors and fittings, steel anchor plates, adapters, and anchor components for installation.
- B. Mirror Glass: Annealed float glass, ASTM C1036 Type I, Class 1, Quality Q2, with silvering, protective and physical characteristics complying with ASTM C1503.

2.03 FINISHES

- A. Stainless Steel: Satin finish, unless otherwise noted.

2.04 COMMERCIAL TOILET ACCESSORIES

- A. Toilet Paper Dispenser: Dual Jumbo Roll Stainless Steel Toilet Paper Dispenser:
 - 1. Basis of Design: Georgia Pacific 12" Sr. Jumbo Bath Tissue Dispenser
 - 2. Architect's pre-approved equal.
- B. Paper Towel Dispenser: Electric, roll paper type.
 - 1. Cover: Stainless steel.
 - 2. Paper Discharge: Touchless automatic.
 - 3. Capacity: 6 inch diameter roll.
 - 4. Mounting: Semi recessed.
 - 5. Power: Battery operated.

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6. Refill Indicator: Illuminated refill indicator.
7. Products:
 - a. Basis of Design: Georgia Pacific model #59460, enMotion Automated Touchless Dispenser.
- C. Waste Receptacle: Shall be Owner provided and Contractor Installed.
- D. Soap Dispenser: Shall be Owner provided and Contractor Installed.
- E. Mirrors: Stainless steel framed, 1/4 inch (6 mm) thick annealed float glass; ASTM C1036.
 1. Annealed Float Glass: Silvering, protective and physical characteristics in compliance with ASTM C1503.
 2. Size: As shown on the Drawings.
 3. Frame: 0.05 inch (1.3 mm) angle shapes, with mitered and welded and ground corners, and tamperproof hanging system; satin finish.
- F. Seat Cover Dispenser
 1. Basis of Design: Bobrick Model No. B-4221
 2. Architect's Pre-Approved Equal
- G. Grab Bars: Stainless steel, smooth surface.
 1. Standard Duty Grab Bars:
 - a. Push/Pull Point Load: 250 pound-force (1112 N), minimum.
 - b. Dimensions: 1-1/2 inch (38 mm) outside diameter, minimum 0.05 inch (1.3 mm) wall thickness, exposed flange mounting, 1-1/2 inch (38 mm) clearance between wall and inside of grab bar.
 - c. Length and Configuration: As indicated on drawings.
- H. Combination Sanitary Napkin/Tampon Dispenser: Stainless steel, surface-mounted.
 1. Door: Seamless 0.05 inch (1.3 mm) door with returned edges and tumbler lock.
 2. Cabinet: Fully welded, 0.03 inch (0.8 mm) thick sheet.
 3. Operation: 25 cent coin required to operate dispenser. Provide locked coin box, separately keyed.
 4. Identify dispensers slots without using brand names.
 5. Minimum capacity: 15 napkins and 20 tampons.
 6. Approved Manufacturers:
 - a. Bobrick Washroom Equipment.
- I. Sanitary Napkin Disposal Unit: Stainless steel, surface-mounted, self-closing door, locking bottom panel with full-length stainless steel piano-type hinge, removable receptacle.
 1. Products:
 - a. Basis of Design: Rubbermaid 6140.
 - b. Architect's Pre-Approved Equal

2.05 UNDER-LAVATORY PIPE AND SUPPLY COVERS

- A. Under-Lavatory Pipe and Supply Covers:
 1. Insulate exposed drainage piping including hot, cold, and tempered water supplies under lavatories or sinks to comply with ADA Standards.
 2. Exterior Surfaces: Smooth non-absorbent, non-abrasive surfaces.
 3. Construction: 1/8 inch (3.2 mm) flexible PVC.
 - a. Microbial and Fungal Resistance: Comply with ASTM G21.
 4. Color: White.
 5. Fasteners: Reusable, snap-locking fasteners with no sharp or abrasive external surfaces.
 6. Products:
 - a. Plumberex Specialty Products, Inc; Plumberex Pro-Extreme: www.plumberex.com/#sle.
 - b. Substitutions: Section 016000 - Product Requirements.

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2.06 UTILITY ROOM ACCESSORIES

- A. Combination Utility Shelf/Mop and Broom Holder: 0.05 inch (1.3 mm) thick stainless steel, Type 304, with 1/2 inch (12 mm) returned edges, 0.06 inch (1.6 mm) steel wall brackets.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify exact location of accessories for installation.
- C. For electrically-operated accessories, verify that electrical power connections are ready and in the correct locations.
- D. Verify that field measurements are as indicated on drawings.

3.02 PREPARATION

- A. Deliver inserts and rough-in frames to site for timely installation.
- B. Provide templates and rough-in measurements as required.

3.03 INSTALLATION

- A. Install accessories in accordance with manufacturers' instructions in locations indicated on drawings.
- B. Install plumb and level, securely and rigidly anchored to substrate.
- C. Mounting Heights: As required by accessibility regulations, unless otherwise indicated.
 - 1. Grab Bars: As indicated on drawings.
 - 2. Electric Hand Dryers: Measured from floor to bottom of nozzle:
 - a. Handicap: 36 inches (910 mm).
 - 3. Other Accessories: As indicated on drawings.

3.04 PROTECTION

- A. Protect installed accessories from damage due to subsequent construction operations.

END OF SECTION

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**SECTION 13120
METAL BUILDING SYSTEMS**

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Structural-steel framing.
 - 2. Metal roof panels.
 - 3. Metal wall panels (fascia at low slope)
 - 4. Thermal Insulation.
 - 5. Accessories.
 - 6. Delegated Design for the slab and foundation system for the Metal Building System.
 - a. Slab and Foundation design shall be in accordance with the Geotechnical Report

1.3 DEFINITIONS

- A. Terminology Standard: See MBMA's "Metal Building Systems Manual" for definitions of terms for metal building system construction not otherwise defined in this Section or in referenced standards.

1.4 COORDINATION

- A. Coordinate sizes and locations of concrete foundations and casting of anchor-rod inserts into foundation walls and footings. Anchor rod installation, concrete, reinforcement, and formwork requirements shall be a part of the Delegated Design responsibility of the Metal Building System Manufacturer and shall be in accordance with the requirements of the Geotechnical Report.
- B. Coordinate metal panel assemblies with rain drainage work, flashing, trim, and construction of supports and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

1.5 SUBMITTALS

- A. Product Data: For each type of metal building system component. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for the following:
 - 1. Structural-steel-framing system.
 - 2. Metal roof panels.
 - 3. Metal wall panels.
 - 4. Thermal insulation.
 - 5. Flashing and trim.

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6. Accessories.
- B. Shop Drawings: For the following metal building system components. Include plans, elevations, sections, details, and attachments to other work.
 1. Anchor-Bolt Plans: Submit anchor-bolt plans and templates before foundation work begins. Include location, diameter, and projection of anchor bolts required to attach metal building to foundation. Indicate column reactions at each location.
 2. Structural-Framing Drawings: Show complete fabrication of primary and secondary framing; include provisions for openings. Indicate welds and bolted connections, distinguishing between shop and field applications. Include transverse cross-sections.
 3. Metal Roof and Wall Panel (fascia) Layout Drawings: Show layouts of metal panels including methods of support. Include details of edge conditions, joints, panel profiles, corners, anchorages, trim, flashings, closures, and special details. Distinguish between factory- and field-assembled work; show locations of exposed fasteners.
 - a. Show roof-mounted items including pipe supports and penetrations, lighting fixtures, and all other applicable components of the facility.
 - b. Show wall-mounted items including lighting fixtures.
 - c. Show cantilevered roof systems.
 4. Accessory Drawings: Include details of the following items, at a scale of not less than 1-1/2 inches per 12 inches (1:8):
 - a. Flashing and trim.
 - b. Gutters.
 - c. Downspouts.
 - d. Louvers.
- C. Samples for Initial Selection: For units with factory-applied color finish.
- D. Samples for Verification: For each type of exposed finish required, prepared on Samples of sizes indicated below:
 1. Metal Panels: Nominal 12 inches (300 mm) long by actual panel width. Include fasteners, closures, and other exposed panel accessories.
 2. Flashing and Trim: Nominal 12 inches (300 mm) long. Include fasteners and other exposed accessories.
 3. Accessories: Nominal 12-inch- (300-mm-) long Samples for each type of accessory.
- E. Delegated-Design Submittal: Provide complete metal building systems complying with industry standard performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
 1. Provide delegated design submittal for all slab and foundation design in accordance with the requirements of the Geotechnical Report.
 2. PEMB Engineer shall be the Engineer of Record for this structure. Submittal documents shall specifically list this information.
- F. Qualification Data: For qualified erector, manufacturer, and professional engineer.
- G. Welding certificates.
- H. Metal Building System Certificates: For each type of metal building system, from manufacturer.

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1. Letter of Design Certification: Signed and sealed by a qualified professional engineer. Include the following:
 - a. Name and location of Project.
 - b. Order number.
 - c. Name of manufacturer.
 - d. Name of Contractor.
 - e. Building dimensions including width, length, height, and roof slope.
 - f. Indicate compliance with AISC standards for hot-rolled steel and AISI standards for cold-rolled steel, including edition dates of each standard.
 - g. Governing building code and year of edition.
 - h. Design Loads: Include dead load, roof live load, collateral loads, roof snow load, deflection, wind loads/speeds and exposure, seismic design category or effective peak velocity-related acceleration/peak acceleration, and auxiliary loads (cranes).
 - i. Load Combinations: Indicate that loads were applied acting simultaneously with concentrated loads, according to governing building code.
 - j. Building-Use Category: Indicate category of building use and its effect on load importance factors.
 - k. AISC Certification for Category MB: Include statement that metal building system and components were designed and produced in an AISC-Certified Facility by an AISC-Certified Manufacturer.
 - l. Loading as required for manufacturers recommended ice and snow guards shall be provided as a part of the letter of certification.
- I. Erector Certificates: For each product, from manufacturer.
- J. Manufacturer Certificates: For each product, from manufacturer.
- K. Material Test Reports: For each of the following products:
 1. Structural steel including chemical and physical properties.
 2. Bolts, nuts, and washers including mechanical properties and chemical analysis.
 3. Tension-control, high-strength, bolt-nut-washer assemblies.
 4. Shop primers.
 5. Nonshrink grout.
- L. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for insulation and vapor-retarder facings. Include reports for thermal resistance, fire-test-response characteristics, water-vapor transmission, and water absorption.
- M. Source quality-control reports.
- N. Field quality-control reports.
- O. Surveys: Show final elevations and locations of major members. Indicate discrepancies between actual installation and the Contract Documents. Have surveyor who performed surveys certify their accuracy.
- P. Maintenance Data: For metal panel finishes to include in maintenance manuals.
- Q. Warranties: Sample of special warranties.

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1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A qualified manufacturer.
 - 1. AISC Certification for Category MB: An AISC-Certified Manufacturer that designs and produces metal building systems and components in an AISC-Certified Facility.
 - 2. Engineering Responsibility: Preparation of Shop Drawings and comprehensive engineering analysis by a qualified professional engineer.
- B. Land Surveyor Qualifications: A professional land surveyor who practices in jurisdiction where Project is located and who is experienced in providing surveying services of the kind indicated.
- C. Erector Qualifications: An experienced erector who specializes in erecting and installing work similar in material, design, and extent to that indicated for this Project and who is acceptable to manufacturer.
- D. Testing Agency Qualifications: Qualified according to ASTM E 329 for testing indicated.
- E. Source Limitations: Obtain metal building system components, including primary and secondary framing and metal panel assemblies, from single source from single manufacturer.
- F. Welding Qualifications: Qualify procedures and personnel according to the following:
 - 1. AWS D1.1/D1.1M, "Structural Welding Code - Steel."
 - 2. AWS D1.3, "Structural Welding Code - Sheet Steel."
- G. Structural Steel: Comply with AISC 360, "Specification for Structural Steel Buildings," for design requirements and allowable stresses.
- H. Cold-Formed Steel: Comply with AISI's "North American Specification for the Design of Cold-Formed Steel Structural Members" for design requirements and allowable stresses.
- I. Preinstallation Conference: Conduct conference at Project site.
 - 1. Review methods and procedures related to metal building systems including, but not limited to, the following:
 - a. Condition of foundations and other preparatory work performed by other trades.
 - b. Structural load limitations.
 - c. Construction schedule. Verify availability of materials and erector's personnel, equipment, and facilities needed to make progress and avoid delays.
 - d. Required tests, inspections, and certifications.
 - e. Unfavorable weather and forecasted weather conditions.
 - 2. Review methods and procedures related to metal roof panel assemblies including, but not limited to, the following:
 - a. Compliance with requirements for purlin and rafter conditions, including flatness and attachment to structural members.
 - b. Structural limitations of purlins and rafters during and after roofing.
 - c. Flashings, special roof details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect metal roof panels.
 - d. Temporary protection requirements for metal roof panel assembly during and after installation.
 - e. Roof observation and repair after metal roof panel installation.

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3. Review methods and procedures related to metal wall panel assemblies including, but not limited to, the following:
 - a. Compliance with requirements for support conditions, including alignment between and attachment to structural members.
 - b. Structural limitations of girts and columns during and after wall panel installation.
 - c. Flashings, special siding details, wall penetrations, openings, and condition of other construction that will affect metal wall panels.
 - d. Temporary protection requirements for metal wall panel assembly during and after installation.
 - e. Wall observation and repair after metal wall panel installation.
 - f. Size, Spacing and configuration of manufacturers recommended ice and snow guards.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver components, sheets, panels, and other manufactured items so as not to be damaged or deformed. Package metal panels for protection during transportation and handling.
- B. Unload, store, and erect metal panels in a manner to prevent bending, warping, twisting, and surface damage.
- C. Stack metal panels horizontally on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal panels to ensure dryness, with positive slope for drainage of water. Do not store metal panels in contact with other materials that might cause staining, denting, or other surface damage.

1.8 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when weather conditions permit metal panels to be installed according to manufacturers' written instructions and warranty requirements.
- B. Field Measurements:
 1. Established Dimensions for Foundations: Comply with established dimensions on approved anchor-bolt plans, establishing foundation dimensions and proceeding with fabricating structural framing without field measurements. Coordinate anchor-bolt installation to ensure that actual anchorage dimensions correspond to established dimensions.
 2. Established Dimensions for Metal Panels: Where field measurements cannot be made without delaying the Work, either establish framing and opening dimensions and proceed with fabricating metal panels without field measurements, or allow for field trimming metal panels. Coordinate construction to ensure that actual building dimensions, locations of structural members, and openings correspond to established dimensions.

1.9 COORDINATION

- A. Coordinate sizes and locations of concrete foundations and casting of anchor-bolt inserts into foundation walls and footings. Concrete, reinforcement, and formwork requirements are specified in Division 03 Section "Cast-in-Place Concrete."

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- B. Coordinate installation of roof penetrations, which are specified in Division 07 Section "Roof Accessories."
- C. Coordinate metal panel assemblies with rain drainage work, flashing, trim, and construction of supports and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

1.10 WARRANTY

- A. Special Warranty on Metal Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal panels that show evidence of deterioration of factory-applied finishes within specified warranty period.
 - 1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
 - a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
 - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
 - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
 - 2. Finish Warranty Period: 20 years from date of Substantial Completion.
- B. Special Weathertightness Warranty for Standing-Seam Metal Roof Panels: Manufacturer's standard form in which manufacturer agrees to repair or replace standing-seam metal roof panel assemblies that leak or otherwise fail to remain weathertight within specified warranty period.
 - 1. Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Alliance Steel, Inc.
 - 2. Butler Manufacturing Company; a BlueScope Steel company.
 - 3. Star Building Systems; an NCI company.
 - 4. Architect's Pre-Approved Equal.
- B. Source Limitations: Obtain metal building system components, including primary and secondary framing and metal panel assemblies, from single source from single manufacturer.

2.2 METAL BUILDING SYSTEMS

- A. Description: Provide a complete, integrated set of mutually dependent components and assemblies that form a metal building system capable of withstanding structural and other loads, thermally induced movement, and exposure to weather without failure or infiltration of water into building interior.

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1. Provide metal building system of size and with bay spacings, roof slopes, and spans indicated on the construction drawings.
- B. Primary-Frame Type:
 1. Rigid Clear Span: Solid-member, structural-framing system without interior columns.
 - a. Refer to documents for additional information.
 - b. Provide varied length cantilevered structural systems as shown in the documents.
- C. End-Wall Framing: Shall be rigid clear span as shown on the documents.
 1. There is no additional end wall structural or secondary framing.
- D. Secondary-Frame Type: Manufacturer's standard roof purlins as shown in the documents.
 1. There shall be no framing extending lower than the ceiling / soffit liner panel.
 2. There shall be no exterior-framed girts.
 3. There shall be no intermediate portal framing. Structural columns and lateral resistance shall be accommodated with the tapered rigid frames as shown in the drawings.
 4. There shall be no cable bracing or 'x' bracing. Structural columns and lateral resistance shall be accommodated with the tapered rigid frames as shown in the drawings.
- E. Eave Height: Refer Construction Drawings for exact dimensions.
 1. Provide varied length cantilevered roof framing systems as shown in the documents.
- F. Bay Spacing: As noted on the construction documents.
- G. Roof Slope: As noted on the construction documents.
- H. Roof System: Manufacturer's standard standing-seam metal roof panels – design and profile as required for the indicated spans and use and as required to remain weathertight.
- I. Exterior Wall System: N/A

2.3 METAL BUILDING SYSTEM PERFORMANCE

- A. Delegated Design: Design metal building system, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.
- B. Structural Performance: Metal building systems shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated according to procedures in MBMA's "Metal Building Systems Manual."
 1. Design Loads: As required for the location and applicable codes / ordinances.
 2. Deflection and Drift Limits: Design metal building system assemblies to withstand serviceability design loads without exceeding deflections and drift limits recommended in AISC Steel Design Guide No. 3 "Serviceability Design Considerations for Steel Buildings."
 3. Metal panel assemblies shall withstand the effects of gravity loads and loads and stresses within limits and under conditions indicated according to ASTM E 1592.

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- C. Seismic Performance: Metal building systems shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.
- D. Thermal Movements: Allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base engineering calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
 - 1. Temperature Change (Range): 120 deg F (67 deg C), ambient; material surfaces.
- E. Air Infiltration for Metal Roof Panels: N/A
- F. Air Infiltration for Metal Wall Panels: N/A
- G. Water Penetration for Metal Roof Panels: No water penetration when tested according to ASTM E 1646 at test-pressure difference of 2.86 lbf/sq. ft. (137 Pa).
- H. Water Penetration for Metal Wall Panels: N/A
- I. Wind-Uplift Resistance: Provide metal roof panel assemblies that comply with UL 580 for Class 60.

2.4 STRUCTURAL-STEEL FRAMING

- A. General: All framing systems and accessories shall be the responsibility of the Metal Building System Engineer of Record as required to meet the design of the building as documented.
- B. Primary Framing: Manufacturer's standard primary-framing system, designed to withstand required loads and specified requirements. Refer to drawings for Framing basis of design.
 - 1. General: Provide frames with attachment plates, bearing plates, and splice members. Factory drill for field-bolted assembly. Provide frame span and spacing indicated.
 - a. Slight variations in span and spacing may be acceptable if necessary to comply with manufacturer's standard, as approved by Architect.
 - 2. Rigid Clear-Span Frames: I-shaped frame sections fabricated from shop-welded, built-up steel plates or structural-steel shapes. Interior columns are not permitted.
 - 3. Frame Configuration: Single Slope – refer to drawings.
 - 4. Exterior Column Type: Tapered – refer to drawings
 - 5. Rafter Type: Not Tapered – refer to drawings.
- C. End-Wall Framing: Refer to drawings for End Wall Framing basis of design.
- D. Secondary Framing: Manufacturer's standard secondary framing, including purlins, girts, eave struts, flange bracing, base members, gable angles, clips, headers, jambs, and other miscellaneous structural members. Unless otherwise indicated, fabricate framing from either cold-formed, structural-steel sheet or roll-formed, metallic-coated steel sheet, prepainted with coil coating, to comply with the following:

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1. Purlins: C- or Z-shaped sections; fabricated from built-up steel plates, steel sheet, or structural-steel shapes; minimum 2-1/2-inch- (64-mm-) wide flanges.
 - a. Depth: as required by metal building manufacturer design.
 2. Girts:
- E. Bracing: N/A. There shall be no rod, cable, angle, portal or other bracing other than metal frames as shown in the drawings. Structural columns and lateral resistance shall be accommodated with the tapered rigid frames as shown in the drawings
- F. Bolts: Provide plain-finish bolts for structural-framing components that are primed or finish painted. Provide zinc-plated or hot-dip galvanized bolts for structural-framing components that are galvanized.
- G. Materials:
1. W-Shapes: ASTM A 992/A 992M; ASTM A 572/A 572M, Grade 50 or 55 (345 or 380); or ASTM A 529/A 529M, Grade 50 or 55 (345 or 380).
 2. Channels, Angles, M-Shapes, and S-Shapes: ASTM A 36/A 36M; ASTM A 572/A 572M, Grade 50 or 55 (345 or 380); or ASTM A 529/A 529M, Grade 50 or 55 (345 or 380).
 3. Plate and Bar: ASTM A 36/A 36M; ASTM A 572/A 572M, Grade 50 or 55 (345 or 380); or ASTM A 529/A 529M, Grade 50 or 55 (345 or 380).
 4. Steel Pipe: ASTM A 53/A 53M, Type E or S, Grade B.
 5. Cold-Formed Hollow Structural Sections: ASTM A 500, Grade B or C, structural tubing.
 6. Structural-Steel Sheet: Hot-rolled, ASTM A 1011/A 1011M, Structural Steel (SS), Grades 30 through 55 (205 through 380), or High-Strength Low-Alloy Steel (HSLAS), Grades 45 through 70 (310 through 480); or cold-rolled, ASTM A 1008/A 1008M, Structural Steel (SS), Grades 25 through 80 (170 through 550), or High-Strength Low-Alloy Steel (HSLAS), Grades 45 through 70 (310 through 480).
 7. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Structural Steel (SS), Grades 33 through 80 (230 through 550), or High-Strength Low-Alloy Steel (HSLAS), Grades 50 through 80 (340 through 550); with G60 (Z180) coating designation; mill phosphatized.
 8. Metallic-Coated Steel Sheet Prepainted with Coil Coating: Steel sheet, metallic coated by the hot-dip process and prepainted by the coil-coating process to comply with ASTM A 755/A 755M.
 - a. Zinc-Coated (Galvanized) Steel Sheet: ASTM A 653/A 653M, Structural Steel (SS), Grades 33 through 80 (230 through 550), or High-Strength Low-Alloy Steel (HSLAS), Grades 50 through 80 (340 through 550); with G90 (Z275) coating designation.
 - b. Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A 792/A 792M, Structural Steel (SS), Grade 50 or 80 (340 or 550); with Class AZ50 (AZM150) coating.
 9. Non-High-Strength Bolts, Nuts, and Washers: ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6), carbon-steel, hex-head bolts; ASTM A 563 (ASTM A 563M) carbon-steel hex nuts; and ASTM F 844 plain (flat) steel washers.
 - a. Finish: Plain.
 10. High-Strength Bolts, Nuts, and Washers: ASTM A 325 (ASTM A 325M), Type 1, heavy-hex steel structural bolts; ASTM A 563 (ASTM A 563M) heavy-hex carbon-steel nuts; and ASTM F 436 (ASTM F 436M) hardened carbon-steel washers.
 - a. Finish: Plain.

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11. High-Strength Bolts, Nuts, and Washers: ASTM A 490 (ASTM A 490M), Type 1, heavy-hex steel structural bolts or tension-control, bolt-nut-washer assemblies with spline ends; ASTM A 563 (ASTM A 563M) heavy-hex carbon-steel nuts; and ASTM F 436 (ASTM F 436M) hardened carbon-steel washers, plain.
 12. Tension-Control, High-Strength Bolt-Nut-Washer Assemblies: ASTM F 1852, Type 1, heavy-hex-head steel structural bolts with spline ends.
 - a. Finish: Plain.
 13. Unheaded Anchor Rods: ASTM F 1554, Grade 36, ASTM A 36/A 36M, or ASTM A 307, Grade A.
 - a. Configuration: Straight.
 - b. Nuts: ASTM A 563 (ASTM A 563M) hex carbon steel.
 - c. Plate Washers: ASTM A 36/A 36M carbon steel.
 - d. Washers: ASTM F 436 (ASTM F 436M) hardened carbon steel.
 - e. Finish: Plain.
 14. Headed Anchor Rods: ASTM F 1554, Grade 36, or ASTM A 307, Grade A.
 - a. Configuration: Straight.
 - b. Nuts: ASTM A 563 (ASTM A 563M) hex carbon steel.
 - c. Plate Washers: ASTM A 36/A 36M carbon steel.
 - d. Washers: ASTM F 436 (ASTM F 436M) hardened carbon steel.
 - e. Finish: Plain.
 15. Threaded Rods (in the plane of the roof structure only): ASTM A 36/A 36M, ASTM A 307, Grade A.
 - a. Nuts: ASTM A 563 (ASTM A 563M) hex carbon steel.
 - b. Washers: ASTM A 36/A 36M carbon steel.
 - c. Finish: Plain.
 16. Recycled Content of Steel Products: Provide steel products with an average recycled content so postconsumer recycled content plus one-half of preconsumer recycled content is not less than 25 percent.
- H. Finish: Factory primed. Apply specified primer immediately after cleaning and pretreating.
1. Apply primer to primary and secondary framing to a minimum dry film thickness of 1 mil (0.025 mm).
 - a. Prime secondary framing formed from uncoated steel sheet to a minimum dry film thickness of 0.5 mil (0.013 mm) on each side.
 2. Primer: SSPC-Paint 15, Type I, red oxide.

2.5 METAL ROOF PANELS

- A. Standing Seam trapezoidal ribbed metal roof panels: Formed with raised, trapezoidal major ribs and intermediate stiffening ribs symmetrically spaced between major ribs; designed to be installed by lapping side edges of adjacent panels and mechanically attaching panels to supports using exposed fasteners in side laps. Minimum 1/2" x 3/32" tape sealer shall be used at all panel side laps.

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1. Basis of Design Product: PBR Panel as manufactured by MBCI Metal Wall and Roof Systems.
2. Material: Zinc-coated (galvanized) steel sheet, 0.028-inch (0.71-mm) nominal thickness.
 - a. Exterior Finish: Fluoropolymer.
 - b. Color: As selected by Architect from manufacturer's full range.
3. Major-Rib Spacing: 12 inches (305 mm) o.c.
4. Panel Coverage: 36 inches (914 mm).
5. Panel Height: 1.25 inches (32 mm).

B. Materials:

1. Metallic-Coated Steel Sheet: Restricted-flatness steel sheet, metallic coated by the hot-dip process and prepainted by the coil-coating process to comply with ASTM A 755/A 755M.
 - a. Zinc-Coated (Galvanized) Steel Sheet: ASTM A 653/A 653M, G90 (Z275) coating designation; structural quality.
 - b. Surface: Smooth, flat finish.

C. Finishes:

1. Exposed Coil-Coated Finish:
 - a. Two-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
2. Concealed Finish: Apply pretreatment and manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil (0.013 mm).

2.6 METAL WALL PANELS (Fascia of Low Slope).

- A. Standing Seam trapezoidal ribbed metal wall panels: Formed with raised, trapezoidal major ribs and intermediate stiffening ribs symmetrically spaced between major ribs; designed to be installed by lapping side edges of adjacent panels and mechanically attaching panels to supports using exposed fasteners in side laps. Minimum 1/2" x 3/32" tape sealer shall be used at all panel side laps.

1. Basis of Design Product: PBR Panel as manufactured by MBCI Metal Wall and Roof Systems.
2. Material: Zinc-coated (galvanized) steel sheet, 0.028-inch (0.71-mm) nominal thickness.
 - a. Exterior Finish: Fluoropolymer.
 - b. Color: As selected by Architect from manufacturer's full range.
3. Major-Rib Spacing: 12 inches (305 mm) o.c.
4. Panel Coverage: 36 inches (914 mm).

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5. Panel Height: 1.25 inches (32 mm).

B. Flush-Profile, Metal Ceiling / Soffit Liner Panels: solid panels formed with vertical panel edges and flat pan between panel edges; with flush joint between panels; designed for interior side of metal wall panel assemblies and installed by lapping and interconnecting side edges of adjacent panels and mechanically attaching through panel to supports using concealed fasteners and factory-applied sealant in side laps. Basis of Design shall be FW-120-0 as manufactured by MBCI Metal Wall and Roof Systems.

1. Material: Zinc-coated (galvanized) or aluminum-zinc alloy-coated steel sheet, .024 inch nominal uncoated steel thickness. Prepainted by the coil-coating process to comply with ASTM A 755/A 755M.
2. Panel Coverage: 12 inches
3. Panel Height: 1.5 inches

C. Finishes:

1. Exposed Coil-Coated Finish:
 - a. Two-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
2. Concealed Finish: Apply pretreatment and manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil (0.013 mm).

2.7 THERMAL INSULATION

- A. Faced Metal Building Roof and Wall Insulation: ASTM C 991, Type II, glass-fiber-blanket insulation; 0.5-lb/cu. ft. (8-kg/cu. m) density; 2-inch- (51-mm-) wide, continuous, vapor-tight edge tabs; with a flame-spread index of 25 or less.
1. Roof insulation shall be 4" thick standard faced metal building insulation with a thermal block at the roof purlin..
- B. Vapor-Retarder Tape: Pressure-sensitive tape of type recommended by vapor-retarder manufacturer for sealing joints and penetrations in vapor retarder.

2.8 ACCESSORIES

- A. General: Provide accessories as standard with metal building system manufacturer and as specified. Fabricate and finish accessories at the factory to greatest extent possible, by manufacturer's standard procedures and processes. Comply with indicated profiles and with dimensional and structural requirements.
1. Form exposed sheet metal accessories that are without excessive oil-canning, buckling, and tool marks and that are true to line and levels indicated, with exposed edges folded back to form hems.

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- B. Roof Panel Accessories: Provide components required for a complete metal roof panel assembly including copings, fasciae, corner units, ridge closures, clips, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal roof panels unless otherwise indicated.
1. Closures: Provide closures at eaves and ridges, fabricated of same material as metal roof panels.
 2. Clips: Manufacturer's standard, formed from steel sheet, designed to withstand negative-load requirements.
 3. Cleats: Manufacturer's standard, mechanically seamed cleats formed from steel sheet.
 4. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.
 5. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch- (25-mm-) thick, flexible closure strips; cut or premolded to match metal roof panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.
 6. Thermal Spacer Blocks: Where metal panels attach directly to purlins, provide thermal spacer blocks of thickness required to provide 1-inch (25-mm) standoff; fabricated from extruded polystyrene.
- C. Wall Panel Accessories: Provide components required for a complete metal wall panel assembly including copings, fasciae, , clips, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal wall panels unless otherwise indicated.
1. Closures: Provide closures at eaves and rakes, fabricated of same material as metal wall panels.
 2. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.
 3. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch- (25-mm-) thick, flexible closure strips; cut or premolded to match metal wall panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.
- D. Flashing and Trim: Formed from 0.022-inch (0.56-mm) nominal-thickness, metallic-coated steel sheet or aluminum-zinc alloy-coated steel sheet prepainted with coil coating; finished to match adjacent metal panels.
1. Provide flashing and trim as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, eaves, rakes, corners, bases, framed openings, ridges, fasciae, and fillers.
 2. Opening Trim: Formed from 0.022-inch (0.56-mm) nominal-thickness, metallic-coated steel sheet or aluminum-zinc alloy-coated steel sheet prepainted with coil coating. Trim head and jamb of door openings, and head, jamb, and sill of other openings.
- E. Gutters: Formed from 0.022-inch (0.56-mm) nominal-thickness, metallic-coated steel sheet or aluminum-zinc alloy-coated steel sheet prepainted with coil coating; finished to match roof fascia and rake trim. Match profile of gable trim, complete with end pieces, outlet tubes, and other special pieces as required. Fabricate in minimum 96-inch- (2438-mm-) long sections, sized according to SMACNA's "Architectural Sheet Metal Manual."
1. Gutter Supports: Fabricated from same material and finish as gutters.
 2. Strainers: Bronze, copper, or aluminum wire ball type at outlets.
- F. Downspouts: Formed from 0.022-inch (0.56-mm) nominal-thickness, zinc-coated (galvanized) steel sheet or aluminum-zinc alloy-coated steel sheet prepainted with coil coating; finished to

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match metal wall panels. Fabricate in minimum **10-foot- (3-m-)** long sections, complete with formed elbows and offsets.

1. Mounting Straps: Fabricated from same material and finish as gutters.
- G. Pipe Flashing: Premolded, EPDM pipe collar with flexible aluminum ring bonded to base.
- H. Ice and Snow Guards: Provide manufacturers recommended ice and snow guards for each building, specific to the building configuration and the panel type.
- I. Materials:
 1. Fasteners: Self-tapping screws, bolts, nuts, self-locking rivets and bolts, end-welded studs, and other suitable fasteners designed to withstand design loads. Provide fasteners with heads matching color of materials being fastened by means of plastic caps or factory-applied coating.
 - a. Fasteners for Metal Roof Panels: Self-drilling or self-tapping, zinc-plated, hex-head carbon-steel screws, with a stainless-steel cap or zinc-aluminum-alloy head and EPDM sealing washer.
 - b. Fasteners for Metal Wall Panels: Self-drilling or self-tapping, zinc-plated, hex-head carbon-steel screws, with EPDM sealing washers bearing on weather side of metal panels.
 - c. Fasteners for Flashing and Trim: Blind fasteners or self-drilling screws with hex washer head.
 - d. Blind Fasteners: High-strength aluminum or stainless-steel rivets.
 2. Corrosion-Resistant Coating: Cold-applied asphalt mastic, compounded for **15-mil (0.4-mm)** dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.
 3. Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107, factory-packaged, nonmetallic aggregate grout, noncorrosive, nonstaining, mixed with water to consistency suitable for application and a 30-minute working time.
 4. Metal Panel Sealants:
 - a. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene-compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape of manufacturer's standard size.
 - b. Joint Sealant: ASTM C 920; one-part elastomeric polyurethane or polysulfide; of type, grade, class, and use classifications required to seal joints in metal panels and remain weathertight; and as recommended by metal building system manufacturer.

2.9 SOURCE QUALITY CONTROL

- A. Special Inspector: Owner will engage a qualified special inspector to perform the following tests and inspections and to submit reports. Special inspector will verify that manufacturer maintains detailed fabrication and quality-control procedures and will review the completeness and adequacy of those procedures to perform the Work.
 1. Special inspections will not be required if fabrication is performed by manufacturer registered and approved by authorities having jurisdiction to perform such Work without special inspection.

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- a. After fabrication, submit copy of certificate of compliance to authorities having jurisdiction, certifying that Work was performed according to Contract requirements.
- B. Testing: Test and inspect shop connections for metal buildings according to the following:
 - 1. Bolted Connections: Shop-bolted connections shall be inspected according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."
 - 2. Welded Connections: In addition to visual inspection, shop-welded connections shall be tested and inspected according to AWS D1.1/D1.1M and the following inspection procedures, at inspector's option:
 - a. Liquid Penetrant Inspection: ASTM E 165.
 - b. Magnetic Particle Inspection: ASTM E 709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration will not be accepted.
 - c. Ultrasonic Inspection: ASTM E 164.
 - d. Radiographic Inspection: ASTM E 94.
- C. Product will be considered defective if it does not pass tests and inspections.
- D. Prepare test and inspection reports.

2.10 FABRICATION

- A. General: Design components and field connections required for erection to permit easy assembly.
 - 1. Mark each piece and part of the assembly to correspond with previously prepared erection drawings, diagrams, and instruction manuals.
 - 2. Fabricate structural framing to produce clean, smooth cuts and bends. Punch holes of proper size, shape, and location. Members shall be free of cracks, tears, and ruptures.
- B. Tolerances: Comply with MBMA's "Metal Building Systems Manual" for fabrication and erection tolerances.
- C. Primary Framing: Shop fabricate framing components to indicated size and section, with baseplates, bearing plates, stiffeners, and other items required for erection welded into place. Cut, form, punch, drill, and weld framing for bolted field assembly.
 - 1. Make shop connections by welding or by using high-strength bolts.
 - 2. Join flanges to webs of built-up members by a continuous, submerged arc-welding process.
 - 3. Brace compression flange of primary framing with steel angles or cold-formed structural tubing between frame web and purlin web or girt web, so flange compressive strength is within allowable limits for any combination of loadings.
 - 4. Weld clips to frames for attaching secondary framing.
 - 5. Shop Priming: Prepare surfaces for shop priming according to SSPC-SP 2. Shop prime primary framing with specified primer after fabrication.
- D. Secondary Framing: Shop fabricate framing components to indicated size and section by roll-forming or break-forming, with baseplates, bearing plates, stiffeners, and other plates required for erection welded into place. Cut, form, punch, drill, and weld secondary framing for bolted field connections to primary framing.

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1. Make shop connections by welding or by using non-high-strength bolts.
 2. Shop Priming: Prepare uncoated surfaces for shop priming according to SSPC-SP 2. Shop prime uncoated secondary framing with specified primer after fabrication.
- E. Metal Panels: Fabricate and finish metal panels at the factory to greatest extent possible, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements. Comply with indicated profiles and with dimensional and structural requirements.
1. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of metal panel.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with erector present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Before erection proceeds, survey elevations and locations of concrete- and masonry-bearing surfaces and locations of anchor rods, bearing plates, and other embedments to receive structural framing, with erector present, for compliance with requirements and metal building system manufacturer's tolerances.
 1. Engage land surveyor to perform surveying.
- C. Proceed with erection only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition.
- B. Provide temporary shores, guys, braces, and other supports during erection to keep structural framing secure, plumb, and in alignment against temporary construction loads and loads equal in intensity to design loads. Remove temporary supports when permanent structural framing, connections, and bracing are in place unless otherwise indicated.

3.3 ERECTION OF STRUCTURAL FRAMING

- A. Erect metal building system according to manufacturer's written erection instructions and erection drawings.
- B. Do not field cut, drill, or alter structural members without written approval from metal building system manufacturer's professional engineer.
- C. Set structural framing accurately in locations and to elevations indicated, according to AISC specifications referenced in this Section. Maintain structural stability of frame during erection.
- D. Base and Bearing Plates: Clean concrete- and masonry-bearing surfaces of bond-reducing materials, and roughen surfaces prior to setting plates. Clean bottom surface of plates.

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1. Set plates for structural members on wedges, shims, or setting nuts as required.
 2. Tighten anchor rods after supported members have been positioned and plumbed. Do not remove wedges or shims but, if protruding, cut off flush with edge of plate before packing with grout.
 3. Promptly pack grout solidly between bearing surfaces and plates so no voids remain. Neatly finish exposed surfaces; protect grout and allow to cure. Comply with manufacturer's written installation instructions for shrinkage-resistant grouts.
- E. Align and adjust structural framing before permanently fastening. Before assembly, clean bearing surfaces and other surfaces that will be in permanent contact with framing. Perform necessary adjustments to compensate for discrepancies in elevations and alignment.
1. Level and plumb individual members of structure.
 2. Make allowances for difference between temperature at time of erection and mean temperature when structure will be completed and in service.
- F. Primary Framing and End Walls: Erect framing level, plumb, rigid, secure, and true to line. Level baseplates to a true even plane with full bearing to supporting structures, set with double-nutted anchor bolts. Use grout to obtain uniform bearing and to maintain a level base-line elevation. Moist-cure grout for not less than seven days after placement.
1. Make field connections using high-strength bolts installed according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts" for bolt type and joint type specified.
 - a. Joint Type: Snug tightened or pretensioned.
- G. Secondary Framing: Erect framing level, plumb, rigid, secure, and true to line. Field bolt secondary framing to clips attached to primary framing.
1. Provide rake or gable purlins with tight-fitting closure channels and fasciae.
 2. Locate and space wall girts to suit openings such as doors and windows.
 3. Locate canopy framing as indicated.
 4. Provide supplemental framing at entire perimeter of openings, including doors, windows, louvers, ventilators, and other penetrations of roof and walls.
- H. Bracing: Install bracing in roof and sidewalls where indicated on erection drawings.
1. Tighten rod and cable bracing to avoid sag.
 2. Locate interior end-bay bracing only where indicated.
- I. Framing for Openings: Provide shapes of proper design and size to reinforce openings and to carry loads and vibrations imposed, including equipment furnished under mechanical and electrical work. Securely attach to structural framing.
- J. Erection Tolerances: Maintain erection tolerances of structural framing within AISC 303.
- 3.4 METAL PANEL INSTALLATION, GENERAL
- A. Examination: Examine primary and secondary framing to verify that structural-panel support members and anchorages have been installed within alignment tolerances required by manufacturer.

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1. Examine roughing-in for components and systems penetrating metal panels, to verify actual locations of penetrations relative to seams before metal panel installation.
- B. General: Anchor metal panels and other components of the Work securely in place, with provisions for thermal and structural movement.
1. Field cut metal panels as required for doors, windows, and other openings. Cut openings as small as possible, neatly to size required, and without damage to adjacent metal panel finishes.
 - a. Field cutting of metal panels by torch is not permitted unless approved in writing by manufacturer.
 2. Install metal panels perpendicular to structural supports unless otherwise indicated.
 3. Flash and seal metal panels with weather closures at perimeter of openings and similar elements. Fasten with self-tapping screws.
 4. Locate and space fastenings in uniform vertical and horizontal alignment.
 5. Locate metal panel splices over, but not attached to, structural supports with end laps in alignment.
 6. Lap metal flashing over metal panels to allow moisture to run over and off the material.
- C. Lap-Seam Metal Panels: Install screw fasteners using power tools with controlled torque adjusted to compress EPDM washers tightly without damage to washers, screw threads, or metal panels. Install screws in predrilled holes.
1. Arrange and nest side-lap joints so prevailing winds blow over, not into, lapped joints. Lap ribbed or fluted sheets one full rib corrugation. Apply metal panels and associated items for neat and weathertight enclosure. Avoid "panel creep" or application not true to line.
- D. Metal Protection: Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with corrosion-resistant coating, by applying rubberized-asphalt underlayment to each contact surface, or by other permanent separation as recommended by metal roof panel manufacturer.
- E. Joint Sealers: Install gaskets, joint fillers, and sealants where indicated and where required for weatherproof performance of metal panel assemblies. Provide types of gaskets, fillers, and sealants indicated; or, if not indicated, provide types recommended by metal panel manufacturer.
1. Seal metal panel end laps with double beads of tape or sealant the full width of panel. Seal side joints where recommended by metal panel manufacturer.
 2. Prepare joints and apply sealants to comply with requirements in Division 07 Section "Joint Sealants."
- 3.5 METAL ROOF PANEL INSTALLATION
- A. General: Provide metal roof panels of full length from eave to ridge unless otherwise indicated or restricted by shipping limitations.
1. Install ridge and hip caps as metal roof panel work proceeds.
 2. Flash and seal metal roof panels with weather closures at eaves and rakes. Fasten with self-tapping screws.

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- B. Lap-Seam Metal Roof Panels: Fasten metal roof panels to supports with exposed fasteners at each lapped joint, at location and spacing recommended by manufacturer.
 - 1. Provide metal-backed sealing washers under heads of exposed fasteners bearing on weather side of metal roof panels.
 - 2. Provide sealant tape at lapped joints of metal roof panels and between panels and protruding equipment, vents, and accessories.
 - 3. Apply a continuous ribbon of sealant tape to weather-side surface of fastenings on end laps and on side laps of nesting-type metal panels, on side laps of ribbed or fluted metal panels, and elsewhere as needed to make metal panels weatherproof to driving rains.
 - 4. At metal panel splices, nest panels with minimum 6-inch (152-mm) end lap, sealed with butyl-rubber sealant and fastened together by interlocking clamping plates.
- C. Metal Fascia Panels: Align bottom of metal panels and fasten with blind rivets, bolts, or self-drilling or self-tapping screws. Flash and seal metal panels with weather closures where fasciae meet soffits, along lower panel edges, and at perimeter of all openings.
- D. Metal Roof Panel Installation Tolerances: Shim and align metal roof panels within installed tolerance of 1/4 inch in 20 feet (6 mm in 6 m) on slope and location lines as indicated and within 1/8-inch (3-mm) offset of adjoining faces and of alignment of matching profiles.

3.6 METAL WALL PANEL INSTALLATION

- A. General: Install metal wall panels in orientation, sizes, and locations indicated on Drawings. Install panels perpendicular to girts, extending full height of building, unless otherwise indicated. Anchor metal wall panels and other components of the Work securely in place, with provisions for thermal and structural movement.
 - 1. Unless otherwise indicated, begin metal panel installation at corners with center of rib lined up with line of framing.
 - 2. Shim or otherwise plumb substrates receiving metal wall panels.
 - 3. When two rows of metal panels are required, lap panels 4 inches (102 mm) minimum.
 - 4. When building height requires two rows of metal panels at gable ends, align lap of gable panels over metal wall panels at eave height.
 - 5. Rigidly fasten base end of metal wall panels and allow eave end free movement due to thermal expansion and contraction. Predrill panels.
 - 6. Flash and seal metal wall panels with weather closures at eaves, rakes, and at perimeter of all openings. Fasten with self-tapping screws.
 - 7. Install screw fasteners in predrilled holes.
 - 8. Install flashing and trim as metal wall panel work proceeds.
 - 9. Apply elastomeric sealant continuously between metal base channel (sill angle) and concrete, and elsewhere as indicated; or, if not indicated, as necessary for waterproofing.
 - 10. Align bottom of metal wall panels and fasten with blind rivets, bolts, or self-drilling or self-tapping screws.
- B. Metal Wall Panels: Install metal wall panels on exterior side of girts and metal liner panels on the inside of girts. Attach metal wall panels to supports with fasteners as recommended by manufacturer. Provide metal closure trim at interior surfaces of metal liner panels.
- C. Installation Tolerances: Shim and align metal wall panels within installed tolerance of 1/4 inch in 20 feet (6 mm in 6 m), nonaccumulative, on level, plumb, and on location lines as indicated, and within 1/8-inch (3-mm) offset of adjoining faces and of alignment of matching profiles.

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3.7 THERMAL INSULATION INSTALLATION

- A. General: Install insulation concurrently with metal panel installation, in thickness indicated to cover entire surface, according to manufacturer's written instructions.
 - 1. Set vapor-retarder-faced units with vapor retarder toward warm side of construction unless otherwise indicated. Do not obstruct ventilation spaces except for firestopping.
 - 2. Tape joints and ruptures in vapor retarder, and seal each continuous area of insulation to the surrounding construction to ensure airtight installation.
 - 3. Install factory-laminated, vapor-retarder-faced blankets straight and true in one-piece lengths, with both sets of facing tabs sealed, to provide a complete vapor retarder.
- B. Blanket Roof Insulation (4" metal building insulation): Comply with the following installation method:
 - 1. Over-Framing Installation: Extend insulation and vapor retarder over and perpendicular to top flange of secondary framing. Hold in place by metal roof panels fastened to secondary framing.

3.8 ACCESSORY INSTALLATION

- A. General: Install accessories with positive anchorage to building and weathertight mounting, and provide for thermal expansion. Coordinate installation with flashings and other components.
 - 1. Install components required for a complete metal roof panel assembly, including trim, copings, ridge closures, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items.
 - 2. Install components for a complete metal wall panel assembly, including trim, copings, corners, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items.
 - 3. Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with corrosion-resistant coating, by applying rubberized-asphalt underlayment to each contact surface, or by other permanent separation as recommended by manufacturer.
- B. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.
 - 1. Install exposed flashing and trim that is without excessive oil-canning, buckling, and tool marks and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and to result in waterproof and weather-resistant performance.
 - 2. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of **10 feet (3 m)** with no joints allowed within **24 inches (600 mm)** of corner or intersection. Where lapped or bayonet-type expansion provisions cannot be used or would not be sufficiently weather resistant and waterproof, form expansion joints of intermeshing hooked flanges, not less than **1 inch (25 mm)** deep, filled with mastic sealant (concealed within joints).
- C. Gutters: Join sections with riveted-and-soldered or lapped-and-sealed joints. Attach gutters to eave with gutter hangers spaced as required for gutter size, but not more than **36 inches (914**

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mm) o.c. using manufacturer's standard fasteners. Provide end closures and seal watertight with sealant. Provide for thermal expansion.

- D. Downspouts: Join sections with 1-1/2-inch (38-mm) telescoping joints. Provide fasteners designed to hold downspouts securely 1 inch (25 mm) away from walls; locate fasteners at top and bottom and at approximately 60 inches (1524 mm) o.c. in between.
 - 1. Provide elbows at base of downspouts to direct water away from building.
- E. Pipe Flashing: Form flashing around pipe penetration and metal roof panels. Fasten and seal to panel as recommended by manufacturer.

3.9 FIELD QUALITY CONTROL

- A. Special Inspections: Owner will engage a qualified special inspector to perform the following special inspections:
 - 1. Inspection of fabricators.
 - 2. Steel construction.
 - 3. Field welds.
- B. Tests and Inspections:
 - 1. High-Strength, Field-Bolted Connections: Connections shall be inspected during installation according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."
 - 2. Welded Connections: In addition to visual inspection, field-welded connections shall be tested and inspected according to AWS D1.1/D1.1M and the following inspection procedures, at inspector's option:
 - a. Liquid Penetrant Inspection: ASTM E 165.
 - b. Magnetic Particle Inspection: ASTM E 709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration will not be accepted.
 - c. Ultrasonic Inspection: ASTM E 164.
 - d. Radiographic Inspection: ASTM E 94.
- C. Product will be considered defective if it does not pass tests and inspections.
- D. Prepare test and inspection reports.

3.10 ADJUSTING

- A. Doors: After completing installation, test and adjust doors to operate easily, free of warp, twist, or distortion.

3.11 CLEANING AND PROTECTION

- A. Repair damaged galvanized coatings on galvanized items with galvanized repair paint according to ASTM A 780 and manufacturer's written instructions.

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- B. Touchup Painting: After erection, promptly clean, prepare, and prime or reprime field connections, rust spots, and abraded surfaces of prime-painted structural framing, bearing plates, and accessories.
 - 1. Clean and prepare surfaces by SSPC-SP 2, "Hand Tool Cleaning," or by SSPC-SP 3, "Power Tool Cleaning."
 - 2. Apply a compatible primer of same type as shop primer used on adjacent surfaces.
- C. Touchup Painting: Cleaning and touchup painting are specified in Division 09 painting Sections.
- D. Metal Panels: Remove temporary protective coverings and strippable films, if any, as metal panels are installed. On completion of metal panel installation, clean finished surfaces as recommended by metal panel manufacturer. Maintain in a clean condition during construction.
 - 1. Replace metal panels that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.
- E. Doors and Frames: Immediately after installation, sand rusted or damaged areas of prime coat until smooth and apply touchup of compatible air-drying primer.
 - 1. Immediately before final inspection, remove protective wrappings from doors and frames.
- F. Louvers: Clean exposed surfaces that are not protected by temporary covering, to remove fingerprints and soil during construction period. Do not let soil accumulate until final cleaning.
 - 1. Restore louvers damaged during installation and construction period so no evidence remains of corrective work. If results of restoration are unsuccessful, as determined by Architect, remove damaged units and replace with new units.
 - a. Touch up minor abrasions in finishes with air-dried coating that matches color and gloss of, and is compatible with, factory-applied finish coating.

END OF SECTION 133419

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**SECTION 313116
TERMITE CONTROL**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Chemical soil treatment.

1.02 RELATED REQUIREMENTS

- A. Section 033000 - Cast-in-Place Concrete: Vapor barrier placement under concrete slab-on-grade.

1.03 PRICE AND PAYMENT PROCEDURES

- A. See Section 012200 - Unit Prices, for additional unit price requirements.

1.04 REFERENCE STANDARDS

- A. Title 7, United States Code, 136 through 136y - Federal Insecticide, Fungicide and Rodenticide Act 2019.

1.05 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Indicate toxicants to be used, composition by percentage, dilution schedule, intended application rate.
- C. Product Data: Submit manufacturers' data on manufactured products showing compliance with specified requirements.
- D. Test Reports: Indicate regulatory agency approval reports when required.
- E. Certificate of compliance from authority having jurisdiction indicating approval of toxicants.
- F. Manufacturer's Instructions: Indicate caution requirement.
- G. Record and document moisture content of soil before application.
- H. Installer Qualifications: Company specializing in performing work of the type specified and with minimum three (3) years of documented experience.
- I. Warranty: Submit warranty and ensure that forms have been completed in Owner's name.

1.06 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing this type of work and:
 - 1. Having minimum of three (3) years documented experience.
 - 2. Approved by manufacturer of treatment materials.
 - 3. Licensed in the State in which the Project is located.

1.07 WARRANTY

- A. See Section 017800 - Closeout Submittals, for additional warranty requirements.
- B. Provide five year installer's warranty against damage to building caused by termites.

PART 2 PRODUCTS

2.01 CHEMICAL SOIL TREATMENT

- A. Toxicant Chemical: EPA Title 7, United States Code, 136 through 136y approved; synthetically color dyed to permit visual identification of treated soil.
- B. Diluent: Recommended by toxicant manufacturer.
- C. Manufacturers:
 - 1. Bayer Environmental Science Corp; []: www.backedbybayer.com/pest-management/#sle. Bayer Environmental Science Corp; []: www.backedbybayer.com/pest-management/#sle. Bayer Environmental Science Corp; []: www.backedbybayer.com/pest-management/#sle.
 - 2. Substitutions: See Section 016000 - Product Requirements.

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PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that soil surfaces are unfrozen, sufficiently dry to absorb toxicant, and ready to receive treatment.
- B. Verify final grading is complete.

3.02 APPLICATION - CHEMICAL TREATMENT

- A. Comply with requirements of U.S. EPA and applicable state and local codes.
- B. Spray apply toxicant in accordance with manufacturer's instructions.
- C. Apply toxicant at following locations:
 - 1. Under Slabs-on-Grade.
 - 2. At Both Sides of Foundation Surface.
 - 3. Soil Within 10 feet (3 m) of Building Perimeter For a Depth of [] feet ([] m).
- D. Under slabs, apply toxicant immediately prior to installation of vapor barrier.
- E. At foundation walls, apply toxicant immediately prior to finish grading work outside foundations.
- F. Apply extra treatment to structure penetration surfaces such as pipe or ducts, and soil penetrations such as grounding rods or posts.
- G. Re-treat disturbed treated soil with same toxicant as original treatment.
- H. If inspection or testing identifies the presence of termites, re-treat soil and re-test.

3.03 PROTECTION

- A. Do not permit soil grading over treated work.

END OF SECTION

**ADDENDUM NUMBER ONE
TO
CONTRACT DOCUMENTS AND SPECIFICATIONS
FOR
KIDS SPACE PARK IMPROVEMENTS**

Dated: March 17, 2022

The following changes, clarifications and/or additions are hereby made a part of the contract documents for the construction of this project, as fully and completely as if the same were originally included therein, and shall supersede anything contained in the plans and specifications with which it might conflict.

1. PROJECT ADDRESS:

The project address is 10320 East 116th Street North Owasso, OK 74055.

2. EXCEL VERSION OF BID FORM:

An Excel Copy of the Bid Form has been placed in the Shared Folder for this project and has been attached to the email Addendum. Contractor is responsible for verifying all quantities, formulas, etc. This is for information purposes only.

3. REVISED BID FORM:

The "REVISED BID FORM 03-17-2022" is attached to this Addendum. The changes include:

- Bid Item #48 - 4'H. Wireworks Plus Fence – CIP, has been updated to reflect the revised quantity as part of Revised Sheet SP-1
 - o All fencing within the Base Bid is included in this number. This includes fence around Playground Area, Fence around Pickleball, etc.
 - o Concrete Fence Band around Pickleball is to be bid in Item #36
- Bid Item #52 has been added for the 8' Long ADA Picnic Tables. Total 8.
- Bid Item #53 has been added for the 144 Mexican Feather Grass. This is to include all Planting Bed Preparation, Steel Bed Edging, Mulch, Etc.
- A-4 Water Fountains – CIP, has been added to the Bid Form.
 - o This is to include all materials and installation for the specified product, installation of service line to connection point SW of restroom building. Etc.
 - o Service Line to be 1" Diameter and meet all City requirements.

4. REVISED SHEET ECDP-1:

The demolition items have been updated to clarify the following:

- Additional Tree Demolition in the area of the Detention Area on the east side of the site.
- Existing Water Line demolition information.

5. REVISED SHEET SP-1:

Sheet SP-1 has been revised to reflect changes to the fence layout. Please replace the original Sheet SP-1 with this revised sheet. Quantities have been modified on the Bid Form.

6. ADDITION OF SHEET AD-1 PLAYGROUND DRAINAGE:

Sheet AD-1 Playground Drainage has been attached to this Addendum #1. This sheet provides the layout and information necessary to complete the playground drainage.

7. ELECTRICAL CONDUIT AT STRING LIGHT POLES:

Conduit can be attached to outside of pole. Conduit and all attaching brackets must match pole color.

8. RESTROOM BUILDING UTILITY CONNECTIONS:

Contractor will reconnect to the existing service lines just outside the proposed building, as noted by MEP on Sheet MP-200. This lists line sizes.

9. WATER FOUNTAINS:

Contractor is to disregard any information related to the two (2) water fountains shown on the plans. These are being eliminated from the project. will reconnect to the existing service lines just outside the proposed building, as noted by MEP on Sheet MP-200. This lists line sizes.

10. RESTROOM BUILDING FIXTURE CLARIFICATIONS:

- Toilet is floor mounted overhead braced (Series 400)
- All components of toilet partitions are to be stainless steel.

11. ELECTRICAL – OG&E LIGHTING CLARIFICATIONS:

- OG&E will provide everything required to accomplish OG&E provided lighting. That includes concrete bases as well. Conduit was not included in the wording of the note because the representative for OG&E we were working with mentioned the wiring between light poles would likely be direct bury.
- OG&E at time of drawings has not completed an internal design of the lighting for the parking lot and the trail around edge of property. They will decide the source location at that time and provide everything necessary to connect lighting to utility power. Contractor shall coordinate with the City of Shawnee and OG&E to make sure timing of installation is understood and accounted for in construction schedule.

12. PRE-ENGINEERED METAL BUILDING – LARGE PAVILION:

The following information is being provided for clarification on bidding the Large Pavilion:

- The foundation system is a delegated design component of the pre-engineered metal building scope of work. This is covered in the PEMB specifications as follows:
 - o 1.2_A6_6 - Delegated Design for the slab and foundation system for the Metal Building System.
 - Slab and Foundation design shall be in accordance with the Geotechnical Report
 - o 1.5_E_E - Delegated-Design Submittal: Provide complete metal building systems complying with industry standard performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
 - Provide delegated design submittal for all slab and foundation design in accordance with the requirements of the Geotechnical Report.
 - o The Concrete under the structure is included in Bid Item #17. The only concrete that will need to be accounted for in this item, would be the footings.

13. DETAIL 7 ON SHEET D-1:

Contractor is to disregard the heights listed below the detail.

- Poured In Place Fall Height is to correspond to playground equipment in that area and required safety surfacing per playground safety standards.
- Slide exit heights are to meet all playground safety standards and do not have to be exactly 9”.

14. SYNTHETIC TURF:

All Synthetic Turf within fall zone areas is to have proper base materials to account for fall heights in those areas. All synthetic turf outside of fall zones and on turf berms, is to have a ¾” or 5/8” pad, recommended for turf installations on playgrounds, installed prior to turf.

15. SYNTHETIC TURF:

The following information is being provided for clarification on bidding the synthetic turf:

- All turf is included in the numbers provided in the bid form. This includes the fitness challenge area and 40 yard dash.
- All striping, labels, etc. are to be included in the turf bid. This includes the 40 yard dash area. Also included in the fitness challenge area will be an 18"x36 "START" icon, and an 18"x36" "STOP" icon.

16. PLAYGROND TUNNEL CLARIFICATIONS:

The following information is being provided for clarification on bidding the tunnels:

- a. The exposed tunnel is to be stainless steel.
 - i. This tunnel will include two (2) 24" diameter holes. One at each end on opposite sides. These will be located on the side of the tunnel roughly 8" above finished grade. There will be 50 3" diameter holes provided throughout the tunnel. All hole locations will be finalized during the submittal process.
- b. The two (2) tunnels that are recessed into the berms will be made out of a prefabricated plastic playground material. The tunnel on the north side of th site will be 11' Long at the bottom side. The tunnel on the south side will be 8' Long on the bottom side. These will need to match berm widths on site, and modified as necessary to match the face of the berm.
- c. There will be no Poured In Place Rubber material inside of tunnels. Tunnels are to be set at grade of adjacent rubber or turf.

17. PRE-ENGINEERED METAL BUILDING EQUAL:

The following company listed below is approved as an equal material to be utilized as the Pre-Engineered Metal Building for the project.

- 18.** Manufacturer must meet all elements of the originally specified product. This includes but is not limited to drawings, specifications, design intent, materials, finish, construction, warranty, etc.

1. AMERICAN BUILDING COMANY

Submitted By:

Lambert Construction

Stephen Mitchell

405-372-1444

Stephen@lambertconstructionco.com

19. PLAYGROUND ELEMENTS:

- a. The following company listed below is approved as an equal to supply the playground elements.
- b. The approval is based on the attached design concept.
- c. Arch Swings will be used in lieu of the ones shown in the rendering.
- d. See attached renderings

1. LSI PLAYGROUNDS

Local Contact:

ACS Playgrounds

Bryan Montgomery

405-406-9670

bryanm@acsplay.com

20. SITE FURNISHINGS:

- a. The following company listed below is approved as an equal to supply the site furnishings including standard benches, picnic tables, ADA picnic tables, and trash receptacles, etc.
- b. The company must meet all elements of the originally specified product. This includes but is not limited to design intent, materials, finish, construction, warranty, etc.

1. DUMOR

Local Contact:

ACS Playgrounds

Bryan Montgomery

405-406-9670

bryanm@acsplay.com

21. SHADE STRUCTURES:

- a. The following companies listed below are approved as an equal to supply the shade structures for the project.
- b. The company must meet all elements of the originally specified product. This includes but is not limited to design intent, materials, connections, height, construction, warranty, etc.
- c. If or equal product is used during construction, Contractor is to provide all necessary coordination between shade structure manufacturer, structural engineer, electrical engineer, and architect, to ensure all elements are compatible.

2. SKYWAYS (LANDSCAPE STRUCTURES)

Local Contact:

ACS Playgrounds

Bryan Montgomery

405-406-9670

bryanm@acsplay.com

3. SHADE SYSTEM INC

Local Contact:

Josh Walk

800-609-6066

josh@shadesystemsinc.com

2. USA SHADE

Local Contact:

Happy Playgrounds

Kelli Collins

918-851-9518

kelli.collins@happyplaygrounds.com

22. POURED IN PLACE RUBBER SURFACING APPROVED EQUALS:

The following companies listed below are approved as an equal material to be utilized as the Poured In Place Rubber Surfacing for the project.

23. Manufacturer must meet all elements of the originally specified product. This includes but is not limited to design intent, materials, finish, colors, construction, warranty, etc.

1. **NO FAULT SAFETY SURFACE**

Local Contact:

Happy Playgrounds

Kelli Collins

918-851-9518

kelli.collins@happyplaygrounds.com

2. **ROSEHILL SPORTS AND PLAY SURFACING**

Local Contact:

ACS Playgrounds

Bryan Montgomery

405-406-9670

bryanm@acsplay.com

24. **SYNTHETIC TURF APPROVED EQUALS:**

The following company listed below is approved as an equal material to be utilized as the Synthetic Turf for the project.

- a. Manufacturer must meet all elements of the originally specified product. This includes but is not limited to design intent, materials, finish, construction, warranty, etc.
- b. Contractor is to be able to supply specified padding and any other associated items.

1. **SOUTHWEST GREENS BOLT 50**

Local Contact:

Southwest Greens of Oklahoma

Richard Shepler

918-852-06202

Richardsphone2014@gmail.com

2. **TURFSCAPE HIGHLAND**

Local Contact:

ACS Playgrounds

Bryan Montgomery

405-406-9670

bryanm@acsplay.com

25. TURF BERM CONSTRUCTION:

The following company listed below is approved as an equal material to be utilized as the Synthetic Turf Berm Construction Method for the project.

- a. Manufacturer must meet all elements of the originally specified product. This includes but is not limited to design intent, materials, finish, construction, warranty, playground safety standards, etc.
- b. Contractor is to be able to supply specified padding and any other associated items.
- c. This method of construction is acceptable for all berms that fall within playground equipment safety fall zones only.
- d. Contractor is to ensure the tunnels, play equipment attached to berm, etc., are all coordinated with the construction of the berm.

1. PLAYMOUNDS BY FOREVERLAWN

Local Contact:

Foreverlawn

Ross Spencer

918-877-8619

ross@tulsa.foreverlawn.com

Receipt of this Addendum will be confirmed by Planning Design Groups via email read receipt.

This Addendum forms a part of the Contract Documents and modifies the original

Bidding Documents advertised on February 21, 2022, in accordance with

PROJECT AND BID SPECIFICATIONS and as noted below.

Acknowledge receipt of this Addendum on the Proposal Form.

Failure to do so may subject the Bidder to disqualification.

This Addendum is a one (1) page Addendum.

End of Addendum #1

REVISED BID FORM 03-17-2022

BASE BID PAY ITEMS

Item	Description	Unit	Quantity	Amount
1	General Conditions/Bonds/Insurance @_____ Dollars	LS (\$_____)	1 =	\$ _____
2	Earthwork-Excavation/Embankment/Compaction/Grading - CIP @_____ Dollars	LS (\$_____)	1 =	\$ _____
3	Demolition - CIP @_____ Dollars	LS (\$_____)	1 =	\$ _____
4	Filter Fabric/Silt Fence - CIP @_____ Dollars	LF (\$_____)	2,000 =	\$ _____
5	Site Electrical Including Lighting - CIP @_____ Dollars	LS (\$_____)	1 =	\$ _____
6	Site Water Line Renovations - CIP @_____ Dollars	LS (\$_____)	1 =	\$ _____
7	Imported Select Fill/Topsoil as Needed - CIP @_____ Dollars	CY (\$_____)	300 =	\$ _____
8	Pond Outlet Structure - CIP @_____ Dollars	LS (\$_____)	1 =	\$ _____
9	Flexamat - CIP @_____ Dollars	SF (\$_____)	124 =	\$ _____
10	Parking Lot - Curb and Gutter - CIP @_____ Dollars	LF (\$_____)	198 =	\$ _____
11	Parking Lot - S4 Asphalt Paving - CIP @_____ Dollars	TONS (\$_____)	30 =	\$ _____
12	Parking Lot - S3 Asphalt Paving - CIP @_____ Dollars	TONS (\$_____)	49 =	\$ _____
13	Parking Lot - Tack Coat Application - CIP @_____ Dollars	GAL (\$_____)	17 =	\$ _____
14	Parking Lot - ODOT Type A - CIP @_____ Dollars	CY (\$_____)	87 =	\$ _____
15	Parking Lot - Striping - CIP @_____ Dollars	LF (\$_____)	320 =	\$ _____
16	4" Thick Concrete Pavement - CIP @_____ Dollars	SF (\$_____)	23,580 =	\$ _____
17	4" Thick Concrete Pavement (Perimeter Trail) - CIP @_____ Dollars	SF (\$_____)	8,927 =	\$ _____
18	Rubberized Safety Surface w/ Concrete Base-CIP @_____ Dollars	SF (\$_____)	12,170 =	\$ _____
19	Synthetic Turf (flat) - CIP @_____ Dollars	SF (\$_____)	13,315 =	\$ _____
20	Synthetic Turf (berm) - CIP @_____ Dollars	SF (\$_____)	4,735 =	\$ _____
21	12' X 12' Shade Structure - CIP @_____ Dollars	EA (\$_____)	5 =	\$ _____
22	16' X 16' Shade Structure - CIP @_____ Dollars	EA (\$_____)	2 =	\$ _____

Item	Description	Unit	Quantity	Amount
23	Architectural Pavilion - CIP @_____ Dollars	EA (\$_____)	1 =	\$_____
24	Restroom Building - CIP @_____ Dollars	LS (\$_____)	1 =	\$_____
25	Cantilevered Shade Structure - CIP @_____ Dollars	EA (\$_____)	1 =	\$_____
26	Large T Type frame Fabric Stucture - CIP @_____ Dollars	EA (\$_____)	1 =	\$_____
27	Playground Equipment with Installation - CIP @_____ Dollars	LS (\$_____)	1 =	\$_____
28	Playground Drainage - CIP @_____ Dollars	LS (\$_____)	1 =	\$_____
29	Pickleball Court (2 Total) - CIP @_____ Dollars	EA (\$_____)	2 =	\$_____
30	Multi-Use Court 60'x94' - CIP @_____ Dollars	EA (\$_____)	1 =	\$_____
31	Basketball Goal - CIP @_____ Dollars	EA (\$_____)	2 =	\$_____
32	Horseshoe Court - CIP (with Synthetic Turf) @_____ Dollars	EA (\$_____)	2 =	\$_____
33	Outdoor Metal Ping Pong Table - CIP @_____ Dollars	EA (\$_____)	2 =	\$_____
34	Stainless Steel Cornhole Boards - CIP (Per Set) @_____ Dollars	EA (\$_____)	2 =	\$_____
35	Jumbo Size Chess/Checker Board - CIP @_____ Dollars	EA (\$_____)	1 =	\$_____
36	1"W. Concrete Curb (For Pickleball Fence) - CIP @_____ Dollars	LF (\$_____)	234 =	\$_____
37	6"W. Concrete Curb - CIP @_____ Dollars	LF (\$_____)	825 =	\$_____
38	Lounge Chairs - CIP @_____ Dollars	EA (\$_____)	12 =	\$_____
39	Square Picnic Tables - CIP @_____ Dollars	EA (\$_____)	11 =	\$_____
40	ADA Sq. Picnic Tables - CIP @_____ Dollars	EA (\$_____)	7 =	\$_____
41	Benches - CIP @_____ Dollars	EA (\$_____)	15 =	\$_____
42	Landscape Stone - CIP @_____ Dollars	EA (\$_____)	22 =	\$_____
43	12' X 12' Fabric Umbrella - CIP @_____ Dollars	EA (\$_____)	9 =	\$_____
44	Trash Receptacles - CIP @_____ Dollars	EA (\$_____)	10 =	\$_____
45	Outdoor Grill - CIP @_____ Dollars	EA (\$_____)	6 =	\$_____

Item	Description		Unit	Quantity	Amount
46	Jumbo Size Park Signage - CIP @_____ Dollars		LS	1	\$ _____
47	Rules Signage - CIP @_____ Dollars		EA	1	\$ _____
48	4'H. Wireworks Plus Fence - CIP @_____ Dollars		LF	1,425	\$ _____
49	Trees - CIP @_____ Dollars		EA	72	\$ _____
50	U-3 Bermuda Solid Sod - CIP @_____ Dollars		SF	60,000	\$ _____
51	Construction Allowance @_____ Dollars		LS	1	\$ 75,000.00
52	8' Long ADA Picnic Tables - CIP @_____ Dollars		EA	8	\$ _____
53	Mexican Feather Grass - CIP (Includes Bed Prep, Mulch, Steel Edging, Etc.) @_____ Dollars		EA	144	\$ _____

TOTAL BASE BID ITEMS _____ **Dollars (\$ _____)**

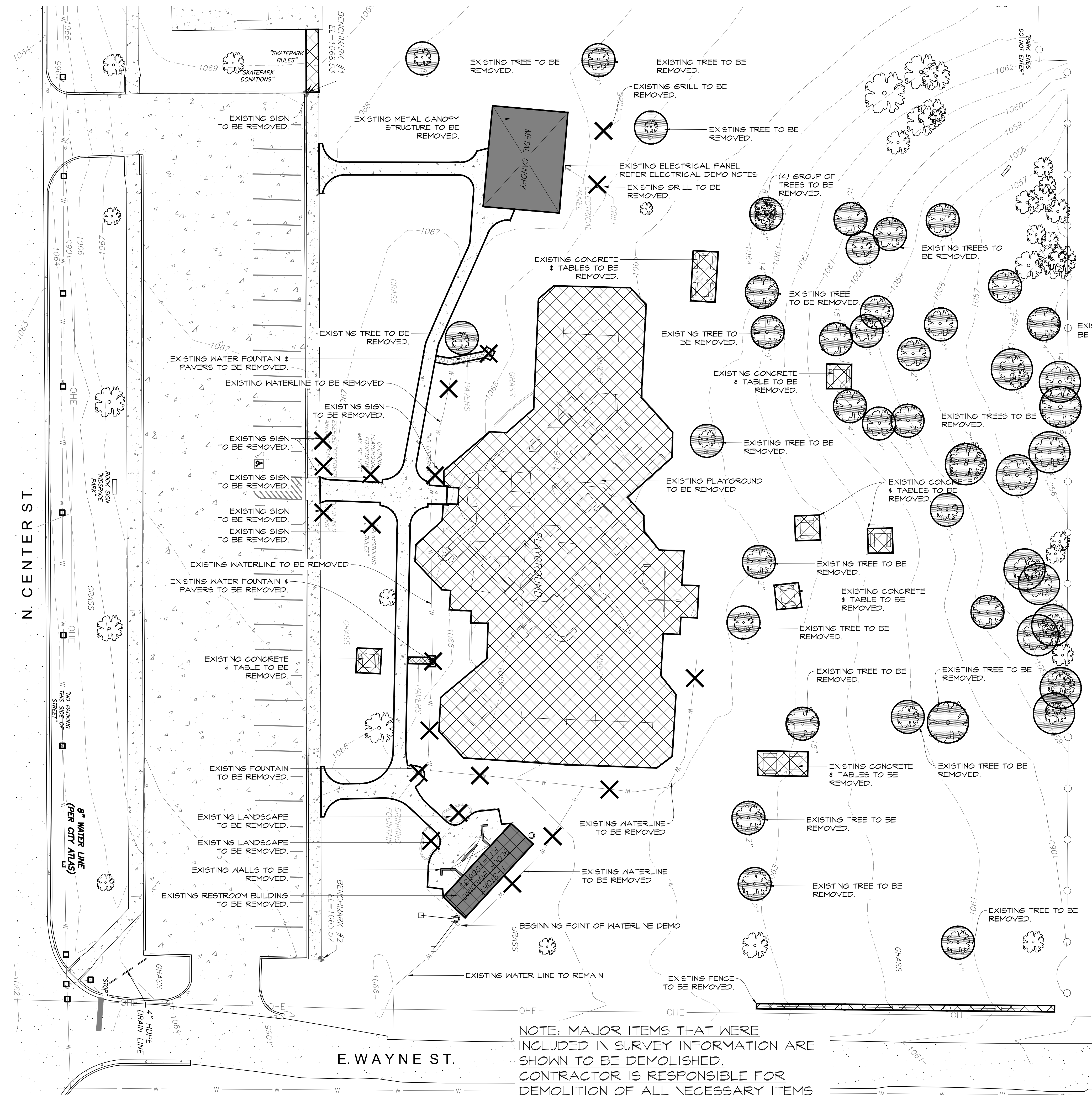
BASE BID PAY ITEMS

Item	Description		Unit	Quantity	Amount
A-1a	Demo and Removal of Existing Fencing - CIP @_____ Dollars		LS	1	\$ _____
A-1b	5' HT Chain Link Fence - CIP @_____ Dollars		LF	1,167	\$ _____
A-2	Basketball Sports Lighting - CIP @_____ Dollars		LS	1	\$ _____
A-3	Pickleball Sports Lighting - CIP @_____ Dollars		LS	1	\$ _____
A-4	Water Fountains w/ Service Line from Meter Location - CIP @_____ Dollars		EA	2	\$ _____

TOTAL ALTERNATE BID ITEMS _____ **Dollars (\$ _____)**

TOTAL BASE & ALTERNATE BID _____ **Dollars (\$ _____)**

CIP = COMPLETE IN PLACE



1 EXISTING CONDITIONS & DEMO - PLAN VIEW
SCALE: 1"=20'-0"

DEMOLITION/CLEARING LEGEND

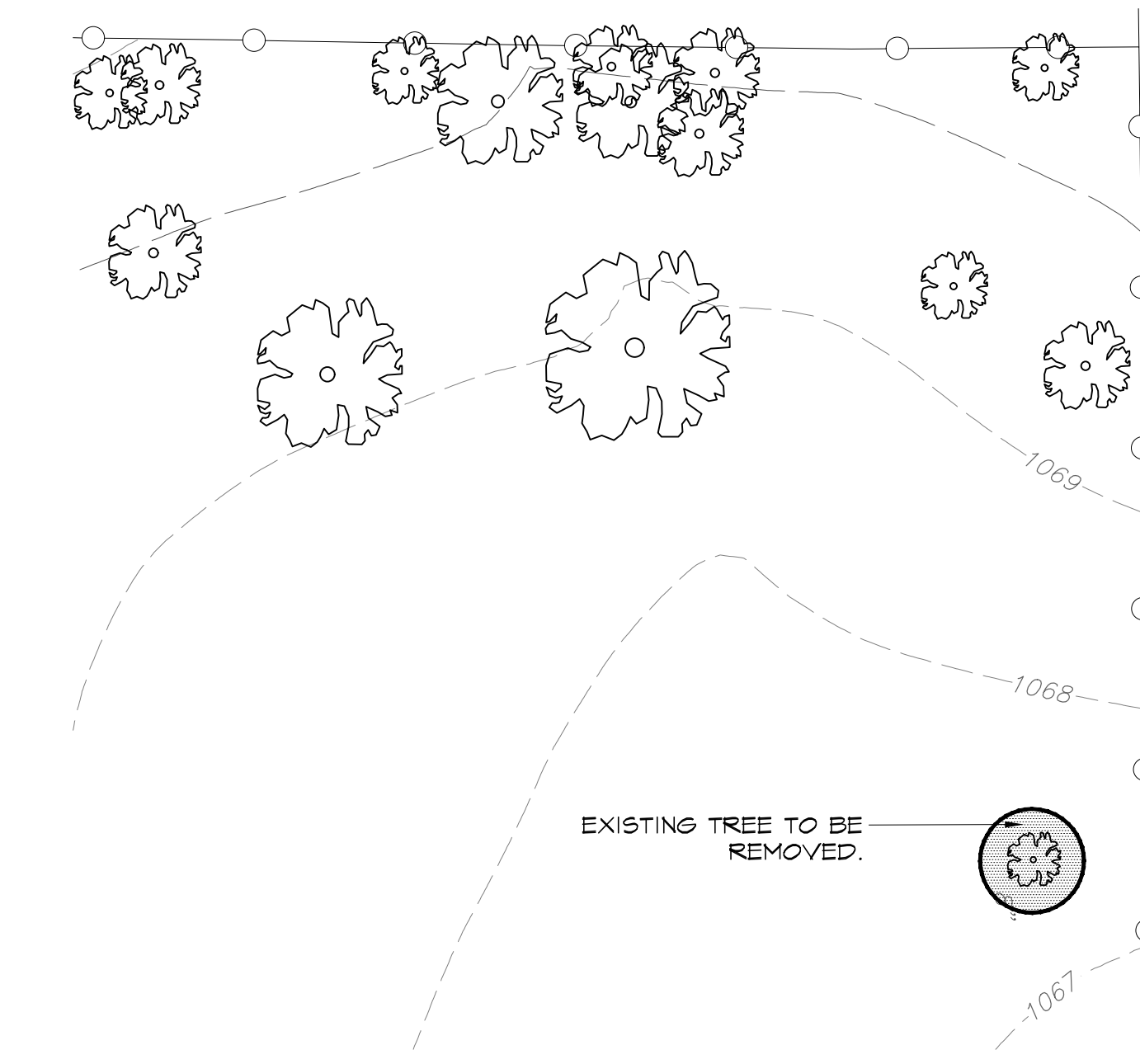
- GENERAL DEMOLITION
- TREE CLEARING
- SITE FURNISHING DEMOLITION

DEMOLITION/CLEARING NOTES

- CONTRACTOR IS TO COORDINATE W/ OWNER AND ARCHITECT PRIOR TO DEMOLITION TO DETERMINE WHICH ITEMS THE OWNER WISHES TO RETAIN AND THE LOCATION THESE ITEMS ARE TO BE DELIVERED TO.
- CONTRACTOR TO CONDUCT A THOROUGH REVIEW OF PROPERTY TO VERIFY ALL ITEMS SHOWN TO BE DEMOLISHED ON THIS SHEET.
- ALL TREES, VEGETATION, TRASH, DEBRIS, CONCRETE, ASPHALT, METAL ITEMS, BLEACHERS AND ALL OTHER MATERIAL ON THIS PROJECT TO BE PROPERLY DEMOLISHED AND REMOVED FROM THIS SITE BY CONTRACTOR AS PER SPECIFICATIONS.
- ALL EXISTING ITEMS THAT ARE TO REMAIN WHICH ARE DAMAGED DURING CONSTRUCTION ARE TO BE RESTORED TO ORIGINAL CONDITIONS. THIS INCLUDES BUT IS NOT LIMITED TO LIGHTS, SIDEWALKS, ASPHALT PAVING, BUILDINGS, CURB & GUTTER, ETC.
- ALL ITEMS WILL BE COMPLETELY REMOVED FROM SITE UNLESS OTHERWISE DIRECTED. NO ITEMS ARE TO BE DEMOLISHED AND LEFT BELOW GRADE.

ELECTRICAL DEMOLITION NOTES

- ALL EXISTING ELECTRICAL WITHIN THE SITE BOUNDARY TO BE DEMOLISHED PER THE FOLLOWING INTENT.
- ELECTRIC UTILITY PROVIDER (OG&E) TO DISCONNECT AND REMOVE ALL ELECTRICAL WIRING FROM ELECTRIC METER BACK TO SOURCE. EXISTING POLE MOUNTED SITE LIGHTING AT KIDS SPACE PARK IS THE PROPERTY OF OG&E. EXISTING SITE LIGHTING WILL NO LONGER BE UTILIZED AS PART OF NEW DESIGN. CONTRACTOR TO COORDINATE WITH UTILITY TO HAVE REMOVED. CONTRACTOR MAY CHOOSE TO UTILIZE SOME OF THE INSTALLED LIGHTING AS SECURITY LIGHTING UNTIL SUCH TIME IT IS REPLACED WITH NEW.
- ALL REMAINING ELECTRICAL WIRING AND EQUIPMENT WHICH IS NOT THE PROPERTY OF OG&E SHALL BE DEMOLISHED BY CONTRACTOR. UNDERGROUND ELECTRIC SHALL BE MADE SAFE AND ABANDONED IN PLACE. ALL ABANDONED ELECTRICAL ENCOUNTERED DURING RE-GRADING OR EXCAVATION OF THE SITE SHALL BE DEMOLISHED.



2 EXISTING CONDITIONS & DEMO - NORTHEAST AREA
SCALE: 1"=20'-0"

DUTY OF COOPERATION

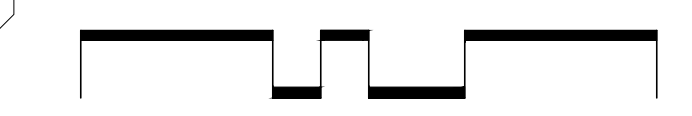
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BASE INFORMATION

ALL BASE INFORMATION INCLUDING EXISTING DRAINAGE HAYS, EXISTING CONTOURS, EXISTING VEGETATION, EXISTING STRUCTURES AND STREETS WERE PROVIDED TO PLANNING DESIGN GROUP BASED FROM DATA COLLECTED BY BENCHMARK SURVEYING & LAND SERVICES, INC.

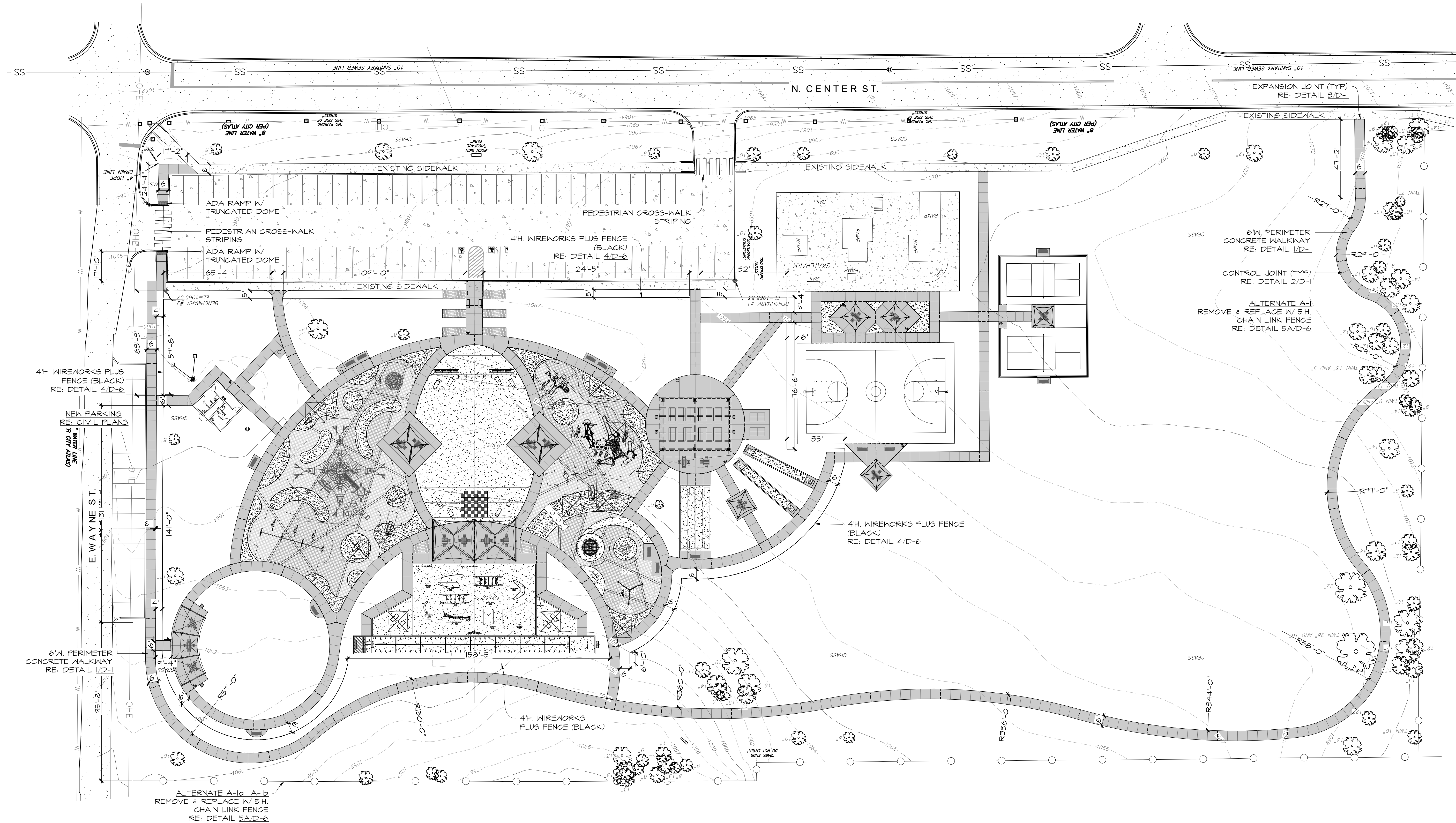


PROJECT INFORMATION	
PROJECT ADDRESS:	
S. CENTER ST. SHAWNEE, OKLAHOMA 74801	
PROJECT NO.	N/A
DATE	02/21/22
DRAWN BY	CHECKED BY
MC	GE

KIDS SPACE PARK SHAWNEE, OKLAHOMA DEMOLITION PLAN

ISSUE/ REVISIONS	
02/21/22	FINAL ISSUED SET
03/17/22	REVISED SHEET

OWNER:
CITY OF SHAWNEE
City Hall
16 West 9th St.
Shawnee, OK 74801
OFFICE: (405) 878-1760



1 PERIMETER TRAIL SITE PLAN - PLAN VIEW
SCALE: 1"=30'-0"

EXPANSION & CONTROL JOINT NOTE

- CONTRACTOR SHALL MOCK UP A CONTROL & EXPANSION JOINT LAYOUT PATTERN AND SUBMIT IT FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION FOR APPROVAL.

LAYOUT NOTES

- ALL DIMENSIONS GIVEN ARE HORIZONTAL.
- LANDSCAPE ARCHITECT TO APPROVE FINAL LAYOUT OF WALL FEATURES.
- CONTRACTOR TO GAIN APPROVAL OF OWNER OR LANDSCAPE ARCHITECT BEFORE ANY DIGGING TAKES PLACE.
- REFER TO PROJECT DETAILS FOR SPECIFICATIONS, MATERIALS, AND CONSTRUCTION DETAILS.
- ASSUME ALL DIMENSIONS TO BE GIVEN AT RIGHT ANGLES UNLESS OTHERWISE NOTED ON PLAN.
- SURVEYOR TO CALCULATE COORDINATES AND STAKE THE LAYOUT OF WALLS AND COLUMNS FOR SUB-CONTRACTOR.

DUTY OF COOPERATION

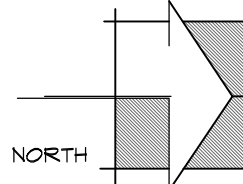
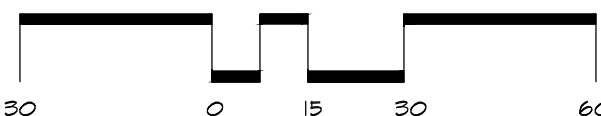
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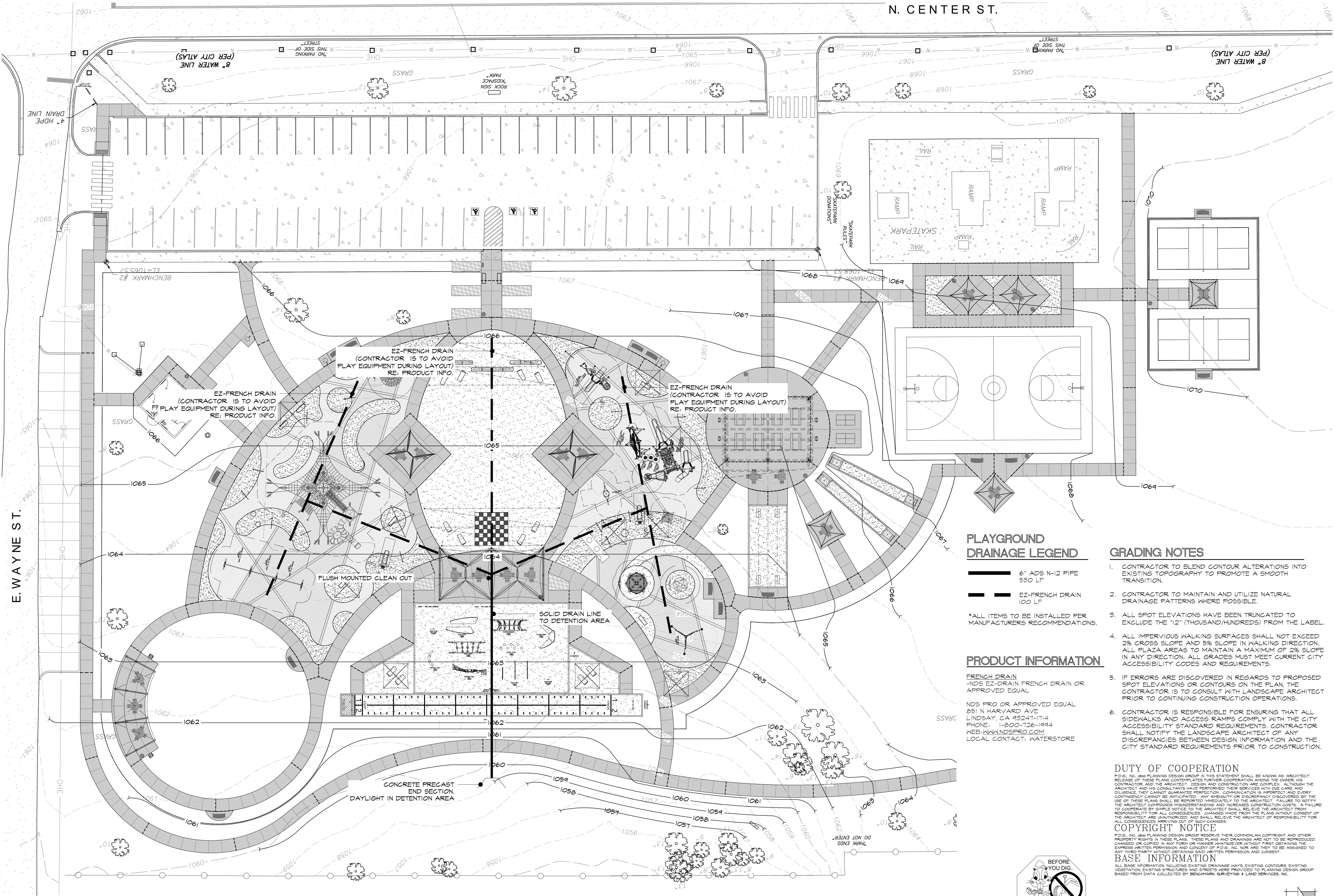


PROJECT INFORMATION	
PROJECT ADDRESS:	
S. CENTER ST. SHAWNEE, OKLAHOMA 74801	
PROJECT NO.	N/A
DATE	02/21/22
DRAWN BY	CHECKED BY
MC	GE

KIDS SPACE PARK SHAWNEE, OKLAHOMA PERIMETER TRAIL SITE PLAN

ISSUE/ REVISIONS	
02/21/22	FINAL ISSUED SET
03/17/22	REVISED SHEET

OWNER:
CITY OF SHAWNEE
City Hall
16 West 9th St.
Shawnee, OK 74801
OFFICE: (405) 878-1780



PLAYGROUND DRAINAGE LEGEND

- 6" ADS N-12 PIPE 530 LF
- EZ-FRENCH DRAIN 100 LF

*ALL ITEMS TO BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS.

PRODUCT INFORMATION

FRENCH DRAIN
-NDS EZ-DRAIN FRENCH DRAIN OR APPROVED EQUAL

NDS PRO OR APPROVED EQUAL
851 N HARVARD AVE
LINDSAY, CA 95241-1114
PHONE: 1-800-126-1994
WEB: WWW.NDSPRO.COM
LOCAL CONTACT: WATERSTORE

GRADING NOTES

- CONTRACTOR TO BLEND CONTOUR ALTERATIONS INTO EXISTING TOPOGRAPHY TO PROMOTE A SMOOTH TRANSITION.
- CONTRACTOR TO MAINTAIN AND UTILIZE NATURAL DRAINAGE PATTERNS WHERE POSSIBLE.
- ALL SPOT ELEVATIONS HAVE BEEN TRUNCATED TO EXCLUDE THE '12' (THOUSAND/HUNDREDS) FROM THE LABEL.
- ALL IMPERVIOUS WALKING SURFACES SHALL NOT EXCEED 2% CROSS SLOPE AND 5% SLOPE IN WALKING DIRECTION. ALL PLAZA AREAS TO MAINTAIN A MAXIMUM OF 2% SLOPE IN ANY DIRECTION. ALL GRADES MUST MEET CURRENT CITY ACCESSIBILITY CODES AND REQUIREMENTS.
- IF ERRORS ARE DISCOVERED IN REGARDS TO PROPOSED SPOT ELEVATIONS OR CONTOURS ON THE PLAN, THE CONTRACTOR IS TO CONSULT WITH LANDSCAPE ARCHITECT PRIOR TO CONTINUING CONSTRUCTION OPERATIONS.
- CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL SIDEWALKS AND ACCESS RAMPS COMPLY WITH THE CITY ACCESSIBILITY STANDARD REQUIREMENTS. CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES BETWEEN DESIGN INFORMATION AND THE CITY STANDARD REQUIREMENTS PRIOR TO CONSTRUCTION.

DUTY OF COOPERATION

P.D.G., INC. AND PLANNING DESIGN GROUP IN THIS STATEMENT SHALL BE KNOWN AS ARCHITECT. RELEASE OF THESE PLANS CONTEMPLATES FURTHER COOPERATION AMONG THE OWNER, HIS CONTRACTOR AND THE ARCHITECT. DESIGN AND CONSTRUCTION ARE COMPLEX. ALTHOUGH THE ARCHITECT AND HIS CONSULTANTS HAVE PERFORMED THEIR SERVICES WITH DUE CARE AND DILIGENCE, THEY CANNOT GUARANTEE PERFECTION. COOPERATION IS IMPERFECT AND EVERY CONTINGENCY CANNOT BE ANTICIPATED. ANY AMBIGUITY OR DISCREPANCY DISCOVERED BY THE USE OF THESE PLANS SHALL BE REPORTED IMMEDIATELY TO THE ARCHITECT. FAILURE TO NOTIFY THE ARCHITECT CONSTITUTES MISUNDERSTANDING AND INCREASES CONSTRUCTION COSTS. A FAILURE TO COOPERATE BY SIMPLE NOTICE TO THE ARCHITECT SHALL RELIEVE THE ARCHITECT FROM RESPONSIBILITY FOR ALL CONSEQUENCES. CHANGES MADE FROM THE PLANS WITHOUT CONSENT OF THE ARCHITECT ARE UNAUTHORIZED AND SHALL RELIEVE THE ARCHITECT OF RESPONSIBILITY FOR ALL CONSEQUENCES ARISING OUT OF SUCH CHANGES.

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BASE INFORMATION

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PDG
PLANNING DESIGN GROUP
LANDSCAPE ARCHITECTURE •
RECREATIONAL DESIGN • LAND PLANNING
5314 S. YALE AVE., SUITE 110, TULSA, OK 74135
918.628.1255 918.628.1256 FAX
WWW.PLANNINGDESIGNGROUP.COM

03-17-22

JAMES C. CROSBY, ASLA
LANDSCAPE ARCHITECT OF RECORD

PROJECT INFORMATION	
PROJECT ADDRESS:	
S. CENTER ST. SHAWNEE, OKLAHOMA 74801	
PROJECT NO.	N/A
DATE	02/21/22
DRAWN BY	CHECKED BY
MC	GE

**KIDS SPACE PARK
SHAWNEE, OKLAHOMA**

ISSUE/ REVISIONS	
02/21/22	FINAL ISSUED SET
03/17/22	ADDENDUM #1

OWNER:
CITY OF SHAWNEE
City Hall
16 West 9th St.
Shawnee, OK 74801
OFFICE: (405) 878-1780

AD-1
ADDENDUM #1
PLAYGROUND DRAINAGE



Shawnee Kids Space

1162554-01-02-01 • 03.15.2022





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landscape
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Shawnee Kids Space

1162554-01-02-08 • 03.15.2022

acs
playground
adventures

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Shawnee Kids Space

1162554-01-02-04 • 03.15.2022



**ADDENDUM NUMBER TWO
TO
CONTRACT DOCUMENTS AND SPECIFICATIONS
FOR
KIDS SPACE PARK IMPROVEMENTS**

Dated: March 17, 2022

The following changes, clarifications and/or additions are hereby made a part of the contract documents for the construction of this project, as fully and completely as if the same were originally included therein, and shall supersede anything contained in the plans and specifications with which it might conflict.

1. PROJECT ADDRESS:

Ignore Address in Addendum #1. This The project is located at N. Center Ave. and E. Wayne St., in Shawnee, OK.

2. PLAYGROUND ELEMENTS:

- a. The approved equal, LSI Playgrounds, is approved for all play pieces except the Challenge Course and the 40 Yard Dash Timing System.

Receipt of this Addendum will be confirmed by Planning Design Groups via email read receipt.

This Addendum forms a part of the Contract Documents and modifies the original Bidding Documents advertised on February 21, 2022, in accordance with PROJECT AND BID SPECIFICATIONS and as noted below.

Acknowledge receipt of this Addendum on the Proposal Form.

Failure to do so may subject the Bidder to disqualification.

This Addendum is a one (1) page Addendum.

End of Addendum #2

Regular Board of Commissioners**13.**

Meeting Date: 03/21/2022

Sales Tax and Budget Reports

Submitted By: Kacie Eck, City Clerk

Department: City Clerk

Information

Title of Item for Agenda

Acknowledge monthly Sales Tax and Budget Reports.

Attachments

Sales Tax Report

Budget Report



Finance Department
16 W. 9th St.
Shawnee, OK 74801
ShawneeOK.org

Date: March 21, 2022
To: City Commission
From: Jacob Bussell, Assistant Finance Director
Subject: March Sales and Use Tax Deposit

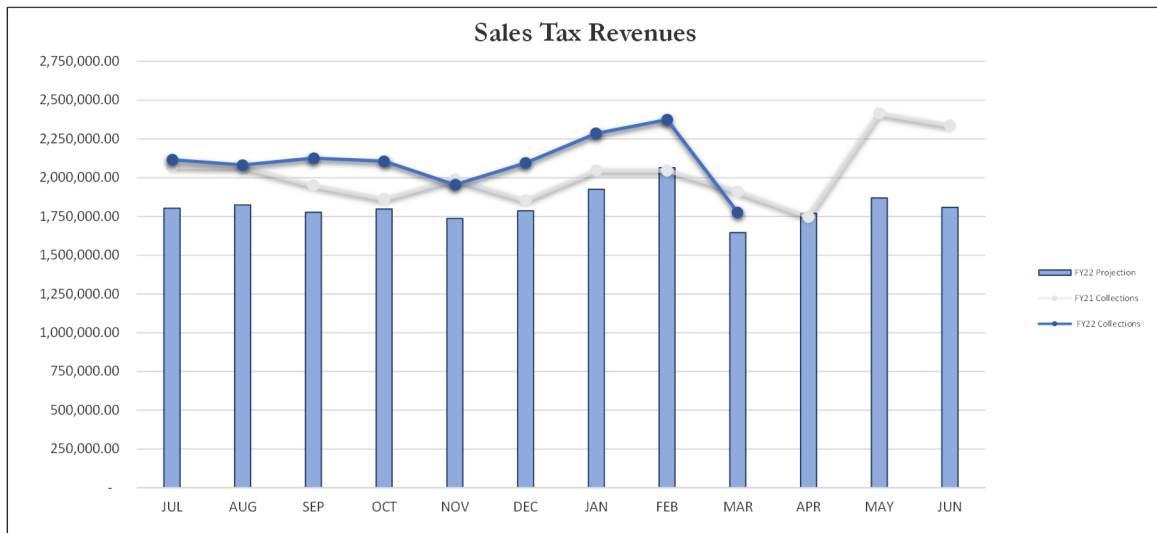
Background: The Oklahoma Tax Commission (the “OTC”) collects and enforces collection of sales and use taxes, including special earmarked taxes such as alcohol and tobacco, for the entities responsible for remitting taxes to the City of Shawnee. Entities with monthly tax liabilities exceeding \$2,500 are required to remit tax estimates each month by the 20th; in addition, entities are required to report their final tax collections for the previous month along with a final payment of taxes for the previous month on the 20th. To summarize, tax collections remitted to the City of Shawnee by the OTC in March consists of February estimates and January final reported collections. Any taxes collected for months prior to January will include accrued late penalties and interest.

- Sales Tax Collection Allocated by Fund - The March sales tax deposit was \$1,775,758.09, including interest of \$725.16, to be allocated as follows:

<u>Fund</u>	<u>Allocation</u>
General Fund	\$ 1,014,718.92
2018 Capital Improvements Fund	253,679.72
Capital Improvements Fund	196,601.80
Street Improvements Fund	221,969.75
Economic Development Fund	25,367.98
Police Sales Tax Fund	31,709.96
Fire Sales Tax Fund	<u>31,709.96</u>
 Total Sales Taxes Collected	 <u><u>\$ 1,775,758.09</u></u>

- Finance Department Report - Sales and use tax collections totaled \$2,011,796.13 for March 2022. It should be noted the current sales tax estimate for FY 21-22 is based on a 2% increase compared to the prior year budget. For the year, sales tax collections are up \$2,553,466 or 15.60%, over the projected budget year-to-date. Use tax collections are up approximately \$538,683, or 28.95%, over the projected budget year-to-date.

○ Fiscal Year 2022 Sales Tax Collections and Performance:

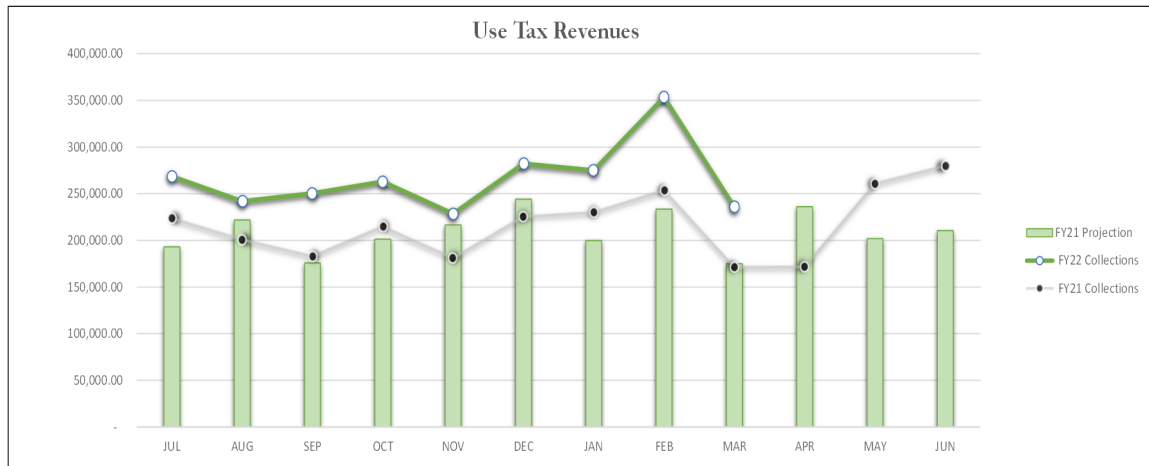


	Projected Budget	Actual	Amount Variance	Percentage Variance
Sales Tax Receipts (March 2022):	\$ 1,646,179	\$ 1,775,758	\$ 129,579	7.87%
Sales Tax Receipts (year-to-date):	\$ 16,363,380	\$ 18,916,846	\$ 2,553,466	15.60%

	February 2021	February 2022	Amount Variance	Percentage Variance
Sales Tax Receipts (vs Prior Year):	\$ 1,910,272	\$ 1,775,758	\$ (134,514)	-7.04%

	Year To Date FY 2021	Year To Date FY 2022	Amount Variance	Percentage Variance
Sales Tax Receipts (vs Prior Year):	\$ 17,801,960	\$ 18,916,846	\$ 1,114,886	6.26%

○ Fiscal Year 2022 Use Tax Collections and Performance:



	Projected Budget	Actual	Amount Variance	Percentage Variance
Use Tax Receipts (March 2022):	\$ 174,971	\$ 236,038	\$ 61,067	34.90%
Use Tax Receipts (year-to-date):	\$ 1,860,602	\$ 2,399,285	\$ 538,683	28.95%

	February 2021	February 2022	Amount Variance	Percentage Variance
Use Tax Receipts (vs Prior Year):	\$ 171,287	\$ 236,038	\$ 64,751	37.80%

	Year To Date FY 2021	Year To Date FY 2022	Amount Variance	Percentage Variance
Use Tax Receipts (vs Prior Year):	\$ 1,883,524	\$ 2,399,285	\$ 515,761	27.38%

○ Fiscal Year 2022 – Sales & Use Tax – Above Projections:

Sale & Use Tax - Above Projections (year to date): \$ 1,695,162

Appropriated:

- COLA - Step & Grade \$ (243,525)
 - Police & Fire Contracts, Com. Dev. Dept. Adj. \$ (674,212)

Unappropriated:

\$ 777,425

How to Navigate the City of Shawnee's Online Budget to Actuals

This year, the City of Shawnee implemented OpenGov which allows for an interactive experience with the city's budget. The Budget to Actuals report is laid out in four sections: Revenue vs Expenditure Summary YTD, Revenue by Source, Breakdown by Account Group, and Breakdown by Department.

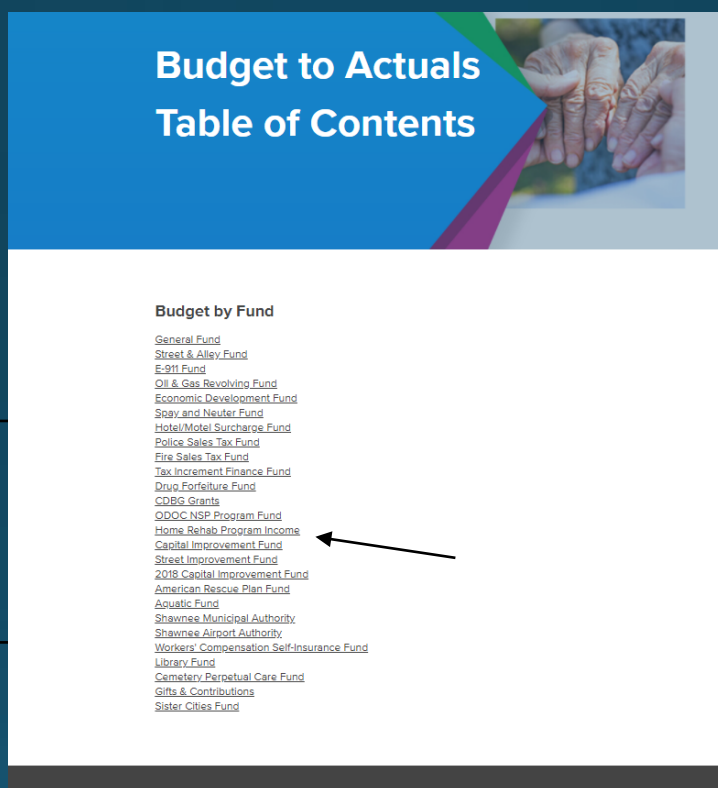
Please Note: *OpenGov works best with Google Chrome.*

Table of Contents

The link below will take you to the City of Shawnee Online Budget to Actuals.

<https://stories.opengov.com/shawneeok/published/u84NCy36R>

The first thing which appears is the Table of Contents. This page contains links to each fund. You may look at the desired budget by clicking on the hyperlink.

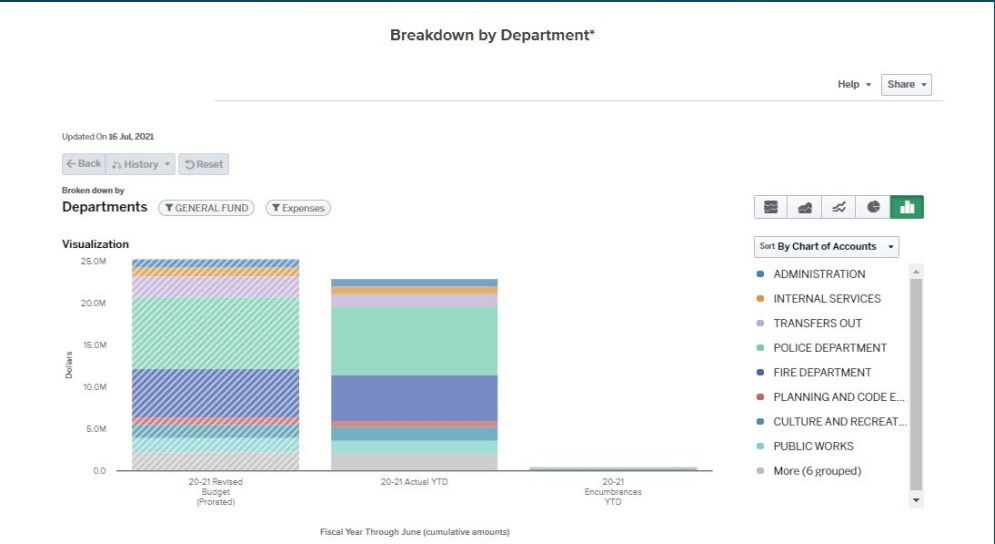


OpenGov comes with many features. The next two pages outline some of the basics of clicking through an OpenGov budget to actuals page.

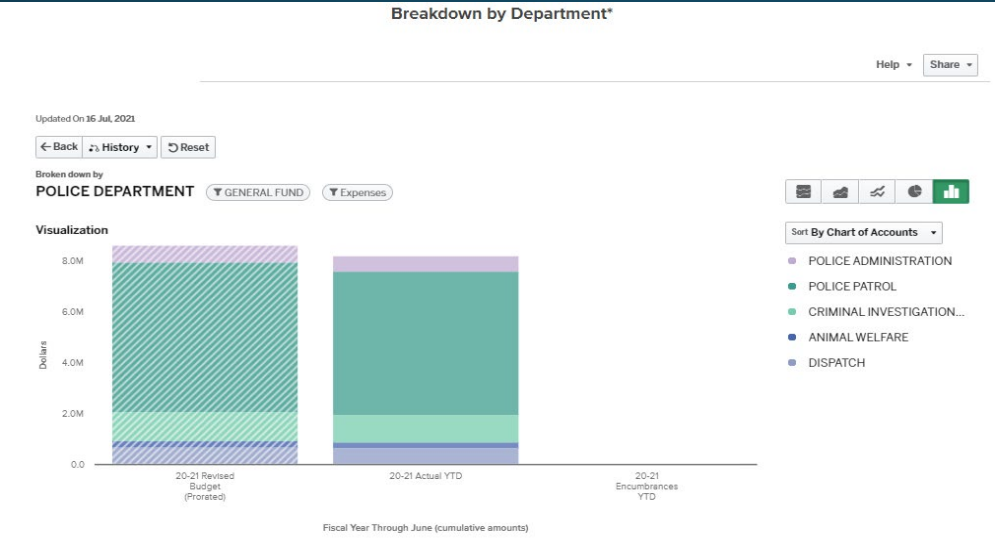
Drill-Down Capabilities

Certain graphs are dynamic and can be used to drill-down. For example, the General Fund Breakdown by Department can be limited to certain divisions. This is done by clicking on the portion of the graph which is of interest.

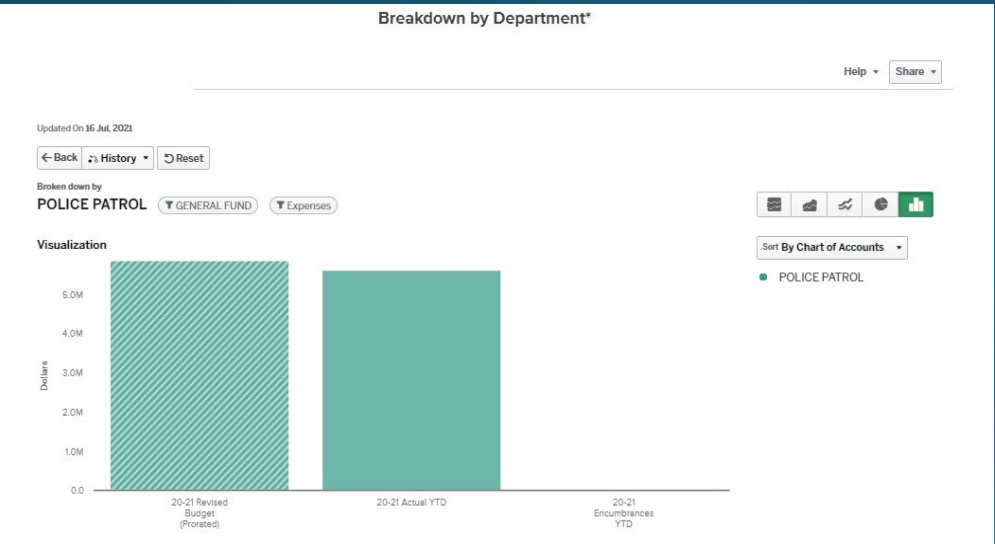
Initial View



Department Level

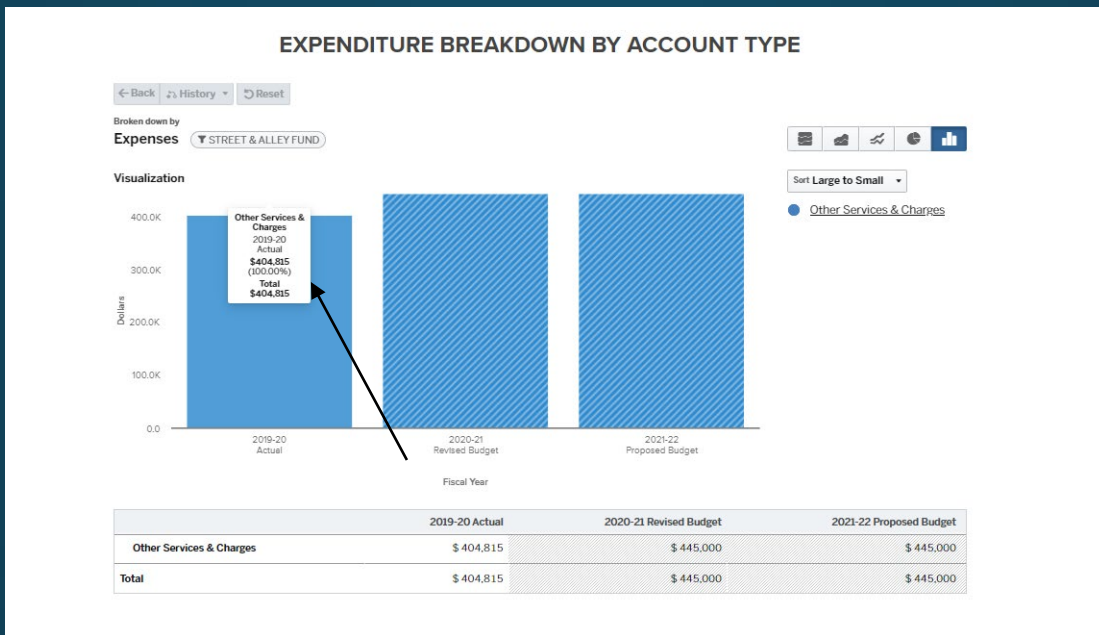


Division Level



Hovering to View Numbers

Hovering over each portion of a bar graph will show you the amount of a particular item.



Sorting

Graphs may be sorted four ways:

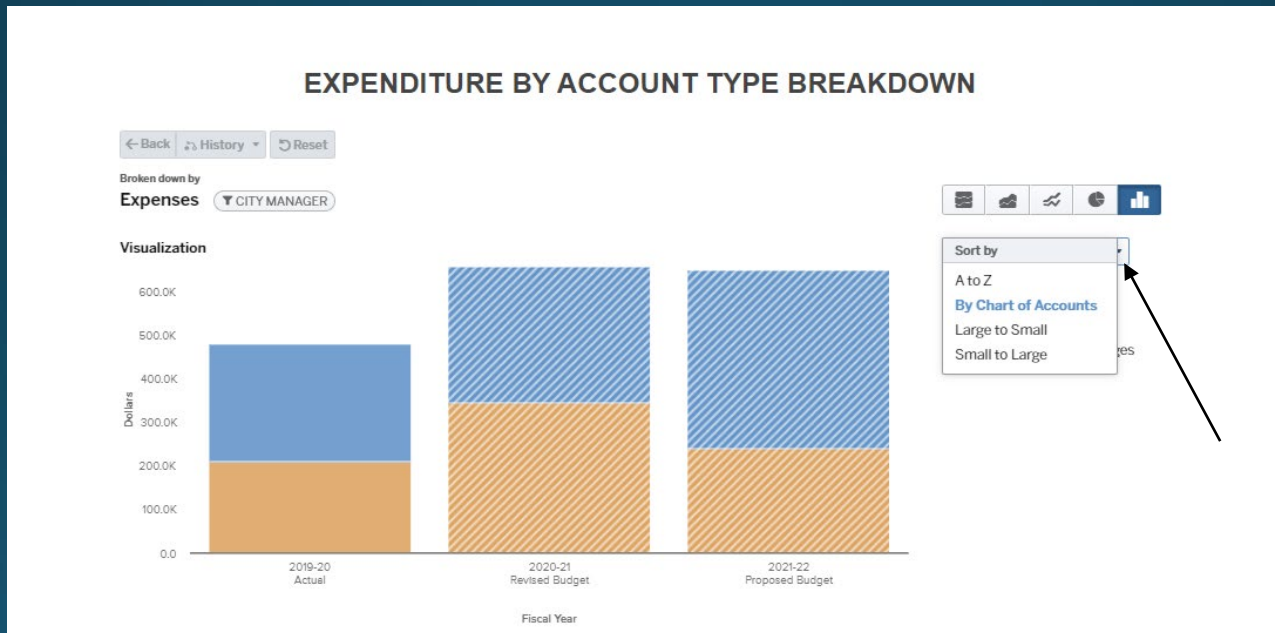
A to Z

Chart of Accounts

Smallest to Largest

Largest to Smallest

To use this feature, please use the Sort By dropdown on the top right-hand corner of the graph.



Please Note: OpenGov information updates daily with current accounting records, and therefore, is subject to change if viewed subsequent to the original presentation date.