Prosper is a place where everyone matters.

Agenda

Prosper Town Council Meeting
Council Chambers
Prosper Town Hall
250 W. First Street, Prosper, Texas
Tuesday, March 23, 2021
5:45 PM

Notice Regarding Public Participation

Governor Greg Abbott has granted a temporary suspension of certain rules to allow for telephone or videoconference public meetings in an effort to reduce in-person meetings that assemble large groups of people, due to the COVID-19 public health emergency.

Individuals may attend the Prosper Town Council meeting in person, or access the meeting via videoconference, or telephone conference call.

Join the Zoom Meeting by clicking on the following link:
https://us02web.zoom.us/j/87047432329

Enter Meeting ID: 87047432329

To request to speak, click on "Participants" at the bottom of the screen, and click "Raise Hand." The meeting moderator will acknowledge your request and allow you to speak.

To join the meeting by phone, dial (346) 248-7799

Enter Meeting ID: 87047432329

To request to speak, enter *9, and *6 to mute/unmute yourself. The meeting moderator will acknowledge your request and allow you to speak.

If you encounter any problems joining or participating in the meeting, please call our help line at 972-569-1191 for assistance.

Call to Order/ Roll Call.

Invocation, Pledge of Allegiance and Pledge to the Texas Flag.

Announcements of recent and upcoming events.

Discussion Items.

1. Discuss and give staff direction on location of Honor Walls. **(DR)**

CONSENT AGENDA:
Items placed on the Consent Agenda are considered routine in nature and non-controversial. The Consent Agenda can be acted upon in one motion. Items may be removed from the Consent Agenda by the request of Council Members or staff.

2. Consider and act upon the minutes from the March 9, 2021, Town Council Meeting. **(ML)**

3. Consider and act upon awarding CSP No. 2021-22-B to Ratliff Hardscape, Ltd, related to construction services for the Hays Park Project (1802-PK); and authorizing the Town Manager to execute a construction agreement for same. **(DR)**

4. Consider and act upon authorizing the Town Manager to execute a Professional Services Agreement between Garver, LLC, and the Town of Prosper, Texas, related to the sizing and timing of detention pond alternatives downstream of the BNSF Railroad. **(HW)**

CITIZEN COMMENTS:

The public is invited to address the Council on any topic. However, the Council is unable to discuss or take action on any topic not listed on this agenda. Please complete a "Public Meeting Appearance Card" and present it to the Town Secretary prior to the meeting, or request to address the Council via videoconference or telephone.

REGULAR AGENDA:

Pursuant to Section 551.007 of the Texas Government Code, individuals wishing to address the Council for items listed as public hearings will be recognized when the public hearing is opened. For individuals wishing to speak on a non-public hearing item, they may either address the Council during the Citizen Comments portion of the meeting or when the item is considered by the Town Council.

Items for Individual Consideration:

5. Consider and act upon a resolution accepting the Independent Audit Report and Comprehensive Annual Financial Report for the Fiscal Year Ended September 30, 2020, as presented by a representative of Pattillo, Brown and Hill LLP., Certified Public Accountants. **(BP)**

6. Consider and act upon an ordinance amending Ordinance No. 2020-71 (FY 2020-2021 Budget). **(BP)**

EXECUTIVE SESSION:

Recess into Closed Session in compliance with Section 551.001 et seq. Texas Government Code, as authorized by the Texas Open Meetings Act, to deliberate regarding:

Section 551.087 – To discuss and consider economic development incentives.

Section 551.072 – To discuss and consider purchase, exchange, lease or value of real property for municipal purposes and all matters incident and related thereto.

Section 551.074 - To discuss and consider personnel matters and all matters incident and related thereto.

Section 551.074 - To discuss appointments to the Board of Adjustment/Construction Board of Appeals, Parks & Recreation Board, Library Board, Prosper Economic Development Corporation Board, and Planning & Zoning Commission.

Reconvene in Regular Session and take any action necessary as a result of the Closed Session.

Possibly direct Town staff to schedule topic(s) for discussion at a future meeting.

7. Winter Storm Debrief **(HJ)**

8. Prosper Ladera Planned Development Rezoning Discussion. **(RZ)**

Adjourn.

CERTIFICATION

I, the undersigned authority, do hereby certify that this Notice of Meeting was posted at Prosper Town Hall, located at 250 W. First Street, Prosper, Texas 75078, a place convenient and readily accessible to the general public at all times, and said Notice was posted by 5:00 p.m., on Friday, March 19, 2021, and remained so posted at least 72 hours before said meeting was convened.

_____ _____

Melissa Lee, Town Secretary Date Notice Removed

Pursuant to Section 551.071 of the Texas Government Code, the Town Council reserves the right to consult in closed session with its attorney and to receive legal advice regarding any item listed on this agenda.

NOTICE

Pursuant to Town of Prosper Ordinance No. 13-63, all speakers other than Town of Prosper staff are limited to three (3) minutes per person, per item, which may be extended for an additional two (2) minutes with approval of a majority vote of the Town Council.

NOTICE OF ASSISTANCE AT PUBLIC MEETINGS: The Prosper Town Council meetings are wheelchair accessible. For special services or assistance, please contact the Town Secretary's Office at (972) 569-1011 at least 48 hours prior to the meeting time.

TOWN OF PROSPER

Prosper is a place where everyone matters.

Parks and Recreation Department

To: **Mayor and Town Council**

From: **Dudley Raymond, Parks and Recreation Department**

Through: **Harlan Jefferson, Town Manager**
Robyn Battle, Executive Director of Community Services

Re: **Town Council Meeting – March 23, 2021**

Agenda Item:

Discuss and give staff direction on location of Honor Walls.

Description of Agenda Item:

At the April 14, 2020, Town Council meeting, Council discussed the desired location for the Honor Wall at Town Hall. A consensus was not reached as to the desired location and Council placed the project on hold. The attached sketches illustrate the two locations discussed in the past with staff and Council.

The sketches are schematic in nature and will be refined once the location has been determined. The amount of landscaping and paving near the Walls shown on the sketches has not been designed and will likely change.

Option One places the Honor Walls slightly off the sidewalk adjacent to the parking lot on the north side of the building.

- It allows paved access to the Honor Walls.
- It allows people to gather on the sidewalk or a crowd can spill onto the parking spaces if there was a gathering. The curb could pose a tripping hazard for those not paying attention during a gathering,
- The paving could be reduced to allow for landscaping around the walls.

Option Two places the Honor Walls within the planter islands flanking the main walk on the north side of the building.

- The Honor Walls would be within the landscape beds. Plants would be chosen so as to not block the Walls.
- The Walls would not have paving adjacent to them.
- People could gather on the sidewalk adjacent to the planter, and/or spill onto the parking lot if there was a gathering. The concern for people tripping on a curb during a gathering would be less than option one.

- It would require removal of existing landscaping. At this point it is unknown if the trees would need to be removed.

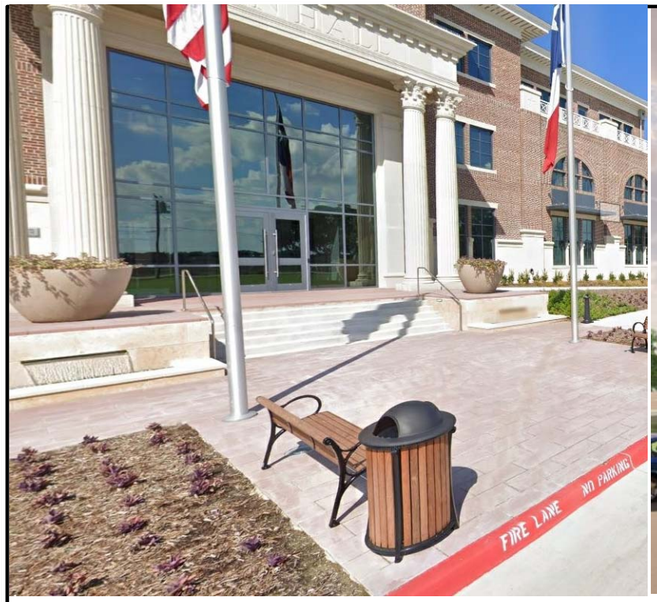
Staff is seeking direction on the preferred location of the Honor Walls.

Budget Impact:

This item was approved in the amended FY 2020-21 Budget in the amount of $90,000 and will be funded from the 100-6610-10-99 account.

Attached Documents:

1. Option 1
2. Option 2



PAVER EXAMPLE

RENDERING

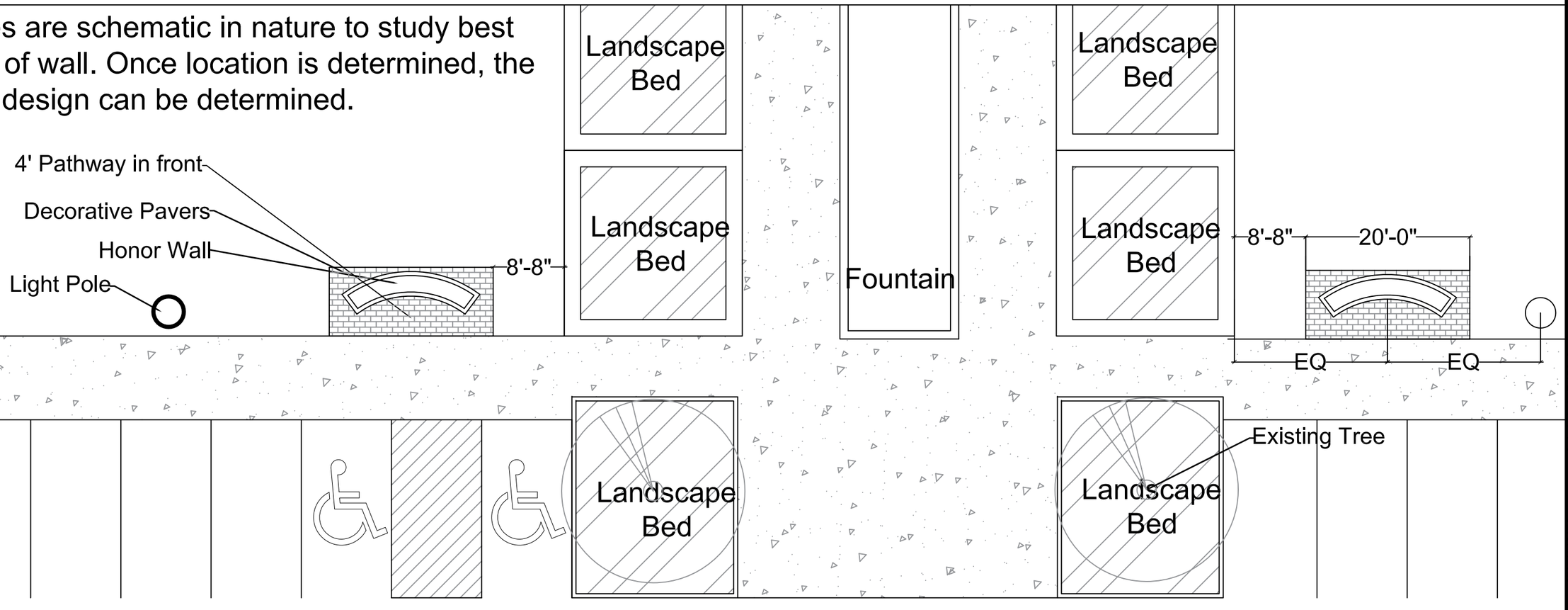
N

SCALE: 1 INCH EQUALS 30 FEET

DEPARTMENT
PLANNING AND DEVELOPMENT
DIVISION

3-9-21

Sketches are schematic in nature to study best location of wall. Once location is determined, the specific design can be determined.



Town Hall
Honor Wall Layout #1

PROSPER PARKS AND RECREATION

REVISIONS

NO.	DATE	DESCRIPTION
1		

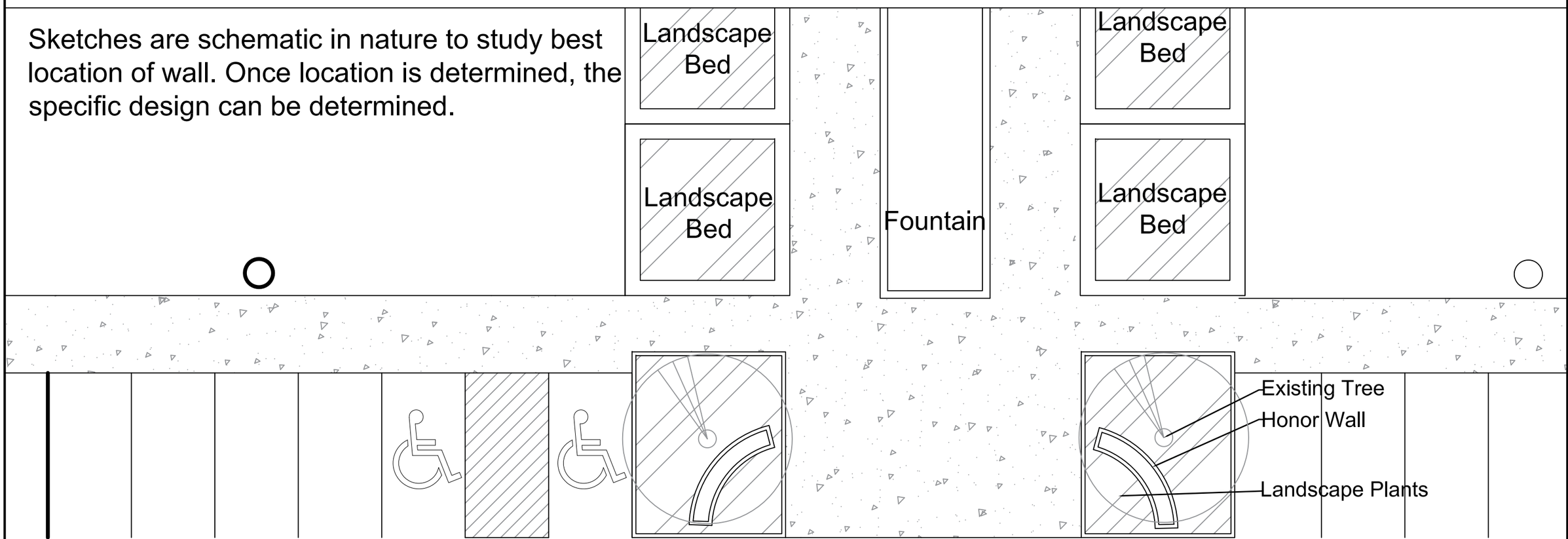
SHEET TITLE:
SITE PLAN

DRAWN BY: P.S.
CHECKED BY: P.N.
SCALE: 1" = 30'-0"
DATE: 01-5-20
PROJECT NO.:
SHEET NO.:

RENDERING

SCALE: 1 INCH EQUALS 30 FEET

Sketches are schematic in nature to study best location of wall. Once location is determined, the specific design can be determined.



DEPARTMENT
PLANNING AND DEVELOPMENT
DIVISION

3-9-21

Town Hall
Honor Wall Layout #2

PROSPER PARKS AND RECREATION

REVISIONS

NO.	DATE	DESCRIPTION

SHEET TITLE:

SITE PLAN

DRAWN BY: P.S.
CHECKED BY: P.N.
SCALE: 1" = 30'-0"
DATE: 01-5-20
PROJECT NO.:
SHEET NO.:

Prosper is a place where everyone matters.

Minutes

Prosper Town Council Meeting
Council Chambers
Prosper Town Hall
250 W. First Street, Prosper, Texas
Tuesday, March 09, 2021

Call to Order/ Roll Call.

The meeting was called to order at 5:45 p.m.

Council Members Present:
Mayor Ray Smith
Mayor Pro-Tem Jason Dixon
Councilmember Marcus E. Ray
Councilmember Amy Bartley
Councilmember Jeff Hodges
Councilmember Meigs Miller

Council Members Absent:
Deputy Mayor Pro-Tem Craig Andres

Staff Members Present:
Harlan Jefferson, Town Manager
Terry Welch, Town Attorney
Melissa Lee, Town Secretary
Robyn Battle, Executive Director of Community Services
Chuck Springer, Executive Director of Administrative Services
Betty Pamplin, Finance Director
January Cook, Purchasing Manager
Rebecca Zook, Executive Director of Development & Infrastructure Services
Khara Dodds, Development Services Director
Hulon Webb, Engineering Services Director
Dan Heischman, Assistant Director of Engineering Services - Development
Alex Glushko, Planning Manager
Frank Jaromin, Director of Public Works
Leigh Johnson, Director of Information Technology
Dudley Raymond, Director of Parks and Recreation
Doug Kowalski, Police Chief
Stuart Blasingame, Fire Chief

Invocation, Pledge of Allegiance and Pledge to the Texas Flag.
Pastor Jim Lugar, Life Journey Church, led the invocation. The Pledge of Allegiance and the Pledge to the Texas Flag were recited.

Announcements of recent and upcoming events.
Councilmember Bartley read the announcements.

The Town Council would like to express our gratitude to Prosper ISD for their assistance during the recent winter storm. Freezing conditions and icy roads caused several local gas stations to

run low on fuel. Prosper ISD transportation staff allowed Fire Department vehicles to refuel at PISD's main fueling station, and also opened the Rock Hill location for first responders only. Thanks to their generous assistance, Prosper Public Safety staff remained ready and able to respond to emergency calls. Special thanks go out to Curtis McDonald, Supervisor of Fleet Operations; Director of Transportation Annamarie Hamrick, Deputy Superintendent Dr. Greg Bradley; and Superintendent Dr. Holly Ferguson for their assistance during the emergency.

Our newest virtual Book Club is featuring this year's One Book, One Town selection, Here in the Real World, by Sara Pennypacker. You can view the latest book club discussion on the Library's YouTube channel.

The Prosper Community Library is hosting a community blood drive. The Carter BloodCare Bus will be parked at the Library on March 16 & 17 from 7:30 a.m. to 6:00 p.m. Visit the Library's Facebook page to learn more about the event and to sign up online.

The Pecan Grove Park Public Input Meeting will take place during a special meeting of the Parks and Recreation Board on Wednesday, March 17, in Council Chambers. A Zoom link will be provided on the Agenda for those who wish to attend virtually.

The Mayor's Fitness Challenge continues through April 18. Residents are encouraged to walk or run at least 100 miles or bike at least 300 miles. Turn in your completed tracking sheets by April 23 to receive a free t-shirt and the opportunity to win a Fitbit.

Town Manager Harlan Jefferson introduced Khara Dodds, the new Development Services Director for the Town of Prosper.

CONSENT AGENDA:

Items placed on the Consent Agenda are considered routine in nature and non-controversial. The Consent Agenda can be acted upon in one motion. Items may be removed from the Consent Agenda by the request of Council Members or staff.

1. **Consider and act upon the February 13, 2021, Town Council Strategic Planning meeting minutes. (ML)**

2. **Consider and act upon the February 23, 2021, Town Council Minutes. (ML)**

3. **Receive the January financial report. (BP)**

4. **Consider and act upon awarding CSP No. 2021-29-B to C. Green Scaping, LP, related to construction services for the Downtown Monument Sign (1922-PK); and authorizing the Town Manager to execute a construction agreement for same. (DR)**

5. **Consider and act upon authorizing the Town Manager to execute a Third Amended Annexation Agreement between Y-C Nurseries, Inc., and the Town of Prosper, Texas, related to a wireless communication and/or support structure, on 12.4± acres, generally located north of US 380, west of Dallas Parkway. (PC)**

6. **Consider and act upon Ordinance No. 2021-13 rezoning 55.8± acres, located on the west side of Good Hope Road, south of Parvin Road, from Agricultural (A) to Planned Development-40 (PD-40), generally to incorporate tracts of land into the Windsong Ranch development. (Z20-0023). (SI)**

7. Consider and act upon authorizing the Town Manager to execute a Second Amended Development Agreement between VP Windsong Operation, LLC and VP Windsong Investments, LLC, and the Town of Prosper, Texas, related to the Windsong Ranch development. (SI)

Mayor Pro-Tem Dixon removed Item No. 8 from the Consent Agenda.

Councilmember Miller made a motion and Councilmember Hodges seconded the motion to approve Items 1 thru 7 on the Consent Agenda.

The motion was approved by a vote of 6 – 0.

8. Consider and act upon whether to direct staff to submit a written notice of appeal on behalf of the Town Council to the Development Services Department, pursuant to Chapter 4, Section 1.5(C)(7) and 1.6(B)(7) of the Town's Zoning Ordinance, regarding action taken by the Planning & Zoning Commission on any Site Plan or Preliminary Site Plan, including Denton ISD Middle School, No. 9 and Oncor Electric Substation. (SI)

Town of Prosper Senior Planner Scott Ingalls answered questions on the site plan for the Oncor Electric Substation, specifically, the screening wall and landscaping. Oncor Project Manager Seth Sampson discussed the increased reliability to Prosper residents the substation would offer. Thomas Fletcher with Kimley-Horn discussed site landscaping and the screening wall.

Mayor Pro-Tem Dixon made a motion and Councilmember Ray seconded the motion to approve the Denton ISD Middle School, No. 9 site plan.

The motion was approved by a vote of 6 – 0.

Mayor Pro-Tem Dixon made a motion and Councilmember Bartley seconded the motion to approve the proposed Oncor site plan, with a revision to the proposed landscaping with 4-inch caliper trees 20 feet on center, with all landscaping subject to Town staff approval.

The motion was approved by a vote of 6 – 0.

CITIZEN COMMENTS:

There were no citizen comments.

REGULAR AGENDA:

Items for Individual Consideration:

9. Consider and act to authorize the Town Manager to execute a Development Agreement between Founders Classical Academy of Prosper and the Town of Prosper, Texas, related to the Founders Classic Academy Charter School development on the southwest corner of First Street and Custer Road. (RZ)

Rebecca Zook, Executive Director of Development & Infrastructure Services, provided the Town Council a historical overview of this item. At the January 12, 2021, February 9, 2021, and February 23, 2021, Town Council meetings, this item was tabled to allow

the applicant additional time to consider revisions that would allow for enhancements to the north side building elevation, landscaping berming along First Street and Custer Road, and the future use of temporary/modular buildings. Since the last meeting the applicant has incorporated berms into the proposed development along Custer Road.

The Town Council had questions on the proposed ornamental metal fence location and discussed the proposed landscaping for the dumpster enclosure.

After discussion, Mayor Pro-Tem Dixon made a motion and Councilmember Ray seconded the motion to approve the Development Agreement between Founders Classical Academy of Prosper and the Town of Prosper, Texas, related to the Founders Classic Academy Charter School development on the southwest corner of First Street and Custer Road.

The motion was approved by a vote of 6 – 0.

10. Consider and act upon Resolution No. 2021-14 of the Town Council of the Town of Prosper, Texas, declaring the necessity to acquire certain properties for right-of-way and drainage easements for the construction of the Fishtrap Road (Stuber Elementary School - Dallas North Tollway) project; determining the public use and necessity for such acquisition; authorizing the acquisition of property rights necessary for said Project; appointing an appraiser and negotiator as necessary; authorizing the Town Manager to establish just compensation for the property rights to be acquired; authorizing the Town Manager to take all steps necessary to acquire the needed property rights in compliance with all applicable laws and resolutions; and authorizing the Town Attorney to institute condemnation proceedings to acquire the property if purchase negotiations are not successful. (HW)

Hulon Webb, Engineering Services Director, presented information on Resolution 2021-14 declaring the necessity to acquire certain properties for right-of-way and drainage easements for the construction of the Fishtrap Road (Stuber Elementary School - Dallas North Tollway) project. As with other similar road construction projects, it is not anticipated that all parcels will require the use of eminent domain to complete the acquisition process, however, staff is requesting advance authorization to pursue acquisition by eminent domain if standard negotiations are unsuccessful.

Councilmember Ray made a motion and Councilmember Miller seconded the motion to approve Resolution No. 2021-14 of the Town Council of the Town of Prosper, Texas, declaring the necessity to acquire certain properties for right-of-way and drainage easements for the construction of the Fishtrap Road (Stuber Elementary School - Dallas North Tollway) project; determining the public use and necessity for such acquisition; authorizing the acquisition of property rights necessary for said Project; appointing an appraiser and negotiator as necessary; authorizing the Town Manager to establish just compensation for the property rights to be acquired; authorizing the Town Manager to take all steps necessary to acquire the needed property rights in compliance with all applicable laws and resolutions; and authorizing the Town Attorney to institute condemnation proceedings to acquire the property if purchase negotiations are not successful. The Town Council voted as follows:

Councilmember Miller: Approve
Mayor Smith: Approve

Deputy Mayor Pro-Tem Dixon: Approve
Councilmember Hodges: Approve
Councilmember Ray: Approve
Councilmember Bartley: Approve

EXECUTIVE SESSION:
Recess into Closed Session in compliance with Section 551.001 et seq. Texas Government Code, as authorized by the Texas Open Meetings Act, to deliberate regarding:

Section 551.087 - To discuss and consider economic development incentives.

Section 551.072 - To discuss and consider purchase, exchange, lease or value of real property for municipal purposes and all matters incident and related thereto.

Section 551.074 - To discuss and consider personnel matters and all matters incident and related thereto.

Section 551.074 - To discuss and review the Town Manager's performance evaluation.

The Town Council recessed into Executive Session at 6:30 p.m.

Reconvene in Regular Session and take any action necessary as a result of the Closed Session.

The Town Council reconvened the Regular Session at 7:10 p.m.

Councilmember Miller made a motion and Councilmember Hodges seconded the motion to approve the recently revised development agreement with BBG Investments, Inc., and authorize the Town Manager to execute it on behalf of the Town.

The motion was approved by a vote of 6 – 0.

Councilmember Miller made a motion and Councilmember Hodges seconded the motion to approve the revisions to the Town Manager Harlan Jefferson's Employment Agreement as discussed in closed session, and authorize the Mayor to execute the agreement on behalf of the Town.

The motion was approved by a vote of 6 – 0.

Possibly direct Town staff to schedule topic(s) for discussion at a future meeting.

11. Community Engagement Committee Update (RB)

Robyn Battle, Executive Director of Community Services, briefed the Town Council on the Community Engagement Committee. The Committee held its first meeting on March 3, 2021, at 6 p.m., in Council Chambers and broadcast via Zoom. All 11 Committee members were present with three Council representatives present, Councilmember Bartley, Councilmember Hodges, and Councilmember Miller, with Deputy Mayor Pro-Tem Andres attending some of the meeting. The Committee discussed the proposed scope, purpose, and structure of the group with the next meeting set for March 24, 2021, and regular meetings occurring the first Wednesday

of the month in Council Chambers and via Zoom. The Committee appointed Sekou Harris as Chairman and Rodolfo Sierra as Vice Chairman. Councilmember Hodges commented positively on the level of engagement from the Committee. Councilmember Bartley was impressed with the discussions from the group and how well they worked together. Councilmember Ray noted a resident panel with a diverse geographic location within the Town of Prosper and thanked Mrs. Battle for her assistance with the Community Engagement Committee.

Adjourn.

The meeting was adjourned at 7:18 p.m. on Tuesday, March 9, 2021.

These minutes approved on the 23rd day of March 2021.

APPROVED:

_____

Ray Smith, Mayor

ATTEST:

_____

Melissa Lee, Town Secretary

TOWN OF PROSPER

Prosper is a place where everyone matters.

PARKS & RECREATION

To: **Mayor and Town Council**

From: **Dudley Raymond, Director of Parks and Recreation**

Through: **Harlan Jefferson, Town Manager**
Robyn Battle, Executive Director of Community Services

Re: **Town Council Meeting – March 23, 2021**

Agenda Item:

Consider and act upon awarding CSP No. 2021-22-B to Ratliff Hardscape, Ltd, related to construction services for the Hays Park Project (1802-PK); and authorizing the Town Manager to execute a construction agreement for same.

Description of Agenda Item:

On January 28, 2021, at 2:00 PM, twenty (20) Competitive Sealed Proposals (CSP) were received for the Hays Park project. The project was advertised using the Competitive Sealed Proposal Construction alternative procurement method to allow the Town to award the project to the contractor that offers the best value proposal based on the following criteria:

- Qualifications and Experience (30%)
  - Outline contractor and subcontractor experience with similar projects.
  - Outline qualifications of key personnel assigned to this project.
  - Provide references.
- Proposed Project Timeline (20%)
- Cost Proposal (50%)

The verified cost proposals for base proposal plus alternate 2.1 ranged between $384,655.47 and $693,905.54. The Engineer's Estimate was $401,045.00. The proposed final completion times ranged from 60 calendar days to 210 calendar days. Ratliff Hardscape, Ltd, was the firm that ranked the highest after consideration of Costs, Time, and Qualifications, with a negotiated cost of $375,026.67 and negotiated project timeline of 95 calendar days.

Ratliff Hardscape, Ltd, costs include the construction of the playground area, pavilion, wildflower area, park sign, associated sidewalk pavement, landscape, irrigation, and other related improvements. This proposal also includes alternate 2.1, which includes stone wrapped columns around the pavilion. Ratliff Hardscape, Ltd, recently completed the construction of the Whitley

Place Trail Extension Project for the Town. Staff checked the references provided and received positive feedback.

Budget Impact:

The FY 2020-2021 Capital Improvement Program included a total budget of $460,000 in Park Improvement Fee Funds for the Hays Park Project. This agreement will be funded from the account 620-6610-60-00-1802-PK.

Legal Obligations and Review:

Terrence Welch of Brown & Hofmeister, L.L.P., has approved the standard construction agreement as to form and legality.

Attached Documents:

1. Evaluation Matrix
2. Construction Agreement

Town Staff Recommendation:

Town staff recommends awarding CSP No. 2021-22-B to Ratliff Hardscape, Ltd, related to construction services for the Hays Park Project (1802-PK); and authorizing the Town Manager to execute a construction agreement for same.

Proposed Motion:

I move to award CSP No. 2021-22-B to Ratliff Hardscape, Ltd, related to construction services for the Hays Park Project (1802-PK); and authorizing the Town Manager to execute a construction agreement for same.

CSP NO. 2021-22-B
HAYS PARK

EVALUATION MATRIX	Qualifications and Experience (30%)		Proposed Project Timeline (20%)		Cost Proposal (Base + Alternate 2.1) (50%)		Total (100%)
CONTRACTOR	**POINTS**	**WEIGHTED SCORE**	**POINTS**	**WEIGHTED SCORE**	**POINTS**	**WEIGHTED SCORE**	**TOTAL**
308 Construction, LLC	5.06	1.52	3.33	0.67	6.99	3.49	**5.68**
AUI Partners, LLC	8.33	2.50	4.00	0.80	9.64	4.82	**8.12**
Authers Building Group	7.19	2.16	4.00	0.80	8.86	4.43	**7.39**
C. Green Scaping, LP	7.56	2.27	3.30	0.66	8.74	4.37	**7.30**
Calvo Construction Inc	5.51	1.65	3.33	0.67	6.22	3.11	**5.43**
Central North Construction, LLC	6.22	1.87	3.53	0.71	9.19	4.59	**7.17**
Cole Construction Inc. dba Sprinkle 'N Sprout	7.57	2.27	4.00	0.80	7.39	3.69	**6.76**
Green Mound LLC	7.72	2.32	3.33	0.67	7.57	3.79	**6.77**
Home Run Construction LLC	5.06	1.52	3.16	0.63	8.22	4.11	**6.26**
HQS Construction	5.67	1.70	3.75	0.75	5.82	2.91	**5.36**
Mart, Inc.	6.68	2.00	3.53	0.71	7.94	3.97	**6.68**
North Rock Construction	8.58	2.57	4.00	0.80	9.86	4.93	**8.31**
Open Space TX, LLC	7.44	2.23	10.00	2.00	6.97	3.49	**7.72**
Parkscape Construction, Inc.	8.19	2.46	3.33	0.67	8.88	4.44	**7.57**
Ratliff Hardscape, Ltd	8.36	2.51	5.00	1.00	10.00	5.00	**8.51**
Schmoldt Construction Inc.	6.56	1.97	4.41	0.88	7.87	3.94	**6.78**
SRH Landscapes LLC	7.51	2.25	2.86	0.57	7.48	3.74	**6.57**
Tegrity Contractors	6.11	1.83	4.00	0.80	8.96	4.48	**7.11**
Unified Contracting, LLC	6.12	1.84	3.57	0.71	7.45	3.72	**6.27**
West Texas Rebar Placers, Inc.	5.56	1.67	3.33	0.67	5.54	2.77	**5.11**

CONTRACT DOCUMENTS AND SPECIFICATIONS
FOR

HAYS PARK
CSP NO. 2021-22-B

TOWN OF PROSPER
COLLIN COUNTY, TEXAS

TOWN OFFICIALS

Ray Smith, Mayor
Marcus E. Ray, Place 1
Craig Andres, Place 2, Deputy Mayor Pro-Tem
Amy Bartley, Place 3
Meigs Miller, Place 4
Jeff Hodges, Place 5
Jason Dixon, Place 6, Mayor Pro-Tem

Harlan Jefferson, Town Manager

TABLE OF CONTENTS

01/06/2021

LEGAL NOTICE

The Town of Prosper is accepting competitive sealed proposals for **CSP NO. 2021-22-B HAYS PARK.** Proposals will be accepted online through IonWave.net, the Town's e-procurement system, or in hard copy in the Purchasing Office located in the 3rd Floor Finance Suite of Town Hall, 250 W. First St., Prosper, Texas 75078 until **2:00 P.M. on Thursday, January 28, 2021.** Any proposals received after this time will not be accepted and will be returned unopened. **The proposal opening will be held online on Thursday, January 28, 2021 @ 2:30 P.M.** To participate in the proposal opening, please use the following:

Join Zoom Meeting:	https://us02web.zoom.us/j/82680421161
Meeting ID:	826 8042 1161
Dial-in any of these numbers:	+1 929 436 2866, +1 312 626 6799, +1 669 900 6833, +1 253 215 8782, +1 301 715 8592 or +1 346 248 7799

The Project consists of furnishing all labor, equipment and materials (except as otherwise specified), and performing all work necessary for the construction of Hays Park Improvements. Hays Park is a two acres park site which will include a pavilion, playground, trail, grading, landscaping and irrigation improvements.

Each proposal submitted shall be accompanied by a cashier's check in the amount of 5% of the maximum amount proposed, payable without recourse to the Town of Prosper, or a Bid Bond in the same amount from a reliable surety company as a guarantee that, if awarded the contract, the successful Contractor will execute a Construction Agreement with the Town, including all required bonds and other documents.

The successful Contractor shall furnish a Performance Bond in the amount of 115% of the contract amount, and a Payment Bond in the amount of 100% of the contract amount, as well as evidence of all required insurance coverage within ten (10) calendar days of notice of award. The successful Contractor shall also furnish a Maintenance Bond in the amount of 100% of the contract amount covering defects of material and workmanship for two calendar years following the Town's approval and acceptance of the construction. An approved surety company, licensed in the State of Texas, shall issue all bonds in accordance with Texas law.

Copies of Plans, Specifications, and Contract Documents may be examined at **Town of Prosper Parks and Recreation Department, 409 E. First St., Prosper, Texas, 75078, Phone: (972) 569-1160** without charge. These documents may be acquired from that office for the non-refundable purchase price of $150 per set, payable to the Town of Prosper. Copies of Plans, Specifications, and Contract Documents may also be downloaded free of charge from Current Bidding Opportunities, at the following link: http://www.prospertx.gov/business/bid-opportunities/.

Questions and requests for clarifications in regards to this proposal should be submitted in writing through IonWave.net, the Town's e-procurement system, or emailed directly to January Cook, CPPO, CPPB, Purchasing Manager, at jcook@prospertx.gov. The deadline for receipt of questions and requests for clarifications is **12:00 P.M. on Friday, January 22, 2021.** After that day and time, no further questions or requests for clarifications will be accepted or answered by the Engineer or Town.

INSTRUCTIONS TO PROPOSERS

1. Submittal Deadline: Proposals will be accepted until **2:00 P.M. on Thursday, January 28, 2021.**

2. Submittal Location: Proposals will be accepted online through IonWave.net, the Town's e-procurement system, or in hard copy in the Purchasing Office located in the 3rd Floor Finance Suite of Town Hall, 250 W. First St., Prosper, Texas 75078.

3. Electronic Submittal Requirements: If submitting proposal through IonWave.net, Proposer shall complete all requested information and submit all required documents.

4. Hard Copy Submittal Requirements: If submitting proposal in hard copy, Proposer shall submit one (1) original of their proposal in a sealed envelope clearly marked with their name and **CSP NO. 2021-22-B HAYS PARK**. Proposer shall complete all requested information and submit all required documents.

5. Proposal Opening: **The proposal opening will be held online on Thursday, January 28, 2021 @ 2:30 P.M.** To participate in the proposal opening, please use the following:

Join Zoom Meeting:	https://us02web.zoom.us/j/82680421161
Meeting ID:	826 8042 1161
Dial-in any of these numbers	+1 929 436 2866, +1 312 626 6799, +1 669 900 6833, +1 253 215 8782, +1 301 715 8592 or +1 346 248 7799

6. Proposal Documents: Copies of Plans, Specifications, and Contract Documents may be examined without charge at the following location:

Town of Prosper Parks and Recreation Department
409 E. First St.
Prosper, TX 75078
Phone: 972-569-1160

or

Download free of charge from Current Bidding Opportunities, at the following link:
http://www.prospertx.gov/business/bid-opportunities/.

7. Questions and Requests for Clarification: Questions and requests for clarifications in regards to this proposal should be submitted in writing through IonWave.net, the Town's e-procurement system, or emailed directly to January Cook, CPPO, CPPB, Purchasing Manager, at jcook@prospertx.gov. The deadline for receipt of questions and requests for clarifications is **12:00 P.M. on Friday, January 22, 2021**. After that day and time, no further questions or requests for clarifications will be accepted or answered by the Engineer or Town.

8. Addenda: If it becomes necessary to provide additional information to potential Proposers, the Town of Prosper will issue an addendum containing the necessary information.

9. Pre-Proposal Meeting: A pre-proposal meeting will not be held for this project.

10. Site Visit: N/A

CONSTRUCTION AGREEMENT

THE STATE OF TEXAS)
)
COUNTY OF COLLIN)

KNOW ALL MEN BY THESE PRESENTS:

This Construction Agreement (the "Agreement") is made by and between **Ratliff Hardscape, Ltd.,** a company authorized to do business in Texas, (the "Contractor") and the **Town of Prosper, Texas**, a municipal corporation (the "Owner"). For and in consideration of the payment, agreements and conditions hereinafter mentioned, and under the conditions expressed in the bonds herein, Contractor hereby agrees to complete the construction of improvements described as follows:

CSP NO. 2021-22-B
HAYS PARK

in the Town of Prosper, Texas, and all extra work in connection therewith, under the terms as stated in the terms of this Contract, including all Contract Documents incorporated herein; and at his, her or their own proper cost and expense to furnish all superintendence, labor, insurance, equipment, tools and other accessories and services necessary to complete the said construction in accordance with all the Contract Documents, incorporated herein as if written word for word, and in accordance with the Plans, which include all maps, plats, blueprints, and other drawings and printed or written explanatory manner therefore, and the Specifications as prepared by Town of Prosper or its consultant hereinafter called Engineer, who has been identified by the endorsement of the Contractor's written proposal, the General Conditions of this Contract, the Special Conditions of this Contract, the payment, performance, and maintenance bonds hereto attached; all of which are made a part hereof and collectively evidence and constitute the entire Contract.

A. Contract Documents and Order of Precedence

The Contract Documents shall consist of the following documents:

1. this Construction Agreement;
2. properly authorized change orders;
3. the Special Conditions of this Contract;
4. the General Conditions of this Contract;
5. the Technical Specifications & Construction Drawings of this Contract;
6. the OWNER's Standard Construction Details;
7. the OWNER's Standard Construction Specifications;
8. the OWNER’s written notice to proceed to the CONTRACTOR;
9. the Contractor’s Cost Proposal;
10. any listed and numbered addenda;
11. the Performance, Payment, and Maintenance Bonds; and,
12. any other proposal materials distributed by the Owner that relate to the Project.

These Contract Documents are incorporated by reference into this Construction Agreement as if set out here in their entirety. The Contract Documents are intended to be complementary; what is called for by one document shall be as binding as if called for by all Contract Documents. It is specifically provided, however, that in the event of any inconsistency in the Contract Documents, the inconsistency shall be

resolved by giving precedence to the Contract Documents in the order in which they are listed herein above. If, however, there exists a conflict or inconsistency between the Technical Specifications and the Construction Drawings it shall be the Contractor's obligation to seek clarification as to which requirements or provisions control before undertaking any work on that component of the project. Should the Contractor fail or refuse to seek a clarification of such conflicting or inconsistent requirements or provisions prior to any work on that component of the project, the Contractor shall be solely responsible for the costs and expenses - including additional time - necessary to cure, repair and/or correct that component of the project.

B. Total of Payments Due Contractor

For performance of the Work in accordance with the Contract Documents, the Owner shall pay the Contractor in current funds an amount not to exceed **Three Hundred Seventy Five Thousand Twenty-Six dollars and Sixty-Seven cents ($375,026.67).** This amount is subject to adjustment by change order in accordance with the Contract Documents.

C. Dates to Start and Complete Work

Contractor shall begin work within ten (10) calendar days after receiving a written Notice to Proceed or written Work Order from the Owner. All Work required under the Contract Documents shall be substantially completed within **75** calendar days after the date of the Notice to Proceed for the base proposal. Within **20** additional calendar days after Substantial Completion, all outstanding issues shall be addressed and ready for final payment.

Under this Construction Agreement, all references to "day" are to be considered "calendar days" unless noted otherwise.

D. CONTRACTOR'S INDEMNITY TO THE OWNER AND OTHERS

CONTRACTOR DOES HEREBY AGREE TO WAIVE ALL CLAIMS, RELEASE, INDEMNIFY, DEFEND AND HOLD HARMLESS THE TOWN OF PROSPER (OWNER) TOGETHER WITH ITS MAYOR AND TOWN COUNCIL AND ALL OF ITS OFFICIALS, OFFICERS, AGENTS AND EMPLOYEES, IN BOTH THEIR PUBLIC AND PRIVATE CAPACITIES, FROM AND AGAINST ANY AND ALL CITATIONS, CLAIMS, COSTS, DAMAGES, DEMANDS, EXPENSES, FINES, JUDGMENTS, LIABILITY, LOSSES, PENALTIES, SUITS OR CAUSES OF ACTION OF EVERY KIND INCLUDING ALL EXPENSES OF LITIGATION AND/OR SETTLEMENT, COURT COSTS AND ATTORNEY FEES WHICH MAY ARISE BY REASON OF INJURY TO OR DEATH OF ANY PERSON OR FOR LOSS OF, DAMAGE TO, OR LOSS OF USE OF ANY PROPERTY OCCASIONED BY ERROR, OMISSION, OR NEGLIGENT ACT OF CONTRACTOR, ITS SUBCONTRACTORS, ANY OFFICERS, AGENTS OR EMPLOYEES OF CONTRACTOR OR ANY SUBCONTRACTORS, INVITEES, AND ANY OTHER THIRD PARTIES OR PERSONS FOR WHOM OR WHICH CONTRACTOR IS LEGALLY RESPONSIBLE, IN ANY WAY ARISING OUT OF, RELATING TO, RESULTING FROM, OR IN CONNECTION WITH THE PERFORMANCE OF THIS CONTRACT, AND CONTRACTOR WILL AT HIS OR HER OWN COST AND EXPENSE DEFEND AND PROTECT TOWN OF PROSPER (OWNER) FROM ANY AND ALL SUCH CLAIMS AND DEMANDS.

CONTRACTOR DOES HEREBY AGREE TO WAIVE ALL CLAIMS, RELEASE, INDEMNIFY, DEFEND AND HOLD HARMLESS TOWN OF PROSPER (OWNER) TOGETHER WITH ITS MAYOR AND TOWN COUNCIL AND ALL OF ITS OFFICIALS, OFFICERS, AGENTS, AND EMPLOYEES, FROM AND

AGAINST ANY AND ALL CITATIONS, CLAIMS, COSTS, DAMAGES, DEMANDS, EXPENSES, FINES, JUDGMENTS, LIABILITY, LOSSES, PENALTIES, SUITS OR CAUSES OF ACTION OF EVERY KIND INCLUDING ALL EXPENSES OF LITIGATION AND/OR SETTLEMENT, COURT COSTS AND ATTORNEYS FEES FOR INJURY OR DEATH OF ANY PERSON OR FOR LOSS OF, DAMAGES TO, OR LOSS OF USE OF ANY PROPERTY, ARISING OUT OF OR IN CONNECTION WITH THE PERFORMANCE OF THIS CONTRACT. SUCH INDEMNITY SHALL APPLY WHETHER THE CITATIONS, CLAIMS, COSTS, DAMAGES, DEMANDS, EXPENSES, FINES, JUDGMENTS, LIABILITY, LOSSES, PENALTIES, SUITS OR CAUSES OF ACTION ARISE IN WHOLE OR IN PART FROM THE NEGLIGENCE OF THE TOWN OF PROSPER (OWNER), ITS MAYOR AND TOWN COUNCIL, OFFICERS, OFFICIALS, AGENTS OR EMPLOYEES. IT IS THE EXPRESS INTENTION OF THE PARTIES HERETO THAT THE INDEMNITY PROVIDED FOR IN THIS PARAGRAPH IS INDEMNITY BY CONTRACTOR TO INDEMNIFY AND PROTECT TOWN OF PROSPER (OWNER) FROM THE CONSEQUENCES OF TOWN OF PROSPER'S (OWNER'S) OWN NEGLIGENCE, WHETHER THAT NEGLIGENCE IS A SOLE OR CONCURRING CAUSE OF THE INJURY, DEATH OR DAMAGE.

IN ANY AND ALL CLAIMS AGAINST ANY PARTY INDEMNIFIED HEREUNDER BY ANY EMPLOYEE OF THE CONTRACTOR, ANY SUB-CONTRACTOR, ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY ANY OF THEM OR ANYONE FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE, THE INDEMNIFICATION OBLIGATION HEREIN PROVIDED SHALL NOT BE LIMITED IN ANY WAY BY ANY LIMITATION ON THE AMOUNT OR TYPE OF DAMAGES, COMPENSATION OR BENEFITS PAYABLE BY OR FOR THE CONTRACTOR OR ANY SUB-CONTRACTOR UNDER WORKMEN'S COMPENSATION OR OTHER EMPLOYEE BENEFIT ACTS.

INDEMNIFIED ITEMS SHALL INCLUDE ATTORNEYS' FEES AND COSTS, COURT COSTS, AND SETTLEMENT COSTS. INDEMNIFIED ITEMS SHALL ALSO INCLUDE ANY EXPENSES, INCLUDING ATTORNEYS' FEES AND EXPENSES, INCURRED BY AN INDEMNIFIED INDIVIDUAL OR ENTITY IN ATTEMPTING TO ENFORCE THIS INDEMNITY.

In its sole discretion, the Owner shall have the right to approve counsel to be retained by Contractor in fulfilling its obligation to defend and indemnify the Owner. Contractor shall retain approved counsel for the Owner within seven (7) business days after receiving written notice from the Owner that it is invoking its right to indemnification under this Construction Agreement. If Contractor does not retain counsel for the Owner within the required time, then the Owner shall have the right to retain counsel and the Contractor shall pay these attorneys' fees and expenses.

The Owner retains the right to provide and pay for any or all costs of defending indemnified items, but it shall not be required to do so. To the extent that Owner elects to provide and pay for any such costs, Contractor shall indemnify and reimburse Owner for such costs.

(Please note that this "broad-form" indemnification clause is not prohibited by Chapter 151 of the Texas Insurance Code as it falls within one of the exclusions contained in Section 151.105 of the Texas Insurance Code.)

E. Insurance Requirements

Contractor shall procure and maintain for the duration of the contract, insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the vendor, his agents, representatives, employees or subcontractors. The cost of such insurance shall be included in the contractor's proposal. A certificate of insurance meeting all requirements and provisions outlined herein shall be provided to the Town prior to any services being performed or rendered. Renewal certificates shall also be supplied upon expiration. Certificates holder shall be listed as follows, with the project/contract number referenced:

Town of Prosper
Attn: Purchasing Manager
P.O. Box 307
Prosper, Texas 75078

re: CSP No. 2021-22-B HAYS PARK

1. Minimum Scope of Insurance

   Coverage shall be at least as broad as:

   a. ISO Form Number GL 00 01 (or similar form) covering Comprehensive General Liability. "Occurrence" form only, "claims made" forms are unacceptable.

   b. Workers' Compensation insurance as required by the Labor Code of the State of Texas, including Employers' Liability Insurance.

   c. Automobile Liability as required by the State of Texas, covering all owned, hired, or non-owned vehicles. Automobile Liability is only required if vehicle(s) will be used under this contract.

2. Minimum Limits of Insurance

   Contractor shall maintain throughout contract limits not less than:

   a. Commercial General Liability: $1,000,000 per occurrence / $2,000,000 in the aggregate for third party bodily injury, personal injury and property damage. Policy will include coverage for:

      1) Premises / Operations

      2) Broad Form Contractual Liability

      3) Products and Completed Operations

      4) Personal Injury

5) Broad Form Property Damage

6) Explosion Collapse and Underground (XCU) Coverage.

b. Workers' Compensation and Employer's Liability: Workers' Compensation limits as required by the Labor Code of the State of Texas and Statutory Employer's Liability minimum limits of $100,000 per injury, $300,000 per occurrence, and $100,000 per occupational disease.

c. Automobile Liability: $1,000,000 Combined Single Limit. Limits can only be reduced if approved by the Town. Automobile liability shall apply to all owned, hired and non-owned autos.

d. Builders' Risk Insurance: Completed value form, insurance carried must be equal to the completed value of the structure. Town shall be listed as Loss Payee.

e. $1,000,000 Umbrella Liability Limit that follows form over underlying Automobile Liability, General Liability, and Employers Liability coverages.

3. Deductible and Self-Insured Retentions

Any deductible or self-insured retentions in excess of $10,000 must be declared to and approved by the Town.

4. Other Insurance Provisions

The policies are to contain, or be endorsed to contain the following provisions:

a. General Liability and Automobile Liability Coverage

1) The Town, its officers, officials, employees, boards and commissions and volunteers are to be added as "Additional Insured's" relative to liability arising out of activities performed by or on behalf of the contractor, products and completed operations of the contractor, premises owned, occupied or used by the contractor. The coverage shall contain no special limitations on the scope of protection afforded to the Town, its officers, officials, employees or volunteers.

2) The contractor's insurance coverage shall be primary insurance in respects to the Town, its officers, officials, employees and volunteers. Any insurance or self- insurance maintained by the Town, its officers, officials, employees or volunteers shall be in excess of the contractor's insurance and shall not contribute with it.

3) Any failure to comply with reporting provisions of the policy shall not affect coverage provided to the Town, its officers, officials, employees, boards and commissions or volunteers.

4) The contractor's insurance shall apply separately to each insured against whom the claim is made or suit is brought, except to the limits of the insured's limits of liability.

b. Workers' Compensation and Employer's Liability Coverage

The insurer shall agree to waive all rights of subrogation against the Town, its officers, officials, employees and volunteers for losses arising from work performed by the contractor for the Town.

c. All Coverages

Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, canceled or non-renewed by either party, reduced in coverage or in limits except after 30 days written notice to the Town for all occurrences, except 10 days written notice to the Town for non-payment.

5. Acceptability of Insurers

The Town prefers that Insurance be placed with insurers with an A.M. Best's rating of no less than A- VI, or better.

6. Verification of Coverage

Contractor shall provide the Town with certificates of insurance indicating coverage's required. The certificates are to be signed by a person authorized by that insurer to bind coverage on its behalf. Certificates of Insurance similar to the ACORD Form are acceptable. Town will not accept Memorandums of Insurance or Binders as proof of insurance. The Town reserves the right to require complete, certified copies of all required insurance policies at any time.

F. Performance, Payment and Maintenance Bonds

The Contractor shall procure and pay for a Performance Bond applicable to the work in the amount of one hundred fifteen percent (115%) of the total proposed price, and a Payment Bond applicable to the work in the amount of one hundred percent (100%) of the total proposed price. The Contractor shall also procure and pay for a Maintenance Bond applicable to the work in the amount of one hundred percent (100%) of the total proposed price. The period of the Maintenance Bond shall be two years from the date of acceptance of all work done under the contract, to cover the guarantee as set forth in this Construction Agreement. The performance, payment and maintenance bonds shall be issued in the form attached to this Construction Agreement as Exhibits A, B and C. Other performance, payment and

maintenance bond forms shall not be accepted. Among other things, these bonds shall apply to any work performed during the two-year warranty period after acceptance as described in this Construction Agreement.

The performance, payment and maintenance bonds shall be issued by a corporate surety, acceptable to and approved by the Town, authorized to do business in the State of Texas, pursuant to Chapter 2253 of the Texas Government Code. Further, the Contractor shall supply capital and surplus information concerning the surety and reinsurance information concerning the performance, payment and maintenance bonds upon Town request. In addition to the foregoing requirements, if the amount of the bond exceeds One Hundred Thousand Dollars ($100,000) the bond must be issued by a surety that is qualified as a surety on obligations permitted or required under federal law as indicated by publication of the surety's name in the current U.S. Treasury Department Circular 570. In the alternative, an otherwise acceptable surety company (not qualified on federal obligations) that is authorized and admitted to write surety bonds in Texas must obtain reinsurance on any amounts in excess of One Hundred Thousand Dollars ($100,000) from a reinsurer that is authorized and admitted as a reinsurer in Texas who also qualifies as a surety or reinsurer on federal obligations as indicated by publication of the surety's or reinsurer's name in the current U.S. Treasury Department Circular 570.

G. Progress Payments and Retainage

As it completes portions of the Work, the Contractor may request progress payments from the Owner. Progress payments shall be made by the Owner based on the Owner's estimate of the value of the Work properly completed by the Contractor since the time the last progress payment was made. The "estimate of the value of the work properly completed" shall include the net invoice value of acceptable, non-perishable materials actually delivered to and currently at the job site only if the Contractor provides to the Owner satisfactory evidence that material suppliers have been paid for these materials.

No progress payment shall be due to the Contractor until the Contractor furnishes to the Owner:

1. copies of documents reasonably necessary to aid the Owner in preparing an estimate of the value of Work properly completed;

2. full or partial releases of liens, including releases from subcontractors providing materials or delivery services relating to the Work, in a form acceptable to the Owner releasing all liens or claims relating to goods and services provided up to the date of the most recent previous progress payment;

3. an updated and current schedule clearly detailing the project's critical path elements; and

4. any other documents required under the Contract Documents.

Progress payments shall not be made more frequently than once every thirty (30) calendar days unless the Owner determines that more frequent payments are appropriate. Further, progress payments are to be based on estimates and these estimates are subject to correction through the adjustment of subsequent progress payments and the final payment to Contractor. If the Owner determines after final payment that it has overpaid the Contractor, then Contractor agrees to pay to the Owner the overpayment amount specified by the Owner within thirty (30) calendar days after it receives written demand from the Owner.

The fact that the Owner makes a progress payment shall not be deemed to be an admission by the Owner concerning the quantity, quality or sufficiency of the Contractor's work. Progress payments shall not be deemed to be acceptance of the Work nor shall a progress payment release the Contractor from any of its responsibilities under the Contract Documents.

After determining the amount of a progress payment to be made to the Contractor, the Owner shall withhold a percentage of the progress payment as retainage. The amount of retainage withheld from each progress payment shall be set at five percent (5%). Retainage shall be withheld and may be paid to:

1. ensure proper completion of the Work. The Owner may use retained funds to pay replacement or substitute contractors to complete unfinished or defective work;

2. ensure timely completion of the Work. The Owner may use retained funds to pay liquidated damages; and

3. provide an additional source of funds to pay claims for which the Owner is entitled to indemnification from Contractor under the Contract Documents.

Retained funds shall be held by the Owner in accounts that shall not bear interest. Retainage not otherwise withheld in accordance with the Contract Documents shall be returned to the Contractor as part of the final payment.

H. Withholding Payments to Contractor

The Owner may withhold payment of some or all of any progress or final payment that would otherwise be due if the Owner determines, in its discretion, that the Work has not been performed in accordance with the Contract Documents. The Owner may use these funds to pay replacement or substitute contractors to complete unfinished or defective Work.

The Owner may withhold payment of some or all of any progress or final payment that would otherwise be due if the Owner determines, in its discretion, that it is necessary and proper to provide an additional source of funds to pay claims for which the Owner is entitled to indemnification from Contractor under the Contract Documents.

Amounts withheld under this section shall be in addition to any retainage.

I. Acceptance of the Work

When the Work is completed, the Contractor shall request that the Owner perform a final inspection. The Owner shall inspect the Work. If the Owner determines that the Work has been completed in accordance with the Contract Documents, it shall issue a written notice of acceptance of the Work. If the Owner determines that the Work has not been completed in accordance with the Contract Documents, then it shall provide the Contractor with a verbal or written list of items to be completed before another final inspection shall be scheduled.

It is specifically provided that Work shall be deemed accepted on the date specified in the Owner's written notice of acceptance of the Work. The Work shall not be deemed to be accepted based on

"substantial completion" of the Work, use or occupancy of the Work, or for any reason other than the Owner's written Notice of Acceptance. Further, the issuance of a certificate of occupancy for all or any part of the Work shall not constitute a Notice of Acceptance for that Work.

In its discretion, the Owner may issue a Notice of Acceptance covering only a portion of the Work. In this event, the notice shall state specifically what portion of the Work is accepted.

J. Acceptance of Erosion Control Measures

When the erosion control measures have been completed, the Contractor shall request that the Owner perform a final inspection. The Owner shall inspect the Work. If the Owner determines that the Work has been completed in accordance with the Contract Documents and per TPDES General Construction Permit, it shall issue a written Notice of Acceptance of the Work. If the Owner determines that the Work has not been completed in accordance with the Contract Documents or TPDES General Construction Permit, then it shall provide the Contractor with a verbal or written list of items to be completed before another final inspection shall be scheduled.

K. Final Payment

After all Work required under the Contract Documents has been completed, inspected, and accepted, the Town shall calculate the final payment amount promptly after necessary measurements and computations are made. The final payment amount shall be calculated to:

1. include the estimate of the value of Work properly completed since the date of the most recent previous progress payment;

2. correct prior progress payments; and

3. include retainage or other amounts previously withheld that are to be returned to Contractor, if any.

Final payment to the Contractor shall not be due until the Contractor provides original full releases of liens from the Contractor and its subcontractors, or other evidence satisfactory to the Owner to show that all sums due for labor, services, and materials furnished for or used in connection with the Work have been paid or shall be paid with the final payment. To ensure this result, Contractor consents to the issuance of the final payment in the form of joint checks made payable to Contractor and others. The Owner may, but is not obligated to issue final payment using joint checks.

Final payment to the Contractor shall not be due until the Contractor has supplied to the Owner original copies of all documents that the Owner determines are reasonably necessary to ensure both that the final payment amount is properly calculated and that the Owner has satisfied its obligation to administer the Construction Agreement in accordance with applicable law. The following documents shall, at a minimum, be required to be submitted prior to final payment being due: redline as-built construction plans; consent of surety to final payment; public infrastructure inventory; affidavit of value for public infrastructure; and, final change order(s). “Redline as-built construction plans” shall include, but are not limited to markups for change orders, field revisions, and quantity overruns as applicable. The list of documents contained in this provision is not an exhaustive and exclusive list for every project performed pursuant to these Contract Documents

and Contractor shall provide such other and further documents as may be requested and required by the Owner to close out a particular project.

Subject to the requirements of the Contract Documents, the Owner shall pay the Final Payment within thirty (30) calendar days after the date specified in the Notice of Acceptance. This provision shall apply only after all Work called for by the Contract Documents has been accepted.

L. Contractor's Warranty

For a two-year period after the date specified in a written notice of acceptance of Work, Contractor shall provide and pay for all labor and materials that the Owner determines are necessary to correct all defects in the Work arising because of defective materials or workmanship supplied or provided by Contractor or any subcontractor. This shall also include areas of vegetation that did meet TPDES General Construction Permit during final close out but have since become noncompliant.

Forty-five (45) to sixty (60) calendar days before the end of the two-year warranty period, the Owner may make a warranty inspection of the Work. The Owner shall notify the Contractor of the date and time of this inspection so that a Contractor representative may be present. After the warranty inspection, and before the end of the two-year warranty period, the Owner shall mail to the Contractor a written notice that specifies the defects in the Work that are to be corrected.

The Contractor shall begin the remedial work within ten (10) calendar days after receiving the written notice from the Town. If the Contractor does not begin the remedial work timely or prosecute it diligently, then the Owner may pay for necessary labor and materials to effect repairs and these expenses shall be paid by the Contractor, the performance bond surety, or both.

If the Owner determines that a hazard exists because of defective materials and workmanship, then the Owner may take steps to alleviate the hazard, including making repairs. These steps may be taken without prior notice either to the Contractor or its surety. Expenses incurred by the Owner to alleviate the hazard shall be paid by the Contractor, the performance bond surety, or both.

Any Work performed by or for the Contractor to fulfill its warranty obligations shall be performed in accordance with the Contract Documents. By way of example only, this is to ensure that Work performed during the warranty period is performed with required insurance and the performance and payment bonds still in effect.

Work performed during the two-year warranty period shall itself be subject to a one-year warranty. This warranty shall be the same as described in this section.

The Owner may make as many warranty inspections as it deems appropriate.

M. Compliance with Laws

The Contractor shall be responsible for ensuring that it and any subcontractors performing any portion of the Work required under the Contract Documents comply with all applicable federal, state, county, and municipal laws, regulations, and rules that relate in any way to the performance and completion of the

Work. This provision applies whether or not a legal requirement is described or referred to in the Contract Documents.

Ancillary/Integral Professional Services: In selecting an architect, engineer, land surveyor, or other professional to provide professional services, if any, that are required by the Contract Documents, Contractor shall not do so on the basis of competitive bids but shall make such selection on the basis of demonstrated competence and qualifications to perform the services in the manner provided by Section 2254.004 of the Texas Government Code and shall so certify to the Town the Contractor's agreement to comply with this provision with Contractor's bid.

N. "Anti-Israel Boycott" Provision

In accordance with Chapter 2270, Texas Government Code, a Texas governmental entity may not enter into a contract with a company for the provision of goods or services unless the contract contains a written verification from the company that it: (1) does not boycott Israel; and (2) will not boycott Israel during the term of the contract. Chapter 2270 does not apply to a (1) a company that is a sole proprietorship; (2) a company that has fewer than ten (10) full-time employees; or (3) a contract that has a value of less than One Hundred Thousand Dollars ($100,000.00). Unless the company is not subject to Chapter 2270 for the reasons stated herein, the signatory executing this Agreement on behalf of the company verifies by its signature to this Contract that the company does not boycott Israel and will not boycott Israel during the term of this Contract.

O. Other Items

The Contractor shall sign the Construction Agreement, and deliver signed performance, payment and maintenance bonds and proper insurance policy endorsements (and/or other evidence of coverage) within ten (10) calendar days after the Owner makes available to the Contractor copies of the Contract Documents for signature. Six (6) copies of the Contract Documents shall be signed by an authorized representative of the Contractor and returned to the Town.

The Construction Agreement "effective date" shall be the date on which the Town Council acts to approve the award of the Contract for the Work to Contractor. It is expressly provided, however, that the Town Council delegates the authority to the Town Manager or his designee to rescind the Contract award to Contractor at any time before the Owner delivers to the Contractor a copy of this Construction Agreement that bears the signature of the Town Manager and Town Secretary or their authorized designees. The purpose of this provision is to ensure:

1. that Contractor timely delivers to the Owner all bonds and insurance documents; and

2. that the Owner retains the discretion not to proceed if the Town Manager or his designee determines that information indicates that the Contractor was not the lowest responsible bidder or that the Contractor cannot perform all of its obligations under the Contract Documents.

THE CONTRACTOR AGREES THAT IT SHALL HAVE NO CLAIM OR CAUSE OF ACTION OF ANY KIND AGAINST OWNER, INCLUDING A CLAIM FOR BREACH OF CONTRACT, NOR SHALL THE OWNER BE REQUIRED TO PERFORM UNDER THE CONTRACT DOCUMENTS, UNTIL THE DATE THE

OWNER DELIVERS TO THE CONTRACTOR A COPY OF THE CONSTRUCTION AGREEMENT BEARING THE SIGNATURES JUST SPECIFIED.

The Contract Documents shall be construed and interpreted by applying Texas law. Exclusive venue for any litigation concerning the Contract Documents shall be Collin County, Texas.

In the event of any disagreement or conflict concerning the interpretation of this Agreement, and such disagreement cannot be resolved by the signatories hereto, the signatories agree to submit such disagreement to non-binding mediation.

Although the Construction Agreement has been drafted by the Owner, should any portion of the Construction Agreement be disputed, the Owner and Contractor agree that it shall not be construed more favorably for either party.

The Contract Documents are binding upon the Owner and Contractor and shall insure to their benefit and as well as that of their respective successors and assigns.

If Town Council approval is not required for the Construction Agreement under applicable law, then the Construction Agreement "effective date" shall be the date on which the Town Manager and Town Secretary or their designees have signed the Construction Agreement. If the Town Manager and Town Secretary sign on different dates, then the later date shall be the effective date.

[*Signatures continued on following page.*]

RATLIFF HARDSCAPE, LTD

By: **BOODER MCWHORTER**

Title: President & C.O.O.

Date: _____

Address: 1740 Midway Rd.
Lewisville, Texas 75056

Phone: (972) 436-2508
Email: bmcwhorter@ratliffco.com

TOWN OF PROSPER, TEXAS

By: **HARLAN JEFFERSON**

Title: Town Manager

Date: _____

Address: 250 W. First St.
P.O. Box 307
Prosper, Texas 75078

Phone: (972) 346-2640
Email: hjefferson@prospertx.gov

ATTEST:

_____
MELISSA LEE
Town Secretary

PERFORMANCE BOND

STATE OF TEXAS)
)
COUNTY OF COLLIN)

KNOW ALL MEN BY THESE PRESENTS: That _____ whose address is _____, hereinafter called Principal, and _____, a corporation organized and existing under the laws of the State of _____, and fully licensed to transact business in the State of Texas, as Surety, are held and firmly bound unto the **TOWN OF PROSPER**, a home-rule municipal corporation organized and existing under the laws of the State of Texas, hereinafter called "Beneficiary", in the penal sum of _____ Dollars ($_____) plus fifteen percent (15%) of the stated penal sum as an additional sum of money representing additional court expenses, attorneys' fees, and liquidated damages arising out of or connected with the below identified Contract in lawful money of the United States, to be paid in Collin County, Texas, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents. The penal sum of this Bond shall automatically be increased by the amount of any Change Order or Supplemental Agreement, which increases the Contract price, but in no event shall a Change Order or Supplemental Agreement, which reduces the Contract price, decrease the penal sum of this Bond.

THE OBLIGATION TO PAY SAME is conditioned as follows: Whereas, the Principal entered into a certain Contract with the Town of Prosper, the Beneficiary, dated on or about the **23rd day of March, A.D. 2021**, a copy of which is attached hereto and made a part hereof, to furnish all materials, equipment, labor, supervision, and other accessories necessary for the construction of:

CSP NO. 2021-22-B
HAYS PARK

in the Town of Prosper, Texas, as more particularly described and designated in the above-referenced contract such contract being incorporated herein and made a part hereof as fully and to the same extent as if written herein word for word.

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform and fulfill all of the undertakings, covenants, terms, conditions and agreements of said Contract in accordance with the Plans, Specifications and Contract Documents during the original term thereof and any extension thereof which may be granted by the Beneficiary, with or without notice to the Surety, and during the life of any guaranty or warranty required under this Contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of said Contract that may hereafter be made, notice of which modifications to the Surety being hereby waived; and, if the Principal shall repair and/or replace all defects due to faulty materials and workmanship that appear within a period of one (1) year from the date of final completion and final acceptance of the Work by Owner; and, if the Principal shall fully indemnify and save harmless the Beneficiary from and against all costs and damages which Beneficiary may suffer by reason of failure to so perform herein and shall fully reimburse and repay Beneficiary all outlay and expense which the Beneficiary may incur in making good any default or deficiency, then this obligation shall be void; otherwise, it shall remain in full force and effect.

PROVIDED FURTHER, that if any legal action were filed on this Bond, exclusive Venue shall lie in Collin County, Texas.

AND PROVIDED FURTHER, that the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the Work to be performed thereunder or the Plans, Specifications and Drawings, etc., accompanying the same shall in anywise affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract, or to the Work or to the Specifications.

This Bond is given pursuant to the provisions of Chapter 2253 of the Texas Government Code, and any other applicable statutes of the State of Texas.

The undersigned and designated agent is hereby designated by the Surety herein as the Resident Agent in Collin County or Dallas County to whom any requisite notices may be delivered and on whom service of process may be had in matters arising out of such suretyship, as provided by Article 7.19-1 of the Insurance Code, Vernon's Annotated Civil Statutes of the State of Texas.

IN WITNESS WHEREOF, this instrument is executed in two copies, each one of which shall be deemed an original, this, the _____ day of _____, 2021.

ATTEST:

By: _____
Signature

_____
Typed/Printed Name

_____
Title

_____
Address

_____
City State Zip

_____
Phone Fax

PRINCIPAL:

_____
Company Name

By: _____
Signature

_____
Typed/Printed Name

_____
Title

_____
Address

_____
City State Zip

_____
Phone Fax

[*Signatures continued on following page.*]

ATTEST:

By: _____
Signature

_____
Printed Name

_____
Title

_____
Address

_____
City State Zip

_____
Phone Fax

SURETY:

By: _____
Signature

_____
Printed Name

_____
Title

_____
Address

_____
City State Zip

_____
Phone Fax

The Resident Agent of the Surety in Collin County or Dallas County, Texas, for delivery of notice and service of the process is:

NAME: _____
STREET ADDRESS: _____
CITY, STATE, ZIP: _____

NOTE: Date on **Page 1** of Performance Bond must be **same date as Contract**. Date on **Page 2** of Performance Bond must be **after date of Contract**. If Resident Agent is not a corporation, give a person's name.

PAYMENT BOND

STATE OF TEXAS)
)
COUNTY OF COLLIN)

KNOW ALL MEN BY THESE PRESENTS: That _____ whose address is _____, hereinafter called Principal, and_____, a corporation organized and existing under the laws of the State of _____, and fully licensed to transact business in the State of Texas, as Surety, are held and firmly bound unto the **TOWN OF PROSPER**, a home-rule municipal corporation organized and existing under the laws of the State of Texas, hereinafter called "Owner", and unto all persons, firms, and corporations who may furnish materials for, or perform labor upon the building or improvements hereinafter referred to in the penal sum of _____ DOLLARS ($_____) (one hundred percent (100%) of the total bid price) in lawful money of the United States, to be paid in Collin County, Texas, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents. The penal sum of this Bond shall automatically be increased by the amount of any Change Order or Supplemental Agreement, which increases the Contract price, but in no event shall a Change Order or Supplemental Agreement, which reduces the Contract price, decrease the penal sum of this Bond.

THE OBLIGATION TO PAY SAME is conditioned as follows: Whereas, the Principal entered into a certain Contract with the Town of Prosper, the Owner, dated on or about the **23rd day of March, A.D. 2021**, a copy of which is attached hereto and made a part hereof, to furnish all materials, equipment, labor, supervision, and other accessories necessary for the construction of:

CSP NO. 2021-22-B
HAYS PARK

NOW THEREFORE, if the Principal shall well, truly and faithfully perform its duties and make prompt payment to all persons, firms, subcontractors, corporations and claimants supplying labor and/or material in the prosecution of the Work provided for in the above-referenced Contract and any and all duly authorized modifications of said Contract that may hereafter be made, notice of which modification to the Surety is hereby expressly waived, then this obligation shall be void; otherwise it shall remain in full force and effect.

PROVIDED FURTHER, that if any legal action were filed on this Bond, exclusive venue shall lie in Collin County, Texas.

AND PROVIDED FURTHER, that the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract, or to the Work performed thereunder, or the Plans, Specifications, Drawings, etc., accompanying the same, shall in anywise affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract, or to the Work to be performed thereunder.

This Bond is given pursuant to the provisions of Chapter 2253 of the Texas Government Code, and any other applicable statutes of the State of Texas.

The undersigned and designated agent is hereby designated by the Surety herein as the Resident Agent in Collin County or Dallas County to whom any requisite notices may be delivered and on whom service of process may

be had in matters arising out of such suretyship, as provided by Article 7.19-1 of the Insurance Code, Vernon's Annotated Civil Statutes of the State of Texas.

IN WITNESS WHEREOF, this instrument is executed in two copies, each one of which shall be deemed an original, this, the _____ day of _____, 2021.

ATTEST:

By: _____
Signature

_____
Typed/Printed Name

_____
Title

_____
Address

_____
City State Zip

_____
Phone Fax

PRINCIPAL:

_____
Company Name

By: _____
Signature

_____
Typed/Printed Name

_____
Title

_____
Address

_____
City State Zip

_____
Phone Fax

[*Signatures continued on following page.*]

ATTEST:

By: _____
Signature

_____
Printed Name

_____
Title

_____
Address

_____
City State Zip

_____
Phone Fax

SURETY:

By: _____
Signature

_____
Printed Name

_____
Title

_____
Address

_____
City State Zip

_____
Phone Fax

The Resident Agent of the Surety in Collin County or Dallas County, Texas, for delivery of notice and service of the process is:

NAME: _____
STREET ADDRESS: _____
CITY, STATE, ZIP: _____

NOTE: Date on **Page 1** of Performance Bond must be **same date as Contract**. Date on **Page 2** of Performance Bond must be **after date of Contract**. If Resident Agent is not a corporation, give a person's name.

MAINTENANCE BOND

STATE OF TEXAS)
)
COUNTY OF COLLIN)

KNOW ALL MEN BY THESE PRESENTS: That _____ whose address is_____, hereinafter referred to as "Principal," and _____, a corporate surety/sureties organized under the laws of the State of _____ and fully licensed to transact business in the State of Texas, as Surety, hereinafter referred to as "Surety" (whether one or more), are held and firmly bound unto the **TOWN OF PROSPER**, a Texas municipal corporation, hereinafter referred to as "Owner," in the penal sum of _____ DOLLARS ($_____) (one hundred percent (100%) of the total bid price), in lawful money of the United States to be paid to Owner, its successors and assigns, for the payment of which sum well and truly to be made, we bind ourselves, our successors, heirs, executors, administrators and successors and assigns, jointly and severally; and firmly by these presents, the condition of this obligation is such that:

WHEREAS, Principal entered into a certain written Contract with the Town of Prosper, dated on or about the **23rd day of March, 2021**, to furnish all permits, licenses, bonds, insurance, products, materials, equipment, labor, supervision, and other accessories necessary for the construction of:

CSP NO. 2021-22-B
HAYS PARK

in the Town of Prosper, Texas, as more particularly described and designated in the above-referenced contract, such contract being incorporated herein and made a part hereof as fully and to the same extent as if written herein word for word:

WHEREAS, in said Contract, the Principal binds itself to use first class materials and workmanship and of such kind and quality that for a period of two (2) years from the completion and final acceptance of the improvements by Owner the said improvements shall require no repairs, the necessity for which shall be occasioned by defects in workmanship or materials and during the period of two (2) years following the date of final acceptance of the Work by Owner, Principal binds itself to repair or reconstruct said improvements in whole or in part at any time within said period of time from the date of such notice as the Town Manager or his designee shall determine to be necessary for the preservation of the public health, safety or welfare. If Principal does not repair or reconstruct the improvements within the time period designated, Owner shall be entitled to have said repairs made and charge Principal and/or Surety the cost of same under the terms of this Maintenance Bond.

NOW, THEREFORE, if Principal will maintain and keep in good repair the Work herein contracted to be done and performed for a period of two (2) years from the date of final acceptance and do and perform all necessary work and repair any defective condition (it being understood that the purpose of this section is to cover all defective conditions arising by reason of defective materials, work or labor performed by Principal) then this obligation shall be void; otherwise it shall remain in full force and effect and Owner shall have and recover from Principal and its Surety damages in the premises as provided in the Plans and Specifications and Contract.

PROVIDED, however, that Principal hereby holds harmless and indemnifies Owner from and against any claim or liability for personal injury or property damage caused by and occurring during the performance of said maintenance and repair operation.

PROVIDED, further, that if any legal action be filed on this Bond, exclusive venue shall lie in Collin County, Texas.

AND PROVIDED FURTHER, Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the Work performed thereunder, or the Plans, Specifications, Drawings, etc. accompanying same shall in any way affect its obligation on this Bond; and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the Work to be performed thereunder.

The undersigned and designated agent is hereby designated by Surety as the resident agent in either Collin or Dallas Counties to whom all requisite notice may be delivered and on whom service of process may be had in matters arising out of this suretyship.

IN WITNESS WHEREOF, this instrument is executed in two copies, each one of which shall be deemed an original, on this the _____ day of _____, 2021.

ATTEST:	**PRINCIPAL**:
	_____
	Company Name
By: _____	By: _____
Signature	Signature
_____	_____
Typed/Printed Name	Typed/Printed Name
_____	_____
Title	Title
_____	_____
Address	Address
_____	_____
City State Zip	City State Zip
_____	_____
Phone Fax	Phone Fax

[*Signatures continued on following page.*]

ATTEST:

By: _____
Signature

_____
Printed Name

_____
Title

_____
Address

_____
City State Zip

_____
Phone Fax

SURETY:

By: _____
Signature

_____
Printed Name

_____
Title

_____
Address

_____
City State Zip

_____
Phone Fax

SPECIAL CONDITIONS

SC.01 **PURPOSE:** The Special Conditions contained herein set forth conditions or requirements particular to this Contract: **CSP NO. 2021-22-B HAYS PARK**

The Special Conditions supplement the General Conditions and the Standard Specifications and take precedence over any conditions or requirements of the General Conditions and the Standard Specifications with which they are in conflict.

SC.02 **DEFINITIONS:** The following words and expressions, or pronouns used in their place, shall wherever they appear in this Contract, be construed as follows, unless a different meaning is clear from the context:

- **ENGINEER:** The Engineer of Record as shown on the Construction Drawings: PARKHILL / Schrickel-Rollins

SC.03 **MINIMUM STANDARDS OF RESPONSBILITY:** A prospective vendor must affirmatively demonstrate responsibility. The Town of Prosper may request representation and other information sufficient to determine respondent's ability to meet the minimum standards, including but not limited to:

A. Have adequate financial resources, or the ability to obtain such resources as required;
B. Have a satisfactory record of performance on a minimum of three (3) completed projects of similar scope, quantities, and cost, within the past five (5) years;
C. Ability to comply with the required or proposed delivery schedule;
D. Have a satisfactory record of integrity and ethics; and
E. Be otherwise qualified and eligible to receive an award.

SC.04 **INTRODUCTION:** The Town of Prosper ("Town") is accepting competitive sealed proposals (CSP) for furnishing all labor, equipment and materials (except as otherwise specified), and performing all work necessary for the construction of HAYS PARK.

The contract will be awarded based on the evaluation criteria stated herein. This document provides interested firms with the information necessary to prepare and submit a proposal for consideration. Proposals are to be submitted in accordance with this document, and the accompanying instructions.

There is no expressed or implied obligation for the Town to reimburse responding firms for any expenses incurred in preparing proposals in response to this request. All costs directly or indirectly related to preparation of a response to this request for competitive sealed proposals (CSP), any oral presentation required to supplement and/or clarify a proposal, and/or reasonable demonstrations which may be, at its discretion, required by the Town shall be the sole responsibility of, and shall be borne completely by the proposer.

Proposals for the projects as specified will be received online, or in hard copy. The date/time stamp located in the Purchasing Office serves as the official time clock. Late Submissions will not be considered. Submissions received after the stated deadline shall be refused and returned unopened. The Town of Prosper is not responsible for issues encountered with methods of delivery. The Town reserves the right to reject any or all proposals submitted.

Proposals submitted will be reviewed by Town staff. It is the responsibility of the proposer to ensure the receipt of any and all addenda related to the proposal. It shall be the sole responsibility of the respondent to insure that their proposal is received by the Purchasing Office within the time limit indicated. Late proposals will not be considered.

During the evaluation process, the Town reserves the right, where it may serve the Town's best interest, to request additional information or clarifications from proposers, or to allow corrections of errors or omissions. At the discretion of the Town, firms submitting proposals may be requested to make oral presentations as part of the evaluation process, including an oral presentation to the Town Council.

The Town reserves the right to retain all proposals submitted, and to use any ideas in a proposal regardless of whether that proposal is selected. Submission of a proposal indicates acceptance by the firm of the conditions contained in this CSP, unless clearly and specifically noted in the proposal submitted and confirmed in the contract between the Town and the firm selected. All proposals submitted will remain valid for a period of 90 days subsequent to the CSP due date.

SC.05 **SPECIFICATIONS:** Proposal must meet or exceed the specifications and requirements herein, in order to be considered.

SC06 **SUBMITTALS:** In order for your proposal to be considered responsive, the following information must be submitted:

A. Qualifications and Experience

1) Outline contractor and subcontractor experience with similar projects, and label as **Attachment A1**.
2) Submit resumes for key personnel that will be assigned to the project (executive and management team, as well as on-site project manager) and label as **Attachment A2**.
3) Complete and submit the Completed Projects and References Worksheet.and label as **Attachment A3**.
4) Submit a copy of an actual project schedule used during construction and label as **Attachment A4.**

B. Pricing

You should respond to all Bid Lines listed for this project as follows:

1) For online submissions, please submit pricing for all Bid Lines.
2) For hard copy submissions, you must print and complete the Bid Lines and submit it with your proposal.
3) The Town is exempt from paying Texas State or local sales and use taxes. Please ensure the prices proposed do not include taxes.

C. Bid Proposal Conditions (Bid Attributes)

1) For online submissions, you must select "I Agree", or provide the requested information for each Bid Attribute.
2) For hard copy submissions, you must complete and print the Bid Attributes section and submit it with your proposal.

D. Supplier Information

1) For hard copy submissions, you must complete and print the Supplier Information section and submit it with your proposal.

SC.07 **EVALUATION CRITERIA:** A review committee will evaluate submissions received in accordance with the general criteria defined herein. Failure of respondents to provide in their submission any information requested in this CSP may result in disqualification of the submission. The objective of the review committee will be to select the Proposal that provides the best value to the Town. The decision made by the Town of Prosper will be final. The agreement will be awarded based on the following evaluation criteria:

A. Qualifications and Experience (30%)
B. Proposed Project Timeline (20%)
C. Cost Proposal (50%)

SC.08 **INTERVIEWS AND PRESENTATIONS:** In fairness to all firms, requests for interviews prior to the closing time and date will not be permitted. Interviews with selected firms may or may not be requested by the Town after the closing date. Selection may be made strictly from the information provided in the Proposal. However, the Town reserves the right to conduct interviews with and request presentations from any respondents.

SC.09 **SELECTION AND AWARD:** If the Town is unable to reach an agreement with the first-ranked Contractor, the Town shall terminate further discussions with the first-ranked Contractor, and commence negotiations with the next-ranked Contractor, in the order of the selection ranking until an agreement is reached, or all Proposals are rejected. Time is of the essence, and the award of the contract to the successful Contractor is expressly conditioned upon (1) the Contractor's execution and delivery of the Contract, and delivery of all required bonds and evidence of insurance, within ten (10) calendar days after the Contractor is notified of the acceptance of its Proposal, and (ii) the Contractor's timely fulfillment of any and all other preconditions expressly set forth in the Contract Documents. Should the Contractor fail to timely execute and deliver the contract, required bonds, evidence of insurance, or fail to timely fulfill any other such preconditions, the Town may, at its option and discretion, without releasing, impairing or affecting its right to receive the Proposal security as damages for such failure, rescind the award, commence negotiations with the next ranked Contractor, or may reject all Proposals.

There will be no contractual obligation on the part of the Town to any Contractor, nor will any firm have any property interest or other right in the contract or work being proposed, unless and until the Agreement is unconditionally executed and delivered by all parties, all submittals required by the Proposal Documents and Agreement and all conditions to be fulfilled by the selected firm have either been so fulfilled by the firm, or waived in writing by the firm or Town, as applicable.

SC.10 **SUBMISSION OR DELIVERY OF PROPOSAL:** Proposals for the construction services specified will be received online, or in hard copy. The date/time stamp located in the Purchasing Office serves as the official time clock. Late Submissions will not be considered. Submissions received after the stated deadline shall be refused and returned unopened. The Town of Prosper is not responsible for issues encountered with methods of delivery.

A. Online Submission

Proposals may be submitted online through IonWave.net, the Town's e-procurement system. Please ensure that you provide all required information, including attachments. Any additional response attachments must be uploaded and included with your submission in order to be considered.

B. Mailed/Delivered Submission

Proposals must be submitted with the CSP number and the respondent's name and address clearly indicated on the front of the envelope. Please submit one (1) unbound original and one (1) copy of your proposal, in a sealed envelope or package to the address listed below:

Delivery Address:
Town of Prosper
Attn: Purchasing Manager
250 W. First St.
3rd Floor Finance Suite
Prosper, Texas 75078

Mailing Address (US Postal Service Only):
Town of Prosper
Attn: Purchasing Manager
P.O. Box 307
Prosper, Texas 75078

TECHNICAL SPECIFICATIONS

TS.01: **GENERAL:** Please reference the Construction Plans for all other technical specifications not contained herein.

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS
(Not Used)

DIVISION 01 - GENERAL REQUIREMENTS

01 10 00 Summary
01 25 00 Substitution Procedures
01 30 00 Administrative Requirements\
01 32 16 Construction Progress Schedule
01 33 00 Submittal Procedures
01 40 00 Quality Requirements
01 43 26 Testing Laboratory Services
01 50 00 Temporary Facilities and Controls
01 56 39 Temporary Tree and Plant Protection
01 57 23 Temporary Stormwater Pollution Control
01 60 00 Product Requirements
01 70 00 Execution and Closeout Requirements

DIVISION 02 - EXISTING CONDITIONS
(Not Used)

DIVISION 03 - CONCRETE
(Not Used)

DIVISION 04 - MASONRY
(Not Used)

DIVISION 05 - METALS
(Not Used)

DIVISION 06 - WOOD, PLASTICS, AND COMPOSITES
(Not Used)

DIVISION 07 - THERMAL AND MOISTURE PROTECTION
(Not Used)

DIVISION 08 - OPENINGS
(Not Used)

DIVISION 09 – FINISHES
(Not Used)

DIVISION 10 - SPECIALTIES
(Not Used)

DIVISION 11 - EQUIPMENT

11 68 00 Playfield Equipment and Structures

DIVISION 12 – FURNISHINGS
(Not Used)

DIVISION 13 - SPECIAL CONSTRUCTION
(Not Used)

DIVISION 21 - FIRE SUPPRESSION
(Not Used)

DIVISION 22 - PLUMBING
(Not Used)

DIVISION 23 - HEATING, VENTILATING, AND AIR-CONDITIONING (HVAC)
(Not Used)

DIVISION 25 - INTEGRATED AUTOMATION
(Not Used)

DIVISION 26 - ELECTRICAL
(Not Used)

DIVISION 27 - COMMUNICATIONS
(Not Used)

DIVISION 28 - ELECTRONIC SAFETY AND SECURITY
(Not Used)

DIVISION 31 - EARTHWORK

31 10 00 Site Clearing
31 20 00 Earth Moving

DIVISION 32 - EXTERIOR IMPROVEMENTS

32 13 13 Concrete Paving
32 13 16 Decorative Concrete Paving
32 14 00 Unit Paving
32 18 16.13 Playground Protective Surfacing
32 31 29 Wood Fences and Gates
32 33 00 Site Furnishings
32 82 00 Landscape Irrigation
32 91 13 Soil Preparation
32 92 00 Turf and Grasses
32 93 00 Plants

DIVISION 33 - UTILITIES
(Not Used)

DIVISION 34 - TRANSPORTATION
(Not Used)

DIVISION 35 - WATERWAY AND MARINE CONSTRUCTION
(Not Used)

DIVISION 40 - PROCESS INTEGRATION
(Not Used)

DIVISION 41 - MATERIAL PROCESSING AND HANDLING EQUIPMENT
(Not Used)

DIVISION 42 - PROCESS HEATING, COOLING, AND DRYING EQUIPMENT
(Not Used)

DIVISION 43 - PROCESS GAS AND LIQUID HANDLING, PURIFICATION AND STORAGE EQUIPMENT
(Not Used)

DIVISION 44 - POLLUTION CONTROL EQUIPMENT
(Not Used)

DIVISION 45 - INDUSTRY-SPECIFIC MANUFACTURING EQUIPMENT
(Not Used)

DIVISION 46 - WATER AND WASTEWATER EQUIPMENT
(Not Used)

DIVISION 48 - ELECTRICAL POWER GENERATION
(Not Used)

SECTION 01 10 00 – SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:
   1. Work covered by Contract Documents.
   2. Contractor use of site and premises.
   3. Owner occupancy.
   4. Permits.

B. Related Requirements:
   1. Other Division 01 Specification Sections apply to Work of this Section.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Identification: Hays Park Improvements.
B. Location: Prosper, Texas.
C. Owner: Town of Prosper.
D. Work consists of demolition, earthwork, pavilion, pedestrian paving, playground, landscape, turfgrass, and irrigation.

1.3 CONTRACTOR USE OF SITE AND PREMISES

A. Limit use of site and premises to allow:
   1. Owner occupancy.
   2. Public access.

B. Construction operations: Limited to areas noted on Drawings.
C. Time restrictions for performing Work:
   1. Weekdays 7 a.m. to 6 p.m., unless otherwise approved by Owner.

D. Utility outages and shutdowns.
   1. Coordinate and schedule utility outages/shutdown.
   2. Allowed only at previously-agreed-upon times.
   3. Schedule at least one week before outage/shutdown.
   4. Submit outage/shutdown request to Architect/Engineer itemizing dates, times, and durations of early requested outage/shutdown.

1.4 OWNER OCCUPANCY

A. Owner will occupy premises during construction to conduct normal operations.
B. Cooperate with Owner to minimize conflict and facilitate Owner operations.

1.5 PERMITS

A. Furnish all necessary permits for construction of Work including:
   1. Grading permit.
   2. Other permits as required by Town of Prosper.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 25 00 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Quality assurance.
   2. Product options.
   3. Product substitution procedures.

B. Related Requirements:
   1. Other Division 01 Specification Sections apply to Work of this Section.

1.2 QUALITY ASSURANCE

A. Contract is based on products and standards established in Contract Documents without consideration of proposed substitutions.

B. Products specified define standard of quality, type, function, dimension, appearance, and performance required.

C. Substitution Proposals: Permitted for specified products except where specified otherwise. Do not substitute products unless Owner accepts substitution and approves in writing.

1.3 PRODUCT OPTIONS

A. See Section 01 60 00 “Product Requirements.”

1.4 PRODUCT SUBSTITUTION PROCEDURES

A. Engineer will consider requests for substitutions only within 30 days after date established in Notice to Proceed.

B. Substitutions may be considered when product becomes unavailable through no fault of Contractor.

C. Document each request with complete data, substantiating compliance of proposed substitution with Contract Documents, including:
   1. Manufacturer name and address, product, trade name, model, or catalog number, performance and test data, and reference standards.
   2. Itemized point-by-point comparison of proposed substitution with specified product, listing variations in quality, performance, and other pertinent characteristics.
   3. Reference to Article numbers in Specifications.
   4. Cost data comparing proposed substitution with specified product and amount of net change to Contract Sum.
   5. Changes required in other Work.
   6. Availability of maintenance service and source of replacement parts, as applicable.
   7. Certified test data to show compliance with performance characteristics specified.
   8. Samples when applicable or requested.
   9. Other information as necessary to assist Engineer's evaluation.

D. A request constitutes a representation Contractor:
   1. Investigated proposed product and determined it meets/exceeds quality level of specified product.
   2. Will provide same warranty for substitution as specified product.
   3. Will coordinate installation and make changes to other Work required for Work to complete with no additional cost to Owner.
   4. Waives claims for additional costs/time extension that subsequently become apparent.

5. Will coordinate installation of accepted substitute, making required changes for Work to complete in all respects.
6. Will reimburse Owner for review/redesign services associated with reapproval by authorities having jurisdiction.

E. Substitutions not considered when indicated/implied on Shop Drawing or Product Data submittals without separate written request or acceptance requires revision to Contract Documents.

F. Substitution Submittal Procedure:
1. Submit requests for substitutions on Contractor-standard or Engineer-provided form.
2. Submit electronic files to Project website of Request for Substitution for consideration. Limit each request to one proposed substitution.
3. Submit Shop Drawings, Product Data, and certified test results attesting to proposed product equivalence. Burden of proof is on Contractor.
4. Engineer will notify Contractor in writing of decision to accept/reject request.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 30 00 - ADMINISTRATIVE REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Project Information Management.
   2. Coordination.
   3. Preconstruction meeting.
   4. Request for information.
   5. Progress meetings.
   6. Preinstallation meetings.

B. Related Requirements:
   1. Other Division 01 Specification Sections apply to Work of this Section.

1.2 PROJECT INFORMATION MANAGEMENT

A. Project Website:
   1. Use Newforma Info Exchange at https://projects.team-psc.com/UserWeb/Login to send and receive Project information.
   2. Contact Architect/Engineer to set up user name and password information.
   3. If Project is not listed when logged in, contact Architect/Engineer to add Project to your account.

B. Project information includes, but is not limited to:
   1. Product Submittals.
   2. Requests for Information (RFI).
   3. Applications for Payment.
   4. Schedules.
   5. Construction Change Requests (CCRs).
   6. Close-out Documents.
   7. Construction Document Files.

1.3 COORDINATION

A. Coordinate scheduling, submittals, and Work to assure efficient and orderly sequence of installation of construction elements.

B. Coordinate completion and clean-up of Work of separate Sections in preparation for Substantial Completion.

C. After Owner occupancy of premises, coordinate access to site with Owner for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

1.4 PRECONSTRUCTION MEETING

A. Architect/Engineer will schedule a meeting after Notice to Proceed.

B. Attendance Required:
   1. Owner.
   2. Architect/Engineer.
   3. Contractor.
   4. Major subcontractors.

C. Agenda:
   1. Distribute Contract Documents.
   2. Submit lists of subcontractors and products, Schedule of Values, submittal schedule, and progress schedule.
   3. Designate personnel representing each party in Contract and Architect/Engineer.
   4. Procedures and processing field decisions, submittals, substitutions, Applications for Payments, proposal request, Change Orders, Request for Information (RFI), and Contract closeout procedures.
   5. Review Notice to Proceed and Substantial/Final Completion Dates.
   6. Workmen's identification and background checks.
   7. Stormwater Pollution and Prevention Plan (SWPPP), if necessary.
   8. Scheduling:
      a. Use of premises by Owner and Contractor.
      b. Owner's requirements and occupancy.
      c. Security and housekeeping procedures.
      d. Construction progress meetings.
      e. Procedures for testing.
      f. Procedures for maintaining record documents.
      g. Requirements for start-up of equipment.
      h. Inspection and acceptance of equipment put into service during construction.
   9. Scheduling activities of Construction Material Testing lab.

D. Architect/Engineer shall record minutes and distribute copies to participants.

1.5 REQUEST FOR INFORMATION (RFI)

A. RFI requests from subcontractors or material suppliers will not be considered.

B. Information indicated on RFI shall be complete before submission. If Engineer determines request can be answered with information provided, Engineer will assign RFI tracking number. If Engineer determines request is not an RFI, request will be returned to Contractor electronically and deleted from Engineer's electronic tracking software without assigning an RFI tracking number. A transmittal document returning denied RFI request will be provided with a response indicating action to be taken by Contractor.

C. RFIs may contain more than one item when items are related. Otherwise, only one item shall be addressed on each RFI request.

D. Allow seven days for Engineer's response to each RFI.

E. Response to RFI will be issued to Contractor and Owner per Section 01 33 00 "Submittal Procedures."

1.6 PROGRESS MEETINGS

A. Schedule and administer monthly meetings throughout Work progress, at minimum.

B. Engineer will Arrange meetings, prepare agenda with copies for participants, preside at meetings.

C. Attendance Required:
   1. Owner.
   2. Job superintendent.
   3. Architect/Engineer.
   4. Others as appropriate to agenda topics for each meeting.

D. Agenda:
   1. Review minutes of previous meetings.
   2. Review Work progress.

3. Field observations, problems, and decisions.
4. Identify problems which impede planned progress.
5. Review submittal schedule and status of submittals.
6. Review off-site fabrication and delivery schedules.
7. Maintenance of progress schedule.
8. Corrective measures to regain projected schedules.
9. Planned progress during succeeding Work period.
10. Coordinate projected progress.
11. Maintenance of quality and work standards.
12. Effect of proposed changes on progress schedule and coordination.
13. Testing.
14. Other business relating to Work.

E. Record minutes and distribute copies within five days to Architect/Engineer, participants, and those affected by decisions made.

1.7 PREINSTALLATION MEETING

A. When required in individual Specifications, convene a preinstallation meeting at site before installing Work.
B. Require attendance of parties directly affecting, or affected by, Work.
C. Notify Architect/Engineer 7 days in advance of meeting date.
D. Prepare agenda and preside at meeting.
   1. Review conditions of installation, preparation, and installation procedures.
   2. Review coordination with related work.
E. Record minutes and distribute copies within five days after meeting to participants and copy Architect/Engineer.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 32 16 - CONSTRUCTION PROGRESS SCHEDULE

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Submittals.
   2. Bar chart schedules.
   3. Review and evaluation.
   4. Updating schedules.
   5. Distribution.

B. Related Sections:
   1. Other Division 01 Specification Sections apply to Work of this Section.

1.2 SUBMITTALS

A. Post as electronic file to Project website.

B. Submit initial progress schedule for Engineer review within 15 days after established Notice to Proceed date.

C. Schedule Updates:
   1. Submit with each Application for Payment.
   2. Projected and actual percent of completion.
   3. Completion progress by listed activity and subactivity, to within five working days prior to submittal.
   4. Changes in Work scope and activities modified since submittal.
   5. Delays in submittals or resubmittals, deliveries, or Work.
   6. Adjusted or modified sequences of Work.
   7. Other identifiable changes.
   8. Revised projections of progress and completion.

D. Narrative Progress Report:
   1. Submit with each Application for Payment.
   2. Summary of Work completed during past period between reports.
   3. Work planned during next period.
   4. Explanation of differences between summary of Work completed and Work planned in previously-submitted report.
   5. Current and anticipated delaying factors and estimated impact on other activities and completion milestones.
   6. Corrective action taken or proposed.

1.3 BAR CHART SCHEDULES

A. Format Bar chart Schedule, to include at least:
   1. Identification and listing, in chronological order, activities reasonably required to complete Work, including:
      a. Subcontract Work.
      b. Major equipment design, fabrication, factory testing, and delivery dates including required lead times.
      c. Move-in and other preliminary activities.

d. Project closeout and cleanup.
e. Work sequences, constraints, and milestones.

2. Listings identified by Specification Section number.
3. Identification of:
   a. Horizontal time frame by year, month, and week.
   b. Duration, early start, and completion for each activity and subactivity.
   c. Critical activities and Project float.
   d. Sub-schedules to further define critical portions of Work.

1.4 REVIEW AND EVALUATION

A. Participate in joint review and evaluation of schedules with Engineer at each Progress Meeting or Application for Payment submittals.
B. Evaluate Project status to determine Work behind and ahead of schedule.
C. After review, revise schedules incorporating results of review, and resubmit within 10 days.

1.5 UPDATING SCHEDULES

A. Maintain schedules to record actual start and finish dates of completed activities.
B. Indicate progress of each activity to date of revision, with projected completion date of each activity. Update schedules to depict current status of Work.
C. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.
D. Upon approval of Change Order, include change in next schedule submittal.
E. Indicate changes required to maintain Date of Substantial Completion.
F. Prepare narrative report to define problem areas, anticipated delays, and impact on schedule. Report corrective action taken or proposed and effect including effects of changes on schedules of separate contractors.

1.6 DISTRIBUTION

A. Following joint review, post to Project website, distribute copies to subcontractors, suppliers, Engineer, Owner, and other concerned parties.
B. Instruct recipients to promptly report, in writing, problems anticipated by projections shown in schedules.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 33 00 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Submittal procedures.
   2. Resubmittal requirements.
   3. Proposed products list.
   4. Shop Drawings.
   5. Product data.
   6. Samples.
   7. Test reports.
   8. Certificates.
   9. Manufacturers' instructions.
   10. Manufacturer’s Field Reports.

B. Related Sections:
   1. Other Division 01 Specification Sections apply to Work of this Section.

1.2 SUBMITTAL PROCEDURES

A. Submit to Engineer for review to check for conformance with information given and design concept expressed in Contract Documents.

B. Produce copies and distribute in accordance with this Article.

C. Use Project website to submit record documents as described in Section 01 70 00 "Execution and Closeout Requirements."

D. Transmit each submittal separately with Contractor's standard transmittal letter including Contractor's name, address, and phone number. Each submittal shall contain only one Specification Section.

E. Sequentially number transmittal forms using Section number or Contractor’s other sequential numbering system.

F. Identify Project, Contractor, subcontractor, or supplier, pertinent Drawing sheet and detail number(s), and Specification Section number appropriate to submittal.

G. Apply Contractor's stamp, signed or initialed certifying review, verification of products required, field dimensions, adjacent construction Work, and coordination of information, is per requirements of Work and Contract Documents.

H. Schedule submittals to expedite Project and deliver to Engineer. Coordinate submission of related items.

I. For each submittal for review, allow 10 working days excluding delivery time to and from Contractor.

J. Identify variations from Contract Documents and product or system limitations detrimental to successful performance of completed Work. Information, comments, field verifications, responses, or other notations marked on submittals by Contractor shall be in blue or green colors only.

K. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.

L. Unrequested Submittals will not be recognized or processed.

M. Format:
1. Submit all submittals digitally using PDF file extension. Each submittal shall be a single PDF file including transmittal letter. Multiple files for same submittal will not be accepted.
2. Submittals in any other format, including ZIP files, will be rejected.
3. Hard copies, not accepted.
4. To ensure each page is legible, PDF pages of Drawings shall be same size/scale as hard copy. Where applicable, provide scale symbols to indicate scale. Illegible submittals will be rejected.
5. Upload submittals to Project website.

N. Submittal procedures described herein apply to construction progress schedule, products list, shop Drawings, product data, samples (actual samples and digital files of same), design data, test reports, certificates, manufacturer's instructions and field reports, erection Drawings, RFIs, and other submittals submitted to Engineer.

1.3 RESUBMITTAL REQUIREMENTS

A. Revise submittals as required and resubmit to meet requirements specified and noted on submittal reviews.
B. Mark as *Resubmittal*.
C. Reuse original transmittal number and supplement with sequential alphabetical or numeric suffix for each resubmittal.

1.4 PROPOSED PRODUCTS LIST

A. Within 15 days after date of Notice to Proceed, submit complete list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

1.5 REQUIREMENTS FOR COMPLETE SHOP DRAWINGS

A. Printable Image Size: Minimum 8 1/2 x 11 inches, maximum 30 x 42 inches.
B. Draw details to a noted scale.
C. Draw site plans to same scale indicated on Contract Drawings.
D. Engineer-issued Construction Documents (electronic or paper format) cannot be used in any shape, form, or fashion in creating and developing Shop Drawings, except electronic files containing floor, site plans, or layout plans purchased from Engineer may be used as backgrounds for Contractor, subcontractors, sub-subcontractors, and material suppliers in Shop Drawing process.
E. Electronic Files: Available upon request. See Project Manager.
1. Electronic AutoCAD drawing files are available for purchase from Engineer upon request. Cost of files plus applicable taxes are:
a. 1 - 3 sheets: $100.00 per sheet.
b. 4 - 6 sheets: $400.00 flat fee.
c. 7 - 9 sheets: $500.00 flat fee.
2. Contractor, subcontractors, and/or sub-subcontractors may purchase electronic file. Electronic file will be provided in software release currently used by Engineer. File provided via Project website.
3. Before file delivery, purchaser shall sign an Electronic File Transfer Release Form. Payment for an electronic file shall occur upon delivery of file to purchaser.

4. Only use electronic file for production of information required by Project and not any other form (in whole or part).
5. In creation and publication of Shop Drawings, under no circumstances shall Engineer's seal or title block of drawing be reproduced. Shop drawings must be original works from Contractor subcontractors, sub-subcontractors, and material suppliers.

1.6 PRODUCT DATA

A. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information unique to Project.
B. Include recommendations for application and use, and reference to compliance with specified standards of trade associations and testing agencies.
C. After review, distribute per Article 1.2 “Submittal Procedures,” and provide copies for Record Documents described in Section 01 70 00 "Execution and Closeout Requirements."

1.7 SAMPLES

A. Submit samples to illustrate functional and aesthetic characteristics of product, with integral parts and attachment devices. Accompany physical sample with color digital image (photo or scanned PDF) of sample. Coordinate sample submittals for interfacing work.
B. Unless otherwise specified, submit samples of finishes from manufacturers' full range of standard colors, textures, and patterns, for Engineer selection.
C. Where variations in color, pattern, or texture are inherent in material or product, submit multiple samples to indicate approximate range or variations.
D. Include full Project information and identification of manufacturer, model number, type, style and color on each sample.
E. Submit number of samples specified in individual Specifications, one of which retained by Engineer.
F. Reviewed samples which may remain as part of Work indicated in individual Specifications.
G. Do not use Samples for testing unless specifically stated in individual Specifications.

1.8 TEST REPORTS

A. Submit for Engineer’s knowledge as Contract Administrator or Owner.
B. Submit test reports for information to assess conformance with information given and design concept expressed in Contract Documents.

1.9 CERTIFICATES

A. When specified in individual Specifications, submit certification by manufacturer, installation/application subcontractor, or Contractor, to Engineer.
B. Indicate material or product conforms to/exceeds specified requirements. Submit supporting reference data, affidavits, and certifications, as appropriate.
C. Certificates may be recent or previous test results on material or product, but must be acceptable to Engineer.

1.10 MANUFACTURER'S INSTRUCTIONS

A. When specified in individual Specifications, submit manufacturer-printed instructions for delivery, storage, assembly, installation, startup, adjusting, and finishing.
B. Identify conflicts between manufacturers' instructions and Contract Documents.

C. Indicate special procedures, conditions requiring special attention and special environmental criteria required for application or installation.

1.11 MANUFACTURER'S FIELD REPORTS

A. Submit reports for Engineer's benefit as contract administrator or for Owner.
B. Submit report within 30 days of observation to Engineer for information.
C. Submit for information to assess conformance with information given and design concept expressed in Contract Documents.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 40 00 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Quality control.
   2. Tolerances.
   3. References.
   4. Mockup requirements.
   5. Testing and inspection services.
   6. Manufacturers' field services.

B. Related Sections:
   1. Other Division 01 Specification Sections apply to Work of this Section.

1.2 QUALITY CONTROL

A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.

B. Comply with manufacturer’s instructions. If manufacturer’s instructions conflict with Contract Documents, request clarification from Engineer before proceeding.

C. Perform Work using persons qualified to produce required and specified quality.

D. Products, materials, and equipment may be subject to inspection by Engineer at place of manufacture or fabrication. Such inspections shall not relieve Contractor of complying with requirements of Contract Documents.

E. Supervise performance of Work to ensure Work, whether completed or in progress, will not be subjected to harmful, dangerous, damaging, or otherwise deleterious exposure during construction.

1.3 TOLERANCES

A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.

B. Comply with manufacturers' recommended tolerances and tolerance requirements in reference standards. When tolerances conflict with Contract Documents, request clarification from Engineer before proceeding.

C. Adjust products to appropriate dimensions; position before securing products in place.

1.4 REFERENCES

A. For products or workmanship specified by association, trade, or other consensus standards, comply with requirements of standard except when more rigid requirements are specified or required by applicable codes.

B. Conform to reference standard by date of issue current as of date of Contract Documents except where specific date is established by code.

C. Obtain copies of standards and maintain onsite when required by product Specifications.

D. When requirements of indicated reference standards conflict with Contract Documents, request clarification from Engineer before proceeding.
E. Neither contractual relationships, duties, or responsibilities of parties in Contract, nor those of Engineer shall be altered from Contract Documents by mention or inference in reference documents.

1.5 MOCK-UP REQUIREMENTS

A. Perform tests under provisions identified herein and in individual product Specifications.
B. Assemble and erect specified/indicated items with specified/indicated attachment and anchorage devices, flashings, seals, and finishes.
C. Accepted mockups shall be comparison standard for remaining Work.
D. Where Architect/Engineer accepts mockup and product Specifications specify to remove, remove mockup and clear area when directed to do so by Architect/Engineer.

1.6 TESTING AND INSPECTION SERVICES

A. Employ and pay for services of an independent firm acceptable to Owner to perform specified testing.
    1. Before starting Work, submit testing laboratory name, address, phone number, and name of responsible officer.
B. Independent firm will perform tests, inspections, and other services specified in individual Specifications and as required by Engineer.
C. Testing, inspections, and source quality control may occur on or off Project site. Perform off-site testing as required by Engineer.
D. Submit reports to Engineer, indicating observations and results of tests and compliance or noncompliance with Contract Documents.
E. Cooperate with independent firm. Furnish samples of materials, design mix, equipment, tools, storage, safe access, and assistance by incidental labor, as requested.
    1. Notify Engineer and independent firm 24 hours before expected time for operations requiring services.
    2. Pay for additional Samples and tests required for Contractor use.
F. Employment of testing agency or laboratory shall not relieve Contractor of obligation to perform Work per requirements of Contract Documents.
G. Retesting or Re-inspection Required Because of Nonconformance with Specified or Indicated Requirements: Payment for retesting or re-inspection will be charged to Contractor by deducting testing charges from Contract Sum/Price.
H. Independent Firm Responsibilities:
    1. Test Samples of mixes submitted by Contractor.
    2. Provide qualified personnel at Site. Cooperate with Engineer and Contractor in performance of services.
    3. Perform indicated sampling and testing of products per specified standards.
    4. Ascertain compliance of materials and mixes with Contract Document requirements.
    5. Promptly notify Engineer and Contractor of observed irregularities or nonconformance of Work or products.
    6. Perform additional tests required by Engineer.
    7. Attend preconstruction and progress meetings.
I. Independent Firm Reports. After each test, promptly submit report to Engineer and Contractor and provide interpretation of test results. Include:
    1. Date issued.
    2. Project title and number.

3. Name of inspector.
4. Date and time of sampling or inspection.
5. Identification of product and Specifications.
6. Location in Project.
7. Type of inspection or test.
8. Date of test.
9. Results of tests.
10. Conformance with Contract Documents.

1.7 MANUFACTURER'S FIELD SERVICES

A. When specified in individual Specifications, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, equipment startup, testing, adjusting, and balancing equipment, commissioning, and other as applicable, and initiate instructions when necessary.
B. Submit qualifications of observer to Engineer 30 days before required observations. Observer is subject to Engineer approval.
C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturer's written instructions.
D. Refer to Section 01 33 00 “Submittal Procedures,” Article 1.11 - Manufacturer's Field Reports.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 43 26 - TESTING LABORATORY SERVICES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Selection and payment.
   2. Contractor submittals.
   3. Laboratory responsibilities.
   4. Laboratory reports.
   5. Limits on testing laboratory authority.
   6. Contractor responsibilities.
   7. Schedule of inspections and tests.

B. Related Sections:
   1. Other Division 01 Specification Sections apply to Work of this Section.

1.2 REFERENCES

A. ASTM C1077 – Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation.
B. ASTM D3666 – Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials.
C. ASTM D3740 – Standard Practice for Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
D. ASTM E329 – Standard Specification for Minimum Requirements for Agencies Engaged in Construction Inspection, Testing, or Special Inspection.
E. ISO/IEC 17025.

1.3 SELECTION AND PAYMENT

A. Contractor shall employ and pay for services of an independent testing laboratory to perform specified inspection and testing.
B. Employment of testing laboratory shall in no way relieve Contractor of obligation to perform work per Contract Document requirements.

1.4 QUALITY ASSURANCE

A. Comply with requirements of ASTM C1077, D3666, D3740, E329, and ISO/IEC 17025.
B. Laboratory: Authorized to operate in State of Texas.
C. Laboratory Staff: Maintain a full-time, on-staff, registered Engineer to review services.

1.5 CONTRACTOR SUBMITTALS

A. Before starting Work, submit testing laboratory name, address, and phone number, as well as names of full-time registered Engineer and responsible officer.
B. Submit copy of laboratory facility inspection report made by Materials Reference Laboratory of National Bureau of Standards during most recent inspection, with remedy memorandum of deficiencies reported by inspection.

C. Submit Testing Laboratory firm's reports to the distribution list the Engineer provided at preconstruction conference, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.
D. Testing and employment of testing agency or laboratory does not relieve Contractor from performing Work to Contract requirements.
E. Retest/reinspect required because of non-conformance to specified requirements using same testing agency or laboratory. Payment for retesting is Contractor responsibility.

1.6 LABORATORY RESPONSIBILITIES

A. Test samples of mixes submitted by Contractor.
B. Provide qualified personnel onsite. Cooperate with Engineer and Contractor in service performance.
C. Perform specified inspection, sampling, and testing of Products per specified standards.
D. Ascertain compliance of materials and mixes with Contract Document requirements.
E. Promptly notify Engineer and Contractor of observed irregularities or non-conformance of Work or Products.
F. Perform additional inspections and tests required by Engineer.
G. Attend preconstruction conferences.

1.7 LABORATORY REPORTS

A. After each inspection and test, promptly distribute reports to distribution list provided by Engineer at preconstruction conference.
B. Include:
    1. Date issued.
    2. Project title and number.
    3. Name of inspector.
    4. Date and time of sampling or inspection.
    5. Identification of product and Specification Section.
    6. Location in Project.
    7. Type of inspection or test.
    8. Date of test.
    9. Results of tests.
    10. Conformance with Contract Documents.
C. When requested by Engineer, provide interpretation of test results.

1.8 LIMITS ON TESTING LABORATORY AUTHORITY

A. Laboratory may not release, revoke, alter, or enlarge on Contract Document requirements.
B. Laboratory may not approve or accept any portion of Work.
C. Laboratory may not assume any duties of Contractor.
D. Laboratory has no authority to stop the Work.

1.9 CONTRACTOR RESPONSIBILITIES

A. Deliver to laboratory at designated location, adequate samples of materials proposed to use which require testing, along with proposed mix designs.
B. Cooperate with laboratory personnel, and provide access to Work and manufacturer facilities.

C. Provide incidental labor and facilities to provide access to Work to test, obtain, and handle samples at site or source of products to test, facilitate tests and inspections, storage, and curing test samples.
D. Notify Engineer and laboratory 24 hours before expected time for operations requiring inspection and testing services.

1.10 SCHEDULE OF INSPECTIONS AND TESTS

A. As indicated in individual Specifications.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Temporary Utilities:
a. Electricity.
b. Ventilation.
c. Communication services.
d. Water.
e. Sanitary.
2. Construction Facilities:
a. Field and sheds.
b. Vehicular access.
c. Parking.
d. Progress cleaning.
e. Project identification.
f. Traffic regulation.
3. Temporary Controls:
a. Barriers.
b. Fencing.
c. Enclosures.
d. Security.
e. Water control.
f. Dust control.
g. Erosion and sediment control.
h. Noise control.
i. Pest and rodent control.
j. Pollution control.
k. Protect Work.
4. Remove utilities, facilities, and controls.
B. Related Requirements:
1. Other Divisions 01 Specification Sections apply to Work of this Section.

1.2 ELECTRICITY

A. Provide separate metering and pay utility provider for cost of energy used.

1.3 COMMUNICATION SERVICES

A. Provide, maintain, and pay for phone service to field office at project mobilization.
B. Do not use Owner’s communication systems.
C. At minimum, provide cell phone service for onsite superintendent and home office phone service.

1.4 WATER

A. Provide separate metering and reimburse Owner for cost of water used.
B. Provide temporary pipe insulation to prevent freezing.

1.5 SANITARY

A. Provide and maintain required facilities and enclosures.
B. Do not use existing facilities.

1.6 FIELD AND SHEDS

A. Storage Areas and Sheds
   1. Size storage per Specifications allowing for access and orderly provision for product maintenance and inspection.
   2. Fire Extinguishers: Appropriate-type fire extinguisher at each storage area.
   3. Interior Materials in Storage Sheds: As required to provide specified environmental conditions for storage of products.
   4. Heating and Ventilation: As required to maintain products per Contract Documents.
   5. Lighting: As required for maintenance and inspection of products.
B. Prepare: Fill/grade sites for temporary structures sloped for drainage away from buildings.
C. Maintenance and Cleaning:
   1. Periodic cleaning and maintenance for storage areas.
   2. Maintain approach walks free of mud, water, and snow.
D. Removal: At Work completion remove buildings, foundations, utility services, and debris. Restore areas to original specified conditions.

1.7 EMPLOYEE RESIDENTIAL OCCUPANCY

A. Not allowed on Owner property.

1.8 VEHICULAR ACCESS

A. Construct temporary all-weather access roads from public thoroughfares to serve construction area, width and load-bearing capacity to accommodate unimpeded traffic for construction purposes.
B. Construct temporary bridges and culverts to span low areas and allow unimpeded drainage.
C. Extend and relocate vehicular access as Work progress requires, providing necessary detours for unimpeded traffic flow.
D. Location as approved by Engineer.
E. Provide unimpeded access for emergency vehicles. Maintain 20-foot-wide driveways with turning space between and around combustible materials.
F. Provide and maintain access to fire hydrants and control valves free of obstructions.
G. Provide means of removing mud from vehicle wheels before entering onsite paved areas and public streets.
H. Use existing onsite roads for construction traffic , as designated.
I. Verify with local Authorities Having Jurisdiction regarding temporary fire lanes and related access.

1.9 PARKING

A. Arrange for surface parking areas to accommodate construction personnel.
B. Locate as approved by Engineer.
C. When site space is not adequate, provide additional off-site parking.
D. Use of designated existing onsite streets and driveways for construction traffic is permitted.
E. Do not allow heavy or tracked vehicles or construction equipment in parking areas.
F. Do not allow vehicle parking on existing pavement.

G. Permanent Pavements And Parking Facilities:
   1. Before Substantial Completion, bases for permanent roads and parking areas may be used for construction traffic.
   2. Avoid traffic loading beyond paving design capacity. Tracked vehicles not allowed.
   3. Use of permanent parking structures not permitted.

H. Maintenance:
   1. Maintain traffic and parking areas in sound condition free of excavated material, construction equipment, products, mud, snow, and ice.
   2. Maintain existing paved areas used for construction. Promptly repair breaks, potholes, low areas, standing water, and other deficiencies, to maintain paving and drainage in original, or specified, condition.

I. Removal, Repair:
   1. Remove temporary materials and construction when permanent paving is usable at Substantial Completion.
   2. Remove underground work and compacted materials to 2-foot depth. Fill and grade site as specified.
   3. Repair existing facilities damaged by use, to original or specified condition.

J. Mud from Site Vehicles: Provide way to remove mud from wheels before entering streets.

1.10 PROGRESS CLEANING

A. Maintain areas free of waste materials, debris, and rubbish. Maintain a clean and orderly site.
B. Remove waste materials, debris, and rubbish from site and dispose off-site as required to maintain clean site.

1.11 PROJECT IDENTIFICATION

A. Project Identification Sign
   1. Size: Provide one 3 feet wide x 4 feet high.
   2. Materials: 3/4-inch-thick exterior-grade plywood and solid-wood frame.
   3. Design: Design indicated in Drawings.
   4. Content indicated on Drawings.
   5. Lettering indicated on Drawings.

B. Project Informational Signs
   1. If required by other documents or Specifications, provide weather-protected signs for site-safety procedures, wage rates, and stormwater pollution prevention plan (SWPPP).
   2. Erect sign on or adjacent to field office, if required.

C. Design sign and structure to withstand 90-mile-per-hour wind velocity.
D. Installation:
   1. Install project identification sign within 15 days after date fixed by Notice to Proceed.
   2. Erect at location directed by Owner.
   3. Erect supports and framing on secure foundation, rigidly braced and framed to resist wind loadings.
   4. Install sign surface plumb and level with butt joints. Anchor securely.
   5. Paint exposed surfaces of sign supports and framing.

E. No other signs allowed without Owner permission except those required by law.
F. Maintain clean signs and supports. Repair deterioration and damage.
G. Remove signs, framing, supports, and foundations at completion of Project and restore area.

1.12 TRAFFIC REGULATION

A. Haul Routes:
   1. Consult with authority having jurisdiction, establish public thoroughfares to use for haul routes and site access.

1.13 BARRIERS

A. Provide barriers to prevent unauthorized entry to construction areas as well as protect existing facilities and adjacent properties from damage from construction operations and demolition. Allow for Owner's use of site.
B. Replace damaged items condition to original condition and protect items designated to remain:
   1. Trees.
   2. Shrubbery.
   3. Lawns.
C. Protect site improvements including but not limited to pavements, walkways, and drainage structures from damage. Replace damaged site improvements to original condition.
D. Protect non-owned vehicular traffic and stored materials from damage.

1.14 FENCING

A. Construction: Commercial-grade chain-link fence.
B. Provide 6-foot-high fence around temporary materials storage area equipped with vehicular and pedestrian gates with locks.

1.15 ENCLOSURES

A. Provide temporary weathertight closure of exterior openings to accommodate acceptable working conditions and protection for products, allow temporary heating, cooling, ventilation, and maintenance of required ambient temperatures identified in individual Specifications, and prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.

1.16 SECURITY

A. Security Program:
   1. Protect Work, existing premises , and Owner operations from theft, vandalism, and unauthorized entry.
   2. Initiate program in coordination with Owner's existing security system at Project mobilization.
   3. Maintain program throughout construction period until Owner acceptance precludes need for Contractor security.
B. Entry Control:
   1. Restrict entrance of persons and vehicles into Project site and existing facilities.
   2. Allow entrance only to authorized persons with proper identification.
   3. Maintain log of workers and visitors and make available to Owner on request.

1.17 WATER CONTROL

A. Grade site to drain.
B. Maintain excavations free of water.
C. Provide, operate, and maintain pumping equipment.

D. Protect site from puddling and running water. Provide water barriers required to protect site from soil erosion.
E. Provide water barriers required to protect existing buildings from puddling, ponding, or other water accumulation that may damage foundations or other subsurface construction.

1.18 DUST CONTROL

A. Execute Work to minimize raising dust from construction operations.
B. Provide positive means to prevent air-borne dust from dispersing into atmosphere.

1.19 EROSION AND SEDIMENT CONTROL

A. Plan and execute construction to control surface drainage from cuts, fills, borrow, and waste disposal areas. Prevent erosion and sedimentation.
B. Minimize surface area of bare soil exposed at one time.
C. Provide temporary measures including berms, dikes, drains, and other devices to prevent water flow resulting in erosion.
D. Construct fill and waste areas by selective placement to avoid erosive surface silts or clays.
E. Periodically inspect earthwork to detect evidence of erosion and sedimentation. Promptly apply corrective measures.
F. Comply with site Section 01 57 23 “Temporary Stormwater Pollution Control.”

1.20 NOISE CONTROL

A. Provide methods, means, and facilities to minimize disruption of Owner operations and activities due to noise produced by construction operations and noise transfer from construction areas to Owner occupied areas.
B. Conduct activities to produce noise that may interfere with Owner operations and activities only when agreed to by Owner.

1.21 PEST AND RODENT CONTROL

A. Provide methods, means, and facilities to prevent the following from damaging Work and entering facility:
    1. Pests.
    2. Insects.
    3. Rodents.

1.22 POLLUTION CONTROL

A. Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations.
B. Comply with pollution and environmental control requirements of authorities having jurisdiction.

1.23 PROTECT WORK

A. Protect installed Work and provide special protection where specified in Specifications.
B. Provide temporary and removable protection for installed Products. Control activity in immediate work area to minimize damage.
C. Protect finished walkways, drives, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
D. Prohibit traffic from landscaped areas.

1.24 REMOVE UTILITIES, FACILITIES, AND CONTROLS

A. Remove temporary above-grade utilities, equipment, facilities, and materials as soon as permanent facilities can be utilized.
B. Remove risers for underground utilities to minimum 2-foot depth and cap.
C. Remove buried equipment, facilities, and materials completely to minimum 2-foot depth and cap.
D. Backfill excavations as specified in other sections and grade site as indicated.
E. Clean and repair damage caused by installation or temporary work.
F. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.
G. Remove when no longer needed:
    1. Office.
    2. Storage sheds.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 56 39 – TEMPORARY TREE AND PLANT PROTECTION

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the protection and trimming of existing trees that interfere with, or are affected by, execution of the Work, whether temporary or permanent construction.
B. Related Sections include the following:
   1. Other Divisions 01 Specification Sections apply to Work of this section.
   2. Section 31 10 00 Site Clearing
   3. Section 31 20 00 Earth Moving
   4. Existing Conditions and Removal Plans, Grading Plans and Landscape Plans: Refer to Plan Sheets.

1.2 DEFINITIONS

A. Tree Protection Zone: Area surrounding individual trees or groups of trees to remain during construction, and defined by the drip line of individual trees or the perimeter drip line of groups of trees, unless otherwise indicated.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.
B. Samples for Verification:
   1. Organic Mulch: 1-quart volume of organic mulch, in sealed plastic bag labeled with composition of materials by percentage of weight and source of mulch.
C. Tree Pruning Schedule: Written schedule from arborist detailing scope and extent of pruning of trees to remain that interfere with or are affected by construction.
D. Qualification Data: For tree service firm and arborist.
E. Certification: From arborist, certifying that trees indicated to remain have been protected during construction according to recognized standards and that trees were promptly and properly treated and repaired when damaged.
F. Maintenance Recommendations: From arborist, for care and protection of trees affected by construction during and after completing the Work.

1.4 QUALITY ASSURANCE

A. Tree Service Firm Qualifications: An experienced tree service firm that has successfully completed tree protection and trimming work similar to that required for this Project and that will assign an experienced, qualified arborist to Project site during execution of tree protection and trimming.
B. Arborist Qualifications: An arborist certified by ISA or licensed in the jurisdiction where Project is located.
C. Tree Pruning Standard: Comply with ANSI A300 (Part 1), "Tree, Shrub, and Other Woody Plant Maintenance--Standard Practices (Pruning)."
D. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 01.
   1. Before tree protection and trimming operations begin, meet with representatives of authorities having jurisdiction, Owner, Landscape Architect/Engineer, consultants, and other concerned entities to review tree protection and trimming procedures and responsibilities.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Drainage Fill: Selected crushed stone, or crushed or uncrushed gravel, washed, ASTM D 448, Size 24, with 90 to 100 percent passing a sieve and not more than 10 percent passing a sieve.
B. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than in diameter; and free of weeds, roots, and toxic and other nonsoil materials.
    1. Obtain topsoil only from well-drained sites where topsoil is deep or more; do not obtain from bogs or marshes.
C. Filter Fabric: Manufacturer's standard, nonwoven, pervious, geotextile fabric of polypropylene, nylon, or polyester fibers.
D. Chain-Link Fence: Metallic-coated steel chain-link fence fabric of diameter wire; a minimum of high; with diameter line posts; diameter terminal and corner posts; diameter top rail; and diameter bottom tension wire; with tie wires, hog ring ties, and other accessories for a complete fence system.
E. Organic Mulch: Wood and bark chips, free of deleterious materials.

PART 3 - EXECUTION

3.1 PREPARATION

A. Temporary Fencing: Install temporary fencing around tree protection zones to protect remaining trees and vegetation from construction damage. Maintain temporary fence and remove when construction is complete.
    1. Install chain-link fence according to ASTM F 567 and manufacturer's written instructions.
B. Protect tree root systems from damage caused by runoff or spillage of noxious materials while mixing, placing, or storing construction materials. Protect root systems from ponding, eroding, or excessive wetting caused by dewatering operations.
C. Mulch areas inside tree protection zones and within drip line of trees to remain and other areas indicated.
    1. Apply 4-inch average thickness of organic mulch. Do not place mulch within 6 inches of tree trunks.
D. Do not store construction materials, debris, or excavated material inside tree protection zones. Do not permit vehicles or foot traffic within tree protection zones; prevent soil compaction over root systems.
E. Maintain tree protection zones free of weeds and trash.
F. Do not allow fires within tree protection zones.

3.2 EXCAVATION

A. Install shoring or other protective support systems to minimize sloping or benching of excavations.
B. Do not excavate within tree protection zones, unless otherwise indicated.

C. Where excavation for new construction is required within tree protection zones, hand clear and excavate to minimize damage to root systems. Use narrow-tine spading forks and comb soil to expose roots.
   1. Redirect roots in backfill areas where possible. If encountering large, main lateral roots, expose roots beyond excavation limits as required to bend and redirect them without breaking. If encountered immediately adjacent to location of new construction and redirection is not practical, cut roots approximately back from new construction.
   2. Do not allow exposed roots to dry out before placing permanent backfill. Provide temporary earth cover or pack with peat moss and wrap with burlap. Water and maintain in a moist condition. Temporarily support and protect roots from damage until they are permanently relocated and covered with soil.

D. Where utility trenches are required within tree protection zones, tunnel under or around roots by drilling, auger boring, pipe jacking, or digging by hand.
   1. Root Pruning: Do not cut main lateral roots or taproots; cut only smaller roots that interfere with installation of utilities. Cut roots with sharp pruning instruments; do not break or chop.

3.3 REGRADING

A. Grade Lowering: Where new finish grade is indicated below existing grade around trees, slope grade beyond tree protection zones. Maintain existing grades within tree protection zones.

B. Grade Lowering Within Protection Zone: Where new finish grade is indicated below existing grade around trees, slope grade away from trees as recommended by arborist, unless otherwise indicated.
   1. Root Pruning: Prune tree roots exposed during grade lowering. Do not cut main lateral roots or taproots; cut only smaller roots. Cut roots with sharp pruning instruments; do not break or chop.

C. Raising Grade: Where new finish grade is indicated above existing grade around tree, slope grade beyond the protection zone. Maintain existing grades within protection zone.

D. Minor Fill Within Protection Zone: Where existing grade is 2 inches or less below elevation of finish grade, fill with topsoil. Place topsoil in a single uncompacted layer and hand grade to required finish elevations.

3.4 TREE PRUNING

A. Prune trees to remain that are affected by temporary and permanent construction.

B. Prune trees to remain to compensate for root loss caused by damaging or cutting root system. Provide subsequent maintenance during Contract period as recommended by arborist.

C. Pruning Standards: Prune trees according to ANSI A300 (Part 1), as follows:
   1. Type of Pruning: Crown cleaning.
   2. Type of Pruning: Crown thinning.
   3. Type of Pruning: Crown raising.
   4. Type of Pruning: Crown reduction.
   5. Type of Pruning: Vista pruning.
   6. Type of Pruning: Crown restoration.

D. Cut branches with sharp pruning instruments; do not break or chop.

E. Chip removed tree branches and spread over areas identified by Landscape Architect/Engineer or stockpile as directed by Owner.

3.5 TREE REPAIR AND REPLACEMENT

A. Promptly repair trees damaged by construction operations within 24 hours. Treat damaged trunks, limbs, and roots according to arborist's written instructions.

B. Remove and replace trees indicated to remain that die or are damaged during construction operations that arborist and Landscape Architect/Engineer determines are incapable of restoring to normal growth pattern.

1. Provide new trees of same size and species as those being replaced for each tree that measures 4 inches or smaller in caliper size; plant and maintain as specified in 32 93 00 “Plants.”
2. Provide 2 new trees of 6-inch caliper size and of a species selected by Landscape Architect/Engineer when damaged trees more than 6 inches in caliper size, measured above grade, are required to be replaced. Plant and maintain new trees as specified in 32 93 00 "Plants."

C. Aerate surface soil, compacted during construction, 10 feet beyond drip line and no closer than 36 inches to tree trunk. Drill 2-inch diameter holes a minimum of 12 inches deep at 24 inches o.c. Backfill holes with an equal mix of augered soil and sand.

3.6 DISPOSAL OF WASTE MATERIALS

A. Burning is not permitted.

B. Disposal: Remove excess excavated material and displaced trees from Owner's property.

C. Chipping: Removed trimmings and trees may be chipped into mulch and reused onsite upon approval of Landscape Architect/Engineer/Engineer or stockpiled as directed by Owner.

END OF SECTION

SECTION 01 57 23 – TEMPORARY STORMWATER POLLUTION CONTROL

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Contractor responsibilities.
   2. Submittals.
   3. Erosion and sediment controls.

B. Related Requirements:
   1. Local jurisdiction requirements.
   2. Other Division 01 Specification Sections apply to Work of this Section.

1.2 CONTRACTOR RESPONSIBILITIES

A. Contractor is solely responsible for meeting all TCEQ and EPA requirements for stormwater pollution prevention:
   1. Develop a Stormwater Pollution Prevention Plan (SWPPP) if not provided;
   2. File Notice of Intent (NOI) and include Owner as an "Operator;"
   3. Install and maintain all erosion control measures and best management practices (BMPs);
   4. Perform inspections and prepare reports; and
   5. File Notice of Termination (NOT).

1.3 SUBMITTALS

A. Submit to Engineer, SWPPP, Submittal Procedures, and all other related documentation conforming to Section 01 33 00 "Submittal Procedures."

1.4 EROSION AND SEDIMENT CONTROLS

A. Implement structural measures to divert flows from exposed soils, temporarily store flows, or otherwise limit run-off and discharge of pollutants from exposed areas of site. Timely implement structural practices as specified in SWPPP during construction to minimize erosion and sediment run-off.

B. Stabilized Ingress/Egress:
   1. Provide stabilized access to/from construction site as soon as practical per SWPPP.
   2. Ensure any soil tracked off-site is cleaned from existing roads, alleys, and any adjacent properties as soon as possible. Check for any pollutants (mud, silt, sand, cement, construction materials, etc.) tracked or washed off-site and perform necessary clean-up measures at the end of each work day.

C. Silt Fences/Diversion Berms: Provide silt fences and/or diversion berms as a temporary structural practice to minimize erosion and sediment runoff, as necessary. Properly install silt fences and/or diversion berms to effectively retain sediment immediately after completing each phase of work where erosion would occur as sheet and rill erosion (clearing and grubbing, excavation, embankment, grading, etc.).

D. Sand/Gravel Bags: Provide sand/gravel bags as a temporary structural practice to minimize erosion and sediment runoff. Properly place bags to effectively retain sediment immediately after completing each phase of work (clearing and grubbing, excavation, embankment, grading, etc.) in each independent runoff area (after clearing and grubbing between ridge and drain, place bags as work progresses, remove/replace/relocate bags as needed for work to progress in drainage area). Replace sand/gravel bags no longer in good condition, as needed.

E. Site Stabilization:
   1. Minimize surface area of base soil material at one time.
   2. Implement necessary stabilization measures including:
      a. Temporary/permanent seeding/sodding;
      b. Mulching;
      c. Geotextiles;
      d. Vegetative buffer stips;
      e. Paving;
      f. Rock riprap; and/or
      g. Rock-filled gabions.
      h. Inlet protection.
   3. Implement stabilization measures per SWPPP.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 60 00 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Products.
   2. Product delivery requirements.
   3. Product storage and handling requirements.
B. Related Sections:
   1. Other Division 01 Specification Sections apply to Work of this Section.

1.2 PRODUCTS

A. At minimum, comply with specified requirements and reference standards.
B. Specified products define standard of quality, type, function, dimension, appearance, and performance required.
C. Furnish products of qualified manufacturers suitable for intended use. Furnish products of each type by single manufacturer unless specified otherwise. Confirm manufacturer's production capacity can provide sufficient product, on time, to meet Project requirements.

1.3 PRODUCT DELIVERY REQUIREMENTS

A. Transport and handle products per manufacturer instructions.
B. Promptly inspect shipments to ensure products comply with requirements, quantities are correct, and products are undamaged.
C. Provide equipment and personnel to handle products. Prevent soiling, disfigurement, or damage.
D. Owner will not assist in offloading or accepting product deliveries.

1.4 PRODUCT STORAGE AND HANDLING REQUIREMENTS

A. Store and protect products per manufacturer instructions.
B. Store products with seals and labels intact and legible.
C. Store sensitive products in weathertight, climate-controlled enclosures in an environment suitable to product.
D. For exterior storage of fabricated products, place products on sloped supports above ground.
E. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
F. Store loose granular materials on solid flat surfaces in well-drained area. Prevent mixing with foreign matter.
G. Provide equipment and personnel to store products. Prevent soiling, disfigurement, or damage.
H. Arrange product storage to permit access for inspection. Periodically inspect to verify products are undamaged and maintained in acceptable condition.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 70 00 - EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Surveying.
   2. Closeout procedures.
   3. Starting systems.
   4. Demonstration and instructions.
   5. Testing, adjusting, and balancing.
   6. Project record documents.
   7. Operation and maintenance data.
   8. Manual for materials and finishes.
   9. Manual for equipment and systems.
   10. Spare parts and maintenance products.
   11. Product warranties and product bonds.
   12. Examination.
   13. Preparation.
   14. Execution.
   15. Protecting installed construction.
   16. Final cleaning.

B. Related Sections:
   1. Other Division 01 Specification Sections apply to Work of this Section.

1.2 SURVEYING

A. Employ land surveyor registered in State of Texas and acceptable to Engineer.

B. Locate and protect survey control and reference points. Promptly notify Engineer of discrepancies discovered.

C. Control datum for survey is indicated on Drawings.

D. Verify setbacks, easements, and rights of way. Confirm Drawing dimensions and elevations.

E. Provide field engineering services. Establish elevations, lines, and levels using recognized engineering survey practices.

F. Submit copy of Site Drawing signed by land surveyor certifying elevations and locations of Work are per Contract Documents.

G. Maintain complete and accurate log of control and survey Work as Work progresses.

H. Protect survey control points before starting Site Work. Preserve permanent reference points during construction.

I. Promptly report to Engineer loss or destruction of reference point or relocation required because of changes in grades or other reasons.

J. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Engineer.

1.3 CLOSEOUT PROCEDURES

A. Prerequisites to Substantial Completion. Complete following items before requesting Certification of Substantial Completion, either for entire Work or portions of Work:
   1. Submit maintenance manuals, Project record documents, and other similar final record data per this Section.

2. Complete facility startup, testing, adjusting, balancing systems and equipment, demonstrations, and instructions to Owner's operating and maintenance personnel as specified per this Section.
3. Conduct inspection to establish basis for request that Work is substantially complete. Create comprehensive list (initial punch list) indicating items to complete or correct, value of incomplete or nonconforming Work, reason for incompletion, and date of anticipated completion for each item. Include copy of list with request for Certificate of Substantial Completion.
4. Obtain and submit releases enabling Owner's full, unrestricted use of Project and access to services and utilities. Include certificate of occupancy, operating certificates, and similar releases from authorities having jurisdiction and utility companies.
5. Deliver tools, spare parts, extra stocks of material, and similar physical items to Owner.
6. Change locks and transmit keys directly to Owner. Advise Owner's personnel of change-over in security provisions.
7. Discontinue or change over and remove temporary facilities and services from Project Site, along with construction tools, mockups, and similar elements.
8. Perform final cleaning per this Section.

B. Substantial Completion Inspection:
1. When Contractor considers Work substantially complete, submit to Engineer and Owner:
   a. Written certificate that Work, or designated portion, is substantially complete.
   b. List of items to complete or correct (initial punch list).
2. Within seven days after receipt of request for Substantial Completion, Engineer and Owner will inspect to determine if Work or designated portion is substantially complete.
3. If Engineer and Owner determine Work is NOT substantially complete:
   a. Engineer and Owner will promptly notify Contractor in writing, stating reasons for opinion.
   b. Contractor shall remedy deficiencies in Work and send second written request for Substantial Completion to Engineer and Owner.
   c. Engineer and Owner will reinspect Work.
   d. Repeat until Work passes inspection.
4. When Architect/Engineer and Owner finds Work is substantially complete, they will:
   a. Prepare Certificate of Substantial Completion on AIA G704 - Certificate of Substantial Completion, accompanied by Contractor's list of items to complete or correct as verified and amended by Engineer and Owner (final punch list).
   b. Submit Certificate to Owner and Contractor for written acceptance of responsibilities assigned in Certificate.
5. After Work is substantially complete, Contractor shall:
   a. Allow Owner occupancy of Project under provisions stated in Certificate of Substantial Completion.
   b. Complete Work listed for completion or correction within time stipulated.

C. Prerequisites for Final Completion. Complete following items before requesting final acceptance and final payment.
1. When Contractor considers Work complete, submit written certification that:
   a. Contract Documents were reviewed.
   b. Work was examined for compliance with Contract Documents.
   c. Work was completed per Contract Documents.
   d. Work is complete and ready for final inspection.

2. Submit:
    a. Final punch list indicating all items are complete or correct.
    b. Final payment request with final releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations, where required.
    c. Specified warranties, workmanship/maintenance bonds, maintenance agreements, and other similar documents.
    d. Accounting statement for final changes to Contract Sum.
    e. Contractor's affidavit of payment of debts and claims on Contractor's Affidavit of Payment of Debts and Claims form.
    f. Contractor affidavit of release of liens on Contractor's Affidavit of Release of Liens form.
    g. Consent of surety to final payment on Contractor’s Consent of Surety to Final Payment form.
3. Perform final cleaning for Contractor-soiled areas per this Section.

D. Final Completion Inspection:
1. Within seven days after receipt of request for final inspection, Engineer and Owner will inspect to determine if Work or designated portion is complete.
2. If Engineer and Owner consider Work incomplete or defective:
    a. Engineer and Owner will promptly notify Contractor in writing, listing incomplete or defective Work.
    b. Contractor shall remedy stated deficiencies and send second written request to Engineer and Owner that Work is complete.
    c. Engineer and Owner will reinspect Work.
    d. Redo and Inspect Deficient Work: Repeated until Work passes inspection.
    e. Engineer and Owner inspection.

1.4 STARTING SYSTEMS

A. Coordinate schedule for startup of various equipment and systems.
B. Notify Engineer seven days before startup of each item.
C. Verify each piece of equipment or system was checked for proper lubrication, drive rotation, belt tension, control sequence, and conditions which may cause damage.
D. Verify tests, meter readings, and electrical characteristics agree with those required by equipment or system manufacturer.
E. Verify wiring and support components for equipment are complete and tested.
F. Execute startup under supervision of manufacturer's representative or Contractors' personnel per manufacturer's instructions.
G. When specified in individual Specifications, require manufacturer to provide authorized representative who will be present at Site to inspect, check, and approve equipment or system installation before startup and supervise placing equipment or system in operation.
H. Submit a written report per Section 01 33 00 “Submittal Procedures,” that equipment or system has properly installed and functioning correctly.

1.5 DEMONSTRATION AND INSTRUCTIONS

A. Demonstrate operation and maintenance (O&M) of products to Owner's personnel two weeks before date of Substantial Completion.
B. Demonstrate Project equipment by qualified manufacturer's representative who is knowledgeable about Project.

C. Use O&M manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.
D. Demonstrate startup, operation, control, adjustment, troubleshooting, servicing, maintenance, and shutdown of each item of equipment at agreed time, at equipment location.
E. Prepare and insert additional data in O&M manuals when need for additional data is apparent during instruction.
F. Required instruction time for each item of equipment and system is specified in individual Specifications.

1.6 TESTING, ADJUSTING, AND BALANCING

A. Owner will appoint, employ, and pay for services of independent firm to perform testing, adjusting, and balancing.
B. Reports will be submitted by independent firm to Engineer indicating observations and results of tests and indicating compliance or noncompliance with requirements of Contract Documents.

1.7 PROJECT RECORD DOCUMENTS

A. Maintain onsite, one set of these record documents and record actual revisions to Work:
   1. Drawings.
   2. Specifications.
   3. Addenda.
   4. Change Orders and other modifications to Contract.
   5. Reviewed Shop Drawings, product data, and Samples.
   6. Manufacturer's instruction for assembly, installation, and adjusting.
B. Ensure entries are complete and accurate, enabling future reference by Owner.
C. Store record documents separate from documents used for construction.
D. Record information concurrent with construction progress, not less than weekly.
E. Specifications: Legibly mark and record, at each product Section, description of actual products installed, including:
   1. Manufacturer's name, product model and number.
   2. Product substitutions or alternates used.
   3. Changes made by Addenda and modifications.
F. Record Drawings: Legibly mark each item to record actual construction as:
   1. Include Contract modifications such as Addenda, supplementary instructions, change directives, field orders, minor changes in Work, and change orders.
   2. Include locations of concealed elements of Work.
   3. Identify depth of buried utility lines and provide dimensions showing distances from permanent facility components parallel to utilities.
   4. Dimension ends, corners, and junctions of buried utilities to permanent facility components using triangulation.
   5. Identify and locate existing buried or concealed items encountered during Project.
   6. Measured depths of foundations in relation to finish main-floor datum.
   7. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
   8. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of Work.
   9. Field changes of dimension and detail.
   10. Details not on original Drawings.

G. Submit PDF electronic files of marked-up documents to Engineer with claim for final Application for Payment.

1.8 OPERATION AND MAINTENANCE DATA

A. Submit in PDF composite electronic indexed file.

1.9 MANUAL FOR MATERIALS AND FINISHES

A. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Engineer will review draft and return one copy with comments.
B. For equipment or component parts of equipment put into service during construction and operated by Owner, submit documents within 10 days after acceptance.
C. Submit one copy of completed volumes 15 days before final inspection. Draft copy reviewed and returned after final inspection, with Engineer comments. Revise content of document sets as required before final submission.
D. Submit two sets of revised final volumes within 10 days after final inspection.
E. Submit in PDF composite electronic indexed file of final manual within 10 days after final inspection.
F. Building Products, Applied Materials, and Finishes: Include product data, with catalog number, size, composition, and color and texture designations. Include information for reordering custom-manufactured products.
G. Instructions for Care and Maintenance: Include manufacturer recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
H. Moisture Protection and Weather-Exposed Products: Include product data listing applicable reference standards, chemical composition, and details of installation. Include recommendations for inspections, maintenance, and repair.
I. Additional requirements as specified in individual product Specifications.
J. Include listing in TOC for design data, with tabbed fly sheet and space for insertion of data.

1.10 MANUAL FOR EQUIPMENT AND SYSTEMS

A. Submit two copies of preliminary draft or proposed formats and outlines of contents before Work. Engineer will review draft and return one copy with comments.
B. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit documents within 10 days after acceptance.
C. Submit one copy of completed volumes 15 days before final inspection. Draft copy will be reviewed and returned after final inspection, with Engineer comments. Revise content of document sets as required before final submission.
D. Submit two sets of revised final volumes within 10 days after final inspection.
E. Submit in PDF composite electronic indexed file of final manual within 10 days after final inspection.
F. Each Item of Equipment and Each System: Include description of unit/system and component parts. Identify function, normal operating characteristics, and limiting conditions. Include performance curves, with engineering data and tests, complete nomenclature, and model number of replaceable parts.
G. Panelboard Circuit Directories: Provide electrical service characteristics, controls, and communications; by label machine.
H. Include color-coded wiring diagrams as installed.

I. Operating Procedures: Include startup, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shutdown, and emergency instructions. Include summer, winter, and special operating instructions.
J. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and troubleshooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
K. Include servicing and lubrication schedule and list of lubricants required.
L. Include manufacturer's printed operation and maintenance instructions.
M. Include sequence of operation by controls manufacturer.
N. Include original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
O. Include control diagrams by controls manufacturer as installed.
P. Include Contractor's coordination drawings with color-coded piping diagrams as installed.
Q. Include charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
R. Include list of original manufacturer's spare parts, current prices, and recommended quantities maintained in storage.
S. Include test and balancing reports per Section 01 40 00 “Quality Requirements.”
T. Additional requirements as specified in individual product Specifications.
U. Include listing in TOC for design data with tabbed dividers and space for insertion of data.

1.11 SPARE PARTS AND MAINTENANCE PRODUCTS

A. Furnish spare parts, maintenance, and extra products in quantities specified in individual Specifications.
B. Deliver to place in location as directed by Owner. Obtain receipt before final payment.

1.12 PRODUCT WARRANTIES AND PRODUCT BONDS

A. Obtain warranties and bonds executed in duplicate by responsible subcontractors, suppliers, and manufacturers within 10 days after completion of applicable item of Work.
B. Execute and assemble transferable warranty documents and bonds from subcontractors, suppliers, and manufacturers.
C. Verify documents are in proper form, contain full information, and notarized.
D. Co-execute submittals when required.
E. Include TOC and assemble in three, D-side-ring binder with durable plastic cover.
F. Submit before final Application for Payment.
G. Time of Submittals:
    1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 10 days after acceptance.
    2. Make other submittals within 10 days after date of Substantial Completion, before final Application for Payment.
    3. For items of Work for which acceptance is delayed beyond Substantial Completion, submit within 10 days after acceptance, listing date of acceptance as beginning of warranty or bond period.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify existing Site conditions and substrate surfaces are acceptable for subsequent Work.
B. Beginning new Work means acceptance of existing conditions.
C. Verify existing substrate can structurally support or attach new Work applied.
D. Examine and verify specific conditions described in individual Specifications.
E. Verify utility services are available with correct characteristics and in correct locations.

3.2 PREPARATION

A. Clean substrate surfaces before applying next material or substance per manufacturer instructions.
B. Seal cracks or openings of substrate before applying next material or substance.
C. Apply manufacturer-required or -recommended substrate primer, sealer, or conditioner before applying new material or substance in contact or bond.

3.3 EXECUTION

A. Comply with manufacturer installation instructions, performing each step, in sequence. Maintain one set of manufacturer's installation instructions at Project Site during installation and until completion of construction.
B. When manufacturer's installation instructions conflict with Contract Documents, request clarification from Engineer before proceeding.
C. Verify field measurements are as indicated on approved Shop Drawings or as instructed by manufacturer.
D. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.
    1. Secure Work true-to-line and level and within specified tolerances, or if not specified, industry-recognized tolerances.
    2. Physically separate products in place, provide electrical insulation, or provide protective coatings to prevent galvanic action or corrosion between dissimilar metals.
    3. Exposed Joints: Provide uniform joint width and arrange to obtain best visual effect. Refer questionable visual-effect choices to Engineer for final decision.
E. Allow for expansion of materials and building movement.
F. Climatic Conditions and Project Status: Install each unit of Work under conditions to ensure best possible results in coordination with entire Project.
    1. Isolate each unit of Work from incompatible Work necessary to prevent deterioration.
    2. Coordinate enclosure of Work with required inspections and tests to minimize necessity of uncovering Work for those purposes.
G. Mounting Heights: Where not indicated, mount individual units of Work at industry-recognized standard mounting heights for particular application indicated.
    1. Refer questionable mounting heights choices to Engineer for final decision.
    2. Elements Identified as Accessible to Handicapped: Comply with applicable codes and regulations.
H. Adjust operating products and equipment to ensure smooth and unhindered operation.
I. Clean and perform maintenance on installed Work as frequently as necessary through remainder of construction. Lubricate operable components recommended by manufacturer.

3.4 PROTECTING INSTALLED CONSTRUCTION

A. Protect installed Work and provide special protection where specified.
B. Provide temporary and removable protection for installed products. Control activity in immediate Work area to prevent damage.
C. Use durable sheet materials to protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects.
D. Prohibit traffic from landscaped areas.

3.5 FINAL CLEANING

A. Execute final cleaning before final Project assessment. Employ experienced personnel or professional cleaning firm.
B. Clean equipment and fixtures to sanitary condition with appropriate cleaning materials.
C. Clean filters of operating equipment.
D. Clean site. Sweep paved areas and rake landscaped surfaces clean.
E. Remove waste and surplus materials, rubbish, and construction facilities from site.

END OF SECTION

SECTION 11 68 00 - PLAY FIELD EQUIPMENT AND STRUCTURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes playground equipment as follows:
   1. Freestanding playground equipment.
   2. Composite playground equipment.
   3. Manufactured pay equipment attached to custom shotcrete climbing walls, platform and mound.
   4. Custom play elements and structures.
   5. Manufactured outdoor musical instruments.

B. Related Requirements:
   1. Section 32 18 16.13 "Playground Protective Surfacing" for protective surfacing under and around playground equipment.

1.2 DEFINITIONS

A. IPEMA: International Play Equipment Manufacturers Association.

B. Fall Height: According to ASTM 1487, "the vertical distance betwen a designated play surface and the protective surfacing beneath it.

C. Use Zone: According to ASTM F 1487, "the area beneath and immediately adjacent to a play structure that is designated for unrestricted circulation around the equipment and on whose surface it is predicted that a user would land when falling from or exiting the equipment."

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: For each type of playground equipment.
   1. Include plans, elevations, sections, and attachment details.
   2. Include fall heights and use zones for playground equipment, coordinated with the critical-height values of protective surfacing specified in Section 32 18 16.13 "Playground Protective Surfacing."

C. Samples for Initial Selection: For each type of exposed finish.
   1. Manufacturer's color charts.
   2. Include Samples of accessories involving color selection.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer, manufacturer, and testing agency:
   1. For Installer: Submit a listing of at least five installations where the brand of play equipment with similar units to those proposed has been installed and has been in successful service for at least five years. This list shall include Owner and purchaser; address of installation; service or maintenance organization; date of installation; and contact person and phone number.
   2. For Manufacturer: Submit documentation that the Playground Equipment Manufacturer is ISO 9001 certified (Quality Management Standard) and ISO 12001 certified (Environmental Management Standard).

3. For Testing Agency: Submit IPEMAcertification showing compliance with all applicable portions of the current ASTM F 1487 standard.

B. Product Certificates: For each type of playground equipment.

C. Material Certificates: For the following items:
   1. Shop finishes.
   2. Recycled plastic.

D. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for playground equipment.

E. Field quality-control reports.

F. Sample Warranty: For manufacturer's special warranties.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: For playground equipment and finishes to include in maintenance manuals.
   1. Submit two bound copies of procedures and instructions pertaining to frequency of preventive maintenance, inspection, adjustment, lubrication, and cleaning necessary to minimize corrective maintenance and repair for play equipment. A list of all parts and components for the system, by manufacturer's name, part number, and nomenclature, shall be attached.
   2. Supply a maintenance kit with each custom play structure that shall include wrenches for tamper-oroof hardware, one can of graffiti remover, primer, and spray paint to match the color of the structure, sandpaper, and a comprehensive maintenance manual. The maintenance manual shall include a complete plan drawing of the structure, inspection procedures, inspection report forms, and installation instructions and parts list. The entire kit is to be sent directly to the Owner.

1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications: A firm whose playground equipment components have been certified by IPEMA's third-party product certification service.

1.7 WARRANTY

A. Special Warranty: Manufacturer agrees to repair or replace components of playground equipment that fail in materials or workmanship within specified warranty period.
   1. Failures include, but are not limited to, the following:
      a. Structural failures.
      b. Deterioration of metals, metal finishes, and other materials beyond normal weathering and use.
   2. Warranty Period: 15 years for plastic equipment and 5 years for cables from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Source Limitations: Obtain playground equipment from single source from single manufacturer.
B. Playground equipment and components shall have the IPEMA Certification Seal.

2.2 PERFORMANCE REQUIREMENTS

A. Safety Standard: Provide playground equipment according to ASTM F1487 and CPSC No. 325.
B. Accessibility: Playground equipment intended for access by children with disabilities shall meet the requirement of 36 CFR Part 1191 (2000) Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities, Play Areas, Final Rule.
    1. Definitions:
        a. Elevated Play Components: An elevated play component is a play component that is appproached above or below grade and is part of a composite play structure and that can be approached from a platform or deck area shall be considered elevated play components.
        b. Ground-Level Play Components: Ground level play components are items that can be approached and exited at ground level.
        c. Type of Play Component: Different types of play components shall be based on the general experience provided by the play component including (but not limited to) experiences such as rocking, swinging, climbing, spinning, and sliding.
        d. Elevated Accessible Route: An elevated accessible route is defined as the path used for connecitng elevated play components.
    2. Requirements for Number and Variety of Play Components:
        a. Ground-Level Play Components: At least one of each type of ground-level play component that is present in the play area shall be on an accessible route. The number and variety of ground-level play components required to be on an accessible route shall be determined by the number of elevated play components provided in accordance with Table 15.6.2.2 of 36 CFR Part 1191 (2000).
        b. Elevated Play Components: At least 50 percent of the elevated play components shall be on an accessible route.
    3. Requirements for Elevated Accessible Routes:
        a. The elevated accessible route shall connect the entry and exit points of at least 50 percent of the elevated play components provided in the play area.
        b. Elevated accessible routes shall have a minimum 36 inches clear width (narrowing to a minimum of 32 inches for a 24 inches length), a 12-inch rise maximum per ramp run, and handrails with a top gripping surface (0.95 inches to 1.55 inches diameter or width) between 20 inches and 28 inches above the ramp surface.
        c. Ramps and transfer systems may be used for providing access to elevated play components. Ramps shall be provided on composite structures with 20 or more elevated play components and they shall connect to at least 25% of the elevated play components.
        d. Landings at the top and bottom of each run are required and shall be as wide as the ramp they connect to and at least 60 inches long

e. Handrails shall comply with ADAAG 4.8.5 except that they shall have no extensions.

4. Requirements for Transfer Systems:
   a. Transfer platforms shall be between 11 inches and 18 inches high, minimum 24 inches wide, and minimum 14 inches deep.
   b. Clear ground space at least 48 inches by 30 inches shall be provided, with the 48 inches long side parallel to the 24 inches side of the transfer platform.
   c. Transfer steps shall be a minimum 24 inches wide by 14 inches deep. Steps shall be maximum 8 inches high. Steps on site-built and custom units shall be 6 inches for preschool-age play components.
   d. Transfer supports shall be provided on transfer platforms and transfer steps at each level where transferring is the intended method of access.
5. Clear Floor or Ground Space:
   a. Clear ground space at least 48 inches by 30 inches shall be provided at ground-level play components and elevated play components accessible by ramp.
   b. Clear ground spaces may overlap accessible routes and maneuvering spaces.
   c. Clear ground spaces shall have slopes not steeper than 1:48 in all directions.
6. Maneuvering Space:
   a. Maneuvering spaces shall comply with ADAAG section 4.8.
   b. Maneuvering spaces at least 60 inches diameter or 60 inches T-shaped shall be provided at ground-level play components and elevated play components accessible by ramp.
   c. Maneuvering spaces shall be provided adjacent to swings.
   d. At least one maneuvering space shall be provided on the same level as elevated play components accessible by ramp.
   e. Maneuvering spaces shall have slopes not steeper than 1:48 in all directions.
7. Entry Points and Seats:
   a. Entry points and seats shall be between 11 inches and 24 inches high, with a recommended height of 18 inches.
8. Reach Ranges for Manipulative Features:
   a. Manipulative features on ground-level play components or elevated play components accessible by ramp shall be located as follows:
      1) Preschool-age equipment: 20 inches to 36 inches above adjacent accessible surface.
      2) School-age equipment: 18 inches to 40 inches above adjacent accessible surface.
   b. Manipulative features on elevated play components accessible only by transfer systems shall be located as follows:
      1) Preschool-age equipment as above, less 15 inches.
      2) School-age equipment as above, less 18 inches.

2.3 FREESTANDING PLAYGROUND EQUIPMENT

A. Reference Sheet LC100 and LD503 for Play Area Equipment Miracle Recreation or approved equal.
   1. Contact: Vince Allen, (972) 727-0653; va@wbuildfun.com. at WeBuildFun Inc., for additional information.

2.4 MATERIALS

A. Aluminum: Material, alloy, and temper recommended by manufacturer for type of use and finish indicated.
   1. Cast Aluminum: ASTM B 179.
B. Steel: Material types, alloys, and forms recommended by manufacturer for type of use and finish indicated:
   1. Steel Plates, Shapes, and Bars: ASTM A 36, hot-dip galvanized.
   2. Steel Pipe: ASTM A 53 or ASTM A 135, standard-weight, hot-dip galvanized.
   3. Steel Tubing: ASTM A 500 or ASTM A 513, cold-formed, hot-dip galvanized.
C. Stainless-Steel Sheet: Type 304; finished on exposed faces with No. 2B finish.
D. Opaque Plastics: Color impregnated, UV stabilized, and mold resistant.
   1. Polyethylene: Fabricated from 96 percent recycled, purified, fractional-melt plastic resin; rotationally molded HDPE, LLDPE, or MDPE with not less than 1/4-inch wall thickness.
E. Suspension Chain and Fittings: ASTM A467/A467M, Class CS, 4/0 or 5/0, welded-straight-link coil chain; hot-dip galvanized; with commercial-quality, hot-dip galvanized steel connectors and swing or ring hangers.
F. Suspension Cable: Manufacturer's standard hot-dip galvanized cable; with commercial-quality, hot-dip galvanized steel connectors and swing or ring hangers.
G. Iron Castings and Hangers: Malleable iron, ASTM A47/A47M, Grade 32510, hot-dip galvanized.
H. Post Caps: Cast aluminum or color-impregnated, UV-stabilized, mold-resistant polyethylene or polypropylene color to match posts.
I. Platform Clamps and Hangers: Cast aluminum or zinc-plated steel, not less than 0.105-inch- nominal thickness.
J. Hardware: Manufacturer's standard; commercial-quality; corrosion-resistant; hot-dip galvanized steel and iron, stainless steel, or aluminum; of a vandal-resistant design.
K. Fasteners: Manufacturer's standard; corrosion-resistant; hot-dip galvanized or zinc-plated steel and iron, or stainless steel; permanently capped; and theft resistant.
L. Rotationally Molded Poly Parts: Molded using prime compounded linear low-density polyethylene with a tensile strength of 2500 psi per ASTM D 638 and with color and UV stabilizing additives. Wall thickness varies by product from 3/16 inch to 5/16 inch. Color shall be specified (four standard colors are available).
M. Permalene Parts: Manufactured from 3/4 inch thick high-density polyethylene that has been specially formulated for optimum UV stability and color retention. Compression-molded products shall meet or exceed density of .933 G/cc per ASTM d 1505, tensile strength of 2400 psi per ASTM D638. Color shall be specified (standard solid colors are tan, red, blue, green, and yellow). Some permalene parts are available in two-color laminate product with (2) .070 inch thick exterior layers over a .610 inch interior core of contrasting color. Color shall be specified (eight standard two-color options are available).
N. Custom Components: Manufactured in sizes and shapes as shown on Drawings and as required to complete the play equipment layout. Custom components shall meet or exceed ASTM standards as set forth in the General Requirements of this Section. All custom components must be approved by the Owner.
O. Elevated Play Surfaces: Guardrails or protective barriers completely surround elevated play surface except for access openings, if play-surface heights above protective surfacing exceed the following for use by age group indicated:
   1. Elevated surface greater than 20 inches intended for use by children aged 2 through 5 years.

2. Elevated surface greater than 30 inches intended for use by children aged 5 through 12 years.

P. Stepped Play Surfaces: Provide stepped platforms where indicated on Drawings.

Q. Handrails: Welded metal pipe or tubing, OD 1-1/2 inches. Provide handrails at height for use by age group indicated below:
1. Ages: Between 5 and 12 years.
2. Height of Top Surface: 38 inches intended for use by children aged 5 through 12 years.
3. Close exposed ends of handrails with returns with clearance of 1/4 inch or less.

2.5 CAST-IN-PLACE CONCRETE

A. Concrete Materials and Properties: Comply with requirements in ACI 301 for normal-weight, air-entrained concrete with minimum 28-day compressive strength of 3000 psi, 3-inch slump, and 1-inch- maximum-size aggregate.

2.6 ALUMINUM FINISHES

A. Baked-Enamel or Powder-Coat Finish: Minimum dry film thickness of 1.5 mils, medium gloss. Comply with coating manufacturer's written instructions for cleaning, conversion coating, and applying and baking finish.

2.7 IRON AND STEEL FINISHES

A. Baked-Enamel or Powder-Coat Finish: After cleaning and pretreating, apply manufacturer's standard two-coat, baked-on finish consisting of prime coat and thermosetting topcoat to a minimum dry film thickness of 2 mils. Comply with coating manufacturer's written instructions for pretreatment, applying, and baking.

2.8 STAINLESS-STEEL FINISHES

A. Surface Preparation: Remove tool and die marks and stretch lines, or blend into finish.

B. Bright, Cold-Rolled, Unpolished Finish: No. 2B.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for earthwork, subgrade elevations, surface and subgrade drainage, and other conditions affecting performance of the Work.
1. Do not begin installation before final grading required for placing playground equipment and protective surfacing is completed.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Verify locations of playground perimeter and pathways. Verify that playground layout and equipment locations comply with requirements for each type and component of equipment.

3.3 INSTALLATION

A. Comply with manufacturer's written installation instructions for each equipment type unless more stringent requirements are indicated. Anchor playground equipment securely, positioned at locations and elevations indicated.
   1. Maximum Equipment Height: Coordinate installed fall heights of equipment with finished elevations and critical-height values of protective surfacing. Set equipment so fall heights and elevation requirements for age group use and accessibility are within required limits. Verify that playground equipment elevations comply with requirements for each type and component of equipment.

B. Post and Footing Excavation: Excavate holes for posts and footings as indicated in firm, undisturbed or compacted subgrade soil.

C. Post Set on Subgrade: Level bearing surfaces with drainage fill to required elevation.

D. Post Set with Concrete Footing: Comply with ACI 301 dry-packaged concrete-mix manufacturer's written instructionsfor measuring, batching, mixing, transporting, forming, and placing concrete.
   1. Set equipment posts in concrete footing. Protect portion of posts above footing from concrete splatter. Verify that posts are set plumb or at the correct angle, alignment, height, and spacing.
      a. Place concrete around posts and vibrate or tamp for consolidation. Hold posts in position during placement and finishing operations until concrete is sufficiently cured.
   2. Embedded Items: Follow equipment manufacturer's written instructions and drawings to ensure correct installation of anchorages for equipment.
   3. Finishing Footings: Smooth top, and shape to shed water.

3.4 FIELD QUALITY CONTROL

A. Perform the following tests and inspections with the assistance of a factory-authorized service representative.
   1. Perform inspection and testing for each type of installed playground equipment according to ASTM F1487 and CPSC No. 325.

B. Playground equipment items will be considered defective if they do not pass tests and inspections.

C. Prepare test and inspection reports.

D. Notify Owner 48 hours in advance of date(s) and time(s) of testing and inspection.

END OF SECTION

SECTION 31 10 00 - SITE CLEARING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Protecting existing vegetation to remain.
   2. Removing existing vegetation.
   3. Clearing and grubbing.
   4. Stripping and stockpiling topsoil.
   5. Removing above- and below-grade site improvements.
   6. Disconnecting, capping or sealing, and removing site utilities and abandoning site utilities in place.
   7. Temporary erosion and sedimentation control.

B. Related Requirements:
   1. Division 01 Specification Sections apply to Work of this Section.

1.2 DEFINITIONS

A. Subsoil: Soil beneath the level of subgrade; soil beneath the topsoil layers of a naturally occurring soil profile, typified by less than 1 percent organic matter and few soil organisms.

B. Surface Soil: Soil that is present at the top layer of the existing soil profile. In undisturbed areas, surface soil is typically called "topsoil," but in disturbed areas such as urban environments, the surface soil can be subsoil.

C. Topsoil: Top layer of the soil profile consisting of existing native surface topsoil or existing in-place surface soil; the zone where plant roots grow.

D. Topsoil: Top layer of the soil profile consisting of existing native surface topsoil or existing in-place surface soil; the zone where plant roots grow. Its appearance is generally friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects larger than 2 inches in diameter; and free of weeds, roots, toxic materials, or other nonsoil materials.

E. Plant-Protection Zone: Area surrounding individual trees, groups of trees, shrubs, or other vegetation to be protected during construction and indicated on Drawings.

F. Tree-Protection Zone: Area surrounding individual trees or groups of trees to be protected during construction and indicated on Drawings.

G. Vegetation: Trees, shrubs, groundcovers, grass, and other plants.

1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.4 MATERIAL OWNERSHIP

A. Except for materials indicated to be stockpiled or otherwise remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

1.5 INFORMATIONAL SUBMITTALS

A. Existing Conditions: Documentation of existing trees and plantings, adjoining construction, and site improvements that establishes preconstruction conditions that might be misconstrued as damage caused by site clearing.
   1. Use sufficiently detailed photographs or video recordings.

1.6 FIELD CONDITIONS

A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
   1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
   2. Provide alternate routes around closed or obstructed trafficways if required by Owner or authorities having jurisdiction.
B. Salvageable Improvements: Carefully remove items indicated to be salvaged and store on Owner's premises.
C. Utility Locator Service: Notify utility locator service for area where Project is located before site clearing.
D. Do not commence site clearing operations until temporary erosion- and sedimentation-control and plant-protection measures are in place.
E. Tree- and Plant-Protection Zones: Protect according to requirements in Drawings.
F. Soil Stripping, Handling, and Stockpiling: Perform only when the soil is dry or slightly moist.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Satisfactory Soil Material: Requirements for satisfactory soil material are specified in Section 31 20 00 "Earth Moving."
   1. Obtain approved borrow soil material off-site when satisfactory soil material is not available on-site.
B. Antirust Coating: Fast-curing, lead- and chromate-free, self-curing, universal modified-alkyd primer complying with MPI #23 (surface-tolerant, anticorrosive metal primer) .

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect and maintain benchmarks and survey control points from disturbance during construction.
B. Verify that trees, shrubs, and other vegetation to remain or to be relocated have been flagged and that protection zones have been identified and enclosed according to requirements in Drawings.
C. Protect existing site improvements to remain from damage during construction.
   1. Restore damaged improvements to their original condition, as acceptable to Owner.

3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

A. Provide temporary erosion- and sedimentation-control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to erosion- and sedimentation-control Drawings and requirements of authorities having jurisdiction.
B. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.
C. Inspect, maintain, and repair erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
D. Remove erosion and sedimentation controls, and restore and stabilize areas disturbed during removal.

3.3 TREE AND PLANT PROTECTION

A. Protect trees and plants remaining on-site according to requirements in Drawings.
B. Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations according to requirements in Drawings.

3.4 EXISTING UTILITIES

A. Locate, identify, disconnect, and seal or cap utilities indicated to be removed or abandoned in place.
    1. Arrange with utility companies to shut off indicated utilities.
B. Locate, identify, and disconnect utilities indicated to be abandoned in place.
C. Interrupting Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others, unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
    1. Notify Owner not less than two days in advance of proposed utility interruptions.
D. Excavate for and remove underground utilities indicated to be removed.

3.5 CLEARING AND GRUBBING

A. Remove obstructions, trees, shrubs, and other vegetation to permit installation of new construction.
    1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
    2. Grind down stumps and remove roots larger than 3 inches in diameter, obstructions, and debris to a depth of 18 inches below exposed subgrade.
    3. Use only hand methods or air spade for grubbing within protection zones.
    4. Chip removed tree branches and dispose of off-site.
B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.
    1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches, and compact each layer to a density equal to adjacent original ground.

3.6 TOPSOIL STRIPPING

A. Remove sod and grass before stripping topsoil.

B. Strip topsoil to depth of 6 inches in a manner to prevent intermingling with underlying subsoil or other waste materials.
   1. Remove subsoil and nonsoil materials from topsoil, including clay lumps, gravel, and other objects larger than 2 inches in diameter; trash, debris, weeds, roots, and other waste materials.

C. Stockpile topsoil away from edge of excavations without intermixing with subsoil or other materials. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust and erosion by water.
   1. Limit height of topsoil stockpiles to 72 inches.
   2. Do not stockpile topsoil within protection zones.
   3. Stockpile surplus topsoil to allow for respreading deeper topsoil.

3.7 SITE IMPROVEMENTS

A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction.

B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.
   1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut along line of existing pavement to remain before removing adjacent existing pavement. Saw-cut faces vertically.
   2. Paint cut ends of steel reinforcement in concrete to remain with two coats of antirust coating, following coating manufacturer's written instructions. Keep paint off surfaces that will remain exposed.

3.8 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.

END OF SECTION

SECTION 31 20 00 - EARTH MOVING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Excavating and filling for rough grading the Site.
   2. Preparing subgrades for walks, pavements, turf and grasses and plants.
   3. Subbase course for concrete walks pavements.
   4. Subbase course and base course for asphalt paving.

B. Related Requirements:
   1. Division 01 Specification Sections apply to Work of this Section.
   2. Section 31 10 00 "Site Clearing" for site stripping, grubbing, stripping and stockpiling topsoil, and removal of above- and below-grade improvements and utilities.
   3. Section 32 92 00 "Turf and Grasses" for finish grading in turf and grass areas, including preparing and placing planting soil for turf areas.
   4. Section 32 93 00 "Plants" for finish grading in planting areas and tree and shrub pit excavation and planting.

1.2 DEFINITIONS

A. Backfill: Soil material or controlled low-strength material used to fill an excavation.
   1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
   2. Final Backfill: Backfill placed over initial backfill to fill a trench.

B. Base Course: Aggregate layer placed between the subbase course and hot-mix asphalt paving.

C. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.

D. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.
   1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Landscape Architect. Authorized additional excavation and replacement material will be paid for according to Contract provisions for unit prices changes in the Work.
   2. Bulk Excavation: Excavation more than 10 feet in width and more than 30 feet in length.
   3. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Landscape Architect. Unauthorized excavation, as well as remedial work directed by Landscape Architect, shall be without additional compensation.

E. Fill: Soil materials used to raise existing grades.

F. Rock: Rock material in beds, ledges, unstratified masses, conglomerate deposits, and boulders of rock material that exceed 1 cu. yd. for bulk excavation or 3/4 cu. yd. for footing, trench, and pit excavation that cannot be removed by rock-excavating equipment equivalent to the following in size and performance ratings, without systematic drilling, ram hammering, ripping, or blasting, when permitted:
   1. Equipment for Footing, Trench, and Pit Excavation: Late-model, track-mounted hydraulic excavator; equipped with a 42-inch- maximum-width, short-tip-radius rock bucket; rated at not less than 138-hp flywheel power with bucket-curling force of not less than 28,700 lbf and stick-crowd force of not less than 18,400 lbf with extra-long reach boom.
   2. Equipment for Bulk Excavation: Late-model, track-mounted loader; rated at not less than 230-hp flywheel power and developing a minimum of 47,992-lbf breakout force with a general-purpose bare bucket.

G. Rock: Rock material in beds, ledges, unstratified masses, conglomerate deposits, and boulders of rock material 3/4 cu. yd. or more in volume that exceed a standard penetration resistance of 100 blows/2 inches when tested by a geotechnical testing agency, according to ASTM D1586.

H. Subbase Course: Aggregate layer placed between the subgrade and base course for hot-mix asphalt pavement, or aggregate layer placed between the subgrade and a cement concrete pavement or a cement concrete or hot-mix asphalt walk.

I. Subgrade: Uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, drainage fill, drainage course, or topsoil materials.

J. Utilities: On-site underground pipes, conduits, ducts, and cables as well as underground services within buildings.

1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct preexcavation conference at Project site.
   1. Review methods and procedures related to earthmoving, including, but not limited to, the following:
      a. Personnel and equipment needed to make progress and avoid delays.
      b. Coordination of Work with utility locator service.
      c. Coordination of Work and equipment movement with the locations of tree- and plant-protection zones.
      d. Extent of trenching by hand or with air spade.
      e. Field quality control.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of the following manufactured products required:
   1. Geotextiles.
   2. Controlled low-strength material, including design mixture.
   3. Geofoam.
   4. Warning tapes.

B. Samples for Verification: For the following products, in sizes indicated below:
   1. Geotextile: 12 by 12 inches.
   2. Warning Tape: 12 inches long; of each color.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For qualified testing agency.
B. Material Test Reports: For each on-site and borrow soil material proposed for fill and backfill as follows:
   1. Classification according to ASTM D2487.
   2. Laboratory compaction curve according to ASTM D698 ASTM D1557.

1.6 FIELD CONDITIONS

A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during earth-moving operations.
   1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
   2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.
B. Utility Locator Service: Notify utility locator service for area where Project is located before beginning earth-moving operations.
C. Do not commence earth-moving operations until temporary site fencing and erosion- and sedimentation-control measures specified in Section 01 50 00 "Temporary Facilities and Controls" and Section 31 10 00 "Site Clearing" are in place.
D. Do not commence earth-moving operations until plant-protection measures specified in Section 01 56 39 "Temporary Tree and Plant Protection" are in place.
E. The following practices are prohibited within protection zones:
   1. Storage of construction materials, debris, or excavated material.
   2. Parking vehicles or equipment.
   3. Foot traffic.
   4. Erection of sheds or structures.
   5. Impoundment of water.
   6. Excavation or other digging unless otherwise indicated.
   7. Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.
F. Do not direct vehicle or equipment exhaust towards protection zones.
G. Prohibit heat sources, flames, ignition sources, and smoking within or near protection zones.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.
B. Satisfactory Soils: Soil Classification Groups GW, GP, GM, SW, SP, and SM according to ASTM D2487 or a combination of these groups; free of rock or gravel larger than 3 inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.
C. Unsatisfactory Soils: Soil Classification Groups GC, SC, CL, ML, OL, CH, MH, OH, and PT according to ASTM D2487 or a combination of these groups.
   1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.

D. Subbase Material: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D2940/D2940M; with at least 90 percent passing a 1-1/2-inch sieve and not more than 12 percent passing a No. 200 sieve.
E. Base Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D2940/D2940M; with at least 95 percent passing a 1-1/2-inch sieve and not more than 8 percent passing a No. 200 sieve.
F. Engineered Fill: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D2940/D2940M; with at least 90 percent passing a 1-1/2-inch sieve and not more than 12 percent passing a No. 200 sieve.
G. Bedding Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D2940/D2940M; except with 100 percent passing a 1-inch sieve and not more than 8 percent passing a No. 200sieve.
H. Drainage Course: Narrowly graded mixture of washed crushed stone, or crushed or uncrushed gravel; ASTM D448; coarse-aggregate grading Size 57; with 100 percent passing a 1-1/2-inch sieve and zero to 5 percent passing a No. 8 sieve.
I. Filter Material: Narrowly graded mixture of natural or crushed gravel, or crushed stone and natural sand; ASTM D448; coarse-aggregate grading Size 67; with 100 percent passing a 1-inch sieve and zero to 5 percent passing a No. 4 sieve.
J. Sand: ASTM C33/C33M; fine aggregate.
K. Impervious Fill: Clayey gravel and sand mixture capable of compacting to a dense state.

2.2 CONTROLLED LOW-STRENGTH MATERIAL

A. Controlled Low-Strength Material: Self-compacting, low-density, flowable concrete material produced from the following:
   1. Portland Cement: ASTM C150/C150M, Type I.
   2. Fly Ash: ASTM C618, Class C or F.
   3. Normal-Weight Aggregate: ASTM C33/C33M, 3/4-inch 3/8-inch nominal maximum aggregate size.
   4. Foaming Agent: ASTM C869/C869M.
   5. Water: ASTM C94/C94M.
   6. Air-Entraining Admixture: ASTM C260/C260M.

2.3 ACCESSORIES

A. Warning Tape: Acid- and alkali-resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility; colored as follows:
   1. Red: Electric.
   2. Yellow: Gas, oil, steam, and dangerous materials.
   3. Orange: Telephone and other communications.
   4. Blue: Water systems.
   5. Green: Sewer systems.
B. Detectable Warning Tape: Acid- and alkali-resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, a minimum of 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches deep; colored as follows:
   1. Red: Electric.
   2. Yellow: Gas, oil, steam, and dangerous materials.
   3. Orange: Telephone and other communications.

4. Blue: Water systems.
5. Green: Sewer systems.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth-moving operations.
B. Protect and maintain erosion and sedimentation controls during earth-moving operations.
C. Protect subgrades and foundation soils from freezing temperatures and frost. Remove temporary protection before placing subsequent materials.

3.2 DEWATERING

A. Provide dewatering system of sufficient scope, size, and capacity to control hydrostatic pressures and to lower, control, remove, and dispose of ground water and permit excavation and construction to proceed on dry, stable subgrades.
B. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
C. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
    1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.
D. Dispose of water removed by dewatering in a manner that avoids endangering public health, property, and portions of work under construction or completed. Dispose of water and sediment in a manner that avoids inconvenience to others.

3.3 EXCAVATION, GENERAL

A. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.
    1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.
    2. Remove rock to lines and grades indicated to permit installation of permanent construction without exceeding the following dimensions:
        a. 24 inches outside of concrete forms other than at footings.
        b. 12 inches outside of concrete forms at footings.
        c. 6 inches outside of minimum required dimensions of concrete cast against grade.
        d. Outside dimensions of concrete walls indicated to be cast against rock without forms or exterior waterproofing treatments.
        e. 6 inches beneath bottom of concrete slabs-on-grade.
        f. 6 inches beneath pipe in trenches and the greater of 24 inches wider than pipe or 42 inches wide.

3.4 EXCAVATION FOR WALKS AND PAVEMENTS

A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades.

3.5 SUBGRADE INSPECTION

A. Notify Landscape Architect when excavations have reached required subgrade.
B. If Landscape Architect determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.
C. Proof-roll subgrade below the pavements with a pneumatic-tired and loaded 10-wheel, tandem-axle dump truck weighing not less than 15 tons to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.
    1. Completely proof-roll subgrade in one direction, repeating proof-rolling in direction perpendicular to first direction. Limit vehicle speed to 3 mph.
    2. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by Landscape Architect, and replace with compacted backfill or fill as directed.
D. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
E. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Landscape Architect, without additional compensation.

3.6 UNAUTHORIZED EXCAVATION

A. Fill unauthorized excavation under foundations or wall footings by extending bottom elevation of concrete foundation or footing to excavation bottom, without altering top elevation. Lean concrete fill, with 28-day compressive strength of 2500 psi, may be used when approved by Landscape Architect.
    1. Fill unauthorized excavations under other construction, pipe, or conduit as directed by Landscape Architect.

3.7 STORAGE OF SOIL MATERIALS

A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
    1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

3.8 BACKFILL

A. Place and compact backfill in excavations promptly, but not before completing the following:
    1. Construction below finish grade including, where applicable, subdrainage, dampproofing, waterproofing, and perimeter insulation.
    2. Surveying locations of underground utilities for Record Documents.
    3. Testing and inspecting underground utilities.
    4. Removing concrete formwork.
    5. Removing trash and debris.

6. Removing temporary shoring, bracing, and sheeting.
7. Installing permanent or temporary horizontal bracing on horizontally supported walls.

B. Place backfill on subgrades free of mud, frost, snow, or ice.

3.9 SOIL FILL

A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.
B. Place and compact fill material in layers to required elevations as follows:
   1. Under grass and planted areas, use satisfactory soil material.
   2. Under walks and pavements, use satisfactory soil material.
   3. Under steps and ramps, use engineered fill.
   4. Under building slabs, use engineered fill.
   5. Under footings and foundations, use engineered fill.
C. Place soil fill on subgrades free of mud, frost, snow, or ice.

3.10 SOIL MOISTURE CONTROL

A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.
   1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
   2. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.11 COMPACTION OF SOIL BACKFILLS AND FILLS

A. Place backfill and fill soil materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment and not more than 4 inches in loose depth for material compacted by hand-operated tampers.
B. Place backfill and fill soil materials evenly on all sides of structures to required elevations and uniformly along the full length of each structure.
C. Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D698:
   1. Under structures, steps, and pavements, scarify and recompact top 12 inches of existing subgrade and each layer of backfill or fill soil material at 95 percent.
   2. Under walkways, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 95 percent.
   3. Under turf or unpaved areas, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 85 percent.
   4. For utility trenches, compact each layer of initial and final backfill soil material at 85 percent.

3.12 GRADING

A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
   1. Provide a smooth transition between adjacent existing grades and new grades.

2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.

B. Site Rough Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to elevations required to achieve indicated finish elevations, within the following subgrade tolerances:
   1. Turf or Unpaved Areas: Plus or minus 1 inch.
   2. Walks: Plus or minus 1 inch.
   3. Pavements: Plus or minus 1/2 inch.

C. Grading inside Building Lines: Finish subgrade to a tolerance of 1/2 inch when tested with a 10-foot straightedge.

3.13 SUBBASE AND BASE COURSES UNDER PAVEMENTS AND WALKS

A. Place subbase course and base course on subgrades free of mud, frost, snow, or ice.

B. On prepared subgrade, place subbase course and base course under pavements and walks as follows:
   1. Install separation geotextile on prepared subgrade according to manufacturer's written instructions, overlapping sides and ends.
   2. Place base course material over subbase course under hot-mix asphalt pavement.
   3. Shape subbase course and base course to required crown elevations and cross-slope grades.
   4. Place subbase course and base course 6 inches or less in compacted thickness in a single layer.
   5. Place subbase course and base course that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.
   6. Compact subbase course and base course at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D698 ASTM D1557.

3.14 FIELD QUALITY CONTROL

A. Special Inspections: Owner will engage a qualified special inspector to perform the following special inspections:
   1. Determine prior to placement of fill that site has been prepared in compliance with requirements.
   2. Determine that fill material classification and maximum lift thickness comply with requirements.
   3. Determine, during placement and compaction, that in-place density of compacted fill complies with requirements.

B. Testing Agency: Engage a qualified geotechnical engineering testing agency to perform tests and inspections.

C. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earth moving only after test results for previously completed work comply with requirements.

D. Footing Subgrade: At footing subgrades, at least one test of each soil stratum will be performed to verify design bearing capacities. Subsequent verification and approval of other footing subgrades may be based on a visual comparison of subgrade with tested subgrade when approved by Landscape Architect.

E. Testing agency will test compaction of soils in place according to ASTM D1556, ASTM D2167, ASTM D2937, and ASTM D6938, as applicable. Tests will be performed at the following locations and frequencies:

F. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil materials to depth required; recompact and retest until specified compaction is obtained.

3.15 PROTECTION

A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.

B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.

1. Scarify or remove and replace soil material to depth as directed by Landscape Architect; reshape and recompact.

C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.

1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.16 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Remove surplus satisfactory soil and waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property.

B. Transport surplus satisfactory soil to designated storage areas on Owner's property. Stockpile or spread soil as directed by Landscape Architect.

1. Remove waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION

SECTION 32 13 13 - CONCRETE PAVING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes Concrete Paving Including the Following:
   1. Curbs.
   2. Walks.

B. Related Requirements:
   1. Division 01 Specification Sections apply to Work of this Section.
   2. Section 32 13 16 "Decorative Concrete Paving" for colored concrete other than stamped detectable warnings.

1.2 DEFINITIONS

A. Cementitious Materials: Portland cement alone or in combination with one or more of blended hydraulic cement, fly ash, slag cement, and other pozzolans.

B. W/C Ratio: The ratio by weight of water to cementitious materials.

1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.
   1. Review methods and procedures related to concrete paving, including but not limited to, the following:
      a. Concrete mixture design.
      b. Quality control of concrete materials and concrete paving construction practices.
   2. Require representatives of each entity directly concerned with concrete paving to attend, including the following:
      a. Contractor's superintendent.
      b. Independent testing agency responsible for concrete design mixtures.
      c. Ready-mix concrete manufacturer.
      d. Concrete paving subcontractor.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples for Initial Selection: For each type of product, ingredient, or admixture requiring color selection.

C. Design Mixtures: For each concrete paving mixture. Include alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For qualified ready-mix concrete manufacturer and testing agency.
B. Material Certificates: For the following, from manufacturer:
   1. Cementitious materials.
   2. Steel reinforcement and reinforcement accessories.
   3. Admixtures.
   4. Curing compounds.
   5. Bonding agent or epoxy adhesive.
   6. Joint fillers.
C. Material Test Reports: For each of the following:
   1. Aggregates: Include service-record data indicating absence of deleterious expansion of concrete due to alkali-aggregate reactivity.
D. Field quality-control reports.

1.6 QUALITY ASSURANCE

A. Ready-Mix-Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.
   1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities" (Quality Control Manual - Section 3, "Plant Certification Checklist").
B. Testing Agency Qualifications: Qualified according to ASTM C 1077 and ASTM E 329 for testing indicated.
   1. Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician, Grade 1, according to ACI CP-1 or an equivalent certification program.
C. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
   1. Build mockups of full-thickness sections of concrete paving to demonstrate typical joints; surface finish, texture, and color; curing; and standard of workmanship.
   2. Build mockups of concrete paving in the location and of the size indicated or, if not indicated, build mockups where directed by Architect and not less than 96 inches by 96 inches.
   3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
   4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.7 PRECONSTRUCTION TESTING

A. Preconstruction Testing Service: Engage a qualified independent testing agency to perform preconstruction testing on concrete paving mixtures.

1.8 FIELD CONDITIONS

A. Traffic Control: Maintain access for vehicular and pedestrian traffic as required for other construction activities.

B. Cold-Weather Concrete Placement: Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing, or low temperatures. Comply with ACI 306.1 and the following:
   1. When air temperature has fallen to or is expected to fall below 40 deg F, uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 deg F and not more than 80 deg F at point of placement.
   2. Do not use frozen materials or materials containing ice or snow.
   3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in design mixtures.

C. Hot-Weather Concrete Placement: Comply with ACI 301 and as follows when hot-weather conditions exist:
   1. Cool ingredients before mixing to maintain concrete temperature below 90 deg F at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated in total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
   2. Cover steel reinforcement with water-soaked burlap, so steel temperature will not exceed ambient air temperature immediately before embedding in concrete.
   3. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade moisture uniform without standing water, soft spots, or dry areas.

PART 2 - PRODUCTS

2.1 CONCRETE, GENERAL

A. ACI Publications: Comply with ACI 301 unless otherwise indicated.

2.2 FORMS

A. Form Materials: Plywood, metal, metal-framed plywood, or other approved panel-type materials to provide full-depth, continuous, straight, and smooth exposed surfaces.
   1. Use flexible or uniformly curved forms for curves with a radius of 100 feet or less. Do not use notched and bent forms.

B. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and that will not impair subsequent treatments of concrete surfaces.

2.3 STEEL REINFORCEMENT

A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60; deformed.

B. Joint Dowel Bars: ASTM A 615/A 615M, Grade 60 plain-steel bars. Cut bars true to length with ends square and free of burrs.

C. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars, welded-wire reinforcement, and dowels in place. Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire, plastic, or precast concrete of greater compressive strength than concrete specified, and as follows:
   1. Equip wire bar supports with sand plates or horizontal runners where base material will not support chair legs.

2.4 CONCRETE MATERIALS

A. Cementitious Materials: Use the following cementitious materials, of same type, brand, and source throughout Project:
   1. Portland Cement: ASTM C 150/C 150M, gray portland cement Type II with low C3A concentration.
   2. Fly Ash: ASTM C 618, Class F.

B. Normal-Weight Aggregates: ASTM C 33/C 33M, Class 1N, uniformly graded. Provide aggregates from a single source with documented service-record data of at least 10 years' satisfactory service in similar paving applications and service conditions using similar aggregates and cementitious materials.
   1. Maximum Coarse-Aggregate Size: 1-1/2 inches nominal.
   2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.

C. Air-Entraining Admixture: ASTM C 260/C 260M.

D. Chemical Admixtures: Admixtures certified by manufacturer to be compatible with other admixtures and to contain not more than 0.1 percent water-soluble chloride ions by mass of cementitious material.
   1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
   2. Retarding Admixture: ASTM C 494/C 494M, Type B.
   3. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
   4. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.
   5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
   6. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.

E. Water: Potable and complying with ASTM C 94/C 94M.

2.5 CURING MATERIALS

A. Absorptive Cover: AASHTO M 182, Class 3, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. dry or cotton mats.

B. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

C. Water: Potable.

D. Evaporation Retarder: Waterborne, monomolecular, film forming, manufactured for application to fresh concrete.
   1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      a. BASF Corporation-Construction Systems; MasterKure ER 50 (Pre-2014: Confilm.
      b. Sika Corporation; SikaFilm.
      c. W.R. Meadows, Inc; EVAPRE.

E. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating.
   1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      a. Horncure 30D: A. C. Horn / W.R. Grace.
      b. Clear-Bond: Guardian Chemical Company.
      c. LR 151: Protex Industries, Inc.

F. White, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 2, Class B, dissipating.
   1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      a. Horncure 30D: A. C. Horn / W.R. Grace.
      b. Clear-Bond: Guardian Chemical Company.
      c. LR 151: Protex Industries, Inc..

2.6 RELATED MATERIALS

A. Joint Fillers: ASTM D 1751, asphalt-saturated cellulosic fiber in preformed strips.

2.7 CONCRETE MIXTURES

A. Prepare design mixtures, proportioned according to ACI 301, for each type and strength of normal-weight concrete, and as determined by either laboratory trial mixtures or field experience.
   1. Use a qualified independent testing agency for preparing and reporting proposed concrete design mixtures for the trial batch method.
   2. When automatic machine placement is used, determine design mixtures and obtain laboratory test results that comply with or exceed requirements.

B. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than portland cement in concrete as follows:
   1. Fly Ash: 25 percent.

C. Add air-entraining admixture at manufacturer's prescribed rate to result in normal-weight concrete at point of placement having an air content as follows:
   1. Air Content: 5 percent plus or minus 1 percent. (38-mm)

D. Limit water-soluble, chloride-ion content in hardened concrete to 0.30 percent by weight of cement.

E. Chemical Admixtures: Use admixtures according to manufacturer's written instructions.
   1. Use water-reducing and retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.

F. Concrete Mixtures: Normal-weight concrete.
   1. Compressive Strength (28 Days): 4000 psi.
   2. Maximum W/C Ratio at Point of Placement: 0.45.
   3. Slump Limit: 4 inches, plus or minus 1 inch for hand pours and 2 inches plus or minus 1 inch for machine finish pours

2.8 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M. Furnish batch certificates for each batch discharged and used in the Work.
   1. When air temperature is between 85 and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

B. Project-Site Mixing: Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M. Mix concrete materials in appropriate drum-type batch machine mixer.
   1. For concrete batches of 1 cu. yd. or smaller, continue mixing at least 1-1/2 minutes, but not more than 5 minutes after ingredients are in mixer, before any part of batch is released.
   2. For concrete batches larger than 1 cu. yd., increase mixing time by 15 seconds for each additional 1 cu. yd..
   3. Provide batch ticket for each batch discharged and used in the Work, indicating Project identification name and number, date, mixture type, mixing time, quantity, and amount of water added.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine exposed subgrades and subbase surfaces for compliance with requirements for dimensional, grading, and elevation tolerances.

B. Proof-roll prepared subbase surface below concrete paving to identify soft pockets and areas of excess yielding.
   1. All subgrade preparation shall be preformed in compliance with Geotechnical Report DE19-415R2 provided by Alliance Geotechnical dated June 15, 2020.
   2. Completely proof-roll subbase in one direction and repeat in perpendicular direction. Limit vehicle speed to 3 mph.
   3. Proof-roll with a pneumatic-tired and loaded, 10-wheel, tandem-axle dump truck weighing not less than 25 tons.
   4. Correct subbase with soft spots and areas of pumping or rutting exceeding depth of 1/2 inch according to requirements in Section 31 20 00 "Earth Moving."

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Remove loose material from compacted subbase surface immediately before placing concrete.

3.3 EDGE FORMS AND SCREED CONSTRUCTION

A. Set, brace, and secure edge forms, bulkheads, and intermediate screed guides to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.

B. Clean forms after each use and coat with form-release agent to ensure separation from concrete without damage.

3.4 STEEL REINFORCEMENT INSTALLATION

A. General: Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.
B. Clean reinforcement of loose rust and mill scale, earth, ice, or other bond-reducing materials.
C. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement. Maintain minimum cover to reinforcement.

3.5 JOINTS

A. General: Form construction, isolation, and contraction joints and tool edges true to line, with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline unless otherwise indicated.
    1. When joining existing paving, place transverse joints to align with previously placed joints unless otherwise indicated.
B. Construction Joints: Set construction joints at side and end terminations of paving and at locations where paving operations are stopped for more than one-half hour unless paving terminates at isolation joints.
    1. Provide tie bars at sides of paving strips where indicated.
    2. Doweled Joints: Install dowel bars and support assemblies at joints where indicated. Lubricate or coat with asphalt one-half of dowel length to prevent concrete bonding to one side of joint.
C. Isolation Joints: Form isolation joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, other fixed objects, and where indicated.
    1. Locate expansion joints at intervals of 50 feet unless otherwise indicated.
    2. Extend joint fillers full width and depth of joint.
    3. Terminate joint filler not less than 1/2 inch or more than 1 inch below finished surface if joint sealant is indicated.
    4. Furnish joint fillers in one-piece lengths. Where more than one length is required, lace or clip joint-filler sections together.
    5. During concrete placement, protect top edge of joint filler with metal, plastic, or other temporary preformed cap. Remove protective cap after concrete has been placed on both sides of joint.
D. Contraction Joints: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of the concrete thickness, as follows, to match jointing of existing adjacent concrete paving:
    1. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch- wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before developing random contraction cracks.
        a. Tolerance: Ensure that sawed joints are within 3 inches either way from centers of dowels.
    2. Doweled Contraction Joints: Install dowel bars and support assemblies at joints where indicated. Lubricate or coat with asphalt one-half of dowel length to prevent concrete bonding to one side of joint.
E. Edging: After initial floating, tool edges of paving, curbs, and joints in concrete with an edging tool to a 1/4-inch radius. Repeat tooling of edges after applying surface finishes. Eliminate edging-tool marks on concrete surfaces.

3.6 CONCRETE PLACEMENT

A. Before placing concrete, inspect and complete formwork installation, steel reinforcement, and items to be embedded or cast-in.
B. Remove snow, ice, or frost from subbase surface and steel reinforcement before placing concrete. Do not place concrete on frozen surfaces.
C. Moisten subbase to provide a uniform dampened condition at time concrete is placed. Do not place concrete around manholes or other structures until they are at required finish elevation and alignment.
D. Comply with ACI 301 requirements for measuring, mixing, transporting, and placing concrete.
E. Do not add water to concrete during delivery or at Project site. Do not add water to fresh concrete after testing.
F. Deposit and spread concrete in a continuous operation between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place.
G. Consolidate concrete according to ACI 301 by mechanical vibrating equipment supplemented by hand spading, rodding, or tamping.
    1. Consolidate concrete along face of forms and adjacent to transverse joints with an internal vibrator. Keep vibrator away from joint assemblies, reinforcement, or side forms. Use only square-faced shovels for hand spreading and consolidation. Consolidate with care to prevent dislocating reinforcement dowels joint devices.
H. Screed paving surface with a straightedge and strike off.
I. Commence initial floating using bull floats or darbies to impart an open-textured and uniform surface plane before excess moisture or bleedwater appears on the surface. Do not further disturb concrete surfaces before beginning finishing operations or spreading surface treatments.
J. Curbs: Use design mixture for automatic machine placement. Produce curbs to required cross section, lines, grades, finish, and jointing.

3.7 FLOAT FINISHING

A. General: Do not add water to concrete surfaces during finishing operations.
B. Float Finish: Begin the second floating operation when bleedwater sheen has disappeared and concrete surface has stiffened sufficiently to permit operations. Float surface with power-driven floats or by hand floating if area is small or inaccessible to power units. Finish surfaces to true planes. Cut down high spots and fill low spots. Refloat surface immediately to uniform granular texture.
    1. Concrete Walks: Medium-to-Fine-Textured Broom Finish: Draw a soft-bristle broom across float-finished concrete surface, perpendicular to line of traffic, to provide a uniform, fine-line texture.

3.8 CONCRETE PROTECTION AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
B. Comply with ACI 306.1 for cold-weather protection.
C. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete but before float finishing.

D. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.

E. Curing Methods: Cure concrete by curing compound as follows:
   1. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating, and repair damage during curing period.

3.9 PAVING TOLERANCES

A. Comply with tolerances in ACI 117 and as follows:
   1. Elevation: 3/4 inch.
   2. Thickness: Plus 3/8 inch, minus 1/4 inch.
   3. Surface: Gap below 10-feet- long; unleveled straightedge not to exceed 1/2 inch.
   4. Lateral Alignment and Spacing of Dowels: 1 inch.
   5. Vertical Alignment of Dowels: 1/4 inch.
   6. Alignment of Dowel-Bar End Relative to Line Perpendicular to Paving Edge: 1/4 inch per 12 inches of dowel.
   7. Joint Spacing: 3 inches.
   8. Contraction Joint Depth: Plus 1/4 inch, no minus.
   9. Joint Width: Plus 1/8 inch, no minus.

3.10 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.

B. Testing Services: Testing and inspecting of composite samples of fresh concrete obtained according to ASTM C 172/C 172M shall be performed according to the following requirements:
   1. Testing Frequency: Obtain at least one composite sample for each 100 cu. yd. or fraction thereof of each concrete mixture placed each day.
      a. When frequency of testing will provide fewer than five compressive-strength tests for each concrete mixture, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.
   2. Slump: ASTM C 143/C 143M; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.
   3. Air Content: ASTM C 231/C 231M, pressure method; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
   4. Concrete Temperature: ASTM C 1064/C 1064M; one test hourly when air temperature is 40 deg F and below and when it is 80 deg F and above, and one test for each composite sample.
   5. Compression Test Specimens: ASTM C 31/C 31M; cast and laboratory cure one set of three standard cylinder specimens for each composite sample.
   6. Compressive-Strength Tests: ASTM C 39/C 39M; test one specimen at seven days and two specimens at 28 days.
      a. A compressive-strength test shall be the average compressive strength from two specimens obtained from same composite sample and tested at 28 days.

C. Strength of each concrete mixture will be satisfactory if average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi.
D. Test results shall be reported in writing to Architect, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.
E. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Architect but will not be used as sole basis for approval or rejection of concrete.
F. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Architect.
G. Concrete paving will be considered defective if it does not pass tests and inspections.
H. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
I. Prepare test and inspection reports.

3.11 REPAIR AND PROTECTION

A. Remove and replace concrete paving that is broken, damaged, or defective or that does not comply with requirements in this Section. Remove work in complete sections from joint to joint unless otherwise approved by Architect.
B. Drill test cores, where directed by Architect, when necessary to determine magnitude of cracks or defective areas. Fill drilled core holes in satisfactory paving areas with portland cement concrete bonded to paving with epoxy adhesive.
C. Protect concrete paving from damage. Exclude traffic from paving for at least 14 days after placement. When construction traffic is permitted, maintain paving as clean as possible by removing surface stains and spillage of materials as they occur.
D. Maintain concrete paving free of stains, discoloration, dirt, and other foreign material. Sweep paving not more than two days before date scheduled for Substantial Completion inspections.

END OF SECTION

SECTION 32 13 16 - DECORATIVE CONCRETE PAVING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes sandblast finish concrete paving.
B. Related Requirements:
   1. Division 01 Specification Sections apply to Work of this Section.
   2. Section 32 13 13 "Concrete Paving" forconcrete paving with other finishes, and curbs.

1.2 AREAS OF SANDBLAST

A. Certain areas of concrete shall be designated on the plans and in the bid proposal to receive a sandblasted finish. Generally, these shall be: the maze plaza and picnic pavilion.

1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.
   1. Review methods and procedures related to decorative concrete paving, including but not limited to, the following:
      a. Concrete mixture design.
      b. Quality control of concrete materials and decorative concrete paving construction practices.
   2. Require representatives of each entity directly concerned with decorative concrete paving to attend, including the following:
      a. Contractor's superintendent.
      b. Decorative concrete paving Installer.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.
B. Samples for Initial Selection: For each type of product, ingredient, or admixture requiring color, pattern, or texture selection.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For qualified installer.
B. Field quality-control reports.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: An employer of workers trained and approved by manufacturer of decorative concrete paving systems.
B. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
   1. Build mockups of full-thickness sections of decorative concrete paving to demonstrate typical joints; surface color, pattern, and texture; curing; and standard of workmanship.

2. Build mockups of decorative concrete paving in the location and of the size indicated or, if not indicated, build mockups where directed by Landscape Architect and not less than 96 inches by 96 inches.
3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Landscape Architect specifically approves such deviations in writing.

PART 2 - PRODUCTS

2.1 SUPPLIES

A. The Contractor shall provide supplies of appropriate sand and the blasting equipment to achieve the desired results.

PART 3 - EXECUTION

3.1 FINISH

A. Specified areas of concrete shall receive a "heavy" sandblast finish. After forms are stripped and prior to sandblasting, any ridges caused by joints in forms will be removed with a Carborundum grinding stone or other method approved by Architect/Engineer. Concrete surfaces will then be sandblasted to a finish which meets the Architect/Engineer's approval. Acceptability of the final finish will be a subjective judgement on the Architect/Engineer's part. However, as a guide, approximately one-eighth inch (c") of the concrete matrix plus-or-minus one-sixteenth inch (1/16") will be removed. The concrete matrix will be sandblasted away to exposed or reveal aggregate particle surfaces in the concrete.
B. The finished surface shall be relatively smooth with no ridges, depressions, blast marks, scoring or other noticeable irregularities caused by the sandblasting. Any areas of unacceptable finish shall be refinished, or if the Architect/Engineer deems them unsalvageable, such areas shall be removed and replaced at no cost to the Owner.

3.2 PROTECTION

A. All existing improvements shall be protected from adverse effects of sandblasting. Adjacent concrete, steel, stone and other improvements will be masked to protect them from scoring or abrasion caused by sandblasting.

3.3 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
B. Decorative concrete paving will be considered defective if it does not pass tests and inspections.
C. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
D. Prepare test and inspection reports.

3.4 REPAIR AND PROTECTION

A. Remove and replace decorative concrete paving that is broken or damaged or does not comply with requirements in this Section. Remove work in complete sections from joint to joint unless otherwise approved by Landscape Architect.

3.5 CLEANUP

A. All sand, concrete dust, and other debris shall be cleaned from concrete surfaces and from adjacent improvements and lawn/soil areas. Sandblasted concrete shall be thoroughly swept and washed, and it shall be dry before the Architect/Engineer may observe surfaces for acceptance.

END OF SECTION

SECTION 32 14 00 - DECOMPOSED GRANITE

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Decomposed granite surfacing.
B. Related Requirements:
   1. Division 01 Specification Sections apply to Work of this Section.
   2. Section 32 13 13 "Concrete Paving" as edge restraints for decomposed granite.

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

A. Product Data:
   1. For the following:
      a. Pavers.
      b. Bituminous setting materials.
      c. Mortar and grout materials.
      d. Edge restraints.
      e. Precast concrete curbs.
      f. Granite curbs.
B. Shop Drawings:
   1. Show details of installation, including plans and sections.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Installer to provide evidence to indicate successful experience in providing 1/4" minus decomposed granite or crushed stone paving.
B. Mockups: Install 4 ft. wide x 10 ft. long mock-up of 1/4" minus decomposed granite or crushed stone paving at location as directed by Owner's Representative.

1.6 WARRANTY

A. General Warranty: The special warranty specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents.
B. Special Warranty: Submit a written warranty executed by the installer agreeing to repair or replace components of surfacing that fail in materials or workmanship within the specified warranty period. Failures include, but are not limited to, the following:

1. Premature wear and tear, provide the material is maintained in accordance with manufacturer's written maintenance instructions.
2. Failure of system to meet performance requirements.

C. Warranty Period: Contractor shall provide warranty for performance of product. Contractor shall warranty installation of product for the time of one year from completion.

D. Contractor shall provide, for a period of sixty days, unconditional maintenance and repairs as required.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Store pavers on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied.

B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.

C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.

D. Store liquids in tightly closed containers protected from freezing.

E. Store asphalt cement and other bituminous materials in tightly closed containers.

1.8 FIELD CONDITIONS

A. Field Measurements: Each bidder is required to visit the site of the Work to verify the existing conditions. No adjustments will be made to the Contract Sum for variations in the existing conditions.
1. Where surfacing is indicated to fit with other construction, verify dimensions of other construction by field measurements before proceeding with the work.

B. Environmental Limitations: Do not install 1/4" minus decomposed granited or crushed stone paving during rainy conditions or below 40 degrees Fahrenheit and falling.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Source Limitations: Obtain each type of unit paver, joint material, and setting material from single source with resources to provide materials and products of consistent quality in appearance and physical properties.

2.2 AUXILARY MATERIALS

A. Geotextile filter fabric:
1. Mirafi Construction Products, 365 South Holland Drive, Pendergrass, GA, USA 30567, 1-888-795-0808, 1-706-693-2226, 1-706-693-2083 (fax), www.mirafi.com.

2.3 MATERIALS

A. Aggregate base per applicable requirements of the City of Southlake Standard Specifications.

B. 1/4" minus decomposed granite or crushed stone screenings. Acceptable colors tan, or equal approved by the Landscape Architect.
1. Decomposed Granite/Crushed Stone Sieve Analysis Percentage of Weight Passing a Square Mesh Sieve AASHTO T11-82 and T27-82

1/4" MINUS AGGREGATE GRADATION

U.S. Sieve No.	Percent Passing by Weight
# 3/8"	100
# 4	90 Ó 100
# 8	75 Ó 80
# 16	55 Ó 65
# 30	40 Ó 50
# 50	25 Ó 35
# 100	15 Ó 20
# 200 to	10 Ó 15

C. Geotextile Filter Fabric:
1. The geotextile shall be manufactured with fibers consisting of long-chain synthetic polymers composed of at least 95 percent by weight of polyolefins or polyesters. They shall form a stable network such that the filaments or yarns retain their dimensional stability relative to each other, including selvages.
2. Woven slit film geotextiles (i.e., geotextiles made from yarns of a flat, tape-like character) shall not be allowed.
3. The geotextile shall meet the following requirements.

Property	Test Method	Units	Elongation 50%[1]
Grab Tensile Strength	ASTM D 4632	N (lbs)	500 (112)
Sewn Seam Strength[2]	ASTM D 4632	N (lbs)	450 (101)
Tear Strength	ASTM D 4533	N (lbs)	180 (40)
Puncture Strength	ASTM D 4833	N (lbs)	180 (40)
Burst Strength	ASTM D 3786	kPa (psi)	950 (138)
Permittivity	ASTM D 4991	sec^{-1}	0.1
Apparent Opening Size	ASTM D 4751	mm (U.S. Sieve)	0.22 max (70)
Ultraviolet Stability[3]	ASTM D 4355	%	50

[1] A measured in accordance with ASTM D 4632
[2] When sewn seams are required.
[3] After 500 hrs

4. All numeric values in this table, except Apparent Opening Size (AOS), represent the Minimum Average Roll Value (MARV) in the weakest principal direction. Values for AOS represent maximum average roll values.
5. Approved geotextiles: Mirafi 140N (or equal).

D. Aluminum Edge Restraints:
1. See Landscape Details

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine surfaces indicated to receive decomposed granite surfacing, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance.
B. Proceed with installation only after unsatisfactory conditions have been corrected and waterproofing protection is in place.

3.2 PREPARATION

A. Subgrades shall have been rough-graded and compacted to minimum 95% compaction. Aggregate base shall have been installed and compacted as specified. Verify that adjacent paving has been installed and accepted under another Section prior to commencement of work.
B. Proof-roll prepared subgrade surface to check for unstable areas and verify need for additional compaction. Proceed with filter cloth placement only after nonconforming conditions have been corrected.

3.3 PLACEMENT

A. Edge Restraints
   1. Install according to drawings. Lines shall be true, even curves. Layout and alignment shall be approved prior to placing decomposed granite or crushed stone. If paving operations distort the alignment, edge restraint shall be re-staked and surfacing re-compacted prior to final approval
B. Filter Fabric:
   1. Place geotextile filter fabric following preparation of subgrade surface.
   2. Remove loose material from compacted subgrade surface immediately before placing geotextile filter fabric.
   3. The geotextile shall be placed loosely with no wrinkles or folds, and with no void spaces between the geotextile and the ground surface. Successive sheets of geotextiles shall be overlapped a minimum of 300 mm (12 in), with the upstream sheet overlapping the downstream sheet.
   4. Should the geotextile be damaged during installation, a geotextile patch shall be placed over the damaged area extending beyond the damaged area a distance of 300 mm (12 in), or the specified seam overlap, whichever is greater
C. Decomposed Granite or Crushed Stone:
   1. Place Decomposed Granite in locations shown on plan.
   2. Place the ¼•minus decomposed aggregate or crushed stone screenings on prepared sub-grade. Install decomposed granite or crushed stone true to grade, properly coinciding with adjacent work and elevations. Do not permit finished work to vary more than ½ inch in 10 feet from true profile and cross section.
   3. Depth of all areas shall be 2" minimum.

3.4 WATERING

A. Water heavily to achieve full depth moisture penetration of the paving profile. During water application randomly test for depth using a probing device to the final depth.

3.5 COMPACTION

A. Upon thorough moisture penetration, compact aggregate screenings to 85% relative compaction by compaction equipment such as; a 2 to 4-ton double drum roller or a 1,000 lb. Single drum roller with vibratory plate tamp. Do not begin compaction for 6 hours after placement and up to 48 hours.

B. Take care in compacting ¼•minus decomposed granite or crushed stone screenings when adjacent to planting and irrigation systems. Do not permit mixture to contaminate planting areas. Hand tamping with 8• or 10• hand tamp recommended. Clean up immediately all mixtures spilled on adjacent paving.

3.6 INSPECTION

A. Finished surface of pathway shall be smooth, uniform and solid. There shall be no evidence of chipping or cracking. Compacted pathway shall be firm throughout profile with no spongy areas. Loose material shall not be present on the surface. Any significant irregularities in path surface shall be repaired to the uniformity of entire installation.

3.7 MAINTENANCE

A. Remove debris, such as paper, grass clippings, leaves or other organic material by mechanically blowing or hand raking the surface as needed. Any plowing program required during winter months shall involve the use of a rubber baffle on the plow blade or wheels on the plow that lifts the blade 1/4" off the paving surface.

END OF SECTION

SECTION 32 18 16.13 - PLAYGROUND PROTECTIVE SURFACING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Organic loose-fill surfacing.
B. Related Sections: Division 01 Specification Sections apply to Work of this Section.

1.2 DEFINITIONS

A. Definitions in ASTM F 2223 apply to Work of this Section.
B. Critical Height: Standard measure of shock attenuation according to ASTM F 2223; same as "critical fall height" in ASTM F 1292. According to ASTM F 1292, this approximates "the maximum fall height from which a life-threatening head injury would not be expected to occur."
C. SBR: Styrene-butadiene rubber.
D. Unitary Surfacing: A protective surfacing of one or more material components bound together to form a continuous surface; same as "unitary system" in ASTM F 2223.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product indicated provide manufacturer's product literature and specification data.
B. Shop Drawings: For each type of protective surfacing show the following:
   1. Location of drainage accessories.
   2. Include fall heights and use zones for equipment and structures specified in Section 11 68 00 "Play Field Equipment and Structures," coordinated with the critical heights for protective surfacing.
C. Samples for Verification: For each type of protective surfacing and exposed finish.
   1. Include Samples of accessories to verify color and finish selection.
   2. Loose-Fill Surfacing: Minimum 1 quart.
   3. Drainage Panel: Minimum 6 by 6 inches.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer and testing agency.
B. Material Certificates: For each type of loose-fill surfacing signed by manufacturer.
C. Field quality-control reports.
D. Manufacturer's detailed installation procedures shall be submitted to the Engineer and made part of the Bid Specifications.
E. Warranty: Special warranty specified in this Section.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: For playground protective surfacing to include in maintenance manuals.

1.6 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
   1. Loose Fill: Amount equal to 1 percent of amount installed, but no fewer than 3 units

1.7 QUALITY ASSURANCE

A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.
B. Testing Agency Qualifications: Contractor shall provide an independent agency qualified according to ANSI Z34.1 for testing indicated.
C. Source Limitations: Obtain playground surface system materials, including primers and binders, from single source from single manufacturer.
   1. Provide secondary materials, including adhesives, primers, and geosynthetics, and repair materials of type and from source recommended by manufacturer of playground surface system materials.
D. Standards and Guidelines: Comply with CPSC No. 325, "Handbook for Public Playground Safety"; ASTM F 1292; ASTM F 1487, and Title 22. Social Security; Division 4. Environmental Health; Chapter 22. Safety Regulations for Playgrounds'.
E. Sub Ease Installation: If sub base is not installed by playground surface manufacturer, sub base preparation must meet manufacturer's written standards.

1.8 WARRANTY

A. Special Warranty: Manufacturer and Installer agree to repair or replace components of protective surfacing that fail in materials or workmanship within specified warranty period.
   1. Failures include, but are not limited to, the following:
      a. Reduction in impact attenuation as measured by reduction of critical fall height.
      b. Deterioration of protective surfacing and other materials beyond normal weathering.
   2. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Source Limitations: Obtain protective surfacing materials, including loose-fill accessories, from single source from single manufacturer.
   1. Provide geosynthetic accessories of each type from source recommended by manufacturer of protective surfacing materials.

2.2 PERFORMANCE REQUIREMENTS

A. Impact Attenuation: Critical fall height tested according to ASTM F 1292.
B. Accessibility of Surface Systems:
   1. According to ASTM F 1951 Determination of Accessibility of Surface Systems Under and Around Playground Equipment.

2. Safety surfaces intended to serve as accessible paths of travel for persons with disabilities shall be firm, stable and slip resistant and shall meet the requirements of FEDSTD 795, 28 CFR Part 36, ASTM F 1487, and ASTM 1292.

C. Safety: According to:
1. Title 22. Social Security; Division 4. Environmental Health, Chapter 22. Safety Regulations for Playgrounds.
2. CPSC Handbook for Public Playground Safety, Publication No. 325, U.S. Consumer Product Safety Commission, Washington D.C. 20207, 301-504-0494.
3. ASTM F 1292 Impact Attenuation of Surface Systems Under and Around Playground Equipment.

D. Minimum Characteristics for Organic Loose-Fill Surfaces: According to ASTM F 2075.

2.3 ORGANIC LOOSE-FILL SURFACING

A. Engineered Wood Fiber: Random-sized wood fibers, in manufacturer's standard fiber size, approximately 10 times longer than wide; containing no bark, leaves, twigs, or foreign or toxic materials according to ASTM F 2075; graded according to manufacturer's standard specification for material consistency for playground surfaces, tested for impact attenuation according to ASTM F 1292 and for accessibility according to ASTM F 1951.
1. Products: Subject to compliance with requirements, provide products by the following:
a. Fibar Group LLC (The); Fibar Systems 300.
2. Wood fiber manufactured for the purpose of playground safety surfacing shall consist of 75% red cedar particles varying from 3 mm (1/8 inch) to 12 mm (1/2 inch) thick by 25 mm (1 inch) to 75 mm (3 inches) long with an average yield as follows:

SIEVE	% PASSING
3/8"	greater than 85%
#60	less than 50%

a. Wood fiber shall be free of twigs, leaves, branches, thorns, dirt, poisonous plants, sharp or foreign objects such as nails or metal fasteners, or toxic chemicals.
b. Not permitted: Wood fiber manufactured from recycled pallets or other lumber containing nails or metal fasteners shall not be permitted.
3. Critical Height: Reference Sheet LD503, Playground Equipment List to determine critical heights.
4. Uncompressed Material Depth: Not less than as required for critical height indicated. Provide 12" minimum.

2.4 GEOSYNTHETIC ACCESSORIES

A. Drainage/Separation Geotextiles: Comply with Section 31 20 00 "Earth Moving."
1. Drainage Felt: Shall be 100% polyester nonwoven engineering geotextile fabric.
2. Drainage Matrix: Shall be drainage core of fused, entangled nylon filaments with drainage felt fully encapsulating the core.

B. Stabilizing Mats: Manufacturer's standard, water-permeable PVC or rubber mats tested for impact attenuation according to ASTM F 1292, and rated for use in the following locations, (with anchoring system designed to anchor mat securely to subgrade through engineered wood):
   1. Fibar Wear Mats: Shall be non-toxic, recycled rubber matting meeting ASTM F 1292-91 playground surfacing standard for a drop height not to exceed 3.5 feet. One (1) provided at toddler swings.

C. Drainage/Separation Geotextile: Nonwoven, needle-punched geotextile, manufactured for subsurface drainage applications and made from polyolefins or polyesters; with the following minimum properties:
   1. Weight: 4 oz./sq. yd. ASTM D 5261.
   2. Water Flow Rate: 100 gpm/sq. ft. according to ASTM D 4491.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for subgrade elevations, slope, and drainage and for other conditions affecting performance of the Work.
   1. Verify that substrates are sound and without high spots, ridges, holes, and depressions.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Prepare substrates to receive surfacing products according to protective surfacing manufacturer's written instructions. Verify that substrates are sound and without high spots, ridges, holes, and depressions.

B. Protect structures, utilities, sidewalks, pavements, and other facilities and turf areas and existing plants from damage caused by installation operations.

3.3 INSTALLATION OF GEOSYNTHETIC ACCESSORIES

A. Install geosynthetic accessories before edging and according to playground surface system manufacturer's and geosynthetic manufacturer's written instructions and in a manner that cannot become a tripping hazard.
   1. Drainage/Separation Geotextile: Completely cover area beneath protective surfacing, overlapping geotextile sides and edges a minimum of 8 inches with manufacturer's standard treatment for overlapping loosely laid seams.
   2. Perimeter: Adhere edges on all sides to 6 inches below top of perimeter.

3.4 INSTALLATION OF LOOSE-FILL SURFACING

A. Apply components of loose-fill surfacing according to manufacturer's written instructions to produce a uniform surface.

B. Loose Fill: Place loose-fill materials to required depth after installation of playground equipment support posts and foundations. Include manufacturer's recommended amount of additional material to offset natural compaction over time.

C. Grading: Uniformly grade loose fill to an even surface free from irregularities.

D. Compaction: After initial grading, mechanically compact loose fill before finish grading.
E. Finish Grading: Hand rake to a uniformly smooth finished surface and to required elevations.

3.5 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
B. Perform the following tests:
   1. Perform "Installed Surface Performance Test" according to ASTM F 1292 for each protective surfacing type and thickness in each playground area.
C. Playground protective surfacing will be considered defective if it does not pass tests.
D. Prepare test reports.
E. Remove and replace applications of playground surface system where test results indicate that it does not comply with requirements.
F. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with requirements.

3.6 PROTECTION

A. During protective surfacing installation, keep adjacent paving and construction clean and work area in an orderly condition.
B. Curing, Protection, and Cleaning: Cure according to manufacturer's directions, taking care to prevent contamination during application stages and before completing the curing process. Close application area until contractor has inspected and determined that the area is fully cured and ready for use.

3.7 DISPOSAL

A. Remove waste material including trash, and debris and legally dispose of them off the City's property.

END OF SECTION

SECTION 32 31 29 - WOOD FENCES AND GATES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Wood fences.
B. Related Requirements:
   1. Division 01 Specification Sections apply to Work of this Section.

1.2 DEFINITIONS

A. Boards: Lumber of less than 2 inches nominalin thickness and 2 inches nominalor greater in width.
B. Dimension Lumber: Lumber of 2 inches nominalor greater but less than 5 inches nominalin least dimension.
C. Timber: Lumber of 5 inches nominalor greater in least dimension.
D. Lumber grading agencies, and the abbreviations used to reference them, include the following:
   1. NeLMA: Northeastern Lumber Manufacturers' Association.
   2. NLGA: National Lumber Grades Authority.
   3. RIS: Redwood Inspection Service.
   4. SPIB: The Southern Pine Inspection Bureau.
   5. WCLIB: West Coast Lumber Inspection Bureau.
   6. WWPA: Western Wood Products Association.

1.3 ACTION SUBMITTALS

A. Product Data: For preservative-treated wood products. Include chemical treatment manufacturer's written instructions for handling, storing, installing, and finishing treated material.

1.4 INFORMATIONAL SUBMITTALS

A. Material Certificates:
   1. For preservative-treated wood products. Indicate type of preservative used and net amount of preservative retained.
B. Certificates of Inspection: Issued by lumber grading agency for exposed wood products not marked with grade stamp.
C. Evaluation Reports: For preservative-treated wood products, from ICC-ES.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store materials under cover and protected from weather and contact with damp or wet surfaces. Stack lumber flat with spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 LUMBER, GENERAL

A. Comply with DOC PS 20 and with grading rules of lumber grading agencies certified by ALSC's Board of Review as applicable. If no grading agency is indicated, comply with the applicable rules of any rules-writing agency certified by ALSC's Board of Review.
   1. Factory mark each item with grade stamp of grading agency.
   2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry wood products.
   3. Provide dressed lumber, S4S, unless otherwise indicated.

2.2 TIMBER

A. Boards:
   1. Cedar Split Rail

2.3 POSTS

A. Dimension Lumber Posts: No. 2 Construction or No. 2 Construction, Stud, or No. 3 grade and any of the following species:
   1. Cedar Split-Rail.

2.4 PRESERVATIVE TREATMENT

A. Application: Treat all wood unless otherwise indicated items indicated.

PART 3 - EXECUTION

3.1 PREPARATION

A. Stain wood indicated to be stained, including both faces and edges. Cut to required lengths and stain ends. Comply with requirements in Section 09 93 00 "Staining and Transparent Finishing."

3.2 INSTALLATION, GENERAL

A. Set work to required levels and lines, with members plumb, true to line, cut, and fitted. Fit work to other construction; scribe and cope as needed for accurate fit.
B. Framing Standard: Comply with AF&PA WCD1 unless otherwise indicated.
C. Do not splice structural members between supports unless otherwise indicated.
D. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.
E. Sort and select lumber so that natural characteristics do not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of members or pieces that are too small to use with minimum number of joints or optimum joint arrangement.

F. Apply copper naphthenate field treatment to comply with AWPA M4, to cut surfaces of preservative-treated lumber.

G. Securely attach exterior rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
   1. ICC-ES AC70 for power-driven fasteners.
   2. "Fastening Schedule" in ICC's International Building Code.
   3. "Fastener Schedule for Structural Members" and "Alternate Attachments" in ICC's International Residential Code for One- and Two-Family Dwellings.

H. Use common wire nails unless otherwise indicated. Select fasteners of size that do not fully penetrate members where opposite side is exposed to view. Make tight connections between members. Install fasteners without splitting wood; do not countersink nail heads unless otherwise indicated.

END OF SECTION

SECTION 32 33 00 - SITE FURNISHINGS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Seating.
   2. Tables.
   3. Trash receptacles.

B. Related Requirements:
   1. Division 01 Specification Sections apply to Work of this Section.
   2. Section 31 20 00 "Earth Moving" for excavation for installing concrete footings.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Product Schedule: For site furnishings. Use same designations indicated on Drawings.

1.3 CLOSEOUT SUBMITTALS

A. Maintenance Data: For site furnishings to include in maintenance manuals.

PART 2 - PRODUCTS

2.1 SEATING

A. Products: Subject to compliance with requirements, provide the following:
   1. Three (3) Backed Benches, 6 ft long Cedar Recycled Plastic slats, (2) cast end supports, S-2 surface mount, 143-60PL model as manufactured by DuMor, Inc.
      a. Contact Eric Hiller with Paul E. Allen Company, Inc., (972) 724-2656.
      b. Benches shall be powder coated. Color shall be black.
      c. Benches shall be located as noted in plans.

2.2 TABLES

A. Products: Subject to compliance with requirements, provide the following:
   1. One (1) Picnic Table & Seats (2), S-2 surface mount, steel frame, 8 ft long Cedar Recycled Plastic slats, 100-80PL model as manufactured by DuMor, Inc.
      a. Contact Eric Hiller with Paul E. Allen Company, Inc., (972) 724-2656.
      b. Table shall be powder coated. Color shall be black.
      c. Table shall be located as noted in plans.
   2. One (1) ADA Picnic Table & Seats (2), S-2 surface mount, steel frame, 8 ft long Cedar Recycled Plastic slats, accessible, 100-681PL model as manufactured by DuMor, Inc.
      a. Contact Eric Hiller with Paul E. Allen Company, Inc., (972) 724-2656.
      b. Table shall be powder coated. Color shall be black.
      c. Table shall be located as noted in plans.

2.3 TRASH RECEPTACLES

A. Products: Subject to compliance with requirements, provide the following:
1. Insert manufacturer's name; product name or designation.
2. Five (5) Trash Receptacles shall be vertical steel slats with inner steel shield, side door emptying, flat top opening, steel cover, 32-gallon plastic liner, S-2 surface mount, 157-22-25BT model as manufactured by DuMor, Inc.
a. Contact Eric Hiller with Paul E. Allen Company, Inc., (972) 724-2656.
b. Table shall be powder coated. Color shall be black.
c. Table shall be located as noted in plans.

2.4 GENERAL FINISH REQUIREMENTS

A. Appearance of Finished Work: Noticeable variations in same piece are unacceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved samples and are assembled or installed to minimize contrast.

2.5 ALUMINUM FINISHES

A. Powder-Coat Finish: Manufacturer's standard polyester powder-coat finish complying with finish manufacturer's written instructions for surface preparation, including pretreatment, application, baking, and minimum dry film thickness.

2.6 STEEL AND GALVANIZED-STEEL FINISHES

A. Powder-Coat Finish: Manufacturer's standard polyester, powder-coat finish complying with finish manufacturer's written instructions for surface preparation, including pretreatment, application, baking, and minimum dry film thickness.

2.7 IRON FINISHES

A. Powder-Coat Finish: Manufacturer's standard polyester powder-coat finish complying with finish manufacturer's written instructions for surface preparation, including pretreatment, application, baking, and minimum dry film thickness.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for correct and level finished grade, mounting surfaces, installation tolerances, and other conditions affecting performance of the Work.
B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Comply with manufacturer's written installation instructions unless more stringent requirements are indicated. Complete field assembly of site furnishings where required.
B. Unless otherwise indicated, install site furnishings after landscaping and paving have been completed.
C. Install site furnishings level, plumb, true, and securely anchored at locations indicated on Drawings.

END OF SECTION

SECTION 32 82 00 – LANDSCAPE IRRIGATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Town of Prosper Ordinance No. 11-57, The Town of Prosper Water Conservation and Drought Contingency and Water Emergency Response Plan, in its entirety applies to this Specification.

1.2 SCOPE

A. Furnish all labor, materials, tools, equipment and related items for the complete installation of the irrigation system as indicated by the Contract Documents. All costs associated with this installation, including the fees for testing and inspections of any system components are the responsibility of the installer of this irrigation system.

B. This contract includes but is not limited to the following:
   1. All required coordination with the electric service provider, and other utilities that may affect the work.
   2. Furnish new water meter (purchase from Town of Prosper Public Works Department, contact Utility Billing, 972-347-9969

C. The Contractor shall furnish (pay for) a Town approved water meter to be installed by the Town. The contractor shall purchase and furnish and install a Town-approved corrugated can or concrete vault, depending on the size of the meter. The meter housing shall be equipped with a "touch-read" cast iron lid. The Contractor will be required to purchase the meter from the Town of Prosper at a cost which shall be obtained from the Utility Billing Department. The Contractor shall also pay a meter set fee for the Town to install the meter.
   1. A double check valve assembly shall be installed in a separate housing.
   2. Installation of flow sensor hydrometer/master valve (ARAD).
   3. Installation of new irrigation equipment as shown on plans.
   4. Furnishing of all equipment specified (Note: not all equipment described herein is required for this job)

D. NOTE: All sprinklers, whether rotors or sprays adjacent to vehicular paved areas shall be installed on swing joints and at a distance of 4" from the edge of pavement.
   1. Coordinate the installation of the irrigation system with the work of other trades.
   2. Coordinate with other trades as needed to ensure that irrigation sleeving and electrical power is in place.

E. Satisfactory operation of the irrigation water meter, double check valve assembly and all associated service components, upon completion of the installation shall be the responsibility of the Contractor. The Contractor is encouraged to visit the site to ascertain the condition and functioning of the existing irrigation system at the park, prior to bidding. Any anticipated need for repair or replacement of these system components must be included in the Contractor's bid for irrigation work.
   1. Installation of all required electrical conduit, and connection of the electric service for the irrigation control system shall be the responsibility of the installer of this irrigation system. All material required for the permanent connection of the electrical components shall be provided under this contract.
   2. Furnish and install all required mounting hardware and conduit for wiring.

1.3 REFERENCE PUBLICATIONS AND STANDARDS

A. ASTM (American Society for Testing and Materials):
   1. D2241 Poly Vinyl Chloride (PVC) Plastic Pipe (SDR-PR).
   2. D2464 Poly Vinyl Chloride (PVC) Plastic Pipe Fittings, Threaded, Schedule 40.
   3. D2466 Poly Vinyl Chloride (PVC) Plastic Pipe Fittings, Socket Type, Schedule 40.
   4. D2564 Solvent Cements for Poly Vinyl Chloride (PVC) Plastic Pipe and Fittings.
   5. B88 Copper Pipe

B. Standard recommended practice for:
   1. D2855 Making Solvent-Cemented Joints with Poly Vinyl Chloride (PVC) Pipe and Fittings.
   2. National Electric Code
   3. Town of Prosper Plumbing Code
   4. National Plumbing Code
   5. National Sanitation Code

1.4 SUBMITTALS:

A. The CONTRACTOR shall submit to the OWNER'S designated representative three (3) copies of shop drawings or manufacturer's "cut sheets" for each type of sprinkler head, pipe, controller, valves, backflow prevention devices, valve boxes, wire, conduit, fittings and all other types of fixtures and equipment which he proposes to be installed on the job. The submittal shall include the manufacturer's name, model number, equipment capacity and manufacturer's installation recommendations, if applicable, for each proposed item.

B. No work order covered under this section may begin until the CONTRACTOR has submitted the required information. No partial submittal will be accepted, and submittals shall be neatly bound into a brochure and logically organized. After the submittal has been approved, substitutions will not be allowed except by written consent of the OWNER'S designated representative.

C. Shop drawings shall include dimensions, elevations, construction details, arrangements and capacity of equipment, as well as manufacturer's installation recommendations.

D. Submittals on products/materials considered by the CONTRACTOR as equal to those specified on the plans shall be submitted by the OWNER'S designated representative for approval a minimum of 10 days prior to the published bid opening date along with any redesign work (sealed by proper authority at the CONTRACTOR'S expense) that may be necessary due to the suggested product/materials specified on the plans as published for bids.

E. The CONTRACTOR shall bear complete responsibility for the installation and operation of any material or equipment installed on the job (as a substitute for specified equipment or material) should such substituted material prove to be defective, inoperable, or inapplicable.

F. Operating and Maintenance Manuals:
   1. Provide two individually bound manuals detailing operating and maintenance requirements for irrigation systems.
   2. Manuals shall be delivered to the Owner's Representative no later than 10 days prior to completion of the irrigation system.
   3. Provide descriptions of all installed materials and systems in sufficient detail to permit maintenance personnel to understand operate and maintain the equipment.
   4. Provide the following in each manual:
      a. Index sheet with Contractor's name, address and telephone number and contact name.
      b. Duration of the guarantee period.

c. Equipment list providing the following for each item:
   1) Manufacturer's name
   2) Make and model number
   3) Name and address of local part's representative
   4) Spare parts list in detail
   5) Detailed operating and maintenance instructions for major equipment

G. Record Irrigation Drawings: The Contractor is responsible for preparing two (2) copies of record drawings on blueprints and one reproducible mylar which shall show all deviations from the bid documents made during construction. The drawings shall indicate and show approved substitutions of size, material and manufacturer's name and catalog number. The drawings shall be delivered to the Owner's representative prior to final acceptance of the work.

1.5 NOTIFICATION OF INSPECTOR and OTHER CONTACTS

A. The Owner's designated representative shall have free access to inspect the work whenever it is preparation or progress and the contractor shall provide safe, convenient, and proper facilities, for such access and inspection. The Contractor shall notify the Owner's representative when he will and will not be on the job. Should the Contractor work periodically on the job, the inspector shall have the right to require the Contractor to give a 24 hour notice of each and every day or partial day that he intends to work on the project. The Contractor shall perform no work unless the inspector has been properly notified. Failure to notify the inspector may require the Contractor to redo, uncover pipe, and expose for the inspection, etc. all that the inspector was unable to inspect.

Parks Irrigator: 972-569-1062
Water Service Connection Inspector (Town of Prosper): 972-347-9969
Line Locate (Town of Prosper): 972-347-9969
Permit (Town of Prosper): 972-569-1086
Oncor (electric): 214-791-2888
Lone Star Gas: 1-800-344-8377
SWB: 1-800-344-8377
TCI Cable: 214-445-5753

1.6 EXISTING UTILITIES

A. Locations and elevations of various utilities included within the scope of this work have been obtained from the most reliable sources available and should serve as a general guide without guarantee to accuracy. The Contractor shall examine the site and verify to his own satisfaction the locations and elevation of all utilities and availability of utilities and services required. The Contractor shall inform himself as to their relation to the work and the submission of bids shall be deemed as evidence thereof. The Contractor shall repair, at his own expense, and to the satisfaction of the utility company, damage to any utility shown on or not shown on the plans. Should utilities not shown on the plans be found during excavations, Contractor should promptly notify Owner's designated representative for instructions as to further action.

B. Contractor shall make necessary adjustments in the layout as may be required to connect to existing stub outs, should such stub outs not be located exactly as shown, and as may be required to work around existing work at no increase in cost to the Owner. All such work will be recorded on as-built drawings and turned over to the Owner and the Owner's designated representative prior to final payment.

1.7 EXTRA STOCK

A. Provide the following extra stock items:
   1. Two (2) sprinklers of each type and size and two full-range nozzle trees for each.
   2. Two (2) Rainbird quick-coupler valve keys (1"x ¾" Ell).

PART 2 - PRODUCTS

2.1 GENERAL

A. This part shall include the furnishing of all materials of the dimensions and types as shown on the Drawings or as established by the Owner's Representative.
B. Unless otherwise noted on the plans, all materials shall be new and unused. All material and equipment shall be delivered to the job site in unbroken reels, cartons, or other packaging to demonstrate that such material is new and of a quality and grade in keeping with the intent of these Specifications.
C. The irrigation equipment catalog numbers used for reference in these Specifications are to establish minimum quality of standards and may be substituted with an "approved equal".
D. Sprinkler Mains: Sprinkler mains are the portion of piping from water source to operating valves. This portion of piping is subject to surges, being a closed portion of the sprinkler system.
E. Lateral Piping: Lateral piping is that portion of piping extending from an operating valve to sprinkler heads. This portion of piping is not subject to surges, being an "open end" portion of the sprinkler system.
F. Drain Valves: A drain valve shall be installed at all low elevation points along the main pipe system. A PVC drain line shall be extended from the drain valve to the nearest and lowest freely draining area of the property, where discharges from draining will not create ponding or standing water. A concrete headwall or sloped end section shall be constructed at the outfall/discharge end of each drain line. Drainpipes shall be equal to the size of the main pipe connected to. Concrete thrust blocking is required at the point of connection of the drain line to the main pipe.
G. Drain Valve Type: Where drain lines are connected to a main pipe of 1-1/2" to 2" size, the drain valve shall be a 2" brass ball valve. Where drain lines are connected to main pipes 2-1/2" and larger, the valve shall be a 4" Matco gate valve with 2" square
H. All Pipe Sizes need to be designed to the specifications given forth in this document.

2.2 MATERIALS

A. POLYVINYL CHLORIDE PIPE (PVC PIPE): PVC pipe manufactured in accordance with ASTM Standards noted herein:
   1. Marking and identification: PVC pipe shall be continuously and permanently marked with the following information: Manufacturer's name, pipe, size, type of pipe and material, SDR number, Product Standard number and the NSF (National Sanitation Foundation) Seal.
   2. PVC pipe fittings shall be of same material as the PVC pipe specified and compatible with PVC pipe furnished. Solvent weld type shall be Schedule 40. Rubber gasket type shall be epoxy coated steel.
   3. PVC Pipe: All mainline 3" and below will be constructed of Schedule 40, Class 200, SDR 21, except ½" , if called for on the plans, shall be Class 315 SDR 13.5; 2-1/2" and smaller shall be solvent weld, 4" and larger shall be rubber gasket connection type.

4. Flexible PVC Pipe Risers (Nipples): All flexible PVC nipples shall be made from flexible PVC tubing made from all virgin PVC material, and shall comply with ASTM D2287. Schedule 40 fittings shall comply with ASTM D2466. Schedule 40 fittings shall be tested on 200 P.S.I. static pressure for 2 hours and have a minimum quick burst rating of 400 P.S.I.

B. Copper Tubing: Hard, straight lengths of domestic manufacture only. Type “K”. Do not use copper tube of foreign extrusion or any so called irrigation tubing (thin wall).

C. Copper Tube Fittings: Cast Brass or wrought copper, sweat-solder type.

D. Wire and Splices: All wire shall be single strand solid copper, sized by the CONTRACTOR and shall be a minimum 14 gauge with Type UF installation which is Underwriters Laboratory approved for direct underground burial when used in a National Electrical Code Class II Circuit (30 volts AC or less) as per Articles 725 and 300. Voltage drop shall be taken into consideration. All wire shall be color coded so that the common wire shall have white insulation and the signal wires shall have red insulation. ARAD Flowmeter wires need to be yellow and blue with extra wiring as green. All wire connectors shall have a two- piece PVC housing which, when filled with resin epoxy and pressed together, forms a permanent, one-piece, moisture-proof wire splice. All connectors shall be U.L. listed, rated 600 volt, for PVC insulated wire. No wire nuts shall be allowed. No wire splices shall be buried. All wire connectors shall be waterproof.

E. Quick Coupling Valves: Quick coupling valves shall be Rainbird with 100K and 11shl key components, or approved equal, composed of a one-piece, bronze-cast body with a weighted rubber cover. The valve shall accept a single lug one (1) inch bronze valve key for operation. A one (1) inch ball valve shall be installed between the main pipe and quick coupling valve. Quick coupling valves shall be installed in a triple swing-joint assembly.

F. Pop-up Spray Heads: Spray heads shall have pop-up strokes according to the following applications:
   1. In turf grass / 6 inches
   2. In groundcover or seasonal color beds / 12 inches (unless drip is approved)
   3. In shrub plantings / 12 inches or on stationary risers
   4. Pressure Regulated Head

G. NOTE: Stationary (non-flexible) shrub risers shall not be installed adjacent to a sidewalk.

H. The sprinkler body and all related parts shall be plastic, cycolac or polycarbonate. They shall have a spring retraction for positive return action of the pop-up nozzle. This spring for retraction and the adjustable screws shall be made of corrosion-resistant materials. Spray heads shall be Hunter PRS40 sprinklers with MP Rotator Nozzle or approved equal.

I. Rotary Sprinklers: Rotary sprinklers shall be Hunter I-25, and PGP Adjustable Arc and identified by nozzle call-outs on the plans, or approved equal. All rotary sprinklers installed on athletic fields or practice areas should be Hunter I-25.

J. Manual Valves: Manual valves greater than 2" shall be all brass, gate type with solid wedge disc and integral seats, and shall be rated at 200 pounds W.O.G. All valves shall have wheel handles unless cross handles are called for on the plan and shall be Ohio brass 1502 and 1502-X, NIBCO #22 and #33 or approved equal. All plastic valves 2 inches and smaller shall be Speers compact design ball valves produced from virgin PVC Type 1, Grade 1 with Viton "O" rings with Safe-T-Shear stem or approved equal.

K. Valve Boxes:
   1. Electric Valves: Boxes for electric control valves 3" and smaller shall be Ametek 12” x 17” with green lock cover, or approved equal.
   2. Quick-couplers and wire splices: 12x17” Ametek standard box or by KBI. ALL quick coupler lids should be Purple to indicate Non-Potable water.
   3. Backflow Prevention Device Box: RPZ with Hotbox Per Town of Prosper standards.
   4. Provide valve box extensions as required.

L. Electric Controller and Valves:
   1. Controller shall be capable of operating the number of stations indicated on the drawings, plus all the existing rotary sprinkler zones in the sport field area, which are not shown on the plans. Simultaneous operation of more than one zone shall only be permitted when flow velocities in pressurized pipe does not exceed 5 feet per second.
   2. Power source shall be standard 120 Volt 60 Cycle AC. Output for operation of companion solenoid actuated valves shall be 24 Volt 60 Cycle AC. The Contractor is to use the existing electrical service to the existing controller for power to the new controller.
   3. The controller for this installation shall be per the plans and specifications w/surge protector (contact Parks Irrigator at 972-569-1062 for selection), providing an adequate number of stations to operate the new system zones, the existing zones in the landscape area, and three (3) additional unused circuits/stations to be used for future installations.
   4. All controllers must accommodate no less than the number of stations installed plus provide extra wires specified in Section 3.01.
   5. Wiring to valves to be as hereinbefore specified (2.1.D).
   6. Electric remote-control valves shall have plastic bodies and covers and shall be globe-type diaphragm valves of normally closed design. Operation shall be accomplished by means of an integrally mounted heavy-duty 24-V AC solenoid complying with National Electrical Code, Class II Circuit. The solenoid coil shall be plotted in epoxy resin within a plastic coated, stainless steel housing. Solenoids shall be completely waterproof, suitable for direct underground burial. A flow stem adjustment shall be included in each valve. The valve shall be able to regulate and maintain a constant outlet pressure regardless of inlet pressure variations. Electric remote-control valves shall be Hunter ICV series or approved equal. All valves shall be preceded by a plastic ball valve equal to the remote valve size.
   7. All electric control valves shall be enclosed in a valve box as shown on the plans and as specified. This valve box shall be properly supported and of sufficient construction that tractors and mowers crossing over the box will not push the box down and crush the pipe, valve, or box.

M. Swing Joints: Swing joints shall be LASCO O-ring seal or approved equal.

N. Double Check Valve Assembly: Febco, or approved equal which must have a Wilkins 100 Series “Y” Strainer installed on the inlet side. There shall also be a Wilkins Full Port Ball Valve or Plastic Ball Valve installed between the P.O.C.(water meter) and the “Y” Strainer. The Ball Valve should be incased by a 10” Ametek Valve Box.

O. Concrete Materials: All concrete shall have a minimum compressive strength of 2000 pounds per square inch at the end of twenty-eight (28) days. Concrete shall have a minimum of four (4) sacks (376 lbs.) of cement per cubic yard.

P. Bubbler Heads: All Bubbler heads are to be installed on any new tree(s) using a triple swing-joint assembly attached to the lateral line at root ball edge. The swing joint should be buried as deep as possible without damaging the root ball and staked in place using sod stakes. Bubbler heads shall be Hunter Multi-Stream spray nozzle. There shall be two per tree, one on each side of the ball.

Q. Flow Sensor: ARAD flowmeter, or approved equal, installed per instructions and in compliance with Town of Prosper construction standards. Must be compatible with Town of Prosper's central irrigation control system. From the controller the contractor shall run (3) yellow wires for Arad flowmeter.

R. Master Valve: ARAD, or approved equal, installed per instructions and in compliance with Town of Prosper construction standards. Must be compatible with Town of Prosper's central irrigation control system. From the controller the contractor shall run (3) blue wires for ARAD master valve.

PART 3 - EXECUTION

3.1 GENERAL

A. This part shall include the placing of all specified materials at the locations and elevations as shown on the Drawings or as established by the Owner's Representative.

B. The work performed hereunder shall conform in every respect to the Contract Documents, the applicable Town of Prosper requirements, the applicable local ordinances and sanitary codes, the regulations of the State Health Department, the regulations of the Occupational Safety and Hazardous Administration (OSHA) and the regulations of the Environmental Protection Agency (EPA). In the event that the Contract Documents do not adequately specify materials, methods of construction or workmanship of any portions of the proposed work, the Standards of the Trade shall govern.

C. Design Pressure: This irrigation system has been designed to operate with a minimum static inlet water pressure as determined at the point of connection. The CONTRACTOR shall take a pressure reading at each water meter prior to beginning construction. If the pressure reading is less than above, the CONTRACTOR shall notify the OWNER'S designated representative.

D. Contractor's Responsibility: The CONTRACTOR shall not willfully install the irrigation system as shown on the drawings when it is obvious in the field that obstructions, grade differences or discrepancies in equipment usage, static water pressure, or area dimensions exist that might not have been considered in the engineering. Such obstructions or differences shall be brought to the attention of the OWNER'S designated representative in writing before work commences. In the event this notification is not performed, the CONTRACTOR shall assume full responsibility for any revision necessary.

E. Staking: Before installation is started, place a surveyor's lathe where each sprinkler is to be located, in accordance with drawing. Staking shall be approved by the OWNER'S designated representative before proceeding with work.

F. Piping Layout: Piping layout is diagrammatic. Route piping around existing trees and shrubs in such a manner as to avoid damage to plantings. Route piping around curb drains in such a manner as to avoid damage to such improvements. Do not dig within the ball of newly planted trees or shrubs. In areas where existing trees are present, trenches will be adjusted on-site to provide a minimum clearance of four feet between the drip line of any tree or trench. The CONTRACTOR shall notify the OWNER'S representative in writing of a planned change in trench routing from that shown on the drawings.

G. Excavating, trenching and grade: Excavations are unclassified and include earth, loose rock, rock or any combination thereof in wet or dry state. Backfill trenches with material removed, provided the earth is free of rock, trash and debris. In the event rock or other debris is found during trenching, pipe shall be installed in accordance with Details of the Landscape drawings, utilizing sand cushion and cover for the pipe. Final grade prior to planting or mulch installation for all new medians shall be 1" below top of curb or any adjacent non pervious surfaces. No crown will be accepted in medians. ALL slopes greater than 5:1 shall require

multiple drip zones for proper management of water applications. Final grade adjacent to ALL structures including buildings, walls or other infrastructure shall have a minimum slope of 2% and a minimum distance of 10’ that falls away from these structures to provide positive drainage.

H. CONTRACTOR shall perform all excavations as required for installation of work included under this section including shoring of earth banks to prevent cave-ins. Restore all surfaces, existing underground installations, etc. damaged or cut as a result of the excavations to their original condition in a manner acceptable to the OWNER'S designated representative. Trenches shall be made wide enough to allow a minimum of 4 inches between parallel pipe lines. Trenches for pipe lines shall be made of sufficient depths to provide for the minimum cover shown in Details of the Landscaping drawings.

I. CONTRACTOR shall make necessary adjustments in the layout as may be required to connect to existing stub outs, should such stub outs not be located exactly as shown, and as may be required to work around existing work at no increase in cost. All such work will be recorded on record drawings and turned over to the OWNER'S designated representative prior to final payment. Adjustments to be made include adjusting the location and/or arc of coverage of existing rotary sprinklers in the sports field area to achieve adequate coverage of the area between the existing and new sprinklers.

3.2 CONTROL WIRE INSTALLATION

A. All control wire less than 500 feet in length shall be continuous without splices or joints from the controller to the valves. Connections to the electric valves shall be made within 18 inches of the valve using connectors specified in Paragraph 2.1.D unless otherwise approved by the OWNER'S designated representative. Two (2) extra control wires shall be installed in each direction from the controller(s) to the remote control valve at the furthest point from the controller. All extra wires shall be green color.

B. All control wires shall be installed at least 18 inches deep in ditches in accordance with Details of the Landscape drawings. CONTRACTOR shall obtain the OWNER'S approval for wiring routing when installed in separate ditch. Control wires may be installed in a common ditch with piping; however, wires must be installed a minimum of 4 inches from piping as per drawings. All wires need a 12” expansion loop at each change of direction.

C. All wire passing under existing or future paving, sidewalk, construction, etc. shall be encased in a PVC or galvanized steel conduit extending at least 12 inches beyond edges of paving, sidewalks or construction.

D. Irrigation controllers shall be grounded within 12" of controller in accordance with manufacturer’s instruction, or with an eight (8) foot grounding rod, properly wired using a #6 bare copper wire.

3.3 PIPE INSTALLATION

A. Sprinkler Mains: Install in a trench with a minimum of 16" of cover not to exceed 18”. See drawings. Trenches for sprinkler mains shall include no more than (1) additional pipe.

B. Lateral Piping: Install in a trench with a minimum of 12" of cover not to exceed 14”. See drawings. Trenches for lateral piping shall include no more than (2) additional pipe.

C. Trenching: Remove lumber, rubbish, and large rocks from trenches. Provide firm, uniform bearing for entire length of each pipeline to prevent uneven settlement. Wedging or blocking of pipe will not be permitted. Remove foreign matter or dirt from inside of pipe before welding and keep piping clean during and after lying of pipe. See drawings.

D. PVC pipe shall not be installed when there is water in the trench, nor shall PVC pipe be laid when temperature of 40 degrees or below or when rain is eminent. PVC pipe will expand and contract as the temperature changes. Therefore, pipes shall be snaked from side to side of trench bottom to allow for expansion and contraction.

E. All main and lateral pipe as well as wiring passing under existing or future paving, sidewalk, construction, etc. shall be encased in a PVC SCH40 conduit extending at least 12 inches beyond edges of paving, sidewalks or construction. The sleeve shall be twice the diameter of the main or lateral pipe passing through it. The location of the sleeve shall be determined and marked with a "X" in the pavement on each side of walk, curb, pavement, etc.

3.4 PVC PIPE AND FITTING ASSEMBLY

A. Solvent: Use solvent recommended by manufacturer to make solvent-welded joints following standards noted herein. Thoroughly clean pipe and fittings of dirt, dust and moisture before applying solvent. All pipe connections 1-1/2" and larger and non-gasket jointed pipe shall be cleaned with acceptable PVC cleaner.

B. PVC to Metal Connection: Work metal connections first. Use a non-hardening pipe dope such as Permatex No. 2 on threaded PVC to metal joints. Use only light wrench pressure.

C. Threaded PVC Connections: Where required, use threaded PVC adapters into which pipe may be welded.

3.5 COPPER TUBING AND FITTING ASSEMBLY

A. Clean pipe and fittings thoroughly and lightly sand pipe connections to remove residue from pipe. Attach fittings to tubing in an approved manner using lead-free solder.

3.6 POP-UP SPRAY HEADS

A. Pop-up spray heads shall be installed on a triple swing-joint on to lateral piping illustrated on the drawings. Heads shall be installed with underside of flange flush with the finish grade. CONTRACTOR will be required to adjust heads as necessary after establishment of grass.

3.7 ROTARY HEADS

A. Rotary heads shall be installed on a triple swing-joint assembly and set with the top of each head at finish grade per manufacturer’s instructions.

3.8 QUICK COUPLING VALVES

A. Quick coupling valves shall be installed with the top of the cover 1/2-inch below the finish grade. Quick coupling valve shall be installed on a triple swing-joint assembly with a 1-inch ball valve. A valve box as shown on the detail shall be installed around the quick coupling valve with a purple lid to indicate Non-Potable. Under the warranty, the CONTRACTOR must return after grass is established and adjust heads and boxes to proper grade.

1. Install 3 inches of size 1 ½” river rock in the bottom of the box. Install bricks under 50% of the bottom edge of the box, evenly distributed to provide support.

3.9 MANUAL AND ELECTRIC VALVES

A. Manual and electric valves shall be sized and located where shown on plans. Top of valve boxes shall be flush with finished grade. The CONTRACTOR will be required to adjust after establishment of grass. Valve boxes shall be properly supported and of sufficient construction that tractors and mowers crossing over the boxes will not push boxes down and crush the pipe, valve, or box.
   1. Install 3 inches of size 1 ½" River Rock in the bottom of the box. Install bricks under 50% of the bottom edge of the box, evenly distributed to provide support.

3.10 ELECTRIC CONTROLLERS AND VALVES

A. Electric controller shall be pedestal-mounted at or near the location of the existing controller. The system is designed to operate only one section at a time, unless otherwise noted on the plans.
B. The CONTRACTOR shall provide electrical service as required by the irrigation plans. All electrical work shall be done in accordance with all applicable codes and permits and standard industry procedures. 115 Volt or larger services shall be installed a minimum 24 inches deep.
C. It will be the responsibility of the CONTRACTOR to furnish and install the proper size wire on each of the low voltage circuits from the master control center to the various section automatic valves. Also see Section 2.1.D.
D. Consideration will be given to each circuit for allowance voltage drop and economy consistent with accepted practices of electrical installation. Under no circumstances shall the voltage of any branch circuit be reduced more than proper due to length of run exceeding the maximum allowance for the wire size used.
E. Remote electrical control valves shall be located and sized as shown on the plans. All electrical connections shall be made when the weather is dry with connection kits in strict accordance with manufacturer's recommended procedures. CONTRACTOR shall submit connection kit data as required under Section 1.3.
F. Electric power, meter drop and meter to operate the control(s) shall be furnished by the CONTRACTOR unless otherwise noted on the plans. Service wiring to the breakers and disconnects and breakers and the controller cabinet shall be furnished by the CONTRACTOR unless noted otherwise on the drawings.

3.11 THRUST BLOCKING

A. All main line piping shall be installed with concrete thrust blocking. For thrust blocking of main line piping, see drawings. Thrust blocking shall be installed at the point of connection of drain lines to the main pipe. When thrust blocking, use dry concrete bags behind any fitting 3" or greater.

3.12 TESTING

A. Sprinkler Mains: Test sprinkler main only for a period of 12 to 14 hours under normal water pressure. If leaks occur or pressure drops, replace joint or joints and repeat test.
B. Complete tests prior to backfilling (See Section 3.1, Paragraph "H" backfill and compacting). Sufficient backfill material may be placed in trenches between fittings to insure stability of line under pressure. In each case leave fittings and coupling open to visual inspection for full period of test.
C. The CONTRACTOR shall furnish all water necessary for testing, flushing, and jetting unless otherwise noted.

3.13 BACKFILL AND COMPACTING

A. After the system is operating and required tests and inspections have been made, backfill excavations and trenches with clean soil, free of rubbish. In no case shall particles greater than the diameter of the pipe be used as backfill material. If rocky materials are to be used, pipe shall be embedded and covered with a minimum depth of 3 inches of sand.
B. Backfill for all trenches, regardless of the type of pipe covered, shall be compacted to between 95% and 100% of the Standard Proctor Density (ASTM D698) at or up to 5 percent above the optimum moisture content.
C. Compact trenches in areas to be planted by thoroughly flooding the backfill. Compact all other areas by flooding or hand tamping. The jetting process may be used in areas when flooding. Compaction by jetting shall not be used in areas beneath or directly adjacent to existing or proposed pavement.
D. Dress off all areas to finish grades.
E. The CONTRACTOR shall immediately repair any trench subsidence before or during the guarantee period.

3.14 FINAL ADJUSTMENT

A. After the installation has been completed, make final adjustment of sprinkler system preparatory to the OWNER'S designated representative's final inspection.
B. Completely flush system to remove debris from lines by removing nozzle from heads on ends of lines and turning on system.
C. Check sprinklers for proper operation and proper alignment for direction of throw. Particular care will be given to spray and rotary heads that irrigate within street and other vehicular paving environments. All heads in medians and along curbs shall be adjusted as needed so that each is 1) set at the proper height in relation to the surrounding grade, 2) set so that the riser and body of the spray or rotary sprinkler is set plumb, and 3) adjusted so that overspray into vehicular pavement is minimized or eliminated. During inspection of the system at completion of installation, any spray or rotary head found by Town staff to not comply with these criteria shall be immediately adjusted so as to comply.
D. Check each section of spray heads for operating pressure and balance to other sections by use of flow adjustment on top of each valve.
E. Check nozzling for proper coverage. Prevailing wind conditions may indicate that arc of angle of spray should be other than as shown on drawings. In this case, change nozzles to provide correct coverage and furnish record data to OWNER'S designated representative with each change.
F. After system is thoroughly flushed and ready for operation, each section of sprinklers must be adjusted to control pressure at heads. Use the following method, one section at a time:
    1. Remove last head on section and install a temporary riser above grade. Install tree with pressure gauge attached on top of riser and re-install head with nipple onto tee.
    2. Correct operating pressure at last head of section as follows:
        a. Spray Heads - 30 psi
        b. Rotary Heads - 40 psi
        c. Or as per manufacturer's recommendations
    3. After replacing head, at grade, tamp thoroughly around head.

3.15 GUARANTEE AND MAINTENANCE

A. The CONTRACTOR shall guarantee material and workmanship for one (1) calendar year after the date of Final Acceptance, including repair and replacement of defective materials, workmanship and repair or backfill settlement.

B. Warranty on all parts, equipment, components, piping heads, valves and other material shall commence upon Final Acceptance of the irrigation system and continue in effect for a period of one (1) calendar year from the date of acceptance. Owner may request that this inspection and acceptance be coordinated with weather conditions so as to eliminate risk to the system from inclement weather.

C. Installer shall program and operate the irrigation system at rates of precipitation he/she deems necessary to sustain and promote vigorous growth of all plantings, as intended by design.

D. Maintenance shall include, but not necessarily be limited to the following:
   1. Adjustment of sprinkler height and plumb to compensate for settling.
   2. Adjustment of head coverage as necessary. NOTE: The Owner reserve the right to require the Contractor to change nozzles from that indicated on the drawings to sizes that better suit field conditions, where overspray occurs, where improper nozzle sizes are installed, and where coverage adjustment is necessary for the proper performance of the system.
   3. Unstopping heads plugged by foreign material.
   4. Adjustment of controller as necessary to insure proper performance.
   5. Cleaning to insure heads pop-up and pop-down properly.

3.16 SYSTEM DEMONSTRATION

A. Instruct Owner’s personnel in operation and maintenance of system including adjusting of sprinkler heads. Use operation and maintenance material as basis for demonstration.

END OF SECTION

SECTION 32 91 13 - SOIL PREPARATION

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes planting soils and layered soil assemblies specified by composition of the mixes.
B. Related Requirements:
   1. Division 01 Specification Sections apply to Work of this Section.
   2. Section 31 10 00 "Site Clearing" for topsoil stripping and stockpiling.
   3. Section 32 92 00 "Turf and Grasses" for placing planting soil for turf and grasses.
   4. Section 32 93 00 "Plants" for placing planting soil for plantings.

1.2 DEFINITIONS

A. AAPFCO: Association of American Plant Food Control Officials.
B. Backfill: The earth used to replace or the act of replacing earth in an excavation. This can be amended or unamended soil as indicated.
C. CEC: Cation exchange capacity.
D. Compost: The product resulting from the controlled biological decomposition of organic material that has been sanitized through the generation of heat and stabilized to the point that it is beneficial to plant growth.
E. Duff Layer: A surface layer of soil, typical of forested areas, that is composed of mostly decayed leaves, twigs, and detritus.
F. Imported Soil: Soil that is transported to Project site for use.
G. Layered Soil Assembly: A designed series of planting soils, layered on each other, that together produce an environment for plant growth.
H. Manufactured Soil: Soil produced by blending soils, sand, stabilized organic soil amendments, and other materials to produce planting soil.
I. NAPT: North American Proficiency Testing Program. An SSSA program to assist soil-, plant-, and water-testing laboratories through interlaboratory sample exchanges and statistical evaluation of analytical data.
J. Organic Matter: The total of organic materials in soil exclusive of undecayed plant and animal tissues, their partial decomposition products, and the soil biomass; also called "humus" or "soil organic matter."
K. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified as specified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.
L. RCRA Metals: Hazardous metals identified by the EPA under the Resource Conservation and Recovery Act.
M. SSSA: Soil Science Society of America.
N. Subgrade: Surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.
O. Subsoil: Soil beneath the level of subgrade; soil beneath the topsoil layers of a naturally occurring soil profile, typified by less than 1 percent organic matter and few soil organisms.

P. Surface Soil: Soil that is present at the top layer of the existing soil profile. In undisturbed areas, surface soil is typically called "topsoil"; but in disturbed areas such as urban environments, the surface soil can be subsoil.
Q. USCC: U.S. Composting Council.

1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.
   1. Include recommendations for application and use.
   2. Include test data substantiating that products comply with requirements.
   3. Include sieve analyses for aggregate materials.
   4. Material Certificates: For each type of imported soil, soil amendment and fertilizer before delivery to the site, according to the following:
      a. Manufacturer's qualified testing agency's certified analysis of standard products.
      b. Analysis of fertilizers, by a qualified testing agency, made according to AAPFCO methods for testing and labeling and according to AAPFCO's SUIP #25.
      c. Analysis of nonstandard materials, by a qualified testing agency, made according to SSSA methods, where applicable.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For each testing agency.
B. Preconstruction Test Reports: For preconsutrction soil analyses specified in "Preconstruction Testing" Article.
C. Field quality-control reports.

1.6 QUALITY ASSURANCE

A. Testing Agency Qualifications: An independent, state-operated, or university-operated laboratory; experienced in soil science, soil testing, and plan nutrition; with the experience and capability to conduct the testing indicated; and that specializes in types of tests to be performed.
   1. Multiple Laboratories: At Contractor's option, work may be divided among qualified testing laboratories specializing in physical testing, chemical testing, and fertility testing.

1.7 PRECONSTRUCTION TESTING

A. Preconstruction Testing Service: Engage a qualified testing agency to perform preconstruction soil analyses on existing, on-site soil and imported soil.
   1. Notify Landscape Architect seven days in advance of the dates and times when laboratory samples will be taken.

B. Preconstruction Soil Analyses: For each unamended soil type, perform testing on soil samples and furnish soil analysis and a written report containing soil-amendment and fertilizer recommendations by a qualified testing agency performing the testing according to "Soil-Sampling Requirements" and "Testing Requirements" articles.
   1. Have testing agency identify and label samples and test reports according to sample collection and labeling requirements.

1.8 SOIL-SAMPLING REQUIREMENTS

A. General: Extract soil samples according to requirements in this article.
B. Sample Collection and Labeling: Have samples taken and labeled by Contractor in presence of Landscape Architect state-certified, -licensed, or -registered soil scientist under the direction of the testing agency.
   1. Number and Location of Samples: Minimum of five representative soil samples from varied locations for each soil to be used or amended for landscaping purposes.
   2. Procedures and Depth of Samples: According to USDA-NRCS's "Field Book for Describing and Sampling Soils."
   3. Division of Samples: Split each sample into two, equal parts. Send half to the testing agency and half to Owner for its records.
   4. Labeling: Label each sample with the date, location keyed to a site plan or other location system, visible soil condition, and sampling depth.

1.9 TESTING REQUIREMENTS

A. General: Perform tests on soil samples according to requirements in this article.
B. Physical Testing:
   1. Soil Texture: Soil-particle, size-distribution analysis by one of the following methods according to SSSA's "Methods of Soil Analysis - Part 1-Physical and Mineralogical Methods":
      a. Sieving Method: Report sand-gradation percentages for very coarse, coarse, medium, fine, and very fine sand; and fragment-gradation (gravel) percentages for fine, medium, and coarse fragments; according to USDA sand and fragment sizes.
      b. Hydrometer Method: Report percentages of sand, silt, and clay.
   2. Total Porosity: Calculate using particle density and bulk density according to SSSA's "Methods of Soil Analysis - Part 1-Physical and Mineralogical Methods."
   3. Water Retention: According to SSSA's "Methods of Soil Analysis - Part 1-Physical and Mineralogical Methods."
   4. Saturated Hydraulic Conductivity: According to SSSA's "Methods of Soil Analysis - Part 1-Physical and Mineralogical Methods"; at 85% compaction according to ASTM D 698 (Standard Proctor).
C. Chemical Testing:
   1. CEC: Analysis by sodium saturation at pH 7 according to SSSA's "Methods of Soil Analysis - Part 3- Chemical Methods."
   2. Clay Mineralogy: Analysis and estimated percentage of expandable clay minerals using CEC by ammonium saturation at pH 7 according to SSSA's "Methods of Soil Analysis - Part 1- Physical and Mineralogical Methods."
   3. Phytotoxicity: Test for plant-available concentrations of phytotoxic minerals including aluminum, arsenic, barium, cadmium, chlorides, chromium, cobalt, copper, lead, lithium, mercury, nickel, selenium, silver, sodium, strontium, tin, titanium, vanadium, and zinc.

D. Fertility Testing: Soil-fertility analysis according to standard laboratory protocol of SSSA NAPT SERA-6, including the following:
   1. Percentage of organic matter.
   2. CEC, calcium percent of CEC, and magnesium percent of CEC.
   3. Soil reaction (acidity/alkalinity pH value).
   4. Buffered acidity or alkalinity.
   5. Nitrogen ppm.
   6. Phosphorous ppm.
   7. Potassium ppm.
   8. Manganese ppm.
   9. Manganese-availability ppm.
   10. Zinc ppm.
   11. Zinc availability ppm.
   12. Copper ppm.
   13. Sodium ppm and sodium absorption ratio.
   14. Soluble-salts ppm.
   15. Presence and quantities of problem materials including salts and metals cited in the Standard protocol. If such problem materials are present, provide additional recommendations for corrective action.
   16. Other deleterious materials, including their characteristics and content of each.

E. Organic-Matter Content: Analysis using loss-by-ignition method according to SSSA's "Methods of Soil Analysis - Part 3- Chemical Methods."

F. Recommendations: Based on the test results, state recommendations for soil treatments and soil amendments to be incorporated to produce satisfactory planting soil suitable for healthy, viable plants indicated. Include, at a minimum, recommendations for nitrogen, phosphorous, and potassium fertilization, and for micronutrients.
   1. Fertilizers and Soil Amendment Rates: State recommendations in weight per 1,000 sq. ft. for 6-inchdepth of soil.
   2. Soil Reaction: State the recommended liming rates for raising pH or sulfur for lowering pH according to the buffered acidity or buffered alkalinity in weight per 1,000 sq. ft. for 6-inchdepth of soil.

1.10 DELIVERY, STORAGE, AND HANDLING

A. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and compliance with state and Federal laws if applicable.

B. Bulk Materials:
   1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
   2. Provide erosion-control measures to prevent erosion or displacement of bulk materials, discharge of soil-bearing water runoff, and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
   3. Do not move or handle materials when they are wet or frozen.
   4. Accompany each delivery of bulk fertilizers and soil amendments with appropriate certificates.

PART 2 - PRODUCTS

2.1 PLANTING SOILS SPECIFIED BY COMPOSITION

A. General: Soil amendments, fertilizers, and rates of application specified in this article are guidelines that may need revision based on testing laboratory's recommendations after preconstruction soil analyses are performed.

B. Planting-Soil Type for Turf Areas: Existing, on-site surface soil, with the duff layer, if any, retained; and stockpiled on-site; modified to produce viable planting soil. Blend existing, on-site surface soil with the following soil amendments and fertilizers in the following quantities to produce planting soil:
   1. Ratio of Loose Compost to Soil: 1:2 by volume.
   2. Weight of Lime: Supply as recommended in laboratory soil analysis per 1,000 sq. ft. per 4 inches of soil depth.
   3. Weight of Sulfur, Iron Sulfate: Supply as recommended in laboratory soil analysis per 1,000 sq. ft. per 4 inches of soil depth.
   4. Weight of Agricultural Gypsum: Supply as recommended in laboratory soil analysis per 1,000 sq. ft. per 4 inches of soil depth.
   5. Weight of Superphosphate: Supply as recommended in laboratory soil analysis per 1,000 sq. ft. per 4 inches of soil depth.
   6. Weight of Commercial Fertilizer: Supply as recommended in laboratory soil analysis per 1,000 sq. ft. per 4 inches of soil depth.
   7. Weight of Slow-Release Fertilizer: Supply as recommended in laboratory soil analysis per 1,000 sq. ft. per 4 inches of soil depth.

C. Planting-Soil Type for Turf Areas: Imported, naturally formed soil from off-site sources and consisting of sandy loam according to USDA textures; and modified to produce viable planting soil.
   1. Basis-of-Design Product: Subject to compliance with requirements, provide Premium Bedding Mix or comparable product by the following:
      a. Texas Pure Products
   2. Additional Properties of Imported Soil before Amending: Soil reaction of pH 6 to 7 and minimum of 6 percent organic-matter content, friable, and with sufficient structure to give good tilth and aeration.
   3. Unacceptable Properties: Clean soil of the following:
      a. Unacceptable Materials: Concrete slurry, concrete layers or chunks, cement, plaster, building debris, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, acid, and other extraneous materials that are harmful to plant growth.
      b. Unsuitable Materials: Stones, roots, plants, sod, clay lumps, and pockets of coarse sand that exceed a combined maximum of 8 percent by dry weight of the imported soil.
      c. Large Materials: Stones, clods, roots, clay lumps, and pockets of coarse sand exceeding 2 inches 3 inches in any dimension.
   4. Amended Soil Composition: Blend imported, unamended soil with the following soil amendments and fertilizers in the following quantities to produce planting soil:
      a. Ratio of Loose Compost to Soil: 1:2 by volume.
      b. Weight of Lime: Supply as recommended in laboratory soil analysis per 1,000 sq. ft. per 4 inches of soil depth.
      c. Weight of Sulfure: Supply as recommended in laboratory soil analysis per 1,000 sq. ft. per 4 inches of soil depth.

d. Weight of Agricultural Gypsum: Supply as recommended in laboratory soil analysis per 1,000 sq. ft. per 4 inches of soil depth.
e. Weight of Superphosphate: Supply as recommended in laboratory soil analysis per 1,000 sq. ft. per 4 inches of soil depth.
f. Weight of Commercial Fertilizer: Supply as recommended in laboratory soil analysis per 1,000 sq. ft. per 4 inches of soil depth.
g. Weight of Slow-Release Fertilizer: Supply as recommended in laboratory soil analysis per 1,000 sq. ft. per 4 inches of soil depth.

D. Planting-Soil Type Planting Beds: Manufactured soil consisting of manufacturer's basic topsoil, blended in a manufacturing facility with sand, stabilized organic soil amendments, and other materials to produce viable planting soil.
1. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings; or comparable product by one of the following:
a. Texas Pure Products
2. Additional Properties of Manufacturer's Basic Soil before Amending: Soil reaction of pH 6 to 7 and minimum of 6 percent organic-matter content, friable, and with sufficient structure to give good tilth and aeration.
3. Unacceptable Properties: Manufactured soil shall not contain the following:
a. Unacceptable Materials: Concrete slurry, concrete layers or chunks, cement, plaster, building debris, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, acid, and other extraneous materials that are harmful to plant growth.
b. Unsuitable Materials: Stones, roots, plants, sod, clay lumps, and pockets of coarse sand that exceed a combined maximum of 5 percent by dry weight of the manufactured soil.
c. Large Materials: Stones, clods, roots, clay lumps, and pockets of coarse sand exceeding 1-1/2 inches in any dimension.
4. Blend manufacturer's basic soil with the following soil amendments and fertilizers in the following quantities to produce planting soil:
a. Weight of Lime: Supply as recommended in laboratory soil analysis.
b. Weight of Iron Sulfate: Supply as recommended in laboratory soil analysis.
c. Weight of Agricultural Gypsum: Supply as recommended in laboratory soil analysis per cu. yd.
d. Weight of Superphosphate: Supply as recommended in laboratory soil analysis per cu. yd.
e. Weight of Commercial Fertilizer: Supply as recommended in laboratory soil analysis per cu. yd.
f. Weight of Slow-Release Fertilizer: Supply as recommended in laboratory soil analysis per cu. yd.

2.2 INORGANIC SOIL AMENDMENTS

A. Lime: ASTM C 602, agricultural liming material containing a minimum of 80 percent calcium carbonate equivalent and as follows:
1. Class: T, with a minimum of 99 percent passing through a No. 8sieve and a minimum of 75 percent passing through a No. 60 sieve.
2. Class: O, with a minimum of 95 percent passing through a No. 8sieve and a minimum of 55 percent passing through a No. 60 sieve.

B. Sulfur: Granular, biodegradable, and containing a minimum of 90 percent elemental sulfur, with a minimum of 99 percent passing through a No. 6 sieve and a maximum of 10 percent passing through a No. 40 sieve.

C. Iron Sulfate: Granulated ferrous sulfate containing a minimum of 20 percent iron and 10 percent sulfur.
D. Perlite: Horticultural perlite, soil amendment grade.
E. Agricultural Gypsum: Minimum 90 percent calcium sulfate, finely ground with 90 percent passing through a No. 50 sieve.
F. Sand: Clean, washed, natural or manufactured, free of toxic materials, and according to ASTM C 33/C 33M.

2.3 ORGANIC SOIL AMENDMENTS

A. Compost: Well-composted, stable, and weed-free organic matter produced by composting feedstock, and bearing USCC's "Seal of Testing Assurance," and as follows:
   1. Feedstock: May include animal waste.
   2. Reaction: pH of 5.5 to 8.
   3. Soluble-Salt Concentration: Less than 4 dS/m.
   4. Moisture Content: 35 to 55 percent by weight.
   5. Organic-Matter Content: 30 to 40 percent of dry weight.
   6. Particle Size: Minimum of 98 percent passing through a 1-inch sieve.
B. Sphagnum Peat: Partially decomposed sphagnum peat moss, finely divided or of granular texture with 100 percent passing through a 1/2-inch sieve, a pH of 3.4 to 4.8, and a soluble-salt content measured by electrical conductivity of maximum 5 dS/m.
C. Wood Derivatives: Shredded and composted, nitrogen-treated sawdust, ground bark, or wood waste; of uniform texture and free of chips, stones, sticks, soil, or toxic materials.
   1. Partially Decomposed Wood Derivatives: In lieu of shredded and composted wood derivatives, mix shredded and partially decomposed wood derivatives with ammonium nitrate at a minimum rate of 0.15 lb/cu. ft. of loose sawdust or ground bark, or with ammonium sulfate at a minimum rate of 0.25 lb/cu. ft. of loose sawdust or ground bark.
D. Manure: Well-rotted, unleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, debris, and material harmful to plant growth.

2.4 FERTILIZERS

A. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
   1. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified testing agency.
B. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
   1. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified testing agency.
C. Chelated Iron: Commercial-grade FeEDDHA for dicots and woody plants, and commercial-grade FeDTPA for ornamental grasses and monocots.

PART 3 - EXECUTION

3.1 GENERAL

A. Place planting soil and fertilizers according to requirements in other Specification Sections.
B. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in planting soil.
C. Proceed with placement only after unsatisfactory conditions have been corrected.

3.2 PREPARATION OF UNAMENDED, ON-SITE SOIL BEFORE AMENDING

A. Excavation: Excavate soil from designated area(s) to a depth of 6 inches and stockpile until amended.
B. Unacceptable Materials: Clean soil of concrete slurry, concrete layers or chunks, cement, plaster, building debris, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, acid, and other extraneous materials that are harmful to plant growth.
C. Unsuitable Materials: Clean soil to contain a maximum of 8 percent by dry weight of stones, roots, plants, sod, clay lumps, and pockets of coarse sand.

3.3 PLACING AND MIXING PLANTING SOIL OVER EXPOSED SUBGRADE

A. General: Apply and mix unamended soil with amendments on-site to produce required planting soil. Do not apply materials or till if existing soil or subgrade is frozen, muddy, or excessively wet.
B. Subgrade Preparation: Till subgrade to a minimum depth of 8 inches. Remove stones larger than 1-1/2 inches in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
    1. Apply, add soil amendments, and mix approximately half the thickness of unamended soil over prepared, loosened subgrade according to "Mixing" Paragraph below. Mix thoroughly into top 4 inches of subgrade. Spread remainder of planting soil.
C. Mixing: Spread unamended soil to total depth of 6 inches, but not less than required to meet finish grades after mixing with amendments and natural settlement. Do not spread if soil or subgrade is frozen, muddy, or excessively wet.
    1. Amendments: Apply soil amendments, and fertilizer, if required, evenly on surface, and thoroughly blend them with unamended soil to produce planting soil.
        a. Mix fertilizer with planting soil no more than seven days before planting.
    2. Lifts: Apply and mix unamended soil and amendments in lifts not exceeding 8 inches in loose depth for material compacted by compaction equipment, and not more than 6 inches in loose depth for material compacted by hand-operated tampers.
D. Compaction: Compact each blended lift of planting soil to 75 to 82 percent of maximum Standard Proctor density according to ASTM D 698 and tested in-place.
E. Finish Grading: Grade planting soil to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.

3.4 PLACING MANUFACTURED PLANTING SOIL OVER EXPOSED SUBGRADE

A. General: Apply manufactured soil on-site in its final, blended condition. Do not apply materials or till if existing soil or subgrade is frozen, muddy, or excessively wet.
B. Subgrade Preparation: Till subgrade to a minimum depth of 12 inches. Remove stones larger than 1-1/2 inches in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
    1. Apply approximately half the thickness of planting soil over prepared, loosened subgrade. Mix thoroughly into top 4 inches of subgrade. Spread remainder of planting soil.
C. Application: Spread planting soil to total depth **of** 4 inches but not less than required to meet finish grades after natural settlement. Do not spread if soil or subgrade is frozen, muddy, or excessively wet.
    1. Lifts: Apply planting soil in lifts not exceeding 8 inchesin loose depth for material compacted by compaction equipment, and not more than 6 inches in loose depth for material compacted by hand-operated tampers.
D. Compaction: Compact each lift of planting soil to 75 to 82 percent of maximum Standard Proctor density according to ASTM D 698.
E. Finish Grading: Grade planting soil to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.

3.5 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
B. Perform the following tests and inspections:
    1. Compaction: Test planting-soil compaction after placing each life and at completion using a densitometer or soil-compaction meter calibrated to a reference test valued based on laboratory testing according to ASTM D 698. Space tests at no less than one for each 2,000 sq. ft. of in-place soil or part thereof.
C. Soil will be considered defective if it does not pass tests and inspections.
D. Prepare test and inspection reports.
E. Label each sample and test report with the date, location keyed to a site plan or other location system, visible conditions when and where sample was taken, and sampling depth.

3.6 PROTECTION

A. Protection Zone: Identify protection zones according to Section 01 56 39 "Temporary Tree and Plant Protection."
B. Protect areas of in-place soil from additional compaction, disturbance, and contamination. Prohibit the following practices within these areas except as required to perform planting operations:
    1. Storage of construction materials, debris, or excavated material.
    2. Parking vehicles or equipment.
    3. Vehicle traffic.
    4. Foot traffic.
    5. Erection of sheds or structures.
    6. Impoundment of water.
    7. Excavation or other digging unless otherwise indicated.

C. If planting soil or subgrade is overcompacted, disturbed, or contaminated by foreign or deleterious materials or liquids, remove the planting soil and contamination; restore the subgrade as directed by Landscape Architect and replace contaminated planting soil with new planting soil.

3.7 CLEANING

A. Protect areas adjacent to planting-soil preparation and placement areas from contamination. Keep adjacent paving and construction clean and work area in an orderly condition.

B. Remove surplus soil and waste material including excess subsoil, unsuitable materials, trash, and debris and legally dispose of them off Owner's property unless otherwise indicated.

1. Dispose of excess subsoil and unsuitable materials on-site where directed by Owner.

END OF SECTION

SECTION 32 92 00 - TURF AND GRASSES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Hydroseeding.
   2. Sodding.
   3. Meadow grasses and wildflowers.
   4. Turf renovation.
   5. Erosion-control material(s).

B. Related Requirements:
   1. Division 01 Specification Sections apply to Work of this Section.
   2. Section 32 93 00 "Plants" for trees, shrubs, ground covers, and other plants as well as border edgings and mow strips.

1.2 DEFINITIONS

A. Finish Grade: Elevation of finished surface of planting soil.

B. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. Pesticides include insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. They also include substances or mixtures intended for use as a plant regulator, defoliant, or desiccant.

C. Pests: Living organisms that occur where they are not desired or that cause damage to plants, animals, or people. Pests include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.

D. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth. See Section 32 91 13 "Soil Preparation," and drawing designations for planting soils.

E. Subgrade: The surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.

1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For landscape Installer.

B. Certification of Grass Seed: From seed vendor for each grass-seed monostand or mixture, stating the botanical and common name, percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.
   1. Certification of each seed mixture for turfgrass sod plugs. Include identification of source and name and telephone number of supplier.

C. Product Certificates: For fertilizers, from manufacturer.

D. Pesticides and Herbicides: Product label and manufacturer's application instructions specific to Project.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: Recommended procedures to be established by Owner for maintenance of turf and meadows during a calendar year. Submit before expiration of required maintenance periods.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: A qualified landscape installer whose work has resulted in successful turf and meadow establishment.
   1. Professional Membership: Installer shall be a member in good standing of either the National Association of Landscape Professionals or AmericanHort.
   2. Experience: Five years' experience in turf installation in addition to requirements in Section 01 40 00 "Quality Requirements."
   3. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when work is in progress.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Seed and Other Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of compliance with state and Federal laws, as applicable.
B. Sod: Harvest, deliver, store, and handle sod according to requirements in "Specifications for Turfgrass Sod Materials" and "Specifications for Turfgrass Sod Transplanting and Installation" sections in TPI's "Guideline Specifications to Turfgrass Sodding." Deliver sod within 24 hours of harvesting and in time for planting promptly. Protect sod from breakage and drying.
C. Bulk Materials:
   1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
   2. Provide erosion-control measures to prevent erosion or displacement of bulk materials; discharge of soil-bearing water runoff; and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
   3. Accompany each delivery of bulk materials with appropriate certificates.

1.8 FIELD CONDITIONS

A. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions.

PART 2 - PRODUCTS

2.1 SEED

A. Grass Seed: Fresh, clean, dry, new-crop seed complying with AOSA's "Rules for Testing Seeds" for purity and germination tolerances.
B. Seed Species:
   1. Quality: State-certified seed of grass species as listed below for solar exposure.
   2. Quality: Seed of grass species as listed below for solar exposure, with not less than 85 percent germination, not less than 95 percent pure seed, and not more than 0.5 percent weed seed:
   3. Full Sun: Sahara II Bermudagrass (Cynodon dactylon (L.) Pers., variety: NuMex SAHARA.)

2.2 TURFGRASS SOD

A. Turfgrass Sod: Certified complying with "Specifications for Turfgrass Sod Materials" in TPI's "Guideline Specifications to Turfgrass Sodding." Furnish viable sod of uniform density, color, and texture that is strongly rooted and capable of vigorous growth and development when planted.
B. Tifway 419 Bermudagrass (Cynodon dactylon x C. transvaalensis germplasma.

2.3 MEADOW GRASSES AND WILDFLOWERS

A. Wildflower Seed: Fresh, clean, and dry new seed, of mixed species as follows:
   1. Blackland Prairie from American Native Seed (1-900-728-4043).
B. Seed Carrier: Inert material, sharp clean sand or perlite.

2.4 FERTILIZERS

A. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
   1. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing laboratory.
B. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
   1. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing laboratory.

2.5 PESTICIDES

A. General: Pesticide, registered and approved by the EPA, acceptable to authorities having jurisdiction, and of type recommended by manufacturer for each specific problem and as required for Project conditions and application. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction.
B. Pre-Emergent Herbicide (Selective and Nonselective): Effective for controlling the germination or growth of weeds within planted areas at the soil level directly below the mulch layer.

C. Post-Emergent Herbicide (Selective and Nonselective): Effective for controlling weed growth that has already germinated.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas to be planted for compliance with requirements and other conditions affecting installation and performance of the Work.
   1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
   2. Suspend planting operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
   3. Uniformly moisten excessively dry soil that is not workable or which is dusty.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

C. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Landscape Architect and replace with new planting soil.

3.2 PREPARATION

A. Protect structures; utilities; sidewalks; pavements; and other facilities, trees, shrubs, and plantings from damage caused by planting operations.
   1. Protect adjacent and adjoining areas from hydroseeding and hydromulching overspray.
   2. Protect grade stakes set by others until directed to remove them.

B. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

3.3 TURF AREA PREPARATION

A. General: Prepare planting area for soil placement and mix planting soil according to Section 32 91 13 "Soil Preparation."

B. Placing Planting Soil: Place and mix planting soil in place over exposed subgrade.
   1. Reduce elevation of planting soil to allow for soil thickness of sod.

C. Moisten prepared area before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.

D. Before planting, obtain Landscape Architect's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.

3.4 PREPARATION FOR EROSION-CONTROL MATERIALS

A. Prepare area as specified in "Turf Area Preparation" Article.

B. Moisten prepared area before planting if surface is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.

3.5 HYDROSEEDING

A. Hydroseeding: Mix specified seed, commercial fertilizer and fiber mulch in water, using equipment specifically designed for hydroseed application. Continue mixing until uniformly blended into homogeneous slurry suitable for hydraulic application.
   1. Spray-apply slurry uniformly to all areas to be seeded in a one-step process. Apply slurry at a rate so that mulch component is deposited at not less than 1500-lb/acre dry weight, and seed component is deposited at not less than the specified seed-sowing rate.

3.6 SODDING

A. Lay sod within 24 hours of harvesting unless a suitable preservation method is accepted by Landscape Architect prior to delivery time. Do not lay sod if dormant or if ground is frozen or muddy.
B. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod; do not stretch or overlap. Stagger sod strips or pads to offset joints in adjacent courses. Avoid damage to soil or sod during installation. Tamp and roll lightly to ensure contact with soil, eliminate air pockets, and form a smooth surface. Work sifted soil or fine sand into minor cracks between pieces of sod; remove excess to avoid smothering sod and adjacent grass.
   1. Lay sod across slopes exceeding 1:3.
   2. Anchor sod on slopes exceeding 1:6 with wood pegs or steel staples spaced as recommended by sod manufacturer but not less than two anchors per sod strip to prevent slippage.
C. Saturate sod with fine water spray within two hours of planting. During first week after planting, water daily or more frequently as necessary to maintain moist soil to a minimum depth of 1-1/2 inches below sod.

3.7 TURF RENOVATION

A. Renovate existing turf where indicated.
B. Renovate turf damaged by Contractor's operations, such as storage of materials or equipment and movement of vehicles.
   1. Reestablish turf where settlement or washouts occur or where minor regrading is required.
   2. Install new planting soil as required.
C. Remove sod and vegetation from diseased or unsatisfactory turf areas; do not bury in soil.
D. Remove topsoil containing foreign materials, such as oil drippings, fuel spills, stones, gravel, and other construction materials resulting from Contractor's operations, and replace with new planting soil.
E. Mow, dethatch, core aerate, and rake existing turf.
F. Remove weeds before seeding. Where weeds are extensive, apply selective herbicides as required. Do not use pre-emergence herbicides.
G. Remove waste and foreign materials, including weeds, soil cores, grass, vegetation, and turf, and legally dispose of them off Owner's property.
H. Till stripped, bare, and compacted areas thoroughly to a soil depth of 6 inches.
I. Apply soil amendments and initial fertilizer required for establishing new turf and mix thoroughly into top 4 inches of existing soil. Install new planting soil to fill low spots and meet finish grades.
J. Apply seed and protect with straw mulch sod plugs sprigs as required for new turf.
K. Water newly planted areas and keep moist until new turf is established.

3.8 TURF MAINTENANCE

A. General: Maintain and establish turf by watering, fertilizing, weeding, mowing, trimming, replanting, and performing other operations as required to establish healthy, viable turf. Roll, regrade, and replant bare or eroded areas and remulch to produce a uniformly smooth turf. Provide materials and installation the same as those used in the original installation.
   1. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace materials and turf damaged or lost in areas of subsidence.
   2. In areas where mulch has been disturbed by wind or maintenance operations, add new mulch and anchor as required to prevent displacement.
   3. Apply treatments as required to keep turf and soil free of pests and pathogens or disease. Use integrated pest management practices whenever possible to minimize the use of pesticides and reduce hazards.

B. Watering: Install and maintain temporary piping, hoses, and turf-watering equipment to convey water from sources and to keep turf uniformly moist to a depth of 4 inches.
   1. Schedule watering to prevent wilting, puddling, erosion, and displacement of seed or mulch. Lay out temporary watering system to avoid walking over muddy or newly planted areas.
   2. Water turf with fine spray at a minimum rate of 1 inch per week unless rainfall precipitation is adequate.

C. Turf Postfertilization: Apply commercial fertilizer after initial mowing and when grass is dry.
   1. Use fertilizer that provides actual nitrogen of at least 1 lb/1000 sq. ft. to turf area.

3.9 SATISFACTORY TURF

A. Turf installations shall meet the following criteria as determined by Landscape Architect:
   1. Satisfactory Sodded Turf: At end of maintenance period, a healthy, well-rooted, even-colored, viable turf has been established, free of weeds, open joints, bare areas, and surface irregularities.

B. Use specified materials to reestablish turf that does not comply with requirements, and continue maintenance until turf is satisfactory.

3.10 MEADOW

A. Sow seed with spreader or seeding machine. Do not broadcast or drop seed when wind velocity exceeds 5 mph.
   1. Before sowing, mix seed with seed carrier at a ratio of not less than two parts seed carrier to one part seed.
   2. Evenly distribute seed by sowing equal quantities in two directions at right angles to each other.
   3. Do not use wet seed or seed that is moldy or otherwise damaged.

B. Sow seed at a total rate of Follow seed producers recommended application rates.

C. Water newly planted areas and keep moist until meadow is established.

3.11 MEADOW MAINTENANCE

A. Maintain and establish meadow by watering, weeding, mowing, trimming, replanting, and performing other operations as required to establish a healthy, viable meadow. Roll, regrade, and replant bare or eroded areas and remulch. Provide materials and installation the same as those used in the original installation.
   1. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace materials and meadow damaged or lost in areas of subsidence.

B. Watering: Install and maintain temporary piping, hoses, and meadow-watering equipment to convey water from sources and to keep meadow uniformly moist.
   1. Schedule watering to prevent wilting, puddling, erosion, and displacement of seed or mulch. Lay out temporary watering system to avoid walking over muddy or newly planted areas.
   2. Water meadow with fine spray at a minimum rate of 1/2 inch per week for four weeks after planting unless rainfall precipitation is adequate.

3.12 PESTICIDE APPLICATION

A. Apply pesticides and other chemical products and biological control agents according to requirements of authorities having jurisdiction and manufacturer's written recommendations. Coordinate applications with Owner's operations and others in proximity to the Work. Notify Owner before each application is performed.

B. Post-Emergent Herbicides (Selective and Nonselective): Apply only as necessary to treat already-germinated weeds and according to manufacturer's written recommendations.

3.13 CLEANUP AND PROTECTION

A. Promptly remove soil and debris created by turf work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.

B. Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of them off Owner's property.

C. Erect temporary fencing or barricades and warning signs as required to protect newly planted areas from traffic. Maintain fencing and barricades throughout initial maintenance period and remove after plantings are established.

D. Remove nondegradable erosion-control measures after grass establishment period.

3.14 MAINTENANCE SERVICE

A. Turf Maintenance Service: Provide full maintenance by skilled employees of landscape Installer. Maintain as required in "Turf Maintenance" Article. Begin maintenance immediately after each area is planted and continue until acceptable turf is established, but for not less than the following periods:
   1. Seeded Turf: 60 days from date of Substantial Completion.
      a. When initial maintenance period has not elapsed before end of planting season, or if turf is not fully established, continue maintenance during next planting season.
   2. Sodded Turf: 30 days from date of Substantial Completion.

B. Meadow Maintenance Service: Provide full maintenance by skilled employees of landscape Installer. Maintain as required in "Meadow Maintenance" Article. Begin maintenance immediately after each area is planted and continue until acceptable meadow is established, but for not less than maintenance period below.
   1. Maintenance Period: 40 days from date of Substantial Completion.

END OF SECTION

SECTION 32 93 00 - PLANTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Plants.
   2. Landscape edgings.

B. Related Requirements:
   1. Section 32 92 00 "Turf and Grasses" for turf (lawn) and meadow planting, hydroseeding, and erosion-control materials.

1.2 DEFINITIONS

A. Backfill: The earth used to replace or the act of replacing earth in an excavation.

B. Balled and Burlapped Stock: Plants dug with firm, natural balls of earth in which they were grown, with a ball size not less than diameter and depth recommended by ANSI Z60.1 for type and size of plant required; wrapped with burlap, tied, rigidly supported, and drum laced with twine with the root flare visible at the surface of the ball as recommended by ANSI Z60.1.

C. Balled and Potted Stock: Plants dug with firm, natural balls of earth in which they are grown and placed, unbroken, in a container. Ball size is not less than diameter and depth recommended by ANSI Z60.1 for type and size of plant required.

D. Container-Grown Stock: Healthy, vigorous, well-rooted plants grown in a container, with a well-established root system reaching sides of container and maintaining a firm ball when removed from container. Container shall be rigid enough to hold ball shape and protect root mass during shipping and be sized according to ANSI Z60.1 for type and size of plant required.

E. Finish Grade: Elevation of finished surface of planting soil.

F. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. Pesticides include insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. They also include substances or mixtures intended for use as a plant regulator, defoliant, or desiccant. Some sources classify herbicides separately from pesticides.

G. Pests: Living organisms that occur where they are not desired or that cause damage to plants, animals, or people. Pests include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.

H. Planting Area: Areas to be planted.

I. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth. See Section 32 91 13 "Soil Preparation" for drawing designations for planting soils.

J. Plant; Plants; Plant Material: These terms refer to vegetation in general, including trees, shrubs, vines, ground covers, ornamental grasses, bulbs, corms, tubers, or herbaceous vegetation.

K. Root Flare: Also called "trunk flare." The area at the base of the plant's stem or trunk where the stem or trunk broadens to form roots; the area of transition between the root system and the stem or trunk.

L. Stem Girdling Roots: Roots that encircle the stems (trunks) of trees below the soil surface.

M. Subgrade: The surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.

1.3 COORDINATION

A. Coordination with Turf Areas (Lawns): Plant trees, shrubs, and other plants after finish grades are established and before planting turf areas unless otherwise indicated.
   1. When planting trees, shrubs, and other plants after planting turf areas, protect turf areas, and promptly repair damage caused by planting operations.

1.4 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.5 ACTION SUBMITTALS

A. Product Data: For each type of product.
   1. Plant Materials: Include quantities, sizes, quality, and sources for plant materials.
   2. Plant Photographs: Include color photographs in digital format of each required species and size of plant material as it will be furnished to Project. Take photographs from an angle depicting true size and condition of the typical plant to be furnished. Include a scale rod or other measuring device in each photograph. For species where more than 10 plants are required, include a minimum of three photographs showing the average plant, the best quality plant, and the worst quality plant to be furnished. Identify each photograph with the full scientific name of the plant, plant size, and name of the growing nursery.

B. Samples for Verification: For each of the following:
   1. Compost Mulch: 1-quart volume of each organic mulch required; in sealed plastic bags labeled with composition of materials by percentage of weight and source of mulch. Each Sample shall be typical of the lot of material to be furnished; provide an accurate representation of color, texture, and organic makeup.
   2. Mineral Mulch: 2 lb of each mineral mulch required, in sealed plastic bags labeled with source of mulch. Sample shall be typical of the lot of material to be delivered and installed on-site; provide an accurate indication of color, texture, and makeup of the material.
   3. Weed Control Barrier: 12 by 12 inches.
   4. Edging Materials and Accessories: Manufacturer's standard size, to verify color selected.

1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: For landscape Installer. Include list of similar projects completed by Installer demonstrating Installer's capabilities and experience. Include project names, addresses, and year completed, and include names and addresses of owners' contact persons.

B. Product Certificates: For each type of manufactured product, from manufacturer, and complying with the following:
   1. Manufacturer's certified analysis of standard products.

2. Analysis of other materials by a recognized laboratory made according to methods established by the Association of Official Analytical Chemists, where applicable.

C. Pesticides and Herbicides: Product label and manufacturer's application instructions specific to Project.

1.7 CLOSEOUT SUBMITTALS

A. Maintenance Data: Recommended procedures to be established by Owner for maintenance of plants during a calendar year. Submit before expiration of required maintenance periods.

1.8 QUALITY ASSURANCE

A. Installer Qualifications: A qualified landscape installer whose work has resulted in successful establishment of plants.
   1. Experience: Five years' experience in landscape installation in addition to requirements in Section 01 40 00 "Quality Requirements."
   2. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when work is in progress.
   3. Pesticide Applicator: State licensed, commercial.

B. Provide quality, size, genus, species, and variety of plants indicated, complying with applicable requirements in ANSI Z60.1.

C. Measurements: Measure according to ANSI Z60.1. Do not prune to obtain required sizes.
   1. Trees and Shrubs: Measure with branches and trunks or canes in their normal position. Take height measurements from or near the top of the root flare for field-grown stock and container-grown stock. Measure main body of tree or shrub for height and spread; do not measure branches or roots tip to tip. Take caliper measurements 6 inches above the root flare for trees up to 4-inch caliper size, and 12 inches above the root flare for larger sizes.
   2. Other Plants: Measure with stems, petioles, and foliage in their normal position.

D. Plant Material Observation: Architect may observe plant material either at place of growth or at site before planting for compliance with requirements for genus, species, variety, cultivar, size, and quality. Architect may also observe trees and shrubs further for size and condition of balls and root systems, pests, disease symptoms, injuries, and latent defects and may reject unsatisfactory or defective material at any time during progress of work. Remove rejected trees or shrubs immediately from Project site.
   1. Notify Architect of sources of planting materials seven days in advance of delivery to site.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of compliance with state and Federal laws if applicable.

B. Bulk Materials:
   1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
   2. Provide erosion-control measures to prevent erosion or displacement of bulk materials; discharge of soil-bearing water runoff; and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
   3. Accompany each delivery of bulk materials with appropriate certificates.

C. Do not prune trees and shrubs before delivery. Protect bark, branches, and root systems from sun scald, drying, wind burn, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of plants during shipping and delivery. Do not drop plants during delivery and handling.

D. Handle planting stock by root ball.

E. Wrap trees and shrubs with burlap fabric over trunks, branches, stems, twigs, and foliage to protect from wind and other damage during digging, handling, and transportation.

F. Deliver plants after preparations for planting have been completed, and install immediately. If planting is delayed more than six hours after delivery, set plants and trees in their appropriate aspect (sun, filtered sun, or shade), protect from weather and mechanical damage, and keep roots moist.

1. Set balled stock on ground and cover ball with soil, peat moss, sawdust, or other acceptable material.
2. Do not remove container-grown stock from containers before time of planting.
3. Water root systems of plants stored on-site deeply and thoroughly with a fine-mist spray. Water as often as necessary to maintain root systems in a moist, but not overly wet condition.

1.10 FIELD CONDITIONS

A. Field Measurements: Verify actual grade elevations, service and utility locations, irrigation system components, and dimensions of plantings and construction contiguous with new plantings by field measurements before proceeding with planting work.

B. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions and warranty requirements.

1.11 WARRANTY

A. Special Warranty: Installer agrees to repair or replace plantings and accessories that fail in materials, workmanship, or growth within specified warranty period.

1. Failures include, but are not limited to, the following:
   a. Death and unsatisfactory growth, except for defects resulting from abuse, lack of adequate maintenance, or neglect by Owner.
   b. Structural failures including plantings falling or blowing over.
   c. Faulty performance of edgings.
   d. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
2. Warranty Periods: From date of Substantial Completion.
   a. Trees, Shrubs, Vines, and Ornamental Grasses: 12 months.
   b. Ground Covers, Biennials, Perennials, and Other Plants: 12 months.
3. Include the following remedial actions as a minimum:
   a. Immediately remove dead plants and replace unless required to plant in the succeeding planting season.
   b. Replace plants that are more than 25 percent dead or in an unhealthy condition at end of warranty period.

c. A limit of one replacement of each plant is required except for losses or replacements due to failure to comply with requirements.
d. Provide extended warranty for period equal to original warranty period, for replaced plant material.

PART 2 - PRODUCTS

2.1 PLANT MATERIAL

A. General: Furnish nursery-grown plants true to genus, species, variety, cultivar, stem form, shearing, and other features indicated in Plant List, Plant Schedule, or Plant Legend indicated on Drawings and complying with ANSI Z60.1; and with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock, densely foliated when in leaf and free of disease, pests, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.
   1. Trees with damaged, crooked, or multiple leaders; tight vertical branches where bark is squeezed between two branches or between branch and trunk ("included bark"); crossing trunks; cut-off limbs more than 3/4 inch in diameter; or with stem girdling roots are unacceptable.
   2. Collected Stock: Do not use plants harvested from the wild, from native stands, from an established landscape planting, or not grown in a nursery unless otherwise indicated.

B. Provide plants of sizes, grades, and ball or container sizes complying with ANSI Z60.1 for types and form of plants required. Plants of a larger size may be used if unable to locate size specified, with a proportionate increase in size of roots or balls.

C. Root-Ball Depth: Furnish trees and shrubs with root balls measured from top of root ball, which begins at root flare according to ANSI Z60.1. Root flare shall be visible before planting.

D. Labeling: Label at least one plant of each variety, size, and caliper with a securely attached, waterproof tag bearing legible designation of common name and full scientific name, including genus and species. Include nomenclature for hybrid, variety, or cultivar, if applicable for the plant.

E. If formal arrangements or consecutive order of plants is indicated on Drawings, select stock for uniform height and spread, and number the labels to assure symmetry in planting.

2.2 FERTILIZERS

A. Planting Tablets: Tightly compressed chip-type, long-lasting, slow-release, commercial-grade planting fertilizer in tablet form. Tablets shall break down with soil bacteria, converting nutrients into a form that can be absorbed by plant roots.
   1. Size: 21-gram tablets.
   2. Nutrient Composition: 20 percent nitrogen, 10 percent phosphorous, and 5 percent potassium, by weight plus micronutrients.

2.3 MULCHES

A. Organic Mulch: Free from deleterious materials and suitable as a top dressing of trees and shrubs, consisting of one of the following:
   1. Type: Shredded hardwood, Silver Creek Materials, or approved equal.
   2. Size Range: 3 inches maximum, 1/2 inch minimum.
   3. Color: Natural.

B. Compost Mulch: Provide Silver Creek Materials, or approved equal. Well-composted, stable, and weed-free organic matter, pH of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through a 1-inch sieve; soluble-salt content of 2 to 5 dS/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
   1. Organic Matter Content: 50 to 60 percent of dry weight.

C. Mineral Mulch: Hard, durable stone, washed free of loam, sand, clay, and other foreign substances, of the following type, size range, and color:
   1. Type: Granite chips.
   2. Size Range: 1/4 inch or less minimum.
   3. Color: Uniform tan-beige color range acceptable to Architect.

2.4 WEED-CONTROL BARRIERS

A. Mirafi Nonwoven Geotextile Filter Fabric: Polypropylene or polyester fabric, 3 oz./sq. yd. minimum, composed of fibers formed into a stable network so that fibers retain their relative position. Fabric shall be inert to biological degradation and resist naturally encountered chemicals, alkalis, and acids.

2.5 PESTICIDES

A. General: Pesticide registered and approved by the EPA, acceptable to authorities having jurisdiction, and of type recommended by manufacturer for each specific problem and as required for Project conditions and application. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction.

B. Pre-Emergent Herbicide (Selective and Nonselective): Effective for controlling the germination or growth of weeds within planted areas at the soil level directly below the mulch layer.

C. Post-Emergent Herbicide (Selective and Nonselective): Effective for controlling weed growth that has already germinated.

2.6 LANDSCAPE EDGINGS

A. Steel Edging: Standard commercial-steel edging, fabricated in sections of standard lengths, with loops stamped from or welded to face of sections to receive stakes.
   1. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
      a. Col-Met Steel.
   2. Edging Size: 10 gauge .
   3. Stakes: Tapered steel, a minimum of 12 inches long.
   4. Accessories: Standard tapered ends, corners, and splicers.
   5. Finish: Manufacturer's standard paint.
      a. Paint Color: Black.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas to receive plants, with Installer present, for compliance with requirements and conditions affecting installation and performance of the Work.
   1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
   2. Verify that plants and vehicles loaded with plants can travel to planting locations with adequate overhead clearance.
   3. Suspend planting operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
   4. Uniformly moisten excessively dry soil that is not workable or which is dusty.

B. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Architect and replace with new planting soil.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities and turf areas and existing plants from damage caused by planting operations.

B. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

C. Lay out individual tree and shrub locations and areas for multiple plantings. Stake locations, outline areas, adjust locations when requested, and obtain Architect's acceptance of layout before excavating or planting. Make minor adjustments as required.

D. Lay out plants at locations directed by Architect. Stake locations of individual trees and shrubs and outline areas for multiple plantings.

3.3 PLANTING AREA ESTABLISHMENT

A. General: Prepare planting area for soil placement and mix planting soil according to Section 32 91 13 "Soil Preparation."

B. Placing Planting Soil: Place manufactured planting soil over exposed subgrade.

C. Before planting, obtain Architect's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.

3.4 EXCAVATION FOR TREES AND SHRUBS

A. Planting Pits and Trenches: Excavate circular planting pits.
   1. Excavate planting pits with sides sloping inward at a 45-degree angle. Excavations with vertical sides are unacceptable. Trim perimeter of bottom leaving center area of bottom raised slightly to support root ball and assist in drainage away from center. Do not further disturb base. Ensure that root ball will sit on undisturbed base soil to prevent settling. Scarify sides of planting pit smeared or smoothed during excavation.
   2. Excavate approximately three times as wide as ball diameter for balled and burlapped and container-grown stock.

3. Excavate at least 12 inches wider than root spread and deep enough to accommodate vertical roots for bare-root stock.
4. Do not excavate deeper than depth of the root ball, measured from the root flare to the bottom of the root ball.
5. If area under the plant was initially dug too deep, add soil to raise it to the correct level and thoroughly tamp the added soil to prevent settling.
6. Maintain angles of repose of adjacent materials to ensure stability. Do not excavate subgrades of adjacent paving, structures, hardscapes, or other new or existing improvements.
7. Maintain supervision of excavations during working hours.
8. Keep excavations covered or otherwise protected when unattended by Installer's personnel.

B. Backfill Soil: Subsoil and topsoil removed from excavations may be used as backfill soil unless otherwise indicated.

C. Obstructions: Notify Architect if unexpected rock or obstructions detrimental to trees or shrubs are encountered in excavations.

D. Drainage: Notify Architect if subsoil conditions evidence unexpected water seepage or retention in tree or shrub planting pits.

3.5 TREE, SHRUB, AND VINE PLANTING

A. Inspection: At time of planting, verify that root flare is visible at top of root ball according to ANSI Z60.1. If root flare is not visible, remove soil in a level manner from the root ball to where the top-most root emerges from the trunk. After soil removal to expose the root flare, verify that root ball still meets size requirements.

B. Roots: Remove stem girdling roots and kinked roots. Remove injured roots by cutting cleanly; do not break.

C. Balled and Burlapped Stock: Set each plant plumb and in center of planting pit or trench with root flare 2 inches above adjacent finish grades.
1. Backfill: Planting soil
2. After placing some backfill around root ball to stabilize plant, carefully cut and remove burlap, rope, and wire baskets from tops of root balls and from sides, but do not remove from under root balls. Remove pallets, if any, before setting. Do not use planting stock if root ball is cracked or broken before or during planting operation.
3. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
4. Place planting tablets equally distributed around each planting pit when pit is approximately one-half filled. Place tablets beside the root ball about 1 inch from root tips; do not place tablets in bottom of the hole.
   a. Quantity: As indicated on manufacturer's label.
5. Continue backfilling process. Water again after placing and tamping final layer of soil.

D. Container-Grown Stock: Set each plant plumb and in center of planting pit or trench with root flare 2 inches above adjacent finish grades.
1. Backfill: Planting soil Planting Bed Mix.
2. Carefully remove root ball from container without damaging root ball or plant.
3. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets.

4. Place planting tablets equally distributed around each planting pit when pit is approximately one-half filled. Place tablets beside the root ball about 1 inch from root tips; do not place tablets in bottom of the hole.
   a. Quantity: As indicated on manufacturer's label.
5. Continue backfilling process. Water again after placing and tamping final layer of soil.

3.6 TREE, SHRUB, AND VINE PRUNING

A. Remove only dead, dying, or broken branches. Do not prune for shape.
B. Do not apply pruning paint to wounds.

3.7 GROUND COVER AND PLANT PLANTING

A. Set out and space ground cover and plants other than trees, shrubs, and vines as indicated on Drawings in even rows with triangular spacing.
B. Use planting soil for planting beds for backfill.
C. Dig holes large enough to allow spreading of roots.
D. For rooted cutting plants supplied in flats, plant each in a manner that minimally disturbs the root system but to a depth not less than two nodes.
E. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water.
F. Water thoroughly after planting, taking care not to cover plant crowns with wet soil.
G. Protect plants from hot sun and wind; remove protection if plants show evidence of recovery from transplanting shock.

3.8 PLANTING AREA MULCHING

A. Install weed-control barriers before mulching according to manufacturer's written instructions. Completely cover area to be mulched, overlapping edges a minimum of 12 inches and secure seams with galvanized pins.
B. Mulch backfilled surfaces of planting areas and other areas indicated.
   1. Trees and Treelike Shrubs in Turf Areas: Apply organic mulch ring of 3-inch average thickness, with 36-inch radius around trunks or stems. Do not place mulch within 3 inches of trunks or stems.
   2. Organic Mulch in Planting Areas: Apply 3-inch average thickness of organic mulch over whole surface of planting area, and finish level with adjacent finish grades. Do not place mulch within 3 inches of trunks or stems.
   3. Mineral Mulch in Planting Areas: Apply 3-inchaverage thickness of mineral mulch, and finish level with adjacent finish grades. Do not place mulch within 3 inches of trunks or stems.

3.9 EDGING INSTALLATION

A. Steel Edging: Install steel edging where indicated according to manufacturer's written instructions. Anchor with steel stakes spaced approximately 30 inches apart, driven below top elevation of edging.
B. Mow-Strip Installation:
   1. Excavate for mow strip as indicated on Drawings.
   2. Compact subgrade uniformly beneath mow strip.
   3. Apply nonselective, pre-emergent herbicide that inhibits growth of grass and weeds.

4. Install steel edging, delineating the edge of mow strip.
5. Install weed-control barrier before mulching, covering area of mow strip, and overlapping and pinning edges of barrier at least 6 inches and according to manufacturer's written instructions.
6. Place indicated thickness of organic or mineral mulch, fully covering weed barrier.
7. Rake mulch to a uniform surface level with adjacent finish grades.

3.10 PLANT MAINTENANCE

A. Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, mulching, restoring planting saucers, adjusting and repairing tree-stabilization devices, resetting to proper grades or vertical position, and performing other operations as required to establish healthy, viable plantings.
B. Fill in, as necessary, soil subsidence that may occur because of settling or other processes. Replace mulch materials damaged or lost in areas of subsidence.
C. Apply treatments as required to keep plant materials, planted areas, and soils free of pests and pathogens or disease. Use integrated pest management practices when possible to minimize use of pesticides and reduce hazards. Treatments include physical controls such as hosing off foliage, mechanical controls such as traps, and biological control agents.

3.11 PESTICIDE APPLICATION

A. Apply pesticides and other chemical products and biological control agents according to authorities having jurisdiction and manufacturer's written recommendations. Coordinate applications with Owner's operations and others in proximity to the Work. Notify Owner before each application is performed.
B. Pre-Emergent Herbicides (Selective and Nonselective): Apply to tree, shrub, and ground-cover areas according to manufacturer's written recommendations. Do not apply to seeded areas.
C. Post-Emergent Herbicides (Selective and Nonselective): Apply only as necessary to treat already-germinated weeds and according to manufacturer's written recommendations.

3.12 REPAIR AND REPLACEMENT

A. General: Repair or replace existing or new trees and other plants that are damaged by construction operations, in a manner approved by Architect.
   1. Submit details of proposed pruning and repairs.
   2. Perform repairs of damaged trunks, branches, and roots within 24 hours, if approved.
   3. Replace trees and other plants that cannot be repaired and restored to full-growth status, as determined by Architect.
B. Remove and replace trees that are more than 25 percent dead or in an unhealthy condition before the end of the corrections period or are damaged during construction operations that Architect determines are incapable of restoring to normal growth pattern.
   1. Provide new trees of same size as those being replaced for each tree of 4 inches or smaller in caliper size.
   2. Species of Replacement Trees: Species selected by Architect.

3.13 CLEANING AND PROTECTION

A. During planting, keep adjacent paving and construction clean and work area in an orderly condition. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
B. Remove surplus soil and waste material including excess subsoil, unsuitable soil, trash, and debris and legally dispose of them off Owner's property.
C. Protect plants from damage due to landscape operations and operations of other contractors and trades. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged plantings.
D. After installation and before Substantial Completion, remove nursery tags, nursery stakes, tie tape, labels, wire, burlap, and other debris from plant material, planting areas, and Project site.
E. At time of Substantial Completion, verify that tree-watering devices are in good working order and leave them in place. Replace improperly functioning devices.

3.14 MAINTENANCE SERVICE

A. Maintenance Service for Trees and Shrubs: Provide maintenance by skilled employees of landscape Installer. Maintain as required in "Plant Maintenance" Article. Begin maintenance immediately after plants are installed and continue until plantings are acceptably healthy and well established, but for not less than maintenance period below:
   1. Maintenance Period: 12 months from date of Substantial Completion.
B. Maintenance Service for Ground Cover and Other Plants: Provide maintenance by skilled employees of landscape Installer. Maintain as required in "Plant Maintenance" Article. Begin maintenance immediately after plants are installed and continue until plantings are acceptably healthy and well established, but for not less than maintenance period below:
   1. Maintenance Period: Six months from date of Substantial Completion.

END OF SECTION

2021-22-B Addendum 1

Hays Park

Issue Date: 1/12/2021
Questions Deadline: 1/22/2021 12:00 PM (CT)
Response Deadline: 1/28/2021 02:00 PM (CT)

Contact Information

Contact: January Cook Purchasing Manager
Address: Purchasing Office
Town Hall
3rd Floor
250 W. First St.
P.O. Box 307
Prosper, TX 75078
Phone: (972) 569-1018
Email: jcook@prospertx.gov

Event Information

Number: 2021-22-B Addendum 1
Title: Hays Park
Type: Competitive Sealed Proposals
Issue Date: 1/12/2021
Question Deadline: 1/22/2021 12:00 PM (CT)
Response Deadline: 1/28/2021 02:00 PM (CT)
Notes: **ENGINEER'S ESTIMATE: $354,345**

The Town of Prosper is accepting competitive sealed proposals for CSP NO. 2021-22-B HAYS PARK. Proposals will be accepted online through IonWave.net, the Town's e-procurement system, or in hard copy in the Purchasing Office located in the 3rd Floor Finance Suite of Town Hall, 250 W. First St., Prosper, Texas 75078 until 2:00 P.M. on Thursday, January 28, 2021. Any proposals received after this time will not be accepted and will be returned unopened. The proposal opening will be held online on Thursday, January 28, 2021 @ 2:30 P.M. To participate in the proposal opening, please use the following:

Join Zoom Meeting: https://us02web.zoom.us/j/82680421161
Meeting ID: 826 8042 1161
Dial-in any of these numbers: +1 929 436 2866, +1 312 626 6799, +1 669 900 6833,
+1 253 215 8782, +1 301 715 8592 or +1 346 248 7799

The Project consists of furnishing all labor, equipment and materials (except as otherwise specified), and performing all work necessary for the construction of Hays Park Improvements. Hays Park is a two acres park site which will include a pavilion, playground, trail, grading, landscaping and irrigation improvements.

Each proposal submitted shall be accompanied by a cashier's check in the amount of 5% of the maximum amount proposed, payable without recourse to the Town of Prosper, or a Bid Bond in the same amount from a reliable surety company as a guarantee that, if awarded the contract, the successful Contractor will execute a Construction Agreement with the Town, including all required bonds and other documents.

The successful Contractor shall furnish a Performance Bond in the amount of 115% of the contract amount, and a Payment Bond in the amount of 100% of the contract amount, as well as evidence of all required insurance coverage within ten (10) calendar days of notice of award. The successful Contractor shall also furnish a Maintenance Bond in the amount of 100% of the contract amount covering defects of material and workmanship for two calendar years following the Town's approval and acceptance of the construction. An approved surety company, licensed in the State of Texas, shall issue all bonds in accordance with Texas law.

Copies of Plans, Specifications, and Contract Documents may be examined at Town of Prosper Parks and Recreation Department, 409 E. First St., Prosper, Texas, 75078, Phone: (972) 569-1160 without charge. These documents may be acquired from that office for the non-refundable purchase price of $150 per set, payable to the Town of Prosper. Copies of Plans, Specifications, and Contract Documents

also be downloaded free of charge from Current Bidding Opportunities, at the following link: http://www.prospertx.gov/business/bid-opportunities/.

Questions and requests for clarifications in regards to this proposal should be submitted in writing through IonWave.net, the Town's e-procurement system, or emailed directly to January Cook, CPPO, CPPB, Purchasing Manager, at jcook@prospertx.gov. The deadline for receipt of questions and requests for clarifications is 12:00 P.M. on Friday, January 22, 2021. After that day and time, no further questions or requests for clarifications will be accepted or answered by the Engineer or Town.

Please complete and submit the Planholder Registration Form to be placed on the official Planholder Listing.

Ship To Information

Contact: January Cook, Purchasing Manager
Address: Purchasing Office
Town Hall
3rd Floor
250 W. First St.
P.O. Box 307
Prosper, TX 75078
Phone: (972) 569-1018
Email: january_cook@prospertx.gov

Billing Information

Contact: Accounts Payable
Address: Finance
Town Hall
3rd Floor
250 W. First St.
P.O. Box 307
Prosper, TX 75078
Phone: (972) 569-1017
Email: ap@prospertx.gov

Bid Activities

Online Public Proposal Opening 1/28/2021 2:30:00 PM (CT)

The proposal opening will be held online on Thursday, January 28, 2021 @ 2:30 P.M. To participate in the proposal opening, please use the following:

Join Zoom Meeting: https://us02web.zoom.us/j/82680421161
Meeting ID: 826 8042 1161

Dial-in any of these numbers: +1 929 436 2866, +1 312 626 6799, +1 669 900 6833, +1 253 215 8782, +1 301 715 8592 or +1 346 248 7799

Bid Attachments

CSP No. 2021-22-B Construction Plans.pdf Download

CSP No. 2021-22-B Construction Plans

CSP No. 2021-22-B Contract Documents and Specifications.pdf Download

CSP No. 2021-22-B Contract Documents and Specifications

Standard Terms and Conditions for Procurements Construction V 4-24-20.pdf Download

Standard Terms and Conditions for Procurements Construction

GENERAL CONDITIONS CIP 2-21-2020.pdf Download

GENERAL CONDITIONS CIP 2-21-2020

Insurance Requirements for Construction Services R7-25-19.pdf Download

Insurance Requirements for Construction Services

CSP No. 2021-22-B Bid Bond.pdf Download

CSP No. 2021-22-B Bid Bond

CIP Completed Projects and References Worksheet 5-7-20 - Fillable.pdf Download

CIP Completed Projects and References Worksheet

Out of State Contractor Compliance Form.pdf Download

Out of State Contractor Compliance Form

Conflict of Interest Questionnaire - fillable.pdf Download

Conflict of Interest Questionnaire

CSP No. 2021-22-B Planholder Registration Form.pdf Download

CSP No. 2021-22-B Planholder Registration Form

CSP No. 2021-22-B Addendum No. 1.pdf Download

CSP No. 2021-22-B Addendum No. 1.pdf

Requested Attachments

Bid Bond
(Attachment required)

Attachment A1
(Attachment required)

Outline contractor and subcontractor experience with similar projects

Attachment A2
(Attachment required)

Submit resumes for key personnel that will be assigned to the project (executive and management team, as well as on-site project manager)

Attachment A3
(Attachment required)

Complete and submit the Completed Projects and References Worksheet

Attachment A4
(Attachment required)

Submit a copy of an actual project schedule used during construction for same or similar project (not specific to this project)

Conflict of Interest Questionnaire

Only submit if applicable

Out of State Contractor Compliance Form

Only submit if applicable

Bid Attributes

1 Bid Proposal Condition No. 1

The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an agreement with Owner in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the Contract Price and within the Contract Time indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.

☐ I Agree

(Required: Check if applicable)

2 Bid Proposal Condition No. 2

Bidder accepts all of the terms and conditions of the Advertisement or Invitation to Bid and Instructions to Bidders, including without limitation those terms and conditions dealing with the disposition of Bid guaranty. This Bid will remain subject to acceptance for 90 calendar days after the day of opening Bids. Bidder will sign and submit the Agreement with the Bonds and other documents required by the Contract Documents within ten (10) calendar days after the date of Owner's Notice of Award.

☐ I Agree

(Required: Check if applicable)

3 Bid Proposal Condition No. 3

The right is reserved, as the interest of the Owner may require, to reject any and all Bids and to waive any informality in the Bids received.

☐ I Agree

(Required: Check if applicable)

4 Bid Proposal Condition No. 4

Bidder has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality, and all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance or furnishing of the Work.

☐ I Agree

(Required: Check if applicable)

5 Bid Proposal Condition No. 5

Bidder has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) all such examinations, investigations, explorations, tests and studies that pertain to the subsurface or physical conditions at the site or which otherwise may affect the cost, progress, performance or furnishing of the Work as Bidder considers necessary for the performance or furnishing of the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, and no additional examinations, investigations, explorations, tests, reports or similar information or data are or will be required by Bidder for such purposes.

☐ I Agree

(Required: Check if applicable)

6 Bid Proposal Condition No. 6

Bidder has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities at or contiguous to the site and assumes responsibility for the accurate location of said Underground Facilities. No additional examinations, investigations, explorations, tests, reports or similar information or data in respect of said Underground Facilities are or will be required by the Bidder in order to perform and furnish the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents.

☐ I Agree

(Required: Check if applicable)

7 **Bid Proposal Condition No. 7**

Bidder has correlated the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.

☐ I Agree

(Required: Check if applicable)

8 **Bid Proposal Condition No. 8**

Bidder has given Engineer written notice of all conflicts, errors or discrepancies that it has discovered, if any, in the Contract Documents and the written resolution thereof by Engineer is acceptable to Bidder.

☐ I Agree

(Required: Check if applicable)

9 **Bid Proposal Condition No. 9**

This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm or corporation to refrain from submitting a Bid; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over Owner.

☐ I Agree

(Required: Check if applicable)

10 **Bid Proposal Condition No. 10**

Bidder will substantially complete the Work for the price(s) shown in the schedule of bid items and within the number of calendar days proposed, based on date of Notice to Proceed.

☐ I Agree

(Required: Check if applicable)

11 **Bid Proposal Condition No. 11**

Bidder hereby agrees to commence work within ten (10) days after the date written notice to proceed shall have been given to him, and to substantially complete the work on which he has bid within the number of calendar days proposed as part of this Proposal. Within 30 additional calendar days after Substantial Completion, all outstanding issues shall be addressed and ready for final payment. All such time restrictions are subject to such extensions of time as are provided by the General Provisions and Special Conditions.

☐ I Agree

(Required: Check if applicable)

12 **Bid Proposal Condition No. 12**

Bidder agrees that the implementation of the Owner's right to delete any portion of the improvements shall not be considered as waiving or invalidating any conditions or provisions of the contract or bonds. Bidder shall perform the Work as altered and no allowances shall be made for anticipated profits.

☐ I Agree

(Required: Check if applicable)

13 **Bid Proposal Condition No. 13**

Since the Work on this Project is being performed for a governmental body and function, the Owner will issue to the Contractor a certificate of exemption for payment for the State Sales TAX on materials incorporated into this Project if requested.

☐ I Agree

(Required: Check if applicable)

14 **Bid Proposal Condition No. 14**

In the event of the award of a contract, vendor will furnish a Performance Bond for 115% of the contract amount, and a Payment Bond for 100% of the contract amount, to secure proper compliance with the terms and provisions of the contract with sureties offered by ***surety company named in the space provided,*** to insure and guarantee the work until final completion and acceptance, and to guarantee payment of all lawful claims for labor performed and materials furnished in the fulfillment of the contract. **In addition, the undersigned will furnish a Maintenance Bond for 100% of the contract amount covering defects of material and workmanship for two calendar years following the Owner's approval and acceptance of the construction.**

☐ I Agree

(Required: Check if applicable)

15 **Bid Proposal Condition No. 15**

The work, proposed to be done, shall be accepted when fully completed in accordance with the plans and specifications, to the satisfaction of the Engineer and the Owner.

☐ I Agree

(Required: Check if applicable)

16 **Bid Proposal Condition No. 16**

The vendor submitting this Bid certifies that the bid prices contained in this Bid have been carefully checked and are submitted as correct and final.

☐ I Agree

(Required: Check if applicable)

17 **Base Bid**

Cost of Materials

$

(Required: Numbers only)

18 **Base Bid**

Cost of Labor, Profit, etc.

$

(Required: Numbers only)

19 **Addendum No. 1**

Bidder has examined copies of all the Contract Documents and of the following Addenda (if issued)

☐ Acknowledged

(Optional: Check if applicable)

20 **Addendum No. 2**

Bidder has examined copies of all the Contract Documents and of the following Addenda (if issued)

☐ Acknowledged

(Optional: Check if applicable)

21 **Addendum No. 3**

Bidder has examined copies of all the Contract Documents and of the following Addenda (if issued)

☐ Acknowledged

(Optional: Check if applicable)

22 **Addendum No. 4**

Bidder has examined copies of all the Contract Documents and of the following Addenda (if issued)

☐ Acknowledged

(Optional: Check if applicable)

23 **Addendum No. 5**

Bidder has examined copies of all the Contract Documents and of the following Addenda (if issued)

☐ Acknowledged

(Optional: Check if applicable)

24 **Subcontractor 1 - Name**

Each Bidder shall include a list of proposed subcontractors, the type of work to be completed by each such subcontractor and the approximate percentage of contract labor to be completed by each subcontractor. If complete listing of subcontracts totals more than five, please attach such additional pages as may be required. Owner reserves the right to accept or reject any subcontracts and/or amount subcontracted that it deems to be objectionable.

(Optional: Maximum 1000 characters allowed)

25 **Subcontractor 1 - Type of Work**

(Optional: Maximum 1000 characters allowed)

26 **Subcontractor 1 - % of Work**

%

(Optional)

27 **Subcontractor 2 - Name**

(Optional: Maximum 1000 characters allowed)

28 **Subcontractor 2 - Type of Work**

(Optional: Maximum 1000 characters allowed)

29 **Subcontractor 2 - % of Work**

%

(Optional)

30 **Subcontractor 3 - Name**

(Optional: Maximum 1000 characters allowed)

31 Subcontractor 3 - Type of Work

(Optional: Maximum 1000 characters allowed)

32 Subcontractor 3 - % of Work

%

(Optional)

33 Subcontractor 4 - Name

(Optional: Maximum 1000 characters allowed)

34 Subcontractor 4 - Type of Work

(Optional: Maximum 1000 characters allowed)

35 Subcontractor 4 - % of Work

%

(Optional)

36 Subcontractor 5 - Name

(Optional: Maximum 1000 characters allowed)

37 Subcontractor 5 - Type of Work

(Optional: Maximum 1000 characters allowed)

38 Subcontractor 5 - % of Work

%

(Optional)

39 **Supplier 1 - Name**

Attachment 2

Each Bidder shall include a list of proposed suppliers of major materials and equipment to be furnished and installed in connection with this Bid. If complete listing of suppliers totals more than five, please attach such additional pages as may be required.

(Optional: Maximum 1000 characters allowed)

40 **Supplier 1 - Type of Material/Equipment**

(Optional: Maximum 1000 characters allowed)

41 **Supplier 2 - Name**

(Optional: Maximum 1000 characters allowed)

42 **Supplier 2 - Type of Material/Equipment**

(Optional: Maximum 1000 characters allowed)

43 **Supplier 3 - Name**

(Optional: Maximum 1000 characters allowed)

44 **Supplier 3 - Type of Material/Equipment**

(Optional: Maximum 1000 characters allowed)

45 **Supplier 4 - Name**

(Optional: Maximum 1000 characters allowed)

46 Supplier 4 - Type of Material/Equipment

(Optional: Maximum 1000 characters allowed)

47 Supplier 5 - Name

(Optional: Maximum 1000 characters allowed)

48 Supplier 5 - Type of Material/Equipment

(Optional: Maximum 1000 characters allowed)

49 Project Timeline: Substantial Completion

Provide total number of calendar days to reach **substantial completion** of all construction (this should be the total number of days to reach substantial completion from notice to proceed date)

(Required: Numbers only)

50 Project Timeline: Final Completion

Provide total number of calendar days to reach **final completion** of all construction (this should be the total number of days to reach final completion from the notice to proceed date)

(Required: Numbers only)

Bid Lines

1 Package Header

BASE PROPOSAL FOR HAYS PARK

Quantity: 1 Total: $

Supplier Notes:

☐ No bid

☐ Additional notes *(Attach separate sheet)*

Package Items

1.1 CLEARING, GRUBBING AND DEMOLIITION
(Response required)

Quantity: 2 UOM: AC Unit Price: $ Total: $

Supplier Notes:

☐ No bid

☐ Additional notes *(Attach separate sheet)*

1.2 TREE PROTECTION
(Response required)

Quantity: 1 UOM: LS Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.3 EROSION CONTROL
(Response required)

Quantity: 1 UOM: LS Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.4 EARTHWORK - EXCAVATION
(Response required)

Quantity: 1 UOM: LS Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.5 EARTHWORK - EMBANKMENT
(Response required)

Quantity: 1 UOM: LS Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.6 5 INCH CONCRETE PEDESTRIAN AND PLAZA PAVING
(Response required)

Quantity: 483 UOM: SY Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.7 SAND BLASTING OF CONCRETE PAVING
(Response required)

Quantity: 895 UOM: SF Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.8 12 IN WIDE CONCRETE LANDSCAPE EDGE
(Response required)

Quantity: 164 UOM: LF Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.9 DECOMPOSED GRANITE TRAIL 4 IN THK WITH WEED BARRIER
(Response required)

Quantity: 631 UOM: SY Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.10 DECOMPOSED GRANITE STABILIZER
(Response required)

Quantity: 631 UOM: SY Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.11 PLAYGROUND EQUIPMENT - COMPLETE AND INPLACE
(Response required)

Quantity: 1 UOM: LS Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.12 PLAYGROUND EDGE
(Response required)

Quantity: 200 UOM: LF Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.13 ACCESSIBLE RAMP AT PLAYGROUND
(Response required)

Quantity: 1 UOM: LS Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.14 ENGINEERED WOOD FIBER PLAYGROUND SURFACE
(Response required)

Quantity: 338 UOM: SY Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.15 4 IN DIA PERF ADS PLAYGROUND DRAIN - TRENCH, GRAVEL AND GEOTEXTILE FABRIC WITH CLEAN OUT
(Response required)

Quantity: 41 UOM: LF Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.16 4 IN DIA SOLID ADS PIPE FROM PLAYGROUND WITH CLEAN OUT
(Response required)

Quantity: 38 UOM: LF Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.17 2FTx2FTx4IN OUTFALL PAD WITH MITERED PIPE
(Response required)

Quantity: 1 UOM: EA Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.18 6FT CUT LIMESTONE BENCH COMPLETE AND IN PLACE
(Response required)

Quantity: 4 UOM: EA Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.19 PARK BENCH COMLETE AND IN PLACE - 6FT MODEL NUMBER 143-60PL WITH CEDAR RECYLED PLASTIC SLATS BY DUMOR, INC OR APPROVED EQUAL
(Response required)

Quantity: 3 UOM: EA Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.20 TRASH RECEPTABLE COMPLETE AND IN PLACE - MODEL NUMBER 157-22-25BT BY DUMOR OR APPROVED EQUAL
(Response required)

Quantity: 5 UOM: EA Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.21 SHADE STRUCTURE COMPLETE AND IN PLACE - 28FT OREGON 2-TIER MODEL BY CLASSIC RECREATION OR APPROVED EQUAL
(Response required)

Quantity: 1 UOM: LS Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.22 8FT PICNIC TABLE W/ BENCHES COMPLETE AND IN PLACE - 100 SERIES PL WITH CEDAR RECYCLED PLASTIC SLATS SURFACE MOUNT BY DUMOR, INC OR APPROVD EQUAL
(Response required)

Quantity: 1 UOM: EA Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.23 8FT ADA PICNIC TABLE W/ BENCHES COMPLETE AND IN PLACE - 100-68-1 PL WITH CEDAR RECYCLED PLASTIC SLATS SURFACE MOUNT BY DUMOR, INC OR APPROVD EQUAL
(Response required)

Quantity: 1 UOM: EA Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.24 PARK SIGN COMPLETE AND IN PLACE
(Response required)

Quantity: 1 UOM: EA Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.25 4FT TALL CEDAR SPLIT RAIL FENCE COMPLETE AND IN PLACE
(Response required)

Quantity: 104 UOM: LF Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.26 3IN CALIPER REDBUD COMPLETE AND IN PLACE – TREES PROVIDED BY TOWN - COST TO INCLUDE SPADE, WRAP, TRANSPORT FROM TOWN FARM AND PLANT ON SITE
(Response required)

Quantity: 5 UOM: EA Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.27 3IN CALIPER BALD CYPRESS COMPLETE AND IN PLACE - TREES PROVIDED BY TOWN - COST TO INCLUDE SPADE, WRAP, TRANSPORT FROM TOWN FARM AND PLANT ON SITE
(Response required)

Quantity: 18 UOM: EA Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.28 3IN CALIPER CEDAR ELM COMPLETE AND IN PLACE - TREES PROVIDED BY TOWN - COST TO INCLUDE SPADE, WRAP, TRANSPORT FROM TOWN FARM AND PLANT ON SITE
(Response required)

Quantity: 24 UOM: EA Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.29 5 GAL BLONDE AMBITION BLUE GRAMMA COMPLETE AND IN PLACE
(Response required)

Quantity: 18 UOM: EA Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.30 5 GAL TEXAS SAGE COMPLETE AND IN PLACE
(Response required)

Quantity: 9 UOM: EA Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.31 5 GAL DWARF WAX MYRTLE COMPLETE AND IN PLACE
(Response required)

Quantity: 32 UOM: EA Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.32 5 GAL AUTUMN SAGE COMPLETE AND IN PLACE
(Response required)

Quantity: 45 UOM: EA Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.33 HYDROSEED BERMUDA GRASS - SAHARA II COMPLETE AND IN PLACE
(Response required)

Quantity: 62673 UOM: SF Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.34 SOD - TIF 419 COMPLETE AND IN PLACE
(Response required)

Quantity: 3893 UOM: SF Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.35 WILDFLOWER SEED MIX - BLACKLAND PRARIE COMPLETE AND IN PLACE
(Response required)

Quantity: 2923 UOM: SF Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.36 IRRIGATION SYSTEM, POWER AND METER COMPLETE AND IN PLACE
(Response required)

Quantity: 1 UOM: LS Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

1.37 MOBILIZATION
(Response required)

Quantity: 1 UOM: LS Unit Price: $ Total: $

Supplier Notes:

☐ No bid
☐ Additional notes *(Attach separate sheet)*

2 Package Header

ALTERNATES

Quantity: 1 Total: $

Supplier Notes: _____

_____

☐ No bid

☐ Additional notes *(Attach separate sheet)*

Package Items

2.1 STONE WRAPPED SHELTER COLUMNS COMPLETE AND IN PLACE
(Response required)

Quantity: 1 UOM: LS Unit Price: $ Total: $

Supplier Notes: _____

_____

☐ No bid

☐ Additional notes *(Attach separate sheet)*

2.2 4 IN IMPORTED TOPSOIL IN LAWN AREAS - TEXAS TURF PRODUCTS - TURF BLEND OR APPROVED EQUAL
(Response required)

Quantity: 7400 UOM: SY Unit Price: $ Total: $

Supplier Notes: _____

_____

☐ No bid

☐ Additional notes *(Attach separate sheet)*

Supplier Information

Company Name:

Contact Name:

Address:

Phone:

Fax:

Email:

Supplier Notes

By submitting your response, you certify that you are authorized to represent and bind your company.

Print Name

Signature

2021-22-B Addendum 1
Ratliff Hardscape, Ltd
Supplier Response

Event Information

Number: 2021-22-B Addendum 1
Title: Hays Park
Type: Competitive Sealed Proposals
Issue Date: 1/12/2021
Deadline: 1/28/2021 02:00 PM (CT)
Notes: **ENGINEER'S ESTIMATE: $354,345**

The Town of Prosper is accepting competitive sealed proposals for CSP NO. 2021-22-B HAYS PARK. Proposals will be accepted online through IonWave.net, the Town's e-procurement system, or in hard copy in the Purchasing Office located in the 3rd Floor Finance Suite of Town Hall, 250 W. First St., Prosper, Texas 75078 until 2:00 P.M. on Thursday, January 28, 2021. Any proposals received after this time will not be accepted and will be returned unopened. The proposal opening will be held online on Thursday, January 28, 2021 @ 2:30 P.M. To participate in the proposal opening, please use the following:

Join Zoom Meeting: https://us02web.zoom.us/j/82680421161
Meeting ID: 826 8042 1161
Dial-in any of these numbers: +1 929 436 2866, +1 312 626 6799, +1 669 900 6833,
+1 253 215 8782, +1 301 715 8592 or +1 346 248 7799

The Project consists of furnishing all labor, equipment and materials (except as otherwise specified), and performing all work necessary for

the construction of Hays Park Improvements. Hays Park is a two acres park site which will include a pavilion, playground, trail, grading, landscaping and irrigation improvements.

Each proposal submitted shall be accompanied by a cashier's check in the amount of 5% of the maximum amount proposed, payable without recourse to the Town of Prosper, or a Bid Bond in the same amount from a reliable surety company as a guarantee that, if awarded the contract, the successful Contractor will execute a Construction Agreement with the Town, including all required bonds and other documents.

The successful Contractor shall furnish a Performance Bond in the amount of 115% of the contract amount, and a Payment Bond in the amount of 100% of the contract amount, as well as evidence of all required insurance coverage within ten (10) calendar days of notice of award. The successful Contractor shall also furnish a Maintenance Bond in the amount of 100% of the contract amount covering defects of material and workmanship for two calendar years following the Town's approval and acceptance of the construction. An approved surety company, licensed in the State of Texas, shall issue all bonds in accordance with Texas law.

Copies of Plans, Specifications, and Contract Documents may be examined at Town of Prosper Parks and Recreation Department, 409 E. First St., Prosper, Texas, 75078, Phone: (972) 569-1160 without charge. These documents may be acquired from that office for the non-refundable purchase price of $150 per set, payable to the Town of Prosper. Copies of Plans, Specifications, and Contract Documents may also be downloaded free of charge from Current Bidding Opportunities, at the following link: http://www.prospertx.gov/business/bid-opportunities/.

Questions and requests for clarifications in regards to this proposal should be submitted in writing through IonWave.net, the Town’s e-procurement system, or emailed directly to January Cook, CPPO, CPPB, Purchasing Manager, at jcook@prospertx.gov. The deadline for receipt of questions and requests for clarifications is 12:00 P.M. on Friday, January 22, 2021. After that day and time, no further questions or requests for clarifications will be accepted or answered by the Engineer or Town.

Please complete and submit the Planholder Registration Form to be placed on the official Planholder Listing.

Contact Information

Contact: January Cook Purchasing Manager
Address: Purchasing Office

Town Hall
3rd Floor
250 W. First St.
P.O. Box 307
Prosper, TX 75078
Phone: (972) 569-1018
Email: jcook@prospertx.gov

Ratliff Hardscape, Ltd Information

Contact: Lisa McBurrows
Address: 1740 MIDWAY RD
Lewisville
Lewisville, TX 75056
Phone: (972) 436-2508
Email: lisa@ratliffhardscape.com

By submitting your response, you certify that you are authorized to represent and bind your company.

Lisa McBurrows
Signature

lisa@ratliffhardscape.com
Email

Submitted at 1/28/2021 11:54:51 AM

Requested Attachments

Bid Bond — Hays Park Improvements BID BOND 2021-01.27.pdf

Attachment A1 — Hays Park Bid Sub-Contractor List.pdf

Outline contractor and subcontractor experience with similar projects

Attachment A2 — B_McWhorter_Resume (A2).doc

Submit resumes for key personnel that will be assigned to the project (executive and management team, as well as on-site project manager)

Attachment A3 — Statement of Qualification.pdf

Complete and submit the Completed Projects and References Worksheet

Attachment A4 — Hubbard Drive Trail - Project Schedule (A4).pdf

Submit a copy of an actual project schedule used during construction for same or similar project (not specific to this project)

Conflict of Interest Questionnaire — Conflict of Intererst 2021-01.28.pdf

Only submit if applicable

Out of State Contractor Compliance Form — Contractor Compliance 2021-01.28.pdf

Only submit if applicable

Response Attachments

Hays Park Bid Sub-Contractor List.pdf

BID PROPOSAL

Bid Attributes

1	**Bid Proposal Condition No. 1** The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an agreement with Owner in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the Contract Price and within the Contract Time indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents. I Agree

2 Bid Proposal Condition No. 2

Bidder accepts all of the terms and conditions of the Advertisement or Invitation to Bid and Instructions to Bidders, including without limitation those terms and conditions dealing with the disposition of Bid guaranty. This Bid will remain subject to acceptance for 90 calendar days after the day of opening Bids. Bidder will sign and submit the Agreement with the Bonds and other documents required by the Contract Documents within ten (10) calendar days after the date of Owner's Notice of Award.

I Agree

3 Bid Proposal Condition No. 3

The right is reserved, as the interest of the Owner may require, to reject any and all Bids and to waive any informality in the Bids received.

I Agree

4 Bid Proposal Condition No. 4

Bidder has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality, and all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance or furnishing of the Work.

I Agree

5 Bid Proposal Condition No. 5

Bidder has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) all such examinations, investigations, explorations, tests and studies that pertain to the subsurface or physical conditions at the site or which otherwise may affect the cost, progress, performance or furnishing of the Work as Bidder considers necessary for the performance or furnishing of the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, and no additional examinations, investigations, explorations, tests, reports or similar information or data are or will be required by Bidder for such purposes.

I Agree

6 Bid Proposal Condition No. 6

Bidder has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities at or contiguous to the site and assumes responsibility for the accurate location of said Underground Facilities. No additional examinations, investigations, explorations, tests, reports or similar information or data in respect of said Underground Facilities are or will be required by the Bidder in order to perform and furnish the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents.

I Agree

7 Bid Proposal Condition No. 7

Bidder has correlated the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.

I Agree

8 Bid Proposal Condition No. 8

Bidder has given Engineer written notice of all conflicts, errors or discrepancies that it has discovered, if any, in the Contract Documents and the written resolution thereof by Engineer is acceptable to Bidder.

I Agree

9	**Bid Proposal Condition No. 9** This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm or corporation to refrain from submitting a Bid; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over Owner. I Agree
10	**Bid Proposal Condition No. 10** Bidder will substantially complete the Work for the price(s) shown in the schedule of bid items and within the number of calendar days proposed, based on date of Notice to Proceed. I Agree
11	**Bid Proposal Condition No. 11** Bidder hereby agrees to commence work within ten (10) days after the date written notice to proceed shall have been given to him, and to substantially complete the work on which he has bid within the number of calendar days proposed as part of this Proposal. Within 30 additional calendar days after Substantial Completion, all outstanding issues shall be addressed and ready for final payment. All such time restrictions are subject to such extensions of time as are provided by the General Provisions and Special Conditions. I Agree
12	**Bid Proposal Condition No. 12** Bidder agrees that the implementation of the Owner's right to delete any portion of the improvements shall not be considered as waiving or invalidating any conditions or provisions of the contract or bonds. Bidder shall perform the Work as altered and no allowances shall be made for anticipated profits. I Agree
13	**Bid Proposal Condition No. 13** Since the Work on this Project is being performed for a governmental body and function, the Owner will issue to the Contractor a certificate of exemption for payment for the State Sales TAX on materials incorporated into this Project if requested. I Agree
14	**Bid Proposal Condition No. 14** In the event of the award of a contract, vendor will furnish a Performance Bond for 115% of the contract amount, and a Payment Bond for 100% of the contract amount, to secure proper compliance with the terms and provisions of the contract with sureties offered by ***surety company named in the space provided***,to insure and guarantee the work until final completion and acceptance, and to guarantee payment of all lawful claims for labor performed and materials furnished in the fulfillment of the contract. **In addition, the undersigned will furnish a Maintenance Bond for 100% of the contract amount covering defects of material and workmanship for two calendar years following the Owner's approval and acceptance of the construction.** I Agree
15	**Bid Proposal Condition No. 15** The work, proposed to be done, shall be accepted when fully completed in accordance with the plans and specifications, to the satisfaction of the Engineer and the Owner. I Agree

16 **Bid Proposal Condition No. 16**

The vendor submitting this Bid certifies that the bid prices contained in this Bid have been carefully checked and are submitted as correct and final.

I Agree

17 **Base Bid**

Cost of Materials

$226686.88

18 **Base Bid**

Cost of Labor, Profit, etc.

$151124.59

19 **Addendum No. 1**

Bidder has examined copies of all the Contract Documents and of the following Addenda (if issued)

Acknowledged

20 **Addendum No. 2**

Bidder has examined copies of all the Contract Documents and of the following Addenda (if issued)

No response

21 **Addendum No. 3**

Bidder has examined copies of all the Contract Documents and of the following Addenda (if issued)

No response

22 **Addendum No. 4**

Bidder has examined copies of all the Contract Documents and of the following Addenda (if issued)

No response

23 **Addendum No. 5**

Bidder has examined copies of all the Contract Documents and of the following Addenda (if issued)

No response

24 **Subcontractor 1 - Name**

Each Bidder shall include a list of proposed subcontractors, the type of work to be completed by each such subcontractor and the approximate percentage of contract labor to be completed by each subcontractor. If complete listing of subcontracts totals more than five, please attach such additional pages as may be required. Owner reserves the right to accept or reject any subcontracts and/or amount subcontracted that it deems to be objectionable.

See attachment

25 **Subcontractor 1 - Type of Work**

No response

26 **Subcontractor 1 - % of Work**

No response

27 **Subcontractor 2 - Name**

No response

28 **Subcontractor 2 - Type of Work**

No response

29 **Subcontractor 2 - % of Work**

No response

30 **Subcontractor 3 - Name**

No response

31 **Subcontractor 3 - Type of Work**

No response

32 **Subcontractor 3 - % of Work**

No response

33 **Subcontractor 4 - Name**

No response

34 **Subcontractor 4 - Type of Work**

No response

35 **Subcontractor 4 - % of Work**

No response

36 **Subcontractor 5 - Name**

No response

37 **Subcontractor 5 - Type of Work**

No response

38 **Subcontractor 5 - % of Work**

No response

39 **Supplier 1 - Name**

Each Bidder shall include a list of proposed suppliers of major materials and equipment to be furnished and installed in connection with this Bid. If complete listing of suppliers totals more than five, please attach such additional pages as may be required.

No response

40 **Supplier 1 - Type of Material/Equipment**

No response

41 **Supplier 2 - Name**

No response

42 Supplier 2 - Type of Material/Equipment

No response

43 Supplier 3 - Name

No response

44 Supplier 3 - Type of Material/Equipment

No response

45 Supplier 4 - Name

No response

46 Supplier 4 - Type of Material/Equipment

No response

47 Supplier 5 - Name

No response

48 Supplier 5 - Type of Material/Equipment

No response

49 Project Timeline: Substantial Completion

Provide total number of calendar days to reach **substantial completion** of all construction (this should be the total number of days to reach substantial completion from notice to proceed date)

100

50 Project Timeline: Final Completion

Provide total number of calendar days to reach **final completion** of all construction (this should be the total number of days to reach final completion from the notice to proceed date)

20

Bid Lines

1 Package Header

BASE PROPOSAL FOR HAYS PARK

Quantity: 1 Total: $377,811.47

Package Items

1.1 CLEARING, GRUBBING AND DEMOLIITION

Quantity: 2 UOM: AC Unit Price: $4,720.00 Total: $9,440.00

1.2 TREE PROTECTION

Quantity: 1 UOM: LS Unit Price: $708.00 Total: $708.00

1.3 EROSION CONTROL

Quantity: 1 UOM: LS Unit Price: $6,490.00 Total: $6,490.00

1.4 EARTHWORK - EXCAVATION

Quantity: 1 UOM: LS Unit Price: $29,736.00 Total: $29,736.00

1.5 EARTHWORK - EMBANKMENT

Quantity: 1 UOM: LS Unit Price: $5,015.00 Total: $5,015.00

1.6 5 INCH CONCRETE PEDESTRIAN AND PLAZA PAVING

Quantity: 483 UOM: SY Unit Price: $6.39 Total: $3,086.37

1.7 SAND BLASTING OF CONCRETE PAVING

Quantity: 895 UOM: SF Unit Price: $3.54 Total: $3,168.30

1.8 12 IN WIDE CONCRETE LANDSCAPE EDGE

Quantity: 164 UOM: LF Unit Price: $19.47 Total: $3,193.08

1.9 DECOMPOSED GRANITE TRAIL 4 IN THK WITH WEED BARRIER

Quantity: 631 UOM: SY Unit Price: $39.24 Total: $24,760.44

1.10 DECOMPOSED GRANITE STABILIZER

Quantity: 631 UOM: SY Unit Price: $9.15 Total: $5,773.65

1.11 PLAYGROUND EQUIPMENT - COMPLETE AND INPLACE

Quantity: 1 UOM: LS Unit Price: $47,000.00 Total: $47,000.00

1.12 PLAYGROUND EDGE

Quantity: 200 UOM: LF Unit Price: $38.35 Total: $7,670.00

1.13 ACCESSIBLE RAMP AT PLAYGROUND

Quantity: 1 UOM: LS Unit Price: $1,770.00 Total: $1,770.00

1.14 ENGINEERED WOOD FIBER PLAYGROUND SURFACE

Quantity: 338 UOM: SY Unit Price: $53.10 Total: $17,947.80

1.15 4 IN DIA PERF ADS PLAYGROUND DRAIN - TRENCH, GRAVEL AND GEOTEXTILE FABRIC WITH CLEAN OUT

Quantity: 41 UOM: LF Unit Price: $29.50 Total: $1,209.50

1.16 4 IN DIA SOLID ADS PIPE FROM PLAYGROUND WITH CLEAN OUT

Quantity: 38 UOM: LF Unit Price: $29.50 Total: $1,121.00

1.17 2FTx2FTx4IN OUTFALL PAD WITH MITERED PIPE

Quantity: 1 UOM: EA Unit Price: $1,770.00 Total: $1,770.00

1.18 6FT CUT LIMESTONE BENCH COMPLETE AND IN PLACE

Quantity: 4 UOM: EA Unit Price: $1,121.00 Total: $4,484.00

1.19 PARK BENCH COMLETE AND IN PLACE - 6FT MODEL NUMBER 143-60PL WITH CEDAR RECYLED PLASTIC SLATS BY DUMOR, INC OR APPROVED EQUAL

Quantity: 3 UOM: EA Unit Price: $1,840.80 Total: $5,522.40

1.20 TRASH RECEPTABLE COMPLETE AND IN PLACE - MODEL NUMBER 157-22-25BT BY DUMOR, INC OR APPROVED EQUAL

Quantity: 5 UOM: EA Unit Price: $2,118.10 Total: $10,590.50

1.21 SHADE STRUCTURE COMPLETE AND IN PLACE - 28FT OREGON 2-TIER MODEL BY CLASSIC RECREATION OR APPROVED EQUAL

Quantity: 1 UOM: LS Unit Price: $55,106.00 Total: $55,106.00

1.22 8FT PICNIC TABLE W/ BENCHES COMPLETE AND IN PLACE - 100 SERIES PL WITH CEDAR RECYCLED PLASTIC SLATS SURFACE MOUNT BY DUMOR, INC OR APPROVD EQUAL

Quantity: 1 UOM: EA Unit Price: $2,690.40 Total: $2,690.40

1.23 8FT ADA PICNIC TABLE W/ BENCHES COMPLETE AND IN PLACE - 100-68-1 PL WITH CEDAR RECYCLED PLASTIC SLATS SURFACE MOUNT BY DUMOR, INC OR APPROVD EQUAL

Quantity: 1 UOM: EA Unit Price: $2,891.00 Total: $2,891.00

1.24 PARK SIGN COMPLETE AND IN PLACE

Quantity: 1 UOM: EA Unit Price: $11,210.00 Total: $11,210.00

1.25 4FT TALL CEDAR SPLIT RAIL FENCE COMPLETE AND IN PLACE

Quantity: 104 UOM: LF Unit Price: $33.04 Total: $3,436.16

1.26 3IN CALIPER REDBUD COMPLETE AND IN PLACE – TREES PROVIDED BY TOWN - COST TO INCLUDE SPADE, WRAP, TRANSPORT FROM TOWN FARM AND PLANT ON SITE

Quantity: 5 UOM: EA Unit Price: $295.00 Total: $1,475.00

1.27 3IN CALIPER BALD CYPRESS COMPLETE AND IN PLACE - TREES PROVIDED BY TOWN - COST TO INCLUDE SPADE, WRAP, TRANSPORT FROM TOWN FARM AND PLANT ON SITE

Quantity: 18 UOM: EA Unit Price: $295.00 Total: $5,310.00

1.28 3IN CALIPER CEDAR ELM COMPLETE AND IN PLACE - TREES PROVIDED BY TOWN - COST TO INCLUDE SPADE, WRAP, TRANSPORT FROM TOWN FARM AND PLANT ON SITE

Quantity: 24 UOM: EA Unit Price: $295.00 Total: $7,080.00

1.29 5 GAL BLONDE AMBITION BLUE GRAMMA COMPLETE AND IN PLACE

Quantity: 18 UOM: EA Unit Price: $106.20 Total: $1,911.60

1.30 5 GAL TEXAS SAGE COMPLETE AND IN PLACE

Quantity: 9 UOM: EA Unit Price: $159.30 Total: $1,433.70

1.31 5 GAL DWARF WAX MYRTLE COMPLETE AND IN PLACE

Quantity: 32 UOM: EA Unit Price: $159.30 Total: $5,097.60

1.32 5 GAL AUTUMN SAGE COMPLETE AND IN PLACE

Quantity: 45 UOM: EA Unit Price: $106.20 Total: $4,779.00

1.33 HYDROSEED BERMUDA GRASS - SAHARA II COMPLETE AND IN PLACE

Quantity: 62673 UOM: SF Unit Price: $0.16 Total: $10,027.68

1.34 SOD - TIF 419 COMPLETE AND IN PLACE

Quantity: 3893 UOM: SF Unit Price: $0.89 Total: $3,464.77

1.35 WILDFLOWER SEED MIX - BLACKLAND PRARIE COMPLETE AND IN PLACE

Quantity: 2923 UOM: SF Unit Price: $0.24 Total: $701.52

1.36 IRRIGATION SYSTEM, POWER AND METER COMPLETE AND IN PLACE

Quantity: 1 UOM: LS Unit Price: $49,324.00 Total: $49,324.00

1.37 MOBILIZATION

Quantity: 1 UOM: LS Unit Price: $21,417.00 Total: $21,417.00

2 Package Header

ALTERNATES

Quantity: 1 Total: $57,000.00

Package Items

2.1 STONE WRAPPED SHELTER COLUMNS COMPLETE AND IN PLACE

Quantity: 1 UOM: LS Unit Price: $6,844.00 Total: $6,844.00

2.2 4 IN IMPORTED TOPSOIL IN LAWN AREAS - TEXAS TURF PRODUCTS - TURF BLEND OR APPROVED EQUAL

Quantity: 7400 UOM: SY Unit Price: $6.79 Total: $50,246.00

Response Total: $434,901.47

CSP No. 2021-22-B Hays Park

Best and Final Offer

				Ratliff Hardscape, Ltd	
SECTION 1: BASE PROPOSAL FOR HAYS PARK					
Line	**Description**	**UOM**	**QTY**	**Unit**	**Extended**
1.1	CLEARING, GRUBBING AND DEMOLIITION	AC	2	$ 4,720.00	$ 9,440.00
1.2	TREE PROTECTION	LS	1	$ 708.00	$ 708.00
1.3	EROSION CONTROL	LS	1	$ 6,490.00	$ 6,490.00
1.4	EARTHWORK - EXCAVATION	LS	1	$ 29,736.00	$ 29,736.00
1.5	EARTHWORK - EMBANKMENT	LS	1	$ 5,015.00	$ 5,015.00
1.6	5 INCH CONCRETE PEDESTRIAN AND PLAZA PAVING	SY	483	$ 6.39	$ 3,086.37
1.7	SAND BLASTING OF CONCRETE PAVING	SF	895	$ 3.54	$ 3,168.30
1.8	12 IN WIDE CONCRETE LANDSCAPE EDGE	LF	164	$ 19.47	$ 3,193.08
1.9	DECOMPOSED GRANITE TRAIL 4 IN THK WITH WEED BARRIER	SY	631	$ 39.24	$ 24,760.44
1.10	DECOMPOSED GRANITE STABILIZER	SY	631	$ 9.15	$ 5,773.65
1.11	PLAYGROUND EQUIPMENT - COMPLETE AND INPLACE	LS	1	$ 47,000.00	$ 47,000.00
1.12	PLAYGROUND EDGE	LF	200	$ 38.35	$ 7,670.00
1.13	ACCESSIBLE RAMP AT PLAYGROUND	LS	1	$ 1,770.00	$ 1,770.00
1.14	ENGINEERED WOOD FIBER PLAYGROUND SURFACE	SY	338	$ 47.20	$ 15,953.60
1.15	4 IN DIA PERF ADS PLAYGROUND DRAIN - TRENCH, GRAVEL AND GEOTEXTILE FABRIC WITH CLEAN OUT	LF	41	$ 29.50	$ 1,209.50
1.16	4 IN DIA SOLID ADS PIPE FROM PLAYGROUND WITH CLEAN OUT	LF	38	$ 29.50	$ 1,121.00
1.17	2FTx2FTx4IN OUTFALL PAD WITH MITERED PIPE	EA	1	$ 1,770.00	$ 1,770.00
1.18	6FT CUT LIMESTONE BENCH COMPLETE AND IN PLACE	EA	4	$ 1,121.00	$ 4,484.00
1.19	PARK BENCH COMLETE AND IN PLACE - 6FT MODEL NUMBER 143-60PL WITH CEDAR RECYLED PLASTIC SLATS BY DUMOR, INC OR APPROVED EQUAL	EA	3	$ 1,840.80	$ 5,522.40
1.20	TRASH RECEPTABLE COMPLETE AND IN PLACE - MODEL NUMBER 157-22-25BT BY DUMOR, INC OR APPROVED EQUAL	EA	5	$ 2,118.10	$ 10,590.50
1.21	SHADE STRUCTURE COMPLETE AND IN PLACE - 28FT OREGON 2-TIER MODEL BY CLASSIC RECREATION OR APPROVED EQUAL	LS	1	$ 55,106.00	$ 55,106.00
1.22	8FT PICNIC TABLE W/ BENCHES COMPLETE AND IN PLACE - 100 SERIES PL WITH CEDAR RECYCLED PLASTIC SLATS SURFACE MOUNT BY DUMOR, INC OR APPROVD EQUAL	EA	1	$ 2,690.40	$ 2,690.40
1.23	8FT ADA PICNIC TABLE W/ BENCHES COMPLETE AND IN PLACE - 100-68-1 PL WITH CEDAR RECYCLED PLASTIC SLATS SURFACE MOUNT BY DUMOR, INC OR APPROVD EQUAL	EA	1	$ 2,891.00	$ 2,891.00
1.24	PARK SIGN COMPLETE AND IN PLACE	EA	1	$ 11,210.00	$ 11,210.00
1.25	4FT TALL CEDAR SPLIT RAIL FENCE COMPLETE AND IN PLACE	LF	104	$ 33.04	$ 3,436.16
1.26	3IN CALIPER REDBUD COMPLETE AND IN PLACE TREES PROVIDED BY TOWN - COST TO INCLUDE SPADE, WRAP, TRANSPORT FROM TOWN FARM AND PLANT ON SITE	EA	5	$ 265.50	$ 1,327.50
1.27	3IN CALIPER BALD CYPRESS COMPLETE AND IN PLACE - TREES PROVIDED BY TOWN - COST TO INCLUDE SPADE, WRAP, TRANSPORT FROM TOWN FARM AND PLANT ON SITE	EA	18	$ 265.50	$ 4,779.00
1.28	3IN CALIPER CEDAR ELM COMPLETE AND IN PLACE - TREES PROVIDED BY TOWN - COST TO INCLUDE SPADE, WRAP, TRANSPORT FROM TOWN FARM AND PLANT ON SITE	EA	24	$ 265.50	$ 6,372.00
1.29	5 GAL BLONDE AMBITION BLUE GRAMMA COMPLETE AND IN PLACE	EA	18	$ 53.10	$ 955.80
1.30	5 GAL TEXAS SAGE COMPLETE AND IN PLACE	EA	9	$ 88.50	$ 796.50
1.31	5 GAL DWARF WAX MYRTLE COMPLETE AND IN PLACE	EA	32	$ 88.50	$ 2,832.00
1.32	5 GAL AUTUMN SAGE COMPLETE AND IN PLACE	EA	45	$ 53.10	$ 2,389.50
1.33	HYDROSEED BERMUDA GRASS - SAHARA II COMPLETE AND IN PLACE	SF	62673	$ 0.16	$ 10,027.68
1.34	SOD - TIF 419 COMPLETE AND IN PLACE	SF	3893	$ 0.89	$ 3,464.77
1.35	WILDFLOWER SEED MIX - BLACKLAND PRARIE COMPLETE AND IN PLACE	SF	2923	$ 0.24	$ 701.52
1.36	IRRIGATION SYSTEM, POWER AND METER COMPLETE AND IN PLACE	LS	1	$ 49,324.00	$ 49,324.00
1.37	MOBILIZATION	LS	1	$ 21,417.00	$ 21,417.00
TOTAL SECTION 1: BASE PROPOSAL FOR HAYS PARK				**$**	**368,182.67**
2	ALTERNATES		1		
2.1	STONE WRAPPED SHELTER COLUMNS COMPLETE AND IN PLACE	LS	1	$ 6,844.00	$ 6,844.00
TOAL SECTION 2: ALTERNATES				**$**	**6,844.00**
TOTAL BID WITH ALTERNATE 2.1				$	375,026.67

DAYS	COMPLETION
75	Substantial Completion
20	Final Completion

BID BOND

Conforms with The American Institute of Architects, A.I.A. Document No. A-310

KNOW ALL BY THESE PRESENTS, That we, **Ratliff Hardscape, Ltd.**

1740 Midway Road, Lewisville, Texas 75056

as Principal, hereinafter called the Principal,

and the **Continental Casualty Company**,

of **151 N. Franklin, Chicago, IL 60606**, a corporation duly organized under the laws of the State of **Illinois**, as Surety, hereinafter called the Surety, are held and firmly bound unto

Town of Prosper, Texas, 250 W. First St., Prosper, TX 75078 as Obligee, hereinafter called the Obligee,

in the sum of *** **FIVE PERCENT OF TOTAL AMOUNT BID BY PRINCIPAL*****

Dollars (**5% TAB**), for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for

Hays Park Improvements

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this **28th** day of **January**, **2021**.

Lisa McBurnett, Sr. Admin Mngr
Witness

Ratliff Hardscape, Ltd. (Seal)
Principal

CFO
Title

Lisa Ortiz
Witness

Continental Casualty Company

By **Patricia Ann Lyttle** Attorney-in-Fact

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That Continental Casualty Company, an Illinois insurance company, National Fire Insurance Company of Hartford, an Illinois insurance company, and American Casualty Company of Reading, Pennsylvania, a Pennsylvania insurance company (herein called "the CNA Companies"), are duly organized and existing insurance companies having their principal offices in the City of Chicago, and State of Illinois, and that they do by virtue of the signatures and seals herein affixed hereby make, constitute and appoint

Clark D Fresher, Gary W Wheatley, Bryan K Moore, Betty J Reeh, Individually, of San Antonio, TX
Michael D Hendrickson, Patricia Ann Lyttle, Individually, of Irving, TX

their true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on their behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of their insurance companies and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the By-Law and Resolutions, printed on the reverse hereof, duly adopted, as indicated, by the Boards of Directors of the insurance companies.

In Witness Whereof, the CNA Companies have caused these presents to be signed by their Vice President and their corporate seals to be hereto affixed on this 17th day of November, 2020.

Continental Casualty Company
National Fire Insurance Company of Hartford
American Casualty Company of Reading, Pennsylvania

Paul T. Bruflat — Vice President

State of South Dakota, County of Minnehaha, ss:

On this 17th day of November, 2020, before me personally came Paul T. Bruflat to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota: that he is a Vice President of Continental Casualty Company, an Illinois insurance company, National Fire Insurance Company of Hartford, an Illinois insurance company, and American Casualty Company of Reading, Pennsylvania, a Pennsylvania insurance company described in and which executed the above instrument; that he knows the seals of said insurance companies; that the seals affixed to the said instrument are such corporate seals; that they were so affixed pursuant to authority given by the Boards of Directors of said insurance companies and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance companies.

J. MOHR
NOTARY PUBLIC SOUTH DAKOTA

My Commission Expires June 23, 2021

J. Mohr — Notary Public

CERTIFICATE

I, D. Johnson, Assistant Secretary of Continental Casualty Company, an Illinois insurance company, National Fire Insurance Company of Hartford, an Illinois insurance company, and American Casualty Company of Reading, Pennsylvania, a Pennsylvania insurance company do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolution of the Board of Directors of the insurance companies printed on the reverse hereof is still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance companies this 20th day of January 2021

Continental Casualty Company
National Fire Insurance Company of Hartford
American Casualty Company of Reading, Pennsylvania

D. Johnson — Assistant Secretary

Form F6853-4/2012

Go to www.cnasurety.com > Owner / Obligee Services > Validate Bond Coverage, if you want to verify bond authenticity.

State of Texas

Claim Notice Endorsement

To be attached to and form a part of Bond No. _____.

In accordance with Section 2253.021(f) of the Texas Government Code and Section 53.202(6) of the Texas Property Code any notice of claim to the named surety under this bond(s) should be sent to:

CNA Surety
151 North Franklin, 17th Floor
Chicago, IL 60606

Telephone: 1-877-672-6115

Figure: 28 TAC §1.601(a)(3)

1 **IMPORTANT NOTICE**

To obtain information or make a complaint:

2 You may contact Continental Casualty Company, National Fire Insurance Company of Hartford, American Casualty Company of Reading, PA and Continental Insurance Company at 312-822-5000.

3 You may call Continental Casualty Company, National Fire Insurance Company of Hartford, American Casualty Company of Reading, PA and Continental Insurance Company's toll-free telephone number for information or to make a complaint at:

1-877-672-6115

4 You may also write to Continental Casualty Company, National Fire Insurance Company of Hartford, American Casualty Company of Reading, PA and Continental Insurance Company at:

CNA Surety
151 North Franklin, 17th Floor
Chicago, IL 60606

5 You may contact the Texas Department of Insurance to obtain information on companies, coverages, rights or complaints at:

1-800-252-3439

6 You may write the Texas Department of Insurance:

P.O. Box 149104
Austin, TX 78714-9104
Fax: (512) 490-1007
Web: www.tdi.texas.gov
E-Mail: ConsumerProtection@tdi.texas.gov

7 **PREMIUM OR CLAIM DISPUTES:**
Should you have a dispute concerning your premium or about a claim you should contact Continental Casualty Company, National Fire Insurance Company of Hartford, American Casualty Company of Reading, PA and Continental Insurance Company first. If the dispute is not resolved, you may contact the Texas Department of Insurance.

8 **ATTACH THIS NOTICE TO YOUR POLICY:**
This notice is for information only and does not become a part or condition of the attached document.

Form F8277-6-2018

AVISO IMPORTANTE

Para obtener informacion o para someter una queja:

Puede comunicarse con Continental Casualty Company, National Fire Insurance Company de Hartford, American Casualty Company de Reading, PA y Continental Insurance Company al 312-822-5000.

Usted puede llamar al numero de telefono gratis de Continental Casualty Company, National Fire Insurance Company de Hartford, American Casualty Company de Reading, PA y Continental Insurance Company's para informacion o para someter una queja al:

1-877-672-6115

Usted tambien puede escribir a Continental Casualty Company, National Fire Insurance Company de Hartford, American Casualty Company de Reading, PA y Continental Insurance Company:

CNA Surety
151 North Franklin, 17th Floor
Chicago, IL 60606

Puede comunicarse con el Departamento de Seguros de Texas para obtener informacion acerca de companias, coberturas, derechos o quejas al:

1-800-252-3439

Puede escribir al Departamento de Seguros de Texas:

P.O. Box 149104
Austin, TX 78714-9104
Fax: (512) 490-1007
Web: www.tdi.texas.gov
E-Mail: ConsumerProtection@tdi.texas.gov

DISPUTAS SOBRE PRIMAS O RECLAMOS:
Si tiene una disputa concerniente a su prima o a un reclamo, debe comunicarse con el Continental Casualty Company, National Fire Insurance Company de Hartford, American Casualty Company de Reading, PA y Continental Insurance Company primero. Si no se resuelve la disputa, puede entonces comunicarse con el departamento (TDI).

UNA ESTE AVISO A SU POLIZA: Este aviso es solo para proposito de informacion y no se convierte en parte o condicion del documento adjunto.

TOWN OF PROSPER

Prosper is a place where everyone matters.

ENGINEERING SERVICES

To: **Mayor and Town Council**

From: **Hulon T. Webb, Jr., Director of Engineering Services**

Through: **Harlan Jefferson, Town Manager**
Rebecca Zook, Executive Director of Development and Infrastructure Services

Re: **Town Council Meeting – March 23, 2021**

Agenda Item:

Consider and act upon authorizing the Town Manager to execute a Professional Services Agreement between Garver, LLC, and the Town of Prosper, Texas, related to the sizing and timing of detention pond alternatives downstream of the BNSF Railroad.

Description of Agenda Item:

This project involves the sizing of three (3) detention pond alternatives downstream of the BNSF Railroad on Town property where the Public Works facility is currently located. In the August 2014 Old Town Core District Drainage Study and Report, a detention pond was proposed upstream of the BNSF Railroad on the property northeast of the intersection of Fifth Street and the BNSF Railroad. Based on discussions with that property owner on their development plans, staff determined that it would be more advantageous to relocate the proposed detention pond downstream of the BNSF Railroad on property owned by the Town in lieu of acquiring property from the development, and constructing the pond within that development.

The scope of the work includes the following:

- Utilizing the fully developed conditions hydrologic model for the storm water runoff to the existing BNSF Railroad crossing to determine a detention pond size to detain the flows coming through the railroad culverts after the culverts are enlarged by the development upstream of the BNSF Railroad. The following three (3) detention pond alternatives will be provided:
    1. a detention pond located in the channel on the south end of the Town property
    2. a detention pond located on the Town property north of the channel
    3. a detention pond located in the channel and Town property north of the channel
- Preparation of the floodplain delineation between the BNSF Railroad and Cook Lane for the three (3) detention pond alternatives.
- Preparation of preliminary detention pond layouts for the three (3) detention pond alternatives.

- Submittal of a final Detention Pond Report that will include an engineer's opinion of construction cost for the three (3) detention pond alternatives.
- Coordination with adjacent property to discuss development phasing and plans.
- Contact with FEMA to discuss LOMR phasing.

At the April 9, 2019, Town Council meeting, the Town Council approved a list of qualified engineering firms, which included Garver, LLC, for engineering design. Garver, LLC, successfully completed the design of East-West Collector (Safety Way), Cook Lane, Phase 1 (Safety Way – First Street), and are currently designing First Street (DNT – Coleman) as well as the Frontier Park/Lakes of Prosper Drainage Channel project.

Budget Impact:

The cost for this project is $48,323. $385,000 is budgeted for the Old Town Regional Retention Pond #2 (Land Acquisition) project in Account No, 760-6410-10-00-2024-DR. With the relocation of the proposed detention pond onto Town owned property, funding for land acquisition is no longer needed and will be reallocated to Professional Services in Account No. 760-5410-10-00-2024-DR for this project.

Legal Obligations and Review:

Terrence Welch of Brown & Hofmeister, L.L.P., has approved the standard Professional Services Agreement as to form and legality.

Attached Documents:

1. Professional Services Agreement
2. Location Map
3. Old Town Drainage Study Exhibit

Town Staff Recommendation:

Town staff recommends that the Town Council authorize the Town Manager to execute a Professional Services Agreement between Garver, LLC, and the Town of Prosper, Texas, related to the sizing and timing of detention pond alternatives downstream of the BNSF Railroad.

Proposed Motion:

I move to authorize the Town Manager to execute a Professional Services Agreement between Garver, LLC, and the Town of Prosper, Texas, related to the sizing and timing of detention pond alternatives downstream of the BNSF Railroad.

PROFESSIONAL SERVICES AGREEMENT
BETWEEN THE TOWN OF PROSPER, TEXAS, AND GARVER, LLC
FOR THE COOK LANE DETENTION ANALYSYS PROJECT (21T10110)

This Agreement for Professional Engineering Services, hereinafter called "Agreement," is entered into by the **Town of Prosper, Texas**, a municipal corporation, duly authorized to act by the Town Council of said Town, hereinafter called "Town," and **Garver, LLC**, an Arkansas corporation, acting through a duly authorized officer, hereinafter called "Consultant," relative to Consultant providing professional engineering services to Town. Town and Consultant when mentioned collectively shall be referred to as the "Parties."

W I T N E S S E T H:

WHEREAS, Town desires to obtain professional services in connection with the Cook Lane Detention Project **Project (21T10110)**, hereinafter called "Project";

For the mutual promises and benefits herein described, Town and Consultant agree as follows:

1. **Term of Agreement.** This Agreement shall become effective on the date of its execution by both Parties, and shall continue in effect thereafter until terminated as provided herein.

2. **Services to be Performed by Consultant.** The Parties agree that Consultant shall perform such services as are set forth and described in **Exhibit A - Scope of Services** and incorporated herein as if written word for word. All services provided by Consultant hereunder shall be performed in accordance with the degree of care and skill ordinarily exercised under similar circumstances by competent members of their profession. In case of conflict in the language of Exhibit A and this Agreement, this Agreement shall govern and control. Deviations from the Scope of Services or other provisions of this Agreement may only be made by written agreement signed by all Parties to this Agreement.

3. **Prompt Performance by Consultant**. Consultant shall perform all duties and services and make all decisions called for hereunder promptly and without unreasonable delay as is necessary to cause Consultant's services hereunder to be timely and properly performed. Notwithstanding the foregoing, Consultant agrees to use diligent efforts to perform the services described herein and further defined in any specific task orders, in a manner consistent with these task orders; however, the Town understands and agrees that Consultant is retained to perform a professional service and such services must be bound, first and foremost, by the principles of sound professional judgment and reasonable diligence.

4. **Compensation of Consultant.** Town agrees to pay to Consultant for satisfactory completion of all services included in this Agreement a total fee of **Forty Eight Thousand, Three Hundred Twenty Three Dollars and No Cents** (**$48,323.00**) for the Project as set forth and described in **Exhibit B - Compensation Schedule** and incorporated herein as if written word for word. Lump sum fees shall be billed monthly based on the percentage of completion. Hourly not to exceed fees shall be billed monthly based on hours of work that have been completed. Direct Costs for expenses such as mileage, copies, scans, sub-consultants, and similar costs are included in fees and shall be billed as completed.

Consultant agrees to submit statements to Town for professional services no more than once per month. These statements will be based upon Consultant's actual services performed and reimbursable expenses incurred, if any, and Town shall endeavor to make prompt payments. Each statement submitted by Consultant to Town shall be reasonably itemized to show the amount of work performed during that period. If Town fails to pay Consultant

within sixty (60) calendar days of the receipt of Consultant's invoice, Consultant may, after giving ten (10) days written notice to Town, suspend professional services until paid.

Nothing contained in this Agreement shall require Town to pay for any work that is unsatisfactory as reasonably determined by Town or which is not submitted in compliance with the terms of this Agreement.

The Scope of Services shall be strictly limited. Town shall not be required to pay any amount in excess of the original proposed amount unless Town shall have approved in writing in advance (prior to the performance of additional work) the payment of additional amounts.

5. **Town's Obligations.** Town agrees that it will (i) designate a specific person as Town's representative, (ii) provide Consultant with any previous studies, reports, data, budget constraints, special Town requirements, or other pertinent information known to Town, when necessitated by a project, (iii) when needed, assist Consultant in obtaining access to properties necessary for performance of Consultant's work for Town, (iv) make prompt payments in response to Consultant's statements and (v) respond in a timely fashion to requests from Consultant. Consultant is entitled to rely upon and use, without independent verification and without liability, all information and services provided by Town or Town's representatives.

6. **Ownership and Reuse of Documents**. Upon completion of Consultant's services and receipt of payment in full therefore, Consultant agrees to provide Town with copies of all materials and documents prepared or assembled by Consultant as deliverables under this Agreement and that Town may use them without Consultant's permission for any purpose relating to the Project; provided however, any and all underlying intellectual property, if any (unless provided by Town), shall remain the property of Consultant such that Consultant may continue to perform its business in the normal course. Upon payment in full, Consultant hereby grants Town an irrevocable, non-exclusive, royalty free license to use the same for the purposes contemplated under this Agreement. Any reuse of the documents not relating to the Project shall be at Town's risk. Consultant may retain in its files copies of all reports, drawings, specifications and all other pertinent information for the work it performs for Town.

7. **Town Objection to Personnel**. If at any time after entering into this Agreement, Town has any reasonable objection to any of Consultant's personnel, or any personnel, professionals and/or consultants retained by Consultant, Consultant shall promptly propose substitutes to whom Town has no reasonable objection, and Consultant's compensation shall be equitably adjusted to reflect any difference in Consultant's costs occasioned by such substitution.

8. **Insurance**. Consultant shall, at its own expense, purchase, maintain and keep in force throughout the duration of this Agreement applicable insurance policies as described in **Exhibit C - Insurance Requirements** and incorporated herein as if written word for word. Consultant shall submit to Town proof of such insurance prior to commencing any work for Town.

9. **Indemnification**. **CONSULTANT DOES HEREBY COVENANT AND AGREE TO RELEASE, INDEMNIFY AND HOLD HARMLESS TOWN AND ITS OFFICIALS, OFFICERS, AGENTS, REPRESENTATIVES, EMPLOYEES AND INVITEES FROM AND AGAINST THIRD PARTY LIABILITY, CLAIMS, SUITS, DEMANDS AND/OR CAUSES OF ACTION, (INCLUDING, BUT NOT LIMITED TO, REASONABLE ATTORNEY'S FEES AND COSTS OF LITIGATION), WHICH MAY ARISE BY REASON OF DEATH OR INJURY TO TANGIBLE PROPERTY OR BODILY INJURY OF PERSONS BUT ONLY TO THE EXTENT OCCASIONED BY THE NEGLIGENT ACT, ERROR OR OMISSION OF CONSULTANT, ITS OFFICIALS, OFFICERS, AGENTS, EMPLOYEES, INVITEES OR OTHER PERSONS FOR WHOM CONSULTANT IS LEGALLY LIABLE WITH REGARD TO THE PERFORMANCE OF THIS AGREEMENT.**

IN THE EVENT THAT TOWN AND CONSULTANT ARE CONCURRENTLY NEGLIGENT, THE PARTIES AGREE THAT ALL LIABILITY SHALL BE CALCULATED ON A COMPARATIVE BASIS OF FAULT AND RESPONSIBILITY AND THAT NEITHER PARTY SHALL BE REQUIRED TO DEFEND OR INDEMNIFY THE OTHER PARTY FOR THAT PARTY'S NEGLIGENT OR INTENTIONAL ACTS, ERRORS OR OMISSIONS.

10. **Notices**. Any notices to be given hereunder by either Party to the other may be affected either by personal delivery, in writing, or by registered or certified mail to the following addresses:

Garver, LLC	Town of Prosper
Burt Weathersbee, PE, Project Manager	Harlan Jefferson, Town Manager
3010 Gaylord Parkway, Suite 190	PO Box 307
Frisco, Texas 75034	Prosper, TX 75078
BEWeathersbee@GarverUSA.com	harlan_jefferson@prospertx.gov

11. **Termination**. The obligation to provide further services under this Agreement may be terminated by either Party in writing upon thirty (30) calendar days notice. In the event of termination by Town, Consultant shall be entitled to payment for services rendered through receipt of the termination notice.

12. **Sole Parties and Entire Agreement**. This Agreement shall not create any rights or benefits to anyone except Town and Consultant, and contains the entire agreement between the Parties. Oral modifications to this Agreement shall have no force or effect.

13. **Assignment and Delegation**. Neither Town nor Consultant may assign its rights or delegate its duties without the written consent of the other Party. This Agreement is binding on Town and Consultant to the extent permitted by law. Nothing herein is to be construed as creating any personal liability on the part of any Town officer, employee or agent.

14. **Texas Law to Apply; Successors; Construction**. This Agreement shall be construed under and in accordance with the laws of the State of Texas. It shall be binding upon, and inure to the benefit of, the Parties hereto and their representatives, successors and assigns. Should any provisions in this Agreement later be held invalid, illegal or unenforceable, they shall be deemed void, and this Agreement shall be construed as if such provision had never been contained herein.

15. **Conflict of Interest.** Consultant agrees that it is aware of the prohibited interest requirement of the Town Charter, which is repeated in **Exhibit D - Conflict of Interest Affidavit** and incorporated herein as if written word for word, and will abide by the same. Further, a lawful representative of Consultant shall execute the Affidavit included in the exhibit. Consultant understands and agrees that the existence of a prohibited interest during the term of this Agreement will render the Agreement voidable.

Consultant agrees that it is further aware of the vendor disclosure requirements set forth in Chapter 176, Local Government Code, as amended, and will abide by the same. In this connection, a lawful representative of Consultant shall execute the Conflict of Interest Questionnaire, Form CIQ, attached hereto as **Exhibit E - Conflict of Interest Questionnaire** and incorporated herein as if written word for word.

16. **Venue**. The Parties herein agree that this Agreement shall be enforceable in Prosper, Texas, and if legal action is necessary to enforce it, exclusive venue shall lie in Collin County, Texas.

17. **Mediation**. In the event of any disagreement or conflict concerning the interpretation of this

Agreement, and such disagreement cannot be resolved by the signatories hereto, the signatories agree to submit such disagreement to non-binding mediation.

18. **Prevailing Party**. In the event a Party initiates or defends any legal action or proceeding to enforce or interpret any of the terms of this Agreement, the prevailing party in any such action or proceeding shall be entitled to recover its reasonable costs and attorney's fees (including its reasonable costs and attorney's fees on any appeal).

19. "**Anti-Israel Boycott" Provision**. In accordance with Chapter 2270, Texas Government Code, a Texas governmental entity may not enter into a contract with a company for the provision of goods or services unless the contract contains a written verification from the company that it: (1) does not boycott Israel; and (2) will not boycott Israel during the term of the contract. Chapter 2270 does not apply to a (1) a company that is a sole proprietorship; (2) a company that has fewer than ten (10) full-time employees; or (3) a contract that has a value of less than One Hundred Thousand Dollars ($100,000.00). Unless the company is not subject to Chapter 2270 for the reasons stated herein, the signatory executing this Agreement on behalf of the company verifies by its signature to this Agreement that the company does not boycott Israel and will not boycott Israel during the term of this Agreement.

20. **Signatories**. Town warrants and represents that the individual executing this Agreement on behalf of Town has full authority to execute this Agreement and bind Town to the same. Consultant warrants and represents that the individual executing this Agreement on its behalf has full authority to execute this Agreement and bind Consultant to same.

IN WITNESS WHEREOF, the Parties, having read and understood this Agreement, have executed such in duplicate copies, each of which shall have full dignity and force as an original, on the _____ day of _____, 20____.

GARVER, LLC	**TOWN OF PROSPER, TEXAS**
By: _____	By: _____
Signature	Signature
Frank McIllwain	Harlan Jefferson
Printed Name	Printed Name
Vice President	Town Manager
Title	Title
March 10th, 2021	
Date	Date

EXHIBIT A
SCOPE OF SERVICES
PROFESSIONAL SERVICES AGREEMENT
BETWEEN THE TOWN OF PROSPER AND GARVER, LLC
FOR THE COOK LANE DETENTION ANALYSIS PROJECT (PRJ # 21T10110)

I. PROJECT DESCRIPTION

The project involves sizing detention pond alternatives downstream of the BNSF Railroad on Doe Branch Tributary A in the Town of Prosper, Texas. In addition, a report will be prepared describing the results of the evaluation with recommendations for a proposed detention pond downstream of the BNSF Railroad to detain flows that pass through a set of proposed culverts under the railroad.

II. TASK SUMMARY

Task 1 – Hydrologic & Hydraulic Modelling.

A. Prepare a fully developed conditions hydrologic model for storm water runoff to the existing BNSF railroad crossing. Fully-urbanized hydrology shall be based on the hydrologic model developed by Garver for the floodplain of Doe Branch Tributary A downstream of proposed Cook Lane. This model used one drainage area upstream of the railroad culverts. HEC-HMS software will be used. The hydrologic models will be used to generate flows for 2-year, 10-year, 50-year and 100-year frequency events. The hydrologic model will be prepared for use in determining a detention pond size to detain the flows coming thru the railroad culverts after the culverts are enlarged. A drainage area map and an exhibit illustrating the results of the existing and fully urbanized conditions hydrologic model will be prepared. Three detention pond alternatives will be included. These include 1) a detention pond in the channel of the tributary, 2) a location on town property north of the creek, downstream of the railroad, and 3) a combination pond in the channel and on the Town property.
B. Prepare a floodplain delineation between the railroad and Cook Lane to demonstrate the floodplain resulting from the three detention pond alternatives described in Task 1.A, above. The hydraulic model will be based on LIDAR geometry and field survey information that were used in the tributary study by Garver in September 2018.

Task 2 – Preliminary Detention Pond Layouts

A. Upon completion of the detention pond sizing from the tasks above, a preliminary detention pond layout will be prepared. The layout will consist of only a general aerial size and depth. No detailed layouts or grading of the proposed ponds will be included. Exhibits will be prepared to show the preliminary layout for the following three (3) options: (1) a proposed in-channel pond; (2) a pond located on the Town property downstream of the railroad and (3) a combination pond on Town property and in the tributary.

Task 3 – Proposed Detention Pond Report.

A. A report will be prepared summarizing the existing and fully urbanized conditions hydrologic modeling and detention pond sizing. Also included will be the delineation of the floodplain downstream of the proposed pond for the three pond alternatives only. The report will also include an approximate engineer's opinion of construction cost for the three proposed detention pond locations. The opinion of construction cost will be based on estimated construction volumes and lump sum numbers for other items. The construction cost will not include property acquisition.

B. This scope includes the following virtual meetings:
    1. One kick off meeting with Town staff.
    2. Up to one meeting with adjacent landowners (or their engineers) to discuss development phasing and plans.
    3. Up to one phone call with FEMA to discuss LOMR phasing.
    4. Up to two meetings with Town staff to discuss report findings and obtain direction from the staff.

III. DELIVERABLES

The following deliverables will be included with this scope of work:

Task 1 – Existing Conditions Hydrologic and Hydraulic Models	Interim Work Product
Task 2 – Preliminary Pond Layouts	Preliminary Pond Layouts
Task 3 – Proposed Detention Pond Report	Final Detention Pond Report and Models

IV. EXCLUSIONS TO THIS SCOPE OF WORK

Items not specifically mentioned in the scope of services above are not included. Also not included are the items listed below:

A. Permitting services or mitigation plans.
B. Waters of the US delineation or costs.
C. LOMR application preparation or submittal.
D. Topographic survey.
E. Construction plans.
F. Boundary surveys.
G. Review of utilities for conflicts.

EXHIBIT B
COMPENSATION SCHEDULE

PROFESSIONAL SERVICES AGREEMENT
BETWEEN THE TOWN OF PROSPER, TEXAS, AND GARVER, LLC
FOR THE COOK LANE DETENTION ANALYSIS PROJECT (PRJ# 21T10110)

I. COMPENSATION SCHEDULE

Task	Completion Schedule	Compensation Schedule
Notice-to-Proceed	April 1, 2021	
Task 1 – Hydrologic & Hydraulic Modeling	May 17, 2021	$32,954.00
Task 2 – Preliminary Detention Pond Layouts	May 31, 2021	$6,052.00
Task 3 – Proposed Detention Pond Report	June 21, 2021	$9,317.00
Total Compensation		**$48,323.00**

II. COMPENSATION SUMMARY

Basic Services (Lump Sum)	Amount
Task 1 – Hydrologic & Hydraulic Modeling	$32,954.00
Task 2 – Preliminary Detention Pond Layouts	$6,052.00
Task 3 – Proposed Detention Pond Report	$9,317.00
Total Basic Services:	**$48,323.00**

Special Services (Hourly Not-to-Exceed)	Amount
None	$0
Total Special Services:	**$0**

Direct Expenses	Amount
None	$0
Total Direct Expenses:	**$0**

EXHIBIT C
INSURANCE REQUIREMENTS

Service provider shall procure and maintain for the duration of the contract, insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the vendor, his agents, representatives, employees or subcontractors. The cost of such insurance shall be borne by the service provider. A certificate of insurance meeting all requirements and provisions outlined herein shall be provided to the Town prior to any services being performed or rendered. Renewal certificates shall also be supplied upon expiration.

A. MINIMUM SCOPE OF INSURANCE

Coverage shall be at least as broad as:

1. ISO Form Number GL 00 01 (or similar form) covering Commercial General Liability. "Occurrence" form only, "claims made" forms are unacceptable, except for professional liability.

2. Workers Compensation insurance as required by the Labor Code of the State of Texas, including Employers' Liability Insurance.

3. Automobile Liability as required by the State of Texas, covering all owned, hired, or non-owned vehicles. Automobile Liability is only required if vehicle(s) will be used under this contract.

4. Professional Liability, also known as Errors and Omissions coverage.

B. MINIMUM LIMITS OF INSURANCE

Service Provider shall maintain throughout contract limits not less than:

1. Commercial General Liability: $500,000 per occurrence /$1,000,000 in the aggregate for third party bodily injury, personal injury and property damage. Policy will include coverage for:

   a. Premises / Operations

   b. Broad Form Contractual Liability

   c. Products and Completed Operations

   d. Personal Injury

   e. Broad Form Property Damage

2. Workers Compensation and Employer's Liability: Workers Compensation limits as required by the Labor Code of the State of Texas and Statutory Employer's Liability minimum limits of $100,000 each accident, $300,000 Disease- Policy Limit, and $100,000 Disease- Each Employee.

3. Automobile Liability: $500,000 Combined Single Limit. Limits can only be reduced if approved by the Town. Automobile liability shall apply to all owned, hired, and non-owned autos.

4. Professional Liability aka Errors and Omissions: $500,000 per occurrence and in the aggregate.

C. DEDUCTIBLES AND SELF-INSURED RETENTIONS

Any deductible or self-insured retentions in excess of $10,000 must be declared to and approved by the Town. The Town hereby approves Service Provider self-retention in excess of $10,000.

D. OTHER INSURANCE PROVISIONS

The policies are to contain, or be endorsed to contain the following provisions:

1. General Liability and Automobile Liability Coverages

   a. The Town, its officers, officials, employees, boards and commissions and volunteers are to be added as "Additional Insured's" relative to liability arising out of activities performed by or on behalf of the provider, products and completed operations of the provider, premises owned, occupied or used by the provider. The coverage shall contain no special limitations on the scope of protection afforded to the Town, its officers, officials, employees or volunteers.

   b. The provider's insurance coverage shall be primary insurance in respects to the Town, its officers, officials, employees and volunteers. Any insurance or self-insurance maintained by the Town, its officers, officials, employees or volunteers shall be in excess of the provider's insurance and shall not contribute with it.

   c. Any failure to comply with reporting provisions of the policy shall not affect coverage provided to the Town, its officers, officials, employees, boards and commissions or volunteers.

   d. The provider's insurance shall apply separately to each insured against whom the claim is made or suit is brought, except to the insured's limits of liability.

2. Workers Compensation and Employer's Liability Coverage:

   The insurer shall agree to waive all rights of subrogation against the Town, its officers, officials, employees and volunteers for losses arising from work performed by the provider for the Town.

3. All Coverages:

   Each insurance policy required by this clause shall be endorsed to state that coverage shall not be canceled except after 30 days written notice to the Town Service Provider will provide thirty (30) days written notice of suspension or non-renewal, and ten (10) days prior written notice of nonpayment.

4. Professional Liability and / or Errors and Omissions:

   "Claims made" policy is acceptable coverage, which must be maintained during the course of the project, and up to two (2) years after completion and acceptance of the project by the Town.

E. ACCEPTABILITY OF INSURERS

The Town prefers that Insurance be placed with insurers with an A.M. Best's rating of no less than **A- VI,** or better.

F. VERIFICATION OF COVERAGE

Service Provider shall provide the Town with certificates of insurance indicating the coverages required. The certificates are to be signed by a person authorized by that insurer to bind coverage on its behalf. Certificates of insurance similar to the ACORD Form are acceptable. Town will not accept Memorandums of Insurance or Binders as proof of insurance. The Town reserves the right to require complete, certified copies of all required insurance policies at any time.

Certificate holder to be listed as follows:

Town of Prosper
P.O. Box 307
Prosper, TX 75078

EXHIBIT D
CONFLICT OF INTEREST AFFIDAVIT

PROFESSIONAL SERVICES AGREEMENT
BETWEEN THE TOWN OF PROSPER, TEXAS, GARVER, LLC
FOR THE COOK LANE DETENTION ANALYSIS PROJECT (PRJ# 21T10110)

THE STATE OF TEXAS §
§
COUNTY OF Collin §

I, Frank McIllwain, a member of the Consultant team, make this affidavit and hereby on oath state the following:

I, and/or a person or persons related to me, have the following interest in a business entity that would be affected by the work or decision on the Project (Check all that apply):

_____ Ownership of 10% or more of the voting shares of the business entity.

_____ Ownership of $25,000.00 or more of the fair market value of the business entity.

_____ Funds received from the business entity exceed 10% of my income for the previous year.

_____ Real property is involved, and I have an equitable or legal ownership with a fair market value of at least $25,000.00.

_____ A relative of mine has substantial interest in the business entity or property that would be affected by my decision of the public body of which I am a member.

_____ Other: _____.

_X_ None of the Above.

Upon filing this affidavit with the Town of Prosper, Texas, I further affirm that no relative of mine, in the first degree by consanguinity or affinity, as defined in Chapter 573 of the Texas Government Code, is a member of the public body which took action on the agreement.

Signed this 10th day of March, 2021.

_____, Vice President
Signature of Official / Title

BEFORE ME, the undersigned authority, this day personally appeared Frank McIllwain and on oath stated that the facts hereinabove stated are true to the best of his / her knowledge or belief.

Sworn to and subscribed before me on this 10th day of March, 2021.

KELLY BROWN
Notary Public, State of Texas
Comm. Expires 02-26-2023
Notary ID 131916060

_____
Notary Public in and for the State of Texas

My Commission expires: 02/26/2023

EXHIBIT E
CONFLICT OF INTEREST QUESTIONNAIRE

CONFLICT OF INTEREST QUESTIONNAIRE — FORM CIQ

For vendor doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. *See* Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY

Date Received

1 **Name of vendor who has a business relationship with local governmental entity.**

Garver, LLC

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.** (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 **Name of local government officer about whom the information is being disclosed.**

N/A
Name of Officer

4 **Describe each employment or other business relationship with the local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with the local government officer. Complete subparts A and B for each employment or business relationship described. Attach additional pages to this Form CIQ as necessary.**

A. Is the local government officer or a family member of the officer receiving or likely to receive taxable income, other than investment income, from the vendor?

☐ Yes ☐ No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer or a family member of the officer AND the taxable income is not received from the local governmental entity?

☐ Yes ☐ No

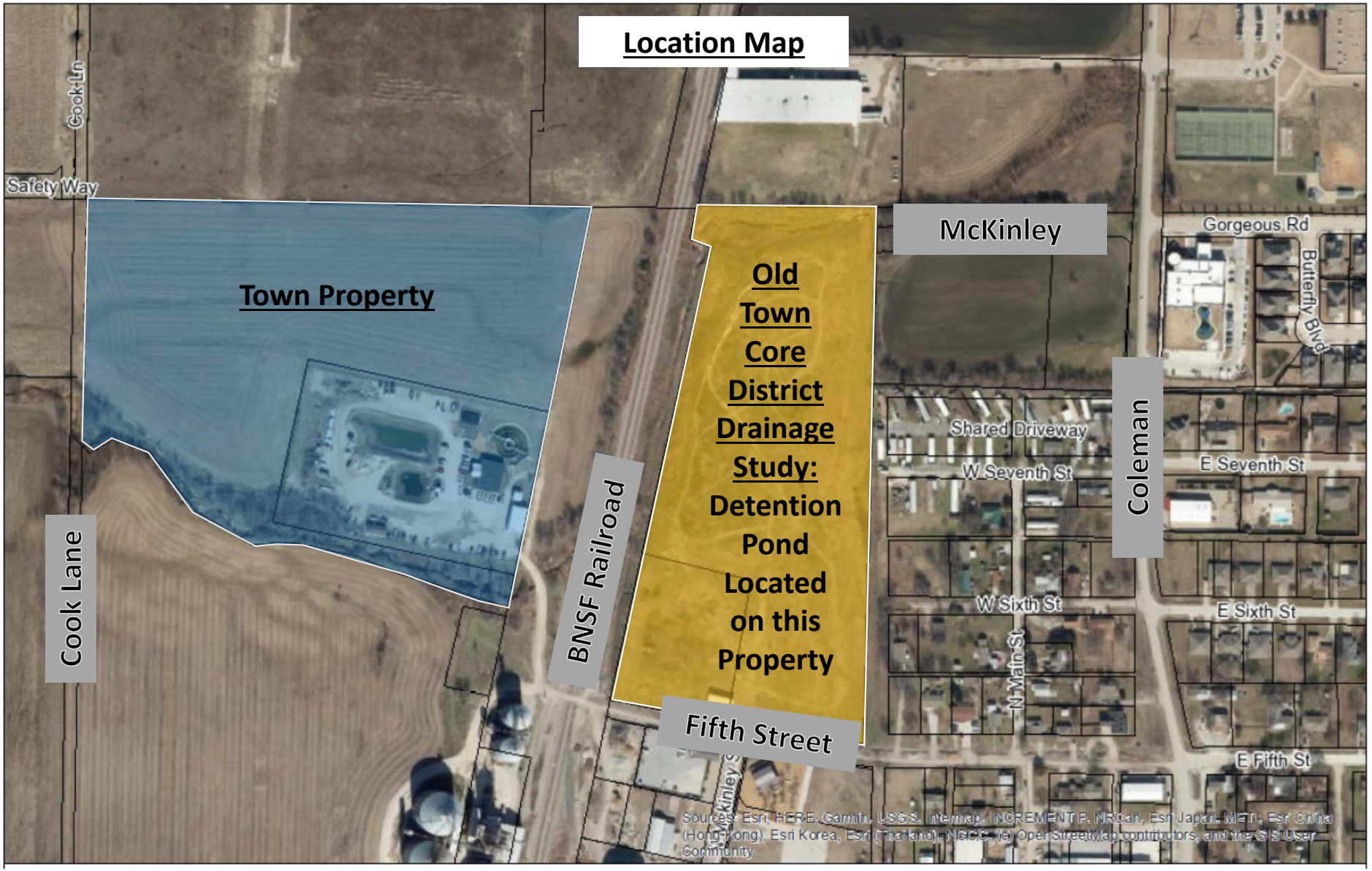
5 **Describe each employment or business relationship that the vendor named in Section 1 maintains with a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more.**

6 ☐ Check this box if the vendor has given the local government officer or a family member of the officer one or more gifts as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.003(a-1).

7 _____
Signature of vendor doing business with the governmental entity

March 10th, 2021
Date

Form provided by Texas Ethics Commission www.ethics.state.tx.us Revised 11/30/2015


Location Map
Cook Ln
Safety Way
Town Property
Cook Lane
BNSF Railroad
Old Town Core District Drainage Study: Detention Pond Located on this Property
McKinley
Fifth Street
Gorgeous Rd
Butterfly Blvd
Coleman
Shared Driveway
W Seventh St
E Seventh St
W Sixth St
E Sixth St
N Main St
E Fifth St
Source: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

DENOTES LIMITS OF NEW TOWN CORE DISTRICT PLAN SOUTH OF LINE SHOWN NEW TOWN CENTER PROJECT DETENTION REQUIREMENTS TO BE ADDRESSED BY FUTURE DEVELOPERS NORTH OF LINE GREATER OF ZONING MAP AND FUTURE LAND USE PLAN USED FOR RUNOFF COEFFICIENTS WITHIN TOWN CORE DISTRICT RUNOFF COEFFICIENTS BASED ON CORE DISTRICT USE EXCEPT WHERE CURRENT USE HAS HIGHER RUNOFF COEFFICIENT USE.

BNSF R.R. (ELEVATED)

DAIRY MANUFACTURERS INC.

JAMES E. ROWLAND

NC-4 33.70

DETENTION BY BACKING

OVERSIZE

DETENTION BY BACKING FROM MAIN CHANNEL

BOX

FUTURE ROADWAY

GOODWILL TRACT

CULVERT AND BOX SIZES WILL DEPEND ON EXTENT OF UPSTREAM DETENTION PROVIDED

IMPROVED CHANNEL

CURRENT FEMA FLOODPLAIN

GOODWILL DETENTION POND
DETENTION BY FUTURE SITE DEVELOPER
NA, NB, & NT VOLUME AVAILABLE=2.8 AC-FT
VOLUME REQ'D=0.60 AC-FT

WIDEN EX. CHANNEL INCREASE CAPACITY

PROPOSED DETENTION POND NT
OPTION A SHOWN, ADD 2-48" RCP CULVERT
DETAIN TO 12.5 AC-FT
AREA=3.8 AC.±
DETAIN TO PRE CONDITION=12.5 AC-FT

ALL WATERSHEDS N = 230.15 AC.
EXISTING 8'X 6'BOX CULVERT
FLOW LINE = 644.56
TOP RAIL = 656.10
BYPASS TO WATERSHED M = 654.5 APPROX.
CAPACITY = 536 CFS TO ELEVATION = 654.5
PRE Q100 = 722 CFS (WITH AREA NC-6 C= 0.40)
POST Q100 = 1037 CFS
REFER TO REPORT FOR OPTIONS
OPTION A SHOWN

ADD 2-48" RCP BY BORE

NT-13 2.02

8'x6' BOX 398 CFS

0.41 AC-FT

EXISTING 5'X 4'BOX
CAPACITY = 185 CFS MAX.
PRE Q100 = 398 CFS
POST Q100 = 465 CFS

VERIFY CHANNEL CAPACITY, FLOOD LEVEL, AND F.F. ELEVATIONS

NC-2 5.80

NT-12 10.68

HAWK RIDGE ADDITION

GORGEOUS RD.

DRAGONFLY

COLEMAN (289)

NT-9E 1.60

8'x4' BOX 290 CFS

7th ST.

NT-11 4.02

NT-10 2.98

6th ST.

ND-19 4.77

ND-14 3.94

ND-15 2.42

ND-16 0.42

ND-17 0.82

ND-18 1.47

ND-11 2.58

ND-8 1.77

ND-9 2.77

ND-3 1.11

ND-4 4.88

ND-5 4.29

ND-7 3.12

5'x4' BOX 194 CFS

4'x4' BOX 141 CFS

48" RCP 104 CFS

27" RCP

21" RCP

5th ST.

ND-20 2.14

ND-13 0.71

ND-10 0.60

ND-6 2.21

ND-1 4.00

M-19 1.81

ND-12 2.74

M-16 1.64

M-13 1.89

ND-2 3.81

M-12 1.07

4th ST

BYPASS ROUTE

29" X 18" ARCH PIPE

0 100 200 300

PREPARED BY:
WIER & ASSOCIATES, INC.
ENGINEERS SURVEYORS LAND PLANNERS
701 HIGHLANDER BLVD., SUITE 300 ARLINGTON, TEXAS 76015 METRO (817)467-7700
Texas Firm Registration No. F-2776 www.Wierassociates.com

NO.	DATE	DESCRIPTION	BY

OLD TOWN
DRAINAGE STUDY
TOWN OF PROSPER,
COLLIN COUNTY, TEXAS

PROPOSED CONDITIONS
PANEL 3

STATE OF TEXAS
ULYS LANE III
40864
REGISTERED
PROFESSIONAL ENGINEER
8.18.2014

LAST SHEET EDIT DATE 8/18/2014
WA# 13016

SHEET NO. 3

PRINTED: 8/18/2014 STB FILE: WIER-DAMAP.STB LAST SAVED: 8/18/2014 2:15 PM SAVED BY: LAURAR FILE: PROP-DA-STUDY-SEC-3.DWG

FINANCE

TOWN OF PROSPER

Prosper is a place where everyone matters.

To: **Mayor and Town Council**

From: **Betty Pamplin, Finance Director**

Through: **Harlan Jefferson, Town Manager**
Chuck Springer, Executive Director of Administrative Services

Re: **Town Council Meeting – March 23, 2021**

Agenda Item:

Consider and act upon a resolution accepting the Independent Audit Report and Comprehensive Annual Financial Report for the Fiscal Year Ended September 30, 2020, as presented by a representative of Pattillo, Brown and Hill LLP., Certified Public Accountants. **(BP)**

Description of Agenda Item:

Section 7.18 of the Town's Charter, as well as Chapter 103 of the Texas Local Government Code, requires that an independent audit be conducted annually. Staff plans to submit an electronic Comprehensive Annual Financial Report to the Government Finance Officers Association in consideration for the Certificate of Achievement for Excellence in Financial Reporting.

Traditionally, to accompany their opinion letter, the auditors compose a Government Auditing Standards letter, which would identify any deficiencies in internal control or material noncompliance with laws, regulations, grant agreements, or contracts. For the year ended September 30, 2020, our auditors have no deficiencies to report under Government Auditing Standards.

A copy of the Comprehensive Annual Financial Report will be provided to the Town Council under separate cover.

Budget Impact:

N/A

Legal Obligations and Review:

Terrence Welch of Brown & Hofmeister, LLP, reviewed the resolution as to form and legality.

Attached Documents:

1. Resolution

Town Staff Recommendation:

Town staff recommends that the Council approve the resolution accepting the Independent Audit Report and Comprehensive Annual Financial Report for the Fiscal Year Ended September 30, 2020.

Proposed Motion:

I move to approve the resolution accepting the Independent Audit Report and Comprehensive Annual Financial Report for the Fiscal Year Ended September 30, 2020.

TOWN OF PROSPER, TEXAS **RESOLUTION NO. 2021-XX**

A RESOLUTION BY THE TOWN COUNCIL OF THE TOWN OF PROSPER, TEXAS, ACCEPTING THE FISCAL YEAR 2019-2020 INDEPENDENT AUDIT REPORT AND COMPREHENSIVE ANNUAL FINANCIAL REPORT; MAKING FINDINGS; AUTHORIZING PUBLICATION OF THE AUDIT; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the Town Council is required by Section 7.18 of the Town Charter to call for an Independent Audit to be made of all accounts of the Town at the close of each fiscal year, a report of which is to be presented to the Town Council; and

WHEREAS, Town staff engaged Pattillo, Brown, and Hill, LLP., Certified Public Accountants, to complete the Town's Fiscal Year 2019-2020 Independent Audit; and

WHEREAS, the Town Charter requires that upon completion of the audit, a copy of the audit shall be posted to the Town's website and copies placed on file in the office of the person performing the duties of Town Secretary, as a public record.

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF PROSPER, TEXAS, THAT:

SECTION 1

The Town Council of the Town of Prosper, Texas, hereby accepts the Town's Fiscal Year 2019-2020 Financial Audit as presented by Pattillo, Brown, and Hill, LLP., Certified Public Accountants.

SECTION 2

A copy of the completed audit shall be published immediately on the Town website and copies of the audit placed on file in the office of the person performing the duties of Town Secretary, as a public record.

SECTION 3

This Resolution shall take effect from and after the date of its passage.

DULY PASSED AND APPROVED, BY THE TOWN COUNCIL OF THE TOWN OF PROSPER, TEXAS, ON THIS 23RD DAY OF MARCH, 2021.

APPROVED:

_____

Ray Smith, Mayor

ATTEST:

_____
Melissa Lee, Town Secretary

APPROVED AS TO FORM AND LEGALITY:

_____
Terrence S. Welch, Town Attorney

FINANCE DEPARTMENT

TOWN OF PROSPER
Prosper is a place where everyone matters.

To: **Mayor and Town Council**

From: **Betty Pamplin, Finance Director**

Through: **Harlan Jefferson, Town Manager**
Chuck Springer, Executive Director of Administrative Services

Re: **Town Council Meeting – March 23, 2021**

Agenda Item:

Consider and act upon an ordinance amending Ordinance No. 2020-71 (FY 2020-2021 Budget). **(BP)**

Description of Agenda Item:

Administrative Services

Communications Manager – Expenditures are increasing by $62,591. This position was requested and not approved during the FY 2020-21 budget process. With the increased demand for Communications programs, and with the current media Contractor (Celso Martinez) scheduled to retire at the end of FY 2020-21 it is recommended to move forward with hiring this full-time employee to facilitate the transition of duties in-house.

Development Services

Building Permit revenue is projected to increase by $1,424,982 from $2,689,060 to $4,114,042 due to extremely strong building activity in the current fiscal year.

Expenditures are increasing for third party plan review and inspection services by $528,000 from $274,000 to $802,000 due to the permit application for PISD High School #3 and other commercial activity.

Expenditures are increasing by $86,994 to fund two additional personnel in the Building Inspections division. A Permit Technician Supervisor is being requested to manage the front counter, coordinate work assignments for the technicians and provide guidance and supervision to the overall front counter team. This role currently falls under the purview of the building official. At this time, approximately 20-30% of his time is spent supervising the day to day operations of this team. Having a supervisor located at the front counter will also assist the team for elevating questions and concerns during the workday and will provide another staff member to support our development customers. A Plans Coordinator is being requested to assist with the increased workload associated with intake, processing of plans, as well as, the issuance of permits and the calculation and assessment of impact and permit fees. This work is currently being completed by the Sr. Plans Examiner and to some extent the Planning Manager (impact fee assessments). The

Sr. Plans Examiner is only spending approximately 25% of his time reviewing plans and the other 75% of his time is spent on tasks that would be performed by the new Plans Coordinator position.

Budget Impact:

The General Fund revenues will increase by $1,424,982 and expenditures will increase by $677,585.

Legal Obligations and Review:

Terrence Welch of Brown & Hofmeister, L.L.P., has reviewed and approved the budget amendment ordinance as to form and legality.

Attached Documents:

1. Ordinance

Town Staff Recommendation:

Town staff recommends approval of amending Ordinance No. 2020-71 (FY 2020-2021 Budget) to provide funding increased expenditures in the General Fund.

Proposed Motion:

I move to approve amending Ordinance No. 2020-71 (FY 2020-2021 Budget) to provide funding increased expenditures in the General Fund.

TOWN OF PROSPER, TEXAS **ORDINANCE NO. 2021-XX**

AN ORDINANCE OF THE TOWN OF PROSPER, TEXAS, AMENDING ORDINANCE NO. 2020-71 (FY 2020-2021 BUDGET) TO FUND INCREASED EXPENDITURES OF $677,585 IN THE GENERAL FUND; PROVIDING FOR REPEALING, SAVINGS AND SEVERABILITY CLAUSES; AND PROVIDING FOR AN EFFECTIVE DATE OF THIS ORDINANCE.

WHEREAS, the Town Council of the Town of Prosper, Texas ("Town Council"), has investigated and determined that it will be beneficial and advantageous to the residents of the Town of Prosper, Texas ("Prosper"), to amend Ordinance No. 2020-71 (FY 2020-2021 Budget) for the purposes listed in Exhibit "A," attached hereto and incorporated herein by reference; and

WHEREAS, the changes will result in budgeted funds being allocated and an overall increase to revenue.

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF PROSPER, TEXAS, THAT:

SECTION 1

Findings Incorporated. The findings set forth above are incorporated into the body of this Ordinance as if fully set forth herein.

SECTION 2

Amendment to Ordinance No. 2020-71 (FY 2020-2021 Budget). Ordinance No. 2020-71 (FY 2020-2021 Budget) is hereby amended to allow for increases to appropriations as shown in Exhibit "A," attached hereto and incorporated herein by reference.

SECTION 3

Savings/Repealing Clause. All provisions of any ordinance in conflict with this Ordinance are hereby repealed, but such repeal shall not abate any pending prosecution for violation of the repealed Ordinance, nor shall the repeal prevent prosecution from being commenced for any violation if occurring prior to the repeal of the Ordinance. Any remaining portions of conflicting ordinances shall remain in full force and effect.

SECTION 4

Severability. Should any section, subsection, sentence, clause, or phrase of this Ordinance be declared unconstitutional or invalid by a court of competent jurisdiction, it is expressly provided that any and all remaining portions of this Ordinance shall remain in full force and effect. Prosper hereby declares that it would have passed this Ordinance, and each section, subsection, sentence, clause, or phrase thereof irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared unconstitutional or invalid.

SECTION 5

Effective Date. This Ordinance shall become effective immediately upon its passage.

DULY PASSED AND APPROVED BY THE TOWN COUNCIL OF THE TOWN OF PROSPER, TEXAS, ON THIS 23RD DAY OF MARCH, 2021.

TOWN OF PROSPER, TEXAS

Ray Smith, Mayor

ATTEST TO:

Melissa Lee, Town Secretary

APPROVED AS TO FORM AND LEGALITY:

Terrence S. Welch, Town Attorney

EXHIBIT "A"
BUDGET AMENDMENT
FISCAL YEAR 2020-2021
March 23, 2021

General Fund	Original Budget	Current Budget	Amended Budget	Increase (Decrease)
Revenues:				
Property Tax	18,246,167	18,246,167	18,246,167	-
Sales Tax	5,793,141	5,793,141	5,793,141	-
Franchise Fees	1,792,875	1,792,875	1,792,875	-
License, Fees & Permits	3,575,100	3,702,760	5,127,742	1,424,982
Charges for Services	845,275	845,275	845,275	-
Fines & Warrants	400,000	400,000	400,000	-
Grants	414,672	514,672	514,672	-
Investment Income	85,000	85,000	85,000	-
Transfers In	1,071,820	1,071,820	1,071,820	-
Miscellaneous	252,350	252,350	252,350	-
Park Fees	222,000	222,000	222,000	-
Total	**$ 32,698,400**	**$ 32,926,060**	**$ 34,351,042**	**$ 1,424,982**
Expenditures:				
Administration	5,598,394	6,391,809	6,454,400	62,591
Police Services	5,997,484	6,142,033	6,142,033	-
Fire Services	7,713,465	9,669,958	9,669,958	-
Public Works	3,272,379	3,290,077	3,290,077	-
Community Services	4,605,459	4,612,744	4,612,744	-
Development Services	3,371,304	3,466,304	4,081,298	614,994
Engineering	2,031,806	2,055,123	2,055,123	-
Total	**$ 32,590,291**	**$ 35,628,048**	**$ 36,305,633**	**$ 677,585**

Total Revenue	**$ 1,424,982.00**
Total Expenditures	**$ 677,585.00**
Net Effect All Funds	**$ 747,397.00**