**NOTICE OF REGULAR MEETING MEETING OF THE BOARD OF TRUSTEES**
**MINIDOKA COUNTY JOINT SCHOOL DISTRICT #331**
**RUPERT, MINIDOKA COUNTY, IDAHO**

**NOTICE IS HEREBY GIVEN** that an **Regular Meeting** of the Board of Trustees of the Minidoka County Joint School District is posted for **Monday, August 16, 2021 at 7:00 PM at the District Service Center 310 10th Street**
**Rupert, ID 83350** at which meeting the following business will be conducted:

**CALL TO ORDER & ROLL CALL:**

Bonnie Heins, Chair
Rick Stimpson, Vice Chair
Russ Suchan, Trustee
Jeff Gibson, Trustee
Mary Andersen, Trustee

Dr. Kenneth Cox, Superintendent
Kerri Tibbitts, Board Clerk
Reed Cotten, School Counsel


1. WORK SESSION - Supplemental Levy
2. CALL TO ORDER & ROLL CALL
3. VISITOR WELCOME, PRAYER & PLEDGE OF ALLEGIANCE
4. AGENDA APPROVAL (Action Item)
5. CONSENT AGENDA (Action Item)
A. Minutes of Previous Meeting 2
B. Payment of Bills, Payroll & Treasurer's Reports, SBF & Activity Reports 11
C. Disposition of District Property/Fixed Assets 55
D. Travel Requests 56
E. New Personnel
6. PATRON COMMENTS
7. DISCUSSION ITEMS
A. Grace Church Community Coalition Presentation (Travis & Tina Turner)
B. Administrator/Department/Committee Reports 60
1. Migrant Ed 85
2. Summer School 104
C. Policy Discussion (None this Month)
D. Continuous Improvement Plan 106
E. Superintendent Report 119
8. BUSINESS (Action Items)
A. ARTEC/ARTEI Board Member
B. Approval of Girls Basketball Fundraiser 120
C. Approval of Supplemental Levy Resolution 121
D. Concession Stand Plan Approval 125
E. New/Amended/Deleted Policies
1. Policy D660.00 Evaluation of Certificated Employees (First Reading) 588
9. ADJOURNMENT

#boldsubject#

** **Robert's Rules of Order will govern all meetings**
*** **Any person needing special accommodations to participate in the above-noticed meeting should contact the Minidoka County School District one (1) day prior to the meeting at 310 10th St., Rupert, Id. (208) 436-4727**

**July 19, 2021**
**Regular Board Meeting Addendum**
**Personnel Recommendation/Requests for Board Consideration**

All recommendations are pending Board approval and District Office receiving state mandated paperwork.

## Certified New Hire(s), 2021-2022

| | |
|---|---|
| Coulson, Jeannie | Minico, Teacher; 1.0 FTE<br>Kimberley Kidd, Minico High School Principal, is recommending Jeannie Coulson, for the Family and Consumer Science teaching position. Jeannie brings experience in both education and CTE programs. We are excited to have her join our Minico team. Category 2 Contract |
| Murphy, Heather | East Minico, Teacher; 0.5 FTE<br>Greg Durrant, East Minico Principal, is recommending Heather Murphy for the part-time teaching position. Heather has her Bachelor of Science in Behavior Science and Health.<br>An Emergency Provisional will need to be requested and approved by the Professional Standards Committee and the State Department of Education. In order for this employee to be employed as an elementary teacher, the Board will need to declare an "area of need." To declare on area of need, the Minidoka School District Human Resource Department has determined an area of need exists in our district for this particular position. Category 2 Contract |
| Thompson, Katherine | Minico, Teacher; 1.0 FTE<br>Kimberley Kidd, Minico High School Principal, is recommending Katherine Thompson, for the Foods and Consumer Science teaching position. She brings experience, creativity and great ideas to grow our programs. We are excited to have her join our Minico team. Category 2 Contract |

## Classified New Hire(s), 2021-2022

| | |
|---|---|
| Breezee, Loralei | Acequia, Para Educator<br>Heather Hepworth, Acequia Elementary Principal, is recommending Loralei Breezee for a para educator position. Loralei comes with a few years of experience in the Cassia County School District where she was a PE prep provider, a para professional in the general education and special education classrooms. She is currently in school to become a teacher and will be graduating November 2022. We are excited to help her along the way, mentor her and give her the opportunism of growth. II/D |
| Dunn, Adalei | Acequia, Para Educator<br>Heather Hepworth, Acequia Elementary Principal, is recommending Adalei Dunn for a para educator position. Adalei is currently a substitute. We were able to witness her ability to direct students and follow through with teacher plans. She is currently enrolled to become a teacher. II/A |
| Stoker, Miriam | Acequia, Para Educator<br>Heather Hepworth, Acequia Elementary Principal, is recommending Miriam Stoker for a para educator position. Miriam has spent many days substituting in our building during the 20-21 school year. She comes highly recommended from her colleagues and friends. II/A |
| Turner, Kaylene | Acequia, Special Ed Aide II<br>Heather Hepworth, Acequia Elementary Principal, is recommending Kaylene Turner for a special education aide position. Kaylene is currently a substitute and spent many weeks in this classroom at Acequia. She was immediately love by not only staff but the students as well. Kaylene comes highly recommended from her colleagues and friends. III/A |

**July 19, 2021**
**Regular Board Meeting**
**Personnel Recommendation/Requests for Board Consideration**

All recommendations are pending Board approval and District Office receiving state mandated paperwork.

## Certified New Hire(s), 2021-2022

Anderson, Kaylen — Minico, Teacher; 1.0 FTE
Kimberley Kidd, Minico High School Principal, is recommending Kaylen Anderson for special education teaching position. Kaylen has worked in various special education positions and has recently completed the pursuit of her degree. She will be joining a strong special education team that works diligently for the success of our students. Category 2 Contract

Espinoza, Julie — DSC, Newcomer Teacher; 1.0 FTE
Michele Widmier, School Improvement Director, is recommending Julie Espinoza for the newcomer teaching position. Our Newcomer Program will service migrant students new to a US school who lack the English proficient to be successful in the general education program in grade K-5. Julie comes with a wide range of educational experiences that make her a great fit for this position; she worked in a variety of capacities for the district: ESL extended-day kindergarten provider, occupational therapy technician and special education aide.
An Emergency Provisional will need to be requested and approved by the Professional Standards Committee and the State Department of Education. In order for this employee to be employed as an elementary teacher, the Board will need to declare an "area of need." To declare on area of need, the Minidoka School District Human Resource Department has determined an area of need exists in our district for this particular position. Category 2 Contract

Sagers, Sarah — Minico, Teacher; 1.0 FTE
Kimberley Kidd, is recommending Sarah Sagers for an Art teaching position. Sarah will bring great ideas and innovation to our already talented art education staff. We are excited to have her join our Minico team.
An Out-of-State certification application will need to be completed and approved by the State Department of Education. Category 2 Contract

Taylor, Andrew — Rupert, Teacher; 1.0 FTE
Angela Davidson, Rupert Elementary Principal, is recommending Andrew Taylor for an elementary teaching position. Andrew will be doing his student teaching in the Spring of 2022 and will graduate in May 2022.
An Alternative Authorization – Content Specialist application will need to be requested and approved by the State Department of Education. Mr. Taylor is currently enrolled in the WGU's Elementary Education program. Ms. Davidson in conjunction with WGU will develop a plan of appropriate pathway to obtain an Idaho Standard Instructional credential with an All Subjects K-8 endorsement. In order for this employee to be employed as an elementary teacher, the Board will need to declare an "area of need." To declare an area of need, the Minidoka School District Human Resource Department has determined an area of need exists in our district for this particular position. Category 2 Contract

## Classified New Hire(s), 2021-2022

Cottle, Danny — Rupert, Para Educator
Angela Davidson, Rupert Elementary Principal, is recommending Danny Cottle for a para educator position. Danny is coming to us from Malad. His references come highly recommended and I believe he will be a great addition for our school staff. II/A

**July 19, 2021**
**Regular Board Meeting**
**Personnel Recommendation/Requests for Board Consideration**

All recommendations are pending Board approval and District Office receiving state mandated paperwork.

| | |
|---|---|
| Gomez, Alissa | Rupert, Para Educator<br>Angela Davidson, Rupert Elementary Principal, is recommending Alissa Gomez for a para educator position. Alissa when through our school for elementary and she will be a great addition for our school staff. II/A |
| Miller, Anthony | Maintenance, Assistant Supervisor<br>Jason VanEvery, Maintenance Supervisor, is recommend Anthony Miller for the assistant supervisor position. Anthony has a great deal of experience in construction and public works. He will be a good addition to the department. Start Date: 08/09/2021 |
| Mortensen, Mary "Lyn" | Rupert, Para Educator<br>Angela Davidson, Rupert Elementary Principal, is recommending Lyn Mortensen for a para educator position. Lyn has worked in the district before in the lunchroom form 2006-2010. She will be a great addition to our staff. II/A |
| Pasillas, Yajaira | **Emergency** Minico, Custodian<br>Jason VanEvery, is recommending Yajaira Pasillas for the 8 hour/day custodial position at Minico. Start Date: 07/06/2021, IV/A |
| Pieper, Amanda | West Minico, Special Ed Aide I<br>Cory Kniep, West Minico Middle School Principal, is recommending Amanda Pieper for the special education aide position. II/A |
| Warr, Brianna | Rupert, Para Educator<br>Angela Davidson, Rupert Elementary Principal, is recommending Brianna Warr for a para educator position. Brianna has been subbing in the district and will make a great addition for our school. II/A |

<u>Certified Change(s), 2021-2022</u>

| | |
|---|---|
| Anderson, Kari | From: Heyburn, Teacher; 1.0 FTE<br>To: West Minico, Teacher; 1.0 FTE |
| Christensen, Tyna | From: Heyburn, Teacher; 1.0 FTE<br>To: West Minico, Teacher; 1.0 FTE |

<u>Certified Change(s), 2021-2022</u>

| | |
|---|---|
| Gilchrist, Shaylee | Rupert, Teacher<br>Shaylee Gilchrist was hired on June 14, 2021 for a teaching position at Rupert Elementary. She will need to change his route for certification from Alternative Authorization – Content Specialist to Emergency Provisional. She will not meet the content area requirements for 2021-2022.<br>An Emergency Provisional will need to be requested and approved by the Professional Standards Committee and the State Department of Education. In order for this employee to be employed as an elementary teacher, the Board will need to declare an "area of need." To declare on area of need, the Minidoka School District Human Resource Department has determined an area of need exists in our district for this particular position. |

**July 19, 2021**
**Regular Board Meeting**
**Personnel Recommendation/Requests for Board Consideration**
All recommendations are pending Board approval and District Office receiving state mandated paperwork.

## Classified Changes(s), 2021-2022

| | |
|---|---|
| DeLuna, Michelle | From: Business Manager; 251 days<br>To: Business Manager; 256 days |

## Substitute New Hire(s), 2021-2022

| | |
|---|---|
| Stephenson, Jocelyn | Substitute Teacher |

## Summer School, 2021

John Kontos, Summer Alternative Administrator, is recommending the following employees for the summer school 30-day program. The following employee recommendations are subject to student enrollment, based on student numbers to justify positions. Certified teachers to be issued a supplemental contract with the hours verified on an approved Teacher Attendance Record. Classified employees will be paid according to policy on an approved time sheet. Summer School compensation will be distributed in the July 2021 payroll; late time sheets will be paid in August and/or September payroll.

Classified: **Emergency** Barker, Priska

## Salary Schedule(s), 2021-2022

Salaried Classified Salary Schedule (attached)

## Stipend(s), 2021-2022

| | |
|---|---|
| Espinoza, Julie | DSC, Migrant Newcomer Center – 10 Extra Days |
| Kent, Robert | East Minico, Boys Soccer Coach |

## Stipend(s), 2020-2021

Ashley Johnson, Student Achievement Director, is recommending the following individuals receive a stipend in the amount of $165.00 per day for attending an English Language Arts meeting at Wet Minico Middle School on August 2, 2021. The team will meet to review the new curriculum and create plans for implementing in the 2021-2022 school year.

| | | |
|---|---|---|
| Christensen, Leah | Hamilton, Karen | Lacey, Jennifer |
| Saurey, Kay | Trenkle, Brook | |

## Release from Contract(s), 2021-2022

| | | |
|---|---|---|
| Campbell, Chelsey | East Minico, Teacher | 07/07/2021 |

## Resignation(s), 2021-2022

| | | |
|---|---|---|
| Clark, Sarah | Special Services, Nurse | 07/14/2021 |
| Haydt, Wilhelm | Mt. Harrison, Teacher | Unable to obtain work visa |
| Hoover, Robin | Transportation, Bus Driver | 07/07/2012 |
| Robins, Hannah | Minico, Volleyball JV Head Coach | 07/12/2021 |
| Seamons, Jennifer | Minico, Volleyball Varsity Asst. Coach | 07/12/2021 |
| Sleight, Michelle | Minico, Special Ed Aide I | 07/13/2021 |

**MINIDOKA COUNTY JOINT SCHOOL DISTRICT #331**
**SALARIED CLASSIFIED SALARY SCHEDULE**
**2021-2022**

| SALARIED CLASSIFIED EMPLOYEES | |
|---|---|
| Business Manager/Board Treasurer | ~~$60,320.00~~ $61,522.00 |
| Food Service Supervisor | $54,496.00 |
| Human Resource Supervisor | $54,600.00 |
| Technology Director | $68,952.00 |
| IT Assistant Director | $52,936.00 |
| IT Specialist I | $55,328.00 |
| IT Specialist II (A) | $45,925.00 |
| IT Specialist II (B) | $42,000.00 |
| Maintenance Supervisor/Energy Specialist | $56,264.00 |
| Maintenance Supervisor Assistant | **$47,000.00** |
| Transportation Supervisor | $51,272.00 |
| District Athletic/Activities Director | $58,344.00 |

**This salary schedule supersedes all previous salary schedules**

# MCSD #331 Board of Trustees
# Regular Board Meeting Minutes
# July 19, 2021

The Regular Board meeting held at the District Service Center, 310 10th St., Rupert, Idaho was called to order by Chair Heins, at 5:03 p.m.

**Board Members Present**

The following trustees were present: Chair Bonnie Heins; Trustees Andersen, Parker, Gibson and Suchan.

**Agenda Review**

The agenda was reviewed for the regular meeting, July 19, 2021, at 7:00 p.m.

**Executive Session**

A motion to move into Executive Session was made by Trustee Andersen, seconded by Trustee Suchan. Motion carried.

A motion to move into Open Session was made by Trustee Suchan, seconded by Trustee Andersen. Motion carried.

**Adjournment**

A motion for adjournment was made by Trustee Suchan, seconded by Trustee Parker. Motion carried. (5:55 p.m.)

Bonnie Heins

Bonnie Heins, Chair of School Board

Attest: August 16, 2021 kt

Kerri Tibbitts

Kerri Tibbitts, Board Clerk

# MCSD #331 Board of Trustees
# Monthly Session Meeting Minutes
# July 19, 2021

The Regular Board meeting held at the District Service Center, 310 10th St., Rupert, Idaho was called to order by Chair Heins, at 7:00p.m.

**Board Members Present**

The following trustees were present: Chair Bonnie Heins; Trustees Andersen, Gibson, Parker and Suchan.

**Work Session**

Chair Heins suggested the Board have a booth at the Minidoka County Fair August 2nd-7th to share information on the school year and the upcoming Supplemental Levy.

Michelle DeLuna, Jason VanEvery and Michelle VanLeuven reviewed with Board member's projects that have been completed with the current levy and those proposed if the levy passes in November.

**Call to Order & Roll Call**

**Prayer, Pledge of Allegiance and Welcome to Meeting**

Reed Cotton led the group in prayer and Chair Heins led the Pledge of Allegiance.

**Agenda Approval (Action Item)**

A motion to accept the agenda as presented was made by Trustee Gibson, seconded Trustee Parker. Motion carried.

**Consent Agenda (action item)**

Chair Heins called for any objections to the Consent Agenda. Hearing none, the Consent Agenda was adopted by unanimous consent.

Minutes of previous board minutes were unanimously approved.
The minutes noted above are herein incorporated into the board minutes by reference to the date of the board meeting.
Bills and Payroll was Approved
The School Board approved bills, with addendum, and payroll for payment.
Accounts Payable: $1,134,093.41
Payroll: $2,402,082.47
The monthly reports are herein incorporated into these minutes by reference to Exhibits: "Board Revenue Report", and "Accounts Payable Runs".
Travel Requests (none this month)
Approval of new Personnel

**Patron Comments**

There were no Patron Comments.

**Discussion Items**

Supplemental Levy

Chair Heins shared with audience members that the levy will be voted on in November. Our supplemental levy is used for technology, buses and maintenance of buildings. The Facilities Committee has recommended to the Board the levy be the same amount as the previous years, 2.25 million each year over the next two years. At the next board meeting more plans will be presented.

Four Day Week

This item was left on the agenda in case there were any questions for discussion. Trustee Suchan stated he had been approached by several parents that were unaware of school start/end times. We need to get the times posted. He also was asked what would the younger students do getting out earlier than the secondary students. Chair Heins informed the Board that the Boys & Girls Club will be at each school with the exception of Acequia. Those students will be transported by the Boys & Girls Club to the Rupert location. This will be a resource for parents who do not want their child to be home alone. There is no cost for this service, except on Fridays. The information will be posted on the website.

Administrator/Department/Committee

There were no comments on the reports.

Policy Discussion

*Policy D660.00 Evaluation of Certificated Employees:* Chair Heins asked Michele Widmier asked where the first section of the policy came from. Ms. Widmier stated it came from the PRC. With MCEA there was a perception they couldn't have a discussion deeper than the piece of the IPLP. This policy will be put on next month as a first reading.

Superintendent Report

There were no comments on this report.

**Business**

Appointment of Vice Chair:

A nomination to appoint Trustee Russ Suchan as Vice Chair was made by Trustee Andersen. When Trustee Suchan was asked if he would accept this position, and he stated he would. With the nomination, Chair Heins asked for a second to the nomination, which was seconded by Trustee Parker. Motion carried.

Approval of 2022-2024 Proposed Levy Amount

A motion to approve the 2022-2024 levy in the amount of 2.25 million dollars each year, for a two-year period was made by Trustee Gibson, sounded by Trustee Suchan. Motion carried.

Four-Day Week

No decisions were need on this item.

Approval of 2021-2022 Bus Routes

Chair Heins thanked Coleen Jones and others who have worked so hard on getting routes put together. Jason Van Every asked if other employees who maybe work part time, could drive bus. He will discuss this with Mrs. Schaeffer and report to the Board.

A motion to accept the 2021-2022 bus routes was made by Trustee Parker, seconded by Vice Chair Suchan. Motion carried. The Board stated any changes transportation needs to make will not need to be approved again by the Board.

Approval of Supply Lists

A motion to approve the supply lists as presented was made by Vice Chair Suchan, seconded by Trustee Gibson. Motion carried.

Approval of Student Handbooks

Vice Chair Suchan asked with the four-day week if there was a snow day, does this need to be addressed in the handbooks. Ashley Johnson stated there are snow days built into the calendar.

Mr. Ramsey stated if it happens it will be a district-wide decision, not by school. A motion to approve the student handbooks as presented was made by Trustee Gibson, seconded by Vice Chair Suchan. Motion carried.

Approval of District Organizational Chart

A motion to approve the District Organizational Chart as presented was made by Vice Chair Suchan, seconded by Trustee Parker. Motion carried.

Adoption of State Special Education Manual

A motion for the adoption of the State Special Education Manual was made by Vice Chair Suchan, seconded by Trustee Gibson. Motion carried.

Adoption of State Transportation Manual

A motion for the adoption of the State Transportation Manual was made by Trustee Andersen, seconded by Vice Chair Suchan. Motion carried.

New/Amended/Deleted Policies

1. Policy D312.00 Minidoka School Scholarship – DELETE
2. Policy D935.00 Energy Conservation Program– DELETE
3. Policy D390.00 Student Discipline Procedure (First Reading)
4. Policy D430.00/430.00F/430.00P Relationship Between School and Law Enforcement (First Reading)

A motion to for the deletion of policies D312.00 Minidoka School Scholarship and Policy D935.00 Energy Conversation Program and acceptance of policies D390.00 Student Discipline Procedure and Policy D430.00/430.00F/430.00P Relationship Between School and Law Enforcement was made by Trustee Parker, seconded by Vice Chair Suchan. Motion carried.

**Adjournment**

A motion for adjournment was made by Vice Chair Suchan seconded by Trustee Andersen. Motion carried. Meeting was adjourned at 7:42 p.m.

Bonnie Heins

Bonnie Heins, Chair of School Board

Attest: August 16, 2021

Kerri Tibbitts

Kerri Tibbitts, Board Clerk

# ACCOUNTS PAYABLE RUNS FOR BOARD APPROVAL

FOR THE MONTH JULY

| DATE OF RUN | EXPLANATION OF RUN | VOUCHER # | AMOUNT OF RUN |
|---|---|---|---|
| 7/29/2021 | SPECIAL RUN - CLEAN UP | 3953 | $ 127,564.70 |
| 8/6/21 | REGULAR RUN - UTILITIES | 3954 | $ 50,807.69 |
| 8/11/21 | REGULAR RUN - INVOICES | 3955 | $ 936,646.14 |
| 8/11/21 | REGULAR RUN - TRAVEL | 3956 | $ 19,074.88 |
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| | | | |
| | GRAND TOTAL ACCOUNTS PAYABLE RUNS FOR AUGUST | | $ 1,134,093.41 |

# MINIDOKA COUNTY SCHOOL DISTRICT #331

## Approval of Bills Report

**Fiscal Year:** 2021-2022

**Criteria:**

**Voucher:** 3953

**Report Sort:** FUND **From Fund:** 100 **To:** 999 ☐ Page Break ☐ Exclude Invoice Description

| Check Number | Vendor | Description | Amount |
|---|---|---|---|
| **100 - GENERAL FUND** | | | |
| 63838 | ANDERSON, JULIAN & HULL, LLP | LEGAL COMMUNICATIONS | $78.00 |
| 63840 | CATMULL PLUMBING, INC | SHOWER / WASHER AND DRYER HOOKUP | $3,745.49 |
| 63843 | INTEGRA MECHANICAL SERVICE, LLC | MATERIAL FOR SCORE BOARD ON BASEBALL FIELD | $2,500.00 |
| 63845 | J & R ASPHALT MAINTANCE INC | FOOD SERVICE ASPHALT PATCHING, SEAL COAT, CRACK FILL | $10,029.70 |
| 63845 | J & R ASPHALT MAINTANCE INC | FOOD SERVICE ASPHALT PATCHING, SEAL COAT, CRACK FILL | $20,501.03 |
| 63845 | J & R ASPHALT MAINTANCE INC | WEST ASPHALT PATCHING, CRACK FILL, | $26,196.00 |
| 63846 | KLEO, INC DBA CLASSWALLET.COM | CLASS WALLET ANNUAL LICENSE FEE | $1,054.75 |
| 63846 | KLEO, INC DBA CLASSWALLET.COM | CLASSWALLET AMAZON MODULE | $3,797.10 |
| 63846 | KLEO, INC DBA CLASSWALLET.COM | ELEM CLASSROOM SUPPLIES-ACEQUIA | $3,800.00 |
| 63846 | KLEO, INC DBA CLASSWALLET.COM | ELEM CLASSROOM SUPPLIES-HEYBURN | $6,200.00 |
| 63846 | KLEO, INC DBA CLASSWALLET.COM | ELEM CLASSROOM SUPPLIES-PAUL | $5,000.00 |
| 63846 | KLEO, INC DBA CLASSWALLET.COM | ELEM CLASSROOM SUPPLIES-RUPERT | $6,400.00 |
| 63846 | KLEO, INC DBA CLASSWALLET.COM | SEC CLASSROOM SUPPLIES-EAST | $5,800.00 |
| 63846 | KLEO, INC DBA CLASSWALLET.COM | SEC CLASSROOM SUPPLIES-WEST | $6,000.00 |
| 63846 | KLEO, INC DBA CLASSWALLET.COM | SEC CLASSROOM SUPPLIES-MINICO | $13,400.00 |
| 63846 | KLEO, INC DBA CLASSWALLET.COM | ALT CLASSROOM SUPPLIES-MT H | $3,600.00 |
| 63846 | KLEO, INC DBA CLASSWALLET.COM | ALT CLASSROOM SUPPLIES-MT H | $800.00 |
| | | **Total for 100 - GENERAL FUND** | **$118,902.07** |
| **253 - TITLE I-C ESEA MIGRANT FUND** | | | |
| 63839 | BANNOCK COUNTY | MIGRANT STUDENT LEADERSHIP INSTITUTE- PAVILION 2 RENTAL | $40.00 |

## Approval of Bills Report

**Fiscal Year:** 2021-2022

**Criteria:**

**Voucher:** 3953

**Report Sort:** FUND **From Fund:** 100 **To:** 999 ☐ Page Break ☐ Exclude Invoice Description

| Check Number | Vendor | Description | Amount |
|---|---|---|---|
| **253 - TITLE I-C ESEA MIGRANT FUND** | | | |
| 63841 | CHARTWELLS DINING SERVICE | 7/23/21 MSLI BOX LUNCH | $812.13 |
| 63841 | CHARTWELLS DINING SERVICE | 7/22/21 MSLI BREAKFAST | $318.00 |
| 63841 | CHARTWELLS DINING SERVICE | 7/23/21 MSLI SUMMER INSTITUTE BREAKFAST | $318.00 |
| 63844 | ISU | MIGRANT STUDENT LEADERSHIP JENSEN HALL RENTAL | $100.00 |
| 63847 | LOPEZ, CECILIA VIOLETTA | MIGRANT STUDENT LEADERSHIP INSTITUTE | $2,634.50 |
| 63848 | RUPERT, CITY OF | MIGRANT SUMMER SCHOOL SWIMMING LESSONS | $1,440.00 |
| 63849 | SALAZAR, GABRIEL | MIGRANT STUDENT LEADERSHIP INSTITUTE | $2,000.00 |
| | | **Total for 253 - TITLE I-C ESEA MIGRANT FUND** | **$7,662.63** |
| **290 - FOOD SERVICE FUND** | | | |
| 63842 | FOOD SERVICES DPT-SCHOOL DIST. | FOOD SERVICE BEGINNING PETTY CASH ACEQUIA, HEYBURN, PAUL RUPERT | $400.00 |
| 63842 | FOOD SERVICES DPT-SCHOOL DIST. | FOOD SERVICE BEGINNING PETTY CASH EAST, WEST, MT HARRISON | $300.00 |
| 63842 | FOOD SERVICES DPT-SCHOOL DIST. | FOOD SERVICE BEGINNING PETTY CASH- MINICO | $200.00 |
| 63842 | FOOD SERVICES DPT-SCHOOL DIST. | FOOD SERVICE BEGINNING PETTY CASH MT HARRISON | $100.00 |
| | | **Total for 290 - FOOD SERVICE FUND** | **$1,000.00** |
| | | Grand Total: | $127,564.70 |

**End of Report**

# MINIDOKA COUNTY SCHOOL DISTRICT #331

## Approval of Bills Report

**Fiscal Year:** 2021-2022

**Criteria:**

**Voucher:** 3954

**Report Sort:** FUND **From Fund:** 100 **To:** 999 ☐ Page Break ☐ Exclude Invoice Description

| Check Number | Vendor | Description | Amount |
|---|---|---|---|
| **100 - GENERAL FUND** | | | |
| 63850 | HEYBURN, CITY OF | HEYBURN UTILITIES | $1,668.26 |
| 63850 | HEYBURN, CITY OF | HEYBURN IRRIGATION | $448.80 |
| 63850 | HEYBURN, CITY OF | MT HARRISON UTILITIES | $1,023.74 |
| 63851 | INTERMOUNTAIN GAS CO. | DISTRICT WIDE GAS INCLUDING FOOD SERVICE/ MAINT BLDG | $9.79 |
| 63851 | INTERMOUNTAIN GAS CO. | MT HARRISON GAS | $11.44 |
| 63851 | INTERMOUNTAIN GAS CO. | TRANSPORTATION GAS | $20.69 |
| 63851 | INTERMOUNTAIN GAS CO. | HEYBURN GAS | $94.71 |
| 63851 | INTERMOUNTAIN GAS CO. | PAUL GAS | $29.57 |
| 63851 | INTERMOUNTAIN GAS CO. | RUPERT GAS | $100.82 |
| 63851 | INTERMOUNTAIN GAS CO. | TLC GAS | $14.23 |
| 63851 | INTERMOUNTAIN GAS CO. | EAST GAS | $57.63 |
| 63851 | INTERMOUNTAIN GAS CO. | WEST GAS | $133.78 |
| 63851 | INTERMOUNTAIN GAS CO. | MINICO GAS | $263.32 |
| 63852 | PAUL, CITY OF | PAUL WATER/SEWER/GARBAGE | $616.00 |
| 63852 | PAUL, CITY OF | WEST WATER/ SEWER/ GARBAGE | $660.00 |
| 63853 | PROJECT MUTUAL TELEPHONE | DISTRICT PHONE SERVICE | $962.52 |
| 63853 | PROJECT MUTUAL TELEPHONE | ACEQUIA PHONE SERVICE | $155.98 |
| 63853 | PROJECT MUTUAL TELEPHONE | HEYBURN PHONE SERVICE | $104.24 |
| 63853 | PROJECT MUTUAL TELEPHONE | PAUL PHONE SERVICE | $104.24 |
| 63853 | PROJECT MUTUAL TELEPHONE | RUPERT PHONE SERVICE | $107.57 |
| 63853 | PROJECT MUTUAL TELEPHONE | EAST PHONE SERVICE | $111.51 |
| 63853 | PROJECT MUTUAL TELEPHONE | WEST PHONE SERVICE | $105.30 |
| 63853 | PROJECT MUTUAL TELEPHONE | MINICO PHONE SERVICE | $853.03 |
| 63853 | PROJECT MUTUAL TELEPHONE | MT HARRISON PHONE SERVICE | $153.93 |
| 63853 | PROJECT MUTUAL TELEPHONE | MAINTENANCE TELEPHONES | $55.94 |
| 63853 | PROJECT MUTUAL TELEPHONE | TRANSPORTATION TELEPHONES | $125.42 |
| 63853 | PROJECT MUTUAL TELEPHONE | HVAC ENERGY DSL LINE FOR MINICO | $102.89 |

## Approval of Bills Report

**Fiscal Year:** 2021-2022

**Criteria:**
**Report Sort:** FUND **From Fund:** 100 **To:** 999 **Voucher:** 3954
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| Check Number | Vendor | Description | Amount |
|---|---|---|---|
| **100 - GENERAL FUND** | | | |
| 63853 | PROJECT MUTUAL TELEPHONE | DISTRICT INTERNET FIBER/IP ADDRESS | $12,811.15 |
| 63854 | RUPERT, CITY OF | DISTRICT WIDE UTILITIES INCLUDING FOOD SERVICE & MAINT BLDG | $882.48 |
| 63854 | RUPERT, CITY OF | TRANSPORTATION UTILITIES | $778.31 |
| 63854 | RUPERT, CITY OF | RUPERT UTILITIES | $4,460.06 |
| 63854 | RUPERT, CITY OF | EAST UTILITIES | $3,047.80 |
| 63854 | RUPERT, CITY OF | TLC UTILITIES | $1,750.22 |
| 63854 | RUPERT, CITY OF | MINICO SEWER TRANSFER | $579.91 |
| 63855 | TOTAL WASTE MANAGEMENT | ACEQUIA GARBAGE SERVICE | $482.22 |
| 63855 | TOTAL WASTE MANAGEMENT | HEYBURN GARBAGE SERVICE | $482.22 |
| 63855 | TOTAL WASTE MANAGEMENT | WEST GARBAGE SERVICE | $528.57 |
| 63855 | TOTAL WASTE MANAGEMENT | MINICO GARBAGE SERVICE | $1,059.02 |
| 63855 | TOTAL WASTE MANAGEMENT | MT HARRISON GARBAGE SERVICE | $379.22 |
| 63856 | UNITED ELECTRIC COOP | ACEQUIA ELECTRIC | $2,593.59 |
| 63856 | UNITED ELECTRIC COOP | PAUL ELECTRIC | $1,577.16 |
| 63856 | UNITED ELECTRIC COOP | MINICO ELECTRIC | $6,803.23 |
| 63856 | UNITED ELECTRIC COOP | WEST ELECTRIC | $2,233.47 |
| 63857 | VERIZON | DISTRICT CELL PHONES | $61.62 |
| 63857 | VERIZON | RUPERT CELL PHONES | $51.63 |
| 63857 | VERIZON | WEST CELL PHONES | $51.63 |
| 63857 | VERIZON | MINICO CELL PHONES | $295.61 |
| 63857 | VERIZON | MT HARRISON CELL PHONES | $129.08 |
| 63857 | VERIZON | MAINTENANCE AND CUSTODIAL CELL PHONES | $895.27 |
| 63857 | VERIZON | TECHNOLOGY CELL PHONES | $259.93 |
| 63857 | VERIZON | NURSE CELL PHONES | $154.90 |
| 63857 | VERIZON | SPECIAL SERVICES CELL PHONES | $51.63 |
| 63857 | VERIZON | TRANSPORTATION CELL PHONES | $154.90 |

## Approval of Bills Report

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| Check Number | Vendor | Description | | Amount |
|---|---|---|---|---|
| | | | **Total for 100 - GENERAL FUND** | **$50,650.08** |
| **251 - TITLE I-A ESEA-IMPROVING BASIC PROGRAMS** | | | | |
| 63857 | VERIZON | FEDERAL PROGRAMS CELL PHONES | | $103.26 |
| | | | **Total for 251 - TITLE I-A ESEA-IMPROVING BASIC PROGRAMS** | **$103.26** |
| **290 - FOOD SERVICE FUND** | | | | |
| 63853 | PROJECT MUTUAL TELEPHONE | FOOD SERVICE TELEPHONES | | $54.35 |
| | | | **Total for 290 - FOOD SERVICE FUND** | **$54.35** |
| | | | Grand Total: | $50,807.69 |

**End of Report**

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# MINIDOKA COUNTY SCHOOL DISTRICT #331

## Approval of Bills Report

**Fiscal Year:** 2021-2022

**Criteria:**

**Report Sort:** FUND **From Fund:** 100 **To:** 999 **Voucher:** 3955

☐ Page Break ☐ Exclude Invoice Description

| Check Number | Vendor | Description | Amount |
|---|---|---|---|
| **100 - GENERAL FUND** | | | |
| 63858 | ACE HARDWARE | GARDEN SPRAYER, GLUEBOARD, MEASURING CUP | $60.37 |
| 63858 | ACE HARDWARE | GARDEN SPRAYER, GLUEBOARD, MEASURING CUP | $16.19 |
| 63858 | ACE HARDWARE | ELBOW PVC | $1.61 |
| 63858 | ACE HARDWARE | RED COUPLING | $8.26 |
| 63858 | ACE HARDWARE | COUPLINGS | $26.22 |
| 63858 | ACE HARDWARE | CONNECTOR COMBINATION, SEAL, STRAP | $2.85 |
| 63858 | ACE HARDWARE | CLAMP | $6.45 |
| 63858 | ACE HARDWARE | COUPLINGS | $10.77 |
| 63858 | ACE HARDWARE | COUPLE PVC | $1.61 |
| 63858 | ACE HARDWARE | PAINTAND SUPPLIES - DISTRICT | $17.99 |
| 63858 | ACE HARDWARE | PAINT AND SUPPLIES - MINICO | $97.18 |
| 63858 | ACE HARDWARE | PAINT AND SUPPLIES - MINICO | $76.76 |
| 63858 | ACE HARDWARE | CABLE TIES | $14.33 |
| 63858 | ACE HARDWARE | CABLE TIES | $14.33 |
| 63858 | ACE HARDWARE | COUPLINGS, ELBOWS | $5.19 |
| 63858 | ACE HARDWARE | SQUARE PLUG | $3.59 |
| 63859 | AG-WEST DISTRIBUTING CO. | PVC SUCTION | $1.86 |
| 63860 | ALL VALLEY FIRE INSPECTIONS & SERVICES | SCHOOL CONTRACTED SERVICES - MINICO | $775.00 |
| 63860 | ALL VALLEY FIRE INSPECTIONS & SERVICES | SCHOOL CONTRACTED SERVICES - HEYBURN | $775.00 |
| 63860 | ALL VALLEY FIRE INSPECTIONS & SERVICES | SCHOOL CONTRACTED SERVICES - RUPERT | $775.00 |
| 63860 | ALL VALLEY FIRE INSPECTIONS & SERVICES | SCHOOL CONTRACTED SERVICES - EAST MINICO | $775.00 |
| 63860 | ALL VALLEY FIRE INSPECTIONS & SERVICES | SCHOOL SUPPLIES | $100.00 |
| 63860 | ALL VALLEY FIRE INSPECTIONS & SERVICES | SCHOOL CONTRACTED SERVICES - ACEQUIA | $775.00 |
| 63862 | AMAZON/GEMB | USB C HUB 7-1 ADAPTER | $208.67 |

## Approval of Bills Report

**Fiscal Year:** 2021-2022

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**Report Sort:** FUND **From Fund:** 100 **To:** 999 **Voucher:** 3955

☐ Page Break ☐ Exclude Invoice Description

| Check Number | Vendor | Description | Amount |
|---|---|---|---|
| **100 - GENERAL FUND** | | | |
| 63862 | AMAZON/GEMB | CAPTURE CARDS 1080P 60 CAPTURE | $142.99 |
| 63862 | AMAZON/GEMB | APPLE THUNDERBOLT 3 TO THUNDERBOLT 2 ADAPTER | $45.95 |
| 63863 | AMAZON/GEMB | 3 STORY FIRE ESCAPE LADDER | $54.13 |
| 63863 | AMAZON/GEMB | DECK ENGAGEMENT CLUTCH CABLE - TLC | $13.26 |
| 63863 | AMAZON/GEMB | PROLINE 50 PIECE FIELD LAYOUT SYSTEM FOR FOOTBALL | $280.90 |
| 63863 | AMAZON/GEMB | SCISSOR LIFT BATTERY CHARGER | $295.18 |
| 63864 | AMERICAN LINEN SUPPLY | YEAR FOR SHIRTS, COVERALLS, TOWELS ETC FOR TRANSPORTATION DEPT FOR YEAR | $153.03 |
| 63864 | AMERICAN LINEN SUPPLY | YEAR FOR SHIRTS, COVERALLS, TOWELS ETC FOR TRANSPORTATION DEPT FOR YEAR | $115.01 |
| 63864 | AMERICAN LINEN SUPPLY | YEAR FOR SHIRTS, COVERALLS, TOWELS ETC FOR TRANSPORTATION DEPT FOR YEAR | $115.01 |
| 63864 | AMERICAN LINEN SUPPLY | YEAR FOR SHIRTS, COVERALLS, TOWELS ETC FOR TRANSPORTATION DEPT FOR YEAR | $153.03 |
| 63865 | ANIXTER INC | DUMMY RIM SYLINDER, US26D | $28.22 |
| 63865 | ANIXTER INC | SCHL/LOCK 20-079 626 RUN CTKM GIYSUBG KESS CIRE YS26D | $488.04 |
| 63865 | ANIXTER INC | SCHL/;OCK B562J 626 GRD2 US26D, ADJ BS SQCR BL | $371.92 |
| 63865 | ANIXTER INC | LUCKY LINE 11101 CERT/94500 HOUDINI 4-WAY LOCK LUBE, | $109.47 |
| 63865 | ANIXTER INC | SCHL/LOCK 35-009-C123 EVEREST-C STANDARD C123 KWY | $174.75 |
| 63865 | ANIXTER INC | SCHL/;OCK B562J 626 GRD2 US26D, ADJ BS SQCR BL | $372.21 |
| 63866 | APPLE, INC | 13" MACBOOK PRO WITH TOUCH BAR 256 GB - SPACE GRAY | $1,199.00 |
| 63866 | APPLE, INC | 13" MACBOOK PRO WITH TOUCH BAR 256 GB - SPACE GRAY | $1,199.00 |
| 63866 | APPLE, INC | 13" MACBOOK PRO WITH TOUCH BAR 256 GB - SPACE GRAY | $1,199.00 |
| 63866 | APPLE, INC | 13" MACBOOK PRO WITH TOUCH BAR 256 GB - SPACE GRAY | $1,199.00 |
| 63866 | APPLE, INC | 13" MACBOOK PRO WITH TOUCH BAR 256 GB - SPACE GRAY | $1,199.00 |
| 63866 | APPLE, INC | 13" MACBOOK PRO WITH TOUCH BAR 256 GB - SPACE GRAY | $1,199.00 |

## Approval of Bills Report

**Fiscal Year:** 2021-2022

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| Check Number | Vendor | Description | Amount |
|---|---|---|---|
| **100 - GENERAL FUND** | | | |
| 63866 | APPLE, INC | 13" MACBOOK PRO WITH TOUCH BAR 256 GB - SPACE GRAY | $1,199.00 |
| 63866 | APPLE, INC | 13" MACBOOK PRO WITH TOUCH BAR 256 GB - SPACE GRAY | $1,199.00 |
| 63866 | APPLE, INC | 13" MACBOOK PRO WITH TOUCH BAR 256 GB - SPACE GRAY | $1,199.00 |
| 63866 | APPLE, INC | 13" MACBOOK PRO WITH TOUCH BAR 256 GB - SPACE GRAY | $1,199.00 |
| 63866 | APPLE, INC | 13 IN MACBOOK PRO W/TOUCH BAR 256 GB - SPACE GRAY | $1,199.00 |
| 63866 | APPLE, INC | 13 IN MACBOOK PRO W/TOUCH BAR 256 GB - SPACE GRAY | $1,199.00 |
| 63866 | APPLE, INC | 13 IN MACBOOK PRO W/TOUCH BAR 256 GB - SPACE GRAY | $1,199.00 |
| 63866 | APPLE, INC | 13 IN MACBOOK PRO W/TOUCH BAR 256 GB - SPACE GRAY | $1,199.00 |
| 63866 | APPLE, INC | 13 IN MACBOOK PRO W/TOUCH BAR 256 GB - SPACE GRAY | $1,199.00 |
| 63866 | APPLE, INC | 13 IN MACBOOK PRO W/TOUCH BAR 256 GB - SPACE GRAY | $1,199.00 |
| 63866 | APPLE, INC | 13 IN MACBOOK PRO W/TOUCH BAR 256 GB - SPACE GRAY | $1,199.00 |
| 63866 | APPLE, INC | 13 IN MACBOOK PRO W/TOUCH BAR 256 GB - SPACE GRAY | $1,199.00 |
| 63866 | APPLE, INC | 13 IN MACBOOK PRO W/TOUCH BAR 256 GB - SPACE GRAY | $1,199.00 |
| 63866 | APPLE, INC | 13 IN MACBOOK PRO W/TOUCH BAR 256 GB - SPACE GRAY | $1,199.00 |
| 63866 | APPLE, INC | 13 IN MACBOOK PRO W/TOUCH BAR 256 GB - SPACE GRAY | $1,199.00 |
| 63866 | APPLE, INC | 13 IN MACBOOK PRO W/TOUCH BAR 256 GB - SPACE GRAY | $1,199.00 |
| 63866 | APPLE, INC | 13 IN MACBOOK PRO W/TOUCH BAR 256 GB - SPACE GRAY | $1,199.00 |
| 63866 | APPLE, INC | 13 IN MACBOOK PRO W/TOUCH BAR 256 GB - SPACE GRAY | $1,199.00 |
| 63866 | APPLE, INC | 13 IN MACBOOK PRO W/TOUCH BAR 256 GB - SPACE GRAY | $1,199.00 |
| 63868 | BAILEY OIL CO., INC. | (1) CASE KENDALL 5-20 WT OIL FOR USE IN DODGE CARAVAN (DISTRICT VEHICLE) | $79.20 |
| 63868 | BAILEY OIL CO., INC. | MO PO JULY 21 FUEL FOR BUSES NEEDING FUEL AFTER ACTIVITY TRIPS AND ROUTES FOR MONTH | $138.34 |
| 63868 | BAILEY OIL CO., INC. | MO PO JULY 21 FUEL FOR BUSES NEEDING FUEL AFTER ACTIVITY TRIPS AND ROUTES FOR MONTH | $160.78 |
| 63868 | BAILEY OIL CO., INC. | HAND PUMP FOR 50 GALLON DRUM OF BUS WASH IN TRANSPORTATION DEPT. | $81.00 |
| 63868 | BAILEY OIL CO., INC. | GROUND FUEL | $637.03 |

## Approval of Bills Report

**Fiscal Year:** 2021-2022

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| Check Number | Vendor | Description | Amount |
|---|---|---|---|
| **100 - GENERAL FUND** | | | |
| 63869 | BARCLAY MECHANICAL | WATER JET | $45.00 |
| 63869 | BARCLAY MECHANICAL | CONTRACTED SERVICES-MT H | $39.17 |
| 63869 | BARCLAY MECHANICAL | 10 GA BLK SHEET | $2.50 |
| 63869 | BARCLAY MECHANICAL | LABOR | $60.00 |
| 63869 | BARCLAY MECHANICAL | CONTRACTED SERVICES-EAST | $1.34 |
| 63869 | BARCLAY MECHANICAL | LABOR | $60.00 |
| 63869 | BARCLAY MECHANICAL | TUBES, FLAT BAR | $29.38 |
| 63871 | BEAR NECESSITIES PORTABLE RESTROOM | PORTABLE RESTROOM RENTAL JULY-JUNE SOFTBALL, SOCCER, BASEBALL, FOOTBALL PRACTICE FIELDS | $484.00 |
| 63872 | BOOK STORE | PAPER COPIER TRANSPARENCY FILM (100 CT) | $52.75 |
| 63874 | BRYSON SALES & SERVICE, INC | METAL SURGE TANK | $858.10 |
| 63874 | BRYSON SALES & SERVICE, INC | HEADLIGHT HARNESS | $131.44 |
| 63875 | CATMULL PLUMBING, INC | WEST ADA BATHROOM | $1,673.94 |
| 63876 | CAXTON PRINTERS | FRIGHT | $37.34 |
| 63877 | CDW GOVERNMENT, INC. | ADOBE LICENSE | $15,000.00 |
| 63879 | CHEMSEARCH | (12) 14 OZ CANS BLUE BEAST AEROSOL TO CLEAN INK OFF OF VINYL SEATS, BUSES, ETC. | $199.85 |
| 63880 | COGNIA INC | 2021-2022 ADVANCED ED IMPROVEMENT NETWORK FEE | $1,200.00 |
| 63882 | CONSOLIDATED ELECTRIC DIST.INC | SHOP LIGHT | $100.00 |
| 63882 | CONSOLIDATED ELECTRIC DIST.INC | LED 120V DIM WRAP | $210.89 |
| 63882 | CONSOLIDATED ELECTRIC DIST.INC | SCHOOL SUPPLIES - WEST | $513.78 |
| 63882 | CONSOLIDATED ELECTRIC DIST.INC | 40A 3P CKT BRAKER | $119.43 |
| 63882 | CONSOLIDATED ELECTRIC DIST.INC | 240V BOLT-ON | $83.25 |
| 63883 | CONVERGINT TECHNOLOGIES LLC | GENETIC CONVERSION AT MT. HARRISON | $4,289.08 |
| 63884 | CRISIS PREVENTION INSTITUTE INC | CLASSROOM CULTURE INSTRUCTOR CERTIFICATION PROGRAM | $1,199.00 |
| 63885 | CURRICULUM ASSOCIATES | IREADY MATH DIAGNOSTIC PER STUDENT LICENSE 1 YEAR | $7,219.88 |

## Approval of Bills Report

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|---|---|---|---|
| **100 - GENERAL FUND** | | | |
| 63885 | CURRICULUM ASSOCIATES | IREADY MATH DIAGNOSTIC PER STUDENT LICENSE 1 YEAR | $10,130.42 |
| 63885 | CURRICULUM ASSOCIATES | IREADY MATH DIAGNOSTIC PER STUDENT LICENSE 1 YEAR | $10,026.59 |
| 63885 | CURRICULUM ASSOCIATES | IREADY MATH DIAGNOSTIC PER STUDENT LICENSE 1 YEAR | $11,763.11 |
| 63886 | D.L. EVANS BANK | TODOIST | $29.00 |
| 63887 | DAD'S BATTERY INC. | CUSTODIAL (BATTERIES, ETC SUPPLIES | $255.90 |
| 63887 | DAD'S BATTERY INC. | CUSTODIAL (BATTERIES, ETC SUPPLIES | $255.90 |
| 63887 | DAD'S BATTERY INC. | GROUNDS BATTERIES FOR EQUIPMENT | $239.90 |
| 63887 | DAD'S BATTERY INC. | GROUNDS BATTERIES FOR EQUIPMENT | $63.95 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |

## Approval of Bills Report

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|---|---|---|---|
| **100 - GENERAL FUND** | | | |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |

## Approval of Bills Report

**Fiscal Year:** 2021-2022

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| Check Number | Vendor | Description | Amount |
|---|---|---|---|
| **100 - GENERAL FUND** | | | |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |

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**Fiscal Year:** 2021-2022

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| Check Number | Vendor | Description | Amount |
|---|---|---|---|
| **100 - GENERAL FUND** | | | |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | CHROMEBOOK 11 3100 | $212.49 |
| 63890 | DELL DIRECT SALES L.P. | GOOGLE CHROME PERPETUAL LICENSE | $2,886.30 |
| 63891 | DIVISION OF BUILDING SAFETY | ANNUAL CERTIFICATION FEE - HEYBURN | $100.00 |
| 63891 | DIVISION OF BUILDING SAFETY | ANNUAL CERTIFICATION FEE ACEQUIA | $100.00 |
| 63892 | EDGENUITY INC | DIGITAL LIBRARY - 6-12 CONCURRENT LICENSE DISTRICT WIDE | $25,000.00 |
| 63892 | EDGENUITY INC | DIGITAL LIBRARY 6-12 CONCURRENT LICENSE DISTRICT WIDE | $25,000.00 |
| 63894 | ELECTRIC MOTOR REWIND,INC | KEY SHAFT | $35.00 |
| 63894 | ELECTRIC MOTOR REWIND,INC | 3M291 HVAC MOTOR 1/15HP | $114.70 |
| 63894 | ELECTRIC MOTOR REWIND,INC | 5HP PUMP MOTOR, BEARINGS | $194.72 |
| 63894 | ELECTRIC MOTOR REWIND,INC | 10 HP PACKING SLEEVE, PUMP GASKET | $955.38 |

## Approval of Bills Report

**Fiscal Year:** 2021-2022

**Criteria:**

**Report Sort:** FUND **From Fund:** 100 **To:** 999 **Voucher:** 3955

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| Check Number | Vendor | Description | Amount |
|---|---|---|---|
| **100 - GENERAL FUND** | | | |
| 63894 | ELECTRIC MOTOR REWIND,INC | 4M207 1/3 HP MOTOR, RUN CAPACITOR | $111.84 |
| 63894 | ELECTRIC MOTOR REWIND,INC | GEAR REDUCER | $323.19 |
| 63894 | ELECTRIC MOTOR REWIND,INC | WEG 1/2 HP SWAMP COOLER MOTOR | $127.50 |
| 63894 | ELECTRIC MOTOR REWIND,INC | CONDENSER FAN MOTOR 1/8 HP | $204.10 |
| 63895 | FLEET PRIDE TRUCK & TRAILER PARTS | YEAR - ANTIFREEZE & LUBE ITEMS FOR USE IN BUSES FOR YEAR | $392.68 |
| 63895 | FLEET PRIDE TRUCK & TRAILER PARTS | YEAR - ANTIFREEZE & LUBE ITEMS FOR USE IN BUSES FOR YEAR | $349.00 |
| 63895 | FLEET PRIDE TRUCK & TRAILER PARTS | YEAR - ANTIFREEZE & LUBE ITEMS FOR USE IN BUSES FOR YEAR | $668.16 |
| 63896 | GEM STATE PAPER CO, INC. | NILIUM DEODORIZER RED TEA CLOVER | $162.36 |
| 63896 | GEM STATE PAPER CO, INC. | 4004 EASY ERASING SPONGE 3X4 | $90.42 |
| 63896 | GEM STATE PAPER CO, INC. | WHITEBOARD CLEANER | $103.46 |
| 63896 | GEM STATE PAPER CO, INC. | TRASH CAN LINERS 45 | $144.56 |
| 63896 | GEM STATE PAPER CO, INC. | TRASH CAN LINERS 33 | $152.55 |
| 63896 | GEM STATE PAPER CO, INC. | GUM REMOVER | $111.77 |
| 63896 | GEM STATE PAPER CO, INC. | LOBBY BROOM | $7.79 |
| 63896 | GEM STATE PAPER CO, INC. | RED PADS 20" 5/CS | $57.23 |
| 63896 | GEM STATE PAPER CO, INC. | 20" GREEN PADS | $39.34 |
| 63896 | GEM STATE PAPER CO, INC. | CLOROX BLEACH CREAM CLEANSER | $288.88 |
| 63896 | GEM STATE PAPER CO, INC. | CONSUME ECO-LYZER | $29.01 |
| 63896 | GEM STATE PAPER CO, INC. | CONSUME BIO BOWL | $41.97 |
| 63896 | GEM STATE PAPER CO, INC. | LIFT OFF #3 INK | $66.80 |
| 63896 | GEM STATE PAPER CO, INC. | TOOTHBRUSH STYLE UTILITY BRUSH | $19.56 |
| 63896 | GEM STATE PAPER CO, INC. | BRAVO WAX STRIPPER 4-1 GAL/CS | $336.59 |
| 63896 | GEM STATE PAPER CO, INC. | 100 GRIT SANDING SCREEN 20" 12/CS | $120.44 |
| 63896 | GEM STATE PAPER CO, INC. | BLACK STRIPPING FLOOR PADS 20" 5/CS | $119.80 |
| 63896 | GEM STATE PAPER CO, INC. | LINO SAFE STRIPPER | $87.24 |
| 63896 | GEM STATE PAPER CO, INC. | REVIVE | $151.34 |

## Approval of Bills Report

**Fiscal Year:** 2021-2022

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| Check Number | Vendor | Description | Amount |
|---|---|---|---|
| **100 - GENERAL FUND** | | | |
| 63896 | GEM STATE PAPER CO, INC. | PROFI | $123.12 |
| 63896 | GEM STATE PAPER CO, INC. | TRASH CAN LINERS 45 | $144.56 |
| 63896 | GEM STATE PAPER CO, INC. | LOBBY BROOM | $7.79 |
| 63896 | GEM STATE PAPER CO, INC. | DESKSIDE WASTEBASKET 28QT GRAY 12/CS | $6.08 |
| 63896 | GEM STATE PAPER CO, INC. | PROCELL D BATTERY ALKALINE 12/PK | $662.04 |
| 63896 | GEM STATE PAPER CO, INC. | 24 OZ WEB FOOT BLEN SHINKLESS WET MOP 5 IN | $9.40 |
| 63896 | GEM STATE PAPER CO, INC. | 20" GREEN PADS | $105.40 |
| 63896 | GEM STATE PAPER CO, INC. | SIMPLE GREEN | $73.41 |
| 63896 | GEM STATE PAPER CO, INC. | ENVY | $462.09 |
| 63896 | GEM STATE PAPER CO, INC. | SPIT FIRE | $171.16 |
| 63896 | GEM STATE PAPER CO, INC. | BLEACH | $223.44 |
| 63896 | GEM STATE PAPER CO, INC. | M95 | $263.05 |
| 63896 | GEM STATE PAPER CO, INC. | CONSUME ECO-LYZER | $580.22 |
| 63896 | GEM STATE PAPER CO, INC. | CONSUME BIO BOWL | $629.50 |
| 63896 | GEM STATE PAPER CO, INC. | GP FORWARD | $259.11 |
| 63896 | GEM STATE PAPER CO, INC. | STERIPHENE II DISINFECTANT 12/CS | $188.90 |
| 63896 | GEM STATE PAPER CO, INC. | CLEAN BY PROXY | $365.55 |
| 63896 | GEM STATE PAPER CO, INC. | STAINLESS STEEL CLEANER | $450.53 |
| 63896 | GEM STATE PAPER CO, INC. | MOP BUCKET | $217.74 |
| 63896 | GEM STATE PAPER CO, INC. | WET MOP BLUE LARGE | $198.00 |
| 63896 | GEM STATE PAPER CO, INC. | OVER & UNDER 5 GAL/BX | $306.12 |
| 63896 | GEM STATE PAPER CO, INC. | CAREFREE FLOOR FINISH/SEALER SOFT TILE | $402.10 |
| 63896 | GEM STATE PAPER CO, INC. | DISTILLED VINEGAR | $27.21 |
| 63896 | GEM STATE PAPER CO, INC. | WHITEBOARD CLEANER | $155.19 |
| 63896 | GEM STATE PAPER CO, INC. | BRAVO WAX STRIPPER 4-1 GAL/CS | $48.08 |
| 63896 | GEM STATE PAPER CO, INC. | BRAVO SPRAY CANS | $79.44 |
| 63896 | GEM STATE PAPER CO, INC. | BLACK STRIPPING FLOOR PADS 20" 5/CS | $99.83 |

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**Fiscal Year:** 2021-2022

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| Check Number | Vendor | Description | Amount |
|---|---|---|---|
| **100 - GENERAL FUND** | | | |
| 63896 | GEM STATE PAPER CO, INC. | TOILET SWABS | $42.24 |
| 63896 | GEM STATE PAPER CO, INC. | TRIANGLE PAPER VACUUM BAG | $525.43 |
| 63896 | GEM STATE PAPER CO, INC. | SQUARE PADS 14X20 SURFACE PREP PAD MAROON | $284.86 |
| 63896 | GEM STATE PAPER CO, INC. | BACKFLIP SQUEEGEE AND SCRUBBER TOOL 14" 6/CS | $64.43 |
| 63896 | GEM STATE PAPER CO, INC. | CREW NA BOWL CLEANER | $111.19 |
| 63896 | GEM STATE PAPER CO, INC. | BAR TOWELS | $60.45 |
| 63896 | GEM STATE PAPER CO, INC. | GRIZZLY MITE NITRILE GLOVES SM | $817.23 |
| 63896 | GEM STATE PAPER CO, INC. | GRIZZLY MITE NITRILE GLOVES M | $817.23 |
| 63896 | GEM STATE PAPER CO, INC. | GRIZZLY MITE NITRILE GLOVES LG | $817.23 |
| 63896 | GEM STATE PAPER CO, INC. | ANGLE BROOM | $90.72 |
| 63896 | GEM STATE PAPER CO, INC. | NIAGARA GREEN SCOUR PAD N96 | $23.34 |
| 63896 | GEM STATE PAPER CO, INC. | OXIVIR | $495.68 |
| 63896 | GEM STATE PAPER CO, INC. | SAFETY SEAT COVERS | $120.34 |
| 63896 | GEM STATE PAPER CO, INC. | SCOTCH BRITE GREEN/YELLOW SPONGE #74 | $140.07 |
| 63896 | GEM STATE PAPER CO, INC. | SCOTCH BRITE WHITE #98 | $164.65 |
| 63896 | GEM STATE PAPER CO, INC. | SPRAY BOTTLE | $35.35 |
| 63896 | GEM STATE PAPER CO, INC. | SPRAY TRIGGER | $57.60 |
| 63896 | GEM STATE PAPER CO, INC. | LAMBS WOOL DUSTER | $70.71 |
| 63896 | GEM STATE PAPER CO, INC. | VIREX II | $97.86 |
| 63896 | GEM STATE PAPER CO, INC. | TRASH CAN LINERS 12-16 | $1,386.22 |
| 63896 | GEM STATE PAPER CO, INC. | TRASH CAN LINERS 45 | $474.99 |
| 63896 | GEM STATE PAPER CO, INC. | TRASH CAN LINERS 33 | $479.43 |
| 63896 | GEM STATE PAPER CO, INC. | TRASH CAN LINERS 60 WHITE | $1,072.22 |
| 63896 | GEM STATE PAPER CO, INC. | TRASH CAN LINERS 56 BLACK | $592.67 |
| 63896 | GEM STATE PAPER CO, INC. | TERRY BAR TOWELS 17"X 15.5" 5 DOZ/CS | $75.12 |
| 63896 | GEM STATE PAPER CO, INC. | SANITARY LINERS 4 GAL | $56.25 |
| 63896 | GEM STATE PAPER CO, INC. | DISTILLED WATER | $23.45 |

## Approval of Bills Report

**Fiscal Year:** 2021-2022

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|---|---|---|---|
| **100 - GENERAL FUND** | | | |
| 63896 | GEM STATE PAPER CO, INC. | LOBBY BROOM | $54.52 |
| 63896 | GEM STATE PAPER CO, INC. | LOBBY DUST PAN | $66.99 |
| 63896 | GEM STATE PAPER CO, INC. | PUMICE STONE | $324.39 |
| 63896 | GEM STATE PAPER CO, INC. | NILOTRON METERED REFILLS 12/CS MYSTIC RAIN | $96.12 |
| 63896 | GEM STATE PAPER CO, INC. | LAUNDRY SOAP | $245.00 |
| 63896 | GEM STATE PAPER CO, INC. | VECTRA | $326.00 |
| 63896 | GEM STATE PAPER CO, INC. | MOPS DUST 24" | $70.64 |
| 63896 | GEM STATE PAPER CO, INC. | MOPS DUST 72" | $180.43 |
| 63896 | GEM STATE PAPER CO, INC. | NILOTRON AEROSOL APPLE PIE | $46.22 |
| 63896 | GEM STATE PAPER CO, INC. | DESKSIDE WASTEBASKET 28QT GRAY 12/CS | $133.86 |
| 63896 | GEM STATE PAPER CO, INC. | RED PADS 20" 5/CS | $57.23 |
| 63896 | GEM STATE PAPER CO, INC. | WASTEBASKET 41 QT. | $307.21 |
| 63896 | GEM STATE PAPER CO, INC. | POLISH FLOOR PADS WHITE 20" | $98.35 |
| 63896 | GEM STATE PAPER CO, INC. | PROCELL D BATTERY ALKALINE 12/PK | $280.53 |
| 63896 | GEM STATE PAPER CO, INC. | 24 OZ WEB FOOT BLEN SHINKLESS WET MOP 5 IN | $65.81 |
| 63896 | GEM STATE PAPER CO, INC. | ARESOL REFILL RED CLOVER TEA | $96.12 |
| 63896 | GEM STATE PAPER CO, INC. | AREOSOL REFIN CINNAMON | $92.45 |
| 63896 | GEM STATE PAPER CO, INC. | HEPA FILTER SET PRO SERIES | $83.10 |
| 63896 | GEM STATE PAPER CO, INC. | 56" 2 PIECE WAND | $59.00 |
| 63896 | GEM STATE PAPER CO, INC. | XOVER MULTI FLOOR TOOL | $55.00 |
| 63896 | GEM STATE PAPER CO, INC. | DYSON VACUUM | $459.52 |
| 63896 | GEM STATE PAPER CO, INC. | DYSON VACUUM | $459.52 |
| 63896 | GEM STATE PAPER CO, INC. | MOTOR SCRUBBER | $479.85 |
| 63896 | GEM STATE PAPER CO, INC. | DYSON VACUUM | $459.52 |
| 63897 | HAUNS HARDWARE | TOGGLE SWITCH, CONCENTRIC PUMP | $50.97 |
| 63897 | HAUNS HARDWARE | MACHINE SCREW, QUICK SNAP, WIRE ROPE | $11.15 |
| 63897 | HAUNS HARDWARE | BOX CONNECTOR | $1.29 |

## Approval of Bills Report

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|---|---|---|---|
| **100 - GENERAL FUND** | | | |
| 63897 | HAUNS HARDWARE | KEY BLANK | $2.89 |
| 63897 | HAUNS HARDWARE | COUPLINGS AND NIPPLE | $34.11 |
| 63897 | HAUNS HARDWARE | WHITE PAINT | $87.99 |
| 63897 | HAUNS HARDWARE | JHOOK RATCHET | $57.98 |
| 63897 | HAUNS HARDWARE | CLAMP | $8.57 |
| 63897 | HAUNS HARDWARE | TRIM NAILS | $2.99 |
| 63897 | HAUNS HARDWARE | PANEL ADHESIVE | $71.98 |
| 63897 | HAUNS HARDWARE | RACHET | $33.98 |
| 63897 | HAUNS HARDWARE | VALVED RESPIRATOR | $4.99 |
| 63897 | HAUNS HARDWARE | 20PK MED WATERPROOF CONNECTOR | $15.99 |
| 63897 | HAUNS HARDWARE | RETURN HUNTER EXT TIMER | ($107.99) |
| 63897 | HAUNS HARDWARE | HUNTER INT TIMER | $89.99 |
| 63897 | HAUNS HARDWARE | ADAPTER | $31.96 |
| 63897 | HAUNS HARDWARE | PVC FIP CAP | $6.45 |
| 63897 | HAUNS HARDWARE | TOILET BOLT SET, WAS EXTENDER KIT | $11.98 |
| 63897 | HAUNS HARDWARE | PIPE ELBOW, POLY RISER, COUPLING | $20.51 |
| 63897 | HAUNS HARDWARE | BOLTS | $3.77 |
| 63897 | HAUNS HARDWARE | PVC, TEE, COUPLING | $19.76 |
| 63897 | HAUNS HARDWARE | PAINT | $87.99 |
| 63897 | HAUNS HARDWARE | GFCI OUTLETS, WALL PLATE | $23.88 |
| 63897 | HAUNS HARDWARE | TORCH BLADES | $52.98 |
| 63897 | HAUNS HARDWARE | CHICAGO TRACTOR KEY | $5.78 |
| 63897 | HAUNS HARDWARE | WALLBOARD ANCHOR | $3.79 |
| 63898 | HYDE, EILEEN MAY | FOOD FOR BOARD MEETINGS | $80.00 |
| 63899 | IASA | 2021-2022 MEMBERSHIP DUES/FEES LAURIE COPMANN | $705.00 |
| 63899 | IASA | 2021-2022 MEMBERSHIP DUES/FEES KIMBERLEY KIDD | $705.00 |
| 63899 | IASA | 2021-2022 MEMBERSHIP DUES/FEES TERRY MERRILL | $705.00 |

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| **100 - GENERAL FUND** | | | |
| 63899 | IASA | DUES AND FEES FOR MR. KNIEP | $705.00 |
| 63899 | IASA | DUES AND FEES FOR MR. FAIRCHILD | $705.00 |
| 63900 | IDAHO HIGH SCHOOL ACTIVITIES ASSOC | 2021-2022 ACTIVITY FEES | $550.00 |
| 63900 | IDAHO HIGH SCHOOL ACTIVITIES ASSOC | NWCA WR WEIGHT CERTIFICATION DUES | $30.00 |
| 63900 | IDAHO HIGH SCHOOL ACTIVITIES ASSOC | 2021-2022 CATASTROPHIC INSURANCE | $1,182.04 |
| 63900 | IDAHO HIGH SCHOOL ACTIVITIES ASSOC | 2021-2022 ACTIVITY CARDS | $2,700.00 |
| 63900 | IDAHO HIGH SCHOOL ACTIVITIES ASSOC | 2021-2022 ANNUAL MEMBERSHIP DUES | $150.00 |
| 63901 | IDAHO SCHOOL DISTRICT COUNCIL | SCHOOL DISTRICT MEMBERSHIP DUES | $50.00 |
| 63902 | IDAHO STEM ACTION CENTER | PD FEE FOR PARTICIPATION TO RECIEVE GRANT | $150.00 |
| 63903 | IDAHO VITAL RECORDS | BIRTH CERTIFICATE FEE- HML STUDENT IGNACIO BERONICA | $16.00 |
| 63904 | JACKSON GROUP PETERBILT | DRAIN LUBE OIL TUBE | $116.48 |
| 63904 | JACKSON GROUP PETERBILT | BRAKE PAD DISCS | $529.44 |
| 63904 | JACKSON GROUP PETERBILT | HOSE - PUSH ON 8X50 | $45.90 |
| 63904 | JACKSON GROUP PETERBILT | 99170 ULTRA SEAL CORROSION PREVENTIVE SEALANT | $3.95 |
| 63904 | JACKSON GROUP PETERBILT | OIL FILTERS - SPIN ON | $77.90 |
| 63904 | JACKSON GROUP PETERBILT | ENGINE REPAIRS ON BUS 134 | $3,528.81 |
| 63905 | K & R RENT-ALL, INC | EXCAVATOR | $120.00 |
| 63905 | K & R RENT-ALL, INC | VINYL FLOOR ROLLER | $39.80 |
| 63905 | K & R RENT-ALL, INC | SANDPAPER, WHITE PAD | $220.05 |
| 63906 | KELLY'S BEARING SUPPLY | BALL BEARING | $29.28 |
| 63906 | KELLY'S BEARING SUPPLY | RUBBER CARTRIDGE | $80.00 |
| 63906 | KELLY'S BEARING SUPPLY | MBL 4L-190 BELT, TWO BOLT FLANGE, BEARING INSERT | $31.79 |
| 63909 | LYNCH OIL, INC. | MO PO JULY 21 FUEL FOR BUSES FOR MONTH (ON SITE) | $1,900.66 |
| 63910 | LYTLE SIGNS, INC | SIGNAGE FOR THE DSC | $1,303.00 |

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| **100 - GENERAL FUND** | | | |
| 63911 | MAD RIVER LASER LLC | EMPLOYEE RECOGNITION | $3,416.32 |
| 63911 | MAD RIVER LASER LLC | CUSTOM DECALS | $350.00 |
| 63911 | MAD RIVER LASER LLC | COFFEE MUGS | $674.75 |
| 63911 | MAD RIVER LASER LLC | NAME PLATES FOR BOARD | $20.50 |
| 63911 | MAD RIVER LASER LLC | NAME PLATES FOR TLC | $30.75 |
| 63911 | MAD RIVER LASER LLC | NAME PLATES FOR BUSINESS OFFICE | $20.50 |
| 63912 | MAGIC VALLEY CARPET | WEST MINICO ADA BATHROOM COLOR IS MODUS PLANET COMMERCIAL IVC | $1,035.77 |
| 63912 | MAGIC VALLEY CARPET | WALK OFF MAT AT EAST IN THE FRONT VESTIBLE | $6,030.35 |
| 63912 | MAGIC VALLEY CARPET | MT HARRISON BATHROOM FLOOR W/VINYL IN SHOWER AREA | $813.12 |
| 63912 | MAGIC VALLEY CARPET | WEST ROOM 8 COMPUTER LAB BOARDER METEOR STONE | $1,425.80 |
| 63912 | MAGIC VALLEY CARPET | EAST MINICO ROOM 8 & 13 COMPUTER ROOMS FRANCHISE II CARPET | $6,197.29 |
| 63912 | MAGIC VALLEY CARPET | EAST CONFERENCE ROOM | $2,501.92 |
| 63913 | MAGIC VALLEY LABS,INC | DRINKING WATER TESTING - MINICO | $494.00 |
| 63914 | MAGIC VALLEY TIRE PAUL | INDUSTRIAL TUBE, FLAT TIRE REPAIR | $15.16 |
| 63914 | MAGIC VALLEY TIRE PAUL | POWER KING TOWMAX, TUBELESS VALVE SYSTEM, USED WHEEL | $494.96 |
| 63917 | MARKS PLUMBING PARTS | NUT,S/J 1-1/4" CP BR SET | $34.56 |
| 63917 | MARKS PLUMBING PARTS | NUT,S/J 1-1/2X1-1/4 CP BR SET | $49.56 |
| 63917 | MARKS PLUMBING PARTS | 1-1/4 17GA P TRAP | $131.16 |
| 63917 | MARKS PLUMBING PARTS | 4 IN 1 STOPCOCK TOOL | $38.56 |
| 63917 | MARKS PLUMBING PARTS | SLOAN CLOSET AND URINAL SIDE MOUNT OPERATOR | $935.00 |
| 63917 | MARKS PLUMBING PARTS | SLOAN ROYAL CHROME OUTSIDE COVER | $181.56 |
| 63917 | MARKS PLUMBING PARTS | SLOAN ROYAL/ REGAL INSIDE COVER A-71 | $40.24 |
| 63917 | MARKS PLUMBING PARTS | SLOAN ROYAL / REGAL DIAPHRAGM FOR INTERNAL PARTS KITS A-156-A | $103.80 |

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| **100 - GENERAL FUND** | | | |
| 63917 | MARKS PLUMBING PARTS | SLOAN ROYAL CHROME 1 1/2" SPUD COUPLING ASSEMBLY F-5-A | $153.00 |
| 63917 | MARKS PLUMBING PARTS | MOEN 4" TWO-HANDLE METERING FAUCET | $1,144.00 |
| 63917 | MARKS PLUMBING PARTS | T&S SINGLE HANDLE PANTRY FAUCET WITH LEVER HANDLE | $286.74 |
| 63917 | MARKS PLUMBING PARTS | CACHE PERLATOR JUNIOR AERATOR 1.5 GPM M21.5 X 1 MALE | $118.56 |
| 63917 | MARKS PLUMBING PARTS | SLOTLESS MALE VANDAL PROOF AERATOR 1.5 GPM (1 PER BAG) | $28.10 |
| 63917 | MARKS PLUMBING PARTS | T&S TWO HANDLE SINGLE HOLE PANTRY FAUCET WITH GOOSENECK SPOUT | $242.43 |
| 63917 | MARKS PLUMBING PARTS | SLOAN NEW STYLE VACUUM BREAKER REPAIR KIT V-651 -A | $148.08 |
| 63917 | MARKS PLUMBING PARTS | SLOAN CHROME NEW STYLE 1 1/2" X 1 1/2" X 9" VACUUM BREAKER ASSEMBLY V-600-AA | $293.40 |
| 63917 | MARKS PLUMBING PARTS | 1-1/4 X 12 17GA SJ EXT TUBE | $71.82 |
| 63917 | MARKS PLUMBING PARTS | 1-1/4X12 17G FINE THD EXT TUBE | $83.28 |
| 63917 | MARKS PLUMBING PARTS | MOEN SELF-CLOSING CARTRIDGE | $546.36 |
| 63917 | MARKS PLUMBING PARTS | DURACELL 6V LITHIUM BATTERY DL223A | $245.52 |
| 63917 | MARKS PLUMBING PARTS | NEOPERL AERATOR INSERT 1.5 GPM (INCLUDES WASHERS) | $32.16 |
| 63917 | MARKS PLUMBING PARTS | 13/16" - 24 FEMALE AERATOR SET REPLACES CHICAGO E3 2.2 GPM (1 PER BAG) | $71.76 |
| 63917 | MARKS PLUMBING PARTS | MARK'S BLUE SUMMER MESH BACK HAT | $25.16 |
| 63917 | MARKS PLUMBING PARTS | SLOTLESS MALE VANDAL PROOF AERATOR 1.5 GPM (1 PER BAG) | $39.34 |
| 63918 | MENDENHALL EQUIPMENT CO | PINCHTUBE-CWE-HYPALON FOR WASHING MACHINE | $37.02 |

## Approval of Bills Report

**Fiscal Year:** 2021-2022

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| **100 - GENERAL FUND** | | | |
| 63920 | MILES CONSTRUCTION | TEAR OUT AND REPLACE FRONT CONCRETE DSC | $18,265.00 |
| 63922 | NAPA AUTO PARTS | OIL SEAL | $8.79 |
| 63922 | NAPA AUTO PARTS | MAX STOP LEAK, SINGLE LEAD | $44.92 |
| 63923 | NEWMAN, G. ROBERT | PAINTING - MINICO | $1,435.00 |
| 63923 | NEWMAN, G. ROBERT | PAINTING EAST | $3,850.00 |
| 63923 | NEWMAN, G. ROBERT | PAINTING WEST | $560.00 |
| 63923 | NEWMAN, G. ROBERT | PAINTING TLC | $35.00 |
| 63923 | NEWMAN, G. ROBERT | PAINT SUPPLIE DISTRICT WIDE - ROLLERS, SPACKLE, ETC | $700.00 |
| 63925 | NORTHSIDE WELDING, INC | FIX FLAG POLE AT MINICO | $188.51 |
| 63926 | NPC INTERNATIONAL | FACILITY COMMITTEE LUNCHES | $27.98 |
| 63927 | NU VU GLASS, INC. | MINICO EXTERIOR DOORS | $19,182.00 |
| 63927 | NU VU GLASS, INC. | WEST LIBRARY DOORS | $2,237.00 |
| 63928 | O'REILLY AUTO PARTS | 3 OIL FILTER, 2 AIR FILTER | $27.58 |
| 63929 | PITNEY BOWES | 2021-2022 POSTAGE MACHINE RENTAL | $117.50 |
| 63930 | PLATT ELECTRIC SUPPLY, INC | REPLACEMENT COIL, IRRIGATION PUMP, | $774.54 |
| 63930 | PLATT ELECTRIC SUPPLY, INC | BOX MOUNT | $1.55 |
| 63930 | PLATT ELECTRIC SUPPLY, INC | DUPLEX RECEPTACLE | $21.84 |
| 63930 | PLATT ELECTRIC SUPPLY, INC | DUPLEX RECEPTACLE | $21.84 |
| 63930 | PLATT ELECTRIC SUPPLY, INC | APPLIANCE SWITCH | $25.13 |
| 63930 | PLATT ELECTRIC SUPPLY, INC | SENSOR SWITCH KIT | $308.25 |
| 63930 | PLATT ELECTRIC SUPPLY, INC | ASTRONOMIC TIMER, VINYL INSULATED TERMINAL | $90.63 |
| 63930 | PLATT ELECTRIC SUPPLY, INC | FREIGHT | $0.94 |
| 63930 | PLATT ELECTRIC SUPPLY, INC | FREIGHT | $37.61 |
| 63930 | PLATT ELECTRIC SUPPLY, INC | REMOTE SWITCH, LOCKING SWITCH | $189.72 |
| 63930 | PLATT ELECTRIC SUPPLY, INC | ASTRONOMIC TIMER | $80.60 |
| 63930 | PLATT ELECTRIC SUPPLY, INC | SOLID BLACK, RED, WHITE, BLUE, GREEN COPPER WIRE, CONDUIT KNOCKOUTS, HANDY BOXES | $561.22 |

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| **100 - GENERAL FUND** | | | |
| 63931 | POSTMASTER | (2) ROLLS POSTAGE STAMPS FOR USE IN TRANSPORTATION DEPT. | $110.00 |
| 63932 | POWERSCHOOL GROUP LLC | POWERSCHOOL SPANISH REGISTRATION PORTAL | $928.77 |
| 63933 | QUILL CORPORATION | CASIO HR-170RC 12 DIGIT DESKTOP PRINGTING CALCULATOR | $33.24 |
| 63933 | QUILL CORPORATION | CUSTOM #10 WINDOW ENVELOPES | $66.27 |
| 63933 | QUILL CORPORATION | QUILL BRAND® WASHABLE GLUE STICKS, 0.28 OZ., PURPLE (DRIES CLEAR), 4/PACK (25959-QCC) | $3.22 |
| 63933 | QUILL CORPORATION | ACCO 6" HANGING DATA BINDER WITH PRESSTEX COVER, EXECUTIVE RED (54129) | $11.47 |
| 63933 | QUILL CORPORATION | SMEAD VIEWABLES COLOR-CODED LABELS, REFILL PACK, BLANK, WHITE, 160/PACK (64915) | $14.02 |
| 63933 | QUILL CORPORATION | QUILL BRAND® STANDARD STAPLES, 1/4", 5,000/BOX (35065) | $14.90 |
| 63933 | QUILL CORPORATION | QUILL BRAND #6 3/4 BUSINESS ENVELOPE, 3 5/8" X 6 1/2", WHITE, 500/BOX (69665 / 70692) | $11.34 |
| 63933 | QUILL CORPORATION | QUILL BRAND® PERMANENT MARKERS, CHISEL TIP, BLACK, DOZEN (716897QL)) | $14.44 |
| 63933 | QUILL CORPORATION | OFFISTAMP PRE-INKED STAMP, ENTERED, RED INK (034520) | $7.39 |
| 63933 | QUILL CORPORATION | TRU RED™ HANGING FOLDER TAB INSERT, 2", WHITE, 100/PACK (TR117762) | $4.58 |
| 63933 | QUILL CORPORATION | POST-IT® SIGN HERE' MESSAGE FLAGS, 1" WIDE, YELLOW, 100 FLAGS/PACK (680-SH2) | $4.88 |
| 63933 | QUILL CORPORATION | POST-IT® FLAGS, 1" X 1.7", BLUE, 100 FLAGS (680-BE2) | $7.90 |
| 63933 | QUILL CORPORATION | POST-IT® FLAGS VALUE PACK, 1" WIDE, ASSORTED COLORS, 200 FLAGS/PACK PLUS FLAG+ HIGHLIGHTER (680-PPBGVA) | $24.80 |
| 63933 | QUILL CORPORATION | POST-IT® ARROW FLAGS VALUE PACK, .47" X 1.7", ASSORTED COLORS, 252 FLAGS (684-VAD2) | $6.59 |
| 63933 | QUILL CORPORATION | QUILL BRAND® STANDARD GRADE PENCIL, #2 LEAD, DOZEN (T7112) | $6.35 |
| 63933 | QUILL CORPORATION | QUILL BRAND® SELF-STICK NOTES, 1-1/2" X 2", YELLOW, 100 SHEETS/PAD, 12 PADS/PACK (7382YW) | $5.80 |
| 63933 | QUILL CORPORATION | POST-IT® SUPER STICKY NOTES, 3" X 3", CANARY YELLOW, 90 SHEETS/PAD, 12 PADS/PACK (654-12SSCY) | $394.80 |
| 63933 | QUILL CORPORATION | PROCELL ALKALINE BATTERY, AA, 24/PACK (PC1500BKD01) | $44.98 |

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| **100 - GENERAL FUND** | | | |
| 63933 | QUILL CORPORATION | PROCELL ALKALINE BATTERY, AAA, 24 PACK (479074) | $64.77 |
| 63933 | QUILL CORPORATION | BIC WITE-OUT CORRECTION FLUID, WHITE, 3/PACK (50603) | $11.88 |
| 63933 | QUILL CORPORATION | QUILL BRAND® MINI BINDER CLIPS, 1/4" CAPACITY, BLACK, 12/BOX (720100) | $21.24 |
| 63933 | QUILL CORPORATION | EXPO LOW ODOR DRY ERASE MARKERS, CHISEL POINT, BLUE, DOZEN (80003) | $38.97 |
| 63933 | QUILL CORPORATION | ELMER'S NO-WRINKLE RUBBER CEMENT, 4 OZ. (E904) | $6.80 |
| 63933 | QUILL CORPORATION | EXPO DRY ERASE MARKERS, CHISEL POINT, ASSORTED, 4/PACK (80174) | $8.98 |
| 63933 | QUILL CORPORATION | EXPO BLOCK ERASER (81505) | $4.50 |
| 63933 | QUILL CORPORATION | BIC BRITE LINER STICK HIGHLIGHTER, CHISEL TIP, YELLOW, 24/PACK (BL241YEL) | $19.98 |
| 63933 | QUILL CORPORATION | OXFORD 1-SUBJECT NOTEBOOK, 8" X 10 1/2", WIDE RULED, 70 SHEETS, ASSORTED COLORS (65000) | $18.60 |
| 63933 | QUILL CORPORATION | QUILL BRAND® LASER ADDRESS LABELS, 1" X 2-5/8", WHITE, 30 LABELS/SHEET, 100 SHEETS/BOX (COMPARABLE TO AVERY 5160) | $73.92 |
| 63933 | QUILL CORPORATION | PAPER MATE PROFILE RT RETRACTABLE BALLPOINT PENS, BOLD POINT, BLUE INK, DOZEN (89466) | $11.89 |
| 63933 | QUILL CORPORATION | PAPER MATE PROFILE RETRACTABLE BALLPOINT PENS, BOLD POINT, BLACK INK, 12/PACK (89465) | $43.95 |
| 63933 | QUILL CORPORATION | QUILL BRAND® CLASP CATALOG ENVELOPE, 6" X 9", KRAFT, 100/BOX (7CL6928) | $28.74 |
| 63933 | QUILL CORPORATION | QUILL BRAND® CLASP CATALOG ENVELOPE, 9" X 12", KRAFT, 100/BOX (7CL91228) | $26.30 |
| 63933 | QUILL CORPORATION | QUILL BRAND® CLASP CATALOG ENVELOPE, 10" X 13", KRAFT, 100/BOX (7CL101328) | $50.64 |
| 63933 | QUILL CORPORATION | QUILL BRAND® INVISIBLE TAPE, MATTE FINISH, 3/4" X 36 YDS., 12 /PACK (765002PK) | $38.24 |
| 63933 | QUILL CORPORATION | QUILL BRAND® CONTOUR TAPE DISPENSER, BLACK (11546-QCC) | $21.95 |
| 63933 | QUILL CORPORATION | QUILL BRAND® STENO PADS, 6" X 9", GREGG RULED, WHITE, 80 SHEETS/PAD, 12 PADS/PACK (SBNW) | $13.35 |
| 63933 | QUILL CORPORATION | SHARPIE PERMANENT MARKER, FINE TIP, BLACK, DOZEN (30001) | $12.96 |
| 63933 | QUILL CORPORATION | EXPO DRY ERASE MARKER, CHISEL POINT, BLACK, 12/PACK (80001) | $64.95 |

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| **100 - GENERAL FUND** | | | |
| 63933 | QUILL CORPORATION | BIC ROUND STIC XTRA-LIFE BALLPOINT PENS, MEDIUM POINT, BLACK INK, 60/PACK (GSM609-BLK) | $6.39 |
| 63933 | QUILL CORPORATION | QUILL BRAND® CARD STOCK, 8 1/2" X 11", WHITE, 250/PACK | $28.88 |
| 63933 | QUILL CORPORATION | EXPO DRY ERASE MARKERS, CHISEL POINT, RED, DOZEN (80002) | $64.95 |
| 63933 | QUILL CORPORATION | QUILL BRAND® WHITE-OUT SIDEWINDER CORRECTION TAPE, WHITE, 2/PACK (52039-QL) | $21.48 |
| 63933 | QUILL CORPORATION | PENTEL SUPER HI-POLYMER HB LEAD REFILLS, 0.5MM, 1 TUBE (C505-HB) | $8.05 |
| 63933 | QUILL CORPORATION | QUILL BRAND® FILE FOLDERS, ASSORTED TABS, 1/3-CUT , LEGAL SIZE, MANILA, 100/BOX (760137) | $40.17 |
| 63933 | QUILL CORPORATION | STAPLES 12" WOODEN IMPERIAL/METRIC RULER (51891) | $40.50 |
| 63933 | QUILL CORPORATION | SMEAD SEAL & VIEW LABEL PROTECTORS, 3-1/2" X 1-11/16", CLEAR, 100/PACK (67600) | $14.10 |
| 63933 | QUILL CORPORATION | PENDAFLEX REINFORCED HANGING FILE FOLDERS, 1/5 TAB, LETTER SIZE, BLACK, 25/BOX (PFX 4152 1/5 BLA) | $22.96 |
| 63933 | QUILL CORPORATION | AVERY BIG TAB INSERTABLE PAPER DIVIDERS, 5-TAB, MULTICOLOR (11121) | $7.12 |
| 63933 | QUILL CORPORATION | EXACT INDEX CARDSTOCK PAPER, 110 LBS, 8.5" X 11", WHITE, 250/PACK (40411) | $41.64 |
| 63933 | QUILL CORPORATION | AVERY EASY PEEL LASER ADDRESS LABELS, 1" X 2 5/8", WHITE, 3000 LABELS PER PACK (5160) | $27.81 |
| 63933 | QUILL CORPORATION | EXPO LOW ODOR DRY ERASE MARKER, CHISEL POINT, PURPLE (80008) | $7.80 |
| 63933 | QUILL CORPORATION | QUILL BRAND® JUMBO PAPER CLIPS, 1000 COUNT, 1 PACK = 10 BOXES (P1JG) | $11.82 |
| 63933 | QUILL CORPORATION | QUILL BRAND® REGULAR PAPER CLIPS, 1000 COUNT, 1 PACK = 10 BOXES (P1KS) | $4.60 |
| 63933 | QUILL CORPORATION | PAPER MATE PINK PEARL BLOCK ERASERS, PINK, DOZEN (70521) | $6.39 |
| 63933 | QUILL CORPORATION | QUILL BRAND® 8" STAINLESS-STEEL SCISSORS, STRAIGHT TIP, BLUE (790703BE) | $24.80 |
| 63933 | QUILL CORPORATION | QUILL BRAND® CONTEMPORARY DESKTOP FULL-STRIP STAPLER, METALLIC BLACK (79604Q) | $46.70 |
| 63933 | QUILL CORPORATION | AVERY BIG TAB INSERTABLE PAPER 5 TAB DIVIDERS, MULTICOLOR, SET (11109) | $1.95 |

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| **100 - GENERAL FUND** | | | |
| 63933 | QUILL CORPORATION | QUILL BRAND® 1-HOLE PUNCH, 5 SHEET CAPACITY, SILVER/BLUE (11514-QL) | $11.50 |
| 63933 | QUILL CORPORATION | QUILL BRAND® PREMIUM RUBBER BAND, POSTAL SIZE #64, 3-1/2"L X 1/4"W, 1 LB RESEALABLE BAG (790064) | $14.60 |
| 63933 | QUILL CORPORATION | COMMAND™ MEDIUM UTILITY HOOKS MEGA PACK, WHITE, 20 HOOKS (17001-MPES) | $17.42 |
| 63933 | QUILL CORPORATION | SCOTCHBLUE™ ORIGINAL PAINTER'S TAPE VALUE PACK, 0.94" X 60 YDS., BLUE, 6/ROLLS (2090-24EVP) | $23.39 |
| 63933 | QUILL CORPORATION | BIC GLIDE BOLD RETRACTABLE BALLPOINT PEN (FORMERLY BIC ATLANTIS VELOCITY BOLD), BOLD POINT, BLUE INK, DOZEN (18509/VLGB11BE) | $11.89 |
| 63933 | QUILL CORPORATION | PILOT G2 RETRACTABLE GEL PENS, BOLD POINT, BLUE INK, DOZEN (31257) | $25.48 |
| 63933 | QUILL CORPORATION | PILOT G2 RETRACTABLE GEL PENS, BOLD POINT, BLACK INK, DOZEN (31256) | $25.48 |
| 63933 | QUILL CORPORATION | 2021-2022 HOUSE OF DOOLITTLE 13" X 18.5" ACADEMIC DESK PAD CALENDAR, CLASSIC, WHITE/BLUE (1556-22) | $8.37 |
| 63933 | QUILL CORPORATION | POST-IT® SUPER STICKY NOTES CABINET PACK, 3" X 3", RIO DE JANEIRO COLLECTION, 70 SHEETS/PAD, 24 PADS/PACK (654-24SSAU-CP) | $28.04 |
| 63933 | QUILL CORPORATION | POST-IT® NOTES, 1 3/8" X 1 7/8" MARSEILLE COLLECTION, 100 SHEETS/PAD, 24 PADS/PACK (653-24APVAD) | $13.00 |
| 63933 | QUILL CORPORATION | QUILL BRAND® HEAVY-DUTY EASY OPEN 4" 3-RING BINDER WITH D-RINGS, BLACK (780551) | $83.28 |
| 63933 | QUILL CORPORATION | PACON ART1ST MIXED MEDIA ART PAPER, 12" X 18", WHITE, 60 SHEETS (PAC4843Q) | $34.65 |
| 63933 | QUILL CORPORATION | LOOSE LEAF BOOK RINGS; 1-1/2", 100/BOX | $13.42 |
| 63933 | QUILL CORPORATION | QUILL BRAND® PERMANENT MARKERS, CHISEL TIP, ASSORTED, DOZEN (716896QL) | $65.40 |
| 63933 | QUILL CORPORATION | DATAPRODUCTS UNIVERSAL RIBBON, BLACK/RED (R2087) | $12.34 |
| 63933 | QUILL CORPORATION | AVERY BIG TAB INSERTABLE PAPER DIVIDERS | $3.38 |
| 63933 | QUILL CORPORATION | BUSINESS CARD SLEEVE | $9.60 |
| 63933 | QUILL CORPORATION | CUSTOM QUILL SELF INKING PRINTING STAMP | $19.54 |
| 63936 | REFRIGERATION SUPPLIES | RETURN THERMOSTAT | ($172.00) |
| 63936 | REFRIGERATION SUPPLIES | HART REF5TI 20 | $691.76 |

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| **100 - GENERAL FUND** | | | |
| 63936 | REFRIGERATION SUPPLIES | TOGGLE SWITCH | $135.25 |
| 63936 | REFRIGERATION SUPPLIES | BLOWER WHEEL | $64.20 |
| 63936 | REFRIGERATION SUPPLIES | INTERNET PROGRAMMABLE THERMOSTAT | $1,204.00 |
| 63936 | REFRIGERATION SUPPLIES | INTERNET PROGRAMMABLE THERMOSTAT, EXTENDED RANGE GATEWAY, RANGE REPEATER | $422.00 |
| 63936 | REFRIGERATION SUPPLIES | INTERNET PROGRAMMABLE THERMOSTAT | $688.00 |
| 63936 | REFRIGERATION SUPPLIES | FLOW SWITCH | $194.06 |
| 63936 | REFRIGERATION SUPPLIES | SPRING RETURN DIRECT COUPLED ACTUATOR | $193.07 |
| 63936 | REFRIGERATION SUPPLIES | POTENTIAL RELAY | $60.87 |
| 63936 | REFRIGERATION SUPPLIES | 1/4 HP MOTOR 115V, PROGRAMMABLE TEMP. AND C02 TERMOSTAT, TEMP. ALARM SENSOR, REMOTE THERMOSTAT BATTERY POWERED, ZONE CONTROLLER, | $2,234.99 |
| 63938 | RICKY ALLEN GARNER | FIX GYM FLOOR AND FINISH THE GYM FLOOR | $2,800.00 |
| 63939 | RIDLEY'S FOOD & DRUG | MILK AND DONUTS | $38.23 |
| 63939 | RIDLEY'S FOOD & DRUG | (5) DOZEN SWEET ROLLS AND JUICE FOR TRANSPORTATION PERSONNEL FOR DRIVER MEETING 7-27-21 | $40.63 |
| 63941 | RUPERT LUMBER & PAINT | 2X6X8 BTR | $50.22 |
| 63941 | RUPERT LUMBER & PAINT | 2x4x10 BTR | $167.40 |
| 63941 | RUPERT LUMBER & PAINT | JOINT COMPOUND BOX | $13.99 |
| 63941 | RUPERT LUMBER & PAINT | ENDCAP | $19.96 |
| 63941 | RUPERT LUMBER & PAINT | 2X4X10 BTR | $14.85 |
| 63942 | RUPERT MEDICAL CENTER | CHRUZA DOT PHYSICALS FOR MECHANICS IN TRANSPORTATION DEPT | $80.00 |
| 63942 | RUPERT MEDICAL CENTER | SFOWLER DOT PHYSICALS FOR MECHANICS IN TRANSPORTATION DEPT | $80.00 |
| 63945 | SCHINDLER ELEVATOR CORP | ELEVATOR SERVICE MINICO | $605.85 |
| 63946 | SCHOLASTIC BOOK CLUB | SCHOLASTIC CHOICES MAGAZINE (L. BAIR) | $117.15 |
| 63946 | SCHOLASTIC BOOK CLUB | JUNIOR SCHOLASTIC MAGAZINE (R. FREIBURGER) | $294.14 |
| 63946 | SCHOLASTIC BOOK CLUB | SCOPE MAGAZINE (M. FROST) | $316.45 |
| 63946 | SCHOLASTIC BOOK CLUB | SCHOLASTIC ACTION MAGAZINE (D. HAMMER) | $187.88 |

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| **100 - GENERAL FUND** | | | |
| 63946 | SCHOLASTIC BOOK CLUB | SCHOLASTIC SCOPE MAGAZINE (K. HAMILTON | $296.67 |
| 63946 | SCHOLASTIC BOOK CLUB | SCHOLASTIC NEWS MAGAZINE (N. MANNING | $93.94 |
| 63946 | SCHOLASTIC BOOK CLUB | SCHOLASTIC ACTION MAGAZINE (N. MANNING | $58.96 |
| 63946 | SCHOLASTIC BOOK CLUB | SCHOLASTIC SCOPE MAGAZINE ((K. SAUREY | $316.45 |
| 63946 | SCHOLASTIC BOOK CLUB | SUPERSCIENCE MAGAZINE (K . TARBET | $229.83 |
| 63947 | SCHOWS, INC | STEERING SHIFT TUBE | $45.55 |
| 63947 | SCHOWS, INC | 3 OIL FILTERS FOR DODGE CARAVAN | $15.03 |
| 63947 | SCHOWS, INC | 2016 DODGE BATTERY | $157.07 |
| 63947 | SCHOWS, INC | BLUE VINYL INSULATION TERMINAL | $5.55 |
| 63948 | SHERWIN WILLIAMS | PAINT AND SUPPLIES MINICO | $21.79 |
| 63948 | SHERWIN WILLIAMS | PTR EDGE FL EXTRA | $1,368.00 |
| 63948 | SHERWIN WILLIAMS | PAINT- MINICO | $30.49 |
| 63949 | SILVER CREEK SUPPLY | HUNTER I-20 ULTRA PC/FC ROTOR W/CK | $2,129.60 |
| 63949 | SILVER CREEK SUPPLY | HUNTER I-25 ULTRA 4" ROTOR W/CV | $787.44 |
| 63949 | SILVER CREEK SUPPLY | RB8005 ROTOR PC/FC 5" | $1,315.68 |
| 63949 | SILVER CREEK SUPPLY | RB 1800 POP-UP SPRAY HEAD 4" | $88.30 |
| 63949 | SILVER CREEK SUPPLY | RB PLASTIC NOZZLE VARI/ARC 12' | $116.20 |
| 63949 | SILVER CREEK SUPPLY | RB PLASTIC NOZZLE VARI/ARC 12' | $58.10 |
| 63949 | SILVER CREEK SUPPLY | RB PLASTIC NOZZLE CARIL/ARC | $29.05 |
| 63949 | SILVER CREEK SUPPLY | MARLEX CUTOFF NIPPLE MIPT X FIPT 3/4 "X4" | $125.00 |
| 63949 | SILVER CREEK SUPPLY | MARLEX CUTOFF NIPPLE MIPT XFIPT 1/2" X 3" | $45.00 |
| 63949 | SILVER CREEK SUPPLY | RB PGA SERIES STR/ANG VALVE 1" | $128.72 |
| 63949 | SILVER CREEK SUPPLY | BAF 3/4 FULL OR PART CIRCLE BRASS IMPACT NO NOZZLE | $148.88 |
| 63949 | SILVER CREEK SUPPLY | AQUALINE BRASS QUICK COUPLING VALVE 3/4" | $109.04 |
| 63949 | SILVER CREEK SUPPLY | MARLEX ST 90 ELBOW MXF M412-007 3/4" | $37.00 |
| 63949 | SILVER CREEK SUPPLY | RB SWING ELL BARB X MALE 90 3/4" | $9.99 |
| 63949 | SILVER CREEK SUPPLY | HUNTER 1-20 ULTRA PC | $532.40 |

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| **100 - GENERAL FUND** | | | |
| 63950 | SNAKE RIVER PEST CONTROL | ANTS/GRUBS SPRAYED | $240.00 |
| 63952 | SPRINKLER SHOP,INC | BIRD AQUABURST, NOZZLE, | $332.04 |
| 63952 | SPRINKLER SHOP,INC | ELBOW PVC | $6.05 |
| 63953 | STANDARD PLUMBING CO | CLAMPS, ELBOW, BUSHING, NIPPLE, TEE | $20.59 |
| 63953 | STANDARD PLUMBING CO | ADAPTER, SELF IGNITION TORCH | $126.50 |
| 63953 | STANDARD PLUMBING CO | CHECK VALVE | $2.26 |
| 63953 | STANDARD PLUMBING CO | WASHER BOX, PVC ELBOWS, PIPE CLAMP, PEX PIPE, ADAPTER, COUPLINGS, TEE, CRIMP RINGS | $81.11 |
| 63953 | STANDARD PLUMBING CO | COUPLING | $19.99 |
| 63954 | STARS FERRY BUILDING SUP | SHEETROCK | $39.75 |
| 63954 | STARS FERRY BUILDING SUP | JOINT COMPOUND | $8.99 |
| 63954 | STARS FERRY BUILDING SUP | SHEETROCK, DURA BEAD NAIL ON | $48.83 |
| 63954 | STARS FERRY BUILDING SUP | POLE SANDER, SANDING SCRN DRYWALL, JOINT COMPOUND | $85.94 |
| 63954 | STARS FERRY BUILDING SUP | FURRING STRIPS, 2X4 STUDS | $55.55 |
| 63954 | STARS FERRY BUILDING SUP | 4X8 WHITE PANELS, MOULDINGS | $409.64 |
| 63955 | STATE DEPARTMENT OF EDUCATION | 2020-21 STUDENT TRANSPORTATION PROGRAM ASSESSMENT FEE | $6,132.00 |
| 63956 | STERLING BATTERY COMPANY | 3 A315-1150 - BATTERIES FOR BUSES | $329.85 |
| 63957 | TEXAS ASSOCIATION OF SCHOOL BOARDS | BOARDBOOK LICENSE | $2,250.00 |
| 63960 | WCEPS | WIDA SCREENER FOR KINDERGARTEN | $639.00 |
| 63960 | WCEPS | SHIPPING FOR WIDA SCREENER FOR KINDERGARTEN | $72.00 |
| 63961 | WESTERN RECORDS DESTRUCTION | SHREDDING FOR BUSINESS OFFICE | $231.00 |
| 63961 | WESTERN RECORDS DESTRUCTION | RECORD DESTRUCTION CONTAINER JULY-JUNE SHRED EVERY OTHER MONTH 64 GAL CONTAINER | $36.00 |
| 63961 | WESTERN RECORDS DESTRUCTION | EXTRA RECORD DESTRUCTION CONTAINER FOR VAULT RECORDS | $90.00 |
| 63961 | WESTERN RECORDS DESTRUCTION | RECORD DESTRUCTION CONTAINER JULY-JUNE SHRED EVERY OTHER MONTH 64 GAL CONTAINER | $36.00 |

## Approval of Bills Report

**Fiscal Year:** 2021-2022

**Criteria:**

**Voucher:** 3955

**Report Sort:** FUND **From Fund:** 100 **To:** 999 ☐ Page Break ☐ Exclude Invoice Description

| Check Number | Vendor | Description | Amount |
|---|---|---|---|
| **100 - GENERAL FUND** | | | |
| 63961 | WESTERN RECORDS DESTRUCTION | SHRED BIN 2021-2022 | $33.00 |
| | | **Total for 100 - GENERAL FUND** | **$330,387.00** |
| **241 - DRIVER EDUCATION FUND** | | | |
| 63915 | MAGIC VALLEY TIRE RUPERT | MISCELLANOUS REPAIRS TO DE CAR WHITE MALIBU - STRUTS ASSEMBLIES STRUT INSTALL, 4-WHEEL ALIGNMENTWITH SHIMS - 4 WHEEL ALIGN -D/CAR | $1,016.18 |
| 63947 | SCHOWS, INC | BATTERIES | $127.00 |
| 63947 | SCHOWS, INC | FOOT PEDAL W/FOOT RESET | $446.00 |
| | | **Total for 241 - DRIVER EDUCATION FUND** | **$1,589.18** |
| **243 - PROFESSIONAL TECHNICAL - STATE** | | | |
| 63921 | MINIDOKA MEMORIAL HOSPITAL | BLS CARD | $270.00 |
| 63921 | MINIDOKA MEMORIAL HOSPITAL | HEARTSAVER CPR AED CARD | $21.00 |
| 63958 | TWIN FALLS SEWING CENTER | SEWING MACHINE PARTS | $144.97 |
| 63958 | TWIN FALLS SEWING CENTER | SCISSORS SHARPENED | $51.00 |
| 63958 | TWIN FALLS SEWING CENTER | SERVICE CLASSROOM SEWING MACHINES | $760.00 |
| | | **Total for 243 - PROFESSIONAL TECHNICAL - STATE** | **$1,246.97** |
| **245 - PUBLIC SCHOOL TECHNOLOGY FUND** | | | |
| 63862 | AMAZON/GEMB | LG 55 ALEXA BUILT IN 4K SMART UHD TV | $576.99 |
| 63862 | AMAZON/GEMB | LG 55 ALEXA BUILT IN 4K SMART UHD TV | $1,730.97 |
| 63862 | AMAZON/GEMB | ROLLING MOBILE CARTS | $169.98 |
| 63862 | AMAZON/GEMB | ROLLING MOBILE CARTS | $169.98 |
| 63862 | AMAZON/GEMB | ROLLING MOBILE CARTS | $339.96 |
| 63862 | AMAZON/GEMB | ROLLING MOBILE CARTS | $169.98 |
| 63862 | AMAZON/GEMB | ROLLING MOBILE CARTS | $849.90 |
| 63862 | AMAZON/GEMB | USB TYPE-C TO USB 3.1 (10 PK) | $135.60 |

## Approval of Bills Report

**Fiscal Year:** 2021-2022

**Criteria:**

**Voucher:** 3955

**Report Sort:** FUND **From Fund:** 100 **To:** 999 ☐ Page Break ☐ Exclude Invoice Description

| Check Number | Vendor | Description | Amount |
|---|---|---|---|
| **245 - PUBLIC SCHOOL TECHNOLOGY FUND** | | | |
| 63862 | AMAZON/GEMB | LG 55 ALEXA BUILT IN 4K SMART UHD TV | $576.99 |
| 63862 | AMAZON/GEMB | LG 55 ALEXA BUILT IN 4K SMART UHD TV | $576.99 |
| 63862 | AMAZON/GEMB | LG 55 ALEXA BUILT IN 4K SMART UHD TV | $3,461.94 |
| 63866 | APPLE, INC | MAGIC MOUSE 2 - SILVER | $79.00 |
| 63866 | APPLE, INC | MAGIC MOUSE 2 - SILVER | $79.00 |
| 63866 | APPLE, INC | MAGIC MOUSE 2 - SILVER | $79.00 |
| 63866 | APPLE, INC | MAGIC MOUSE 2 - SILVER | $79.00 |
| 63866 | APPLE, INC | MAGIC MOUSE 2 - SILVER | $79.00 |
| 63866 | APPLE, INC | MAGIC KEYBOARD - SILVER | $129.00 |
| 63866 | APPLE, INC | MAGIC KEYBOARD - SILVER | $129.00 |
| 63866 | APPLE, INC | MAGIC KEYBOARD - SILVER | $129.00 |
| 63866 | APPLE, INC | MAGIC KEYBOARD - SILVER | $129.00 |
| 63866 | APPLE, INC | MAGIC KEYBOARD - SILVER | $129.00 |
| 63866 | APPLE, INC | APPLE TV HD 32 GB | $149.00 |
| 63866 | APPLE, INC | APPLE TV HD 32 GB | $149.00 |
| 63866 | APPLE, INC | APPLE TV HD 32 GB | $149.00 |
| 63866 | APPLE, INC | APPLE TV HD 32 GB | $149.00 |
| 63866 | APPLE, INC | APPLE TV HD 32 GB | $149.00 |
| 63866 | APPLE, INC | APPLE TV HD 32 GB | $149.00 |
| 63866 | APPLE, INC | APPLE TV HD 32 GB | $149.00 |
| 63866 | APPLE, INC | APPLE TV HD 32 GB | $149.00 |
| 63866 | APPLE, INC | APPLE TV HD 32 GB | $149.00 |
| 63866 | APPLE, INC | APPLE TV HD 32 GB | $149.00 |
| 63866 | APPLE, INC | APPLE TV HD 32 GB | $149.00 |
| 63866 | APPLE, INC | APPLE TV HD 32 GB | $149.00 |

## Approval of Bills Report

**Fiscal Year:** 2021-2022

**Criteria:**

**Voucher:** 3955

**Report Sort:** FUND **From Fund:** 100 **To:** 999 ☐ Page Break ☐ Exclude Invoice Description

| Check Number | Vendor | Description | Amount |
|---|---|---|---|
| **245 - PUBLIC SCHOOL TECHNOLOGY FUND** | | | |
| 63866 | APPLE, INC | APPLE TV HD 32 GB | $149.00 |
| 63866 | APPLE, INC | APPLE TV HD 32 GB | $149.00 |
| 63866 | APPLE, INC | APPLE TV HD 32 GB | $149.00 |
| 63866 | APPLE, INC | APPLE TV HD 32 GB | $149.00 |
| 63866 | APPLE, INC | APPLE TV HD 32 GB | $149.00 |
| 63866 | APPLE, INC | APPLE TV HD 32 GB | $149.00 |
| 63866 | APPLE, INC | APPLE TV HD 32 GB | $149.00 |
| 63866 | APPLE, INC | APPLE TV HD 32 GB | $149.00 |
| 63866 | APPLE, INC | APPLE TV HD 32 GB | $149.00 |
| 63866 | APPLE, INC | APPLE TV HD 32 GB | $149.00 |
| 63866 | APPLE, INC | APPLE TV HD 32 GB | $149.00 |
| 63866 | APPLE, INC | APPLE TV HD 32 GB | $149.00 |
| 63866 | APPLE, INC | APPLE TV HD 32 GB | $149.00 |
| 63866 | APPLE, INC | APPLE TV HD 32 GB | $149.00 |
| 63866 | APPLE, INC | APPLE TV HD 32 GB | $149.00 |
| 63937 | RENAISSANCE LEARNING | STAR MATH/ READING- MINICO | $6,937.50 |
| 63937 | RENAISSANCE LEARNING | STAR MATH/ READING- EAST | $5,799.00 |
| 63937 | RENAISSANCE LEARNING | STAR MATH/ READING- RUPERT | $1,485.00 |
| 63937 | RENAISSANCE LEARNING | STUDENT IGDI ASSESSMENT SUBSCRIPTION-PRESCHOOL | $150.00 |
| 63937 | RENAISSANCE LEARNING | STAR MATH/ READING- MT HARRISON JR/ SR | $1,740.00 |
| 63937 | RENAISSANCE LEARNING | STAR MATH/ READING- MT HARRISON JR/ SR | $1,740.00 |
| 63937 | RENAISSANCE LEARNING | STAR MATH/ READING- DATA INTEGRATION DSC | $3,125.00 |
| 63937 | RENAISSANCE LEARNING | STAR MATH/ READING- WEST | $6,294.00 |
| | | **Total for 245 - PUBLIC SCHOOL TECHNOLOGY FUND** | **$41,539.78** |

**246 - STATE SUBSTANCE ABUSE FUND**

## Approval of Bills Report

**Fiscal Year:** 2021-2022

**Criteria:**

**Voucher:** 3955

**Report Sort:** FUND **From Fund:** 100 **To:** 999 ☐ Page Break ☐ Exclude Invoice Description

| Check Number | Vendor | Description | Amount |
|---|---|---|---|
| **246 - STATE SUBSTANCE ABUSE FUND** | | | |
| 63861 | ALL WIRELESS COMMUNICATIONS | SITE RENTAL FOR RADIO TOWERS | $200.00 |
| 63955 | STATE DEPARTMENT OF EDUCATION | FINGERPRINTING FOR NEW HIRES AND SUBSTITUTES | $2,000.00 |
| | | **Total for 246 - STATE SUBSTANCE ABUSE FUND** | **$2,200.00** |
| **253 - TITLE I-C ESEA MIGRANT FUND** | | | |
| 63881 | COLLEGE OF SOUTHERN ID | RICK ALLEN ROOM RENTAL- MIGRANT STUDENT LEADERSHIP INSTITUTE | $306.10 |
| 63951 | SODEXO | MIGRANT STUDENT LEADERSHIP INSTITUTE- FOOD | $576.85 |
| | | **Total for 253 - TITLE I-C ESEA MIGRANT FUND** | **$882.95** |
| **257 - TITLE VI-B IDEA SPECIAL ED FUND** | | | |
| 63908 | LRP PUBLICATIONS | SPECIAL ED CONNECTION - PRACTICAL PCLG | $1,650.00 |
| 63940 | RIVERSIDE INSIGHTS | WOODCOCK JOHNSON IV ACHIEVEMENT STANDARD AND EXTENDED FORM A TEST RECORD (25) | $1,749.52 |
| 63940 | RIVERSIDE INSIGHTS | WOODCOCK JOHNSON IV ACHIEVEMENT STANDARD AND EXTENDED FORM B TEST RECORD (25) | $100.35 |
| | | **Total for 257 - TITLE VI-B IDEA SPECIAL ED FUND** | **$3,499.87** |
| **271 - TITLE II-A ESEA IMPROVING TEACHER QUALITY** | | | |
| 63870 | BARNES & NOBLE | TEACH LIKE A CHAMPION 3.0 | $978.40 |
| 63893 | EDUCATIONAL TESTING SERVICE | PARA PROFESSIONAL TESTING | $550.00 |
| | | **Total for 271 - TITLE II-A ESEA IMPROVING TEACHER QUALITY** | **$1,528.40** |
| **290 - FOOD SERVICE FUND** | | | |
| 63864 | AMERICAN LINEN SUPPLY | MATS, DUS MOP, FRAMES, ETC FOR KITCHENS | $48.00 |
| 63864 | AMERICAN LINEN SUPPLY | MATS, DUS MOP, FRAMES, ETC FOR KITCHENS | $48.00 |
| 63864 | AMERICAN LINEN SUPPLY | MATS, DUS MOP, FRAMES, ETC FOR KITCHENS | $48.00 |
| 63864 | AMERICAN LINEN SUPPLY | MATS, DUS MOP, FRAMES, ETC FOR KITCHENS | $48.00 |
| 63868 | BAILEY OIL CO., INC. | FUEL FOR DELIVERY TRUCK AND VAN | $111.84 |

## Approval of Bills Report

**Fiscal Year:** 2021-2022

**Criteria:**
**Report Sort:** FUND **From Fund:** 100 **To:** 999 **Voucher:** 3955
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| Check Number | Vendor | Description | Amount |
|---|---|---|---|
| **290 - FOOD SERVICE FUND** | | | |
| 63873 | BRADY CHEMICAL | CHEMICALS FOR KITCHENS | $374.99 |
| 63878 | CHARLIE'S PRODUCE | EAST MINICO PRODUCE | $133.25 |
| 63878 | CHARLIE'S PRODUCE | MINICO PRODUCE | $1,136.50 |
| 63878 | CHARLIE'S PRODUCE | MINICO PRODUCE | $448.25 |
| 63878 | CHARLIE'S PRODUCE | MINICO PRODUCE | $1,442.65 |
| 63878 | CHARLIE'S PRODUCE | MINICO PRODUCE | $1,202.70 |
| 63888 | DALRY ELECTRIC, INC | NEW WALL OUTLET AND PLUG FOR MIXER AT PAUL ELEMENTARY | $266.70 |
| 63889 | DEAN DAIRY COPRORATE, LLC | RUPERT - MILK | ($26.84) |
| 63889 | DEAN DAIRY COPRORATE, LLC | EAST - MILK | $517.78 |
| 63889 | DEAN DAIRY COPRORATE, LLC | MINICO - MILK | $5,685.93 |
| 63905 | K & R RENT-ALL, INC | DEHUMIDIFIER FOR MINICO HIGH FREEZER BOX | $90.00 |
| 63916 | MARC CORP. | DRAIN CLEANER FOR ALL KITCHENS | $1,096.28 |
| 63919 | MIKEY'S REFRIGERATION INC | SEAL SEAMS INSIDE WALK IN FREEZER | $519.60 |
| 63919 | MIKEY'S REFRIGERATION INC | COOLER CONDENSER FAN | $381.40 |
| 63924 | NICHOLAS & CO | FOOD FOR KITCHENS | $2,610.77 |
| 63924 | NICHOLAS & CO | PAPER AND CLEANING SUPPLIES | $3,068.76 |
| 63924 | NICHOLAS & CO | FOOD FOR KITCHENS | $152.20 |
| 63924 | NICHOLAS & CO | FOOD FOR KITCHENS | $1,155.65 |
| 63924 | NICHOLAS & CO | PAPER AND CLEANING SUPPLIES | $182.32 |
| 63924 | NICHOLAS & CO | FOOD FOR KITCHENS | $3,129.07 |
| 63924 | NICHOLAS & CO | PAPER AND CLEANING SUPPLIES | $284.83 |
| 63924 | NICHOLAS & CO | FOOD FOR KITCHENS | $364.80 |
| 63924 | NICHOLAS & CO | FOOD FOR KITCHENS | $396.63 |
| 63924 | NICHOLAS & CO | FOOD FOR KITCHENS | $662.47 |
| 63924 | NICHOLAS & CO | PAPER AND CLEANING SUPPLIES | $874.34 |
| 63924 | NICHOLAS & CO | FOOD FOR KITCHENS | $353.20 |

## Approval of Bills Report

**Fiscal Year:** 2021-2022

**Criteria:**
**Report Sort:** FUND **From Fund:** 100 **To:** 999 **Voucher:** 3955
☐ Page Break ☐ Exclude Invoice Description

| Check Number | Vendor | Description | Amount |
|---|---|---|---|
| | | **Total for 290 - FOOD SERVICE FUND** | **$26,808.07** |
| **420 - PLANT FACILITY FUND** | | | |
| 63867 | ARNOLD MACHINERY COMPANY | 2013 HYSTER H50CT 2. MAZDA LP FUEL | $17,500.00 |
| 63874 | BRYSON SALES & SERVICE, INC | BLUEBIRD BBCV 1910 30 PASS (SN: 1BAKACSH9NF385082) | $91,192.37 |
| 63874 | BRYSON SALES & SERVICE, INC | BLUEBIRD BBCV 1910 30 PASS (SN:1BAKACSH0NF385083) | $91,192.37 |
| 63907 | LEATHAM & KROHN ARCHITECTS PLLC | ARCHITECTIAL AND STRUCTURAL SERVICES FOR MINICO CONCESSION AND RESTROOM BUILDING | $8,813.28 |
| 63934 | RAMSEY HEATING & ELECTRIC, INC | PAUL HVAC PHASE #4 - AUG PAYMENT | $77,028.00 |
| 63935 | RAMSEY HEATING & ELECTRIC, INC | PAUL HVAC PHASE #4 - FINAL SEP PAYMENT | $77,028.00 |
| 63943 | SANTANDER | 2018 SCHOOL BUSES SN#3751,3752, AND 3753 | $65,905.00 |
| 63944 | SANTANDER | 2020 SCHOOL BUSES SN#3818,3819, AND 3817 | $68,008.00 |
| 63959 | UNITED SERVICE & SALES | SCAG TURF TIGER 61" DECK 37HP VANCUARD EFI | $12,251.40 |
| 63959 | UNITED SERVICE & SALES | SCAG TURF TIGER 72" DECK 37HP VANGUARD EFI | $12,911.20 |
| 63959 | UNITED SERVICE & SALES | NEW LOAD TRAIL 7x16 TANDEM TRAILER 7,000 GVWR W/SPARE | $5,134.50 |
| | | **Total for 420 - PLANT FACILITY FUND** | **$526,963.92** |
| | | Grand Total: | $936,646.14 |

**End of Report**

# MINIDOKA COUNTY SCHOOL DISTRICT #331

## Approval of Bills Report

**Fiscal Year:** 2021-2022

**Criteria:**

**Voucher:** 3956

**Report Sort:** FUND **From Fund:** 100 **To:** 999 ☐ Page Break ☐ Exclude Invoice Description

| Check Number | Vendor | Description | Amount |
|---|---|---|---|
| **100 - GENERAL FUND** | | | |
| 63978 | RAMSEY, JAMES | OUT OF DISTRICT MILEAGE- DISTRICT IV MEETINGS | $51.40 |
| 63978 | RAMSEY, JAMES | IN DISTRICT MILEAGE | $23.48 |
| | | **Total for 100 - GENERAL FUND** | **$74.88** |
| **710 - CLARENCE BIRRER SCHOLARSHIP TRUST FUND** | | | |
| 63962 | BOLDT, GRAYSON | BIRRER SCHOLARSHIP | $1,000.00 |
| 63963 | BOLDT, JAXSON | BIRRER SCHOLARSHIP | $1,000.00 |
| 63964 | DUNCAN, SARA | BIRRER SCHOLARSHIP | $1,500.00 |
| 63966 | HARDCASTLE, MARISSA | BIRRER SCHOLARSHIP | $1,000.00 |
| 63967 | JAQUEZ, JUAN LUIS | BIRRER SCHOLARSHIP | $1,500.00 |
| 63969 | MAUGHAN, ZACKERY | BIRRER SCHOLARSHIP | $1,000.00 |
| 63970 | MAUGHAN, ZAYNE | BIRRER SCHOLARSHIP | $1,000.00 |
| 63971 | MCEWEN, SHANNON | BIRRER SCHOLARSHIP | $1,000.00 |
| 63972 | MERRILL, KENT | BIRRER SCHOLARSHIP | $1,000.00 |
| 63973 | MERRILL, MAURA | BIRRER SCHOLARSHIP | $1,000.00 |
| 63974 | MONTOYA, SAMANTHA | BIRRER SCHOLARSHIP | $1,000.00 |
| 63976 | PFEIFFER, HANA | BIRRER SCHOLARSHIP | $1,000.00 |
| 63979 | STRUCHEN, ASHLYNN | BIRRER SCHOLARSHIP | $1,000.00 |
| | | **Total for 710 - CLARENCE BIRRER SCHOLARSHIP TRUST FUND** | **$14,000.00** |
| **712 - PRIVATE SCHOLARSHIP DONATION** | | | |
| 63965 | GRAF, MEGAN | BIRRER SCHOLARSHIP | $1,000.00 |
| 63968 | KRAUS, ANDREW | BIRRER SCHOLARSHIP | $1,000.00 |
| 63975 | PETERSON, SAYRE | BIRRER SCHOLARSHIP | $1,000.00 |
| 63977 | POOLE, SHAELEE | BIRRER SCHOLARSHIP | $1,000.00 |
| 63980 | VEGA, JESSICA | BIRRER SCHOLARSHIP | $1,000.00 |
| | | **Total for 712 - PRIVATE SCHOLARSHIP DONATION** | **$5,000.00** |

## Approval of Bills Report

**Fiscal Year:** 2021-2022

**Criteria:**

**Report Sort:** FUND **From Fund:** 100 **To:** 999 **Voucher:** 3956

☐ Page Break ☐ Exclude Invoice Description

| Check Number | Vendor | Description | Amount |
|---|---|---|---|
| | | Grand Total: | $19,074.88 |

End of Report

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# GENERAL FUND MONTHLY SUMMARY REVISED TO DATE

## REVENUES:

| | BEG BUDGET | REVISED | JULY | AUGUST | SEPT | OCT | NOV | DEC | JAN | FEB | MARCH | APR | MAY | JUNE | RECEIVABLE | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **LOCAL:** | | | | | | | | | | | | | | | | |
| SUPPLEMENTAL LEVY/REA | $ 2,252,000 | $ 2,268,000 | $ - | $ - | $ - | $ - | $ - | $ 44,568 | $ 1,365,353 | $ 47,023 | $ - | $ 37,867 | $ - | $ 32,397 | $ 740,000 | $ 2,267,208 |
| TAX PENALTY/INTEREST | $ 10,000 | $ 10,000 | $ 1,107 | $ - | $ 1,363 | $ - | $ 1,478 | $ 274 | $ 1,890 | $ 1,234 | $ - | $ 1,635 | $ - | $ 830 | | $ 9,811 |
| TUITION | $ - | $ 38,000 | $ 19,824 | | | | | | $ - | $ - | $ - | $ - | $ - | $ 20,108 | | $ 39,932 |
| BANK/POOL INTEREST | $ 125,000 | $ 50,000 | $ 54 | $ 1,986 | $ 4,182 | $ 4,723 | $ 3,683 | $ 4,108 | $ 3,058 | $ 1,770 | $ 1,631 | $ 1,486 | $ 1,018 | $ 847 | $ 515 | $ 29,061 |
| OTHER LOCAL REV/GRANTS[1] | $ 86,500 | $ 182,500 | $ 52 | $ 183 | $ 1,031 | $ 3,678 | $ 92,562 | $ 5,100 | $ 10,136 | $ 630 | $ 511 | $ 16,830 | $ 448 | $ 45,405 | | $ 176,565 |
| SECONDARY ACTIVITY DUTY | $ 20,000 | $ 20,000 | $ - | $ - | $ - | $ 75 | $ 1,163 | $ 76 | $ 369 | $ 7,485 | $ - | $ 2,770 | $ - | $ 489 | | $ 12,427 |
| ISBA & INSURANCE DIVIDEND | $ 5,000 | $ - | | | $ - | $ - | $ - | $ - | | | | | $ - | | | $ - |
| ERATE | $ 123,000 | $ 123,000 | | | | $ - | | | $ - | | | | | $ - | $ 117,000 | $ 117,000 |
| ARTEC REIMB | $ 655,000 | $ 400,000 | $ 1,494 | | $ 30,987 | $ - | $ 201,616 | $ - | $ - | $ 1,027 | $ - | $ - | $ - | $ 200,472 | | $ 435,595 |
| OTHER FEES | $ - | $ 6,000 | $ 28 | $ 56 | $ - | $ 112 | $ 6,614 | $ 392 | $ 352 | $ 98 | $ 28 | $ 266 | $ - | $ 168 | | $ 8,114 |
| **STATE:** | | | | | | | | | | | | | | | | |
| STATE BASE SUPPORT | $ 19,243,000 | $ 19,284,000 | | $ 11,341,636 | $ - | $ - | $ 4,577,762 | | | $ 3,422,570 | $ - | $ - | $ - | $ - | | $ 19,341,968 |
| TRANSPORTATION | $ 1,565,000 | $ 1,499,000 | | | | | | | | $ 1,107,479 | | | $ - | | $ 423,780 | $ 1,531,259 |
| BENEFIT APPORTIONMENT | $ 2,647,000 | $ 2,815,200 | | | | | | | | $ 536,000 | $ - | $ - | $ 2,281,182 | $ - | | $ 2,817,182 |
| OTHER STATE PAYMENTS[2] | $ 248,000 | $ 1,570,000 | $ - | $ - | $ - | $ - | $ 23,918 | $ 1,362,604 | $ 11,928 | $ - | $ - | $ - | $ 48,974 | $ 130,827 | | $ 1,578,251 |
| TUITION EQUIVALENCY | $ 180,000 | $ 180,000 | | | | | | | | | | | 0.00 | | $ 152,479 | $ 152,479 |
| LOTTERY/MAINT MATCH | $ 321,000 | $ 325,000 | | $ 309,117 | $ - | $ - | $ - | $ 14,924 | | $ - | | | | | | $ 324,041 |
| PROP TAX REPLACEMENT | $ 120,000 | $ 120,000 | $ - | $ 19,213 | | $ 19,213 | | $ - | $ 40,353 | $ - | $ - | $ 19,213 | $ - | $ 660 | $ 20,000 | $ 118,653 |
| **OTHER:** | | | | | | | | | | | | | | | | |
| INDIRECT COSTS TRANSFER | $ 345,000 | $ 265,000 | | | | | | $ 200,000 | | | | | | $ 71,659 | | $ 271,659 |
| GENERAL FUND | $ 27,945,500 | $ 29,155,700 | $ 22,559 | $ 11,672,191 | $ 37,562 | $ 27,801 | $ 4,908,796 | $ 1,632,045 | $ 1,433,439 | $ 5,125,316 | $ 2,170 | $ 80,067 | $ 2,331,622 | $ 503,863 | $ 1,453,774 | $ 29,231,205 |
| **ADDITIONAL STATE GRANTS IN GENERAL FUND:** | | | | | | | | | | | | | | | | |
| STATE SPECIAL FUNDS [3] | $ 974,500 | $ 1,228,000 | | $ 11,256 | $ - | $ 721,107 | $ - | 31,130 | $ - | $ - | $ 86,782 | $ - | $ 100,225 | $ 269,467 | | $ 1,219,967 |
| | $ - | $ - | | | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | | $ - |
| TOTAL GEN PLUS GRANTS | $ 28,920,000 | $ 30,383,700 | $ 22,559 | $ 11,683,447 | $ 37,562 | $ 748,908 | $ 4,908,796 | $ 1,663,175 | $ 1,433,439 | $ 5,125,316 | $ 88,952 | $ 80,067 | $ 2,431,847 | $ 773,330 | $ 1,453,774 | $ 30,451,172 |
| PROJ CARRYOVER | $ 1,650,000 | $ 1,900,000 | | | | | | | | | | | | | | |
| GRAND TOTAL BUDGET | $ 30,570,000 | $ 32,283,700 | | | | | | | | | | | | | | |



## EXPENDITURES:

| | BEG BUDGET | REVISED | JULY | AUGUST | SEPT | OCT | NOV | DEC | JAN | FEB | MARCH | APR | MAY | JUNE | ACCRUAL/ENCUMBRANCE | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SALARIES | $ 17,460,000 | $ 17,637,000 | $ 225,788 | $ 322,722 | $ 1,446,994 | $ 1,452,850 | $ 2,027,498 | $ 1,437,195 | $ 1,425,386 | $ 1,421,290 | $ 1,422,960 | $ 1,272,441 | $ 1,692,567 | $ 1,320,889 | 2,061,737 | $ 17,530,316 |
| BENEFITS | $ 6,831,000 | $ 6,247,000 | $ 77,014 | $ 111,222 | $ 822,660 | $ 503,248 | $ 618,952 | $ 501,373 | $ 498,128 | $ 494,214 | $ 494,145 | $ 442,593 | $ 525,576 | $ 453,039 | 716,464 | $ 6,258,628 |
| PURCHASED SERVICES | $ 1,716,000 | $ 1,800,200 | $ 76,643 | $ 77,908 | $ 125,864 | $ 109,666 | $ 105,556 | $ 155,131 | $ 147,364 | $ 115,638 | $ 223,365 | $ 120,387 | $ 137,528 | $ 244,746 | | $ 1,639,797 |
| SUPPLIES | $ 1,831,000 | $ 2,116,500 | $ 214,103 | $ 385,739 | $ 301,944 | $ 123,529 | $ 77,574 | $ 177,153 | $ 81,155 | $ 114,476 | $ 75,478 | $ 60,544 | $ 100,178 | $ 98,432 | | $ 1,810,305 |
| CAPITAL OUTLAY | $ 56,000 | $ 968,000 | $ (150,844) | $ 279,769 | $ 71,075 | $ 62,502 | $ 96,620 | $ 180,836 | $ 82,954 | $ 130,884 | $ 51,611 | $ 28,029 | $ 22,466 | $ 107,552 | | $ 963,454 |
| INSURANCE & JUDGEMENTS | $ 180,000 | $ 194,000 | $ - | $ 194,441 | 0 | $ 59 | $ - | $ 723 | 0 | $ 59 | $ 39 | $ 20 | $ - | $ 1,599 | | $ 196,939 |
| TRANSFER PLANT/FS/BOND | $ 1,696,000 | $ 1,421,000 | | $ - | | | $ - | $ 200,000 | $ - | $ - | $ - | $ - | $ - | $ 1,228,920 | | $ 1,428,920 |
| CONTINGENCY | $ 800,000 | $ 1,900,000 | | | | | | | | | | | | | | $ - |
| | $ 30,570,000 | $ 32,283,700 | $ 442,704 | $ 1,371,800 | $ 2,768,538 | $ 2,251,854 | $ 2,926,200 | $ 2,652,411 | $ 2,234,988 | $ 2,276,561 | $ 2,267,598 | $ 1,924,012 | $ 2,478,315 | $ 3,455,177 | $ 2,778,201 | $ 29,828,359 |

| ACTUAL CASH FLOWS TO DATE: | JULY | AUGUST | SEPT | OCT | NOV | DEC | JAN | FEB | MARCH | APR | MAY | JUNE | JULY/AUG ACCRUAL/DEFERRAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEFERED RECEIVABLE | | | | | | | | | | | | | | $ - |
| REVENUES | $ 22,559 | $ 11,683,447 | $ 37,562 | $ 748,908 | $ 4,908,796 | $ 1,663,175 | $ 1,433,439 | $ 5,125,316 | $ 88,952 | $ 80,067 | $ 2,431,847 | $ 773,330 | *$ 1,453,774* | $ 30,451,173 |
| EXPENDITURES | $ 442,704 | $ 1,371,800 | $ 2,768,538 | $ 2,251,854 | $ 2,926,200 | $ 2,652,411 | $ 2,234,988 | $ 2,276,561 | $ 2,267,598 | $ 1,924,012 | $ 2,478,315 | $ 3,455,177 | $ 2,778,201 | $ 29,828,360 |
| FUND BALANCE JUNE 30 $ 1,899,629 | $ 1,479,484 | $ 11,791,131 | $ 9,060,156 | $ 7,557,210 | $ 9,539,806 | $ 8,550,570 | $ 7,749,021 | $ 10,597,776 | $ 8,419,130 | $ 6,575,184 | $ 6,528,716 | $ 3,846,869 | $ 2,522,442 | |

[1] Cobra, rebates, restitution, patronage, insurance claims, jury duty, bldg rental,transportation,fingerprinting, matching, NNU,CAP ED, Idaho Lives Grant, Workforce & STEM

[2] Professional Development, IT funding, Leadership,Strategic Plan Training

[3] LEP/Math &Science/Fast Forward/Literacy/Career Counseling/ISAT/GT/Fuel Up to Play

| | |
|---|---|
| | $ 2,522,442 |
| *PROJECTED* ENDING FUND BALANCE | $ 2,522,442 |

# FOOD SERVICE MONTHLY SUMMARY REVISED TO DATE

| | BEG BUDGET | REVISED | JULY | AUGUST | SEPT | OCT | NOV | DEC | JAN | FEB | MARCH | APR | MAY | JUNE | RECEIVABLE | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **LOCAL:** | | | | | | | | | | | | | | | | |
| INTEREST | $ 5,000 | $ 1,000 | $ 1 | $ 175 | $ 105 | $ 90 | $ 44 | $ 42 | $ 38 | $ 40 | $ 50 | $ 50 | $ 45 | $ 54 | $ 52 | $ 786 |
| LOCAL LUNCH REVENUE | $ 350,000 | $ 75,000 | $ (170) | $ 22,457 | $ 33,759 | $ 11,271 | $ 750 | $ 303 | $ 1,645 | $ 783 | $ 707 | | | | | $ 71,506 |
| LOCAL ADULT LUNCH | $ 18,000 | $ 8,000 | $ 227 | $ 432 | $ 1,131 | $ 719 | $ 739 | $ 1,062 | $ 936 | $ 964 | $ 1,265 | $ 2,079 | $ 2,695 | $ 1,314 | | $ 13,562 |
| OTHER LOCAL | | $ 10,000 | $ 332 | | | | | | $ 721 | $ 2,205 | | $ 5,860 | | | | $ 9,117 |
| **FEDERAL:** | | | | | | | | | | | | | | | | |
| FEDERAL LUNCH REVENI | $ 1,200,000 | $ 1,550,000 | | $ 66,398 | $ 41,371 | $ 107,569 | $ 135,668 | $ 102,411 | $ 101,279 | $ 185,655 | $ 191,121 | $ 170,421 | $ 205,373 | $ 182,006 | $ 75,655 | $ 1,564,927 |
| FEDERAL BREAKFAST RE' | $ 320,000 | $ 380,000 | | | $ 8,094 | $ 31,079 | $ 36,532 | $ 25,505 | $ 25,799 | $ 47,215 | $ 52,192 | $ 46,771 | $ 56,927 | $ 50,230 | $ 9,856 | $ 390,201 |
| OTHER FEDERAL/FF&V | $ 6,000 | $ 242,000 | | | | $ 1,784 | $ 23,699 | $ 25,764 | $ 17,033 | $ 24,039 | $ 25,103 | $ 29,874 | $ 34,233 | $ 26,086 | $ 8,864 | $ 216,478 |
| INTERFUND MATCH | $ 45,000 | $ 45,000 | | | | | | | | | | | | $ 41,288 | | $ 41,288 |
| TOTAL FOOD SERVICE RE | $ 1,944,000 | $ 2,311,000 | $ 390 | $ 89,462 | $ 84,460 | $ 152,511 | $ 197,433 | $ 155,087 | $ 147,452 | $ 260,900 | $ 270,438 | $ 255,056 | $ 299,274 | $ 300,978 | $ 94,426 | $ 2,307,865 |
| FUND BALANCE FORWARD | | $ 185,000 | | | $ 10,557 | $ 7,626 | $ 11,614 | $ 14,099 | $ 13,405 | $ 13,732 | $ 14,234 | $ 14,170 | $ 14,251 | $ 15,840.94 | | |
| | $ 1,944,000 | $ 2,496,000 | | | 8 | 20 | 17 | 11 | 11 | 19 | 19 | 18 | 21 | 19 | | |

**EXPENDITURES:**

| | BEG BUDGET | REVISED | JULY | AUGUST | SEPT | OCT | NOV | DEC | JAN | FEB | MARCH | APR | MAY | JUNE | ACCRUALS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SALARIES | $ 594,000 | $ 575,000 | $ 17,876 | $ 20,355 | $ 44,072 | $ 45,450 | $ 43,985 | $ 43,073 | $ 43,474 | $ 45,099 | $ 43,874 | $ 46,314 | $ 65,050 | $ 44,009 | $ 66,737 | $ 569,367 |
| BENEFITS | $ 400,000 | $ 377,000 | $ 4,389 | $ 5,647 | $ 64,519 | $ 28,786 | $ 27,917 | $ 27,808 | $ 27,668 | $ 26,786 | $ 26,797 | $ 27,342 | $ 30,743 | $ 26,731 | $ 47,673 | $ 372,805 |
| PURCHASED SERVICES | $ 50,000 | $ 62,000 | $ 430 | $ 2,020 | $ 13,095 | $ 7,058 | $ 5,174 | $ 1,651 | $ 773 | $ 2,157 | $ 1,341 | $ 5,512 | $ 7,954 | $ 4,572 | | $ 51,737 |
| SUPPLIES | $ 900,000 | $ 997,000 | $ 2,661 | $ 13,777 | $ 66,712 | $ 82,900 | $ 75,003 | $ 66,118 | $ 74,950 | $ 107,815 | $ 121,287 | $ 90,367 | $ 133,547 | $ 105,988 | | $ 941,124 |
| EQUIPMENT | | $ 485,000 | | | | | | | | | | | | | | $ - |
| INDIRECT COSTS | $ - | $ - | | | | | | | | | | | | | | $ - |
| | $ 1,944,000 | $ 2,496,000 | $ 25,356 | $ 41,798 | $ 188,398 | $ 164,194 | $ 152,079 | $ 138,651 | $ 146,865 | $ 181,857 | $ 193,298 | $ 169,535 | $ 237,294 | $ 181,300 | $ 114,410 | $ 1,935,033 |
| | | | | | $ 20,174.79 | $ 8,209.68 | $ 8,945.81 | $ 12,604.63 | $ 13,351.41 | $ 9,571.40 | $ 10,173.58 | $ 9,418.60 | $ 11,299.69 | $ 9,542.08 | | |

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JULY/AUG ACCRUAL/RECEIVABLE

**ACTUAL CASH FLOWS TO DATE:**

| | | JULY | AUGUST | SEPT | OCT | NOV | DEC | JAN | FEB | MARCH | APR | MAY | JUNE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | REVENUES | $ 390 | $ 89,462 | $ 84,460 | $ 152,511 | $ 197,433 | $ 155,087 | $ 147,452 | $ 260,900 | $ 270,438 | $ 255,056 | $ 299,274 | $ 300,978 | $ 94,426 | $ 2,307,865 |
| | EXPENSES | $ (25,356) | $ (41,798) | $ (188,398) | $ (164,194) | $ (152,079) | $ (138,651) | $ (146,865) | $ (181,857) | $ (193,298) | $ (169,535) | $ (237,294) | $ (181,300) | $ (114,410) | $ (1,935,033) |
| **FUND BALANCE JUNE 30** | $ 185,682 | $ 160,716 | $ 208,380 | $ 104,441 | $ 92,759 | $ 138,113 | $ 154,549 | $ 155,135 | $ 234,179 | $ 311,318 | $ 396,839 | $ 458,819 | $ 578,497 | $ 558,513 | |

**$ 558,513**

ESTIMATED FUND BALANCE

# BOND FUND MONTHLY SUMMARY REVISED TO DATE

| REVENUES: | BEG BUDGET | REVISED | JULY | AUGUST | SEPT | OCT | NOV | DEC | JAN | FEB | MARCH | APR | MAY | JUNE | RECEIVABLE | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LOCAL: | | | | | | | | | | | | | | | | $ - |
| BOND LEVY TAXES CERTIFIED | $ 1,676,000 | $ 1,925,000 | | | | | | $ 38,034 | $ 1,166,776 | $ 40,184 | | $ 32,339 | | $ 27,685 | $ 620,000 | $ 1,925,018 |
| BOND PENALTY & FEES | $ 10,000 | $ 10,000 | $ 932 | | $ 1,205 | | $ 1,265 | $ 231 | $ 1,545 | $ 1,052 | | $ 1,361 | | $ 715 | $ 2,000 | $ 10,307 |
| INTEREST | $ 10,000 | $ 10,000 | | $ 650 | $ 291 | $ 121 | $ 121 | $ 116 | $ 97 | $ 63 | $ 124 | $ 273 | $ 235 | $ 225 | $ 199 | $ 2,517 |
| BOND PROCEEDS | | | | | | | | | | | | | | | | $ - |
| STATE: | | | | | | | | | | | | | | | | $ - |
| BOND EQUALIZATION | $ 350,000 | $ 369,000 | | $ 369,329 | | | | | | | | | | | | $ 369,329 |
| OTHER: | | | | | | | | | | | | | | | | $ - |
| INTERFUND TRANSFERS | | | | | | | | | | | | | | | | $ - |
| TOTAL BOND REVENUE | $ 2,046,000 | $ 2,314,000 | $ 932 | $ 369,979 | $ 1,496 | $ 121 | $ 1,386 | $ 38,382 | $ 1,168,418 | $ 41,299 | $ 124 | $ 33,973 | $ 235 | $ 28,625 | $ 622,199 | $ 2,307,171 |
| FUND BALANCE FORWARD | $ - | $ 2,032,000 | | | | | | | | | | | | | | |
| | $ 2,046,000 | $ 4,346,000 | | | | | | | | | | | | | | |
| **EXPENDITURES:** | | | | | | | | | | | | | | | | |
| DEBT SERVICE | $ 2,046,000 | $ 4,346,000 | $ 1,561,989 | $ 272,605 | | $ 500 | | $ 2,500 | $ 13,897 | $ 192,444 | | $ 500 | $ 500 | | | $ 2,044,935 |
| PROJECTED CASH FLOW | | | $ 470,943 | $ 568,318 | $ 569,814 | $ 569,435 | $ 570,822 | $ 606,703 | $ 1,761,225 | $ 1,610,080 | $ 1,610,204 | $ 1,643,677 | $ 1,643,412 | $ 1,672,037 | $ 2,294,236 | |
| | | | | | | | | | | | | | | *projected* | fund balance | |
| ACTUAL CASH FLOWS TO DATE: | | | | | | | | | | | | | | | JULY/AUG ACCRUAL/DEFERRAL | |
| | | | | | | | | | | | | | | | | $ - |
| REVENUES | | | $ 932 | $ 369,979 | $ 1,496 | $ 121 | $ 1,386 | $ 38,382 | $ 1,168,418 | $ 41,299 | $ 124 | $ 33,973 | $ 235 | $ 28,625 | *$ 623,199* | $ 2,308,171 |
| EXPENSES | | | $ (1,561,989) | $ (272,605) | $ - | $ (500) | $ - | $ (2,500) | $ (13,897) | $ (192,444) | $ - | $ (500) | $ (500) | $ - | | $ (2,044,935) |
| PROJ FUND BALANCE JUNE 30 | $ 2,032,838 | | $ 471,781 | $ 569,155 | $ 570,652 | $ 570,273 | $ 571,659 | $ 607,541 | $ 1,762,062 | $ 1,610,917 | $ 1,611,041 | $ 1,644,515 | $ 1,644,249 | $ 1,672,875 | $ 2,296,074 | |
| | | | | | | | | | | | | | | | projected fund balance | |

# PLANT FACILITIES MONTHLY SUMMARY REVISED TO DATE

## REVENUES:

| | BEG BUDGET | REVISED | JULY | AUGUST | SEPT | OCT | NOV | DEC | JAN | FEB | MARCH | APR | MAY | JUNE | RECEIVABL | ACTUAL TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **LOCAL:** | | | | | | | | | | | | | | | | $ - |
| OTHER REIMBURSEMENTS | | $ 1,000 | | $ 10 | $ 30 | $ 140 | $ 353 | $ 63 | | $ 90 | | | | $ 12,635 | | $ 13,321 |
| FIXED ASSETS PROCEEDS | $ 10,000 | $ 22,000 | | | $ 46 | | $ 21,268 | $ 340 | $ 125 | | | $ 103 | | $ 30,682 | | $ 52,565 |
| **STATE:** | | | | | | | | | | | | | | | | $ - |
| BUS DEPRECIATION TRANS | $ 236,000 | $ 236,000 | | | | | | | | | | | | $ 237,632 | | $ 237,632 |
| **OTHER:** | | | | | | | | | | | | | | | | $ - |
| SUPPLEMENTAL TRANSFER | $ 1,150,000 | $ 940,000 | | | | | | | | | | | | $ 950,000 | | $ 950,000 |
| TOTAL PLANT REVENUE | $ 1,396,000 | $ 1,199,000 | $ - | $ 10 | $ 76 | $ 140 | $ 21,621 | $ 403 | $ 125 | $ 90 | $ - | $ 103 | $ - | $ 1,230,949 | $ - | $ 1,253,517 |
| FUND BALANCE FORWARD | $ - | $ 143,000 | | | | | | | | | | | | | | |
| | $ 1,396,000 | $ 1,342,000 | | | | | | | | | | | | | | |

## EXPENSES:

| | BEG BUDGET | REVISED | JULY | AUGUST | SEPT | OCT | NOV | DEC | JAN | FEB | MARCH | APR | MAY | JUNE | ACCRUALS | ACTUAL TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SCHOOL BLDG IMPROVE | $ 442,000 | $ 309,000 | | | | | | | | | | | | $ 71,382 | | $ 71,382 |
| SCHOOL BLDG EQUIPMENT | $ 355,000 | $ 560,000 | $ 206,226 | $ 68,742 | | | | | | | | | $ 45,000 | $ 77,028 | | $ 396,996 |
| SITE IMPROVEMENT | $ 135,000 | $ 40,000 | | | | | | | | | | | | | | $ - |
| OTHER BLDG IMPROVE | $ - | $ - | | | | | | | | | | | | | | $ - |
| OTHER EQUIPMENT | $ 128,000 | $ 100,000 | | $ 26,610 | $ 37,526 | $ 7,154 | $ 9,381 | | | | | $ 16,042 | | | | $ 96,713 |
| VEHICLE | $ - | $ - | | | | | | | | | | | | | | $ - |
| SITE ACQUISTION | $ - | $ - | | | | | | | | | | | | | | $ - |
| BUS LEASE | $ 336,000 | $ 333,000 | $ 125,292 | $ 65,905 | $ 141,208 | | | | | | | | | | | $ 332,405 |
| | $ 1,396,000 | $ 1,342,000 | $ 331,518 | $ 161,257 | $ 178,734 | $ 7,154 | $ 9,381 | $ - | $ - | $ - | $ - | $ 16,042 | $ 45,000 | $ 148,410 | $ - | $ 897,496 |

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**ACTUAL CASH FLOWS TO DATE:**

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| REVENUES | | $ - | $ 10 | $ 76 | $ 140 | $ 21,621 | $ 403 | $ 125 | $ 90 | $ - | $ 103 | $ - | $ 1,230,949 | | $ 1,253,517 |
| EXPENSES | | $ (331,518) | $ (161,257) | $ (178,734) | $ (7,154) | $ (9,381) | $ - | $ - | $ - | $ - | $ (16,042) | $ (45,000) | $ (148,410) | | $ (897,496) |
| FUND BALANCE JUNE 30 | $ 143,320 | $ (188,198) | $ (349,446) | $ (528,103) | $ (535,117) | $ (522,878) | $ (522,475) | $ (522,350) | $ (522,260) | $ (522,260) | $ (538,199) | $ (583,199) | $ 499,341 | $ 499,341 | | |
| | | | | | | | | | | | | | projected | fund balance | | |
| | | | | | | | | | | | | | | $ 499,341 | | |

# STATE AND FEDERAL GRANTS

## REVENUES:

| | BEG BUDGET | REVISED | JULY | AUGUST | SEPT | OCT | NOV | DEC | JAN | FEB | MARCH | APR | MAY | JUNE | RECEIVABLE | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **LOCAL:** | | | | | | | | | | | | | | | | |
| LOCAL FEES | $ 10,000 | $ 10,000 | | | | | | | | | | | | | | $ - |
| **STATE:** | | | | | | | | | | | | | | | | $ - |
| STATE REVENUES | $ 1,646,000 | $ 1,598,500 | $ 79,659 | | $ 694 | | | $ 311,987 | | $ 111,867 | $ 323,886 | $ 85,882 | $ 192,688 | $ 308,009 | $ 222,959 | $ 1,637,631 |
| **FEDERAL:** | | | | | | | | | | | | | | | | |
| FEDERAL REVENUE | $ 2,529,800 | $ 4,621,800 | | | | $ 325,819 | $ 8,318 | $ 776,002 | $ 28,758 | $ 6,572 | $ 396,587 | $ 390,739 | $ 18,825 | $ 1,260,190 | $ 1,099,232 | $ 4,311,043 |
| | | | | | | | | | | | | | | | | $ - |
| INTERFUND TRANSFERS | $ 205,000 | $ 195,000 | | | | | | | | | $ 160,000 | | | | $ 35,000 | $ 195,000.00 |
| TOTAL FEDERAL REV | $ 4,390,800 | $ 6,425,300 | $ 79,659 | $ - | $ 694 | $ 325,819 | $ 8,318 | $ 1,087,989 | $ 28,758 | $ 118,439 | $ 880,473 | $ 476,621 | $ 211,514 | $ 1,568,200 | $ 1,357,191 | $ 6,143,674 |

## EXPENDITURES:

| | BEG BUDGET | REVISED | JULY | AUGUST | SEPT | OCT | NOV | DEC | JAN | FEB | MARCH | APR | MAY | JUNE | ACCRUALS/ENCUMBRANCES | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SALARIES | $ 1,818,010 | $ 2,997,610 | $ 50,814 | $ 17,426 | $ 136,003 | $ 147,765 | $ 146,178 | $ 151,632 | $ 173,638 | $ 147,622 | $ 147,269 | $ 317,521 | $ 384,661 | $ 324,074 | $ 576,772 | $ 2,721,373 |
| BENEFITS | $ 935,590 | $ 1,176,990 | $ 9,954 | $ 4,727 | $ 71,218 | $ 66,087 | $ 66,083 | $ 64,476 | $ 71,220 | $ 66,631 | $ 66,044 | $ 122,414 | $ 135,387 | $ 123,794 | $ 239,797 | $ 1,107,831 |
| PURCHASED SERVICES | $ 624,000 | $ 640,500 | $ 6,065 | $ 4,422 | $ 14,587 | $ 78,720 | $ 46,371 | $ 38,166 | $ 51,377 | $ 54,658 | $ 50,673 | $ 42,748 | $ 55,301 | $ 101,755 | | $ 544,841 |
| SUPPLIES | $ 426,700 | $ 1,100,700 | $ 40,138 | $ (5,026) | $ 111,923 | $ 152,816 | $ 19,882 | $ 108,044 | $ 43,204 | $ 167,792 | $ 19,823 | $ 13,882 | $ 167,676 | $ 17,420 | | $ 857,572 |
| EQUIPMENT | $ 36,500 | $ 49,500 | | | $ 35,486 | $ 25,221 | $ 3,886 | $ 5,350 | $ 29,270 | $ 3,656 | $ 129,181 | $ 86,000 | $ 132,700 | $ 29,646 | | $ 480,397 |
| INDIRECT COSTS/TRANSFER | $ 550,000 | $ 460,000 | | | | | | $ 200,000 | | | $ 160,000 | | | $ 71,659 | | $ 431,659 |
| | $ 4,390,800 | $ 6,425,300 | $ 106,971 | $ 21,548 | $ 369,217 | $ 470,607 | $ 282,400 | $ 567,667 | $ 368,710 | $ 440,358 | $ 572,990 | $ 582,565 | $ 875,725 | $ 668,347 | $ 816,569 | $ 6,143,674 |

| ACTUAL CASH FLOWS TO DATE: | | | | | | | | | | | | | | | JULY/AUG ACCRUAL/RECEIVABLE | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| REVENUES | | | $ 79,659 | $ - | $ 694 | $ 325,819 | $ 8,318 | $ 1,087,989 | $ 28,758 | $ 118,439 | $ 880,473 | $ 476,621 | $ 211,514 | $ 1,568,200 | $ 1,357,191 | $ 6,143,674 |
| EXPENSES | | | $ (106,971) | $ (21,548) | $ (369,217) | $ (470,607) | $ (282,400) | $ (567,667) | $ (368,710) | $ (440,358) | $ (572,990) | $ (582,565) | $ (875,725) | $ (668,347) | $ (816,569) | $ (6,143,674) |
| ROJ FUND BALANCE JUNE 30 | $ - | | $ (27,312) | $ (48,860) | $ (417,382) | $ (562,171) | $ (836,252) | $ (315,930) | $ (655,883) | $ (977,802) | $ (670,318) | $ (776,263) | $ (1,440,474) | $ (540,622) | $ (0) | |

**CASH BALANCE TOTALS**

| | JULY | AUGUST | SEPTEMBER | OCTOBER | NOVEMBER | DECEMBER | JANUARY | FEBRUARY | MARCH | APRIL | MAY | JUNE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GENERAL FUND BALANCE | $ 1,479,484 | $ 11,791,131 | $ 9,060,156 | $ 7,557,210 | $ 9,539,806 | $ 8,550,570 | $ 7,749,021 | $ 10,597,776 | $ 8,419,130 | $ 6,575,184 | $ 6,528,716 | ##### |
| FOOD SERVICE FUND BALANCE | $ 160,716 | $ 208,380 | $ 104,441 | $ 92,759 | $ 138,113 | $ 294,768 | $ 155,135 | $ 234,179 | $ 311,318 | $ 396,839 | $ 458,819 | ##### |
| BOND/DEBT FUND BALANCE | $ 471,781 | $ 569,155 | $ 570,652 | $ 570,273 | $ 571,659 | $ 607,541 | $ 1,762,062 | $ 1,610,917 | $ 1,611,041 | $ 1,644,515 | $ 1,644,249 | ##### |
| PLANT FACILITIES FUND BALANCE | $ (188,198) | $ (349,446) | $ (528,103) | $ (535,117) | $ (522,878) | $ (522,475) | $ (522,350) | $ (522,260) | $ (522,260) | $ (538,199) | $ (583,199) | ##### |
| STATE/FEDERAL GRANTS FUND | $ (27,312) | $ (48,860) | $ (417,382) | $ (562,171) | $ (836,252) | $ (315,930) | $ (655,883) | $ (977,802) | $ (670,318) | $ (776,263) | $ (1,440,474) | ##### |
| SCHOLARSHIP FUNDS | $ 20,526 | $ 20,420 | $ 20,233 | $ 20,335 | $ 20,317 | $ 21,772 | $ 21,303 | $ 21,226 | $ 21,294 | $ 21,123 | $ 20,885 | ##### |
| RECEIVABLES OWED | $ (1,072,037) | $ (1,014,461) | $ (493,958) | $ (79,251) | $ (37,483) | $ (34,763) | $ (20,914) | $ (14,446) | $ (14,446) | $ (10,154) | $ (10,154) | ##### |
| DEFERED REVENUE | $ 88,795 | $ 88,834 | $ 88,933 | $ 88,983 | $ 89,034 | $ 88,943 | $ 88,798 | $ 88,811 | $ 88,833 | $ 88,765 | $ 86,402 | ##### |
| OTHER LIABILITIES OWED | $ 1,734,432 | $ (1,000) | $ (986) | $ (584) | $ (1,000) | $ (2,293) | $ (12,289) | $ (2,330) | $ (2,348) | $ (2,665) | $ (2,616) | ##### |
| TOTAL CASH ON HAND | $ 2,668,185 | $ 11,264,153 | $ 8,403,986 | $ 7,152,437 | $ 8,961,317 | $ 8,688,131 | $ 8,564,884 | $ 11,036,073 | $ 9,242,245 | $ 7,399,146 | $ 6,702,629 | ##### |
| | | | | | | | | | | | | |
| CASH BALANCE REPORT VISIONS | $ 2,668,185 | $ 11,264,153 | $ 8,403,986 | $ 7,152,437 | $ 8,961,317 | $ 8,688,131 | $ 8,564,884 | $ 11,036,006 | $ 9,242,210 | $ 7,397,000 | $ 6,697,928 | ##### |
| | | | | | | | | | | | | |
| IMPUTED INCOME CORRECTIONS | $ (0) | $ (0) | $ (0) | $ (0) | $ (0) | $ (0) | $ (0) | $ (67) | $ (35) | $ (2,146) | $ (4,701) | ####### |

AUG/06/2021/FRI 10:49 AM West Minico FAX No. 208-438-8513 P. 001/001

# MINIDOKA COUNTY SCHOOL DISTRICT

## DISPOSITION OF DISTRICT PROPERTY/FIXED ASSETS

BUILDING:

| | TAG NO. | ITEM DESCRIPTION | SERIAL NO. | COST | CURRENT VALUE | SURPLUS / DONATE / DISPOSE / TRANSFER |
|---|---|---|---|---|---|---|
| 1 | | | | | | DISPOSE |
| 2 | | SMART BOARD | | | 200.00 | DISPOSE |
| 3 | 16151 | LAMINATOR USI ARL 27 | | | 0.00 | DISPOSE |
| 4 | | FAX MACHINE | | | 0.00 | DISPOSE |
| 6 | | SMART BOARD | | | 200.00 | DISPOSE |
| 7 | | | | | | DISPOSE |
| 8 | | | | | 0.00 | DISPOSE |
| 9 | | | | | | DISPOSE |
| 10 | | | | | | |
| 11 | | | | | | DISPOSE |
| 12 | | | | | | DISPOSE |
| 13 | | | | | | DISPOSE |
| 14 | | | | | | DISPOSE |
| 15 | | | | | 0.00 | DISPOSE |
| 16 | | | | | 0.00 | DISPOSE |
| 17 | | | | | 0.00 | DISPOSE |
| 18 | | | | | 0.00 | DISPOSE |
| 19 | | | | | 0.00 | DISPOSE |
| 20 | | | | | 0.00 | DISPOSE |
| 21 | | | | | 0.00 | DISPOSE |

55

**SIGNATURE** DATE 8-6-21

**SIGNATURE** DATE

(Removal From Building - Maintenance Work Order)

**SIGNATURE** DATE

VALUE AUTHORIZATION (Maintenance/Technology/Curriculum Supervisor)

**SIGNATURE** DATE

* REQUIRES BOARD APPROVAL (Board Authorization)

**DELETED FROM GFA LISTING BY** DATE

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# TRAVEL REQUEST FORM (POLICY 546.00F)

MINIDOKA COUNTY JOINT SCHOOL DISTRICT #331

| TITLE OF CONFERENCE | DESTINATION | CHECK ONE |
|---|---|---|
| 2021 CASE Fall Conference | Little Rock, Arkansas | IN RADIUS: ; OUT OF RADI: X |
| PURPOSE OF CONFERENCE | REPORT TO: (CIRCLE ONE) | STUDENT TRAVEL OVERNIGHT Y/N: |
| Council of Special Education of Administrators | BOARD STAFF TEAM | # STUDENTS: ; # CHAPERONES: |

QUESTS THAT ARE REQUIRED BY GRANT, GOVERNMENTAL RULES AND REGULATIONS, OR CONSIDERED IMPERATIVE TO THE OPERATION
THE DISTRICT ARE SUBJECT TO APPROVAL. THE DEADLINE FOR ALL TRIP REQUESTS ARE THE FIRST MONDAY EACH MONTH.
T OF RADIUS AND STUDENT REQUESTS ARE REVIEWED AT THE SEPTEMBER BOARD MEETING.

FUNDING SOURCE (MARK ONE)

| DISTRICT P | X | SPECIAL ED | | ACTIVITIES | |
|---|---|---|---|---|---|
| FEDERAL | | SAFETY | | VOCATION | |

| ES OF ATTENDEE | DATE(S) OF TRAVEL | MEALS: BREAKFAST $10 | LUNCH $15 | DINNER IN-STATE $20 OUT-STATE $30 | DAILY TOTAL | MILEAGE: DESTINATION CITY OR AIRPORT | MILES | TOTAL .45 PER MILE | Y/N: DISTRICT CAR AVAILABLE | PARKING BAGGAGE | RENTAL CAR SHUTTLE TAXI | SUB | REGISTRATION | AIRFARE | LODGING | TOTAL STAFF REIMB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sherry Bingham | 10-Nov-21 | | $ 15 | $ 30 | $ 45 | Twin Falls | 98 | $ 44.10 | | $ 70 | | | $ 450 | $550 | $ 732 | $ 254.1 |
| | 11-Nov-21 | $ 10 | $ 15 | $ 30 | $ 55 | | | | | | | | | | | |
| | 12-Nov-21 | $ 10 | $ 15 | $ 30 | $ 55 | | | | | | | | | | | |
| | 13-Nov-21 | $ 10 | $ 15 | $ 30 | $ 55 | | | | | | | | | | | |
| | 14-Nov-21 | $ 10 | $ 15 | | $ 25 | | | | | | | | | | | |
| | | | | | $ - | | | $ - | | | | | | | | $ 25.0 |
| | | | | | $ - | | | | | | | | | | | 56 |
| | | | | | $ - | | | | | | | | | | | |
| | | | | | $ - | | | | | | | | | | | |
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| | | | | | $ - | | | | | | | | | | | |
| | | | | | $ - | | | | | | | | | | |

MINIDOKA COUNTY JOINT SCHOOL DISTRICT #331

| TITLE OF CONFERENCE | DESTINATION | CHECK ONE | | | |
|---|---|---|---|---|---|
| FALL STATE TOURNAMENTS | VARIOUS LOCATIONS | IN-RADIUS | X | OUT-RADIUS | X |
| PURPOSE OF CONFERENCE | REPORT TO: (CIRCLE ONE) | STUDENT TRAVEL OVERNIGHT Y/N | | | |
| TOURNAMENTS | BOARD STAFF TEAM | # STUDENTS | | # CHAPERONES | |

REQUESTS THAT ARE REQUIRED BY GRANT, GOVERNMENTAL RULES AND REGULATIONS, OR CONSIDERED IMPERATIVE TO THE OPERATION OF THE DISTRICT ARE SUBJECT TO APPROVAL. THE DEADLINE FOR ALL TRIP REQUESTS ARE THE FIRST MONDAY EACH MONTH. OUT OF RADIUS AND STUDENT REQUESTS ARE REVIEWED AT THE SEPTEMBER BOARD MEETING.

| FUNDING SOURCE (MARK ONE) | | | | | |
|---|---|---|---|---|---|
| DISTRICT PD | | SPECIAL ED | | ACTIVITIES | X |
| FEDERAL | | SAFETY | | VOCATION | |

| NAMES OF ATTENDEES | DATE(S) OF TRAVEL | MEALS: BREAKFAST $10 | LUNCH $15 | DINNER IN-STATE $20 OUT-STATE $30 | | MILEAGE: DESTINATION CITY OR AIRPORT | MILES | TOTAL .45 PER MILE | Y/N: DISTRICT CAR AVAILABLE | PARKING BAGGAGE | RENTAL CAR SHUTTLE TAXI | SUB | REGISTRATION | AIRFARE | LODGING | TOTAL STAFF REIMB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VARSITY VB TEAM | OCT 28-30, 2021 | | | | $ - | POST FALLS, ID | 1220 | | N | | sm bus $ 610 | | | | $ 1,500 | |
| BOYS SOCCER | OCT 21-23, 2021 | | | | $ - | CALDWELL, ID | 380 | | N | | $ 1,330 | | | | $2,000 | |
| GIRLS SOCCER | OCT 21-23, 2021 | | | | $ - | CALDWELL, ID | 380 | | N | | $ 1,330 | | | | $ 2,000 | |
| CROSS COUNTRY | OCT 29-30, 2021 | | | | $ - | BOISE, ID | 330 | | N | | sm bus $ 165 | | | | $ 500 | |
| SWIMMING | NOV 4-6, 2021 | | | | $ - | BOISE, ID | 330 | | N | | $ 1,155 | | | | $ 2,000 | |
| | | | | | $ - | | | | | | | $- | | | | |
| | | $ - | $ - | $ - | $ - | | | $ - | | $ - | $ 4,590 | | | | $ 8,000 | |

OFFICE USE ONLY

ALL FORMS MUST BE TYPED. INCOMPLETE TRAVEL REQUESTS WILL BE RETURNED FOR ADDITIONAL INFORMATION.
PERDIEM REIMBURSED AHEAD FOR OUT OF RADIUS TRAVEL. RECIEPTS REQUIRED FOR NON PERDIEM EXPENSES INCURRED.

BUDGET CODE: ATHLETICS, DISTRICT TRANSPORTATION PROGRAM DIRECTOR INITIAL: _____ TOTAL COST OF REQUEST $ 12,590

SIGNATURE(S) OF SUPERVISOR/ADMINISTRATOR: [signature]

SIGNATURE OF SUPERINTENDENT: James Ramsey 8/11/21 BOARD APPROVAL DATE

MINIDOKA COUNTY JOINT SCHOOL DISTRICT #331

| TITLE OF CONFERENCE | DESTINATION | CHECK ONE | | | |
|---|---|---|---|---|---|
| VOLLEYBALL TOURNAMENTS | VARIOUS LOCATIONS | IN-RADIUS | X | OUT-RADIUS | |
| PURPOSE OF CONFERENCE | REPORT TO: (CIRCLE ONE) | STUDENT TRAVEL OVERNIGHT Y/N | | | |
| TOURNAMENTS | BOARD STAFF TEAM | # STUDENTS | 10 | # CHAPERONES | 3 |

REQUESTS THAT ARE REQUIRED BY GRANT, GOVERNMENTAL RULES AND REGULATIONS, OR CONSIDERED IMPERATIVE TO THE OPERATION OF THE DISTRICT ARE SUBJECT TO APPROVAL. THE DEADLINE FOR ALL TRIP REQUESTS ARE THE FIRST MONDAY EACH MONTH. OUT OF RADIUS AND STUDENT REQUESTS ARE REVIEWED AT THE SEPTEMBER BOARD MEETING.

| FUNDING SOURCE (MARK ONE) | | | | | |
|---|---|---|---|---|---|
| DISTRICT PD | | SPECIAL ED | | ACTIVITIES | X |
| FEDERAL | | SAFETY | | VOCATION | |

| NAMES OF ATTENDEES | DATE(S) OF TRAVEL | MEALS | | | | MILEAGE | | | Y/N | PARKING BAGGAGE | RENTAL CAR SHUTTLE TAXI | SUB | REGISTRATION | AIRFARE | LODGING | TOTAL STAFF REIMB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | BREAKFAST $10 | LUNCH $15 | DINNER IN-STATE $20 OUT-STATE $30 | | DESTINATION CITY OR AIRPORT | MILES | TOTAL .45 PER MILE | DISTRICT CAR AVAILABLE | | | | | | | |
| VARSITY VB TEAM | SEPT 3-4, 2021 | | | | $ - | POCATELLO | 148 | | N | | sm bus $ 74 | | $ 300 | | $ 500 | |
| | | | | | $ - | | | | | | | | | | | |
| | | | | | $ - | | | | | | | | | | | |
| | | | | | $ - | | | | | | | | | | | |
| VARSITY VB TEAM | SEP 17-18, 2021 | | | | $ - | IDAHO FALLS | 242 | | N | | sm bus $ 121 | | $ 350 | | $ 500 | |
| | | | | | $ - | | | | | | | | | | | |
| | | | | | $ - | | | | | | | | | | | |
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| | | | | | $ - | | | | | | | | | | | |
| | | $ - | $ - | $ - | $ - | | | $ - | | $ - | $ 195 | | $ 650 | | $ 1,000 | |

OFFICE USE ONLY

ALL FORMS MUST BE TYPED. INCOMPLETE TRAVEL REQUESTS WILL BE RETURNED FOR ADDITIONAL INFORMATION.
PERDIEM REIMBURSED AHEAD FOR OUT OF RADIUS TRAVEL. RECIEPTS REQUIRED FOR NON PERDIEM EXPENSES INCURRED.

BUDGET CODE: VOLLEYBALL PROGRAM DIRECTOR INITIAL: _____ TOTAL COST OF REQUEST $ 1,845

SIGNATURE(S) OF SUPERVISOR/ADMINISTRATOR:

SIGNATURE OF SUPERINTENDENT: Jared Ramsey 8/11/21 BOARD APPROVAL DATE

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# TRAVEL REQUEST FORM (POLICY 546.00F)

MINIDOKA COUNTY JOINT SCHOOL DISTRICT #331

| TITLE OF CONFERENCE | DESTINATION | CHECK ONE | | | | |
|---|---|---|---|---|---|---|
| FETC | Orlando, FL | IN RADIUS | | OUT OF RADI | X | |
| PURPOSE OF CONFERENCE | REPORT TO: (CIRCLE ONE) | STUDENT TRAVEL OVERNIGHT Y/N | | | | |
| Best practices for teaching with technology, technology tools | BOARD STAFF TEAM | # STUDENTS | | # CHAPERONES | | |

QUESTS THAT ARE REQUIRED BY GRANT, GOVERNMENTAL RULES AND REGULATIONS, OR CONSIDERED IMPERATIVE TO THE OPERATION
THE DISTRICT ARE SUBJECT TO APPROVAL. THE DEADLINE FOR ALL TRIP REQUESTS ARE THE FIRST MONDAY EACH MONTH.
T OF RADIUS AND STUDENT REQUESTS ARE REVIEWED AT THE SEPTEMBER BOARD MEETING.

FUNDING SOURCE (MARK ONE)

| | | | | | |
|---|---|---|---|---|---|
| DISTRICT P | X | SPECIAL ED | | ACTIVITIES | |
| FEDERAL | | SAFETY | | VOCATION | |

| ES OF ATTENDEE | DATE(S) OF TRAVEL | MEALS BREAKFAST $10 | MEALS LUNCH $15 | MEALS DINNER IN-STATE $20 OUT-STATE $30 | MEALS DAILY TOTAL | MILEAGE DESTINATION CITY OR AIRPORT | MILEAGE MILES | MILEAGE TOTAL .45 PER MILE | Y/N DISTRICT CAR AVAILABLE | PARKING BAGGAGE | RENTAL CAR SHUTTLE TAXI | SUB | REGISTRATION | AIRFARE | LODGING | TOTAL STAFF REIMB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ashley Johnson | 25-Jan-21 | | $ 15 | $ 30 | $ 45 | Salt Lake City | 360 | $ 162.00 | | $ 60 | $ 75 | | $ 390 | $475 | $ 1,000 | $ 372.0 |
| | 26-Jan-21 | $ 10 | $ 15 | $ 30 | $ 55 | | | | | | | | | | | |
| | 27-Jan-21 | $ 10 | $ 15 | $ 30 | $ 55 | | | | | | | | | | | |
| | 28-Jan-21 | $ 10 | $ 15 | $ 30 | $ 55 | | | | | | | | | | | |
| Brittni Darrington | 25-Jan-21 | | $ 15 | $ 30 | $ 45 | | | $ - | | $ 60 | | | $ 390 | $475 | | $ 210.0 |
| | 26-Jan-21 | $ 10 | $ 15 | $ 30 | $ 55 | | | | | | | | | | | 59 |
| | 27-Jan-21 | $ 10 | $ 15 | $ 30 | $ 55 | | | | | | | | | | | |
| | 28-Jan-21 | $ 10 | $ 15 | $ 30 | $ 55 | | | | | | | | | | | |
| | | | | | $ - | | | $ - | | | | | | | | $ - |
| | | | | | $ - | | | | | | | | | | | |
| | | | | | $ - | | | | | | | | | | | |
| | | | | | $ -

**Minidoka County School District**

# Monthly Maintenance Report
# August 12, 2021

July - 101 New Requests
259 Work in Progress
89 Complete

Aug – 52 New Requests
265 Work in Progress
56 Complete

**Maintenance Department Updates**

**Current Projects:**

## East

1. New door knobs and key cores are 98% complete.
2. ADA lift will be delivered in the next week; the mezzanine is being built.

## West

1. ADA lift will be delivered in the next week; the mezzanine is being built.
2. ADA bathroom 98% complete.



## Minico

1. Front vestibule Access Control started
2. Well
3. Concession/Bathrooms meeting with LKV.
4. Door Replacements on old exterior doors.

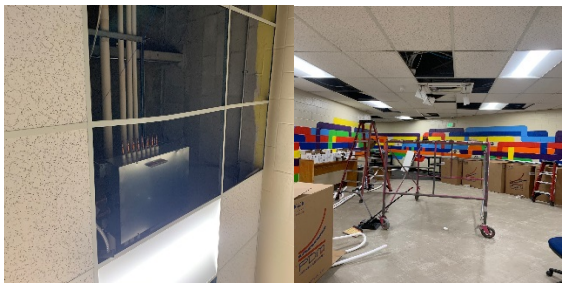


Minidoka County School District

# Monthly Maintenance Report
# August 12, 2021

## Paul

1. HVAC Phase 4 will be completed August 18.



## Mt. Harrison High School

1. Shower

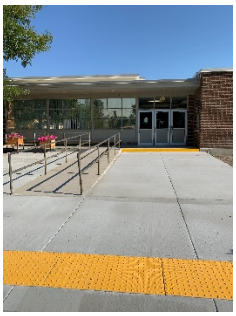


Minidoka County School District

# Monthly Maintenance Report
# August 12, 2021

## Mt. Harrison Jr. High School/ District Office

1. New sidewalk in front of the building.



2. Shower.

Work orders that have been completed:

HVAC – Working on heating, cooling and preventative maintenance.

Plumbing –Toilets, sinks, sprinklers and irrigation.

Grounds – Delivering supplies, cleaning schools, yard work, mowing lawns and spraying weeds.

Minidoka County School District

# District Facilities Committee Meeting

## August 12, 2021

12:00 p.m. Welcome and lunch

Reviewing the following items-

1. Budget
2. Review of Monthly Maintenance Report
3. Current Projects

**Minico** – Concession/Restrooms

**East** – ADA Lift – will be delivered in the next week, the mezzanine is being built.

**West** - ADA Lift - will be delivered in the next week, the mezzanine is being built.

ADA Bathroom – 98% complete.

4. Wrestling
5. Heyburn Drop-off repainting
6. HVAC – completed August 18.
7. Concessions at Minico getting plans approved
8. Parking at Minico
9. Johnson Controls

**Facilities Committee**

Minidoka County School District

# Transportation's Report

## August 2021 Board Report

We have been able to drive every route and map the changes to each route in order to **HOPEFULLY** be able to get all elementary students home and return back to school on time. The first few days of school might be interesting. We hope that everyone will have some patience with each other during this learning experience. It seems as if we are always meeting with drivers in order to go over different routes and options. The drivers have been very understanding, and I believe they are looking forward to the 4-day work week.

We have lost three drivers and one aide this summer but, we have been able to hire two drivers and one aide. We also have a couple prospects that are working on their written tests and possibly one coming in after harvest. Only time will tell.

We would like to thank the Board for all their understanding, patience and help as we move towards a new year. You have all been great to work with.

Thank you

Ryan Edwards
Transportation supervisor

**Minidoka School District #331**

# Spring 2021 Data




2 High Schools

3 Middle Schools

4 Elementary Schools

## We Are Minidoka

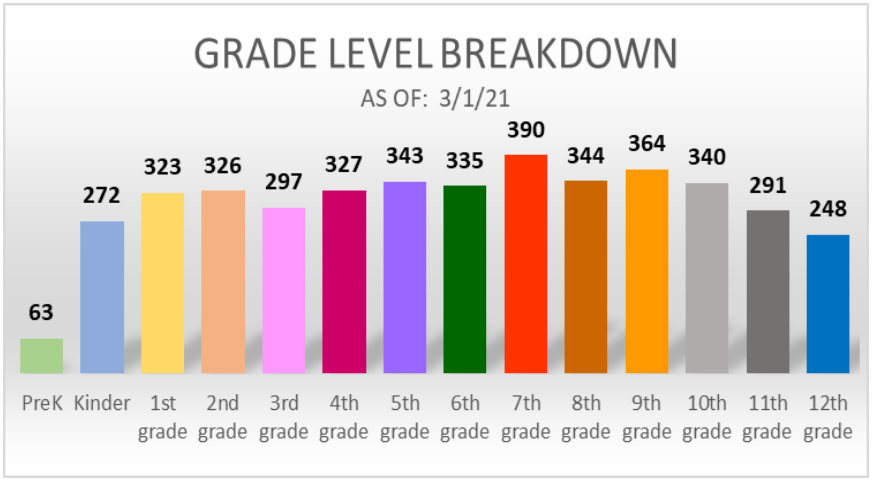
**Mr. James Ramsey**

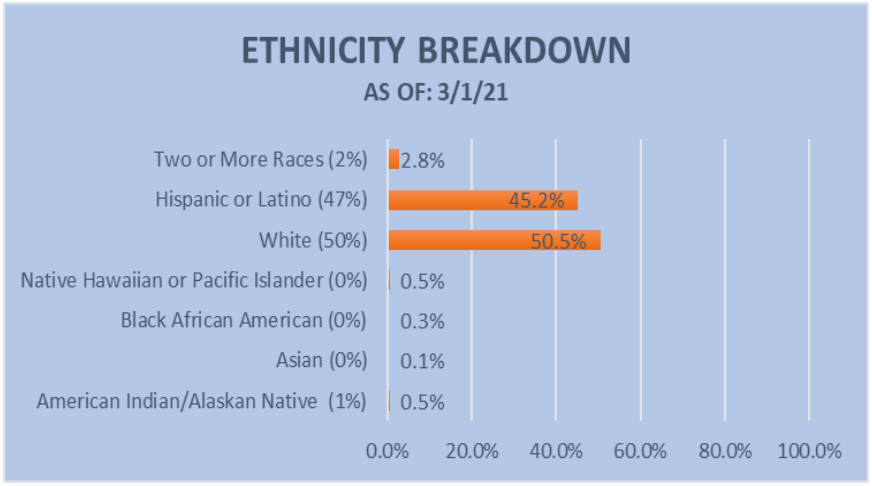
**Superintendent of Schools**

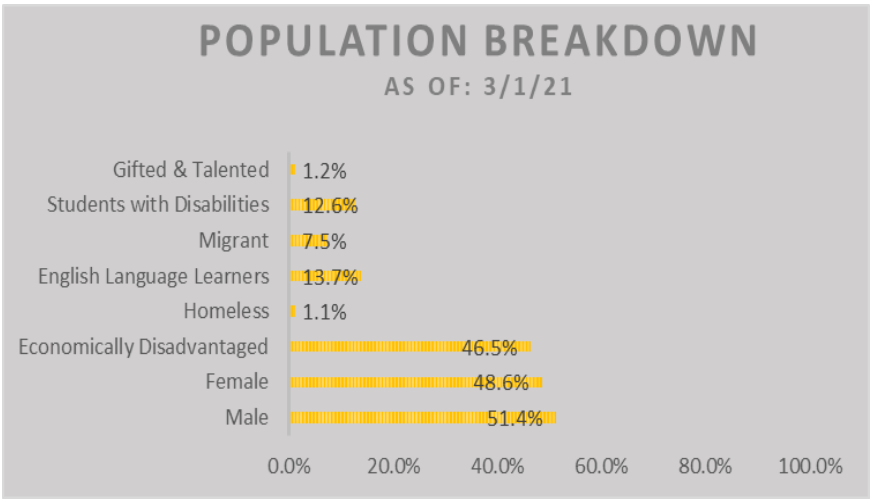
# About Us

*As of: 3/1/21*

## Total Enrollment = 4263



# Spring 2021 Data Comparison – ISAT 2.0

**District ELA Proficiency Comparison** - *(same color indicates similar group of students)*
**SP21 State Proficiency Target = 66.1%** *(all students)*

| Grade Level | SP2019 | SP2021 | District Performance Differences SP19 to SP21 | SP19-State | SP21-State | State Performance Differences SP19 to SP21 | 2021 Performance Differences between District & State |
|---|---|---|---|---|---|---|---|
| 3rd | 35% | 37% | 2% | 50% | 48% | -2% | -11% |
| 4th | 42% | 34% | -8% | 52% | 50% | -2% | -16% |
| 5th | 49% | 38% | -11% | 57% | 55% | -2% | -17% |
| 6th | 42% | 38% | -4% | 55% | 52% | -3% | -14% |
| 7th | 43% | 43% | 0% | 58% | 58% | 0% | -15% |
| 8th | 43% | 38% | -5% | 54% | 55% | 1% | -17% |
| 10th | 49% | 39% | -10% | 59% | 60% | 1% | -21% |

**District Math Proficiency Comparison - (same color indicates similar group of students)**
**SP21 State Proficiency Target = 57.8% (all students)**

| Grade Level | SP2019 | SP2021 | District Performance Differences SP19 to SP21 | SP19-State | SP21-State | State Performance Differences SP19 to SP21 | 2021 Performance Differences between District & State |
|---|---|---|---|---|---|---|---|
| 3rd | 36% | 34% | -2% | 53% | 48% | -5% | -14% |
| 4th | 40% | 24% | -16% | 50% | 45% | -5% | -21% |
| 5th | 36% | 25% | -11% | 45% | 40% | -5% | -15% |
| 6th | 31% | 19% | -12% | 43% | 37% | -6% | -18% |
| 7th | 33% | 25% | -8% | 46% | 40% | -6% | -15% |
| 8th | 24% | 23% | -1% | 41% | 36% | -5% | -13% |
| 10th | 24% | 22% | -2% | 33% | 33% | 0% | -11% |

**Acequia ELA Proficiency Comparison - (same color indicates similar group of students)**
**SP21 State Proficiency Target = 66.1% (all students)**

| Grade Level | SP2019 | SP2021 | School Performance Differences SP19 to SP21 | SP19-State | SP21-State | 2021 Performance Differences between School & State |
|---|---|---|---|---|---|---|
| 3rd | 27% | 33% | 6% | 50% | 48% | -15% |
| 4th | 48% | 43% | -5% | 52% | 50% | -7% |
| 5th | 37% | 33% | -4% | 57% | 55% | -22% |

**Acequia Math Proficiency Comparison - (same color indicates similar group of students)**
**SP21 State Proficiency Target = 57.8% (all students)**

| Grade Level | SP2019 | SP2021 | School Performance Differences SP19 to SP21 | SP19-State | SP21-State | 2021 Performance Differences between School & State |
|---|---|---|---|---|---|---|
| 3rd | 42% | 29% | -13% | 53% | 48% | -19% |
| 4th | 41% | 28% | -13% | 50% | 45% | -17% |
| 5th | 27% | 33% | 6% | 45% | 40% | -7% |

| Heyburn ELA Proficiency Comparison - (same color indicates similar group of students)<br>SP21 State Proficiency Target = 66.1% (all students) | | | | | | |
|---|---|---|---|---|---|---|
| **Grade Level** | **SP2019** | **SP2021** | **School Performance Differences SP19 to SP21** | **SP19-State** | **SP21-State** | **2021 Performance Differences between School & State** |
| **3rd** | 34% | 29% | -5% | 50% | 48% | -19% |
| **4th** | 38% | 28% | -10% | 52% | 50% | -22% |
| **5th** | 44% | 33% | -11% | 57% | 55% | -22% |

| Heyburn Math Proficiency Comparison - (same color indicates similar group of students)<br>SP21 State Proficiency Target = 57.8% (all students) | | | | | | |
|---|---|---|---|---|---|---|
| **Grade Level** | **SP2019** | **SP2021** | **School Performance Differences SP19 to SP21** | **SP19-State** | **SP21-State** | **2021 Performance Differences between School & State** |
| **3rd** | 33% | 36% | 3% | 53% | 48% | -12% |
| **4th** | 39% | 24% | -15% | 50% | 45% | -21% |
| **5th** | 31% | 27% | -4% | 45% | 40% | -13% |

| Paul ELA Proficiency Comparison - (same color indicates similar group of students)<br>SP21 State Proficiency Target = 66.1% (all students) | | | | | | |
|---|---|---|---|---|---|---|
| **Grade Level** | **SP2019** | **SP2021** | **School Performance Differences SP19 to SP21** | **SP19-State** | **SP21-State** | **2021 Performance Differences between School & State** |
| **3rd** | 41% | 49% | 8% | 50% | 48% | 1% |
| **4th** | 40% | 44% | 4% | 52% | 50% | -6% |
| **5th** | 55% | 46% | -9% | 57% | 55% | -9% |

| Paul Math Proficiency Comparison - (same color indicates similar group of students)<br>SP21 State Proficiency Target = 57.8% (all students) | | | | | | |
|---|---|---|---|---|---|---|
| **Grade Level** | **SP2019** | **SP2021** | **School Performance Differences SP19 to SP21** | **SP19-State** | **SP21-State** | **2021 Performance Differences between School & State** |
| **3rd** | 44% | 43% | -1% | 53% | 48% | -5% |
| **4th** | 41% | 29% | -12% | 50% | 45% | -16% |
| **5th** | 42% | 26% | -16% | 45% | 40% | -14% |

| Rupert ELA Proficiency Comparison - (same color indicates same group of students) SP21 State Proficiency Target = 66.1% (all students) | | | | | | |
|---|---|---|---|---|---|---|
| **Grade Level** | **SP2019** | **SP2021** | **School Performance Differences SP19 to SP21** | **SP19-State** | **SP21-State** | **2021 Performance Differences between School & State** |
| **3rd** | 35% | 35% | 0% | 50% | 48% | -13% |
| **4th** | 44% | 27% | -17% | 52% | 50% | -23% |
| **5th** | 53% | 39% | -14% | 57% | 55% | -16% |

| Rupert Math Proficiency Comparison - (same color indicates similar group of students) SP21 State Proficiency Target = 57.8% (all students) | | | | | | |
|---|---|---|---|---|---|---|
| **Grade Level** | **SP2019** | **SP2021** | **School Performance Differences SP19 to SP21** | **SP19-State** | **SP21-State** | **2021 Performance Differences between School & State** |
| **3rd** | 27% | 29% | 2% | 53% | 48% | -19% |
| **4th** | 40% | 18% | -22% | 50% | 45% | -27% |
| **5th** | 38% | 18% | -20% | 45% | 40% | -22% |

| East Minico ELA Proficiency Comparison - (same color indicates similar group of students) SP21 State Proficiency Target = 66.1% (all students) | | | | | | |
|---|---|---|---|---|---|---|
| **Grade Level** | **SP2019** | **SP2021** | **School Performance Differences SP19 to SP21** | **SP19-State** | **SP21-State** | **2021 Performance Differences between School & State** |
| **6th** | 43% | 43% | 0% | 55% | 52% | -9% |
| **7th** | 45% | 49% | 4% | 58% | 58% | -9% |
| **8th** | 41% | 45% | 4% | 54% | 55% | -10% |

| East Minico Math Proficiency Comparison - (same color indicates similar group of students) SP21 State Proficiency Target = 57.8% (all students) | | | | | | |
|---|---|---|---|---|---|---|
| **Grade Level** | **SP2019** | **SP2021** | **School Performance Differences SP19 to SP21** | **SP19-State** | **SP21-State** | **2021 Performance Differences between School & State** |
| **6th** | 32% | 21% | -11% | 43% | 37% | -16% |
| **7th** | 34% | 26% | -8% | 46% | 40% | -14% |
| **8th** | 23% | 23% | 0% | 41% | 36% | -13% |

| Mt. Harrison Jr ELA Proficiency Comparison - (same color indicates similar group of students) SP21 State Proficiency Target = 66.1% (all students) | | | | | | |
|---|---|---|---|---|---|---|
| **Grade Level** | **SP2019** | **SP2021** | **School Performance Differences SP19 to SP21** | **SP19-State** | **SP21-State** | **2021 Performance Differences between School & State** |
| **6th** | 20% | 10% | -10% | 55% | 52% | -42% |
| **7th** | 7% | 9% | 2% | 58% | 58% | -49% |
| **8th** | 14% | 0% | -14% | 54% | 55% | -55% |

| Mt. Harrison Jr Math Proficiency Comparison - (same color indicates similar group of students) SP21 State Proficiency Target = 57.8% (all students) | | | | | | |
|---|---|---|---|---|---|---|
| **Grade Level** | **SP2019** | **SP2021** | **School Performance Differences SP19 to SP21** | **SP19-State** | **SP21-State** | **2021 Performance Differences between School & State** |
| **6th** | 10% | 0% | -10% | 43% | 37% | -37% |
| **7th** | 7% | 18% | 11% | 46% | 40% | -22% |
| **8th** | 14% | 0% | -14% | 41% | 36% | -36% |

| West Minico ELA Proficiency Comparison - (same color indicates similar group of students) SP21 State Proficiency Target = 66.1% (all students) | | | | | | |
|---|---|---|---|---|---|---|
| **Grade Level** | **SP2019** | **SP2021** | **School Performance Differences SP19 to SP21** | **SP19-State** | **SP21-State** | **2021 Performance Differences between School & State** |
| **6th** | 43% | 34% | -9% | 55% | 52% | -18% |
| **7th** | 45% | 38% | -7% | 58% | 58% | -20% |
| **8th** | 48% | 35% | -13% | 54% | 55% | -20% |

| West Minico Math Proficiency Comparison - (same color indicates similar group of students) SP21 State Proficiency Target = 57.8% (all students) | | | | | | |
|---|---|---|---|---|---|---|
| **Grade Level** | **SP2019** | **SP2021** | **School Performance Differences SP19 to SP21** | **SP19-State** | **SP21-State** | **2021 Performance Differences between School & State** |
| **6th** | 31% | 18% | -13% | 43% | 37% | -19% |
| **7th** | 34% | 24% | -10% | 46% | 40% | -16% |
| **8th** | 27% | 24% | -3% | 41% | 36% | -12% |

| Minico ELA Proficiency Comparison<br>SP21 State Proficiency Target = 66.1% (all students) | | | | | | |
|---|---|---|---|---|---|---|
| **Grade Level** | **SP2019** | **SP2021** | **School Performance Differences SP19 to SP21** | **SP19-State** | **SP21-State** | **2021 Performance Differences between School & State** |
| **10th** | 56% | 43% | -13% | 59% | 60% | -17% |

| Minico Math Proficiency Comparison<br>SP21 State Proficiency Target = 57.8% (all students) | | | | | | |
|---|---|---|---|---|---|---|
| **Grade Level** | **SP2019** | **SP2021** | **School Performance Differences SP19 to SP21** | **SP19-State** | **SP21-State** | **2021 Performance Differences between School & State** |
| **10th** | 28% | 25% | -3% | 33% | 33% | -8% |

| Mt. Harrison ELA Proficiency Comparison<br>SP21 State Proficiency Target = 66.1% (all students) | | | | | | |
|---|---|---|---|---|---|---|
| **Grade Level** | **SP2019** | **SP2021** | **School Performance Differences SP19 to SP21** | **SP19-State** | **SP21-State** | **2021 Performance Differences between School & State** |
| **10th** | 7% | 13% | 6% | 59% | 60% | -47% |

| Mt. Harrison Math Proficiency Comparison<br>SP21 State Proficiency Target = 57.8% (all students) | | | | | | |
|---|---|---|---|---|---|---|
| **Grade Level** | **SP2019** | **SP2021** | **School Performance Differences SP19 to SP21** | **SP19-State** | **SP21-State** | **2021 Performance Differences between School & State** |
| **10th** | 2% | 0% | -2% | 33% | 33% | -33% |

***NOTE:*** *All data above is based on preliminary results, which includes all students tested in our district, regardless of their attendance. State Report Card data will only include those students who attended our schools 80% or more of the school year and therefore may reflect a slightly different proficiency percentage when it is posted.*

# Trends Over Time – A Look at Historical Data

## Understanding ISAT 2.0 Scores & Data

After students take the ISAT 2.0, their results are reported in two primary ways: scaled scores and achievement levels. A scaled score is the student's overall numerical score. These scores fall on a continuous scale (from approximately 2000 to 3000) that increases across grade levels. Scaled scores can be used to illustrate students' current level of achievement and their growth over time. When combined together across a student population, scaled scores can also describe school- and district-level changes in performance, as well as reveal gaps in achievement among different groups of students. Based on their scaled scores, students fall into one of four categories of performance called achievement levels. The tables below show the range of scaled scores for each achievement level for mathematics and English language arts/literacy:

Achievement Level

English Language Arts and Mathematics Cut Scores

| Grade Level | Level 1 | | Level 2 | | Level 3 | | Level 4 | |
|---|---|---|---|---|---|---|---|---|
| ELA | From | To | From | To | From | To | From | To |
| 3 | 2001 | 2366 | 2367 | 2431 | 2432 | 2489 | 2490 | 2811 |
| 4 | 2032 | 2415 | 2416 | 2472 | 2473 | 2532 | 2533 | 2867 |
| 5 | 2056 | 2441 | 2442 | 2501 | 2502 | 2581 | 2582 | 2916 |
| 6 | 2079 | 2456 | 2457 | 2530 | 2531 | 2617 | 2618 | 2937 |
| 7 | 2082 | 2478 | 2479 | 2551 | 2552 | 2648 | 2649 | 2964 |
| 8 | 2097 | 2486 | 2487 | 2566 | 2567 | 2667 | 2668 | 2989 |
| 9 | 2102 | 2487 | 2488 | 2570 | 2571 | 2669 | 2670 | 3032 |
| 10 | 2102 | 2490 | 2491 | 2576 | 2577 | 2676 | 2677 | 3032 |
| 11 | 2102 | 2492 | 2493 | 2582 | 2583 | 2681 | 2682 | 3032 |
| Math | From | To | From | To | From | To | From | To |
| 3 | 2071 | 2380 | 2381 | 2435 | 2436 | 2500 | 2501 | 2762 |
| 4 | 2090 | 2410 | 2411 | 2484 | 2485 | 2548 | 2549 | 2834 |
| 5 | 2095 | 2454 | 2455 | 2527 | 2528 | 2578 | 2579 | 2891 |
| 6 | 2103 | 2472 | 2473 | 2551 | 2552 | 2609 | 2610 | 2911 |
| 7 | 2108 | 2483 | 2484 | 2566 | 2567 | 2634 | 2635 | 2964 |
| 8 | 2113 | 2503 | 2504 | 2585 | 2586 | 2652 | 2653 | 2993 |
| 9 | 2118 | 2514 | 2515 | 2598 | 2599 | 2675 | 2676 | 3085 |
| 10 | 2118 | 2528 | 2529 | 2613 | 2614 | 2696 | 2697 | 3085 |
| 11 | 2118 | 2542 | 2543 | 2627 | 2628 | 2717 | 2718 | 3085 |

**Level 1=Below Basic** **Level 2=Basic** **Level 3=Proficient** **Level 4=Advanced**

## District Average Scale Score on ELA Summative ISAT 2.0

*Based on District ISAT Performance Reports*

| Grade & Minimum Proficent Score | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2020-21 |
|---|---|---|---|---|---|---|
| **3rd grade** **2432** | 2414 | 2426 | 2418 | 2417 | 2407 | 2395 |
| **4th grade** **2473** | 2450 | 2463 | 2460 | 2457 | 2452 | 2437 |
| **5th grade** **2502** | 2502 | 2506 | 2497 | 2506 | 2496 | 2481 |
| **6th grade** **2531** | 2500 | 2503 | 2500 | 2505 | 2515 | 2500 |
| **7th grade** **2552** | 2531 | 2537 | 2532 | 2529 | 2533 | 2530 |
| **8th grade** **2567** | 2545 | 2561 | 2554 | 2551 | 2547 | 2541 |
| **10th grade** **2577** | 2531 | 2540 | 2552 | 2558 | 2570 | 2553 |

***NOTE**: The first column shows the grade level and the minimum score needed to be proficient on the ISAT in red. The colored columns represent the MCSD district average score for that grade level. The same color indicates a similar group, which allows you to see their growth from year to year. For example, the 3rd graders in 2014-15 would be the same group as 4th graders in 2015-16. A comparison by schools is also available.*

## District Average Scale Score on MATH Summative ISAT 2.0

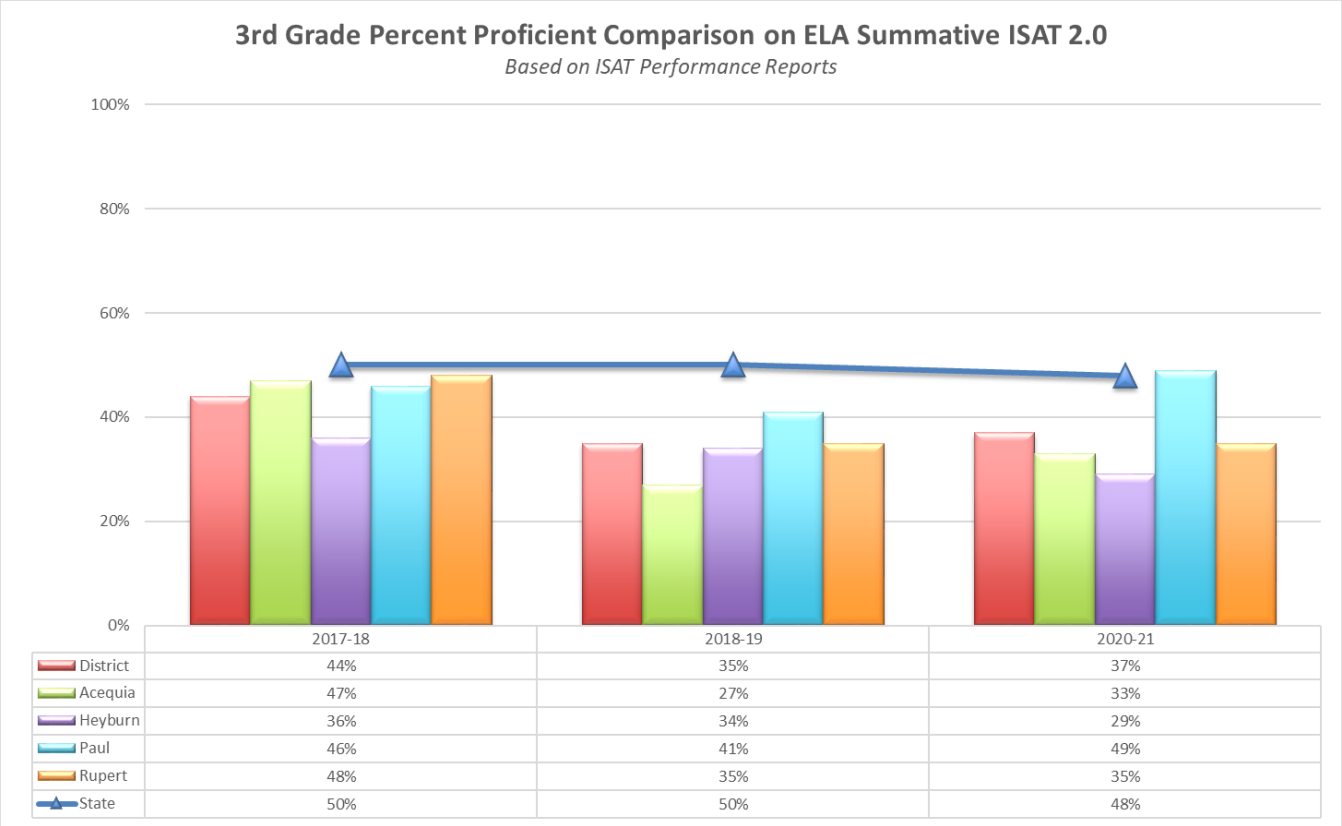
*Based on District ISAT Performance Reports*

| Grade & Minimum Proficent Score | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2020-21 |
|---|---|---|---|---|---|---|
| **3rd grade** **2436** | 2419 | 2434 | 2430 | 2427 | 2410 | 2399 |
| **4th grade** **2485** | 2468 | 2472 | 2472 | 2473 | 2467 | 2432 |
| **5th grade** **2528** | 2490 | 2501 | 2500 | 2516 | 2495 | 2469 |
| **6th grade** **2552** | 2493 | 2491 | 2508 | 2504 | 2505 | 2473 |
| **7th grade** **2567** | 2511 | 2524 | 2511 | 2519 | 2517 | 2493 |
| **8th grade** **2586** | 2508 | 2526 | 2526 | 2527 | 2525 | 2510 |
| **10th grade** **2614** | 2528 | 2519 | 2515 | 2521 | 2543 | 2523 |

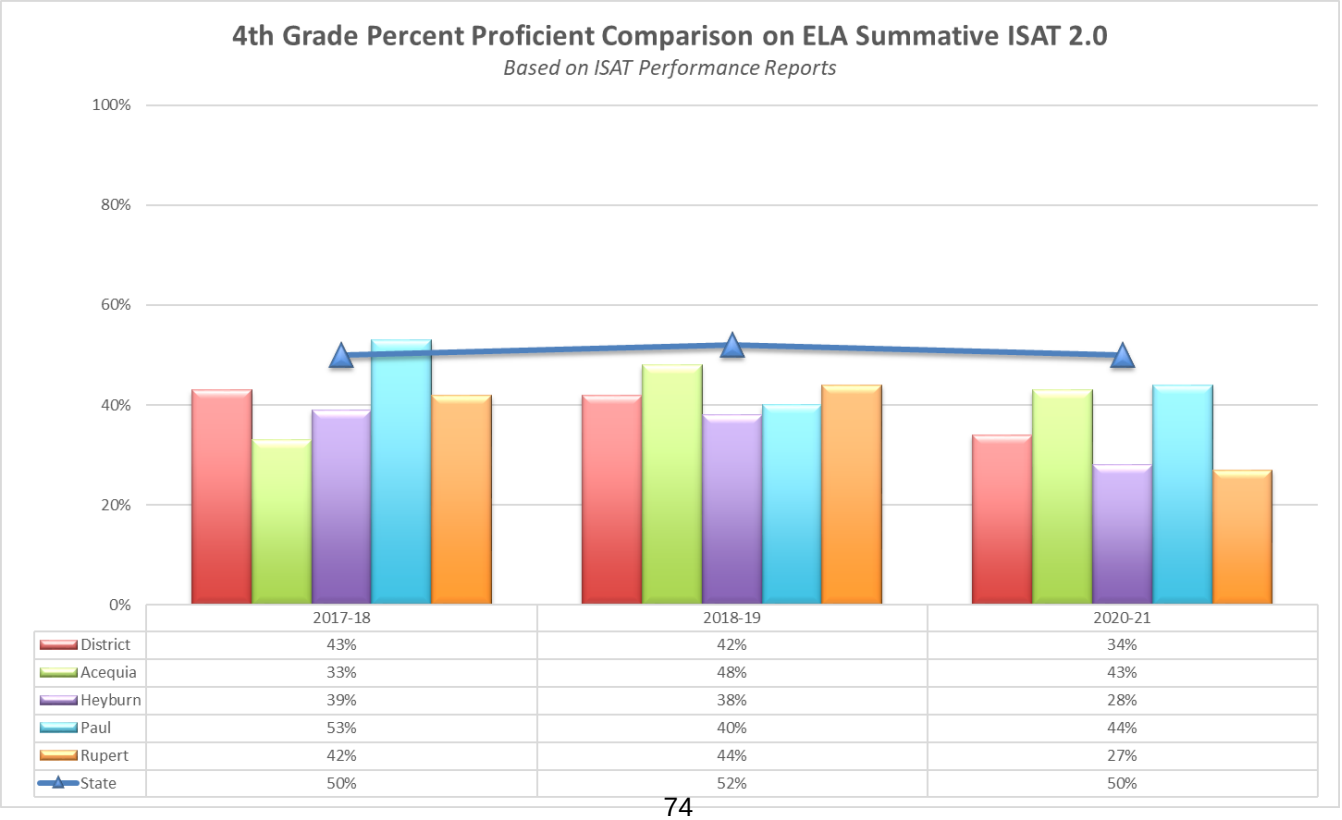
# Trends Over Time – A Look at Historical Data

## Percent Proficient School Comparison

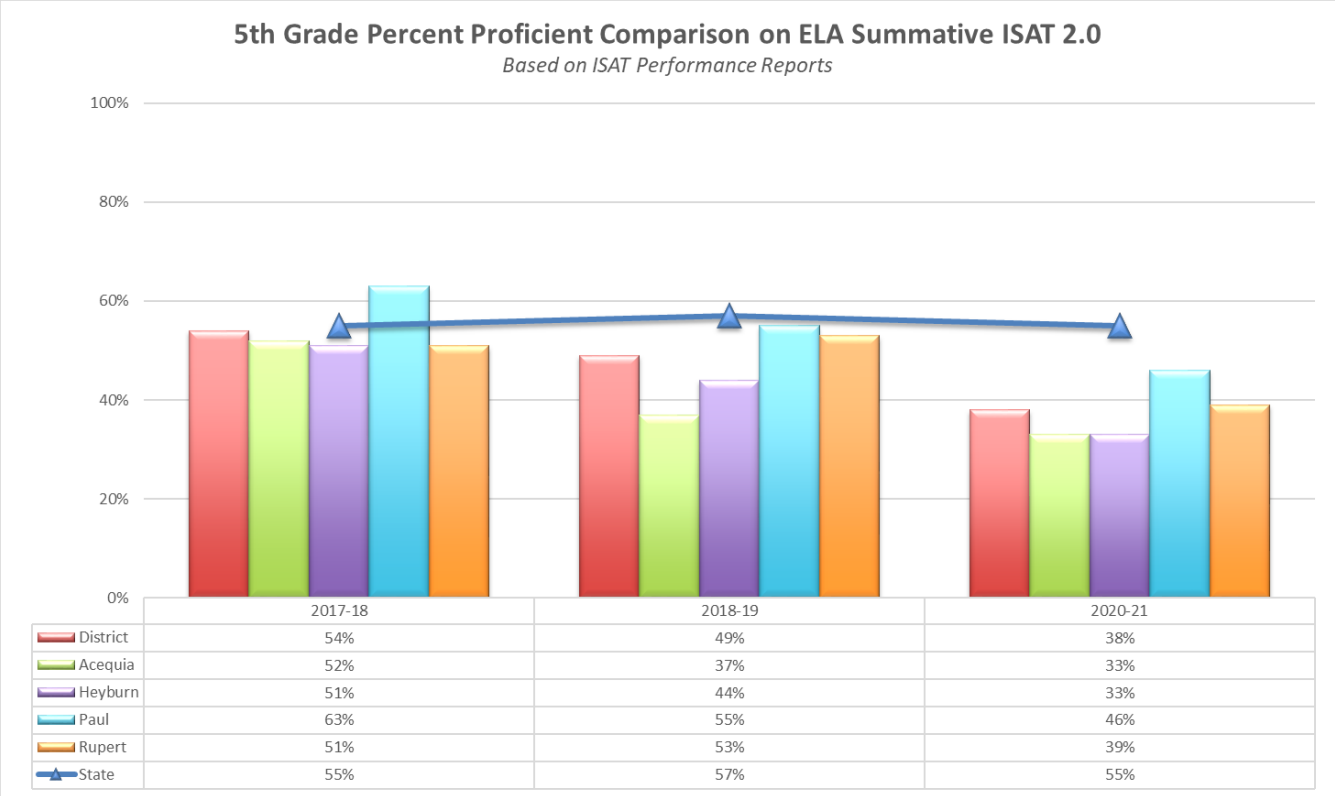
## *English Language Arts - Elementary Schools*




| | 2017-18 | 2018-19 | 2020-21 |
|---|---|---|---|
| District | 44% | 35% | 37% |
| Acequia | 47% | 27% | 33% |
| Heyburn | 36% | 34% | 29% |
| Paul | 46% | 41% | 49% |
| Rupert | 48% | 35% | 35% |
| State | 50% | 50% | 48% |

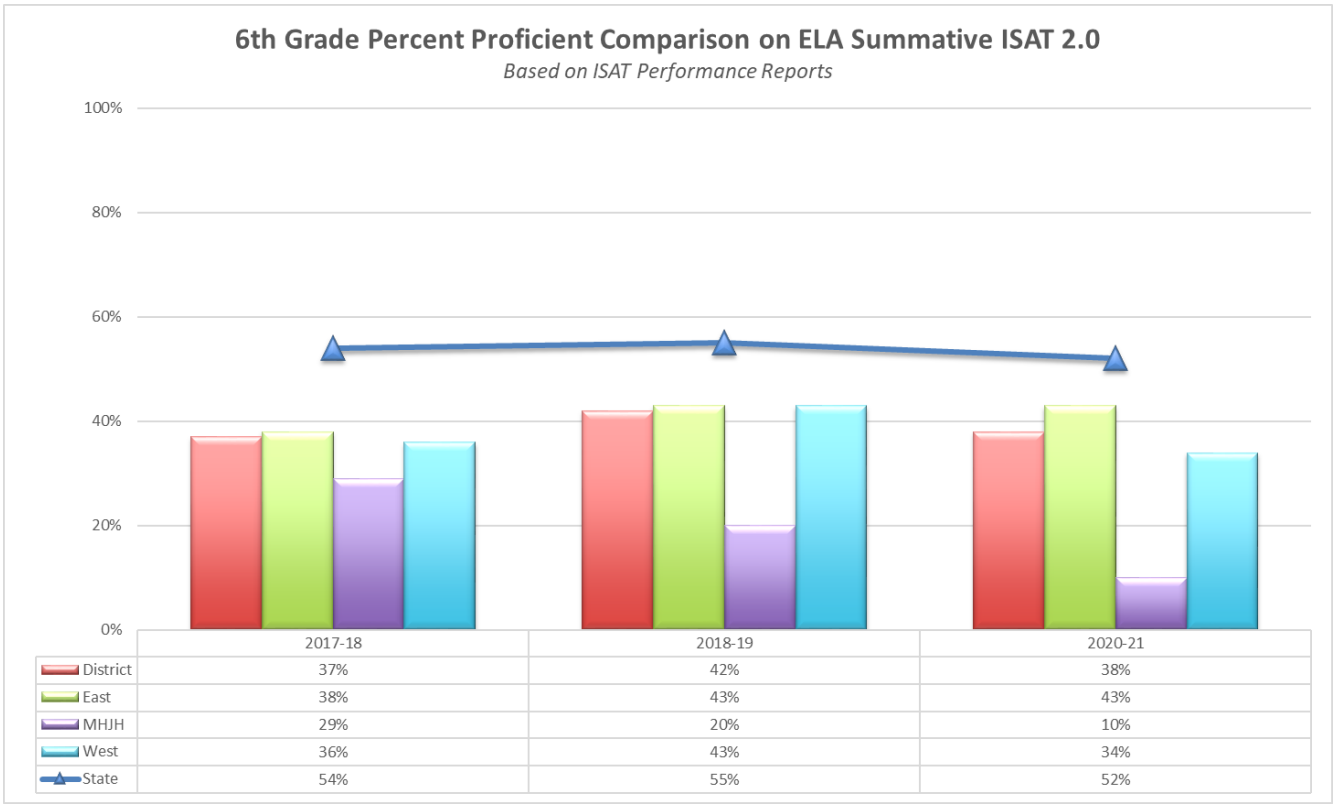



| | 2017-18 | 2018-19 | 2020-21 |
|---|---|---|---|
| District | 43% | 42% | 34% |
| Acequia | 33% | 48% | 43% |
| Heyburn | 39% | 38% | 28% |
| Paul | 53% | 40% | 44% |
| Rupert | 42% | 44% | 27% |
| State | 50% | 52% | 50% |




| | 2017-18 | 2018-19 | 2020-21 |
|---|---|---|---|
| District | 54% | 49% | 38% |
| Acequia | 52% | 37% | 33% |
| Heyburn | 51% | 44% | 33% |
| Paul | 63% | 55% | 46% |
| Rupert | 51% | 53% | 39% |
| State | 55% | 57% | 55% |

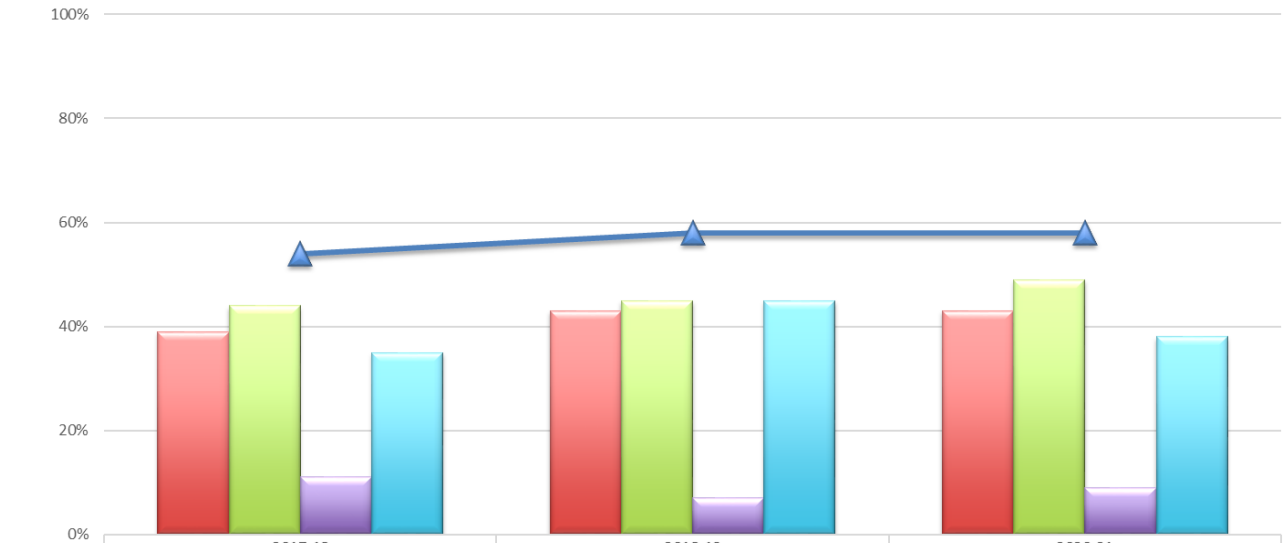
# English Language Arts - Middle Schools




| | 2017-18 | 2018-19 | 2020-21 |
|---|---|---|---|
| District | 37% | 42% | 38% |
| East | 38% | 43% | 43% |
| MHJH | 29% | 20% | 10% |
| West | 36% | 43% | 34% |
| State | 54% | 55% | 52% |

## 7th Grade Percent Proficient Comparison on ELA Summative ISAT 2.0

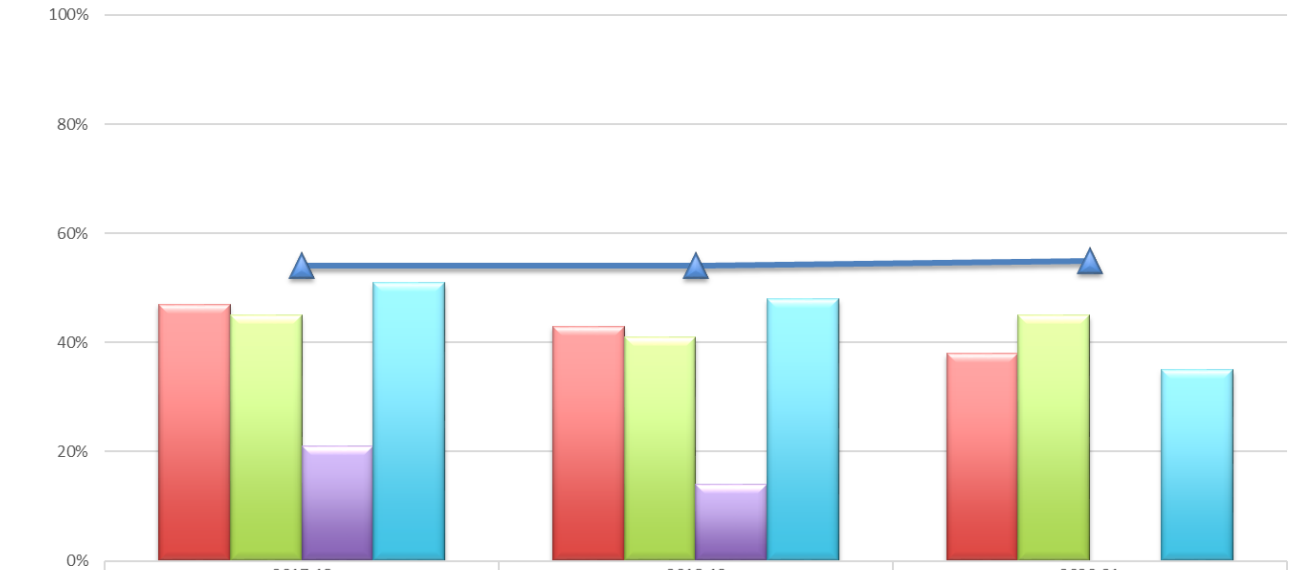
*Based on ISAT Performance Reports*




| | 2017-18 | 2018-19 | 2020-21 |
|---|---|---|---|
| District | 39% | 43% | 43% |
| East | 44% | 45% | 49% |
| MHJH | 11% | 7% | 9% |
| West | 35% | 45% | 38% |
| State | 54% | 58% | 58% |

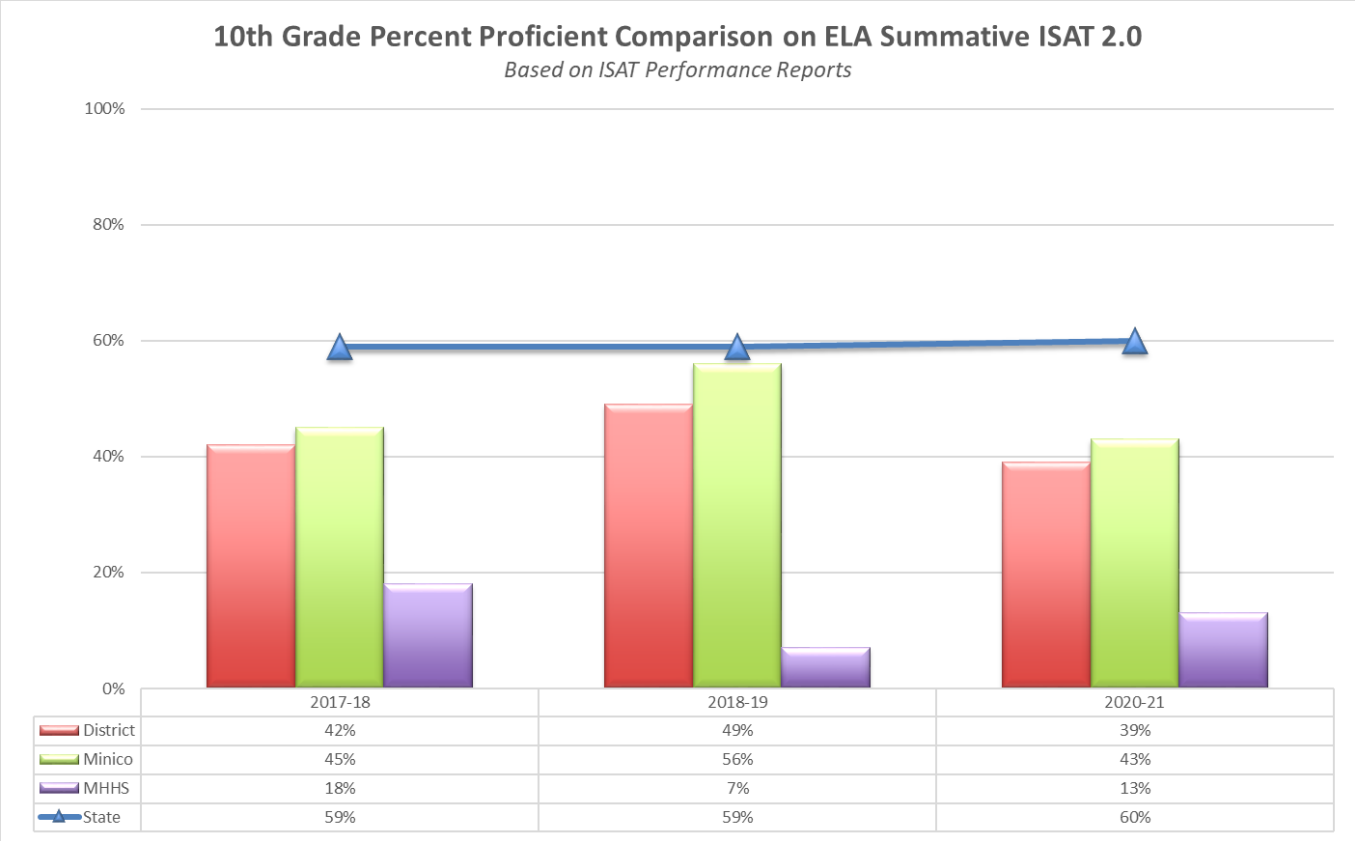
## 8th Grade Percent Proficient Comparison on ELA Summative ISAT 2.0

*Based on ISAT Performance Reports*




| | 2017-18 | 2018-19 | 2020-21 |
|---|---|---|---|
| District | 47% | 43% | 38% |
| East | 45% | 41% | 45% |
| MHJH | 21% | 14% | 0% |
| West | 51% | 48% | 35% |
| State | 54% | 54% | 55% |

# English Language Arts - High Schools

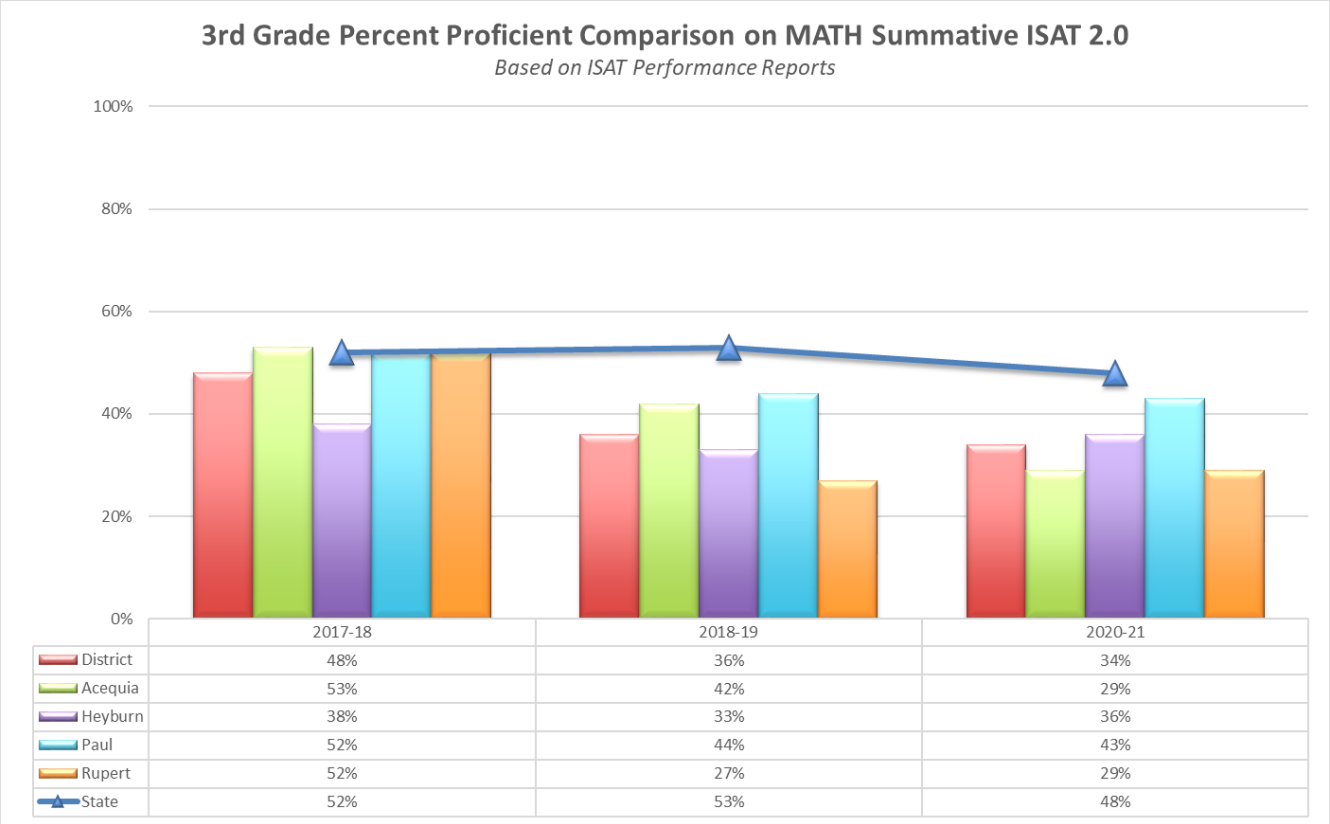



| | 2017-18 | 2018-19 | 2020-21 |
|---|---|---|---|
| District | 42% | 49% | 39% |
| Minico | 45% | 56% | 43% |
| MHHS | 18% | 7% | 13% |
| State | 59% | 59% | 60% |

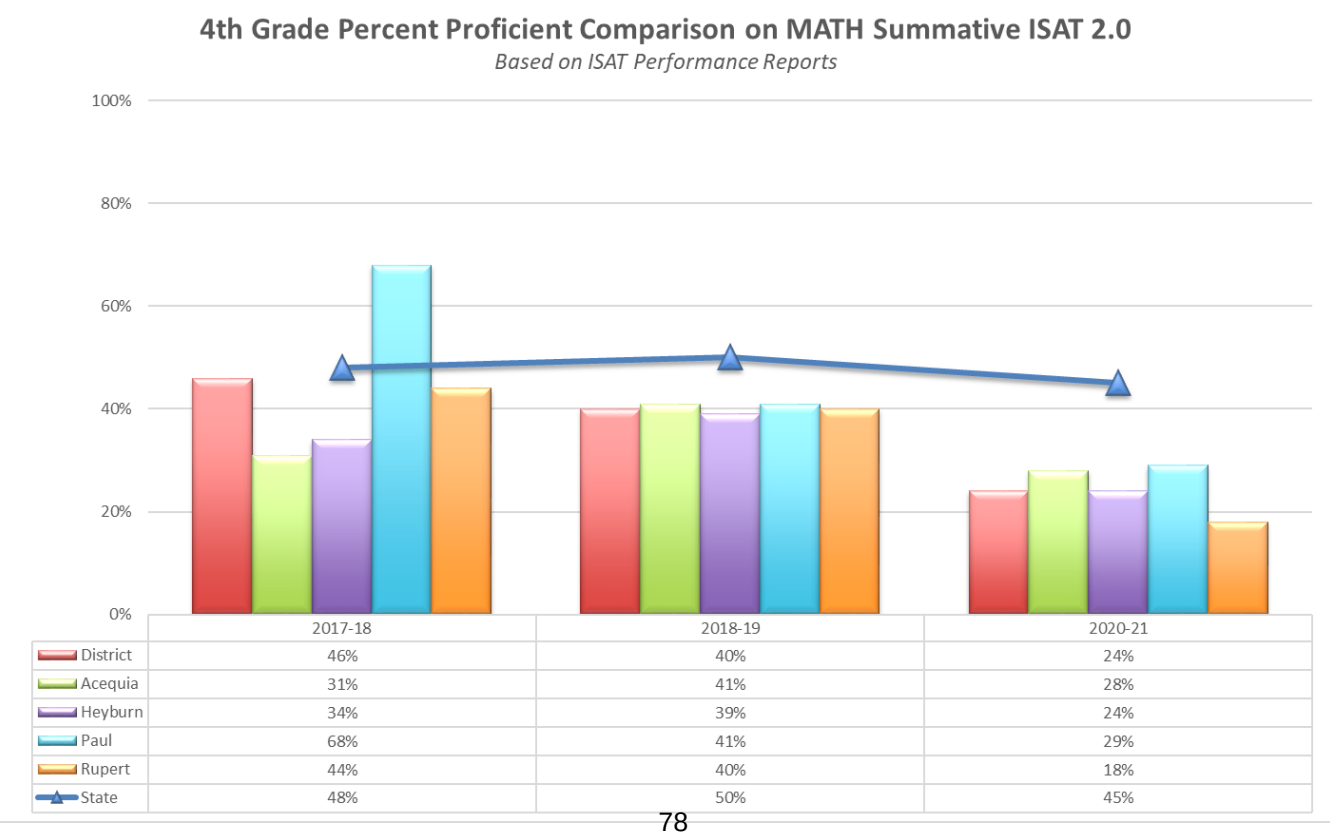
# Trends Over Time – A Look at Historical Data

## Percent Proficient School Comparison

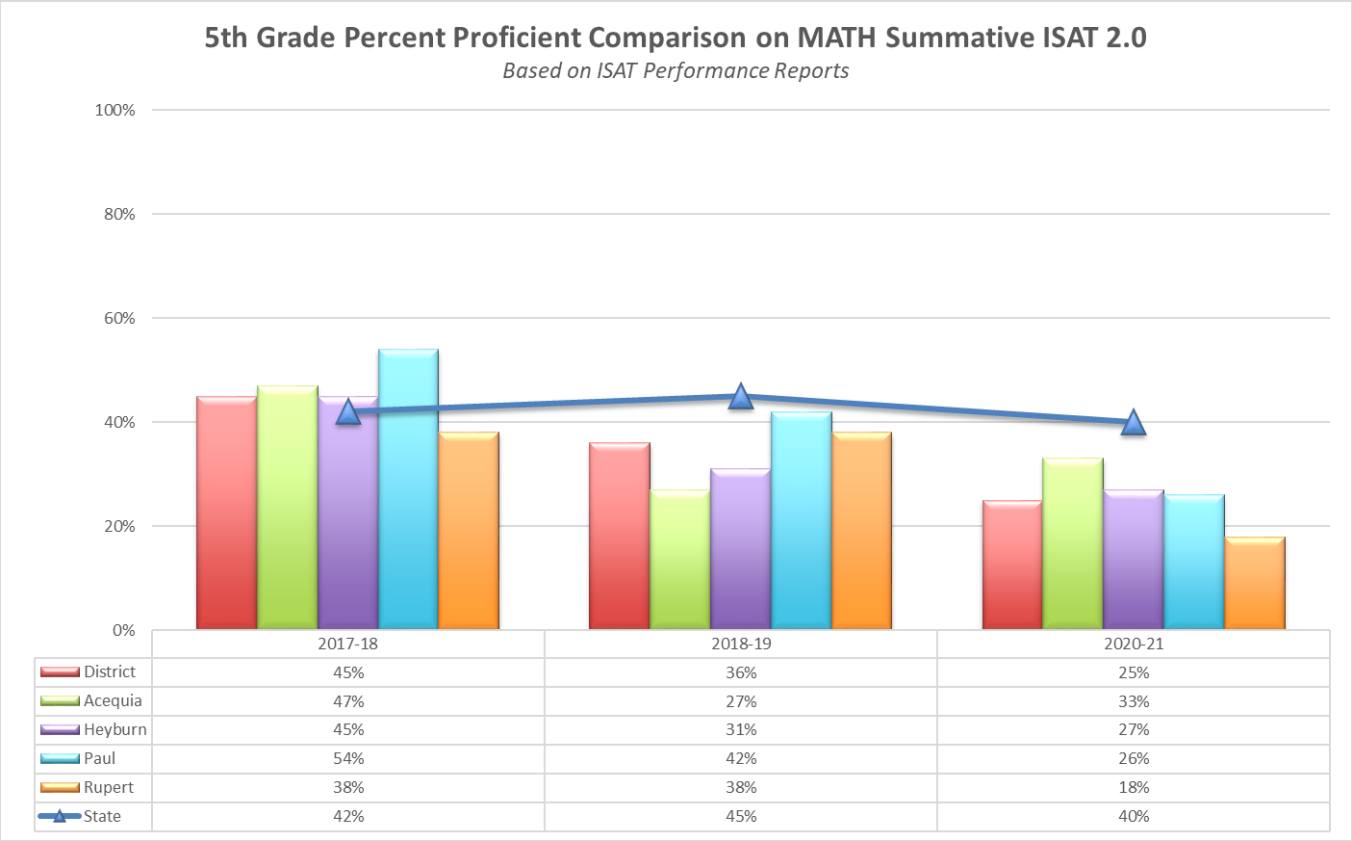
## *Math - Elementary Schools*




| | 2017-18 | 2018-19 | 2020-21 |
|---|---|---|---|
| District | 48% | 36% | 34% |
| Acequia | 53% | 42% | 29% |
| Heyburn | 38% | 33% | 36% |
| Paul | 52% | 44% | 43% |
| Rupert | 52% | 27% | 29% |
| State | 52% | 53% | 48% |

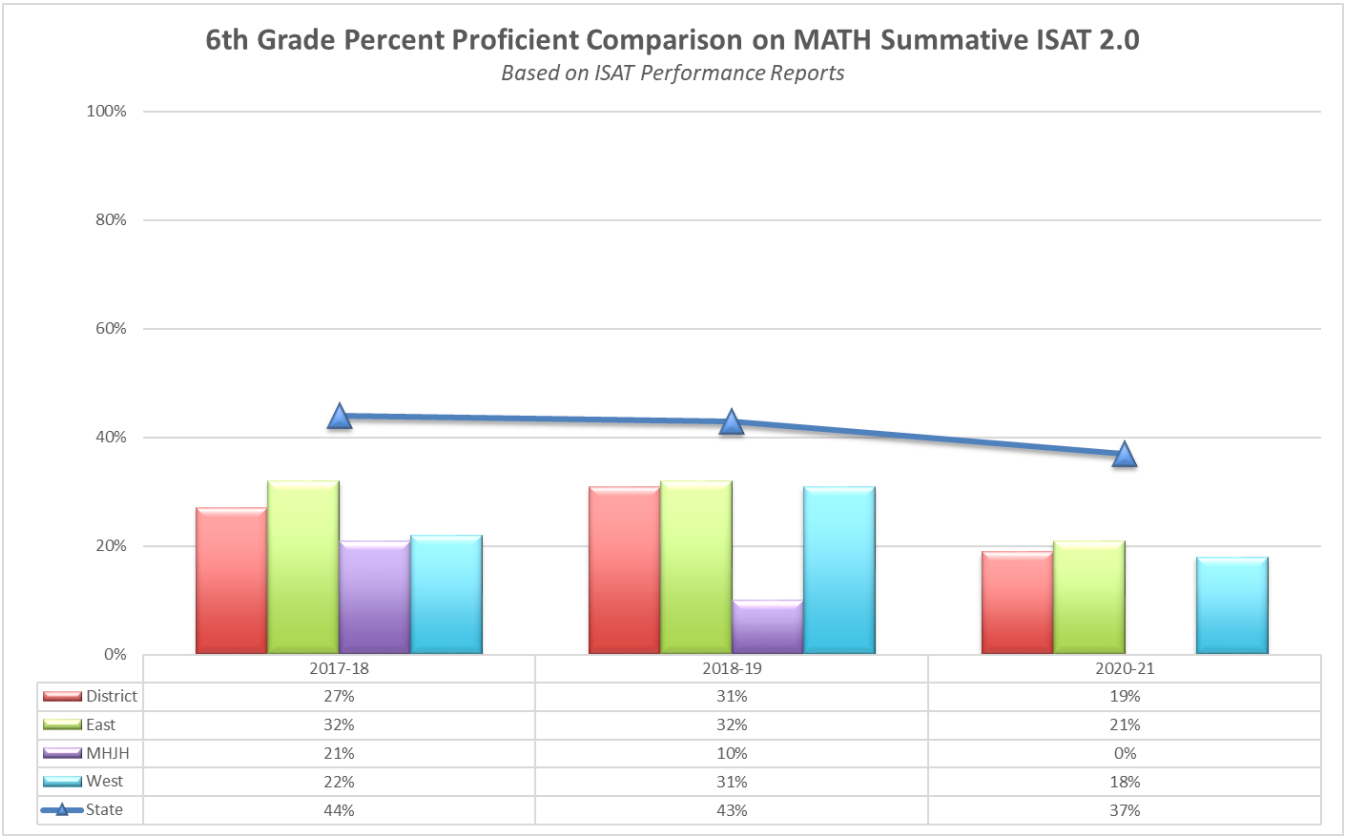



| | 2017-18 | 2018-19 | 2020-21 |
|---|---|---|---|
| District | 46% | 40% | 24% |
| Acequia | 31% | 41% | 28% |
| Heyburn | 34% | 39% | 24% |
| Paul | 68% | 41% | 29% |
| Rupert | 44% | 40% | 18% |
| State | 48% | 50% | 45% |




| | 2017-18 | 2018-19 | 2020-21 |
|---|---|---|---|
| District | 45% | 36% | 25% |
| Acequia | 47% | 27% | 33% |
| Heyburn | 45% | 31% | 27% |
| Paul | 54% | 42% | 26% |
| Rupert | 38% | 38% | 18% |
| State | 42% | 45% | 40% |

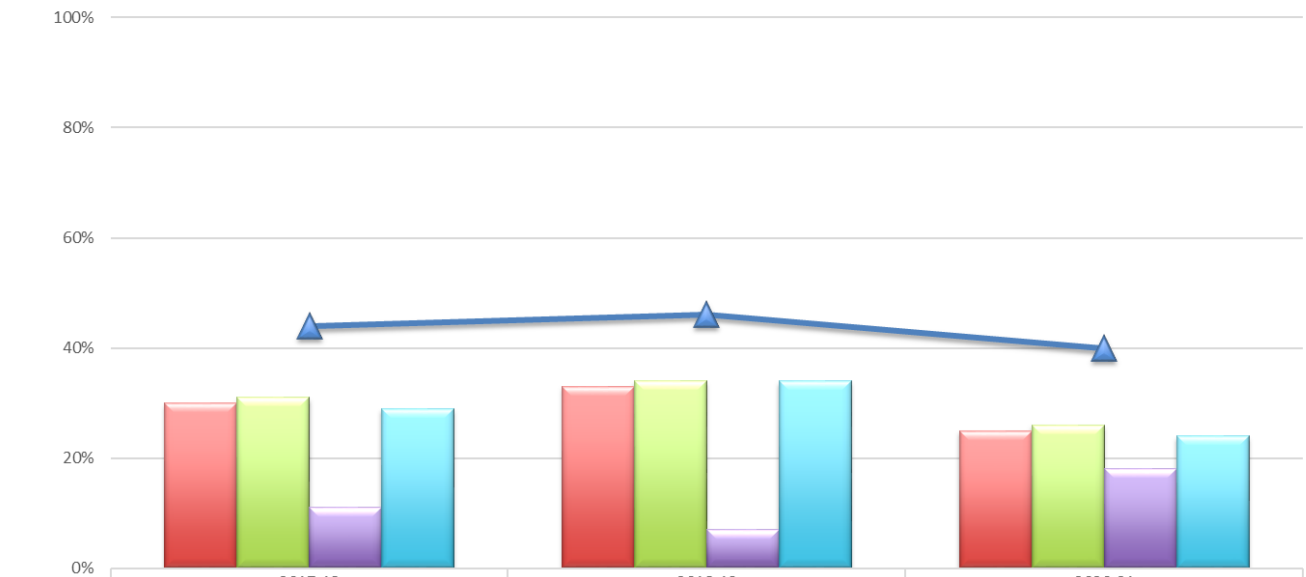
# Math - Middle Schools




| | 2017-18 | 2018-19 | 2020-21 |
|---|---|---|---|
| District | 27% | 31% | 19% |
| East | 32% | 32% | 21% |
| MHJH | 21% | 10% | 0% |
| West | 22% | 31% | 18% |
| State | 44% | 43% | 37% |

## 7th Grade Percent Proficient Comparison on MATH Summative ISAT 2.0

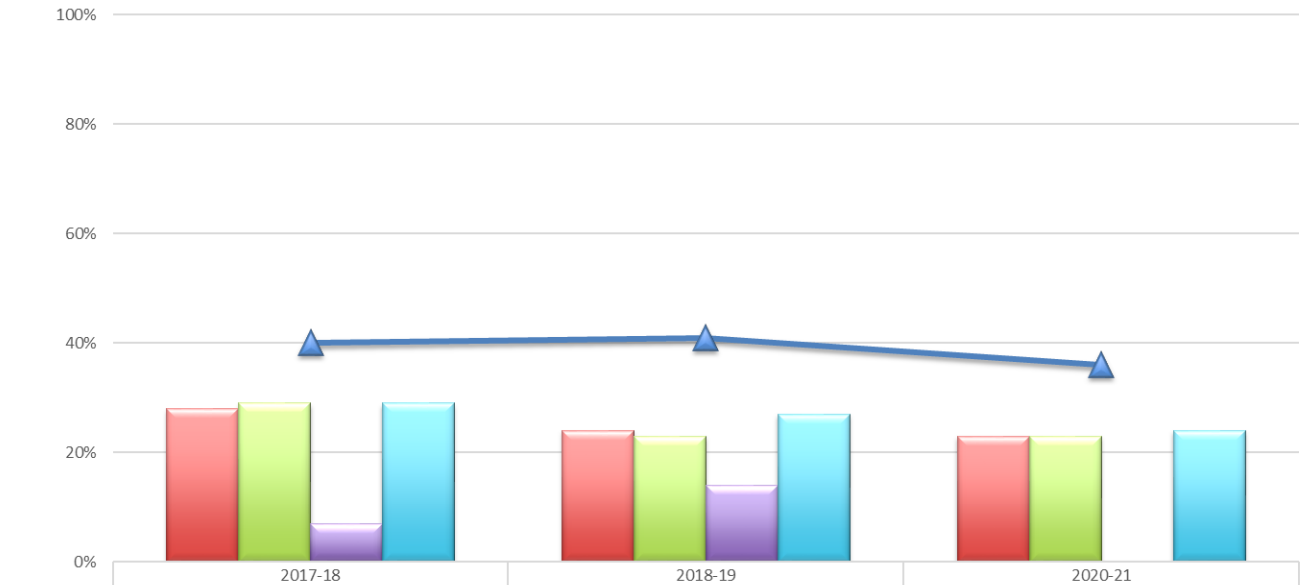
*Based on ISAT Performance Reports*




| | 2017-18 | 2018-19 | 2020-21 |
|---|---|---|---|
| District | 30% | 33% | 25% |
| East | 31% | 34% | 26% |
| MHJH | 11% | 7% | 18% |
| West | 29% | 34% | 24% |
| State | 44% | 46% | 40% |

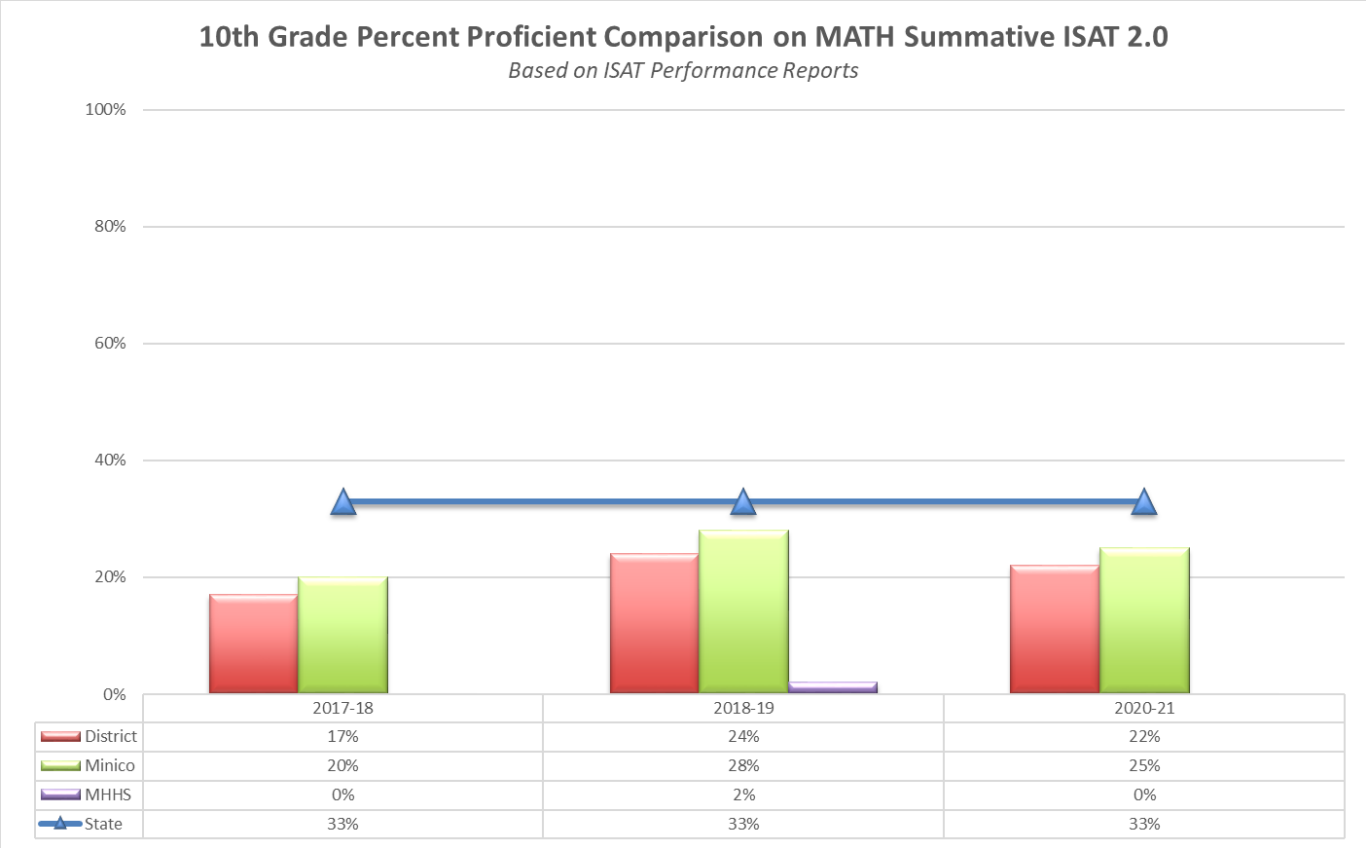
## 8th Grade Percent Proficient Comparison on MATH Summative ISAT 2.0

*Based on ISAT Performance Reports*




| | 2017-18 | 2018-19 | 2020-21 |
|---|---|---|---|
| District | 28% | 24% | 23% |
| East | 29% | 23% | 23% |
| MHJH | 7% | 14% | 0% |
| West | 29% | 27% | 24% |
| State | 40% | 41% | 36% |

# Math - High Schools




| | 2017-18 | 2018-19 | 2020-21 |
|---|---|---|---|
| District | 17% | 24% | 22% |
| Minico | 20% | 28% | 25% |
| MHHS | 0% | 2% | 0% |
| State | 33% | 33% | 33% |

Minidoka
School District 331

***MCSD K-5 Newcomer Program***
***Mt. Harrison Jr. High/Preschool Center***
***Principal, Dyann Blood***
***Julie Espinoza, Teacher***

## Overview

The MCSD K-5 Newcomer Program is located at Mt. Harrison Jr. High/Preschool Center. Our district-wide program provides language support services in core content to K-5 first year English learners (EL). The program is designed to meet the needs of migrant students in their first year in a US school who are non-English speaking from the communities of Acequia, Heyburn, Paul and Rupert. If space is available other eligible first year ELs may receive services from the MCSD K-5 Newcomer Program provided that all K-5 first year migrant students are prioritized for services. The program will be staffed by one certified teacher and one paraprofessional. The students will be provided academic and language support for core content at the Newcomer Center and mainstreamed with their grade-level peers for the remaining half day at their "home schools" for additional academic instruction from their general education teacher.

Eligible students may attend the K-5 Newcomer Program for no more than 2 school years, (18 instructional months). The goal is to have first year students demonstrate sufficient language proficiency to fully transition back to their home school from the K-5 Newcomer Program within 9 instructional months. However, if needed up to an additional 9 months of instructional language support within the Newcomer Program may be provided based on available space and qualifications, (*not to exceed a total of 18 instructional months from the date of initial entry*). After the designated program duration, all K-5 students will be transitioned back fully to their home school where language acquisition and academic support will continue to be provided within the general education classroom by certified teachers and paraprofessionals.

The primary focus of the MCSD K-5 Newcomer Program is language acquisition for success in the general education program. District math and ELA curriculum serve as a vehicle to acquire language, while allowing students to become familiar with the education system and the social environment. Students are provided opportunities to experience the customs and cultures of the United States while maintaining and honoring their first cultures, customs, and languages.

The MCSD K-5 Newcomer Program teaches language by encouraging meaningful context, physical contact with pictures and objects, responding to multi-sensory experiences, and interacting in authentic, developmentally appropriate learning through continual reading, writing, listening, and speaking opportunities. Teachers and paraprofessionals will continue to increase their instructional expertise by participating in the Go to Strategies and Sheltered Instruction Observation Protocol (SIOP; *Echevarria, Vogt, & Short 2013*). In addition to the district adopted reading and math curriculums, Wonders and Eureka Math, the Newcomer program will also utilize Imagine Math and Imagine Learning, as well as the Wonders Newcomer Kit to supplement language and academic instruction. Additional supplementary programs and language acquisition strategies will be integrated daily using various grouping configurations, hands-on experiences, and technology.

## Criteria

The following criteria will be used to potentially qualify for the MCSD K-5 Newcomer Program:

Migrant: Student qualifies for the MCSD Migrant Education Program
L1 (*English Learner Year 1*): Student has recently arrived to the US and been enrolled for the first time in a U.S. school for less than 1 year
Kindergarten English learner: Students identified as migrant English learners will be considered for placement depending on their language proficiency scores, need and number of eligible students. First year K-5 English learner students will be ranked by migrant status, language proficiency scores, length of time in a US school, and need to determine eligibility for placement in the MCSD K-5 Newcomer Program.
Parents /guardians may reserve the right to refuse services at the MCSD K-5 Newcomer Program. This does not mean the child is ineligible to receive English learner support services and instruction at their home school.

## Identification & Placement Protocol

The following protocol will be used to identify and place students in the MCSD K-5 Newcomer Program.

1. The student will register and enroll in their home school (school within the student's residential boundary).
2. The home school will assign the student to a grade-level appropriate general education classroom.
3. The home school will use the Home Language Survey and an interview with parents to determine if language placement testing is needed. If placement testing is appropriate a WIDA Screener will be used to assess language proficiency.
4. The home school will provide a COPY of the WIDA Screener results to Federal Programs.
    a. Must be submitted to Federal Programs within 3 days of giving the screener.
    b. All screener scores must be compiled on a spreadsheet that is stored in DRIVE by the ELL case manager at each school – these scores will be entered into the state database, ELMS, by the EL/Migrant Specialist.
    c. EL/Migrant Specialist will meet with the newcomer teacher and the home school administrator to confirm or deny placement in the MCSD K-5Newcomer Program.
5. Once admitted to the MCSD K-5 Newcomer Program:
    a. The newcomer teacher will notify parents of their child's eligibility for the MCSD K-5 Newcomer Program
    b. The EL/Migrant Specialist will set up busing with the transportation department and the newcomer teacher will communicate the busing schedule with the parents/families.
    c. The home school secretary, or designated office staff, will communicate with transportation, food service and parents concerning early release days (either scheduled or emergency) and follow district procedures for communicating with parents.

## Schedule

- K-2 students will attend the MCSD K-5 Newcomer Program from 8:00-12:30, Monday - Thursday at the Minidoka District Service Center, unless the home school or general education class has a special group activity planned, in which case the students would participate with their general education peers.
- 3rd-5th grade students will attend the MCSD K-5 Newcomer Program from 12:00-3:00, Monday - Thursday at the Minidoka District Service Center, unless the home school or general education class has a special group activity planned, in which case the students would participate with their general education peers.

Minidoka County School District

# Technology Department

**Technology Director:** Branan Hardcastle

**Technology Department Members**: Cameron Jackson, James Thomas, Neal Larson, Andrew Kontos

## July 2021 Report

| Resolved Projects | School/Dept. Impacted |
|---|---|
| EMS Camera Replacement Plan | EMS |
| New Staff Device Handout | ALL |
| Active Directory Audit | TECH |
| Powerschool Registration Setup | ALL |
| Student Device Set up | WMS |
| Ednetics Network Plan | ALL |

## Tickets

| Submitted | Resolved |
|---|---|
| Total: 33<br>Staff: 32<br>Students: 1 | Total: 26<br>Staff: 26<br>Students: 0 |

## Upcoming Projects

- EMS Camera Replacement
- Computer lab replacements
- Azure AD port
- Office 365 deployment
- Active directory security permissions
- Registration

# Minidoka Migrant Education Summer Session 2021



# Number of Students

**2019-142**

**2020-116**

**2021-140**

imagine learning

84.3% of students showed growth in Mathematics

80% of students showed growth in Language and Literacy

















COLLEGE OF SOUTHERN IDAHO

# Castle Rock State Park











# Castle Rocks State Park



















The Herrett Center











The Herrett Center

Idaho State University











DeMary Memorial Library





DeMary Memorial Library









University of Idaho

















University of Idaho


CITY OF PAPPERY
ICE



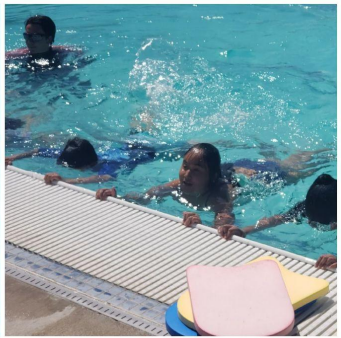




# Service Animal Visitor









# Swimming Lessons (2-5) and Water Fun (preK-1)

















Thank you to West End Fire Department



Thank you to our Fabulous Teachers!



# Principal's Favorites










Summer School 2021

Administrators:  John Kontos, Maggi Fortner

Teachers:  18 classroom teachers, 2 special education teachers

Students:
**First term (June 7-June 24) average daily attendance 257.68**

| Number | Date | Day | Membership | Attendance |
|---|---|---|---|---|
| 1 | 06/07/2021 | Mon (A) | 273.00 | 242.00 |
| 2 | 06/08/2021 | Tue (A) | 280.00 | 270.00 |
| 3 | 06/09/2021 | Wed (A) | 282.00 | 264.00 |
| 4 | 06/10/2021 | Thu (A) | 281.00 | 261.50 |
| 5 | 06/11/2021 | Fri (A) | 281.00 | 260.00 |
| 6 | 06/14/2021 | Mon (A) | 280.00 | 263.00 |
| 7 | 06/15/2021 | Tue (A) | 279.00 | 262.50 |
| 8 | 06/16/2021 | Wed (A) | 279.00 | 263.50 |
| 9 | 06/17/2021 | Thu (A) | 276.00 | 260.00 |
| 10 | 06/18/2021 | Fri (A) | 274.00 | 253.00 |
| 11 | 06/21/2021 | Mon (A) | 274.00 | 246.00 |
| 12 | 06/22/2021 | Tue (A) | 273.00 | 256.00 |
| 13 | 06/23/2021 | Wed (A) | 273.00 | 257.00 |
| 14 | 06/24/2021 | Thu (A) | 273.00 | 249.00 |
| | | **Total:** | 3878.00 | 3607.50 |
| | | **Average:** | 277.00 | 257.68 |

| Number | Date | Day | Membership | Attendance |
|---|---|---|---|---|
| 1 | 06/25/2021 | Fri (A) | 211.00 | 192.00 |
| 2 | 06/28/2021 | Mon (A) | 210.00 | 190.00 |
| 3 | 06/29/2021 | Tue (A) | 210.00 | 195.50 |
| 4 | 06/30/2021 | Wed (A) | 208.00 | 187.50 |
| 5 | 07/01/2021 | Thu (A) | 203.00 | 187.50 |
| 6 | 07/02/2021 | Fri (A) | 202.00 | 175.00 |
| 7 | 07/06/2021 | Tue (A) | 197.00 | 180.50 |
| 8 | 07/07/2021 | Wed (A) | 191.00 | 177.00 |
| 9 | 07/08/2021 | Thu (A) | 190.00 | 170.50 |
| 10 | 07/09/2021 | Fri (A) | 188.00 | 176.00 |
| 11 | 07/12/2021 | Mon (A) | 187.00 | 179.50 |
| 12 | 07/13/2021 | Tue (A) | 186.00 | 174.00 |
| 13 | 07/14/2021 | Wed (A) | 186.00 | 178.00 |
| 14 | 07/15/2021 | Thu (A) | 185.00 | 173.50 |
| | | **Total:** | 2754.00 | 2536.50 |
| | | **Average:** | 196.71 | 181.18 |

**Second term (June 25- July 15) Average attendance 181.18**

# Minidoka County Joint School District # 331

# Continuous Improvement Plan 2020-21

2 High Schools

3 Middle Schools

4 Elementary Schools

Empowering Students for Success

**#WeAreMinidoka**

# MCSD COMBINED DISTRICT PLAN (2020-2021)

**Continuous Improvement Plan • College & Career Advising Plan • Literacy Intervention Plan**

| | | | |
|---|---|---|---|
| **School District** | **# 331** | **Name: Minidoka County Joint School District** | |
| **Superintendent** | **Name**: Mr. James Ramsey | | Phone: 208-436-4727 |
| | **E-mail:** jramsey@minidokaschools.org | | |
| **Plan Contact** | **Name:** Michele Widmier | | Phone: 208-436-4727 |
| | **E-mail:** mwidmier@minidokaschools.org | | |

## Narrative – Part 1

### Mission and Vision

Mission: **Empowering Students for Success**

Vision: The Minidoka County School District is dedicated to developing the whole child in an atmosphere of excellence, characterized by mutual respect, shared responsibility for learning, and academic rigor, which facilitates success in all aspects of life.

Priority Focus: **Effective Instruction**

### Demographic Analysis – Annual March 1st Counts

| | 2018-2019 | 2019-2020 |
|---|---|---|
| Male | *51.5%* | *51.7%* |
| Female | *48.5%* | *48.3%* |
| White | *50.7%* | *50.7%* |
| Black/African American | *0.3%* | *< 0.01%* |
| Asian | *0.1%* | *< 0.01%* |
| Native American | *0.5%* | *< 0.01%* |
| Hispanic/Latino | *45.9%* | *45.6%* |
| Free/Reduced Lunch Program | *64.5%* | *63.8%* |
| Received Special Education Services | *11.7%* | *12.2%* |

MCSD, like so many other districts in Idaho, has experienced growing enrollments, rising staffing costs, a shortage of highly qualified teachers, and now, due to COVID-19, a changing educational landscape. As a result, student safety has taken a front seat, which has meant making adjustments to address those needs. Precious resources have been needed to design new learning spaces, improve sanitation, and implement a new online version of our educational program for families not comfortable sending their children to our brick and mortar schools. This, in addition to ever-changing remote learning scenarios, will make it even more challenging to meet the unique needs of our most at-risk students in the upcoming year.

# MCSD COMBINED DISTRICT PLAN (2020-2021)

**Continuous Improvement Plan • College & Career Advising Plan • Literacy Intervention Plan**

## Community Involvement - REQUIRED

MCSD recognizes how important it is to engage families in our schools and their child's education and as such, has a rich tradition of community involvement. This involvement is a critical component of our Continuous Improvement Planning process. Community and family input shape our programs and the future direction of our district. We utilize the following strategies to engage our community:

- Announcements and information from schools are translated and notification to parents regarding academic achievement, school and community events, services and resources available, and safety procedures/notifications occur through a variety of media formats: student handbooks, brochures, the District website, Facebook, Remind, automatic dialing system, newspapers, local television stations, memos and flyers, parent-teacher conferences, and the parent component of PowerSchool. To further engage our Hispanic community, MCSD also reaches out to our non-English speaking families through the Spanish radio station and make personal phone calls to invite them to events throughout the district.
- Monthly meetings occur with a variety of groups: our Board, the Policy Review Committee, the Patron/Parent Advisory Team, and the Migrant Parent Advisory Committee. Each of these groups consists of parents, community members, MCSD staff, and Board of Trustee members. Collaborative discussions with these groups focus on a variety of topics including continuous improvement planning, educational programs and instruction, college and career readiness, literacy planning, policy, communication, parental involvement, concerns, ways to improve as a district, and future needs.
- District sponsored Town Hall meetings have been used to disseminate accurate information across the community around key issues that impact families and businesses, like school bonds and the supplemental levy.
- The MCSD administrative team meets with local emergency and law enforcement personnel at least twice annually to discuss safety concerns and ways to improve our emergency preparedness and response. This group includes representatives from every school, local police and fire departments, as well as juvenile probation and parole.
- Annually the MCSD Federal Programs office takes out a full-page advertisement in our local newspaper to outline the various programs available to families and ways that the community can become involved. The circular is free and reaches over 15,000 residents.
- Like many schools across Idaho, sporting events are community events. MCSD uses this venue to build positive relationships with the community and, occasionally, share information with them about our schools.
- Our schools host a variety of parent involvement activities throughout the year. In a normal school year each school hosts a Back-to-School or an Open House in the fall to introduce staff to parents and teach them about procedures and school expectations. In addition, schools engage families with a variety of student recognition and performance events, literacy and math nights, afterschool and summer programs, as well as parent training and information events like Parenting with Love & Logic classes and our Bi-lingual Parent Outreach program.
- Our high schools host college and career readiness events that include an opportunity for parents to ask questions and get assistance with the college entrance process. Information about the services and resources available, as well as training on how to access financial aid are provided to parents.
- Formal parent–teacher conferences are held twice a year and include the development and progress monitoring of literacy intervention plans and student achievement.

MCSD enjoys a positive relationship with our community. Many of our local churches and businesses donate backpacks filled with school supplies and other items to support our most needy families. Schools reap the benefits of strong ties with the community as well. School parent-teacher organizations sponsor community involvement activities throughout the year such as tailgating at sporting events, 5K runs, carnivals, and student fieldtrips to local venues to enhance the educational programming for all students.

## LITERACY INTERVENTION PROGRAM - Required

Minidoka County School District's (MCSD) Mission is "Empowering Students for Success." Focusing of effective literacy instruction, MCSD strives to meet the goal of all students reading proficiently by third grade as measure by the Spring IRI.

As a result of teacher shortages in the state of Idaho, MCSD has a high percentage of teachers in the classroom who have received teaching certificates through alternate routes, resulting in teachers with little to no training in literacy instruction. As a result of this data, the literacy plan focuses on providing professional development to instructional coaches and literacy leaders within each school with the intention of creating capacity within the district to support literacy instruction. MCSD has a high percentage of English Language Learners who need additional supports to be successful in learning to read. To address this need, teachers in grades K-5 will receive training and support in best practices in teaching and support English Language Learners in reading instruction.

MCSD partners with Education Northwest (EdNW) and other Idaho school districts in the NW Literacy Co-Op. The purpose of the Co-Op is to improve literacy outcomes in districts by sharing what is working and collectively brainstorming solutions to common challenges through evidence-based research. As part of this co-operative instructional coaches, administrators, and school literacy leadership will receive training in skills specific to literacy such as phonemic awareness, decoding, vocabulary, comprehension, and fluency.

All elementary schools in MCSD have implemented a Literacy Committee, which consists of at least two teachers and the instructional coach as members of the committee. The committee discusses literacy best practices, school-wide progress on the ISIP (IStation's Indicator of Progress), receives and delivers literacy training, and guides the school in improving literacy for all students.

Each school will receive an additional classroom teacher, to reduce class size. With a reduced class size, teachers will be able to more closely monitor and assess literacy foundational skills. The intent of reducing class size is to ensure students receive solid foundational skills in the earliest grades. Each school will also receive an additional paraprofessional to help facilitate small group interventions and decrease the size of current intervention groups.

**Program Description & Time**

MCSD recognizes the need for effective instruction with the core reading program. Core reading instruction is delivered daily during a 90-minute instructional reading block using the evidence-based reading program Wonders for all students. In order to provide students with intervention based on skill deficits, students in grades K-3 will be assessed using the ISIP (IStation's Indicator of Progress) monthly. Data from student

assessments will be used to identify student deficits and needs for intervention. Teachers are trained on ISIP reporting, and data. The ISIP provides data based on phonological awareness, decoding/phonics (explicit and systematic), fluency, and comprehension, which will be used to determine intervention groups. Students who are identified as either a two or three on the IRI will receive an additional 30 minutes of small group intervention in addition to the 90-minute reading block. This is facilitated through either a pull-out or push-in model. Intervention groups focus on phonological awareness, decoding/phonics (explicit and systematic), fluency, and comprehension. Kindergarteners who require more intensive intervention may participate in an extended kindergarten program which is administered five days a week all year long.

**Intervention**

Interventionists have been provided training specifically on literacy intervention. Additional interventionists will allow schools the ability to reduce intervention group size. Small group instruction includes three to six students. Whole group instruction is more than six students. These additional interventionists (paraprofessionals) will help to lower the small group intervention size.

**Intervention Materials**

| Program | Grades |
|---|---|
| Anita Archer Phonics for Reading<br>Phonics for Reading | K, 1, 2, 3<br>K, 1, 2, 3 |
| Imagine Learning | K, 1, 2, 3 |
| Language for Learning | K, 1, 2, 3 |
| Early Interventions in Reading | K |
| WonderWorks (McGraw-Hill) | K, 1, 2, 3 |
| iStation Reading Instruction | K, 1, 2, 3 |
| Read Naturally (Comprehension) | 1, 2, 3 |

**Assessment**

In order to assess student's literacy growth, MCSD has several multiple assessments in place. The Idaho Reading Indicator is given three times a year (Fall, Winter & Spring). This assessment is used to identify "at risk" students for reading failure. The CORE Phonics assesses phonics and phonics-related skills with a high rate of application in beginning reading. CORE Phonics can be used as a screening measure, as well as outcome measures, providing data about growth and mastery at the end of an instructional period. CORE Phonics is administered every 6-8 weeks for students with a reading deficit. Results are shared with the classroom teacher, instructional coach, principal and support staff during monthly collaborations and provide data for leveling students in intervention groups. The ISIP is used monthly as a progress-monitoring tool monthly. This assessment measures overall performance of key foundational skills at each grade level.

**Comprehensive Literacy Plan Alignment - REQUIRED**

The Idaho Comprehensive Literacy Plan is comprised of four essential elements of the Idaho Comprehensive Literacy Plan; collaborative leadership, developing professional educators, effective instruction and interventions, and assessment and data. Minidoka County School District incorporated each of these components in designing their literacy plan.

- **Collaborative Leadership**-In order to achieve academic success and rigor in attaining the goal of students reading at grade level, all constituents are involved in creating a literacy plan. All groups understand their responsibilities and contribute to achieving literacy goals. Creating stronger school-family community partnerships is a goal MCSD is engaged by providing more opportunities for parents to become involved in students' literacy growth.
- **Developing Professional Educators**- Administrations, teachers and paraprofessionals will be provided extra support from experienced trainers in order to increase their knowledge of support programs and reading foundational skills. Schools will maintain opportunities for collaboration on a monthly basis. Instructional coaches will provide support in the classroom especially during the 90-minute reading block. New teachers will receive additional training through the mentoring program specifically on literacy and core instruction.
- **Effective Instruction and Interventions**-- Minidoka County School District has determined a priority focus to be effective instruction. Literacy rounds will assist in determining next steps to increase student achievement specifically in the areas of reading and writing. Waterford will help classroom teachers in kindergarten be able to provide individualized instruction based on the student's need. All schools follow district MTSS/RTI processes. It is a continued goal to meet the needs of all English Language learners through the WIDA standards.
- **Assessment and Data**-In order to increase student achievement through the use of data, teachers will be trained in the use of Mileposts, a data management system, which provides an overview of each student's assessment data, as well as where progress monitoring will be recorded. Comprehensive assessment systems are in place, which include IRI, ISAT, and CORE Phonics as well as various other formative assessments. All students will participate in screening for literacy skills, as well as additional diagnostic assessments as needed. Data will be used to determine students' deficits, which also determine interventions.

## Parent Involvement - REQUIRED

Parental input and support in Minidoka County School District (MCSD) is a key component for academic success. MCSD continually strives to increase communication with parents. When designing MCSD's literacy plan, the district sought input from the Parent Patron Advisory Team (PPAT). The PPAT is a representation of all schools within the district. Input was sought in this group in how the district could better support parents and families in literacy. In addition to input from the PPAT team, individual elementary schools sought input from parent organizations in how to best support parents with literacy needs.

As part of the K-3 literacy plan, MCSD invites parents to discuss their child's reading level with their child's teacher and/or literacy plan members. The meeting ensures all parties are involved in creating a literacy plan, which provides the child with needed intervention and supports. This gives parents an opportunity to engage and provide input. The meeting and notification will describe the reading intervention services each student receives once they have been identified as having a reading deficiency on the Fall IRI. The parent meeting and/or notification includes a description of current services provided to the student and description of available or supplemental services and supports. Once the plan has been developed, 30 days after the deficiency is identified, a description of the reading intervention and supplemental services/supports is provided to each parent including strategies to use at home. This is crucial in meeting the goals for the child throughout the year.

The school district provides opportunities for parents to attend literacy nights, which educate parents on how literacy support can be provided within the home. Meetings with families to discuss the plan for their child, letters home to families in their preferred language and parent teacher conferences also serve to communicate the child's progress toward literacy goals.

# MCSD COMBINED DISTRICT PLAN (2020-2021)

**Continuous Improvement Plan • College & Career Advising Plan • Literacy Intervention Plan**

| | |
|---|---|
| **District Name and Number: Minidoka County School District #331** | Minidoka County School District #331 |
| **Estimated Total Literacy Funding for 2020-2021** | **$503,840.00** |

| **PERSONNEL COSTS** | | | | | **Proposed Budget** | |
|---|---|---|---|---|---|---|
| **Position / Item** | **Details** | **FTE** | **Cost Per FTE** | **Total Cost** | **Amount from Literacy Funds** | **Amount from Other Funds** |
| Literacy Paraprofessionals | 4 Paraprofessionals | 4.0 | | 60,600.00 | **60,600.00** | 0.00 |
| Benefits- Literacy Paraprofessionals | | | | 45,000.00 | **45,000.00** | 0.00 |
| Literacy Teacher | 4 Classroom Teachers | 4.0 | 40,000.00 | 160,000.00 | **160,000.00** | |
| Benefits - Literacy Teacher | | | | 63,700.00 | **63,700.00** | |
| PD Stipends | 4 -$4800 Stipends | 4.0 | 4800.00 | 19,200.00 | **19,200.00** | |
| Literacy Team Stipends | 8 - $500 Stipends | 8.0 | 500.00 | 4,000.00 | **4,000.00** | 0.00 |
| SPED Literacy Coaching | 1-$1500 Stipend | | 1500.00 | $1,500.00 | $1,500.00 | |
| Stipends - Benefits | | | | $4,900.00 | $4,900.00 | |
| **Personnel Subtotal** | | | | **358,900.00** | **358,900.00** | **0.00** |

| **PROGRAMS / CURRICULA COSTS** | | | | | **Proposed Budget** | |
|---|---|---|---|---|---|---|
| **Item** | **Details** | **# Items** | **Cost Per Item** | **Total Cost** | **Amount from Literacy Funds** | **Amount from Other Funds** |
| iStation | | | | 26,401.00 | 26,401.00 | |
| **Programs / Curricula Subtotal** | | | | **26,401.00** | **26,401.00** | **#REF!** |

| **OTHER COSTS** | | | | | **Proposed Budget** | |
|---|---|---|---|---|---|---|
| **Item** | **Details** | **# Items** | **Cost Per Item** | **Total Cost** | **Amount from Literacy Funds** | **Amount from Other Funds** |
| Education Northwest | Ed Northwest Literacy Co-operative | 1 | 86,099.00 | 86,099.00 | 86,099.00 | 0.00 |
| iPads | | 40 | 294.00 | 11,760.00 | 11,760.00 | |
| Apple Pencil | | 40 | 89.00 | 3,560.00 | 3,560.00 | |
| iPad Cases | | 40 | 25.00 | 1,000.00 | 1,000.00 | |
| Headphones | | 420 | 17.00 | 7,140.00 | 7,140.00 | |
| Headphone Cords | | 120 | 4.00 | 480.00 | 480.00 | |
| Professional Development | Visible Learning Institute | 1 | 8,500.00 | 8,500.00 | 8,500.00 | |
| **Other Costs Subtotal** | | | | **118,539.00** | **118,539.00** | 0.00 |
| **TOTAL COSTS & BUDGET** | | | | **$503,840.00** | **$503,840.00** | |

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# MCSD COMBINED DISTRICT PLAN (2020-2021)

**Continuous Improvement Plan • College & Career Advising Plan • Literacy Intervention Plan**

| COLLEGE AND CAREER ADVISING AND MENTORING PROGRAM - REQUIRED | | |
|---|---|---|
| | **Model Name** | **Additional Details** |
| | School Counselor | John Kontos, Kent Chandler, Nikki Sayer |
| | Teacher or paraprofessional as advisor | Brooke Claridge & Marisol Gillette |
| | Near Peer Mentoring / Mentoring | |
| | Virtual or Remote Coaching | |
| | GEAR UP (7th & 8th grade only) | TBD |
| | Transition Coordinator | Crystal Padron & TRIO Representative |
| | Student Ambassadors | |
| | HYBRID (please list all models used in Details) | |

**Advising Program Summary - REQUIRED**

**Transition Coordinator Model- CSI Transition Coordinator, TRIO Coordinator, Career & Technical Education Transition Coordinator, ARTEC**

Post-secondary institutions provide college and career advising in the high schools. They develop and implement services to high school students to help them define their education and career aspirations.

**High School Advisement Team Responsibilities**

The team consists of 3 administrators and 3 counselors at the high school level, 3 administrators and 2 counselors at the middle school level the promote and enhance college and career coaching. Each administrator is assigned to a group of students and advises them throughout the year.

**Gaining Early Awareness for Undergraduate Program Model, Gear-Up Coordinator for 11th and 12th graders**

Increase the number of students prepared to enter and succeed in postsecondary programs. The goal is to increase academic performance and preparation for postsecondary education, increase the rate of high school graduation and participation in postsecondary education, increase GEAR UP students' and the families' knowledge of postsecondary education option, preparation, and financing.

**College and Career Advisor**

The advisor will support and assist the student in understanding their choices for post-secondary education and career training, and provide information and/or provide direction to students, parents, teacher, and administration about career and educational services available to students.

9th Grade

- 4 Year Plan
- GPA - Keep your grades up (2.25 GPA)
- Advanced Opportunities
- IDLA
- Extra-Curricular Activities
- Clubs

- Career Information System (www.idahocis.org)
- Paying for college

10th Grade

- Goal for future career
- College Options
- Interest and options for Dual Enrollment Classes
- Technical programs offered in our area
- Dual Credit Plan for interested students

11th Grade

- Set up a meeting with your counselor
- Make sure you're taking the right classes
- Keep your grades up (2.25 GPA)
- Research schools and programs
- Plan for the SAT and/or ACT
- Research scholarship options
- Dual Credit Options and Process

12th Grade

- FASFA
    1. Advisory
    2. Parent Night
- Scholarship Information
- ACT/SAT
    1. Preparation classes offered by Kale Tarbet
- Career and Technical Schools
    1. Career Fairs
- School to Work programs
- Letters of Recommendation
- College Application Week
- Higher Ed Days
- Scholarship Search
- College Campus Visits
- Back to School Night at the beginning of the School Year
- Spartan Forward tab on Minico Homepage with all of the information and forms
- Social Media (Twitter, Facebook, Remind 101)
- Youcanbook.me option for parents to have a one on one meeting
- Postcards mailed home regarding upcoming events
- Notifications sent to parents in Advisory Class
- Monthly Newsletters

## Other Notes / Comments

Not Applicable.

# MCSD COMBINED DISTRICT PLAN (2020-2021)

**Continuous Improvement Plan • College & Career Advising Plan • Literacy Intervention Plan**

## Minidoka County School District #331
## Metrics

**LINK to District Report Card with previous year's data for the Section I Metrics:**
https://idahoschools.org/districts/331/achievement
**Please Note: Due to school closures in Spring 2020, data on the report card will be incomplete for the 2019-2020 school year.**

### Section I: Continuous Improvement Measures

| Goal | Performance Metric | 2019-20 Benchmarks (LEA Chosen 2019-2020 Performance Targets) | 2020-21 Benchmarks (LEA Chosen 2020-2021 Performance Targets) |
|---|---|---|---|
| | | 2019 cohort | 2020 cohort |
| All students will be college and career ready | 4-year cohort graduation rate | 80.0% | 80.0% |
| | % students who meet the college ready benchmark on the college entrance exam (SAT/ACT) | 19.0% | 19.0% |
| All students will be prepared to transition from middle school / | % students who score proficient on the 8th grade math ISAT | 30.0% | 27.0% |
| | % students who score proficient on the 8th grade ELA ISAT | 50.0% | 46.0% |
| All students will be prepared to transition from grade 6 to grade 7 | % students who score proficient on the 6th grade math ISAT | 32.0% | 32.0% |
| | % students who score proficient on the 6th grade ELA ISAT | 45.0% | 45.0% |
| All students will demonstrate the reading readiness needed to transition to the next grade | % students who score proficient on the Kindergarten Spring IRI | 70.0% | 70.0% |
| | % students who score proficient on the Grade 1 Spring IRI | 70.0% | 70.0% |
| | % students who score proficient on the Grade 2 Spring IRI | 70.0% | 70.0% |
| | % students who score proficient on the Grade 3 Spring IRI | 70.0% | 70.0% |

### Section II: Report of Progress Narrative

Although our progress monitoring data indicated positive student growth across grade levels during the 2019-2020 school year, without summative achievement data available it is difficult to predict with any certainty if our 2019-2020 Benchmark goals would have been met due to COVID-19 school closures. As a result, we have adjusted some of our 2020-2021 Benchmark goals using the spring 2019 information as a guide to accommodate for anticipated learning losses.

### Section III: Additional Continuous Improvement Measures

| Goal | Performance Metric | SY 2018-19 (Yr 1) | SY 2019-20 (Yr 2) if available | 2020-21 Benchmarks (LEA Chosen 2020-2021 Performance Targets) |
|---|---|---|---|---|
| All students will be college and career ready | % students who participate in one or more advanced opportunities | 24.0% | 25.0% | **25.0%** |
| | % CTE track HS students who graduate with an industry-recognized certification | information unavailable | 5.0% | **5.0%** |
| | % CTE track HS students who pass the CTE-recognized workplace readiness exam | 80.0% | 60.0% | **60.0%** |

# MCSD COMBINED DISTRICT PLAN (2020-2021)

**Continuous Improvement Plan • College & Career Advising Plan • Literacy Intervention Plan**

## Section IV: Required College and Career Advising Performance Metrics

| Goal | Performance Metric | SY 2018-19 (Yr 1) | | SY 2019-20 (Yr 2) if available | | 2020-21 Benchmarks (LEA Chosen 2020-2021 Performance Targets) |
|---|---|---|---|---|---|---|
| All students will be college and career ready | # of HS students who graduate with an associate's degree or a CTE certificate | 36 | | 40 | | **44** |
| | % of students with learning plans created and reviewed in 8th grade | **8th grade** | 100.0% | **8th grade** | 100.0% | **100.0%** |
| | % of students whose learning plans are reviewed annually by grade level | **9th grade** | 100.0% | **9th grade** | 100.0% | **100.0%** |
| | | **10th grade** | 100.0% | **10th grade** | 100.0% | **100.0%** |
| | | **11th grade** | 100.0% | **11th grade** | 100.0% | **100.0%** |
| | | **12th grade** | 100.0% | **12th grade** | 100.0% | **100.0%** |
| | # students who Go On to some form of postsecondary education within 1 year of HS graduation | **# Enrolled** | **# 2018 cohort** | **# Enrolled** | **2019 cohort** | Not Required |
| | | 117 | 241 | 104 | 277 | |
| | % students who Go On to some form of postsecondary education within 1 year of HS graduation | 48.5% | | 37.5% | | **48.0%** |
| | # students who Go On to some form of postsecondary education within 2 years of HS graduation | **# Enrolled** | **# 2017 cohort** | **# Enrolled** | **2018 cohort** | Not Required |
| | | 113 | 217 | 129 | 241 | |
| | % students who Go On to some form of postsecondary education within 2 years of HS graduation | 52.1% | | 53.5% | | **55.0%** |

## Section V: College and Career Advising - LEA Chosen Performance Metrics

| Performance Metric | SY 2018-19 Results | SY 2019-20 Results if available | 2020-21 Benchmarks (LEA Chosen 2020-2021 Performance Targets) |
|---|---|---|---|
| # of HS students who graduate with an associate's degree or a CTE certificate | 36 | 40 | **44** |

## Section VI: Literacy Intervention - LEA Chosen Performance Metrics

| Performance Metric | SY 2018-19 Results | 2019-20 Benchmarks (LEA Chosen 2019-20 Performance Targets) | SY 2019-20 Results (September-March) | 2020-21 Benchmarks (LEA Chosen 2020-2021 Performance Targets) |
|---|---|---|---|---|
| District-wide K3 IRI scores will increase at least 20% from fall to spring | 16.0% | 20.0% | 9.25% | **20.0%** |

## Section VII: Notes

**NOTES:** N/A

**Minidoka County School District**

# Superintendent's Report
# August 16, 2021

| | | |
|---|---|---|
| July | 20 – 21 | Office Carpet Cleaning – worked out of vehicle |
| | 21 | Regional Migrant Student Leadership Institute – Burley |
| | | Region IV Zoom Meeting – Reopening Plan 2021-22 |
| | 22 | KMVT – Zoom interview (four-day school week) |
| | | Personnel Meeting |
| | 27 | ARTEC/ARTEI Zoom Meeting – plans for next year |
| | 28 | Webinar – ESSR fund guidelines |
| | | American Fidelity Meeting – cafeteria plan/HSA/Insurance |
| | 29 | ARPA (American Rescue Plan Act) Webinar |
| August | | |
| | 2 | Set up booth at fairgrounds with Dr. Parker |
| | 3 | New Teacher Boot Camp – welcome |
| | | Maintenance Meeting |
| | | Transportation Meeting – Minico and East Minico |
| | | ARTEC/ARTEI - phone meeting with Amy White, legal counsel |
| | 4 – 5 | IASA Conference – Boise |
| | 9 | Agenda Review |
| | 10 | Kiwanis Luncheon Meeting |
| | 11 | Administrator's Meeting |
| | | Present program at Rotary Club meeting |




* EVERY FRIDAY THE MONTH OF SEPT. & OCT.
* COST: $75
* GRADES: 3-8

oes your child like basketball? Do you ant them to learn the game and have a ood time doing it?
ow's your chance to enroll them in the ttle Spartans basketball clinic.

partan Head Coach Anna Bateman will elp train your young players ranging om beginner on up. Every Friday during e months of September & October om 8 am -11 am.
ocated at Minico High School.
. great way to build a solid undation of basketball knowledge nd skills that will benefit them for all eir time playing basketball.

**Areas of Focus**

Individual Skills
- *Passing*
- *Shooting*
- *Dribbling*
- *Defense*

Team Skills
- *Fast Breaks*
- *Pick n' Roll*
- *Reading & Using Screens*
- *Help n' Recovery*

Attendees: All Girls
Ages: 3rd-8th Grade
Dates: Every Friday-
September 10, 17, 24
October 1, 8, 15, 22, 29

Time: 8am- 11am

Price: $75

Price Includes: Clinic time, spartan jersey & basketball

For more information:
Allsha Wilkins 208.431.9058 or ajwilkins@gmail.com

## Basketball Clinic Registration Form

**Students Name** _____ **Grade** _____
**Head of Household (first/last name)** _____
**Address** _____ **City** _____ **Zip** _____
**Home Phone** _____ **Cell** _____ **Text Y/N**
**Email** _____
**Student Shirt Size** _____ **Total Enclosed:** _____

* **$75- Includes clinic time, Spartan jersey & basketball**
* **Register online at: https://forms.gle/VTZ2XBfGLMf9ldiq6**
  **Or scan the QR code on this sheet**
* **Make checks payable to: MINICO BASKETBALL**

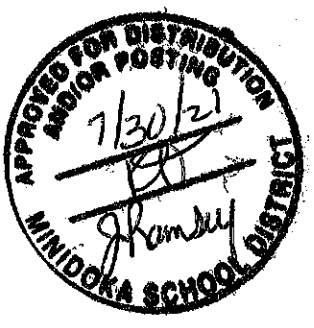
* **Mail completed registration form and payment to:** **Allsha Wilkins**
**362 W. 200 N.**
**Rupert, ID 83350**

Scan this QR Code to quickly take you to the online registration form

**This is to certify that I, as parent/guardian with legal responsibility for this participant, do consent and sign this release.**
**I release and agree to indemnify and hold harmless Minico High School, the coaching staff, its employees, agents, and assigns, from any and a liabilities incident to my minor child's involvement or participation in these activities and programs as provided above.**

_____ (Print Parent/Guardian Name)

_____ (Parent/Guardian Signature)



**JOINT SCHOOL DISTRICT #331**
**MINIDOKA, CASSIA, JEROME AND LINCOLN COUNTIES**

# A RESOLUTION CALLING A SPECIAL ELECTION TO BE HELD FOR THE PURPOSE OF SUBMITTING TO THE QUALIFIED ELECTORS OF JOINT SCHOOL DISTRICT NO. 331, MINIDOKA, CASSIA, JEROME, AND LINCOLN COUNTIES, STATE OF IDAHO, THE PROPOSITION OF AUTHORIZING A SUPPLEMENTAL LEVY

WHEREAS, in accordance with Section 33-802(3), Idaho Code, as amended, the Board of Trustees of Joint School District No. 331, Minidoka, Cassia, Jerome and Lincoln Counties, State of Idaho (the "District") has determined there is a need for a Supplemental Levy in the amount of Two Million Two Hundred Fifty Thousand Dollars ($2,250,000) per year for two (2) years, for the purpose of paying all lawful expenses of maintaining and operating the District for the fiscal year(s) beginning July 1, 2022, and ending June 30, 2024.

NOW, THEREFORE, BE IT RESOLVED by the Board of Trustees of the District as follows:

SECTION 1. That a supplemental levy election be and the same is hereby called to be held in the District on Tuesday, November 2, 2021 for the purpose of submitting to the qualified electors of the District the question set out in the form of the ballot appearing in Section 5 hereof.

SECTION 2. That pursuant to Section 34-1401, Idaho Code, the Clerk of Minidoka County, Idaho (the "Minidoka County Clerk") shall administer and coordinat the Levy Election with the Election Clerks of Cassia County, Idaho (the "Cassia County Clerk"), Jerome County, Idaho (the "Jerome County Clerk"), and Lincoln County, Idaho (the "Lincoln County Clerk") (collectively, the "County Clerks").

SECTION 3. That in compliance with Section 34-1404, Idaho Code, the Clerk of the District shall notify the County Clerks that the District has called the Levy Election by delivering to the County Clerks a copy of this Resolution, including the form of the official ballot appearing in Section 5 and the form of the notice of the Levy Election set forth in Section 6, for election preparation and publication pursuant to Title 34, Idaho Code. The Clerk shall submit these forms to the County Clerks prior to September 3, 2021.

SECTION 4. That said election shall be conducted as other school elections by the County Clerk in accordance with Title 34, Idaho Code.

SECTION 5. That the form of the official ballot will be substantially as follows:

[*Form of Official Ballot*]

**OFFICIAL BALLOT**

SUPPLEMENTAL LEVY ELECTION

JOINT SCHOOL DISTRICT NO. 331,
MINIDOKA, CASSIA, JEROME AND LINCOLN COUNTIES, STATE OF IDAHO

November 2, 2021

QUESTION: Shall the Board of Trustees of Joint School District No. 331, Minidoka, Cassia, Jerome and Lincoln Counties, State of Idaho, be authorized and empowered to levy a Supplemental Levy in the amount of Two Million Two Hundred Fifty Thousand Dollars ($2,250,000) each year for two (2) years, commencing with the fiscal year beginning July 1, 2022 and ending June 30, 2024**,** for the purpose of paying all lawful expenses of maintaining and operating schools of the District; all as provided in the Resolution adopted by the Board of Trustees on August 16, 2021?

The estimated average annual cost to the taxpayer on the proposed levy is a tax of $114.33 per $100,000 of taxable assessed value, per year, based on current conditions. The proposed levy replaces an existing levy that will expire on June 30, 2022 and that currently costs $114.33 per $100,000 of taxable assessed value. If the proposed levy is approved, the tax per $100,000 of taxable assessed value is not expected to change.

| | |
|---|---|
| IN FAVOR OF AUTHORIZING A SUPPLEMENTAL LEVY IN THE AMOUNT OF $2,250,000 EACH YEAR FOR TWO (2) YEARS | ☐ |
| AGAINST AUTHORIZING A SUPPLEMENTAL LEVY IN THE AMOUNT OF $2,250,000 EACH YEAR FOR TWO (2) YEARS | ☐ |

[*End Form of Official Ballot for Supplemental Levy Election*]

SECTION 6. That the Notice of the Levy Election shall be in substantially the form as follows:

[*Form of Notice of Supplemental Levy Election*]

**NOTICE OF SUPPLEMENTAL LEVY ELECTION**

PUBLIC NOTICE IS HEREBY GIVEN that pursuant to the laws of the State of Idaho and the Levy Election Resolution of the Board of Trustees of Joint School District No. 331, Minidoka, Cassia, Jerome and Lincoln Counties, State of Idaho, adopted on August 16, 2021, a Supplemental Levy Election will be held on November 2, 2021, between the hours of 8:00 a.m. and 8:00 p.m. for the purpose of voting upon the following question and proposition of authorizing a levy:

> QUESTION: Shall the Board of Trustees of Joint School District No. 331, Minidoka, Cassia, Jerome and Lincoln Counties, State of Idaho be authorized and empowered to levy a Supplemental Levy in the amount of two million two hundred fifty thousand and no/dollars ($2,250,000) each year for two (2) years, commencing with the fiscal year beginning July 1, 2022, and ending June 30, 2024**,** for the purpose of paying all lawful expenses of maintaining and operating schools of the District; all as provided in the Resolution by the Board of Trustees on August 16, 2021?

The estimated average annual cost to the taxpayer on the proposed levy is a tax of $114.33 per $100,000 of taxable assessed value based on current conditions. The proposed levy replaces an existing levy that will expire on June 30, 2022 and that currently costs $114.33 per $100,000 of taxable assessed value. If the proposed levy is approved, the tax per $100,000 of taxable assessed value is not expected to change.

Said election shall be conducted pursuant to Title 34, Idaho Code.

[*End of Form of Notice of Supplemental Levy Election*]

SECTION 7. That the County Commissioners of each Minidoka, Cassia, Jerome, and Lincoln Counties, Idaho, shall act as the canvassing boards pursuant to and in accordance with Title 34, Idaho Code, and the County Clerks will certify and convey the results to the District as provided therein.

SECTION 8. That if at the election a simple majority of the qualified registered electors of the District authorize such levy, the supplemental levy shall be approved and become effective in accordinace with the provisions of section 33-802, Idaho Code.

ADOPTED AND APPROVED this 16th day of August, 2021.

BOARD OF TRUSTEES OF JOINT SCHOOL DISTRICT NO. 331, MINIDOKA, CASSIA, JEROME AND LINCOLN COUNTIES, STATE OF IDAHO

By _____
Bonnie Heins, Chair

(SEAL)

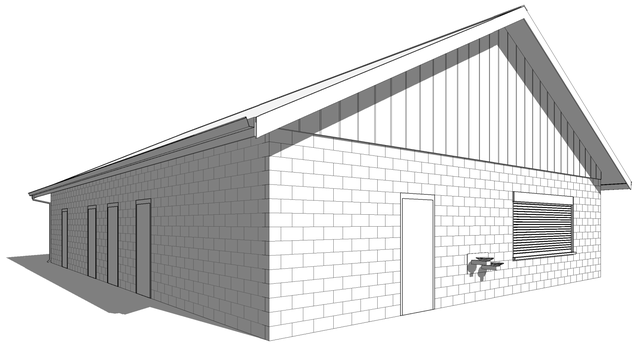
ATTEST:

By _____
Kerri Tibbitts, Board Clerk

# Minico High School Team Building

## Rupert, Idaho

## July 26, 2021



Minidoka School District

LKV ARCHITECTS

REGISTERED ARCHITECT · AMBER VAN OCKER · IDAHO · BOISE · 5848 · 07/xx/21 · STATE OF

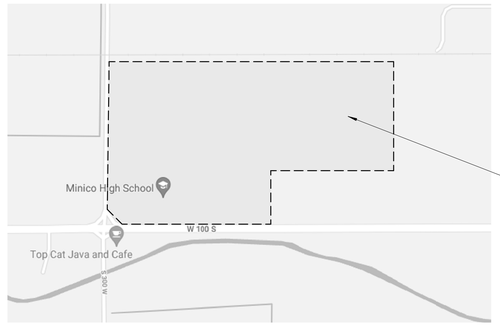
**PROJECT NO. 2123**

## Project Team

| ARCHITECT | STRUCTURAL ENGINEER | MECHANICAL ENGINEER | ELECTRICAL ENGINEER |
|---|---|---|---|
| LKV Architects<br>2400 East Riverwalk Dr.<br>Boise, Idaho 83706 | McClendon Engineering Inc.<br>1412 W Idaho St. Suite 240<br>Boise, ID 83702 | Musgrove<br>234 South Whisperwood Way<br>Boise, Idaho 83709 | Musgrove<br>234 South Whisperwood Way<br>Boise, Idaho 83709 |
| **Amber VanOcker**<br>Project Architect<br>**Phone:** 208.336.3443<br>amber@lkvarchitects.com | **Sarah McClendon**<br>Structural Engineer<br>**Phone:** (208) 342-2919<br>sarah@mcclendonengineering.com | **Bill Carter**<br>Principal & Project Mechanical Engineer<br>**Phone:** 208.384.0585<br>billc@musgrovepa.com | **Kurt Lachtenberg**<br>Principal<br>**Phone:** 208.384.0585 Ext 315<br>kurtl@musgrovepa.com |

| OWNER | Name |
|---|---|
| Minidoka School District<br>1018 D St.<br>Rupert, ID 83350 | Jason Van Every<br>Maintenance Director<br>**Phone:** (208) 260-0855 |

## Vicinity Map




N W E S Vicinity Map
No Scale

**PROJECT SITE**
292 W 100 S
Rupert, ID 83350

## Building Data

2,250 SQUARE FOOT SUPPORT BUILDING THAT CONTAINS PUBLIC RESTROOMS, ATHLETIC TEAM ROOMS, CONCESSIONS, AND STORAGE.

## Sheet Schedule


**COVER**

| | |
|---|---|
| A0.0 | COVER SHEET / DRAWING INDEX |

**ARCHITECTURAL DRAWINGS**

| | |
|---|---|
| A1.1 | CODE & ENERGY COMPLIANCE PLANS |
| A1.2 | KEYED NOTES |
| A2.0 | OVERALL SITE PLAN |
| A3.1 | FLOOR PLAN |
| A4.1 | SCHEDULES |
| A5.1 | ELEVATIONS |
| A5.2 | ELEVATIONS |
| A6.1 | ROOF PLAN |
| A7.1 | BUILDING SECTIONS |
| A7.10 | WALL SECTIONS |
| A7.11 | WALL SECTIONS |
| A8.1 | DOOR DETAILS |
| A8.2 | ARCHITECTURAL DETAILS |
| A9.1 | INTERIOR ELEVATIONS |
| A10.1 | MILLWORK |
| A11.1 | REFLECTED CEILING PLAN |

**STRUCTURAL DRAWINGS**

| | |
|---|---|
| S1.0 | GENERAL STRUCTURAL NOTES |
| S1.1 | STRUCTURAL NOTES |
| S2.0 | FOUNDATION PLAN |
| S3.0 | TYPICAL FOUNDATION DETAILS |
| S4.0 | ROOF FRAMING PLAN |
| S5.0 | TYPICAL FRAMING DETAILS |
| S6.0 | 3D STRUCTURAL VIEWS |

**MECHANICAL DRAWINGS**

| | |
|---|---|
| M0.0 | MECHANICAL COVER SHEET |
| M0.1 | ZONE PLAN |
| M1.0 | HVAC PLAN |
| M2.0 | HVAC SCHEDULES |

**PLUMBING DRAWINGS**

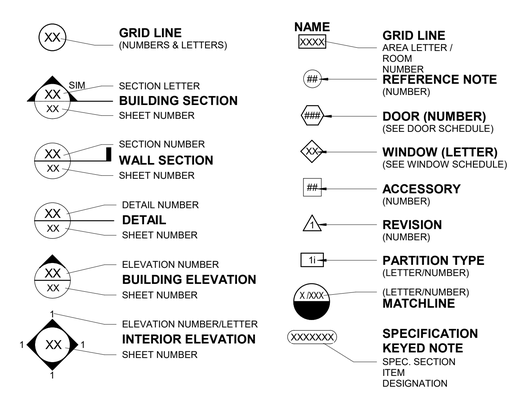
| | |
|---|---|
| P1.0 | PLUMBING PLAN |
| P2.0 | WATER AND GAS PLAN |
| P3.0 | RISER DIAGRAMS |
| P4.0 | PLUMBING DETAILS |
| P4.1 | PLUMBING DETAILS |
| P5.0 | PLUMBING SCHEDULES |

**ELECTRICAL DRAWINGS**

| | |
|---|---|
| E0.0 | ELECTRICAL COVER SHEET |
| E1.0 | ELECTRICAL SITE PLAN |
| E2.1 | LIGHTING PLAN |
| E2.2 | MECHANICAL POWER PLAN |
| E2.3 | ELECTRICAL PLAN |
| E3.0 | ELECTRICAL DETAILS |
| E4.0 | ELECTRICAL SCHEDULES |

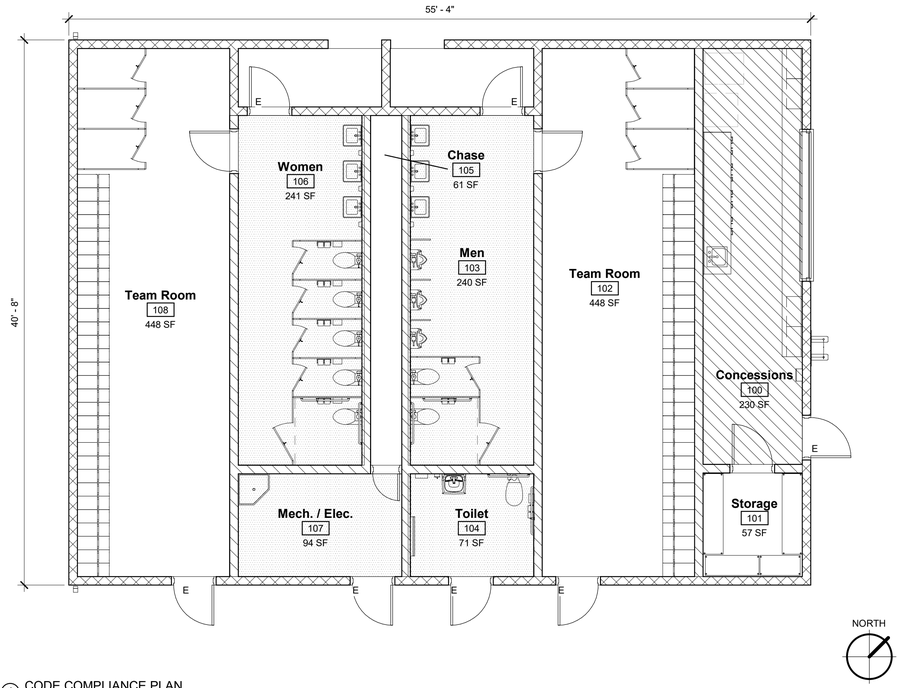

## Symbols & Abbreviations

| | |
|---|---|
| AB | ANCHOR BOLT |
| L | ANGLE |
| BRG. | BEARING |
| B.M. | BENCH MARK |
| BLDG. | BUILDING |
| CLG. | CEILING |
| | CENTERLINE |
| C.O. | CLEAN OUT |
| COL. | COLUMN |
| CONC. | CONCRETE |
| C.M.U. | CONCRETE MASONRY UNIT |
| CONT. | CONTINUOUS |
| D.F. | DRINKING FOUNTATION |
| DIM. | DIMENSION |
| EA. | EACH |
| ELECT. | ELECTRICAL |
| ELEV. | ELEVATION |
| EQ. | EQUAL |
| EXIST. | EXISTING |
| EXT. | EXTERIOR |
| FIN. | FINISH |
| F.E.C. | FIRE EXTINGUISHER CABINET |
| FLR. | FLOOR |
| F.R.T. | FIRE RETARDENT TREATED |
| FTG. | FOOTING |
| FDN. | FOUNDATION |
| GALV. | GALVANIZED |
| GA. | GAUGE |
| GL. | GLASS |
| G.B. | GYPSUM BOARD |
| GRD. | GRADE |
| HT. | HEIGHT |
| H.C. | HOLLOW CORE |
| H.M. | HOLLOW METAL |
| HORIZ. | HORIZONTAL |
| I.D. | INSIDE DIAMETER |
| INT. | INTERIOR |
| MAX. | MAXIMUM |
| MTL. | METAL |
| MIN. | MINIMUM |
| MISC. | MISCELLANEOUS |
| N.I.C. | NOT IN CONTRACT |
| N.T.S. | NOT TO SCALE |
| O.C. | ON CENTER |
| OPP. | OPPOSITE |
| O.D. | OUTSIDE DIAMETER |
| d | PENNY |
| PLWD. | PLYWOOD |
| P.T. | PRESSURE TREATED |
| R. | RADIUS |
| REF. | REFERENCE |
| REV. | REVISION |
| R.D. | ROOF DRAIN |
| SIM. | SIMILAR |
| S.C. | SOLID CORE |
| SPEC. | SPECIFICATION |
| SQR. | SQUARE |
| STD. | STANDARD |
| STOR. | STORAGE |
| STRUCT. | STRUCTURAL |
| SUSP. | SUSPENDED |
| T.O. | TOP OF |
| T & B | TOP AND BOTTOM |
| TYP. | TYPICAL |
| U.N.O. | UNLESS NOTED OTHERWISE |
| VERT. | VERTICAL |
| V.C.T. | VINYL COMPOSITION TILE |
| W.C. | WATER CLOSET |
| WWM. | WELDED WIRE MESH |
| W/ | WITH |
| W/O | WITHOUT |

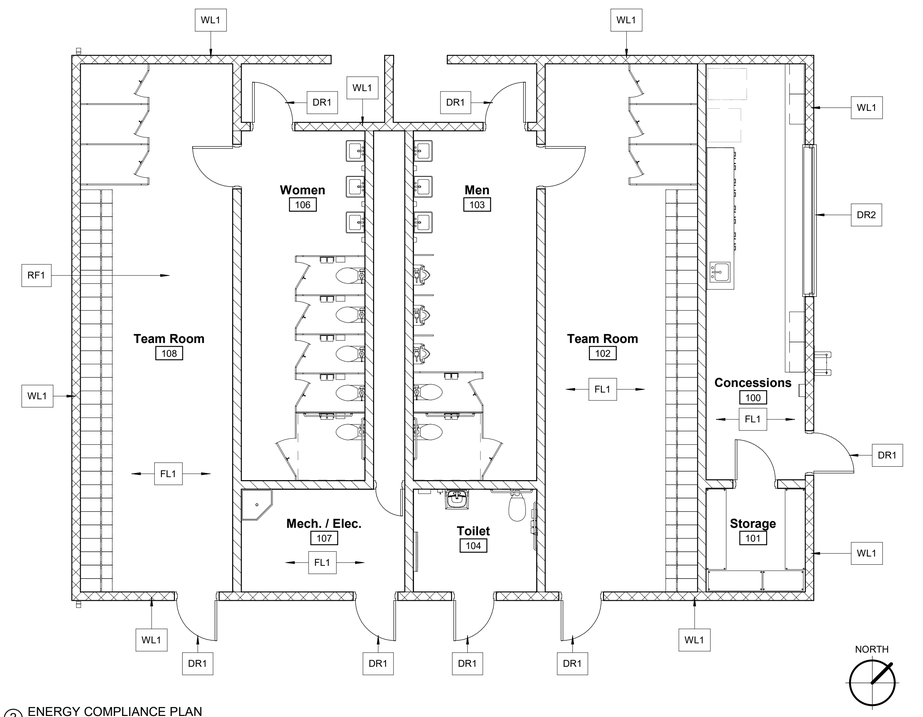





COVER




1 CODE COMPLIANCE PLAN
3/16" = 1'-0"




2 ENERGY COMPLIANCE PLAN
3/16" = 1'-0"

## Building Code Compliance Summary

**Building Codes**

2018 INTERNATIONAL BUILDING CODE
2009 ICC A117.1
2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL FUEL GAS CODE
2017 IDAHO STATE PLUMBING CODE
2017 NATIONAL ELECTRIC CODE
2018 IDAHO FIRE CODE
2018 IDAHO ENERGY CONSERVATION CODE

**Occupancy Group**

| | | |
|---|---|---|
| Construction Type | Group B | |
| | Type VB | |
| Building Area | Actual | Allowable |
| | 2,250 | 9,500 |

| Occupant Load | OLF / OF | Occupants |
|---|---|---|
| Team Room | 20 / 896 | 45 |
| Concessions | 100 / 230 | 3 |
| Storage / Accessory | 300 / 712 | 3 |
| Total | | 51 |

| | |
|---|---|
| Building Stories | One |
| Building Height | Highest Point of Roof: 20' - 10" |
| Exterior Wall Rating | Not Required (Fire Seperation Distance < 10') |
| Fire Protection System | Automatic Sprinkler - Not Required<br>Manual Fire Alarm - Not Required |

## Energy Analysis Reference Notes

SEE THERMAL ENVELOPE ASSEMBLIES BELOW. SEE WALL SECTIONS AND WALL TYPES FOR CONSTRUCTION DETAILS.

| | |
|---|---|
| FL1 | 4" CONCRETE SLAB ON GRADE W/ 2" PERIMETER XPS RIGID INSULATION. |
| WL1 | 8" MEDIUM WEIGHT REINFORCED MASONRY BLOCK WALL, CELLS PARTIALLY GROUTED WITH FORMED-IN-PLACE INSULATION. |
| DR1 | INSULATED HOLLOW METAL DOOR AND STEEL FRAME. |
| DR2 | METAL ROLLING COUNTER DOOR. |
| RF1 | WOOD TRUSSES, 15/32" O.S.B. ROOF SHEATHING, R-38 BLOWN INSULATION, STANDING SEAM METAL ROOFING. |

LKV ARCHITECTS
2400 E. Riverwalk Drive
Boise, Idaho 83706
www.lkvarchitects.com
208.336.3443

LICENSED ARCHITECT
JEFFREY A. VOLLMER
07/26/21
STATE OF IDAHO

Revisions
# | Description | Date

Minico High School Team Building
Minidika School District
292 W 100 S, Rupert, ID 83350

DATE: 07/26/21
LKV PROJECT #: 2321

DRAWN BY: TL
CHECKED BY: AVO

Project Status

DRAWING NO.:
A1.1
CODE & ENERGY COMPLIANCE PLANS

# Master Keyed Notes

| | |
|---|---|
| 033000.A1 | CONCRETE FOOTING |
| 033000.B1 | CONCRETE FOUNDATION WALL |
| 033000.C1 | CONCRETE FLOOR SLAB ON GRADE, 4" U.N.O. |
| 033000.C2 | CONCRETE SLAB ON GRADE (EXTERIOR), 4" U.N.O. |
| 033000.M1 | VAPOR RETARDER |
| 042000.A1 | CONCRETE MASONRY UNIT(S) SMOOTH FACE, 8X8X16 |
| 042000.D1 | SOLID GROUT |
| 042000.E1 | CONTROL JOINT WITH PREFORMED GASKETING |
| 042000.F1 | CAVITY DRAINAGE MATERIAL |
| 042000.G1 | MASONRY VENEER TIE |
| 042000.J1 | MASONRY-CELL INSULATION |
| 042113.H2 | SOLID GROUT |
| 042113.I1 | LINTEL UNIT(S) |
| 054000.I | FURRING HAT CHANNEL - 7/8" |
| 061000.A1 | DIMENSION LUMBER |
| 061000.A3 | WOOD STUD(S) 2X4 @ 16" O.C., U.N.O. |
| 061000.A8 | SOLID BLOCKING / BRIDGING |
| 061000.A12 | (3) 1-1/2" DIAMETER VENTILATION HOLES. |
| 061000.D1 | FASTENER(S) |
| 061600.A1 | SHEATHING, MISC. (TYPE AND THICKNESS INDICATED) |
| 061600.A2 | ROOF SHEATHING, 23/32" O.S.B. |
| 061600.A4 | WALL SHEATHING, 7/16" O.S.B. |
| 061753.A1 | PRE-ENGINEERED WOOD ROOF TRUSS(ES) - GABLE - 24" O.C. U.N.O. |
| 064116.A2 | 1/2" MELAMINE COATED PARTICLE BOARD |
| 064116.D1 | H.P. DECORATIVE LAMINATE - EXPOSED EXTERIOR SURFACES |
| 064116.D2 | H.P. DECORATIVE LAMINATE - TOPS, EDGES, AND BACKSPLASH |
| 064116.E1 | ADJUSTABLE SHELVES ON 32MM SYSTEM SHELF SUPPORTS - 3/4" MELAMINE COATED PARTICLE BOARD |
| 064116.F1 | DRAWER(S) ON SLIDES W/ PULL(S) |
| 064116.G1 | DOOR(S) ON HINGES W/ PULL(S) |
| 072100.A1 | FOUNDATION / WALL INSULATION - EXTRUDED POLYSTYRENE, 2" U.N.O. |
| 072100.B1 | BATT INSULATION, GLASS FIBER, UNFACED FULL WIDTH OF CAVITY |
| 072100.B4 | VAPOR RETARDER WITH TAPED SEAMS |
| 072100.C1 | BLOWN INSULATION, GLASS FIBER, R38 |
| 072700.A1 | BUILDING WRAP |
| 074113.A1 | METAL ROOF PANEL(S) - STANDING SEAM |
| 074113.B1 | FASTENING CLIP |
| 074113.B2 | PANEL CLOSURE STRIP |
| 074113.B3 | FASTENER(S) |
| 074113.D1 | UNDERLAYMENT SHEETING |
| 074113.D3 | 30 LB FELT |
| 074113.G2 | PLYWOOD SHEATHING, 1/2" |
| 074113.I | 24 GA. PREFINISHED METAL RIDGE CAP CONT. ATTACH TO CLEAT W/ SCREWS W/ NEOPREENE WASHERS AT 8" OC. |
| 074213.A1 | METAL WALL PANEL(S) |
| 074213.B1 | METAL WALL PANEL TRIM |
| 074213.C1 | FASTENER(S) |
| 074213.D2 | 30 LB FELT |
| 074213.G3 | PANEL STARTER CLEAT |
| 074293.A1 | METAL SOFFIT PANEL(S), VENTILATING |
| 074293.B1 | METAL SOFFIT PANEL FINISHING TRIM |
| 076200.C2 | PRE-FINISHED METAL FLASHING, 24 GA. |
| 076200.C4 | PRE-FINISHED METAL FASCIA, 24 GA. |
| 076200.D1 | PRE-FINISHED METAL GUTTER, 24 GA. |
| 076200.D2 | PRE-FINISHED DOWNSPOUT, 24 GA. |
| 076200.F1 | FASTENER |
| 078413.A1 | PENETRATION FIRESTOPPING |
| 079200.A1 | ONE PART SILICON SEALANT |
| 079200.B1 | ONE PART URETHANE SEALANT |
| 079200.C1 | LATEX JOINT SEALANT |
| 079200.E1 | FOAM BACKER ROD |
| 081113.A1 | HOLLOW METAL DOOR |
| 081113.B1 | HOLLOW METAL DOOR FRAME |
| 081113.E1 | FRAME ANCHOR(S) FOR MASONRY WALLS |
| 083113.A1 | ACCESS DOOR |
| 083313.A1 | COILING COUNTER DOOR |
| 083313.A2 | OVERHEAD COILING DOOR TRACK |
| 083313.A3 | OVERHEAD COILING DOOR SILL |
| 092900.A1 | SINGLE LAYER GYPSUM BOARD, 5/8" TYPE "X" U.N.O. |
| 096513.A2 | 6" RUBBER COVE BASE |
| 102113.A1 | TOILET COMPARTMENT PARTITION(S) |
| 102113.B1 | URINAL SCREEN |
| 102800.A1 | GRAB BAR, 36" LONG |
| 102800.A2 | GRAB BAR, 42" LONG |
| 102800.A4 | GRAB BAR, 18" LONG |
| 102800.B1 | MIRROR, 18" WIDE X 36" HIGH, FRAMED |
| 102800.D1 | TOILET PAPER DISPENSER |
| 102800.E1 | TOILET SEAT COVER DISPENSER |
| 102800.F1 | PAPER TOWEL DISPENSER WITH WASTE, RECESSED |
| 102800.F2 | PAPER TOWEL DISPENSER, RECESSED |
| 102800.G2 | SOAP DISPENSER, WALL MOUNTED |
| 102800.J1 | BABY CHANGING STATION |
| 102800.L1 | AUTOMATIC HAND DRYER |
| 104413.A2 | FIRE EXTINGUISHER CABINET, SURFACED MOUNTED |
| 114000.E1 | REFRIGERATOR (REACH-IN) |
| 114000.J1 | ICE MAKER / ICE BIN |
| 220100.C2 | DUAL-HEIGHT DRINKING FOUNTAIN |
| 220100.K1 | LAVATORY |
| 220100.M1 | MOP SINK |
| 220100.N1 | WATER CLOSET |
| 220100.O1 | URINAL |
| 312300.B1 | DRAINAGE FILL COURSE |

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Revisions

| # | Description | Date |
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Minico High School Team Building
Minidika School District
292 W 100 S, Rupert, ID 83350

DATE: 07/26/21
LKV PROJECT #: 2321

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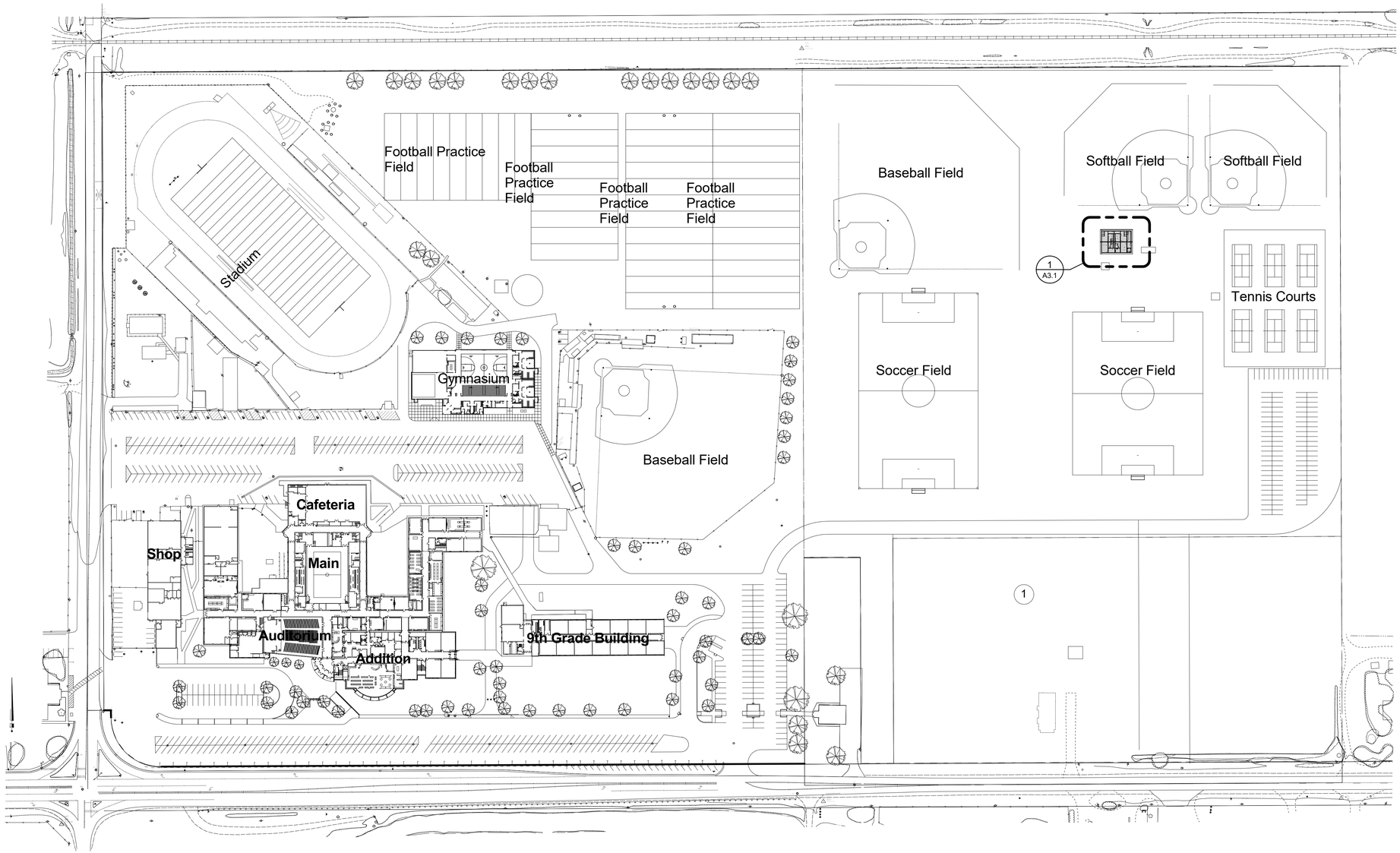
Project Status

DRAWING NO.:

A1.2
KEYED NOTES

## General Notes

1. THE OWNER WILL BE PROVIDING ALL CIVIL ENGINEERING FOR BUILDING PLACEMENT, GRADING, DRAINAGE, AND SITE FLATWORK.
2. ALL SITE UTILITIES AND CONNECTIONS WILL BE PROVIDED UNDER A SEPARATE CONTRACT BY THE OWNER.
3. BUILDING PLACEMENT AND RELOCATION OF BUILDINGS WILL BE DETERMINED BY OWNER.




1 Overall Site Plan - Minico High School
1" = 100'-0"

NORTH

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| # | Revisions Description | Date |
|---|---|---|

Minico High School Team Building
Minidika School District
292 W 100 S, Rupert, ID 83350

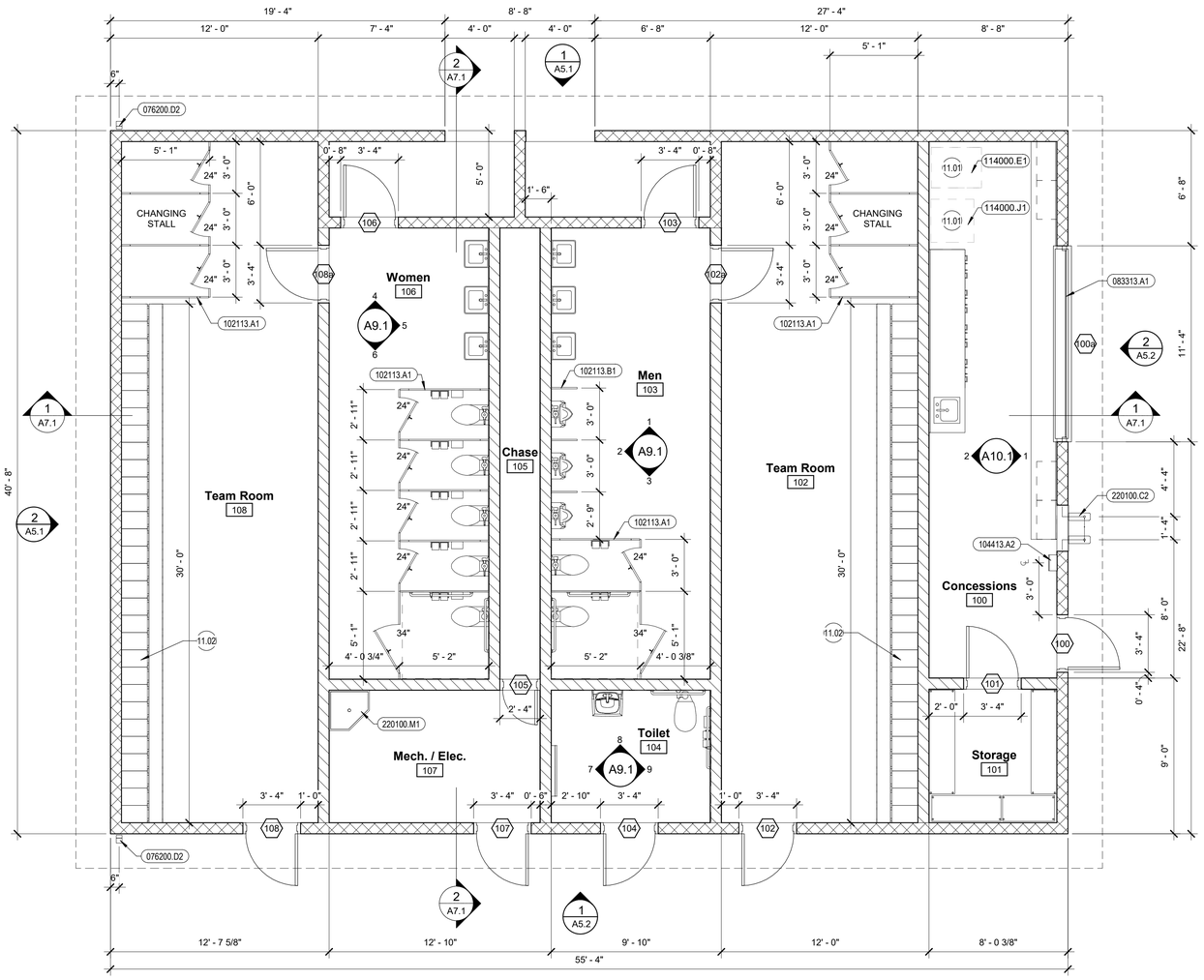
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Project Status

DRAWING NO.:

A2.0
OVERALL SITE PLAN




1 LEVEL 1 FLOOR PLAN
1/4" = 1'-0"

## General Notes

1. EXTERIOR DIMENSIONS ARE TO OUTSIDE FACE OF CONCRETE FOUNDATION WALL / CMU WALL UNLESS NOTES OTHERWISE.
2. SEE SHEET A1.1 FOR BUILDING CODE AND ENERGY CODE COMPLIANCE SUMMERY.
3. SEE A4.1 FOR ROOM FINISH SCHEDULE.
4. SEE A4.1 FOR DOOR SCHEDULE AND FRAME TYPES.
5. A.D.A. COMPLIANT INTERIOR SIGNS REQUIRED AT ALL INTERIOR DOORS AND AT OTHER INTERIOR AND EXTERIOR LOCATIONS AS REQUIRED. SIGNS BY OWNER N.I.C.
6. SEE SHEET A9.1 FOR SPECALTY ITEM MOUNTING HEIGHTS.

## Reference Notes

| | |
|---|---|
| 11.01 | FURNISHING / EQUIPMENT BY OWNER (N.I.C.) |
| 11.02 | METAL LOCKERS W/ BENCH. O.F. (N.I.C.) |

## Keyed Notes

| | |
|---|---|
| 076200.D2 | PRE-FINISHED DOWNSPOUT, 24 GA. |
| 083313.A1 | COILING COUNTER DOOR |
| 102113.A1 | TOILET COMPARTMENT PARTITION(S) |
| 114000.E1 | REFRIGERATOR (REACH-IN) |
| 114000.J1 | ICE MAKER / ICE BIN |

## Legend

8" CMU WALL W/ FORMED-IN-PLACE, MASONRY-CELL INSULATION. ALL EMPTY CELLS, FULL HEIGHT.

8" CMU WALL - INTERIOR

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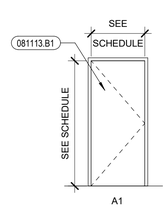
A3.1
FLOOR PLAN

## Room Finish Schedule

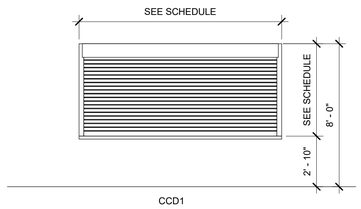
| Room No. | Room Name | Floor | | South | | West | | North | | East | | Ceiling | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Mat. | Base | Mat. | Finish | Mat. | Finish | Mat. | Finish | Mat. | Finish | Mat. | Finish | Height | |
| 100 | Concessions | SC | RB | CMU | PNT | CMU | PNT | CMU | PNT | CMU | PNT | GYP | PNT | 10' - 2 3/8" AFF | |
| 101 | Storage | SC | RB | CMU | PNT | CMU | PNT | CMU | PNT | CMU | PNT | GYP | PNT | 10' - 2 3/8" AFF | |
| 102 | Team Room | SC | RB | CMU | PNT | CMU | PNT | CMU | PNT | CMU | PNT | GYP | PNT | 10' - 2 3/8" AFF | |
| 103 | Men | SC | RB | CMU | PNT | CMU | PNT | CMU | PNT | CMU | PNT | GYP | PNT | 10' - 2 3/8" AFF | |
| 104 | Toilet | SC | RB | CMU | PNT | CMU | PNT | CMU | PNT | CMU | PNT | GYP | PNT | 10' - 2 3/8" AFF | |
| 105 | Chase | C | - | CMU | - | CMU | - | CMU | - | CMU | - | - | - | - | |
| 106 | Women | SC | RB | CMU | PNT | CMU | PNT | CMU | PNT | CMU | PNT | GYP | PNT | 10' - 2 3/8" AFF | |
| 107 | Mech. / Elec. | SC | RB | CMU | - | CMU | PNT | CMU | PNT | CMU | PNT | GYP | PNT | 10' - 2 3/8" AFF | |
| 108 | Team Room | SC | RB | CMU | PNT | CMU | - | CMU | - | CMU | - | GYP | PNT | 10' - 2 3/8" AFF | |

## Door Schedule

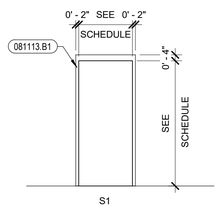
| Mark | Door | | | | | | | Frame | | | Details | | | Label | Hardware Set | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Door Width | Des. | Height | Thickness | Type | Mat. | Finish | Type | Mat. | Finish | Head | Jamb | Sill | | | |
| 100 | 3' - 0" | Single | 7' - 0" | 0' - 1 3/4" | A1 | HM | PNT | A | HM | PNT | 4/A8.1 | 5/A8.1 | 6/A8.1 | - | | |
| 100a | 5' - 8" | Pair | 5' - 2" | 0' - 0 1/2" | CCD1 | - | - | - | - | - | 1/A8.1 | 2/A8.1 | 3/A8.1 | | | |
| 101 | 3' - 0" | Single | 7' - 0" | 0' - 1 3/4" | A1 | HM | PNT | A | HM | PNT | 4/A8.1 | 5/A8.1 | 6/A8.1 | - | | |
| 102 | 3' - 0" | Single | 7' - 0" | 0' - 1 3/4" | A1 | HM | PNT | A | HM | PNT | 4/A8.1 | 5/A8.1 | 6/A8.1 | - | | |
| 102a | 3' - 0" | Single | 7' - 0" | 0' - 1 3/4" | A1 | HM | PNT | A | HM | PNT | 4/A8.1 | 5/A8.1 | 6/A8.1 | - | | LOUVER IN DOOR. SEE MECHANICAL. |
| 103 | 3' - 0" | Single | 7' - 0" | 0' - 1 3/4" | A1 | HM | PNT | A | HM | PNT | 4/A8.1 | 5/A8.1 | 6/A8.1 | - | | |
| 104 | 3' - 0" | Single | 7' - 0" | 0' - 1 3/4" | A1 | HM | PNT | A | HM | PNT | 4/A8.1 | 5/A8.1 | 6/A8.1 | - | | |
| 105 | 2' - 0" | Single | 7' - 0" | 0' - 1 3/4" | A1 | HM | PNT | A | HM | PNT | 4/A8.1 | 5/A8.1 | 6/A8.1 | - | | |
| 106 | 3' - 0" | Single | 7' - 0" | 0' - 1 3/4" | A1 | HM | PNT | A | HM | PNT | 4/A8.1 | 5/A8.1 | 6/A8.1 | - | | |
| 107 | 3' - 0" | Single | 7' - 0" | 0' - 1 3/4" | A1 | HM | PNT | A | HM | PNT | 4/A8.1 | 5/A8.1 | 6/A8.1 | - | | |
| 108 | 3' - 0" | Single | 7' - 0" | 0' - 1 3/4" | A1 | HM | PNT | A | HM | PNT | 4/A8.1 | 5/A8.1 | 6/A8.1 | - | | |
| 108a | 3' - 0" | Single | 7' - 0" | 0' - 1 3/4" | A1 | HM | PNT | A | HM | PNT | 4/A8.1 | 5/A8.1 | 6/A8.1 | - | | LOUVER IN DOOR. SEE MECHANICAL. |




Door Types
1/4" = 1'-0"




Door Types - Coiling Door
1/4" = 1'-0"




Frame Types
1/4" = 1'-0"

## Finish Schedule Notes

1. GYPSUM BOARD EXPOSED TO VIEW SHALL BE TAPED, TEXTURED, AND PAINTED.
2. ALL HOLLOW METAL DOORS AND FRAMES SHALL BE PAINTED.

## Finish Schedule Abbreviations

| | |
|---|---|
| A.F.F. | ABOVE FINISH FLOOR |
| CMU | CONCRETE MASONRY UNIT |
| GB | GYPSUM BOARD |
| PNT | PAINT |
| RB | RUBBER BASE |
| SC | SEALED CONCRETE |
| SDK | STEEL DECKING |

## Door Schedule Abbreviations

| | |
|---|---|
| HM | HOLLOW METAL |
| PNT | PAINT |

## Keyed Notes

| | |
|---|---|
| 081113.B1 | HOLLOW METAL DOOR FRAME |


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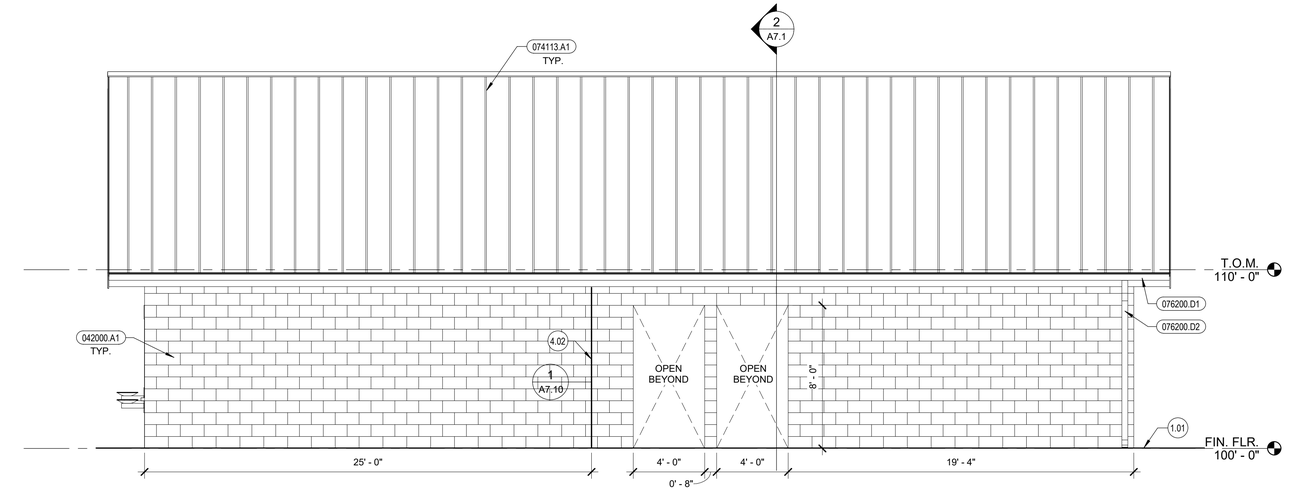
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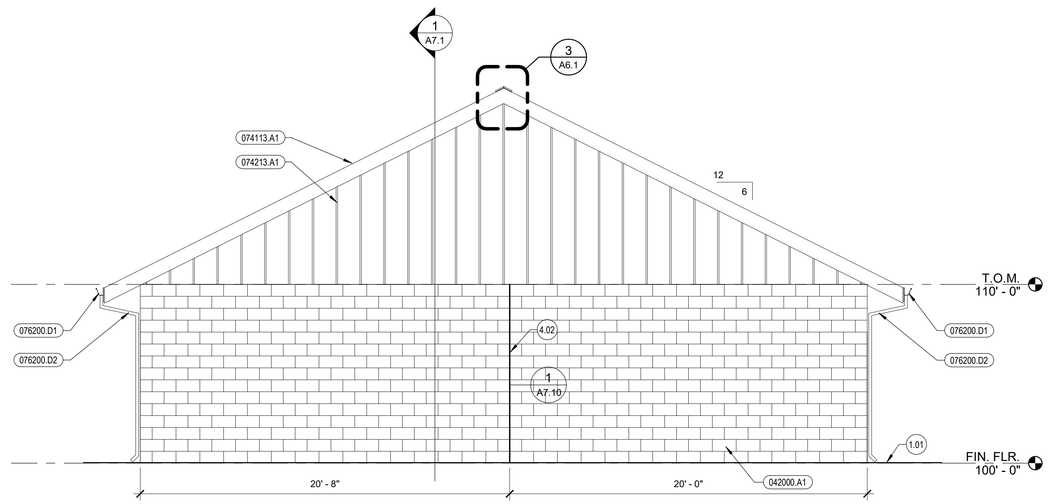
Project Status

DRAWING NO.:

A4.1
SCHEDULES




1 North Elevation
1/4" = 1'-0"




2 West Elevation
1/4" = 1'-0"

## General Notes

1. PAINT ALL MECHANICAL EQUIPMENT, VENTS, AND FLUES VISIBLE ON STANDING SEAM METAL ROOF. COLOR AS SELECTED BY ARCHITECT.
2. SEE DETAIL 1/A7.10 AND STRUCTURAL FOR CMU CONTROL JOINT.

## Reference Notes

| | |
|---|---|
| 1.01 | APPROX. FINISH GRADE. SEE CIVIL. |
| 4.02 | CONTROL JOINT. SEE DETAILS. |

## Keyed Notes

| | |
|---|---|
| 042000.A1 | CONCRETE MASONRY UNIT(S) SMOOTH FACE, 8X8X16 |
| 074113.A1 | METAL ROOF PANEL(S) - STANDING SEAM |
| 074213.A1 | METAL WALL PANEL(S) |
| 076200.D1 | PRE-FINISHED METAL GUTTER, 24 GA. |
| 076200.D2 | PRE-FINISHED DOWNSPOUT, 24 GA. |

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Revisions

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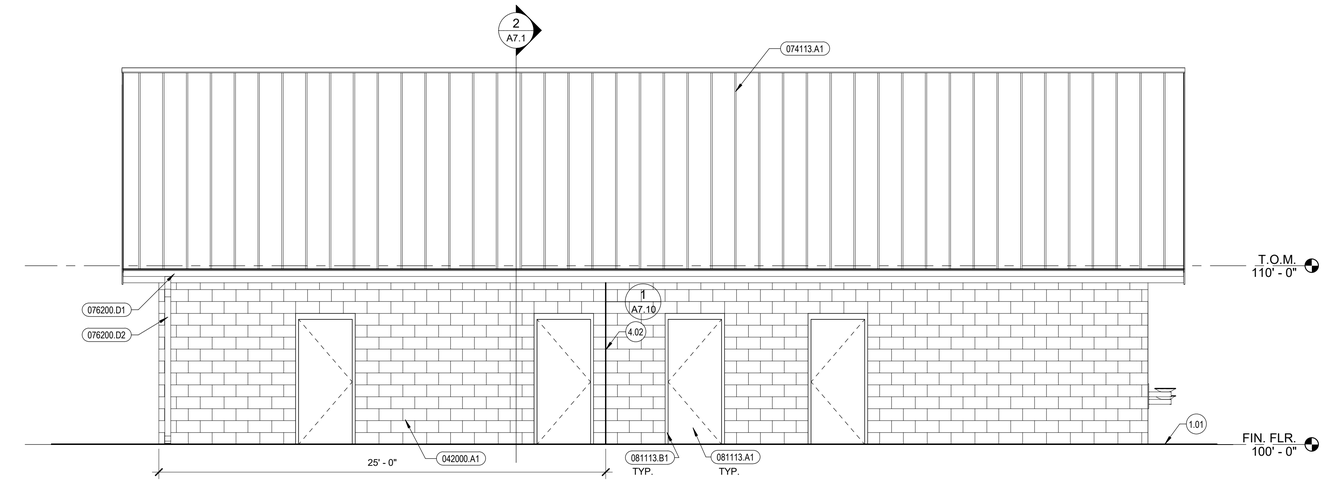
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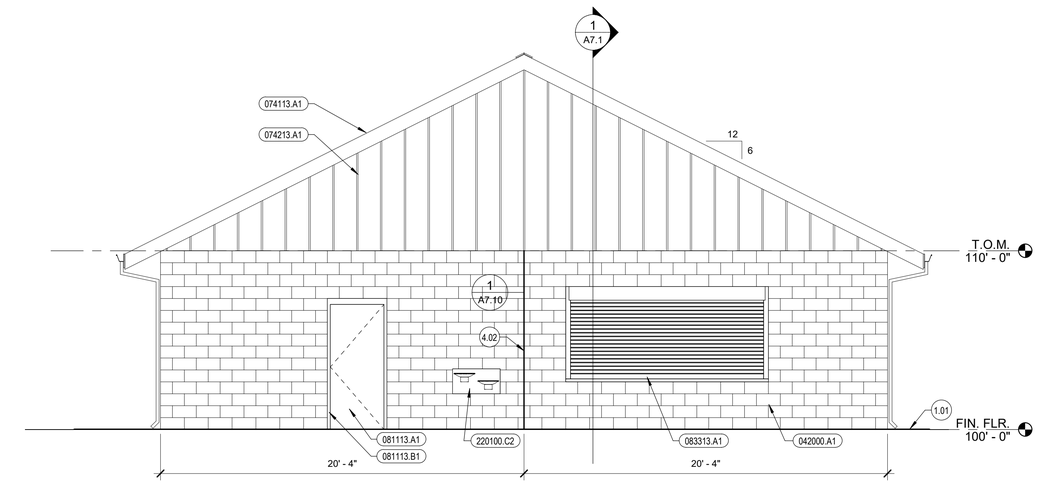
Project Status

DRAWING NO.:

A5.1
ELEVATIONS




1 South Elevation
1/4" = 1'-0"




2 East Elevation
1/4" = 1'-0"

## General Notes

1. PAINT ALL MECHANICAL EQUIPMENT, VENTS, AND FLUES VISIBLE ON STANDING SEAM METAL ROOF. COLOR AS SELECTED BY ARCHITECT.
2. SEE DETAIL AND STRUCTURAL FOR CMU CONTROL JOINT.

## Reference Notes

| | |
|---|---|
| 1.01 | APPROX. FINISH GRADE. SEE CIVIL. |
| 4.02 | CONTROL JOINT. SEE DETAILS. |

## Keyed Notes

| | |
|---|---|
| 042000.A1 | CONCRETE MASONRY UNIT(S) SMOOTH FACE, 8X8X16 |
| 074113.A1 | METAL ROOF PANEL(S) - STANDING SEAM |
| 074213.A1 | METAL WALL PANEL(S) |
| 076200.D1 | PRE-FINISHED METAL GUTTER, 24 GA. |
| 076200.D2 | PRE-FINISHED DOWNSPOUT, 24 GA. |
| 081113.A1 | HOLLOW METAL DOOR |
| 081113.B1 | HOLLOW METAL DOOR FRAME |
| 083313.A1 | COILING COUNTER DOOR |
| 220100.C2 | DUAL-HEIGHT DRINKING FOUNTAIN |

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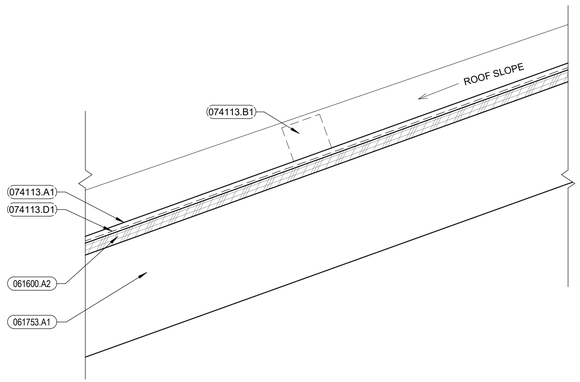
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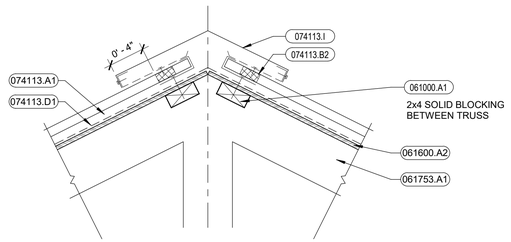
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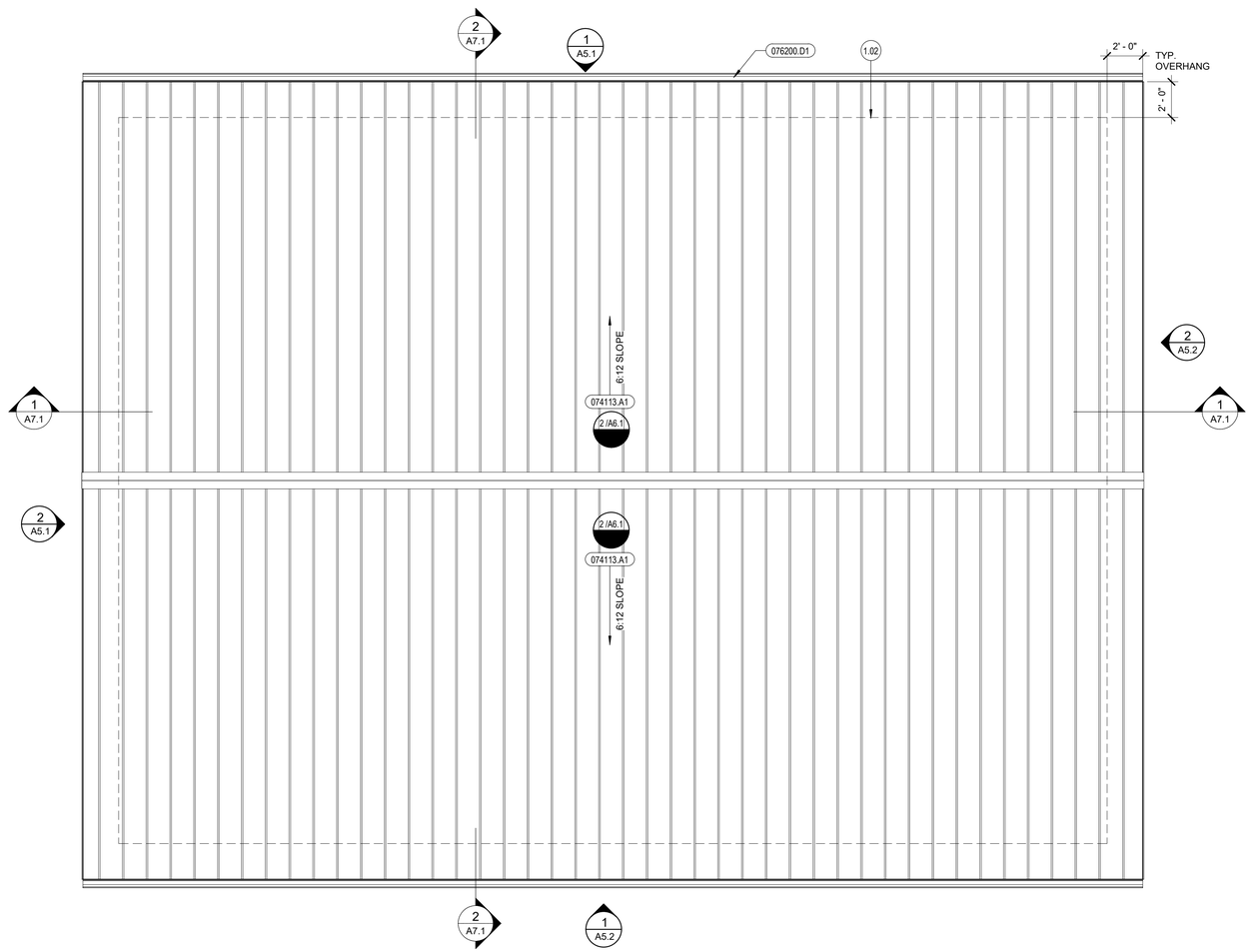
A5.2
ELEVATIONS




② ROOF TYPE - R-1
3" = 1'-0"




③ ROOF RIDGE VENT
1 1/2" = 1'-0"




NORTH

① Roof Plan
1/4" = 1'-0"

## General Notes

1. PAINT ALL ROOFTOP EQUIPMENT, VENTS, OR FLUES VISABLE ON SLOPED METAL ROOF. COLOR AS SELECTED BY ARCHITECT.

## Reference Notes

| | |
|---|---|
| 1.02 | LINE OF WALL BELOW ROOF. |

## Keyed Notes

| | |
|---|---|
| 061000.A1 | DIMENSION LUMBER |
| 061600.A2 | ROOF SHEATHING, 23/32" O.S.B. |
| 061753.A1 | PRE-ENGINEERED WOOD ROOF TRUSS(ES) - GABLE - 24" O.C. U.N.O. |
| 074113.A1 | METAL ROOF PANEL(S) - STANDING SEAM |
| 074113.B1 | FASTENING CLIP |
| 074113.B2 | PANEL CLOSURE STRIP |
| 074113.D1 | UNDERLAYMENT SHEETING |
| 074113.I | 24 GA. PREFINISHED METAL RIDGE CAP CONT. ATTACH TO CLEAT W/ SCREWS W/ NEOPREENE WASHERS AT 8' OC. |
| 076200.D1 | PRE-FINISHED METAL GUTTER, 24 GA. |

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LICENSED ARCHITECT
133
07/26/21
STATE OF IDAHO

| # | Description | Date |
|---|---|---|
| | Revisions | |

Minico High School Team Building
Minidika School District
292 W 100 S, Rupert, ID 83350

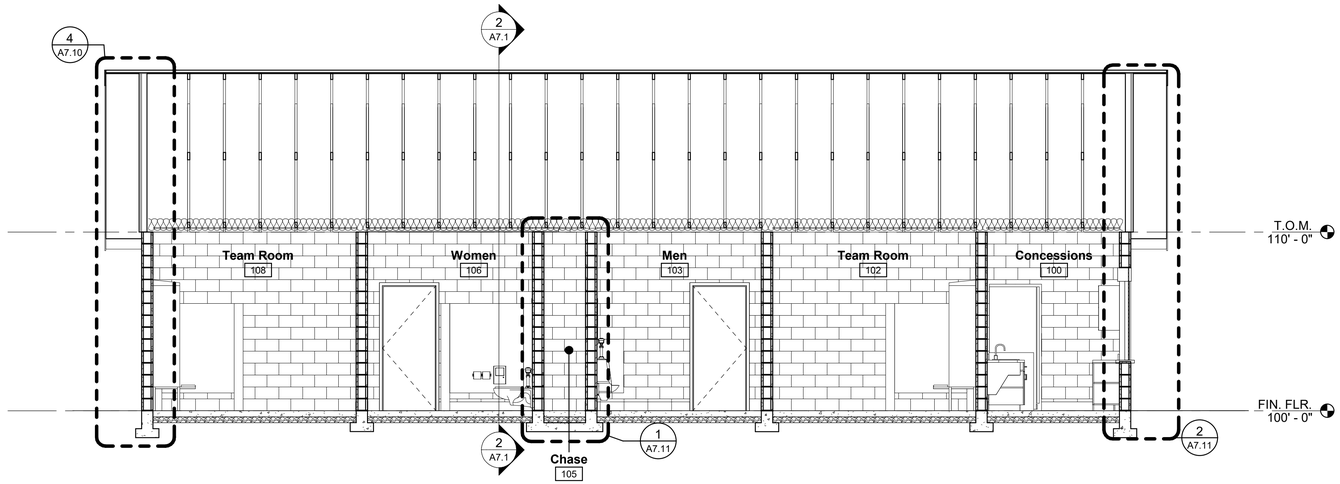
DATE: 07/26/21
LKV PROJECT #: 2321

DRAWN BY: TL
CHECKED BY: AVO

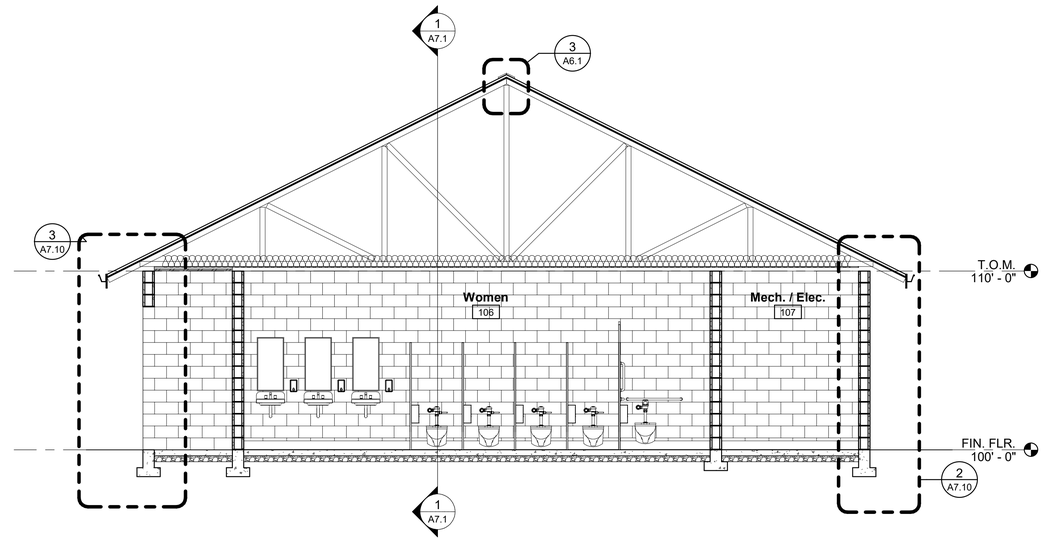
Project Status

DRAWING NO.:

A6.1
ROOF PLAN




1 BUILDING SECTION
1/4" = 1'-0"




2 BUILDING SECTION
1/4" = 1'-0"

## General Notes

1. SEE STRUCTURAL FOR MASONRY WALL BOND BEAM LOCATIONS AND HORIZONTAL AND VERTICAL REINFORCING.
2. SEE STRUCTURAL FOR ROOF TRUSS AND LINTEL SIZES.

## Reference Notes

## Keyed Notes

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LICENSED ARCHITECT
JEFFREY A. VOLLMER
07/26/21
STATE OF IDAHO

Revisions

| # | Description | Date |
|---|---|---|

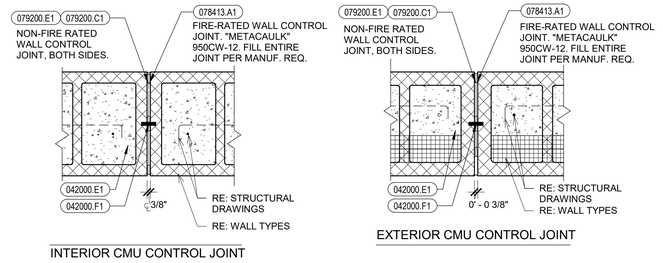
Minico High School Team Building
Minidika School District
292 W 100 S, Rupert, ID 83350

DATE: 07/26/21
LKV PROJECT #: 2321

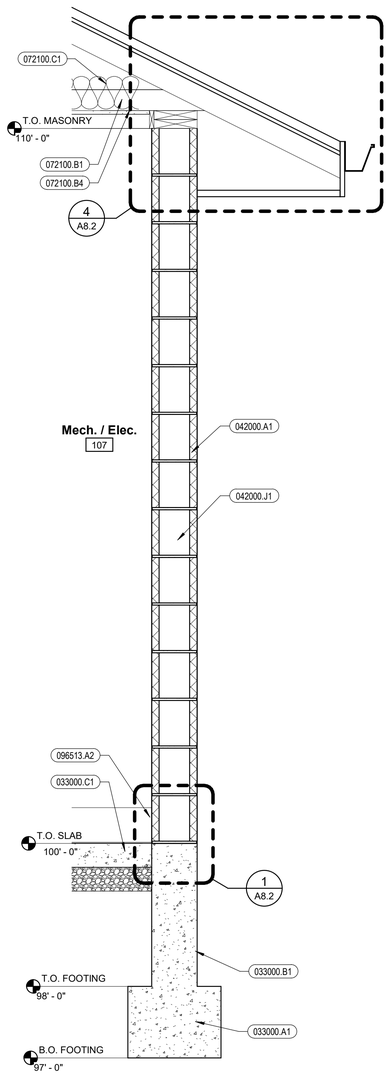
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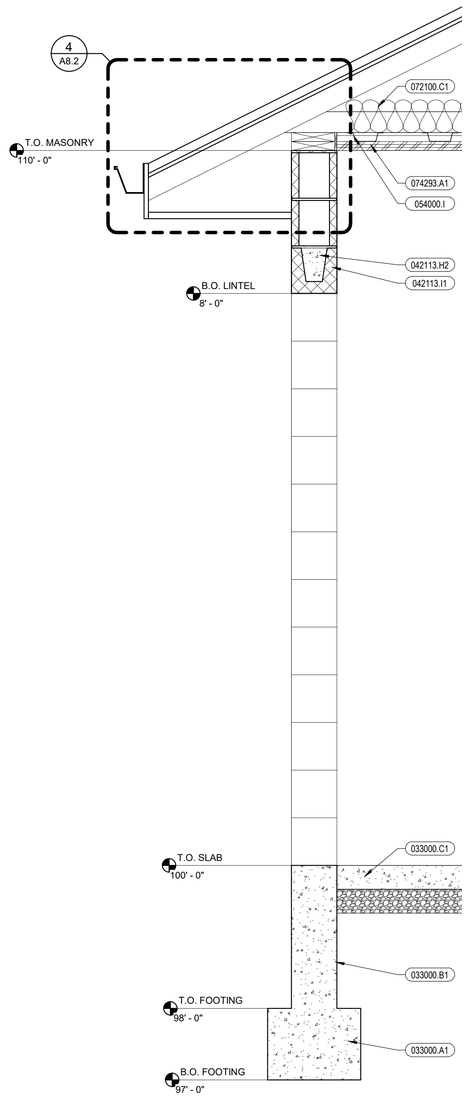
DRAWING NO.:
A7.1
BUILDING SECTIONS



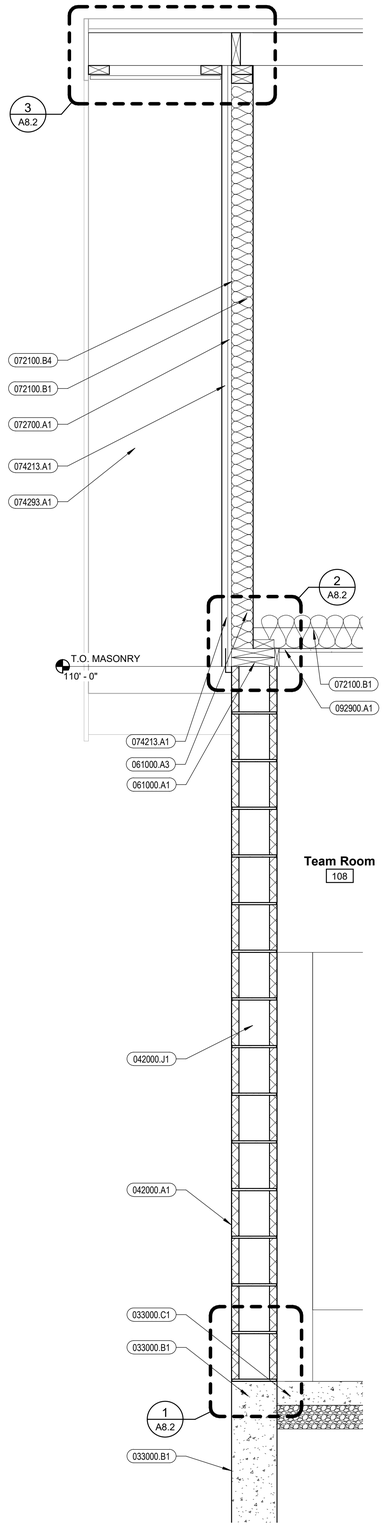

1 CMU CONTROL JOINT
1 1/2" = 1'-0"




2 BUILDING SECTION 2 - Callout 1
1" = 1'-0"




3 BUILDING SECTION 2 - Callout 2
1" = 1'-0"




4 BUILDING SECTION - Callout 1
1" = 1'-0"

## General Notes

1. SEE STRUCTURAL FOR MASONRY WALL BOND BEAM LOCATIONS AND HORIZONTAL AND VERTICAL REINFORCING.
2. SEE STRUCTURAL FOR ROOF TRUSS AND LINTEL SIZES.

## Reference Notes

## Keyed Notes

| | |
|---|---|
| 033000.A1 | CONCRETE FOOTING |
| 033000.B1 | CONCRETE FOUNDATION WALL |
| 033000.C1 | CONCRETE FLOOR SLAB ON GRADE, 4" U.N.O. |
| 042000.A1 | CONCRETE MASONRY UNIT(S) SMOOTH FACE, 8X8X16 |
| 042000.E1 | CONTROL JOINT WITH PREFORMED GASKETING |
| 042000.F1 | CAVITY DRAINAGE MATERIAL |
| 042000.J1 | MASONRY-CELL INSULATION |
| 042113.H2 | SOLID GROUT |
| 042113.I1 | LINTEL UNIT(S) |
| 054000.I | FURRING HAT CHANNEL - 7/8" |
| 061000.A1 | DIMENSION LUMBER |
| 061000.A3 | WOOD STUD(S) 2X4 @ 16" O.C., U.N.O. |
| 072100.B1 | BATT INSULATION, GLASS FIBER, UNFACED FULL WIDTH OF CAVITY |
| 072100.B4 | VAPOR RETARDER WITH TAPED SEAMS |
| 072100.C1 | BLOWN INSULATION, GLASS FIBER, R38 |
| 072700.A1 | BUILDING WRAP |
| 074213.A1 | METAL WALL PANEL(S) |
| 074293.A1 | METAL SOFFIT PANEL(S), VENTILATING |
| 078413.A1 | PENETRATION FIRESTOPPING |
| 079200.C1 | LATEX JOINT SEALANT |
| 079200.E1 | FOAM BACKER ROD |
| 092900.A1 | SINGLE LAYER GYPSUM BOARD, 5/8" TYPE "X" U.N.O. |
| 096513.A2 | 6" RUBBER COVE BASE |

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JAMES V. OLSEN
07/26/21
STATE OF IDAHO

135

| Revisions | | |
|---|---|---|
| # | Description | Date |

Minico High School Team Building
Minidika School District
292 W 100 S, Rupert, ID 83350

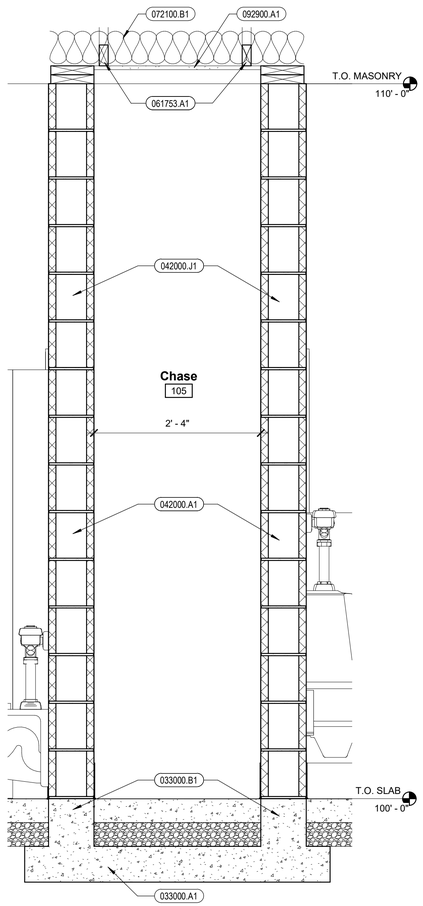
DATE: 07/26/21
LKV PROJECT #: 2321

DRAWN BY: TL
CHECKED BY: AVO

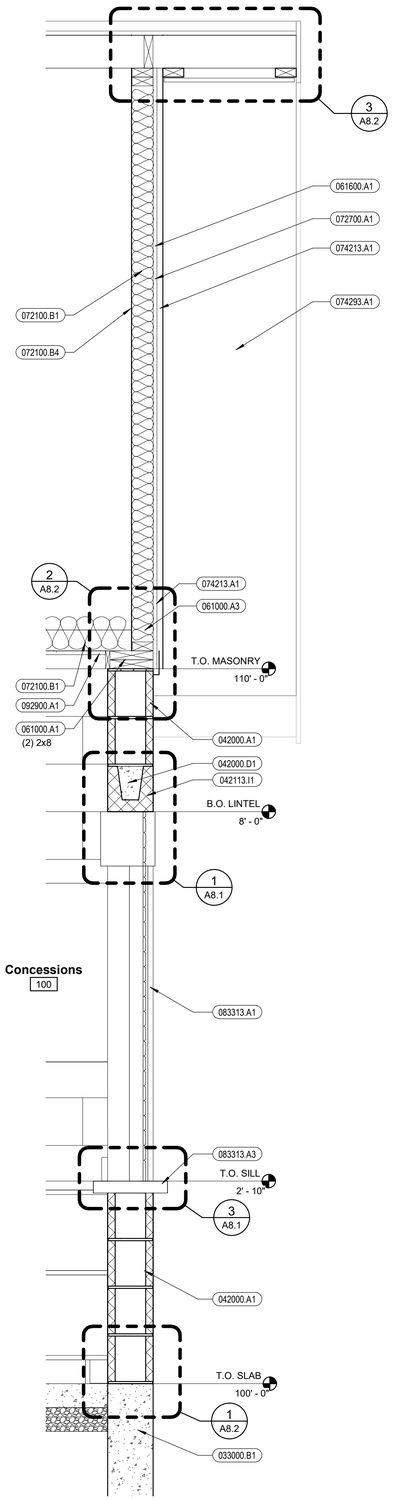
Project Status

DRAWING NO.:

A7.10
WALL SECTIONS




1 BUILDING SECTION - Callout 2
1" = 1'-0"




2 BUILDING SECTION - Callout 3
1" = 1'-0"

## General Notes

1. SEE STRUCTURAL FOR MASONRY WALL BOND BEAM LOCATIONS AND HORIZONTAL AND VERTICAL REINFORCING.
2. SEE STRUCTURAL FOR ROOF TRUSS AND LINTEL SIZES.

## Reference Notes

## Keyed Notes

| | |
|---|---|
| 033000.A1 | CONCRETE FOOTING |
| 033000.B1 | CONCRETE FOUNDATION WALL |
| 042000.A1 | CONCRETE MASONRY UNIT(S) SMOOTH FACE, 8X8X16 |
| 042000.D1 | SOLID GROUT |
| 042000.J1 | MASONRY-CELL INSULATION |
| 042113.I1 | LINTEL UNIT(S) |
| 061000.A1 | DIMENSION LUMBER |
| 061000.A3 | WOOD STUD(S) 2X4 @ 16" O.C., U.N.O. |
| 061600.A1 | SHEATHING, MISC. (TYPE AND THICKNESS INDICATED) |
| 061753.A1 | PRE-ENGINEERED WOOD ROOF TRUSS(ES) - GABLE - 24" O.C. U.N.O. |
| 072100.B1 | BATT INSULATION, GLASS FIBER, UNFACED FULL WIDTH OF CAVITY |
| 072100.B4 | VAPOR RETARDER WITH TAPED SEAMS |
| 072700.A1 | BUILDING WRAP |
| 074213.A1 | METAL WALL PANEL(S) |
| 074293.A1 | METAL SOFFIT PANEL(S), VENTILATING |
| 083313.A1 | COILING COUNTER DOOR |
| 083313.A3 | OVERHEAD COILING DOOR SILL |
| 092900.A1 | SINGLE LAYER GYPSUM BOARD, 5/8" TYPE "X" U.N.O. |

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STATE OF IDAHO

Revisions

| # | Description | Date |
|---|---|---|

Minico High School Team Building
Minidika School District
292 W 100 S, Rupert, ID 83350

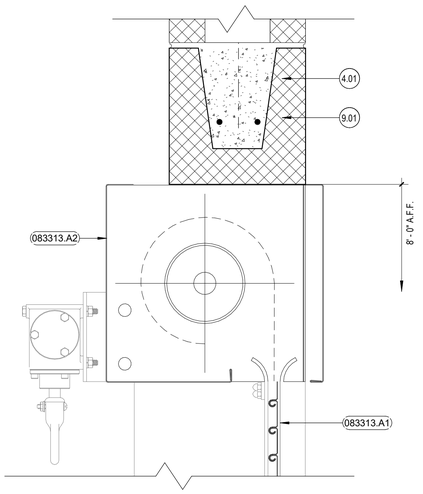
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LKV PROJECT #: 2321

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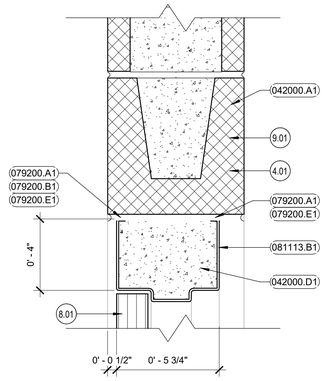
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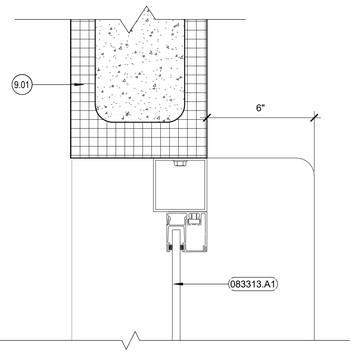
A7.11
WALL SECTIONS



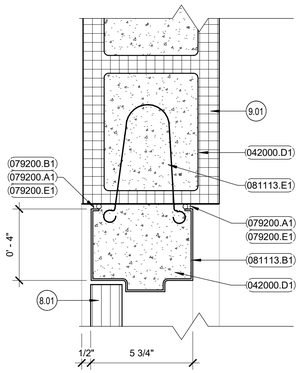

1 COILING DOOR HEAD AT CONCESSION
3" = 1'-0"



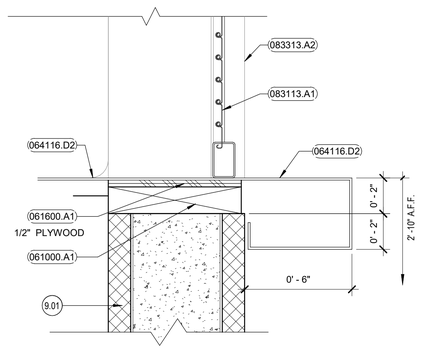

4 HM. DOOR HEAD @ CMU
3" = 1'-0"



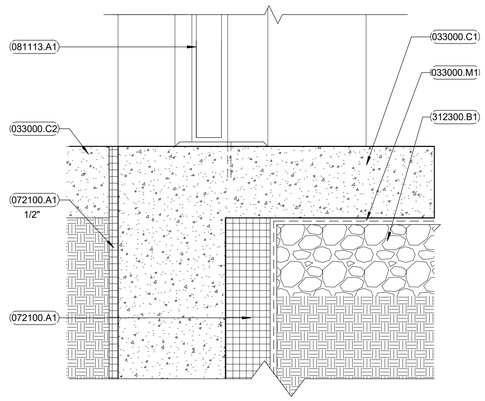

2 COILING DOOR JAMB AT CONCESSION
3" = 1'-0"




5 HM. DOOR JAMB @ CMU
3" = 1'-0"




3 COILING DOOR SILL AT CONCESSION
3" = 1'-0"




6 HOLLOW METAL DOOR THRESHOLD
3" = 1'-0"

## General Notes

1. FIELD VERIFY EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING WORK.

## Reference Notes

| | |
|---|---|
| 4.01 | SEE STRUCTURAL FOR LINTEL TYPES AND SIZES. |
| 8.01 | DOOR AS SCHEDULED. SEE SHEET A4.1 |
| 9.01 | SEE FLOOR PLANS AND BUILDING SECTIONS FOR WALL TYPES AND WALL DETAIL REFERENCES. |

## Keyed Notes

| | |
|---|---|
| 033000.C1 | CONCRETE FLOOR SLAB ON GRADE, 4" U.N.O. |
| 033000.C2 | CONCRETE SLAB ON GRADE (EXTERIOR), 4" U.N.O. |
| 033000.M1 | VAPOR RETARDER |
| 042000.A1 | CONCRETE MASONRY UNIT(S) SMOOTH FACE, 8X8X16 |
| 042000.D1 | SOLID GROUT |
| 061000.A1 | DIMENSION LUMBER |
| 061600.A1 | SHEATHING, MISC. (TYPE AND THICKNESS INDICATED) |
| 064116.D2 | H.P. DECORATIVE LAMINATE - TOPS, EDGES, AND BACKSPLASH |
| 072100.A1 | FOUNDATION / WALL INSULATION - EXTRUDED POLYSTYRENE, 2" U.N.O. |
| 079200.A1 | ONE PART SILICON SEALANT |
| 079200.B1 | ONE PART URETHANE SEALANT |
| 079200.E1 | FOAM BACKER ROD |
| 081113.A1 | HOLLOW METAL DOOR |
| 081113.B1 | HOLLOW METAL DOOR FRAME |
| 081113.E1 | FRAME ANCHOR(S) FOR MASONRY WALLS |
| 083113.A1 | ACCESS DOOR |
| 083313.A1 | COILING COUNTER DOOR |
| 083313.A2 | OVERHEAD COILING DOOR TRACK |
| 312300.B1 | DRAINAGE FILL COURSE |

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LICENSED ARCHITECT
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137
07/26/21
STATE OF IDAHO

| # | Revisions Description | Date |
|---|---|---|

Minico High School Team Building
Minidika School District
292 W 100 S, Rupert, ID 83350

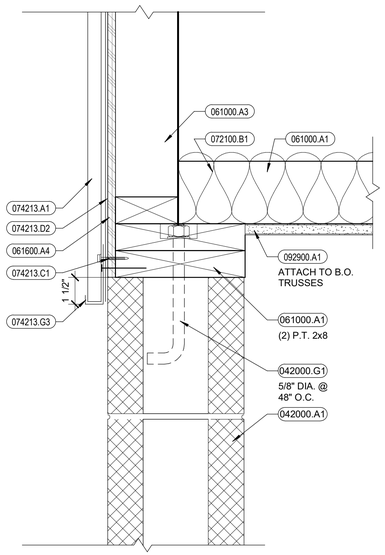
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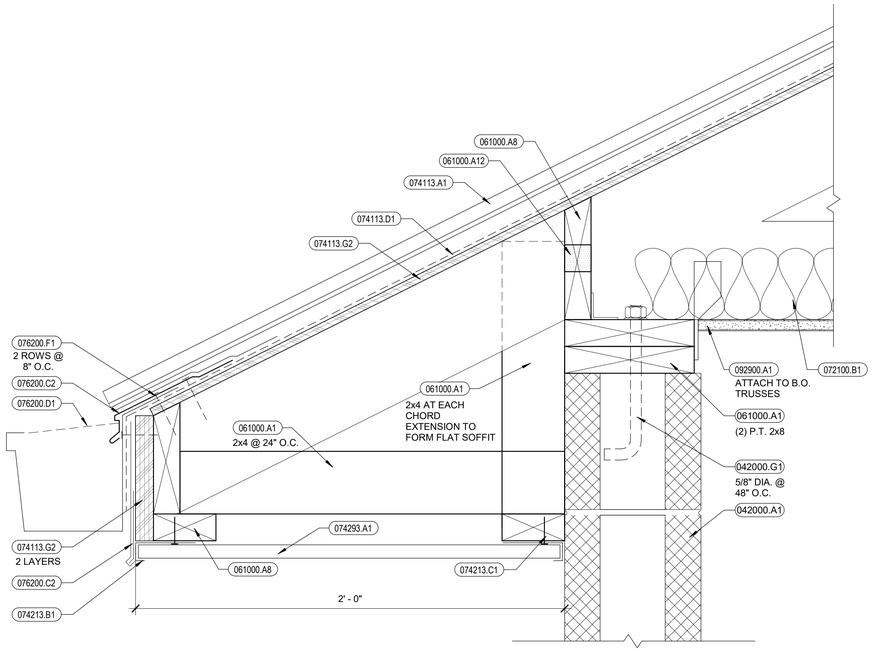
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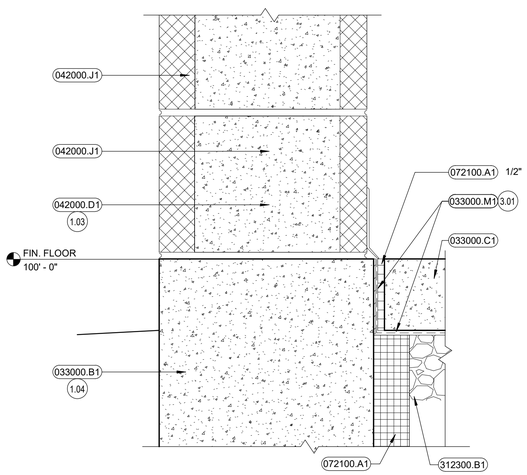
A8.1
DOOR DETAILS



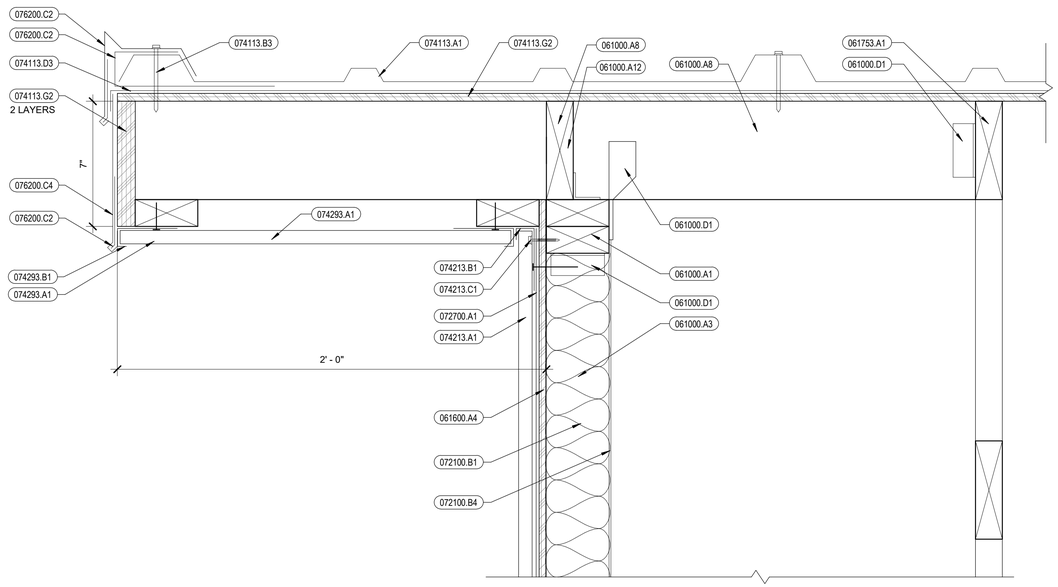

2 ROOF FLASHING AT CMU
3" = 1'-0"




4 ROOF FLASHING AT CMU
3" = 1'-0"




1 WALL BASE DETAIL
3" = 1'-0"




3 ROOF SOFFIT DETAIL
3" = 1'-0"

## General Notes

1. FIELD VERIFY EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING WORK.

## Reference Notes

| | |
|---|---|
| 1.03 | SEE STRUCTURAL FOR REQUIRED REINFORCING. |
| 1.04 | SEE STRUCTURAL DRAWINGS. |
| 3.01 | TURN UP VAPOR RETARDER TO TOP OF FOUNDATION WALL AND SEAL TO WALL WITH URETHANE SEALANT. |

## Keyed Notes

| | |
|---|---|
| 033000.B1 | CONCRETE FOUNDATION WALL |
| 033000.C1 | CONCRETE FLOOR SLAB ON GRADE, 4" U.N.O. |
| 033000.M1 | VAPOR RETARDER |
| 042000.A1 | CONCRETE MASONRY UNIT(S) SMOOTH FACE, 8X8X16 |
| 042000.D1 | SOLID GROUT |
| 042000.G1 | MASONRY VENEER TIE |
| 042000.J1 | MASONRY-CELL INSULATION |
| 061000.A1 | DIMENSION LUMBER |
| 061000.A3 | WOOD STUD(S) 2X4 @ 16" O.C., U.N.O. |
| 061000.A8 | SOLID BLOCKING / BRIDGING |
| 061000.A12 | (3) 1-1/2" DIAMETER VENTILATION HOLES. |
| 061000.D1 | FASTENER(S) |
| 061600.A4 | WALL SHEATHING, 7/16" O.S.B. |
| 061753.A1 | PRE-ENGINEERED WOOD ROOF TRUSS(ES) - GABLE - 24" O.C. U.N.O. |
| 072100.A1 | FOUNDATION / WALL INSULATION - EXTRUDED POLYSTYRENE, 2" U.N.O. |
| 072100.B1 | BATT INSULATION, GLASS FIBER, UNFACED FULL WIDTH OF CAVITY |
| 072100.B4 | VAPOR RETARDER WITH TAPED SEAMS |
| 072700.A1 | BUILDING WRAP |
| 074113.A1 | METAL ROOF PANEL(S) - STANDING SEAM |
| 074113.B3 | FASTENER(S) |
| 074113.D1 | UNDERLAYMENT SHEETING |
| 074113.D3 | 30 LB FELT |
| 074113.G2 | PLYWOOD SHEATHING, 1/2" |
| 074213.A1 | METAL WALL PANEL(S) |
| 074213.B1 | METAL WALL PANEL TRIM |
| 074213.C1 | FASTENER(S) |
| 074213.D2 | 30 LB FELT |
| 074213.G3 | PANEL STARTER CLEAT |
| 074293.A1 | METAL SOFFIT PANEL(S), VENTILATING |
| 074293.B1 | METAL SOFFIT PANEL FINISHING TRIM |
| 076200.C2 | PRE-FINISHED METAL FLASHING, 24 GA. |
| 076200.C4 | PRE-FINISHED METAL FASCIA, 24 GA. |
| 076200.D1 | PRE-FINISHED METAL GUTTER, 24 GA. |
| 076200.F1 | FASTENER |
| 092900.A1 | SINGLE LAYER GYPSUM BOARD, 5/8" TYPE "X" U.N.O. |
| 312300.B1 | DRAINAGE FILL COURSE |

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LICENSED ARCHITECT
JEFFREY A. LOWE
NUMBER
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Minidika School District
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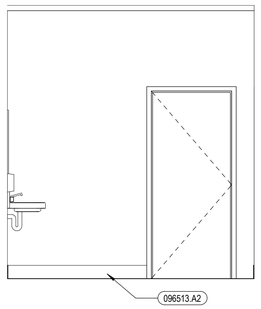
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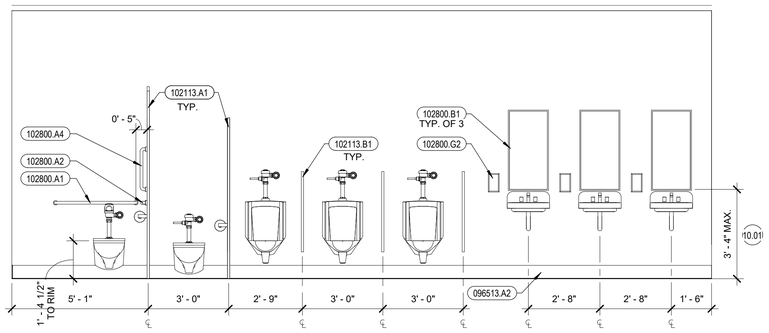
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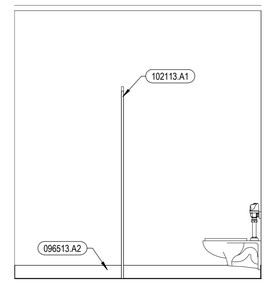
A8.2
ARCHITECTURAL DETAILS



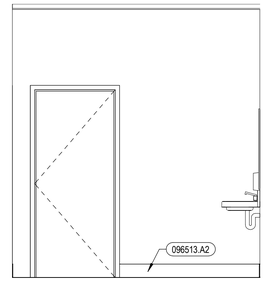

1 Mens Restroom 1
3/8" = 1'-0"



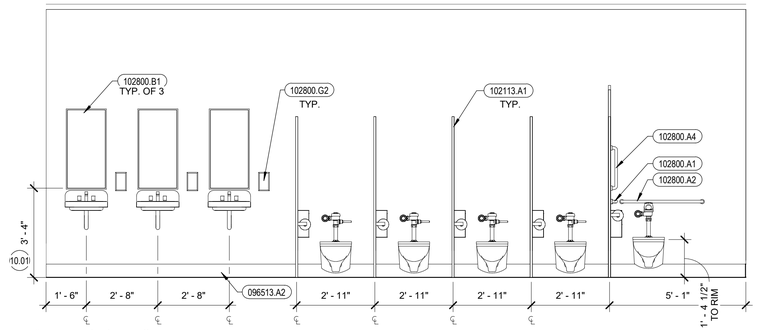

2 Mens Restroom 2
3/8" = 1'-0"



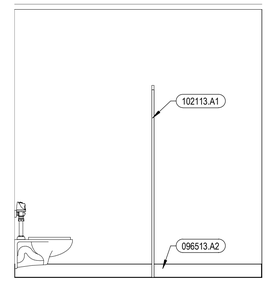

3 Mens Restroom 3
3/8" = 1'-0"



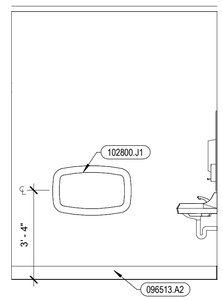

4 Womens Restroom
3/8" = 1'-0"



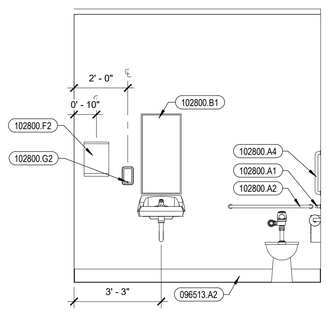

5 Womens Restroom 2
3/8" = 1'-0"



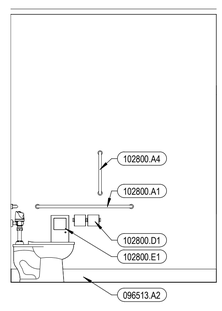

6 Womens Restroom 3
3/8" = 1'-0"




7 Toilet 1
3/8" = 1'-0"




8 Toilet 2
3/8" = 1'-0"




9 Toilet 3
3/8" = 1'-0"

NOTE: CMU WALL PATTERN HIDDEN FOR CLARITY

## General Notes

1. DIMENSIONS ARE TO THE FACE OF WALL OR FLOOR UNLESS NOTED OTHERWISE.
2. SOAP DISPENSERS, TOILET TISSUE DISPENSERS, TOILET SEAT COVERS DISPENSERS, AND PAPER TOWEL DISPENSERS BY OWNER.

## Reference Notes

| | |
|---|---|
| 10.01 | DIMENSION TO BOTTOM OF REFLECTIVE GLASS SURFACE. |

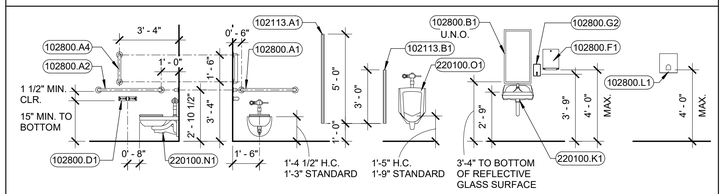
## Keyed Notes

| | |
|---|---|
| 096513.A2 | 6" RUBBER COVE BASE |
| 102113.A1 | TOILET COMPARTMENT PARTITION(S) |
| 102113.B1 | URINAL SCREEN |
| 102800.A1 | GRAB BAR, 36" LONG |
| 102800.A2 | GRAB BAR, 42" LONG |
| 102800.A4 | GRAB BAR, 18" LONG |
| 102800.B1 | MIRROR, 18" WIDE X 36" HIGH, FRAMED |
| 102800.D1 | TOILET PAPER DISPENSER |
| 102800.E1 | TOILET SEAT COVER DISPENSER |
| 102800.F1 | PAPER TOWEL DISPENSER WITH WASTE, RECESSED |
| 102800.F2 | PAPER TOWEL DISPENSER, RECESSED |
| 102800.G2 | SOAP DISPENSER, WALL MOUNTED |
| 102800.J1 | BABY CHANGING STATION |
| 102800.L1 | AUTOMATIC HAND DRYER |
| 220100.K1 | LAVATORY |
| 220100.N1 | WATER CLOSET |
| 220100.O1 | URINAL |

## Mounting Heights

| | |
|---|---|
| MIRRORS | + 40" MAX. A.F.F. TO BOTTOM OF REFLECTIVE SURFACE |
| GRAB BARS | + 34 1/2" A.F.F. TO CENTER |
| TOILET PAPER DISPENSER | + 15" A.F.F. MIN. TO BOTTOM |
| PAPER TOWEL DISPENSER | + 48" A.F.F. MAX. TO DISPENSER OPENING |
| SOAP DISPENSER | + 45" A.F.F. TO TOP OF DISPENSER |
| MARKER BOARDS | + 6'-8" A.F.F. TO TOP |
| TACK BOARDS | + 6'-8" A.F.F. TO TOP |
| INTERIOR SIGNS | +5'-0" A.F.F. TO TOP, 3" FROM DOOR FRAME, LATCH SIDE OF DOOR |
| FIRE EXTINGUISHER CABINETS | +4'-4" A.F.F. TO TOP |
| MOP SHELF / HOLDER | +6'-0" A.F.F. TO TOP |

## Toilet Room Fixture and Accessory Mounting Requirements




NOTES:
1. IF PAPER TOWEL DISPENSER IS ABOVE GRAB BAR, 12" MIN. MUST BE MAINTAINED BETWEEN THE TOP OF GRAB BAR AND THE BOTTOM OF THE PAPER TOWEL DISPENSER.
2. COORDINATE VALVE HEIGHTS WITH PLUMBING AND GRAB BARS.
3. FOR ACTUAL RESTROOM LAYOUT AND CONFIGURATIONS, SEE INDIVIDUAL RESTROOM ELEVATIONS.
4. SEE RESTROOM ELEVATIONS FOR OWNER FURNISHED ITEMS.
5. 4'-0" MAX. MOUNTING HEIGHT FOR PAPER PRODUCT DISPENSERS AND HAND DRYERS IS TO HIGHEST POINT OF REQUIRED REACH FROM FINISHED FLOOR LEVEL.

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LICENSED ARCHITECT 139 STATE OF IDAHO 07/26/21

| # | Description | Date |
|---|---|---|
| | Revisions | |

Minico High School Team Building
Minidika School District
292 W 100 S, Rupert, ID 83350

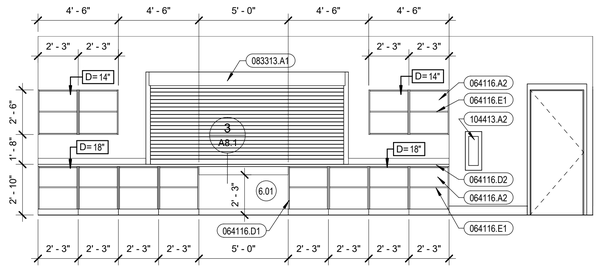
DATE: 07/26/21
LKV PROJECT #: 2321

DRAWN BY: TL
CHECKED BY: AVO

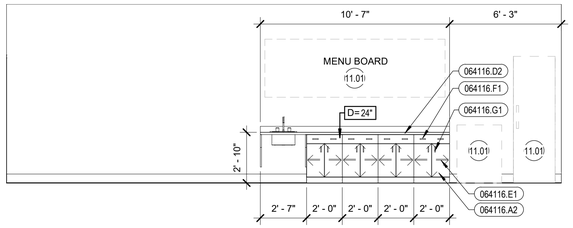
Project Status

DRAWING NO.:

A9.1
INTERIOR ELEVATIONS




1 CONCESSION MILLWORK
1/4" = 1'-0"




2 CONCESSION MILLWORK
1/4" = 1'-0"

## General Notes

1. FIELD VERIFY ALL ROOM DIMENSIONS PRIOR TO FABRICATION OF MILLWORK AND ADJUST MILLWORK DIMENSIONS ACCORDINGLY.
2. ALL COUNTERTOP SPLASHES SHALL BE 4" HIGH UNLESS NOTED OTHERWISE.
3. ALL TOE KICK SPACES SHALL BE 4" HIGH UNLESS NOTED OTHERWISE. FURNISH AND INSTALL 4" BASE MATERIAL TO MATCH ROOM, TYPICAL.
4. DEPTH OF UNIT DESIGNATION D=X" VERIFY SINK / LAVATORY SIZE REQUIREMENTS.
5. TYPICAL CABINET CONSTRUCTION SHALL BE MIN. 3/4" MELAMINE COATED PARTICLE BOARD EXCEPT AT EXPOSED EXTERIOR SURFACES. EXPOSED EXTERIOR SURFACES SHALL HAVE HIGH PRESSURE DECORATIVE LAMINATE IN LIEU OF MELAMINE COATING UNLESS NOTED OTHERWISE. BACK PANELS SHALL BE MINIMUM 1/2" MELAMINE COATED PARTICLE BOARD UNLESS NOTED OTHERWISE. WHERE ALL CABINETS / SHELVING (W/O A COUNTER ABOVE) MEET AT AN INSIDE CORNER OF A ROOM, A HORIZONTAL CLOSURE PANEL SHALL BE PROVIDED AT THE TOP TO CLOSE OFF VOID SPACE BELOW.
6. TYPICAL COUNTERTOP CONSTRUCTION SHALL BE MINIMUM 3/4" PARTICLE BOARD WITH HIGH PRESSURE DECORATIVE LAMINATE AT TOPS AND BACKSPLASHES WITH 1 1/2" FRONT SELF EDGE UNLESS NOTED OTHERWISE. PVC EDGE BANDING, 0.12", (3mm) THICK, MATCHING LAMINATE COLOR, PATTERN, AND FINISH, TO BE AT VERTICAL COUNTER TOP SURFACES. RADIUS OUTSIDE COUNTER CORNERS WITH 1" RADIUS.
7. FURNISH AND INSTALL 3mm PVC EDGE BANDING (64023.K1) AS REQUIRED AT ALL EXPOSED CABINET FACE FRAME, SHELF, DOOR, AND DRAWER EDGES.
8. SEE TYPICAL ACCESSORY MOUNTING HEIGHT DETAIL ON SHEET A1.2.

## Reference Notes

| | |
|---|---|
| 6.01 | KNEE SPACE, 2'-3" CLR. INSTALL (1) 3" DIA. RUBBER GROMMET (64116.M1) IN COUNTER ABOVE EACH KNEE SPACE EXCEPT AT SINK LOCATIONS. FURNISH AND INSTALL 4" BASE MATERIAL TO MATCH ROOM, TYPICAL. |
| 11.01 | FURNISHING / EQUIPMENT BY OWNER (N.I.C.) |

## Keyed Notes

| | |
|---|---|
| 064116.A2 | 1/2" MELAMINE COATED PARTICLE BOARD |
| 064116.D1 | H.P. DECORATIVE LAMINATE - EXPOSED EXTERIOR SURFACES |
| 064116.D2 | H.P. DECORATIVE LAMINATE - TOPS, EDGES, AND BACKSPLASH |
| 064116.E1 | ADJUSTABLE SHELVES ON 32MM SYSTEM SHELF SUPPORTS - 3/4" MELAMINE COATED PARTICLE BOARD |
| 064116.F1 | DRAWER(S) ON SLIDES W/ PULL(S) |
| 064116.G1 | DOOR(S) ON HINGES W/ PULL(S) |
| 083313.A1 | COILING COUNTER DOOR |
| 104413.A2 | FIRE EXTINGUISHER CABINET, SURFACED MOUNTED |

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LICENSED ARCHITECT
JAMES V. VANDENBERG
07/26/21
STATE OF IDAHO

| # | Description | Date |
|---|---|---|
| | Revisions | |

Minico High School Team Building
Minidika School District
292 W 100 S, Rupert, ID 83350

DATE: 07/26/21
LKV PROJECT #: 2321

DRAWN BY: TL
CHECKED BY: AVO

Project Status

DRAWING NO.:
A10.1
MILLWORK

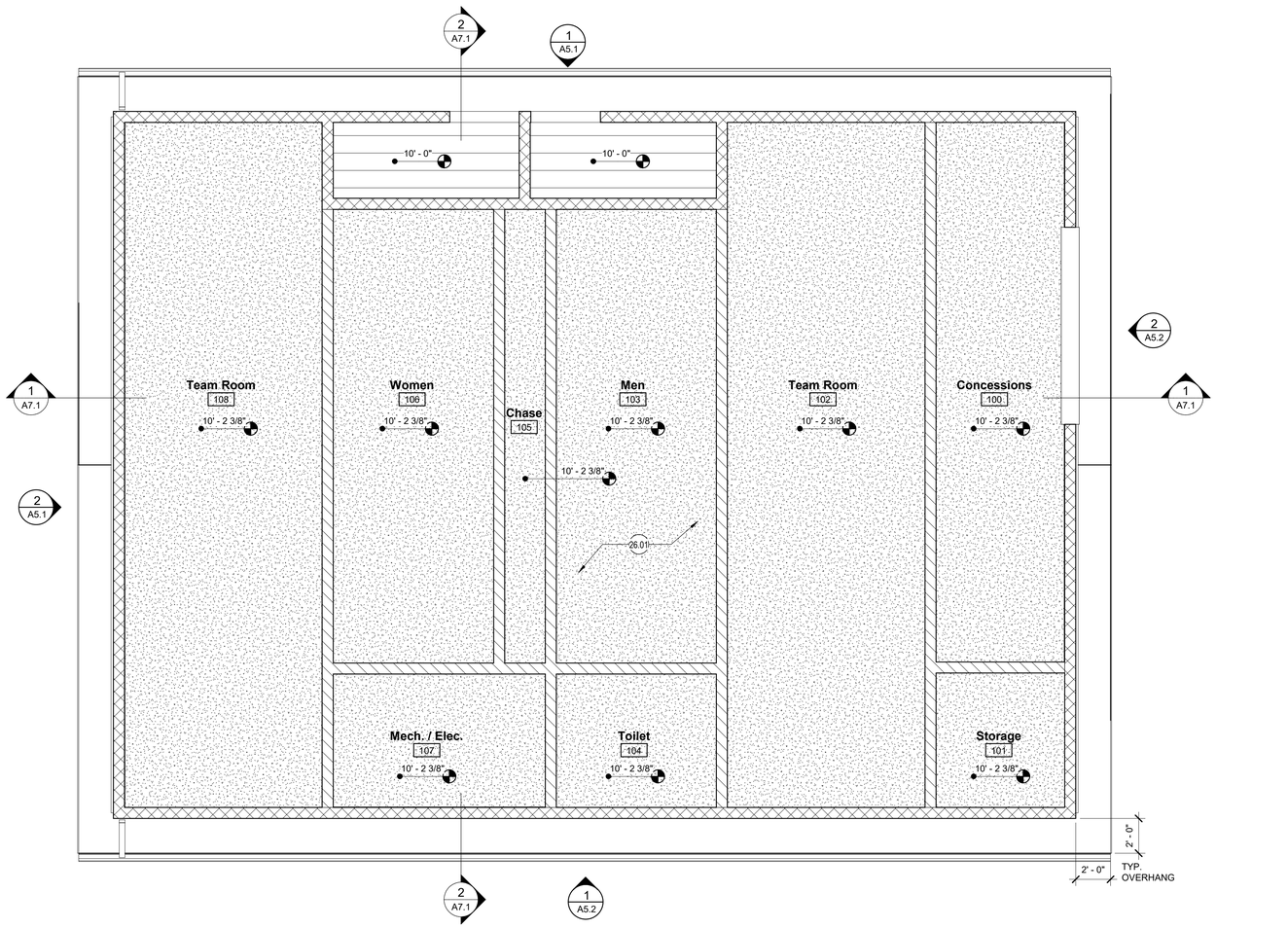
## General Notes

1. SEE ROOM FINISH SCHEDULE SHEET A4.1 FOR ADDITIONAL REQUIREMENTS.
2. COORDINATE WITH MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS.

## Reference Notes

## Legend

- TYPICAL LIGHTING FIXTURES. REFER TO ELECTRICAL DRAWINGS.
- TYPICAL MECHANICAL FIXTURES. REFER TO MECHANICAL DRAWINGS.
- CEILING HEIGHT ABOVE FINISHED FLOOR.
- GYPSUM CEILING BOARD: (092900.A1) SEE SPECIFICATION SECTION 092216 FOR FRAMING REQUIREMENTS.
- EXTERIOR METAL SOFFIT SYSTEM. REFER TO WALL SECTIONS FOR FRAMING DETAILS.




1 FIN. FLR.
1/4" = 1'-0"


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LICENSED ARCHITECT AVO 07/26/21 STATE OF IDAHO

142

Revisions

| # | Description | Date |
|---|---|---|

Minico High School Team Building
Minidika School District
292 W 100 S, Rupert, ID 83350

DATE: 07/26/21
LKV PROJECT #: 2321

DRAWN BY: TL
CHECKED BY: AVO

Project Status

DRAWING NO.:

A11.1
REFLECTED CEILING PLAN

**GENERAL NOTES:**

A. CONSTRUCTION DOCUMENTS:
1. THE CONTRACTOR SHALL REVIEW THE APPROVED CONSTRUCTION DOCUMENTS AND NOTIFY THE ENGINEER OF ANY ERRORS OR DISCREPANCIES PRIOR TO THE START OF CONSTRUCTION.
2. CONTRACTOR IS RESPONSIBLE FOR USING QUALIFIED SUB CONTRACTORS EXPERIENCED IN THIS TYPE OF CONSTRUCTION.
3. THE CONTRACTOR SHALL FURNISH AND INSTALL EVERYTHING REQUIRED TO PROVIDE A COMPLETE STRUCTURE AS SHOWN HEREIN. IF THERE IS AN OMISSION ON THE PLANS, SUCH OMISSION SHALL NOT BE CONSTRUED TO MEAN THAT THE CONTRACTOR IS NOT REQUIRED TO FURNISH OR PROVIDE EVERYTHING THAT IS NECESSARY TO COMPLETE THE PROJECT TO THE MINIMUM REQUIREMENTS OF THE 2018 INTERNATIONAL BUILDING CODE AND ALL OTHER SPECIFICATIONS, CODES AND STANDARDS NOTED ON THE APPROVED CONSTRUCTION DOCUMENTS.
4. THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY IF ANY UNIDENTIFIED EXISTING UNDERGROUND UTILITIES ARE DISCOVERED. THE ENGINEER IS NOT RESPONSIBLE FOR THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES WHETHER OR NOT SHOWN ON THE DRAWINGS.
5. THE APPROVED STRUCTURAL DRAWINGS ARE PART OF THE OVERALL CONSTRUCTION DOCUMENT SET AND SHALL BE REFERENCED IN CONJUNCTION WITH OTHER APPROVED CONSTRUCTION DOCUMENTS INCLUDING, BUT NOT LIMITED TO, CIVIL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, LANDSCAPE AND GEOTECHNICAL DOCUMENTS.
   a. SEE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING: HORIZONTAL AND VERTICAL DIMENSIONS NOT SHOWN ON THE STRUCTURAL PLANS. SIZE AND LOCATIONS OF DOOR AND WINDOW OPENINGS. SIZE AND LOCATIONS OF ROOF AND FLOOR OPENINGS. SIZE AND LOCATIONS OF INTERIOR NON-BEARING AND NON STRUCTURAL WALLS. CEILING ASSEMBLIES; WALL, FLOOR AND ROOF FINISHES; AND HANDRAILS.
   b. SEE MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR THE FOLLOWING: SIZE AND LOCATION OF PIPES, SLEEVES, AND DUCT PENETRATIONS. EQUIPMENT SIZES AND LOCATION. EQUIPMENT CURBS AND MOUNTING BRACKETS OR ANCHORS.
   c. SEE CIVIL, GEOTECHNICAL, OR LANDSCAPE DRAWINGS AND REPORTS FOR THE FOLLOWING: SITE TOPOGRAPHY, EXCAVATION AND COMPACTION REQUIREMENTS, FINISH GRADE SLOPE AND DRAINAGE, AND SITE ELEVATION.
6. THE STRUCTURAL DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT ARE NOT LIMITED TO, BRACING AND/OR SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. CONTRACTOR AT HIS/HER OWN EXPENSE SHALL ENGAGE PROPERLY QUALIFIED PERSONS TO DESIGN BRACING, SHORING, ETC. OBSERVATION VISITS TO THE SITE BY THE ENGINEER SHALL NOT INCLUDE OBSERVATION OF THE ABOVE NOTED ITEMS.
7. UNDER NO CIRCUMSTANCES CAN STRUCTURAL COMPONENTS BE SUBSTITUTED, OMITTED, SPLICED, OR ALTERED FROM THE APPROVED SET OF CONSTRUCTION DOCUMENTS WITHOUT WRITTEN APPROVAL FROM THE ENGINEER.

B. DIMENSIONS AND NOTATIONS:
1. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE DRAWINGS.
2. FOR ANY MISSING DIMENSIONS REFER TO THE ARCHITECTURAL DRAWINGS OR THE DRAWINGS OF APPLICABLE TRADE.
3. ABBREVIATIONS USED ON THE APPROVED CONSTRUCTION DOCUMENTS SHALL BE CONSIDERED TYPICAL ABBREVIATIONS FOR THE INDUSTRY. THE CONTRACTOR SHALL BE RESPONSIBLE TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY ABBREVIATIONS THAT ARE UNKNOWN TO THE CONTRACTOR.

C. TYPICAL NOTES AND DETAILS:
1. SPECIFIC NOTES AND DETAILS SHALL TAKE PRECEDENCE OVER STANDARD TYPICAL NOTES AND DETAILS.
2. STANDARD TYPICAL NOTES AND DETAILS ARE TO BE USED WHEN REFERRED TO OR WHEN NO OTHER MORE RESTRICTIVE OR DIFFERENT DETAILS ARE SHOWN ON THE DRAWINGS.
3. WORK NOT PARTICULARLY SHOWN OR SPECIFIED SHALL BE THE SAME AS SIMILAR PARTS THAT ARE SHOWN OR SPECIFIED.

D. SHOP DRAWINGS (DEFERRED SUBMITTALS):
1. SHOP DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER IN A TIMELY FASHION PRIOR TO FABRICATION AND CONSTRUCTION. UNLESS OTHERWISE STATED, A MINIMUM OF 5 WORKING DAYS AFTER RECEIPT OF SHOP DRAWINGS SHALL BE CONSIDERED AN ACCEPTABLE TIME PERIOD FOR THE STRUCTURAL ENGINEER REVIEW PROCESS.
2. A MINIMUM OF (2) HARD COPY SETS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW. THE STRUCTURAL ENGINEER WILL MAINTAIN (1) SET FOR REFERENCE PURPOSES. THE CONTRACTOR SHALL MAINTAIN (1) SET AT THE JOB SITE DURING THE DURATION OF CONSTRUCTION.
3. CONTRACTOR SHALL REVIEW AND STAMP SHOP DRAWINGS PRIOR TO SUBMISSION TO THE STRUCTURAL ENGINEER. CONTRACTOR SHALL REVIEW FOR COMPLETENESS AND COMPLIANCE WITH CONTRACT DOCUMENTS.
4. SHOP DRAWINGS ARE NOT A PART OF THE CONSTRUCTION DOCUMENTS. THE STRUCTURAL ENGINEER REVIEW DOES NOT GIVE PERMISSION TO DEVIATE FROM THE APPROVED CONSTRUCTION DOCUMENTS. WHERE THE SHOP DRAWINGS AND THE CONSTRUCTION DOCUMENTS DIFFER, THE MORE STRICT OF THE TWO SHALL GOVERN UNLESS WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER PERMITS OTHERWISE.

E. INSPECTIONS, SPECIAL INSPECTIONS, AND SITE VISITS (STRUCTURAL OBSERVATIONS):
1. INSPECTIONS BY THE BUILDING OFFICIAL ARE REQUIRED FOR CONSTRUCTION WORK FOR WHICH A PERMIT IS REQUIRED PER SECTION 110 OF THE IBC. CONTRACTOR IS REQUIRED TO COORDINATE AND SCHEDULE ALL REQUIRED INSPECTIONS WITH THE BUILDING OFFICIAL. INSPECTIONS PRESUMING TO GIVE AUTHORITY TO VIOLATE OR CANCEL PROVISIONS OF THE IBC OR OF OTHER ORDINANCES OF THE JURISDICTION SHALL NOT BE VALID.
2. SPECIAL INSPECTIONS ARE IN ADDITION TO, AND DO NOT REPLACE, THE INSPECTIONS BY THE BUILDING OFFICIAL PER CHAPTER 17 OF THE IBC. SPECIAL INSPECTIONS SHALL BE PERFORMED BY A QUALIFIED PERSON TO INSPECT AS REQUIRED ON THESE DOCUMENTS THE MATERIALS, INSTALLATION, FABRICATION, ERECTION OR PLACEMENT OF COMPONENTS AND CONNECTIONS REQUIRING SPECIAL EXPERTISE TO ENSURE COMPLIANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.
3. SITE VISITS OR STRUCTURAL OBSERVATIONS BY THE STRUCTURAL ENGINEER DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY OF INSPECTIONS OR SPECIAL INSPECTIONS PER SECTION 110 AND CHAPTER 17 OF THE IBC. SITE VISITS ARE NOT CONTINUOUS OR DETAILED. SITE VISITS DO NOT VALIDATE CONTRACTORS PERFORMANCE, MEANS, OR METHODS. SITE VISITS ARE FOR VISUAL OBSERVATION FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS.

F. CODE REQUIREMENTS:
ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE FOLLOWING CODES:
1. 2018 INTERNATIONAL BUILDING CODE (IBC)
2. ANY OTHER REGULATING AGENCIES WHICH MAY HAVE AUTHORITY OVER ANY PORTION OF THE WORK, INCLUDING THE STATE OF IDAHO.
3. SPECIFICATIONS, CODES AND STANDARDS NOTED SHALL BE OF THE LATEST APPROVED ISSUE, INCLUDING SUPPLEMENTS, UNLESS NOTED OTHERWISE.
4. CONTRACTOR SHALL BE PROPERLY REGISTERED IN THE STATE OF IDAHO PER IDAHO STATE LAW.
5. ALL STRUCTURAL MATERIAL MUST HAVE CURRENT ICC-ES REPORTS AVAILABLE UPON REQUEST TO PROVE CODE APPROVAL & INDUSTRY TOLERANCES.

**DESIGN CRITERIA:**

A. 2018 INTERNATIONAL BUILDING CODE (IBC).
1. RISK CATEGORY: III
2. NATURE OF OCCUPANCY: EDUCATION

B. DESIGN LOADS:
1. ROOF:
   a. LIVE LOAD = 25 PSF (SNOW)
   b. DEAD LOAD = 17 PSF
2. PRE MANUFACTURED TRUSS- TOP CHORD:
   a. LIVE LOAD = 25 PSF
   b. DEAD LOAD = 7 PSF
   c. WIND UPLIFT = 15 PSF (NET / ASD)
3. PRE MANUFACTURED TRUSS- BOTTOM CHORD:
   a. LIVE LOAD = 10 PSF
   b. DEAD LOAD = 10 PSF
   c. LIVE LOADS ARE NOT CONCURRENT

C. IBC SEISMIC DESIGN:
1. SEISMIC DESIGN CATEGORY: D
2. IMPORTANCE FACTOR, I = 1.25
3. SOIL SITE CLASS: D-DEFAULT
4. SEISMIC COEFFICIENTS: $S_{DS}$ = 0.208 $S_{D1}$ = 0.141
5. RESPONSE MODIFICATION: R= 5
   SEISMIC FORCE RESISTING SYSTEM: SPECIAL REINFORCED MASONRY
6. DESIGN BASE SHEAR:
   V= 0.0312 W
7. ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE

D. IBC WIND LOAD:
1. BASIC DESIGN WIND SPEED = 110 MPH
2. EXPOSURE = C
3. ANALYSIS METHOD= ENVELOPE PROCEDURE METHOD 2
4. DESIGN BASE PRESSURE (ASD):
   P = 15 PSF

**FOUNDATIONS:**

A. MAXIMUM ALLOWABLE FOUNDATION SOIL BEARING PRESSURE:
1. 1500 PSF (DEAD + LIVE LOAD)
2. 1995 PSF (GRAVITY + LATERAL LOAD)

B. THE BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE 24 INCHES MINIMUM BELOW ADJACENT FINISHED GRADE.

C. THE INTERIOR FOOTINGS SHALL BE 12 INCHES MINIMUM BELOW FINISH FLOOR, U.N.O.

D. STRUCTURAL BACKFILL SHALL BE COMPACTED TO 95 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D1557. BRACE WALLS AND PIERS AS REQUIRED DURING BACKFILLING OPERATIONS.

E. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL COORDINATE THE CONSTRUCTION DOCUMENTS, INCLUDING THE STRUCTURAL DRAWINGS, WITH THE GEOTECHNICAL REPORT. ANY DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE STRUCTURAL ENGINEER.

F. DEFINITIONS:
1. STRUCTURAL WALLS - ANY LOAD BEARING WALL, SHEAR WALL, AND ANY WALL THAT REQUIRES A FOOTING.

**CONCRETE:**

A. REFERENCE STANDARDS:
1. ALL CONCRETE WORK SHALL CONFORM TO THE LATEST EDITION OF ACI 301
2. ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE
3. CONCRETE MIX DESIGN SHALL BE ESTABLISHED IN ACCORDANCE WITH CHAPTERS 19 AND 26 OF ACI 318
4. USE LATEST EDITION OF ACI 306R WHEN CONCRETING DURING COLD WEATHER

B. DEFERRRED SUBMITTALS:
1. SUPPLY PRODUCT DATA FOR PROPRIETARY MATERIALS AND ITEMS, INCLUDING REINFORCEMENT AND FORMING ACCESSORIES, ADMIXTURES, PATCHING COMPOUNDS, JOINT SYSTEMS, CURING COMPOUNDS AND OTHERS.
2. SHOP DRAWINGS FOR REINFORCEMENT DETAILING, FABRICATING, FOR BENDING, AND PLACING OF CONCRETE REINFORCEMENT SHALL COMPLY WITH ACI 315, MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES. BAR SCHEDULES, STIRRUP SPACING, BENT BAR DIAGRAMS, AND ARRANGEMENT OF CONCRETE REINFORCEMENT SHALL BE SHOWN. INCLUDE SPECIAL REINFORCING REQUIRED FOR OPENINGS THROUGH CONCRETE STRUCTURES.

C. FORMWORK AND FINISHES:
1. FORMWORK: DESIGN, ERECT, SUPPORT, BRACE AND MAINTAIN FORMWORK TO SUPPORT VERTICAL, LATERAL, STATIC AND DYNAMIC LOADS THAT MIGHT BE APPLIED UNTIL STRUCTURE CAN SUPPORT SUCH LOADS.
2. FINAL SLAB SURFACES SHALL RECEIVE A MACHINED STEEL TROWEL FINISH.
3. ANY PROJECTING CORNERS OF COLUMNS, BEAMS, WALLS, PEDESTALS, ETC SHALL BE FORMED WITH A 3/4 INCH CHAMFER.
4. DRY PACK, OR USE NON-SHRINK GROUT, UNDER BASE PLATES, BEARING PLATES, OR SILL PLATES AS REQUIRED FOR A LEVEL AND UNIFORM BEARING SURFACE. MINIMUM GROUT STRENGTH SHALL BE f'c = 7000 PSI, U.N.O.
5. SEPARATE SLABS-ON-GRADE FROM VERTICAL SURFACES WITH JOINT FILLER.

D. MIX DESIGN, STRENGTH, AND ADMIXTURES:
1. 28-DAY COMPRESSIVE STRENGTHS (f'c):
   a. FOUNDATION STEM WALLS = 3500 PSI
   b. FOOTINGS = 3500 PSI
   c. INTERIOR SLABS-ON-GRADE = 4000 PSI
2. CEMENT II OR I/II PER ASTM C-150
3. MAXIMUM SLUMP:
   a. PRIOR TO ADDITION OF WATER-REDUCING ADMIXTURE = 4"
   b. WITH ADDITION OF WATER-REDUCING ADMIXTURE= 10"
4. MAXIMUM SIZE COARSE AGGREGATE: 3/4 INCHES (PER ASTM C-33)
5. APPROVED ADMIXTURES:
   a. FLYASH PER ASTM C-618
   b. AIR ENTRAINING PER ASTM C-260
   c. WATER REDUCING PER ASTM C-494

E. REINFORCEMENT:
1. REINFORCEMENT FOR CONCRETE:
   a. ALL REINFORCING SHALL BE SUPPORTED IN FORMS SPACED WITH NECESSARY ACCESSORIES AND SHALL BE SECURELY WIRED TOGETHER IN ACCORDANCE WITH THE LATEST EDITION OF THE CRSI "MANUAL OF STANDARD PRACTICE"
   b. DEFORMED BARS - ASTM A615, GRADE 60
   c. WELDED WIRE REINFORCEMENT (WWR):
      " PLAIN WIRE - ASTM A1064
      " DEFORMED WIRE - ASTM A1064
      " USE FLAT MATS ONLY. NO ROLLED WWR IS PERMITTED.
2. MINIMUM REINFORCEMENT LAP = 40 BAR DIAMETERS
3. MINIMUM WWR LAP = GRID SPACING PLUS 2 INCHES
4. MINIMUM CONCRETE COVER OVER REINFORCEMENT:
   a. CONCRETE CAST AGAINST EARTH = 3"
   b. CONCRETE EXPOSED TO EARTH OR WEATHER = 1 1/2"
   c. CONCRETE NOT EXPOSED TO EARTH OR WEATHER = 3/4"
5. SLAB-ON-GRADE REINFORCEMENT SHALL BE PLACED AT THE MID-DEPTH OF THE SLAB.

F. COORDINATION:
1. COORDINATE ALL UNDER-SLAB MATERIAL SUCH AS VAPOR BARRIER, INSULATION, AND SUB-BASE WITH ARCHITECTURAL AND GEOTECHNICAL CONSTRUCTION DOCUMENTS. WHERE DOCUMENTS CONFLICT OR DIFFER, THE MORE STRICT OF THE TWO SHALL GOVERN UNLESS WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER PERMITS OTHERWISE.
2. COORDINATE CONCRETE SURFACE FINISHING WITH ARCHITECTURAL FINISH MATERIALS.
3. REPAIR OR REPLACE DEFECTIVE CONCRETE AS DIRECTED BY THE ARCHITECT, ENGINEER, OR TESTING AGENCY.
4. COORDINATE ALL JOINT SPACING, LAYOUT, FILLER AND SEALANTS.
5. COORDINATE WITH ARCHITECTURAL ANY FINISH SURFACES THAT REQUIRE MOCK-UPS AND ACCEPTANCE PRIOR TO CONSTRUCTION.
6. COORDINATE WITH REQUIRED INSPECTORS, SPECIAL INSPECTORS, AND STRUCTURAL OBSERVERS FOR FIELD QUALITY CONTROL ITEMS AND SCHEDULE NOTIFICATIONS IN A TIMELY FASHION.

G. DEFINITIONS:
1. PERFORMANCE DESIGN - A SET OF INSTRUCTIONS THAT OUTLINES THE FUNCTIONAL REQUIREMENTS FOR HARDENED CONCRETE DEPENDING ON THE APPLICATION. PERFORMANCE DESIGN DOES NOT INCLUDE REQUIREMENTS FOR MEANS AND METHODS AND DOES NOT PROVIDE LIMITATIONS ON THE INGREDIENTS OR PROPORTIONS OF THE CONCRETE MIXTURE. SUBMITTALS FOR PERFORMANCE DESIGN WOULD NOT BE A DETAILS LIST OF MIXTURE INGREDIENTS BUT RATHER A CERTIFICATION THAT THE MIX WILL MEET THE SPECIFICATION REQUIREMENTS, INCLUDING PRE-QUALIFICATION TEST RESULTS.
2. DURABILITY DESIGN - DURABILITY IS THE ABILITY OF CONCRETE TO RESIST WEATHERING ACTION, CHEMICAL ATTACK, AND ABRASION WHILE MAINTAINING IT'S DESIRED ENGINEERING PROPERTIES.
3. STRENGTH DESIGN- MAXIMUM ULTIMATE COMPRESSIVE STRENGTH OF THE CONCRETE NEEDED TO RESIST THE CALCULATED DESIGN LOADS. ANY ADDITIONAL STRENGTH THAT MAY BE PRESENT DUE TO STEEL REINFORCING IS NOT PERMITTED TO BE INCLUDED IN THE CONCRETE STRENGTH DESIGN.

**WOOD:**

A. REFERENCE STANDARDS AND GOVERNING AGENCIES:
1. NDS FOR WOOD CONSTRUCTION
2. APA PANEL DESIGN SPECIFICATION
3. AWPA U1 - USE CATEGORY SYSTEM: USER SPECIFICATION FOR TREATED WOOD
4. TPI 1 NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION
5. WWPA - WESTERN WOOD PRODUCTS ASSOCIATION

B. DEFERRED SUBMITTALS:
1. ENGINEERED WOOD PRODUCTS:
   a. ANY ALTERNATE PROPRIETARY FRAMING SYSTEM(S) SHALL BE OF THE SAME DEPTH AND LOAD CARRYING CAPACITY AS THE TRUS-JOIST SYSTEM(S) SHOWN ON THE DRAWINGS. ICC REPORTS FOR THE ALTERNATE PROPRIETARY FRAMING SYSTEM(S) SHALL BE SUBMITTED SHOWING TESTING APPROVAL AND MATERIAL STRENGTH EQUIVALENCY.
   b. ALL SUBMITTED ENGINEERED WOOD PRODUCTS CALCULATIONS SHALL BE STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF IDAHO.
2. FABRICATED WOOD TRUSSES:
   a. ALL ROOF TRUSSES SHALL BE DESIGNED, STAMPED, AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF IDAHO.
   b. TRUSS MANUFACTURER SHALL PROVIDE PROOF OF APPROVED THIRD PARTY INSPECTION AS REQUIRED BY THE 2018 IBC, SECTION 1704.2.5.
   c. SUBMIT SHOP DRAWINGS OF PRE MANUFACTURED WOOD TRUSS LAYOUT FOR REVIEW BY THE ENGINEER PRIOR TO FABRICATION. TRUSS DESIGN DRAWINGS AND CALCULATIONS SHALL CONFORM TO THE REQUIREMENTS FROM SECTION 2303.4 OF THE IBC.

C. CARPENTRY
1. WOOD FRAMING MEMBERS SHALL HAVE THE FOLLOWING GRADES, OR BETTER, UNLESS NOTED OTHERWISE (U.N.O.):
   a. BLOCKING: DOUGLAS FIR LARCH NO. 2, OR BETTER
   b. BRIDGING: DOUGLAS FIR LARCH NO. 2, OR BETTER
   c. STUD FRAMING: DOUGLAS FIR LARCH NO. 2, OR BETTER
   d. BEAMS/HEADERS/JOISTS: DOUGLAS FIR LARCH NO. 2, OR BETTER
   e. POSTS/BUILT-UP COLUMNS: DOUGLAS FIR LARCH NO. 2, OR BETTER
   f. TOP AND BOTTOM PLATES: DOUGLAS FIR LARCH NO. 2, OR BETTER
2. MAXIMUM MOISTURE CONTENT OF ALL LUMBER AT THE TIME OF CLOSURE SHALL BE 19%.
3. SPLICING OF WOOD MEMBERS, UNLESS SHOWN ON THE DRAWINGS, IS PROHIBITED WITHOUT WRITTEN APPROVAL OF THE PROJECT ENGINEER.
4. HOLES MAY BE DRILLED IN JOIST/BEAM IF SPECIFICALLY INDICATED ON THESE DRAWINGS. ANY OTHER HOLES OR NOTCHES ARE NOT ALLOWED.
5. ALL WOOD IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED OR REDWOOD.

D. ENGINEERED OR COMPOSITE WOOD PRODUCTS
1. ALL ENGINEERED WOOD PRODUCTS SHALL BE TRUS-JOIST PRODUCTS OR APPROVED EQUAL.
2. ALL ENGINEERED WOOD PRODUCTS SHALL BE DESIGNED FOR THE LOADS SPECIFIED AND SHALL CONFORM TO THE LATEST SPECIFICATIONS.
3. ALL ENGINEERED WOOD PRODUCTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
4. SPLICING OF ENGINEERED WOOD MEMBERS, UNLESS SHOWN ON THE DRAWINGS, IS PROHIBITED WITHOUT WRITTEN APPROVAL OF THE PROJECT ENGINEER.

E. MANUFACTURED OR FABRICATED WOOD TRUSSES
1. ALL TRUSS LOADING SHALL SATISFY DEAD AND LIVE LOADS SHOWN UNDER DESIGN LOADS IN THE DESIGN CRITERIA, ABOVE.
2. MEMBER PROPERTIES: NO EXCEPTIONS OR SUBSTITUTIONS WITHOUT A WRITTEN REQUEST PRIOR TO FABRICATION.
   a. CHORDS: DOUGLAS FIR LARCH NO. 2, OR BETTER
   b. WEBS: DOUGLAS FIR LARCH NO. 2, OR BETTER, OR STUD GRADE
   c. UTILITY, CONSTRUCTION, OR #3 GRADE WOOD IS NOT ACCEPTABLE FOR ANY TRUSS MEMBER
3. EACH TRUSS SHALL BE MARKED WITH THE FOLLOWING INFORMATION:
   a. MANUFACTURER'S IDENTIFICATION
   b. DESIGN LOAD(S)
   c. TRUSS SPACING AND CONFIGURATION.
4. ALL TRUSS BLOCKING PANELS SHALL BE DESIGNED AND PROVIDED BY THE TRUSS MANUFACTURER AND CONSTRUCTED WITH APPROVED PLATES.
5. TRUSS PROFILES SHOWN ARE REPRESENTATIONS OF POSSIBLE CONFIGURATIONS OF WEB LOCATIONS, MEMBER SIZES, AND NUMBER OF PLAYS.
6. TRUSS MANUFACTURER SHALL VERIFY ALL TRUSS DIMENSIONS, ACCOUNTING FOR TOLERANCES, CONNECTIONS AND SPLICE REQUIREMENTS.
7. TRUSS ORIENTATION DIRECTLY IMPACTS THE STRUCTURAL INTEGRITY OF THE FOUNDATION, AND WALL SYSTEM DESIGNS. ANY MODIFICATIONS TO THE TRUSS ORIENTATION MUST BE MADE IN WRITING AND SUBMITTED TO THE CONTRACTOR, AND ENGINEER PRIOR TO THE CONSTRUCTION OF THE ABOVE SYSTEMS.
8. THE TRUSS MANUFACTURER IS RESPONSIBLE FOR COORDINATION BETWEEN STRUCTURAL, ARCHITECTURAL, AND MECHANICAL LAYOUT REQUIREMENTS PRIOR TO FABRICATION.

F. PANEL SHEATHING:
1. STRUCTURAL WOOD SHEATHING AS SPECIFIED ON THESE DRAWINGS AT ROOF/FLOOR DIAPHRAGMS, SHEAR WALLS, AND BUILT-UP BLOCKING LOCATIONS SHALL BE STAMPED WITH THE SPECIFIED APA RATING.
2. STRUCTURAL WOOD SHEATHING MAY BE EITHER PLYWOOD OR ORIENTED STRAND BOARD (OSB) AS LONG AS THE PANEL MEETS OR EXCEEDS THE CRITERIA LISTED BELOW.
3. ROOF SHEATHING SHALL BE, U.N.O.:
   a. THICKNESS: PER PLAN
   b. SPAN RATING: PER PLAN
   c. GRADE: PER PLAN
   d. NAILING: PER PLAN
   e. PLY CLIPS AT ALL UNSUPPORTED EDGES
   f. MAXIMUM DISTANCE BETWEEN SUPPORT MEMBERS: 24"

G. ACCESSORIES AND FASTENERS:
1. ALL WOOD CONNECTORS SHALL BE SIMPSON STRONG-TIE OR APPROVED EQUAL AND INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
   a. POST TO CONCRETE CONNECTIONS SHALL BE SIMPSON 'AB' POST BASES, U.N.O.
   b. POST TO BEAM CONNECTIONS SHALL BE SIMPSON 'LPCZ' POST CAPS, U.N.O.
   c. SAWN LUMBER JOIST HANGERS SHALL BE SIMPSON 'LU' HANGERS, U.N.O.
   d. I-JOIST HANGERS SHALL BE SIMPSON 'ITS' HANGERS, U.N.O.
2. NAILING SHALL BE IN ACCORDANCE WITH THE 2018 IBC TABLE 2304.10.1, UNLESS NOTED OTHERWISE.
3. NAILS SHALL BE COMMON WIRE NAILS (EXCEPT 16d NAILS MAY BE BOX WIRE NAILS).
4. METAL FINISH MATERIAL:
   a. HIGH HUMIDITY AND PRESERVATIVE TREATED WOOD LOCATIONS: HOT DIPPED GALVANIZED STEEL PER ASTM A 153.
   b. INTERIOR AND DRY LOCATIONS: STANDARD PAINTED OR ZINC GALVANIZED COATING.

H. DEFINITIONS:
1. APA RATED SHEATHING: A COMMON TRADE NAME THAT APPLIES TO A GRADE OR PANEL FOR USE AS SUBFLOORING, WALL SHEATHING, AND ROOF SHEATHING. PANELS ARE MADE WITH RESIN ADHESIVES THAT PROVIDE A MOISTURE RESISTANT BOND AND ARE DESIGNATED AS: EXPOSURE 1. PANELS CAN BE MANUFACTURED AS EITHER: PLYWOOD OR OSB.
2. APA STRUCTURAL 1 RATED SHEATHING: A SPECIAL SHEATHING GRADE DESIGNED FOR USE WHERE SHEAR AND/OR CROSS PANEL STRENGTH PROPERTIES ARE OF MAXIMUM IMPORTANCE. PANELS ARE MADE WITH RESIN ADHESIVES THAT PROVIDE A MOISTURE RESISTANT BOND AND ARE DESIGNATED AS: EXPOSURE 1. PANELS CAN BE MANUFACTURED AS EITHER: PLYWOOD OR OSB.

**MASONRY:**

A. REFERENCE STANDARDS:
1. ACI 530 - SPECIFICATION FOR MASONRY STRUCTURES

B. DEFERRED SUBMITTALS:
1. SUPPLY PRODUCT DATA FOR PROPRIETARY MATERIALS AND ITEMS INCLUDING REINFORCEMENT AND FORMING ACCESSORIES, ADMIXTURES, PATCHING COMPOUNDS, JOINT SYSTEMS, CURING COMPOUNDS AND OTHERS.
2. SHOP DRAWINGS FOR TYPICAL MASONRY WALL REINFORCEMENT DETAILING, FABRICATING, BENDING, AND PLACING SHALL COMPLY WITH THE LATEST EDITION OF THE ACI 315, MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES.
3. SHOP DRAWINGS FOR MASONRY WALL OPENING AND CORNER BAR SCHEDULES, STIRRUP SPACING, BENT BAR DIAGRAMS, AND ARRANGEMENT OF MASONRY REINFORCEMENT SHALL BE SHOWN.

C. MORTAR AND GROUT:
1. WALLS SHALL BE:
   a. PARTIAL GROUTED - GROUT ALL REINFORCED CELLS
2. MORTAR:
   a. ASTM C270 FOR JOB MIXED MORTAR
   b. TYPE S, COMPRESSIVE STRENGTH = 2000 PSI
3. GROUT:
   a. ASTM C476, 28-DAY COMPRESSIVE STRENGTH = 2000 PSI
   b. MAXIMUM GROUT LIFT WITHOUT CLEANOUTS: 60"
4. GROUT SHALL BE A WORKABLE MIXTURE SUITABLE FOR PUMPING WITHOUT SEGREGATION AND SHALL BE THOROUGHLY MIXED.
5. GROUT SHALL BE CONSOLIDATED BY PUDDLING OR MECHANICAL VIBRATION DURING PLACING AND SHALL BE RECONSOLIDATED AFTER EXCESS MOISTURE HAS BEEN ABSORBED, BUT BEFORE WORKABILITY IS LOST.
6. GROUTING OF ANY WALL SHALL BE COMPLETED IN ONE DAY WITH NO INTERRUPTIONS OF MORE THAN ONE HOUR.

D. REINFORCEMENT AND ANCHORAGE:
1. WALL REINFORCEMENT:
   a. ASTM A615, DEFORMED, GRADE 60.
   b. Frs = 32,000 PSI
   c. MINIMUM REINFORCEMENT LAP = 48 BAR DIAMETERS, U.N.O.
2. ALL REINFORCING SHALL BE PLACED PRIOR TO GROUTING.
3. VERTICAL BARS SHALL BE HELD IN POSITION AT THEIR TOP AND BOTTOM AND AT INTERVALS OF NOT MORE THAN 200 BAR DIAMETERS.
   a. NO "STABBING - IN" OF REINFORCING IS PERMITTED AFTER GROUT HAS BEEN PLACED.
4. TYPICAL VERTICAL REINFORCEMENT, U.N.O
   a. 8 INCH CMU WALLS:
      " (1) #5 @ 32" - FULL HEIGHT AT ALL WALLS, UNO
      " (2) #5 @ EACH END OF EACH WALL
      " (2) #5 @ EACH SIDE OF EACH WALL OPENING JAMB (CONT. FROM FOOTING TO TOP OF WALL. LAP WALL REINFORCING WITH FOOTING DOWEL AS REQUIRED) U.N.O.
5. TYPICAL HORIZONTAL REINFORCEMENT, U.N.O
   a. 8 INCH CMU WALLS:
      " (1) #5 @ 48" O.C. - MAXIMUM, UNO
      " (2) #5 @ ROOF DIAPHRAGM LEVEL (OR TOP COURSE)
      " (1) #5 TOP & BOTTOM @ EA WALL OPENING (EXTEND REINFORCING 24 BEYOND EACH SIDE OF OPENING, U.N.O.)
      " PROVIDE (1) #5 HORIZONTAL CORNER BAR AT ALL WALL CORNERS AT ALL BOND BEAM LEVELS. LAP CORNER BARS WITH TYPICAL HORIZONTAL REINFORCEMENT, AND DEVELOP 48 BAR DIAMETERS IN BOTH DIRECTIONS FROM CORNER.

E. CONCRETE MASONRY UNITS (CMU):
1. ASTM C90
2. WALL COMPRESSIVE STRENGTH: (f'm)=1500 PSI
3. UNIT COMPRESSIVE STRENGTH = 1900 PSI
4. WEIGHT CLASSIFICATION: MEDIUM WEIGHT
5. PROVIDE GRADE N, TYPE 1, MOISTURE CONTROLLED UNITS
   a. 8" NOMINAL (15"x8"x8")
      " 7 5/8" ACTUAL (15 5/8"x7 5/8"x7 5/8")
6. LAYING CMU WALLS:
   a. BOND PATTERN: ONE-HALF RUNNING BOND
   b. LAY WALLS WITH 3/8 INCH JOINTS
   c. TOOL JOINTS SLIGHTLY CONCAVE

F. COORDINATION:
1. COORDINATE COURSING PATTERNS AND TOOLED JOINTS WITH ARCHITECTURAL.
2. COORDINATE LOCATIONS OF CONTROL JOINTS WITH OPENINGS, WALL CORNERS, AND ARCHITECTURAL.
3. COORDINATE MASONRY REINFORCEMENT LAPS WITH FOUNDATION REINFORCEMENT.
4. COORDINATE MASONRY REINFORCEMENT ANCHORAGE WITH FLOOR/ROOF ANCHORAGE.
5. COORDINATE ANY AND ALL MOCK-UP PANELS REQUIRED PER ARCHITECTURAL.

H. DEFINITIONS:
1. VENEER - RELATIVELY THIN MASONRY THAT IS EITHER ADHERED OR ANCHORED TO THE MAIN STRUCTURAL WALL SYSTEM. VENEER IS PART OF THE WALL FINISH SYSTEM BUT IS NOT CONSIDERED TO ADD LOAD RESISTING CAPACITY TO THE STRUCTURAL WALL.

**STEEL:**

A. REFERENCE STANDARDS:
1. ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE AISC MANUAL AND SPECIFICATIONS.
2. ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE.SPLICING OF STEEL MEMBERS, UNLESS SHOWN ON THE DRAWINGS, IS PROHIBITED WITHOUT WRITTEN APPROVAL OF THE ENGINEER.

B. DEFERRED SUBMITTALS:
1. SUBMIT SHOP DRAWINGS OF STRUCTURAL STEEL LAYOUT FOR REVIEW BY THE EN

**SPECIAL INSPECTION PROGRAM:**

A. THE OWNER SHALL EMPLOY AN APPROVED AGENCY FOR SPECIAL INSPECTION SERVICES TO PERFORM SPECIAL INSPECTIONS IN ACCORDANCE WITH CHAPTER 17 OF THE IBC.
B. AN APPROVED AGENCY SHALL BE AN ESTABLISHED AND RECOGNIZED AGENCY REGULARLY ENGAGED IN CONDUCTING TESTS OR FURNISHING INSPECTION SERVICES.
C. A SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL SHOW COMPETENCE TO THE SATISFACTION OF THE BUILDING OFFICIAL FOR THE INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION. A SPECIAL INSPECTOR SHALL ALSO DEMONSTRATE A THOROUGH WORKING KNOWLEDGE OF CHAPTER 17 OF THE IBC AS SUMMARIZED BELOW. IF THERE IS ANY OMISSION ON THE SUMMARIZED LIST BELOW, SUCH OMISSION SHALL NOT BE CONSTRUED TO MEAN THAT THE SPECIAL INSPECTOR IS NOT REQUIRED TO INSPECT EVERYTHING THAT IS NECESSARY TO MEET THE MINIMUM REQUIREMENTS OF THE IBC.
D. SPECIAL INSPECTORS SHALL KEEP RECORDS OF INSPECTIONS. THE SPECIAL INSPECTOR SHALL SUBMIT INSPECTION REPORTS TO THE BUILDING OFFICIAL AND THE ENGINEER FOR REVIEW IN A TIMELY FASHION.
E. SPECIAL INSPECTION REPORTS SHALL INDICATE THAT WORK INSPECTED WAS DONE IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THE DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE BUILDING OFFICIAL AND THE ENGINEER.

**SPECIAL INSPECTION:**

A. SPECIAL INSPECTION AS HEREIN REQUIRED OF THE FOLLOWING MATERIALS, INSTALLATION, FABRICATION, ERECTION OR PLACEMENT OF COMPONENTS AND CONNECTIONS REQUIRING SPECIAL EXPERTISE TO ENSURE COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS AND REFERENCED STANDARDS.
B. STRUCTURAL OBSERVATION OF THE STRUCTURAL SYSTEM BY THE ENGINEER OF RECORD DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR THE SPECIAL INSPECTION REQUIRED BY SECTION 110, 1704, 1705, OR OTHER SECTIONS OF THE INTERNATIONAL BUILDING CODE.
C. THE SPECIAL INSPECTION STATEMENT ON THIS SHEET LISTS THE ITEMS THAT REQUIRE SPECIAL INSPECTION AND VERIFICATION, THE CODE SECTION-REFERENCE FOR ADDITIONAL INFORMATION, AND THE REQUIRED FREQUENCY OF INSPECTION.

**STRUCTURAL OBSERVATIONS:**

A. STRUCTURAL OBSERVATION IS THE VISUAL OBSERVATION OF THE STRUCTURAL SYSTEMS BY A REGISTERED DESIGN PROFESSIONAL FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS.
B. THE STRUCTURAL OBSERVER SHALL BE EITHER THE ENGINEER OF RECORD OR A REGISTERED DESIGN PROFESSIONAL APPROVED BY THE ENGINEER OF RECORD.
C. THE REGISTERED DESIGN PROFESSIONAL RESPONSIBLE FOR STRUCTURAL OBSERVATION, THE CONTRACTOR, AND APPROPRIATE SUBCONTRACTORS SHALL HOLD A PRE-CONSTRUCTION MEETING TO REVIEW THE DETAILS OF THE STRUCTURAL SYSTEMS TO BE STRUCTURALLY OBSERVED.
D. THE REGISTERED DESIGN PROFESSIONAL RESPONSIBLE FOR STRUCTURAL OBSERVATION SHALL SUBMIT SEPARATE WRITTEN OBSERVATION REPORTS FOR EACH REQUIRED SIGNIFICANT CONSTRUCTION STAGE TO BE OBSERVED. THIS WRITTEN REPORT, INCLUDING ANY OBSERVED DEFICIENCIES, SHALL BE SUBMITTED TO THE ENGINEER OF RECORD, THE OWNER'S REPRESENTATIVE, THE CONTRACTOR, AND THE BUILDING OFFICIAL.

## SPECIAL INSPECTION STATEMENT:

A. TO BE USED IN CONJUNCTION WITH CHAPTER 17 OF THE 2018 IBC

### S.I. TABLE 1

| INSPECTION OF FABRICATORS: SECTION 1704.2.5 | |
|---|---|
| REQUIRED VERIFICATION & INSPECTION | FREQUENCY |
| 1. WHERE FABRICATION OF STRUCTURAL LOAD-BEARING MEMBERS AND ASSEMBLIES IS BEING PERFORMED ON THE PREMISES OF A FABRICATOR'S SHOP, UNLESS THE FABRICATOR IS REGISTERED AND APPROVED TO PERFORM WITH SPECIAL INSPECTION. | ONE TIME |

### S.I. TABLE 5

| MASONRY - LEVEL 1: SECTION 1705.4 AND TMS 402 & TMS 602 | | | |
|---|---|---|---|
| REQUIRED VERIFICATION & INSPECTION | | | FREQUENCY |
| 1. | COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS SHALL BE VERIFIED | | PERIODIC |
| 2. | VERIFICATION OF f'm AND f'AAC PRIOR TO CONSTRUCTION EXCEPT WHERE SPECIFICALLY EXEMPTED BY THE 2018 IBC. | | PERIODIC |
| 3. | VERIFICATION OF SLUMP FLOW AND VSI AS DELIVERED TO THE SITE FOR SELF-CONSOLIDATING GROUT | | CONTINUOUS |
| 4. | AS MASONRY CONSTRUCTION BEGINS, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE: | | |
| | a. | PROPORTIONS OF SITE-PREPARED MORTAR | PERIODIC |
| | b. | CONSTRUCTION OF MORTAR JOINTS | PERIODIC |
| 5. | THE INSPECTION PROGRAM SHALL VERIFY: | | |
| | a. | SIZE AND LOCATION OF STRUCTURAL ELEMENTS | PERIODIC |
| | b. | TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION | PERIODIC |
| | c. | SPECIFIED SIZE, GRADE AND TYPE OF REINFORCEMENT | PERIODIC |
| | d. | WELDING OF REINFORCING BARS | CONTINUOUS |
| | e. | PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40° F) OR HOT WEATHER (TEMPERATURE ABOVE 90°F) | PERIODIC |
| 6. | PRIOR TO GROUTING, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE: | | |
| | a. | GROUT SPACE IS CLEAN | PERIODIC |
| | b. | PLACEMENT OF REINFORCEMENT AND CONNECTORS AND PRE-STRESSING TENDONS AND ANCHORAGES | PERIODIC |
| | c. | PROPORTIONS OF SITE-PREPARED GROUT AND PRE-STRESSING GROUT FOR BONDED TENDONS | PERIODIC |
| | d. | CONSTRUCTION OF MORTAR JOINTS | PERIODIC |
| 7 | GROUT PLACEMENT SHALL BE VERIFIED TO ENSURE COMPLIANCE WITH CODE AND CONSTRUCTION DOCUMENT PROVISIONS | | CONTINUOUS |
| 8. | PREPARATION OF ANY REQUIRED GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS SHALL BE OBSERVED | | PERIODIC |

### S.I. TABLE 6

| MASONRY - LEVEL 2: SECTION 1705.4 AND TMS 402 & TMS 602 | | | |
|---|---|---|---|
| REQUIRED VERIFICATION & INSPECTION | | | FREQUENCY |
| 1. | COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS SHALL BE VERIFIED | | PERIODIC |
| 2. | VERIFICATION OF f'm AND f'AAC PRIOR TO CONSTRUCTION AND FOR EVERY 5,000 SQUARE FEET DURING CONSTRUCTION. | | PERIODIC |
| 3. | VERIFICATION OF PROPORTIONS OF MATERIALS IN PREMIXED OR PREBLENDED MORTAR AND GROUT AS DELIVERED TO THE SITE. | | PERIODIC |
| 4. | VERIFICATION OF SLUMP FLOW AND VSI AS DELIVERED TO THE SITE FOR SELF-CONSOLIDATING GROUT. | | CONTINUOUS |
| 5. | THE INSPECTION PROGRAM SHALL VERIFY: | | |
| | | PLACEMENT OF MASONRY UNITS AND CONSTRUCTION OF MORTAR JOINTS | PERIODIC |
| | b. | PLACEMENT OF REINFORCEMENT, CONNECTORS AND ANCHORAGES | PERIODIC |
| | c. | GROUT SPACE PRIOR TO GROUTING | CONTINUOUS |
| | d. | PLACEMENT OF GROUT | CONTINUOUS |
| | e. | SIZE AND LOCATION OF STRUCTURAL ELEMENTS | |
| | f. | TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION | PERIODIC<br>CONTINUOUS |
| | g. | SPECIFIED SIZE, GRADE AND TYPE OF REINFORCEMENT, ANCHOR BOLTS AND ANCHORAGES | PERIODIC |
| | h. | WELDING OF REINFORCING BARS | CONTINUOUS |
| | i. | PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40° F) OR HOT WEATHER (TEMPERATURE ABOVE 90°F) | PERIODIC |
| 6. | PREPARATION OF ANY REQUIRED GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS SHALL BE OBSERVED | | CONTINUOUS |

### S.I. TABLE 7

| STRUCTURAL STEEL CONSTRUCTION: SECTION 1705.2 | | | | |
|---|---|---|---|---|
| INSPECTION OF WELDING (AISC360)<br>TABLE C-N5.4-1 INSPECTION TASKS PRIOR TO WELDING | | | QC | QA |
| 1. | WELDER QUALIFICATION AND CONTINUITY RECORDS, | | P | O |
| 2. | WPS AVAILABLE | | P | P |
| 3. | MANUFACTURER CERTIFICATION FOR WELDING CONSUMABLES | | P | P |
| 4 | MATERIAL IDENTIFICATION (TYPE/GRADE) | | O | O |
| 5. | WELDER IDENTIFICATION SYSTEM | | O | O |
| 6. | FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY) | | O | O |
| | a. | JOINT PREPARATION | | |
| | b. | DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) | | |
| | c. | CLEANLINESS (CONDITION OF STEEL SURFACES) | | |
| | d. | TACKING (TACK WELD QUALITY AND LOCATION) | | |
| | e. | BACKING TYPE AND FIT (IF APPLICABLE) | | |
| 7. | FIT-UP OF CJP GROOVE WELDS OF HSS T-, Y- AND K-JOINTS WITHOUT BACKING (INCLUDING JOINT GEOMETRY) | | P | O |
| | a. | JOINT PREPARATION | | |
| | b. | DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) | | |
| | c. | CLEANLINESS (CONDITION OF STEEL SURFACES) | | |
| | d. | TACKING (TACK WELD QUALITY AND LOCATION) | | |
| 8. | CONFIGURATION AND FINISH OF ACCESSHOLES | | O | O |
| 9. | FIT-UP FOR FILLET WELDS | | O | O |
| | a. | DIMENSIONS (ALIGNMENT, GAPS AT ROOT) | | |
| | b. | CLEANLINESS (CONDITION OF STEEL SURFACES) | | |
| | | TACKING (TACK WELD QUALITY AND LOCATION) | | |
| 9. | CHECK WELDING EQUIPMENT | | P | O |
| TABLE C-N5.4-2 INSPECTION TASKS DURING WELDING (AISC 360) | | | | |
| 1. | USE OF QUALIFIED WELDERS | | O | O |
| 2. | CONTROL AND HANDLING OF WELDING CONSUMABLES | | O | O |
| | a. | PACKAGING | | |
| | b. | EXPOSURE CONTROL | | |
| 3. | NO WELDING OVER CRACKED TACK WELDS | | O | O |
| 4. | ENVIRONMENTAL CONDITIONS | | O | O |
| | a. | WIND SPEED WITHIN LIMITS | | |
| | b. | PRECIPITATION AND TEMPERATURE | | |
| 5. | WPS FOLLOWED | | O | O |
| | a. | SETTING ON WELDING EQUIPMENT | | |
| | b. | TRAVEL SPEED | | |
| | c. | SELECTED WELDING MATERIALS | | |
| | d. | SHIELDING GAS TYPE/FLOW RATE | | |
| | e. | PREHEAT APPLIED | | |
| | f. | INTERPASS TEMPERATURE MAINTAINED (MIN/MAX) | | |
| | g. | PROPER POSITION (F, V, H, OH) | | |
| 6. | WELDING TECHNIQUES | | O | O |
| | a. | INTERPASS AND FINAL CLEANING | | |
| | b. | EACH PASS WITHIN PROFILE LIMITATIONS | | |
| | c. | EACH PASS MEETS QUALITY REQUIREMENTS | | |
| TABLE C-N5.4-3 INSPECTION TASKS AFTER WELDING (AISC 360) | | | | |
| 1. | WELDS CLEANED | | O | O |
| 2. | SIZE, LENGTH AND LOCATION OF WELDS | | P | P |
| 3. | WELDS MEET VISUAL ACCEPTANCE CRITERIA | | P | P |
| | a. | CRACK PROHIBITION | | |
| | b. | WELD/BASE-METAL FUSION | | |
| | c. | CRATER CROSS SECTION | | |
| | d. | WELD PROFILES | | |
| | e. | WELD SIZE | | |
| | f. | UNDERCUT | | |
| | g. | POROSITY | | |
| 4. | ARC STRIKES | | P | P |
| 5. | K-AREA | | P | P |
| 6. | BACKING REMOVED AND WELD TABS REMOVED IF REQUIRED | | P | P |
| 7. | REPAIR ACTIVITIES | | P | P |
| 8. | DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT MEMBER | | P | P |
| INSPECTION OF BOLTING (AISC360)<br>TABLE C-N5.6-1 INSPECTION TASKS PRIOR TO BOLTING | | | | |
| 1. | MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS | | O | P |
| 2. | FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS | | O | O |
| 3. | PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS TO BE EXCLUDED FROM SHEAR PLANE | | O | O |
| 4. | PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL | | O | O |
| 5. | CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FLAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS | | O | O |
| 6. | PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED | | P | O |
| 7. | PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS | | O | O |
| TABLE C-N5.6-2 INSPECTION TASKS DURING BOLTING (AISC 360) | | | | |
| 1. | FASTENER ASSEMBLIES OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED | | O | O |
| 2. | JOINT BROUGHT TO SNUG TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION | | O | O |
| 3. | FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING | | O | O |
| 4. | FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH A METHOD APPROVED BY RSCE AND PROGRESSING SYSTEMATICALLY FROM MOST RIGID POINT TOWARD FREE EDGES | | O | O |
| *RSCE 2009 | | | | |
| TABLE C-N5.6-3 INSPECTION TASKS AFTER BOLTING (AISC 360) | | | | |
| 1. | DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS | | P | P |

A A.B. ANCHOR BOLT
ADD'L ADDITIONAL
ALT ALTERNATE
APPROX APPROXIMATE
ARCH. ARCHITECT
ARCH'L ARCHITECTURAL
B
B BOTTOM
BLDG. BUILDING
BM BEAM
BOT BOTTOM
BRG. BEARING
C
C CHANNEL
CJ CONTROL JOINT
CL CENTER LINE
CLG. CEILING
CMU CONCRETE MASONRY UNITS
COM COMMON
CONC. CONCRETE
COND. CONDITION
CONN. CONNECTION
COORD. COORDINATE
D
(D) DEPTH
DET DETAIL
D.F. DOUGLAS FIR
D.F.L. DOUGLAS FIR- LARCH
DIAG DIAGONAL
DIAM DIAMETER
DIMS DIMENSION
DWG DRAWING
E
(E) EXISTING
EA. EACH
E.B. EXPANSION BOLT/ANCHOR
E.J. EXPANSION JOINT
ELEV ELEVATION
E.N. EDGE NAIL
EQ EQUAL
EQUIP EQUIPMENT
EXIST EXISTING
F
FDN FOUNDATION
FIN FINISH
FLR FLOOR
FRMG FRAMING
FTG FOOTING
FIELD VERIFY (F.V.)
G
GA GAUGE
GALV GALVANIZE
GLB GLU-LAM BEAM
GYP GYPSUM BOARD
H
H.A.S. HEADED ANCHOR STUD
H.D. HOLD DOWN
HDR HEADER
HORIZ HORIZONTAL
I
IN INCHES
L
(L) LENGTH
LB POUND
LLH LONG LEG HORIZONTAL
LLV LONG LEG VERTICAL
LVL LAMINATED VENEER LUMBER
M
MANUF MANUFACTURER
MAX MAXIMUM
MB MACHINE BOLT
MECH MECHANICAL
MIN MINIMUM
MISC MISCELLANEOUS
N
NO. NUMBER
N.T.S. NOT TO SCALE
O
O.C. ON CENTER
O.H. OPPOSITE HAND
OPNG OPENING
OPP OPPOSITE
OSB ORIENTED STRAND BOARD
OWSJ OPEN WEB STEEL JOIST
P
PEMB PRE-ENGINEERED METAL BUILDING
PERP PERPENDICULAR
PL PLATE
PLY PLYWOOD
PSL PARALLEL STRAND LUMBER
PSI POUNDS PER SQUARE INCH
P.T. PRESSURE TREATED
R
REF REFERENCE
REINF REINFORCEMENT
REQ'D REQUIRED
REV REVISION
R.S. ROUGH SAWN
RTU ROOF TOP UNIT
S
SCHED SCHEDULE
SHTG SHEATHING
SIM SIMILAR
SK SKETCH
SPECS SPECIFICATIONS
SS STAINLESS STEEL
STAG STAGGERED
STD STANDARD
STRUCT STRUCTURAL
T
T.A.S. THREADED ANCHOR STUD
T&G TONGUE AND GROOVE
T&B TOP AND BOTTOM
THRU THROUGH
TJI TRUS JOIST I-JOIST
TO TOP OF
TRANSV TRANSVERSE
TYP TYPICAL
U
UNO UNLESS OTHERWISE NOTED
V
V.I.F. VERIFY IN FIELD
VERT VERTICAL
W
(W) WIDTH
W WIDE FLANGE
WD WOOD
W.P. WORK POINT
WT WEIGHT
WWF WELDED WIRE FABRIC
WWR WELDED WIRE REINFORCEMENT


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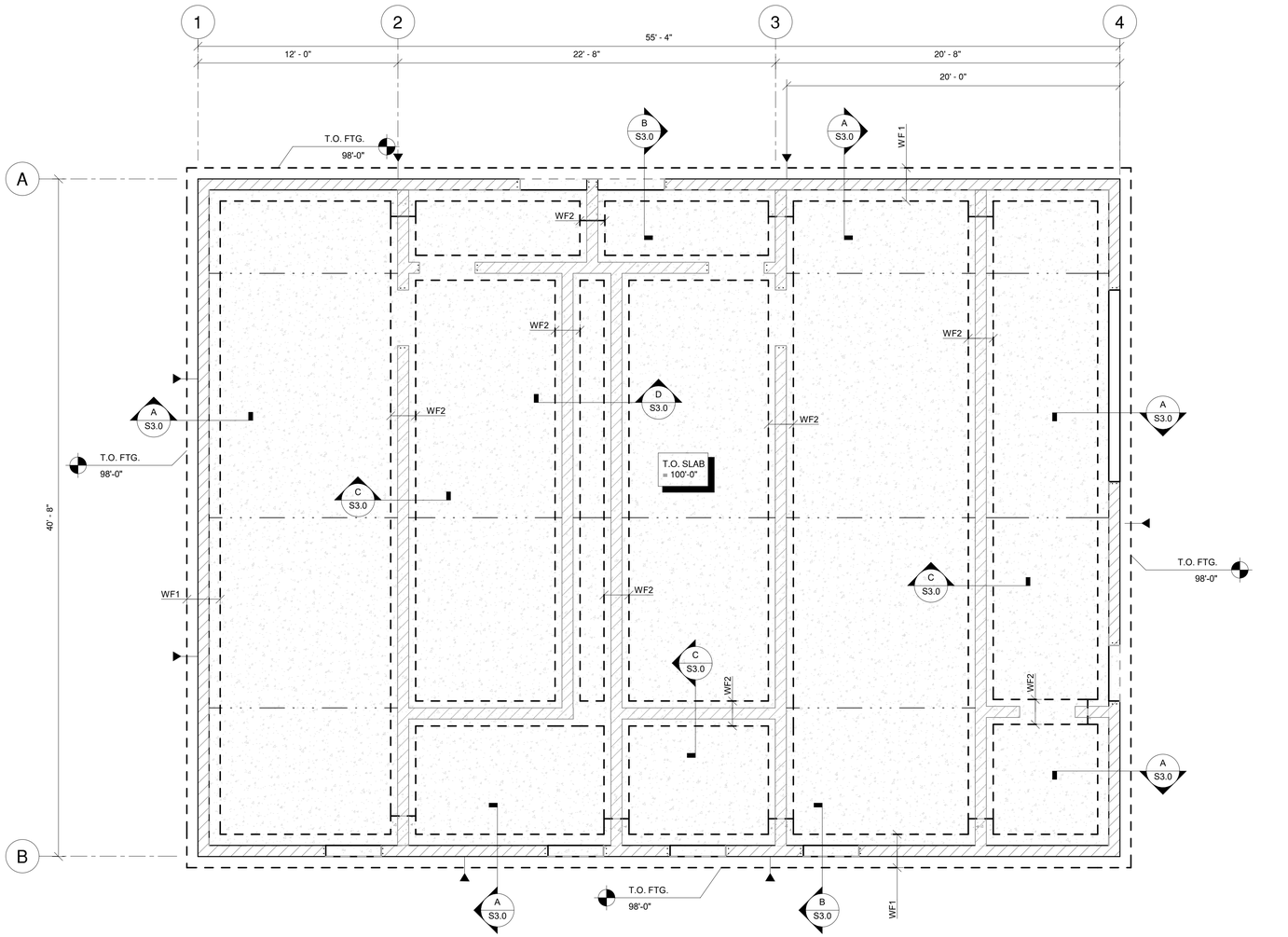
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McE PROJECT #: 1102.21

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STRUCTURAL NOTES


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1 FOUNDATION PLAN
1/4" = 1'-0"

NORTH

# FOUNDATION PLAN NOTES:

1. FOR ANY ADDITIONAL DIMENSIONS NOT SHOWN, SEE ARCH PLANS. NOTIFY THE ARCHITECT OR ENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARE FOUND.
2. FOR ANY DIMENSION DISCREPANCIES FOUND BETWEEN THE ARCH. PLANS AND THESE PLANS USE THE DIMENSIONS FROM THE ARCH. PLANS. NOTIFY THE ARCHITECT OR ENGINEER IMMEDIATELY.
3. STRUCTURAL WALLS ARE CONSIDERED TO BE ALL LOAD BEARING WALLS, SHEAR WALLS AND ANY WALL THAT REQUIRES A FOOTING.
4. CONTRACTOR TO REVIEW GEOTECH REPORT FOR SPECIAL REQUIREMENTS PRIOR TO POURING CONCRETE.
5. FOR GENERAL STRUCTURAL NOTES SEE SHEET S1.0.
6. FOR TYPICAL FOUNDATION DETAILS SEE SHEET S3.0.
8. T.O.SLAB = TOP OF CONCRETE SLAB ELEVATION
9. T.O.FTG. = TOP OF FOOTING ELEVATION
10. B.O.FTG. = BOTTOM OF FOOTING ELEVATION

# FOUNDATION PLAN LEGEND:

| | |
|---|---|
| | INDICATES 8" CMU WALL<br>REINF: #5 @ 32" O.C. VERTS<br>REINF: #5 @ 48" O.C. HORIZ., U.N.O. |
| — · · · — | INDICATES CONCRETE SLAB CONTROL JOINT. SEE 1/S3.0 |
| | INDICATES 4" CONC. SLAB ON GRADE W/ #3 @ 16" O.C. EA. WAY (OR 4x4 2.9W x 2.9W WWR) (PLACED @ MID-DEPTH OF SLAB) OVER 10 MIL VAPOR BARRIER OVER 2" CLEAN DAMP SAND OVER 4" COMPACTED 3/4" MINUS GRAVEL. |
| | INDICATES MASONRY CONTROL JOINT PER 10/S3.0. |

**WALL FOOTING SCHEDULE**

| FOOTING MARK | WIDTH (W) | DEPTH (D) | REINF. |
|---|---|---|---|
| WF1 | 2'-0" | 1'-0" | (2) #5 CONT. (L) |
| WF2 | 1'-6" | 1'-0" | (2) #5 CONT. (L) & #5 @ 16" O.C. (T) |

NOTES:
1. FOR ANY WALL FOOTING NOT MARKED, USE FOOTING TYPE WF1.
2. ALL FOOTINGS ARE CENTERED UNDER WALLS UNLESS NOTED OR DETAILED OTHERWISE.
3. (H) = HORIZONTAL BARS IN STEM WALL
   (L) = LONGITUDINAL BARS IN FOOTING
   (V) = VERTICAL BARS IN STEM WALL
   (T) = TRANSVERSE BARS IN FOOTING
4. (V) VERTICAL BARS IN STEM WALL MAY BE BENT (IN ALTERNATE DIRECTIONS) @ THE FOOTING AND USED IN LIEU OF (T) TRANSVERSE BARS - SEE DETAILS.


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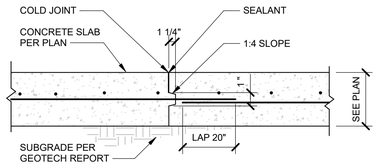
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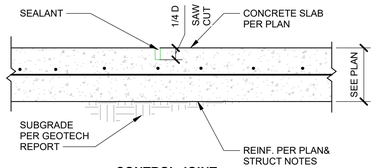
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FOUNDATION PLAN




**CONSTRUCTION JOINT**

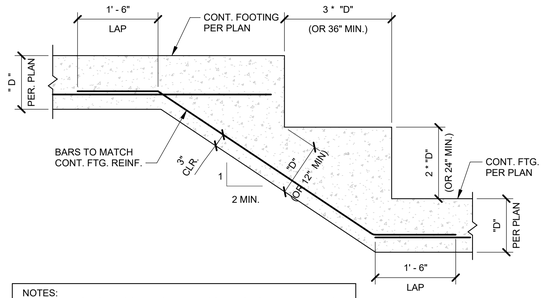
NOTES:
1. CONSTRUCTION JOINTS & CONTROL JOINTS MAY BE LOCATED INTERCHANGEABLE TO ALLOW WORKABLE SIZE CONC. PLACMENTS. COORDINATE LOCATIONS WITH ARCH. PLANS
2. SAWING SHALL OCCURE NO LATER THAN 12 HOURS AFTER CONCRETE HAS BEEN PLACED.
3. MAX SPACING IN EITHER DIRECTION FOR REINFORCED SLAB, U.N.O.
   a. 4" THICK SLAB = 12'-0" O.C.




**CONTROL JOINT**

1 S3.0 CONTROL & CONSTRUCTION JOINT

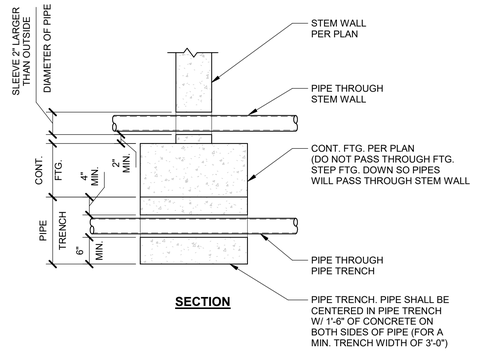
SCALE: 3/4" = 1'-0"




NOTES:
1. STEP FTG DOWN SO PIPES WILL PASS THROUGH TEM WALL AS REQ'D. SEE DET 3/S3.0
2. AT INTERSECTION BETWEEN EXTIRIOR FTG. & INTERIOR FTG. EITHER STEP FTG. UP TO INTERIOR FTG. ELEVATION OR DO NOT STEP FTG. AND COMPACT STRUCTURAL BACKFILL UNDER INTERIOR FTG. TO 95% OF THE MAX. DENSITY AS DETERMINED BY ASTM D1557 AND PROVIDE 1/2" PREMOLDED EXP. JT. BETWEEN EXTIRIOR & INTIRIOR FTGS.
3. "D" = FOOTING THICKNESS PER PLAN
4. PROVIDE DOWELS TO MATCH AND LAP VERT. WALL REINF SIZE AND SPACING.

2 S3.0 STEPPED FOOTING DETAIL

SCALE: 3/4" = 1'-0"

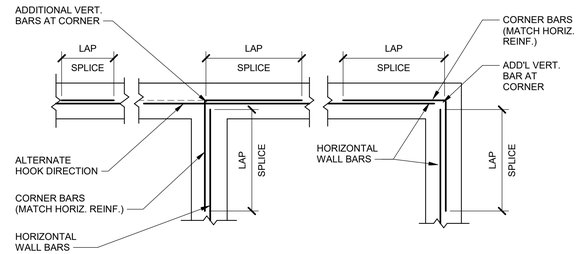



**SECTION**

NOTE:
TRENCH BELOW FOOTING SHALL BE FILLED W/ CONCRETE BEFORE POURING FOOTING

3 S3.0 PIPE TRENCH AT FOUNDATION DETAIL

SCALE: 3/4" = 1'-0"




NOTE:
LAP SPLICE LENGTH (U.N.O.)
CONCRETE WALL: 48 BAR DIA. OR 28" (MIN) WHICHEVER IS GREATER

4 S3.0 STEM WALL CORNER AND INTERSECTION REINF.

SCALE: 3/4" = 1'-0"




SINGLE MAT

9 S3.0 TYPICAL CMU WALL INTERSECTIONS

SCALE: N.T.S.




NOTE:
1. MAX SPACING OF CONTROL JOINTS IS 3x THE HEIGHT OF THE WALL BETWEEN FLOORS AND/OR ROOF LEVELS BUT NOT TO EXCEED 40'-0".
2. AT WALL CORNERS: SPACE CONTROL JOINTS AT HALF THE DISTANCE OF THE MAX SPACING.
3. AT WALL OPENINGS: SPACE CONTROL JOINTS A MIN OF 2'-0" AWAY FROM OPENING TO AVOID LINTEL STEEL.
4. PROVIDE A CONTROL JOINT AT CHANGES IN WALL HEIGHT OR THICKNESS.
5. COORDINATE JOINT LOCATIONS WITH ARCHITECT.
6. RUN BOND BEAM STEEL CONT. THRU CONTROL JOINT AT ROOF AND FLOOR DIAPHRAGMS, OTHERWISE LAP ALL HORIZONTAL BOND BEAMS WITH GREASED RODS AS SHOWN.

10 S3.0 CONCRETE MASONRY CONTROL JOINT

SCALE: N.T.S




A S3.0 EXTERIOR CMU WALL FOOTING

SCALE: 3/4" = 1'-0"




B S3.0 SECTION @ DOOR FOOTING

SCALE: 3/4" = 1'-0"




NOTE:
WHERE INTERIOR WALL FOOTING INTERSECTS W/ EXTERIOR WALL FOOTING- SEE TYPICAL DETAIL: "STEPPED FOOTING DETAIL"

C S3.0 INTERIOR CMU WALL FOOTING

SCALE: 3/4" = 1'-0"




NOTE:
WHERE INTERIOR WALL FOOTING INTERSECTS W/ EXTERIOR WALL FOOTING- SEE TYPICAL DETAIL: "STEPPED FOOTING DETAIL"

D S3.0 INTERIOR CMU CHASE WALL FOOTING

SCALE: 3/4" = 1'-0"

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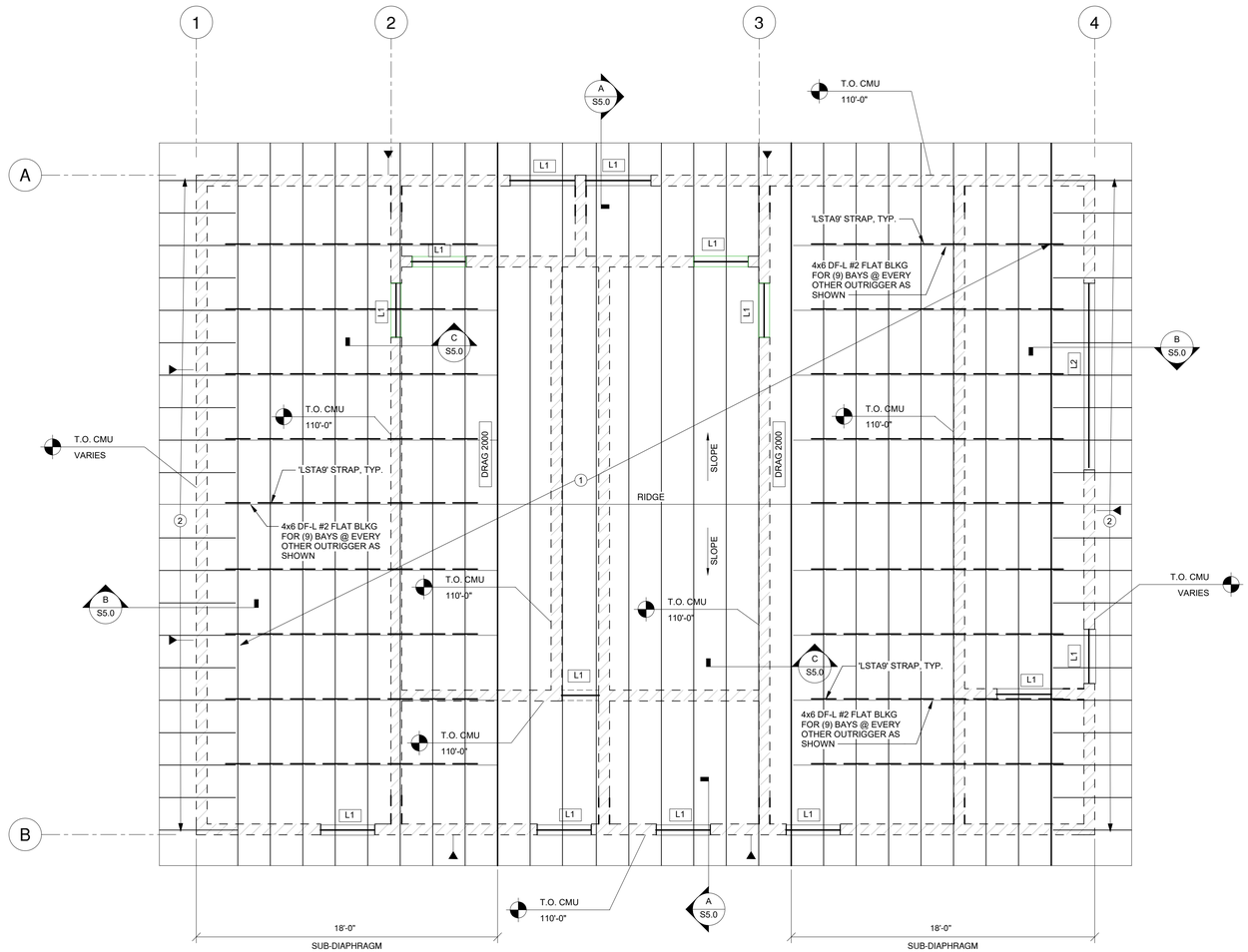
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1 ROOF FRAMING PLAN
1/4" = 1'-0"

NORTH

## ROOF FRAMING PLAN NOTES:

1. FOR ANY ADDITIONAL DIMENSIONS NOT SHOWN, SEE ARCH PLANS. NOTIFY THE ARCHITECT OR ENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARE FOUND.
2. STRUCTURAL WALLS ARE CONSIDERED TO BE ALL LOAD BEARING WALLS, SHEAR WALLS AND ANY WALL THAT REQUIRES A FOOTING.
3. FOR GENERAL STRUCTURAL NOTES SEE SHEET S1.0.
4. FOR TYPICAL FRAMING DETAILS SEE SHEET S5.0.
5. T.O. CMU = TOP OF CMU WALL ELEVATION
6. 2x FASCIA BOARD SHALL BE PROVIDED @ ALL ROOF EDGE CORNERS FOR A CONT. SPAN OF 8'-0" (MIN.) W/ (2) 1/4"Ø LAG SCREWS INTO EA. TRUSS END.
7. ROOF SHEATHING: 15/32" APA RATED SHTG W/ 10d @ 6" O.C. EDGE NAIL (EN) & 10d @ 12" O.C. FIELD NAIL (FN).
8. SUB-DIAPHRAGM ROOF SHEATHING: 15/32" APA RATED SHTG (BLOCKED) W/ 10d @ 6" O.C. EDGE NAIL (EN) & 10d @ 12" O.C. FIELD NAIL (FN). SEE DETAIL 3/S5.0.

## ROOF FRAMING PLAN LEGEND:

| | |
|---|---|
| | INDICATES 8" CMU WALL BELOW. |
| L1 | INDICATES CMU LINTEL BELOW. SEE DETAIL 1/S5.0 & 2/S5.0 |
| DRAG 2000 | INDICATES 2-PLY (MIN) DRAG TRUSS GIRDER W/ AN ADD'L AXIAL LOAD OF ± 2000 LB (WIND) |

## ROOF FRAMING PLAN KEYNOTES:

| | |
|---|---|
| 1 | INDICATES PRE-MANUFACTURED WOOD ROOF (DOUBLE PITCH) TRUSSES @ 24" O.C. |
| 2 | INDICATES 2x4 DF-L #2 OUTRIGGER @ 24" O.C. |

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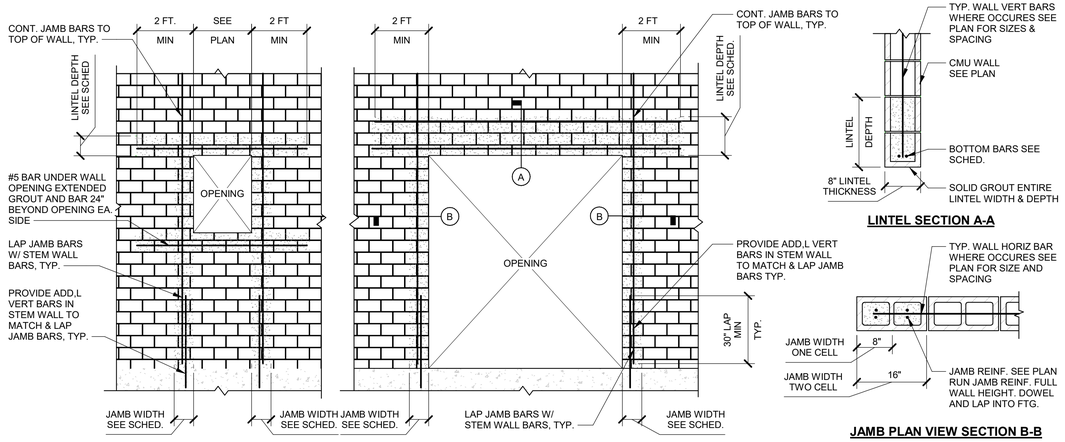
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ROOF FRAMING PLAN

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1 S5.0 CMU WALL OPENING

SCALE: N.T.S



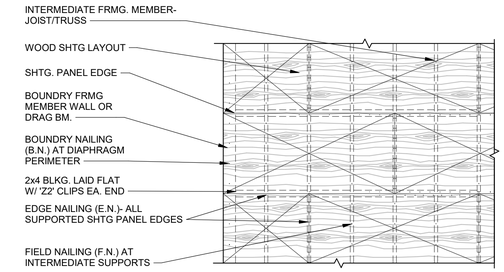

**LINTEL SECTION A-A**




**JAMB PLAN VIEW SECTION B-B**

**LINTEL SCHEDULE**

| MARK | MAX SPAN | LINTEL DEPTH | JAMB WIDTH | JAMB BARS | LINTEL BARS |
|---|---|---|---|---|---|
| L1 | 4'-0" | 16" | 8" | (2) #5 | (2) #5 BOTTOM BARS |
| L2 | 11'-0" | 16" | 16" | (2) #5 | (2) #5 T&B BOTTOM BARS |




NAILING NOTES:
1. MIN. EDGE DISTANCE FOR NAILS SHALL BE 3/8"
2. NAIL HEAD SHALL NOT BREAK OUTER PLY OF SHEATHING
3. NAILS SHALL BE COMMON WIRE TYPE.
4. PNEUMATIC DRIVEN FASTENERS MAY BE USED W/ ENGINEER APPROVAL.
5. BOUNDERY NAILING = EDGE NAILING, U.N.O.

SHEATHING NOTES:
1. SEE PLAN AND STRUCTURAL NOTES FOR SHTG THICKNESS, GRADE, AND NAILING.
2. SHTG. PANELS SHALL BE APPLIED WITH LONG DIMENSION ACROSS JOISTS/TRUSSES
3. MIN. SHTG. SHEET SIZE SHALL BE 2'-0"x4'-0"
4. WOOD SHTG MAY BE EITHER OSB OR PLYWOOD- SEE STRUCTURAL NOTES.

BLOCKED NOTES:
1. 2x4 BLOCKING @ ALL SHTG. PANEL EDGES AT "BLOCKED DIAPHRAGM" AREAS AS NOTED ON PLAN

2 S5.0 CMU LINTEL SCHEDULE

SCALE: N.T.S.

3 S5.0 BLOCKED DIAPHRAGM - ROOF FRAMING

SCALE: N.T.S.




NAILING NOTES:
1. MIN. EDGE DISTANCE FOR NAILS SHALL BE 3/8"
2. NAIL HEAD SHALL NOT BREAK OUTER PLY OF SHEATHING
3. NAILS SHALL BE COMMON WIRE TYPE.
4. PNEUMATIC DRIVEN FASTENERS MAY BE USED W/ ENGINEER APPROVAL.
5. BOUNDERY NAILING = EDGE NAILING, U.N.O.

SHEATHING NOTES:
1. SEE PLAN AND STRUCTURAL NOTES FOR SHTG THICKNESS, GRADE, AND NAILING.
2. SHTG. PANELS SHALL BE APPLIED WITH LONG DIMENSION ACROSS JOISTS/TRUSSES
3. MIN. SHTG. SHEET SIZE SHALL BE 2'-0"x4'-0"
4. WOOD SHTG MAY BE EITHER OSB OR PLYWOOD- SEE STRUCTURAL NOTES.

4 S5.0 UNBLOCKED DIAPHRAGM - ROOF FRAMING

SCALE: 3/4" = 1'-0"




A S5.0 SECTION @ CMU WALL

SCALE: 3/4" = 1'-0"




B S5.0 OUTRIGGER @ CMU WALL

SCALE: 3/4" = 1'-0"




C S5.0 SECTION @ INTERIOR CMU WALL

SCALE: 3/4" = 1'-0"


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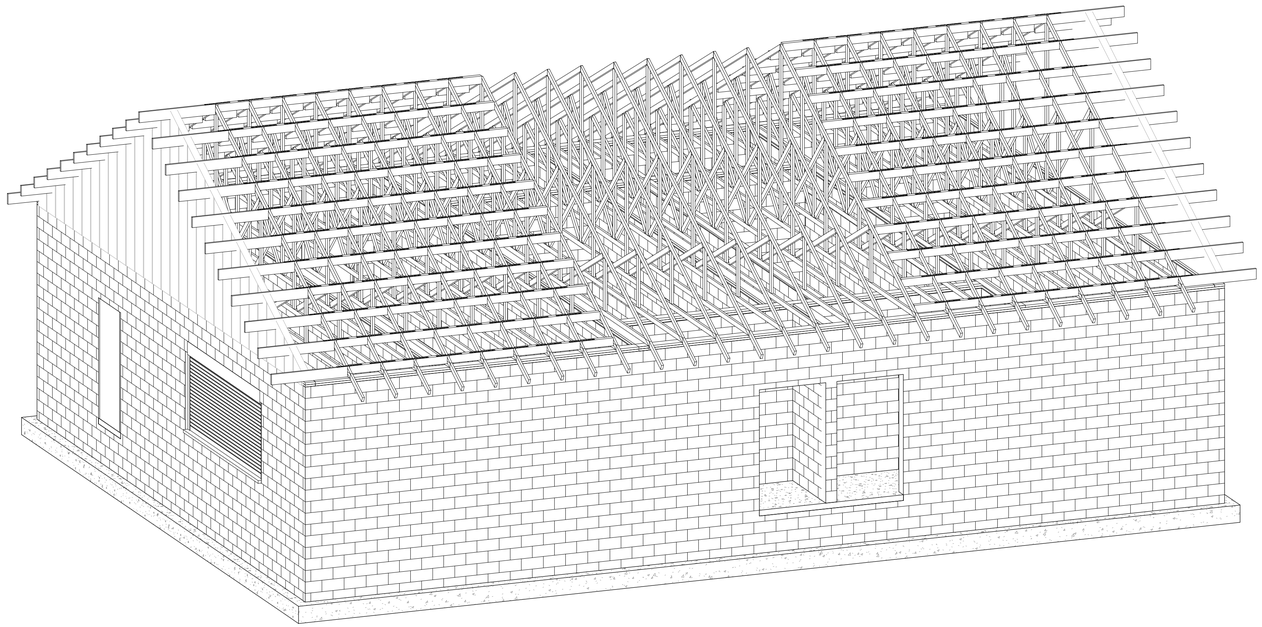
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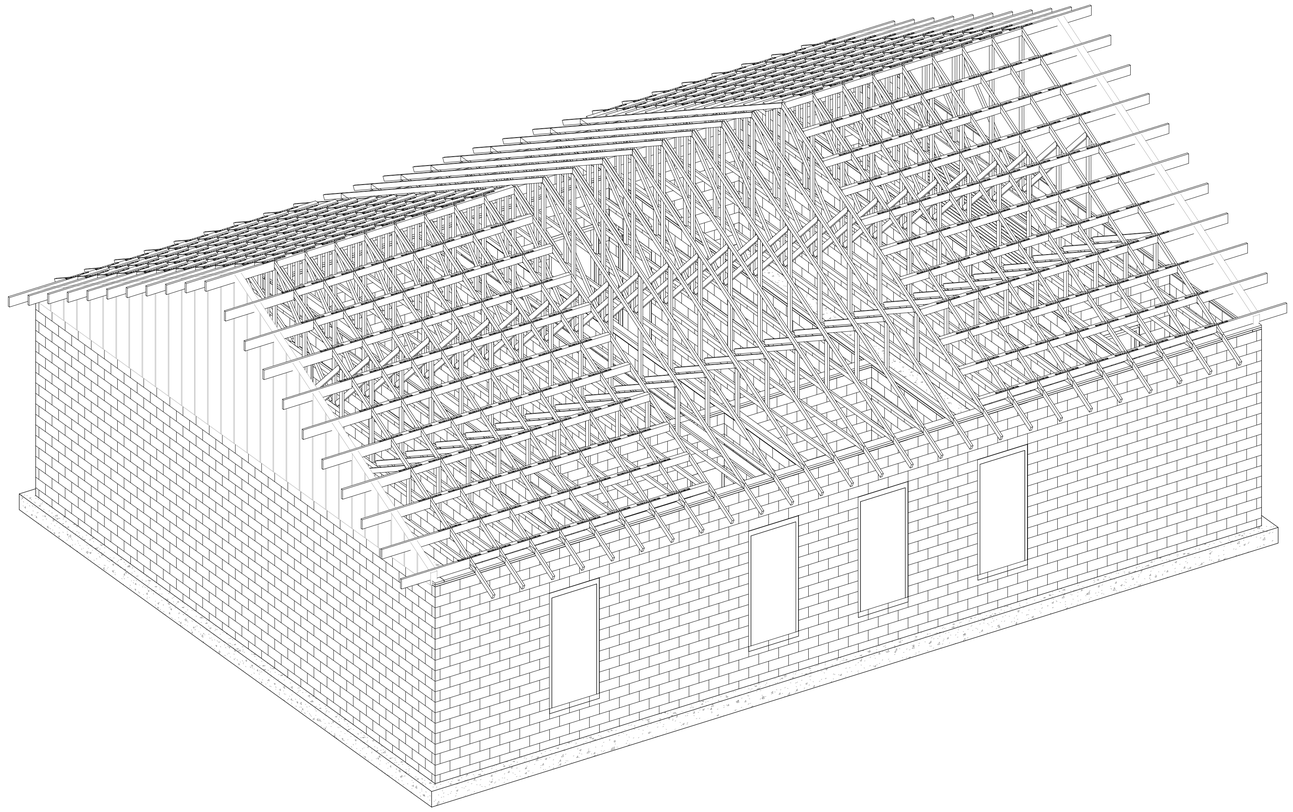
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TYPICAL FRAMING DETAILS






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3D STRUCTURAL VIEWS


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# MECHANICAL ABBREVIATIONS

| | | | |
|---|---|---|---|
| A/C or AC | AIR CONDITIONING | KW | KILOWATT |
| AFF | ABOVE FINISHED FLOOR | KWH | KILOWATT HOUR |
| AHU | AIR HANDLING UNIT | | |
| ASHRAE | AMERICIAN SOCIETY OF HEATING, REFRIGERATION, AND AIR CONDITIONING ENGINEERS | LAT | LEAVING AIR TEMPERATURE |
| | | LAV | LAVATORY |
| BTU | BRITISH THERMAL UNITS | LEED | LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN |
| BTUH | BTUS PER HOUR | LWT | LEAVING WATER TEMPERATURE |
| CA | COMBUSTION AIR | MAX | MAXIMUM |
| CC | COOLING COIL | MCA | MINIMUM CIRCUIT AMPS |
| CFM | AIR FLOW RATE (CUBIC FEET PER MINUTE) | MOCP | MAXIMUM OVERCURRENT PROTECTION |
| CHWR | CHILLED WATER RETURN | MIN | MINIMUM |
| CHWS | CHILLED WATER SUPPLY | | |
| CLG | CEILING | NC | NOISE CRITERIA |
| CW | COLD WATER | NFPA | NATIONAL FIRE PROTECTION ASSOCIATION |
| | | NTS | NOT TO SCALE |
| DEG or ° | DEGREE | | |
| DIA or Ø | DIAMETER | OSA | OUTSIDE AIR |
| DB | DRY BULB | | |
| | | PD | PRESSURE DROP |
| EA | EXHAUST AIR | PH or Ø | PHASE |
| EAT | ENTERING AIR TEMPERATURE | PRV | PRESSURE REDUCING VALVE |
| EER | ENERGY EFFICIENCY RATIO | | |
| ESP | EXTERNAL STATIC PRESSURE | RA | RETURN AIR |
| EWT | ENTERING WATER TEMPERATURE | RPM | REVOLUTIONS PER MINUTE |
| | | RTU | ROOFTOP UNIT |
| FCO | FLOOR CLEANOUT | | |
| FD | FIRE DAMPER | SA | SUPPLY AIR |
| FLA | FULL LOAD AMPS | SEER | SEASONAL ENERGY EFFICIENCY RATIO |
| FLR | FLOOR | SFD | COMBINATION SMOKE/FIRE DAMPER |
| FPM | FEET PER MINUTE | SP | STATIC PRESSURE |
| FT | FEET | SYM | SYMBOL |
| GA | GAUGE | T & P | TEMPERATURE AND PRESSURE |
| GCO | GRADE CLEANOUT | TEMP | TEMPERATURE |
| GPM | WATER FLOW RATE (GALLONS PER MINUTE) | TYP | TYPICAL |
| HC | HEATING COIL | UMC | UNIFORM MECHANICAL CODE |
| HP | HORSE POWER | UPC | UNIFORM PLUMBING CODE |
| HVAC | HEATING, VENTILATING, AIR CONDITIONING | URL | URINAL |
| HW | HOT WATER | | |
| HWR | HOT WATER RETURN | VTR | VENT THROUGH ROOF |
| HWS | HOT WATER SUPPLY | V | VOLTS |
| IBC | INTERNATIONAL BUILDING CODE | W/ | WITH |
| IEEC | INTERNATIONAL ENERGY CONSERVATION CODE | WB | WET-BULB |
| IFC | INTERNATIONAL FIRE CODE | WC | WATER CLOSET |
| IFGC | INTERNATIONAL FUEL GAS CODE | WCO | WALL CLEANOUT |
| IMC | INTERNATIONAL MECHANICAL CODE | WH | WATER HEATER |
| IPC | INTERNATIONAL PLUMBING CODE | | |

NOTE: THIS IS A STANDARD LIST OF COMMONLY USED MECHANICAL ABBREVIATIONS. SOME OF THE ABBREVIATIONS SHOWN ABOVE MAY NOT BE USED IN THIS DRAWING PACKAGE.

# MECHANICAL GENERAL NOTES

1. ALL MECHANICAL EQUIPMENT AND SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE INTERNATIONAL MECHANICAL CODE (IMC) LATEST EDITION, AND ALL LOCAL & STATE CODES.
2. ALL PLUMBING EQUIPMENT AND SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST ADOPTED PLUMBING CODE, AND ALL LOCAL & STATE CODES.
3. ALL MECHANICAL AND PLUMBING EQUIPMENT SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.
4. MECHANICAL CONTRACTORS SHALL RECEIVE PRIOR APPROVAL FROM THE STRUCTURAL ENGINEER BEFORE MAKING CUTS THROUGH ANY STRUCTURAL MEMBER.
5. MECHANICAL CONTRACTORS SHALL COORDINATE INSTALLATION WITH CONSTRUCTION SUPERVISOR AND WITH ALL OTHER TRADES TO AVOID CONFLICTS.
6. THE MECHANICAL CONTRACTORS SHALL VERIFY MOTOR VOLTAGES WITH THE ELECTRICAL DRAWINGS BEFORE ORDERING MOTORIZED EQUIPMENT AND CONTROLS.
7. SEE MECHANICAL SCHEDULE SHEET FOR SCHEDULED CAPACITIES OF ALL MECHANICAL EQUIPMENT AND MATERIALS SPECIFIED.
8. DOMESTIC WATER SERVICE IS PROVIDED WITH A DOUBLE CHECK BACKFLOW PREVENTER.
9. ALL MECHANICAL EQUIPMENT TO BE PROPOSED MUST BE ON THE APPROVED LIST PRIOR TO SUBMITTALS. ALL APPROVED MANUFACTURERS MUST BE CAPABLE OF MEETING THE REQUIREMENTS OF THE SPECIFIED EQUIPMENT.
10. RUNOUT AND HOOKUP SIZES TO INDIVIDUAL PLUMBING FIXTURE CAN BE FOUND ON THE PLUMBING FIXTURE SCHEDULE.
11. PROVIDE REMOTE CEILING ACCESS BALANCE DAMPERS WITH CONCEALED CHROME PLATE COVERS FOR BALANCE DAMPERS LOCATED ABOVE HARD CEILINGS.
12. PAINT ALL VTR'S, FLUES, EXHAUST CAPS, AND OTHER MECHANICAL ITEMS ON THE ROOF TO MATCH THE ROOF COLOR.
13. INSULATED FLEXIBLE DUCTWORK MAY BE USED FOR RUNOUTS TO GRILLES AND DIFFUSERS, IN LENGTHS OF 6'-0" OR LESS.
14. MAINTAIN MINIMUM OF 10'-0" DISTANCE BETWEEN ALL FRESH AIR INTAKES AND EXHAUST OR GAS FLUE DISCHARGES.
15. THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR ALL BACKFLOW DEVICES TO BE INSPECTED BY A CERTIFIED BACKFLOW TECHNICIAN BEFORE THE USE OF THE BUILDING POTABLE WATER SYSTEM.
16. LOCATE ACCESS HATCHES SO AS TO PROVIDE OPTIMUM SERVICEABILITY TO EQUIPMENT AND/OR VALVING. SEE ARCHITECTURAL SPECIFICATION FOR TYPE AND COLOR. COORDINATE LOCATION WITH STRUCTURAL & LIGHTING.
17. WHENEVER THERE IS A DISCREPANCY BETWEEN THE RUNOUT DUCT SIZE SHOWN ON THE PLANS AND THAT SHOWN IN THE SCHEDULE, ALWAYS USE THE LARGER OF THE TWO DUCT SIZES.

# MECHANICAL AND PLUMBING DRAWINGS LEGEND

| | | | |
|---|---|---|---|
| | FLEXIBLE DUCTWORK | | THREE WAY CONTROL VALVE |
| | DUCTWORK | | TWO WAY CONTROL VALVE |
| | DUCTWORK BREAK | | PRESSURE REDUCING VALVE |
| | DUCTWORK OR PIPING RISE | | GATE VALVE |
| | CONCENTRIC SQUARE TO ROUND TRANSITION | | REDUCER |
| M | MOTORIZED DAMPER | | GLOBE VALVE |
| | MANUAL VOLUME DAMPER | | BALL VALVE |
| AIRFLOW | SPIN-IN FITTING W/ AIR EXTRACTOR AND HAND DAMPER | | BUTTERFLY VALVE |
| AIRFLOW | HIGH EFFICIENCY FITTING W/ HAND DAMPER | | BALANCE VALVE |
| $ | SWITCH | | CHECK VALVE |
| T | THERMOSTAT | FCO | FLOOR CLEANOUT |
| H | HUMIDISTAT | WCO | WALL CLEANOUT |
| S | TEMPERATURE SENSOR | GCO | GRADE CLEANOUT |
| $CO_2$ | CARBON DIOXIDE SENSOR | | WATER HAMMER ARRESTOR |
| CO | CARBON MONOXIDE SENSOR | | FLOOR DRAIN |
| NO | NITROUS OXIDE SENSOR | | FLOOR SINK |
| SD | DUCT SMOKE DETECTOR | | GAS PRESSURE REGULATOR W/ GAS COCK |
| SFD | COMBINATION SMOKE/FIRE DAMPER | | PRESSURE RELIEF VALVE |
| FD | FIRE DAMPER | | VENT-THROUGH-ROOF |
| SD | SMOKE DAMPER | VENT | |
| # | EQUIPMENT CALLOUT | SOIL, WASTE, OR SANITARY SEWER | |
| | TURNING VANES | AW | ACID WASTE LINE |
| | INTAKE OR EXHAUST | AV | ACID VENT LINE |
| | DIRECTION OF AIRFLOW | SD | STORM DRAIN |
| D-X CFM X-Ø | SUPPLY DIFFUSER | RD | ROOF DRAIN LINE |
| R-X X"Ø | RETURN GRILLE | OD | OVERFLOW DRAIN LINE |
| R-X CFM X-Ø | EXHAUST GRILLE | CD | CONDENSATE DRAIN LINE |
| G-X CFM X-Ø | FLOOR GRILLE | – | DOMESTIC COLD WATER (CW) |
| | CEILING EXHAUST FAN | – – | DOMESTIC HOT WATER (HW) |
| | TEMPERATURE GAUGE | – – – | DOMESTIC HOT WATER RETURN (HWR) |
| | PRESSURE GAUGE (LIQUID FILLED W/ ISOLATION VALVE) | TW | TEMPERED WATER (TW) |
| TS | TEMPERATURE SENSOR (DUCT OR PIPING) | MPG | MEDIUM PRESSURE NATURAL GAS |
| FS | FLOW SWITCH | G | LOW PRESSURE NATURAL GAS |
| | STAINLESS STEEL BRAIDED FLEX CONNECTION | F | FIRE SPRINKLER LINE |
| | ELASTOMETRIC FLEX CONNECTOR | GWS | GEOTHERMAL WATER SUPPLY |
| | SUCTION DIFFUSER | GWR | GEOTHERMAL WATER RETURN |
| | Y TYPE STRAINER (1 1/2" OR LARGER PROVIDED W/ BLOW DOWN VALVE) | CWS | CHILLED WATER SUPPLY |
| | FLOW DIRECTION | CWR | CHILLED WATER RETURN |
| | DEMOLITION / EQUIPMENT TO BE REMOVED | CS | CONDENSER WATER SUPPLY |
| | NEW TO EXISTING CONNECTION POINT | CR | CONDENSER WATER RETURN |
| (E) | EXISTING | HWS | HEATING WATER SUPPLY |
| (F) | FUTURE | HWR | HEATING WATER RETURN |
| (N) | NEW | L | LIQUID REFRIGERANT LINE |
| | REDUCED PRESSURE BACKFLOW PREVENTER | S | SUCTION REFRIGERANT LINE |
| | DOUBLE CHECK BACKFLOW PREVENTER | | SLOPE PIPE IN DIRECTION OF ARROW |
| | UNION | | PIPE ANCHOR |
| | AIR VENT | | PIPE GUIDE |
| | TRIPLE DUTY VALVE | | CAP |

NOTE: THIS IS A LIST OF COMMONLY USED MECHANICAL AND PLUMBING SYMBOLS. SOME OF THE SYMBOLS SHOWN ABOVE MAY NOT BE USED IN THIS DRAWING PACKAGE.

# ENERGY CODE COMPLIANCE

A. COMPLIANCE WITH THE LATEST ADOPTED EDITION OF THE INTERNATIONAL ENERGY CONSERVATION CODE IS REQUIRED FOR THIS PROJECT. THESE NOTES COVER MANDATORY REQUIREMENTS OF THE CODE. ADDITIONAL REQUIREMENTS ARE NOTED ON THE DRAWINGS AND IN THE SPECIFICATIONS.

B. CONTRACTOR SHALL VERIFY WITH THE MANUFACTURER, THE R-VALUES OF THE ACTUAL INSULATION USED. R-VALUES SHALL BE INSTALLED VALUES.

C. WHERE DUCTS USED FOR COOLING ARE EXTERNALLY INSULATED, THE INSULATION SHALL BE COVERED WITH A VAPOR RETARDER HAVING A MAXIMUM PERMEANCE OF 0.05 PERM OR ALUMINUM FOIL HAVING A MINIMUM THICKNESS OF 2 MILS. INSULATION HAVING A PERMEANCE OF 0.05 PERMS OR LESS SHALL NOT BE REQUIRED TO BE COVERED. ALL JOINTS AND SEAMS SHALL BE SEALED TO MAINTAIN THE CONTINUITY OF THE VAPOR RETARDER.

D. ALL DUCT JOINTS, SEAMS, AND CONNECTIONS SHALL BE FASTENED AND SEALED WITH WELDS, GASKETS, ADHESIVES, MASTIC-PLUS-EMBEDDED-FABRIC SYSTEMS, OR TAPES. TAPES AND MASTICS SHALL BE LISTED AND LABELED PER UL181A OR UL181B. DUCT TAPE IS NOT PERMITTED AS A SEALANT ON ANY METAL DUCTS. DUCT CONNECTIONS TO FLANGES OR EQUIPMENT SHALL BE SEALED AND MECHANICALLY FASTENED.

G. DOMESTIC HOT WATER PIPING SYSTEMS SHALL BE INSULATED WITH 1" INSULATION HAVING A CONDUCTIVITY NOT EXCEEDING 0.27 BTU-INCH/HOUR-FT2-°F.

H. DOMESTIC WATER HEATERS WHICH ARE NOT PROVIDED WITH INTEGRAL HEAT TRAPS AND SERVE NONCIRCULATING SYSTEMS SHALL BE PROVIDED WITH HEAT TRAPS ON THE SUPPLY AND DISCHARGE PIPING AT THE WATER HEATER.

I. DOMESTIC HOT WATER SYSTEMS WITH RECIRCULATION PUMPS OR ELECTRIC HEAT TRACE SHALL BE CONTROLLED WITH 7-DAY TIME CLOCKS.

J. AN OPERATING AND MAINTENANCE MANUAL SHALL BE PROVIDED PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY. THE O&M MANUAL SHALL CONTAIN THE FOLLOWING INFORMATION AS A MINIMUM:

1. EQUIPMENT CAPACITY (INPUT & OUTPUT).
2. EQUIPMENT OPERATING AND MAINTENANCE INSTRUCTIONS.
3. CONTROL SYSTEM MAINTENANCE AND CALIBRATION INFORMATION, INCLUDING WIRING DIAGRAMS, SCHEMATICS, AND CONTROL SEQUENCES.
4. CONTROL SYSTEM SETPOINTS SHALL BE SHOWN ON CONTROL DRAWINGS, AT CONTROL DEVICES, OR IN PROGRAMMING COMMENT ON DDC SYSTEMS.
5. A COMPLETE WRITTEN NARRATIVE ON HOW EACH MECHANICAL SYSTEM IS INTENDED TO OPERATE.


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PROFESSIONAL ENGINEER — REGISTERED — 9394 — 7/23/2021 — STATE OF IDAHO — WILLIAM A. CARTER

Revisions
Description | Date
1

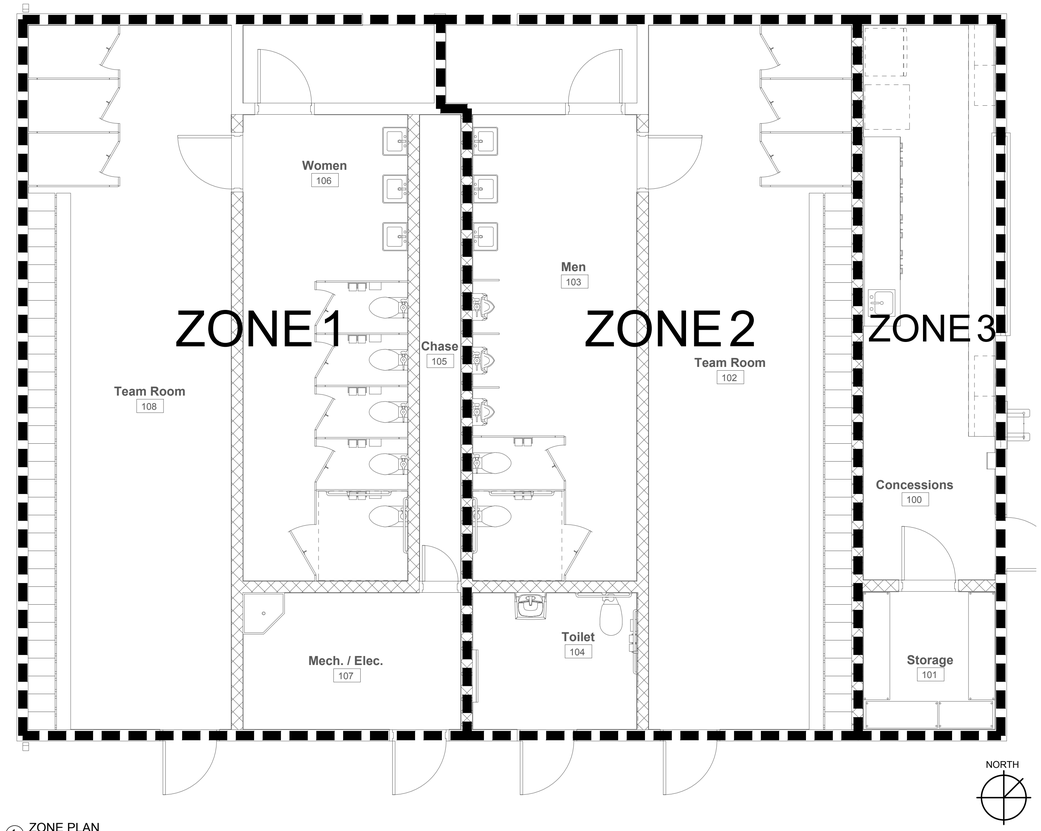
Minico HS Team Building
Minidoka School District
292 W 100 S, Rupert, ID 83350

DATE: 07/23/21
LKV PROJECT #: 2321

DRAWN BY: PY
CHECKED BY: BC

Project Status

DRAWING NO.:
M0.0
MECHANICAL COVER SHEET – LEVEL 1




1 ZONE PLAN
1/4" = 1'-0"

## MUSGROVE ENGINEERING, PA

234 S. WHISPERWOOD WAY BOISE, IDAHO 83709

### Zone Summary

| PROJECT: | MINICO HIGH SCHOOL CONCES | Design Conditions | | Winter | 3.6 | Summer | 90.7 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| COMPUTED BY: | PY | DATE: | 6-Jul-21 | CHK BY: | BC | | | | | | |
| | | Heating Load | | Sensible Cooling Load | Total Cooling Load | | | | | | Unit Selection Size |
| | Zone Reference | FLOOR SQ. FT. | BTUH | kW | BTUH | BTUH | NOMINAL TON (12000-BTUH/TON) | SQ. FT PER NOMINAL TON | NUMBER OF PEOPLE | OSA | EXHAUST | TONS |
| 1 | ZONE 1 WOMENS TEAM ROOM | 950 | 21,183 | 6 | 9,148 | 9,148 | 0.8 | 1246.2 | 0 | 0 | 475 | |
| 2 | ZONE 2 - MENS TEAM ROOM | 840 | 15,873 | 5 | 6,812 | 6,812 | 0.6 | 1479.7 | 0 | 0 | 420 | |
| 3 | ZONE 3 - CONCESSIONS | 290 | 32,505 | 10 | 17,023 | 25,157 | 2.1 | 138.3 | 29 | 337 | 0 | |
| | Total Loads = | 2080 | 69,561 | 20 | 32,983 | 41,117 | 3.4 | 607 | 29 | 337 | 895 | |

**Energy Compliance Calculations *(Not Equipment Schedule)***
Equipment is selected based on next available size

**COM*check* Software Version COMcheckWeb**

## Mechanical Compliance Certificate

### Project Information

| | |
|---|---|
| Energy Code: | 2018 IECC |
| Project Title: | Minico HS Concessions |
| Location: | Rupert, Idaho |
| Climate Zone: | 5b |
| Project Type: | New Construction |

Construction Site: Owner/Agent: Designer/Contractor:

### Additional Efficiency Package(s)

Credits: 1.0 Required 0.0 Proposed

### Mechanical Systems List

**Quantity System Type & Description**

2 5 HW (Single Zone):
Heating: 1 each - Other, Electric, Capacity = 17 kBtu/h
No minimum efficiency requirement applies
Fan System: FAN SYSTEM 1 -- Compliance (Motor nameplate HP and fan efficiency method) : Passes

Fans:
FAN 1 Supply, Constant Volume, 700 CFM, 0.1 motor nameplate hp, 80.0 fan efficiency grade, 80.0 total fan efficiency, 80.0 design fan efficiency

1 3 KW Hung (Single Zone):
Heating: 1 each - Other, Electric, Capacity = 10 kBtu/h
No minimum efficiency requirement applies
Fan System: FAN SYSTEM 2 -- Compliance (Motor nameplate HP and fan efficiency method) : Passes

Fans:
FAN 2 Supply, Constant Volume, 510 CFM, 0.1 motor nameplate hp, 80.0 fan efficiency grade, 80.0 total fan efficiency, 80.0 design fan efficiency

1 2 KW Hung (Single Zone):
Heating: 1 each - Other, Electric, Capacity = 6 kBtu/h
No minimum efficiency requirement applies
Fan System: FAN SYSTEM 3 -- Compliance (Motor nameplate HP and fan efficiency method) : Passes

Fans:
FAN 3 Supply, Constant Volume, 510 CFM, 0.1 motor nameplate hp, 80.0 fan efficiency grade, 80.0 total fan efficiency, 80.0 design fan efficiency

2 3 KW Ceiling (Single Zone):
Heating: 1 each - Other, Electric, Capacity = 10 kBtu/h
No minimum efficiency requirement applies
Fan System: FAN SYSTEM 4 -- Compliance (Motor nameplate HP and fan efficiency method) : Passes

Fans:
FAN 4 Supply, Constant Volume, 175 CFM, 0.1 motor nameplate hp, 80.0 fan efficiency grade, 80.0 total fan efficiency, 80.0 design fan efficiency

1 2 KW Ceiling (Single Zone):
Heating: 1 each - Other, Electric, Capacity = 6 kBtu/h
No minimum efficiency requirement applies
Fan System: FAN SYSTEM 5 -- Compliance (Motor nameplate HP and fan efficiency method) : Passes

Fans:
FAN 5 Supply, Constant Volume, 175 CFM, 0.1 motor nameplate hp, 80.0 fan efficiency grade, 80.0 total fan



**Quantity System Type & Description**

efficiency, 80.0 design fan efficiency

1 1.5 KW (Single Zone):
Heating: 1 each - Other, Electric, Capacity = 5 kBtu/h
No minimum efficiency requirement applies
Fan System: FAN SYSTEM 6 -- Compliance (Motor nameplate HP and fan efficiency method) : Passes

Fans:
FAN 6 Supply, Constant Volume, 175 CFM, 0.1 motor nameplate hp, 80.0 fan efficiency grade, 80.0 total fan efficiency, 80.0 design fan efficiency

1 1.25 KW (Single Zone):
Heating: 1 each - Other, Electric, Capacity = 4 kBtu/h
No minimum efficiency requirement applies

### Mechanical Compliance Statement

*Compliance Statement:* The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2018 IECC requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Austin Hall — Austin Hall — 7/23/2021
Name - Title Signature Date





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Project No. 21-286

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PROFESSIONAL ENGINEER — REGISTERED — 9394 — 7/23/2021 — STATE OF IDAHO — WILLIAM A. CARTER

Revisions
Description
Date

Minico HS Team Building
Minidoka School District
292 W 100 S, Rupert, ID 83350

DATE: 07/23/21
LKV PROJECT #: 2321

DRAWN BY: PY
CHECKED BY: BC

Project Status

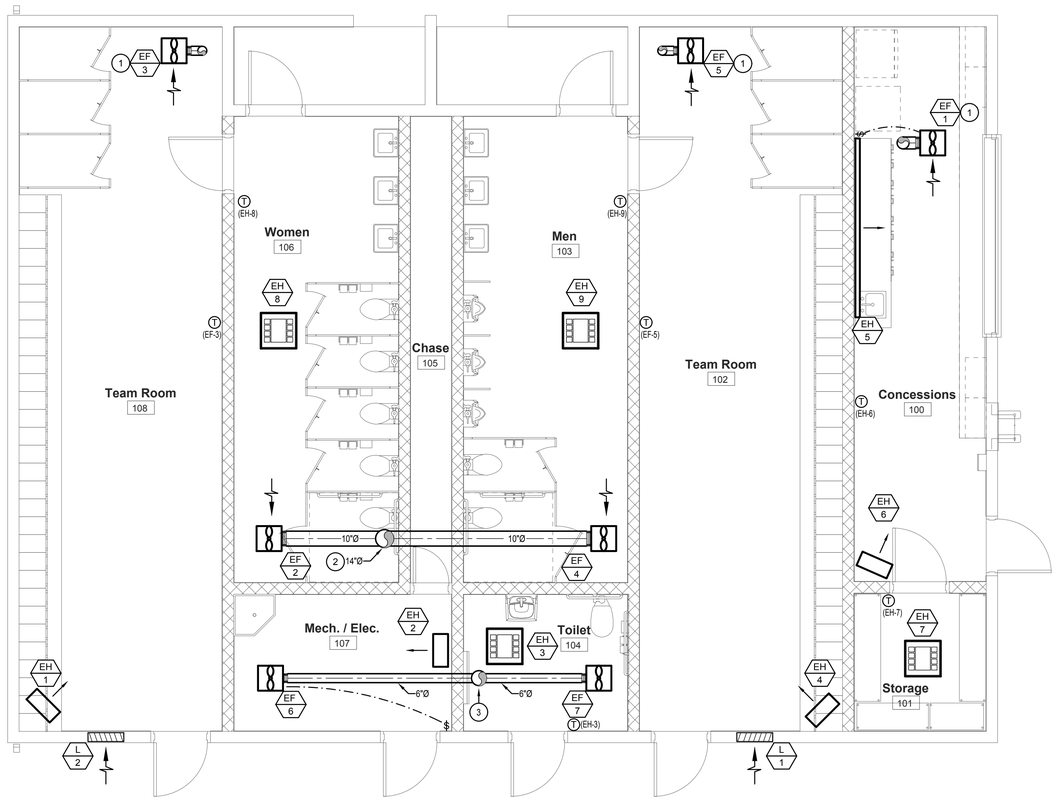
DRAWING NO.:
M0.1
ZONE PLAN

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## KEYED NOTES:

(#) SYMBOL USED FOR NOTE CALLOUT.

1. ROUTE 8" EXHAUST DUCT UP THROUGH ROOF FROM FAN OUTLET AND TERMINATE WITH FACTORY ROOF CAP.
2. ROUTE 10" EXHAUST DUCTS FROM EXHAUST FANS AND COMBINE INTO ONE 14" DUCT UP THROUGH ROOF. TERMINATE WITH COOK MODEL RJ OR EQUAL.
3. ROUTE 6" EXHAUST DUCTS FROM EXHAUST FANS AND COMBINE INTO ONE 10" DUCT UP THROUGH ROOF. TERMINATE WITH COOK MODEL RJ OR EQUAL.




NORTH

1 HVAC PLAN
1/4" = 1'-0"



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PROFESSIONAL ENGINEER
REGISTERED
9394
7/23/2021
STATE OF IDAHO
WILLIAM A. CARTER

| Revisions | Date |
|---|---|
| Description | |
| # | |

Minico HS Team Building
Minidoka School District
292 W 100 S, Rupert, ID 83350

DATE: 07/23/21
LKV PROJECT #: 2321

DRAWN BY: PY
CHECKED BY: BC

Project Status

DRAWING NO.:
M1.0
HVAC PLAN

## ELECTRIC HEATER SCHEDULE

| SYMBOL | AREA SERVED | UNIT TYPE | FAN | | | ELECTRICAL | | | | MANUFACTURER AND MODEL | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CFM | RPM | HP | KW | STEPS | V/Ø | AMPS | | |
| EH-1 | WOMENS TEAM ROOM 108 | CEILING HUNG | 700 | 1550 | 1/30 | 5 | 1 | 240/1 | 20.8 | REZNOR MODEL EGHB-5 | 1 , 2 |
| EH-2 | MECHANICAL ROOM 107 | CEILING HUNG | 510 | 1550 | 1/30 | 2 | 1 | 240/1 | 8.3 | REZNOR MODEL EGHB-2 | 1 , 2 |
| EH-3 | TOILET 104 | CEILING MOUNT | 175 | 600 | 1/30 | 2 | 1 | 240/1 | 8.3 | MARKEL 3380 SERIES | 1, 3 |
| EH-4 | MENS TEAM ROOM 102 | CEILING HUNG | 700 | 1550 | 1/30 | 5 | 1 | 240/1 | 20.8 | REZNOR MODEL EGHB-5 | 1 , 2 |
| EH-5 | CONCESSIONS 100 | WALL MOUNTED | -- | -- | -- | 1.25 | 1 | 120/1 | 10.4 | MARKEL MODEL CV12527X | 1 , 2 |
| EH-6 | CONCESSIONS 100 | CEILING HUNG | 510 | 1550 | 1/30 | 3 | 1 | 240/1 | 12.5 | REZNOR MODEL EGHB-5 | 1 , 3 |
| EH-7 | STORAGE 101 | CEILING MOUNT | 175 | 600 | 1/30 | 2 | 1 | 240/1 | 8.3 | MARKEL 3380 SERIES | 1, 3 |
| EH-8 | WOMEN 106 | CEILING MOUNT | 175 | 600 | 1/30 | 3 | 1 | 240/1 | 12.5 | MARKEL 3380 SERIES | 1, 3 |
| EH-9 | MEN 103 | CEILING MOUNT | 175 | 600 | 1/30 | 3 | 1 | 240/1 | 12.5 | MARKEL 3380 SERIES | 1, 3 |

REMARKS:

1. APPROVED ALTERNATE MANUFACTURERS: BRASCH, QMARK, INDEECO, OUELLET, AND CHROMALOX.
2. PROVIDE UNIT WITH AN INTEGRAL THERMOSTAT. THERMOSTAT SHALL BE COVERED WITH A TAMPER-PROOF ACCESS COVER.
3. PROVIDE WITH SEPARATE WALL MOUNTED THERMOSTAT WITH A TAMPER-PROOF ACCESS COVER.

## EXHAUST FAN SCHEDULE

| SYMBOL | AREA SERVED | UNIT TYPE | BLOWER | | | | ELECTRICAL | | MAXIMUM SONES | OPERATING WEIGHT (LBS) | MANUFACTURER AND MODEL | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | CFM | ESP | MAXIMUM RPM | DRIVE | HP/W | V/Ø | | | | |
| EF-1 | CONCESSIONS 100 | CEILING CABINET | 200 | .375 | 1100 | DIRECT | 80.8 W | 115/1 | 5.5 | 17 | COOK MODEL GC-186 | 1 , 2 , 3 |
| EF-2 | WOMENS 106 | CEILING CABINET | 500 | .375 | 1228 | DIRECT | 164 W | 115/1 | 4.0 | 35 | COOK MODEL GC-720 | 1 , 2 , 5 |
| EF-3 | WOMENS TEAM ROOM 108 | CEILING CABINET | 225 | .375 | 1450 | DIRECT | 98 W | 115/1 | 6 | 18 | COOK MODEL GC-188 | 1 , 2 , 4 |
| EF-4 | MENS 103 | CEILING CABINET | 500 | .375 | 1228 | DIRECT | 164 W | 115/1 | 4.0 | 35 | COOK MODEL GC-720 | 1 , 2 , 5 |
| EF-5 | MENS TEAM ROOM 102 | CEILING CABINET | 225 | .375 | 1450 | DIRECT | 98 W | 115/1 | 6 | 18 | COOK MODEL GC-188 | 1 , 2 , 4 |
| EF-6 | MECHANICAL ROOM 107 | CEILING CABINET | 200 | .375 | 1100 | DIRECT | 80.8 W | 115/1 | 5.5 | 17 | COOK MODEL GC-186 | 1 , 2 , 3 |
| EF-7 | TOILET 104 | CEILING CABINET | 100 | .375 | 1100 | DIRECT | 79.0 W | 115/1 | 3.2 | 15 | COOK MODEL GC-144 | 1 , 2 , 5 |

REMARKS:

1. APPROVED ALTERNATE MANUFACTURERS: GREENHECK, PENNBARRY, TWIN CITY FAN COMPANY, SOLER & PALAU, ACME, AND BARRY BLOWER.
2. PROVIDE UNIT WITH MANUFACTURER'S STEEL ROOF JACK (SLOPED ROOF) EQUAL TO COOK MODEL RJ (W/ INTEGRAL BIRD SCREEN, FLASHING FLANGE AND BLACK EPOXY FINISH), BACK DRAFT DAMPER, OUTLET FLEX DUCT CONNECTION, STANDARD PLUG DISCONNECT, PRE-WIRED FAN SPEED CONTROLLER, THERMAL OVERLOAD PROTECTION, HANGING VIBRATION ISOLATORS, AND WHITE ALUMINUM GRILLE.
3. CONTROL FAN WITH SEPARATE WALL SWITCH.
4. CONTROL FAN WITH HEAT RISE-STAT.
5. INTERLOCK WITH LIGHT SWITCH.

## LOUVER SCHEDULE

| SYMBOL | SERVICE | TYPE | NOMINAL SIZE | MINIMUM FREE AREA (SQ.FT.) | FINISH | MANUFACTURER AND MODEL | REMARKS |
|---|---|---|---|---|---|---|---|
| L-1 | MAKE-UP AIR | FIXED DRAINABLE | 24X24 | 1.94 | AAMA 2604 | RUSKIN ELF375DX | 1 , 2 , 3 |
| L-2 | MAKE-UP AIR | FIXED DRAINABLE | 24X24 | 1.94 | AAMA 2604 | RUSKIN ELF375DX | 1 , 2 , 3 |

REMARKS:

1. APPROVED ALTERNATE MANUFACTURERS: GREENHECK, AMERICAN WARMING, AIROLITE, SAFE-AIR/DOWCO, LOUVERS & DAMPERS, ARROW UNITED, CESCO, NCA MANUFACTURING, NAILOR, POTTORFF, AND UNITED ENERTECH.
2. COLOR TO BE SELECTED BY ARCHITECT.
3. INCLUDE MANUFACTURERS INSECT SCREEN AND FLANGED FRAME. PROVIDE WITH BACKDRAFT DAMPER.



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Minidoka School District
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LKV PROJECT #: 2321

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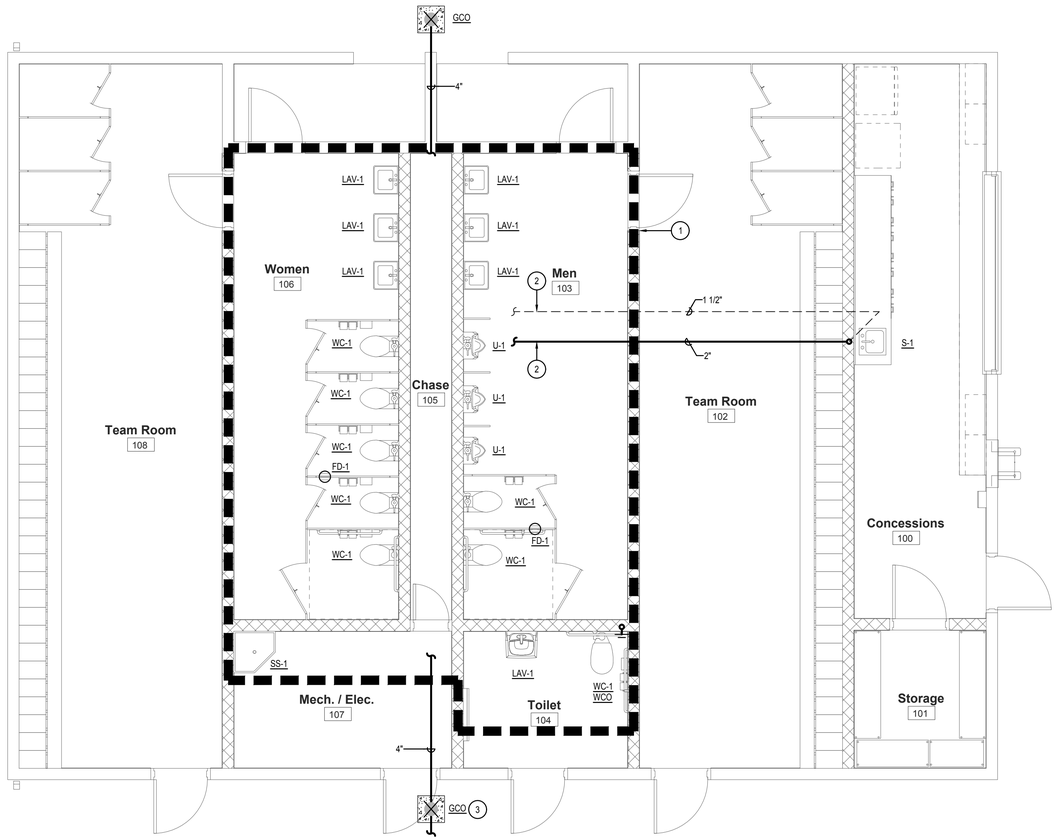
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M2.0
HVAC SCHEDULES

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# KEYED NOTES:

(#) SYMBOL USED FOR NOTE CALLOUT.

1. SEE WASTE AND VENT PLUMBING RISER DIAGRAM.
2. SEE WASTE AND VENT PLUMBING RISER DIAGRAM FOR CONNECTIONS.
3. THE WASTE LINE INVERT ELEVATION AT THIS LOCATION IS 36-INCHES BELOW FINISH FLOOR (BFF). THIS INVERT ELEVATION IS BASED ON A STARTING POINT OF 2-FEET BFF WITH A LINE SLOPE OF 1/4" PER FOOT. SEE CIVIL SITE PLAN FOR CONTINUATION.




1 PLUMBING PLAN
1/4" = 1'-0"

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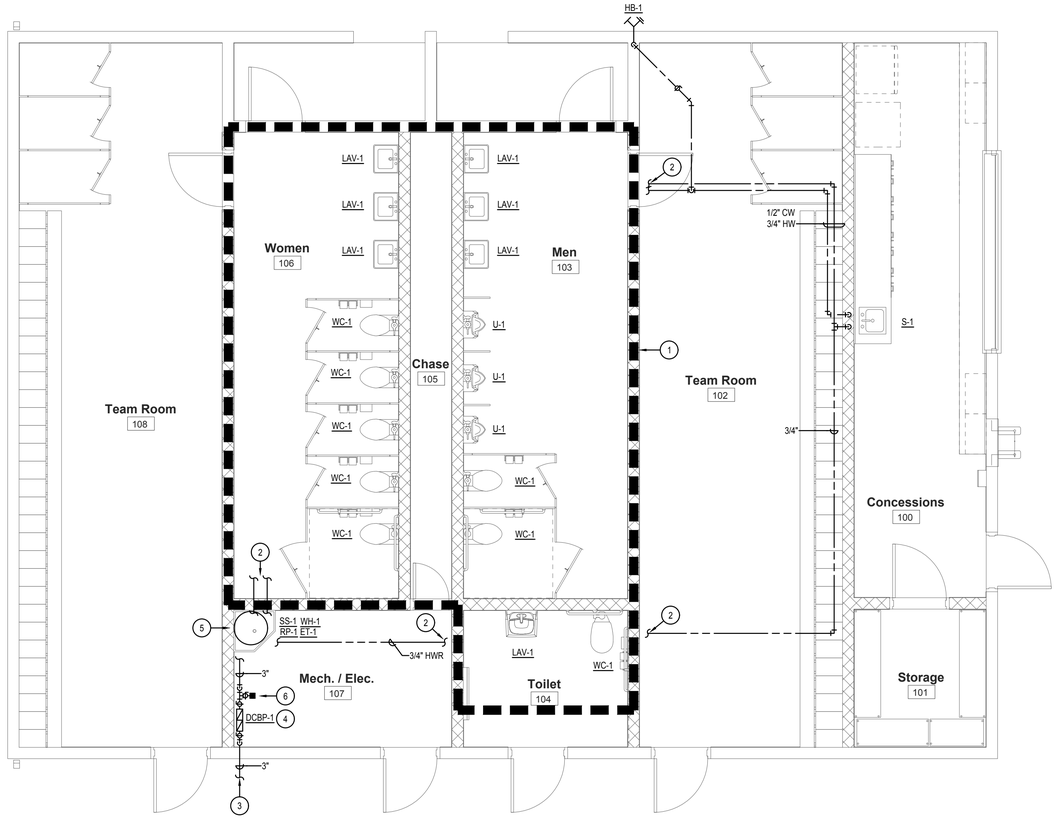
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P1.0
PLUMBING PLAN

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## KEYED NOTES:

(#) SYMBOL USED FOR NOTE CALLOUT.

1. SEE WATER RISER DIAGRAM.
2. SEE WATER RISER DIAGRAM FOR CONNECTIONS.
3. ROUTE 3" WATER LINE OUT 2" METER. SEE CIVIL SITE PLAN FOR CONTINUATION.
4. SEE BUILDING WATER SERVICE DETAIL.
5. SEE SERVICE SINK WATER HEATER DETAIL FOR CONNECTION INFORMATION.
6. CONTRACTOR TO PROVIDE COMPRESSED AIR FITTING TO BLOW-OUT WATER SYSTEM.




1 WATER & GAS NEW FLOOR PLAN
1/4" = 1'-0"

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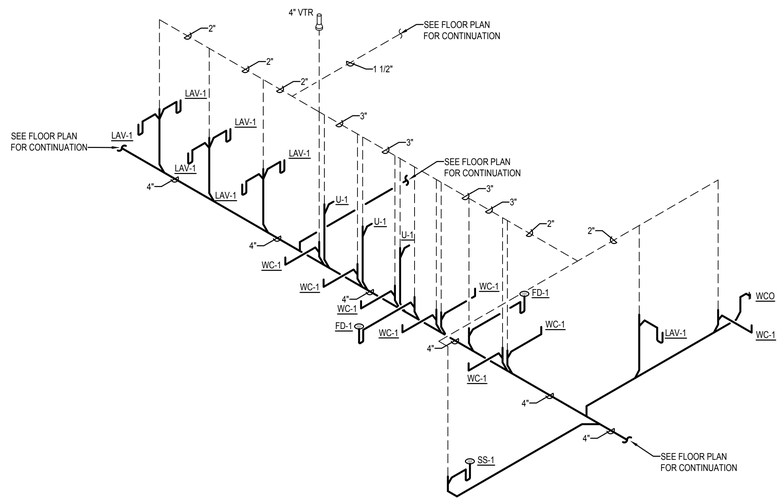
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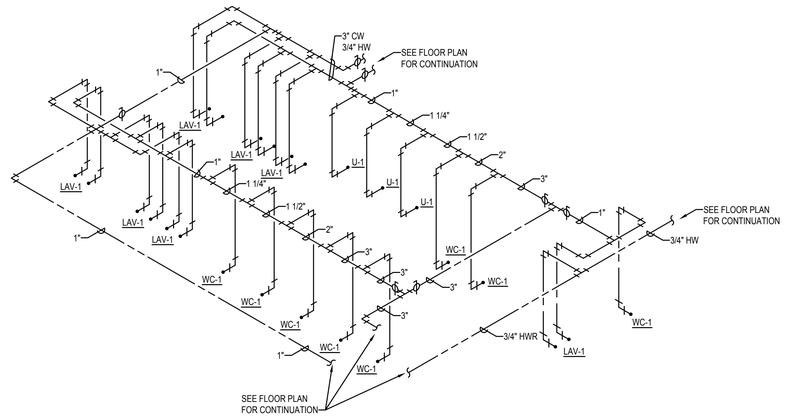
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WATER AND GAS PLAN




1 WASTE AND VENT RISER DIAGRAM




2 WATER RISER DIAGRAM



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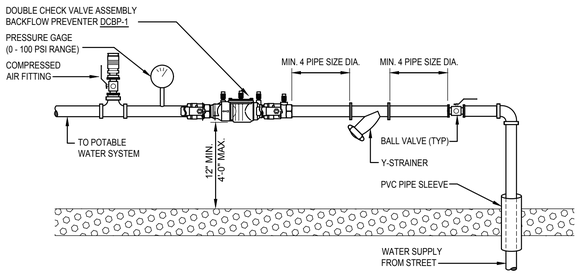
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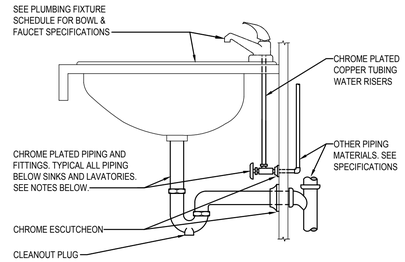
P3.0
RISER DIAGRAMS

NOTE:

1. THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR ALL BACKFLOW DEVICES TO BE INSPECTED BY A CERTIFIED BACKFLOW TECHNICIAN BEFORE THE USE OF THE BUILDING POTABLE WATER SYSTEM.
2. THIS BACKFLOW PREVENTER CAN BE INSTALLED IN A VERTICAL CONFIGURATION WHEN SPACE IN ROOM IS LIMITED. REFERENCE PLANS FOR CONFIGURATION OR CONTACT THE ENGINEER FOR APPROVAL.
3. THIS SYSTEM IS FOR INDOOR INSTALLATIONS ONLY. THIS VALVE SHALL BE EASILY ACCESSIBLE TO FACILITATE TESTING AND SERVICING. DO NOT INSTALL IN A CONCEALED LOCATION.

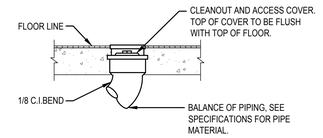



## 1 BUILDING WATER SERVICE DETAIL
NOT TO SCALE




NOTES:
1. INTERIOR EXPOSED PIPE, VALVES AND FIXTURE TRIM, INCLUDING TRIM BEHIND CASEWORK DOORS SHALL BE CHROME PLATED.
2. ALL PIPING PENETRATIONS THROUGH FINISHED WALLS SHALL BE PROVIDED WITH CHROME ESCUTCHEONS.
3. ALL SINK TRAPS SHALL BE PROVIDED WITH A CLEANOUT PLUG IN THE BOTTOM OF THE TRAP.
4. ALL PLUMBING FIXTURES SHALL BE CAULKED AND SEALED TO SURROUNDING SURFACES.

## 2 SINK/LAVATORY TAILPIECE & TRAP DETAIL
NOT TO SCALE

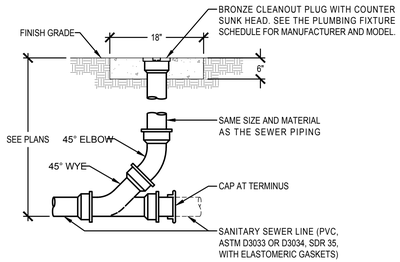



NOTE:
CLEANOUTS SHALL BE PROVIDED AT EACH HORIZONTAL DRAINAGE PIPE AT ITS UPPER TERMINAL, AND EACH RUN OF PIPING WHICH IS MORE THAN 100 FEET, AND SHALL BE PROVIDED FOR EACH 100 FEET DEVELOPED LENGTH, OR FRACTION THEREOF OF SUCH PIPING. AN ADDITIONAL CLEANOUT SHALL BE PROVIDED FOR EACH AGGREGATE HORIZONTAL CHANGE OF DIRECTION EXCEEDING ONE HUNDRED THIRTY-FIVE DEGREES, PER APPLICABLE PLUMBING CODE. THIS SHALL BE PROVIDED REGARDLESS OF WHAT IS SHOWN ON THE DRAWINGS.

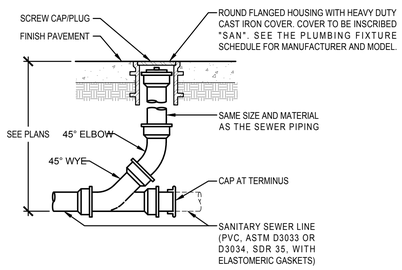
## 3 FLOOR CLEANOUT (FCO) DETAIL
NOT TO SCALE




## 4 SERVICE SINK DETAIL
NOT TO SCALE




PEDESTRIAN TRAFFIC AREAS / NON-PAVED AREAS




VEHICULAR TRAFFIC AREAS / PAVED AREAS

## 5 GRADE CLEANOUT (GCO) DETAIL
NOT TO SCALE



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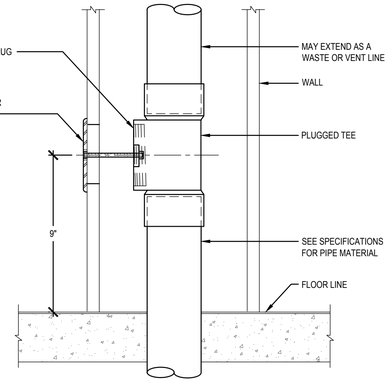
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PLUMBING DETAILS

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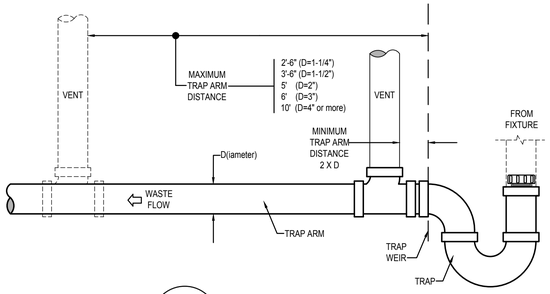
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1 WALL CLEANOUT (WCO) DETAIL
NOT TO SCALE

NOTES:

1. MAINTAIN ONE-FOURTH (1/4) INCH PER FOOT SLOPE.
2. THE DEVELOPED LENGTH BETWEEN THE TRAP OF A WATER CLOSET OR SIMILAR FIXTURE (MEASURED FROM THE TOP OF THE CLOSET FLANGE TO THE INNER EDGE OF THE VENT) AND IT'S VENT SHALL NOT EXCEED SIX (6) FEET.
3. ALL PLUMBING EQUIPMENT AND SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST ADOPTED PLUMBING CODE, AND ALL LOCAL AND STATE CODES.



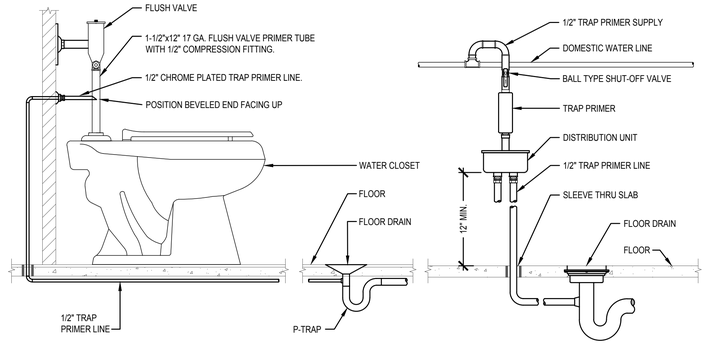

2 TRAP ARM DETAIL
SCALE: NOT TO SCALE

FLUSH VALVE PRIMER NOTES:

1. THE FLUSH VALVE PRIMER IS DESIGNED TO PRIME ONE FLOOR DRAIN TRAP AT A DISTANCE NOT TO EXCEED 20 FEET FROM POINT OF INSTALLATION.
2. THE FLUSH VALVE PRIMER SHALL BE INSTALLED WITH A VACUUM BREAKER.
3. FLUSH VALVE PRIMER IS INTENDED FOR USE WITH WATER CLOSETS CONSUMING 3.5 TO 1.0 GAL/FLUSH.
4. TRAP PRIMER SHALL BE PRECISION PLUMBING PRODUCTS MODEL FVP-1VB WITH VACUUM BREAKER.
   APPROVED ALTERNATES: MIFAB, SIOUX CHIEF, AND ZURN.

PRESSSURE ACTIVATED PRIMER NOTES:

1. THE PRIMING VALVE MUST BE INSTALLED ON A FRESH COLD WATER LINE OF 1/2" TO 1-1/2" DIAMETER.
2. DISTRIBUTION UNIT MUST BE INSTALLED LEVEL WITH AN ACCESS DOOR FOR PERIODIC INSPECTION.
3. DO NOT SUBJECT TRAP PRIMER VALVE TO ROUGH-IN PRESSURE TEST.
4. DISTANCE FROM DISTRIBUTION UNIT TO FLOOR MUST BE 12" FOR EVERY 20' HORIZONTALLY.
5. TRAP PRIMER SHALL BE PRECISION PLUMBING PRODUCTS MODEL CPO-500 WITH DU DISTRIBUTION UNIT IF REQUIRED. APPROVED ALTERNATES: MIFAB, SIOUX CHIEF, AND ZURN.




3 TRAP PRIMER CONNECTION DETAIL
NOT TO SCALE

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PLUMBING DETAILS

# PLUMBING FIXTURE SCHEDULE

| SYMBOL | FIXTURE DESCRIPTION | CONNECTION SIZE | | | | | MANUFACTURER / MODEL NUMBER / DESCRIPTION / ADDITIONAL COMMENTS |
|---|---|---|---|---|---|---|---|
| | | WASTE | VENT | TRAP | CW | HW | |
| ET-1 | EXPANSION TANK | -- | -- | -- | 3/4 | -- | AMTROL THERM-X-TROL ST-12, OR APPROVED EQUAL, NON-ASME SERIES THERMAL EXPANSION ABSORBER, ANTI-MICROBIAL LINER, AND 5 YEAR WARRANTY. |
| FCO | FLOOR CLEANOUT | SEE PLANS | -- | -- | -- | -- | JAY R. SMITH 4020 SERIES WITH ADJUSTABLE, ROUND NICKEL BRONZE TOP AND ABS PLUG. |
| FD-1 | FLOOR DRAIN<br>(PVC BODY)<br>(CONCRETE FLOOR) | 2 | 2 | 2 | -- | -- | SIOUX CHIEF SERIES NUMBER 832-2PNR, POST- CONSTRUCTION LEVELING FLOOR DRAIN, NO-HUB OUTLET, 6-1/2" ROUND, ADJUSTABLE NICKEL BRONZE STRAINER AND TRAP PRIMER PORT. INSTALL TOP OF DRAIN 1/8" BELOW FINISH FLOOR AND CAULK EDGE. |
| GCO | GRADE CLEANOUT<br>(NON-PAVED AREAS) | SEE PLANS | -- | -- | -- | -- | JAY R. SMITH 4220 SERIES, ROUND EXTRA HEAVY DUTY CAST IRON TOP. FURNISH WITH WITH ABS PLUG. COVER TO BE INSCRIBED "SAN". |
| GCO | GRADE CLEANOUT<br>(PAVED AREAS)<br>(VEHICULAR TRAFFIC) | SEE PLANS | -- | -- | -- | -- | JAY R. SMITH 4250 SERIES, ROUND FLANGED HOUSING WITH HEAVY DUTY CAST IRON COVER. FURNISH WITH ABS PLUG. COVER TO BE INSCRIBED "SAN". |
| LAV-1 | LAVATORY<br>(WALL MOUNTED)<br>(ADA COMPLIANT) | 1 1/2 | 1 1/2 | 1 1/4 | 1/2 | 1/2 | KOHLER KINGSTON MODEL K-2005: VITREOUS CHINA, WALL MOUNTED, HOLES ON 4" CENTERS, AND GRID STRAINER. KOHLER CORALAIS MODEL K-15198: 4-1/2" LONG, SINGLE LEVER FAUCET WITH 0.5 GPM AERATOR. PROVIDE WITH JAY R. SMITH FIGURE NUMBER 0700-Z SUPPORT WITH CONCEALED ARMS AND WATTS SERIES LFUSG-B LEAD-FREE, THERMOSTATIC MIXING VALVE, ASSE STANDARD 1070 LISTED, BRONZE BODY, INTEGRAL CHECK VALVES, AND SELECTABLE TEMPERATURE RANGE FROM 80°F TO 120°F. PROVIDE WITH LS-1 LAV SHIELD. |
| LS-1 | LAVATORY SHIELD<br>(WALL MOUNTED SHIELD FOR CONCEALING PIPING AND VALVES) | -- | -- | -- | -- | -- | TRUEBRO "LAV SHIELD" ADA COMPLIANT, TOTAL ENCLOSURE. SINGLE-PIECE CONSTRUCTION, SLOAN OPTISHIELD ETF-529, OR APPROVED EQUAL. |
| RP-1 | RECIRCULATION PUMP<br>(HOT WATER RETURN SYSTEM)<br>(MEDIUM SIZED SYSTEM) | -- | -- | -- | -- | 3/4 | BELL AND GOSSETT BRONZE MODEL NBF-22, 115 VOLT, 0.8 AMPS, 92 WATTS, AND SHALL PROVIDE 7 GPM AT 10 FEET HEAD. INCLUDE 7-DAY PROGRAMMABLE ELECTRONIC TIME CLOCK WITH BATTERY BACKUP, INTERMATIC MODEL GM40AVE-RD89. APPROVED ALTERNATE: ARMSTRONG, TACO, GRUNDFOS. |
| S-1 | SINK - SINGLE COMPARTMENT<br>(17" X 20" X 6 1/2")<br>(ADA COMPLIANT) | 2 | 1 1/2 | 1 1/2 | 1/2 | 1/2 | ELKAY LUSTERTONE MODEL LRAD172065: 6-1/2" DEEP, STAINLESS STEEL SINK. PROVIDE AND INSTALL ELKAY MODEL LK3001CR SINGLE LEVER CHROME FAUCET WITH SWING SPOUT AND HOSE SPRAY. ELKAY MODEL LK35 STAINLESS STEEL STRAINER BASKET AND TAILPIECE, AND WATTS SERIES LFUSG-B LEAD-FREE, THERMOSTATIC MIXING VALVE, ASSE STANDARD 1070 LISTED, BRONZE BODY, INTEGRAL CHECK VALVES, AND SELECTABLE TEMPERATURE RANGE FROM 80°F TO 120°F. |
| SA-1 | SHOCK ABSORBER<br>(WATER HAMMER ARRESTOR) | -- | -- | -- | -- | -- | JAY R. SMITH FIGURE NUMBER 5005 TO 5050, SIZED PER FIXTURES SERVED. PROVIDE AN ACCESS PANEL AND A BALL TYPE SHUT-OFF VALVE UPSTREAM OF SHOCK ABSORBER.<br>APPROVED ALTERNATES: PRECISION PLUMBING PRODUCTS (PPP), SIOUX CHIEF, PROFLO, AND ZURN |
| SS-1 | SERVICE SINK<br>(24" X 24" X 10")<br>(FLOOR MOUNTED) | 3 | 2 | 3 | 1/2 | 1/2 | ACORN TERRAZZO-WARE MODEL TRH-242410: PROVIDE AND INSTALL WITH MODEL KFC CHROME UTILITY FAUCET, STAINLESS STEEL BUMPER GUARD, DRAIN GASKET, 36" HOSE AND WALL HANGER, MOP HANGER, AND (2) STAINLESS STEEL WALL GUARDS. MOUNT FAUCET 36" AFF. |
| TP-1 | TRAP PRIMER<br>(PRESSURE ACTIVATED)<br>(1 TO 4 TRAPS) | -- | -- | -- | 1/2" | -- | PRECISION PLUMBING PRODUCTS MODEL CPO-500 WITH DU DISTRIBUTION UNIT IF REQUIRED FOR SERVING MORE THAN ONE TRAP.<br>APPROVED ALTERNATES: MIFAB, SIOUX CHIEF, SLOAN, AND ZURN |
| TP-1 | TRAP PRIMER<br>(FLUSH VALVE PRIMER)<br>(1 TRAP) | -- | -- | -- | 1/2" | -- | PRECISION PLUMBING PRODUCTS MODEL FVP-1VB WITH VACUUM BREAKER. TRAP PRIMER TUBING SHALL BE INSTALLED OFF BACK OF FLUSH VALVE.<br>APPROVED ALTERNATES: MIFAB, SIOUX CHIEF, SLOAN, AND ZURN |
| TP-1 | TRAP PRIMER<br>(LAVATORY TAILPIECE PRIMER)<br>(1 TRAP) | -- | -- | -- | 1/2" | -- | DEARBORN BRASS 1-1/2" TRAP PRIMER TAILPIECE WITH COMPRESSION CONNECTION. |
| U-1 | URINAL<br>(FLUSH VALVE)<br>(SEE ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHT) | 2 | 1 1/2 | INT. | 3/4 | -- | KOHLER BARDON MODEL K-4991-ET WALL MOUNTED URINAL WITH 3/4" TOP SPUD.<br>SLOAN REGAL MODEL 186-0.5 FLUSHOMETER, 0.5 GPF.<br>INCLUDE BEEHIVE STRAINER AND JAY R. SMITH FIGURE NUMBER 0637 ADJUSTABLE FIXTURE SUPPORT. |
| WC-1 | WATER CLOSET (17-1/2" SEAT HEIGHT)<br>(FLUSH VALVE)<br>(FLOOR MOUNTED)<br>(COMFORT HEIGHT / ADA COMPLIANT) | 4 | 2 | INT. | 1 | -- | KOHLER HIGHCLIFF ULTRA MODEL K-96057 FLOOR MOUNTED WITH ELONGATED BOWL.<br>KOHLER LUSTRA MODEL K-4666-C ELONGATED OPEN FRONT SEAT WITH HINGE.<br>SLOAN REGAL MODEL 111-1.6 FLUSHOMETER, 1.6 GPF. |
| WCO | WALL CLEANOUT | SEE PLANS | -- | -- | -- | -- | JAY R. SMITH 4472T SERIES WITH CAST BRONZE TAPER THREAD PLUG, STAINLESS STEEL ROUND COVER, AND A STAINLESS STEEL VANDAL PROOF SCREW. |
| WH-1 | WATER HEATER<br>(20 GALLON)<br>(240V-1Ø ELECTRIC) | -- | -- | -- | SEE PLANS | SEE PLANS | BRADFORD WHITE MODEL LE120U3-1, SINGLE ELEMENT, 4.0 KW, 240V/1Ø, 18" DIAMETER, 25" TALL, WITH SIDE CONNECTIONS. PROVIDE WITH WALL BRACKET SUPPORT SIZED FOR WEIGHT, SEISMIC STRAPS, AND DRAIN PAN. |

NOTES:

1. ALL ADA COMPLIANT FIXTURES MUST COMPLY WITH ICC/ANSI A117.1. SEE ARCHITECTURAL PLANS FOR HANDICAPPED FIXTURE DESIGNATIONS, LOCATIONS, CLEARANCES, AND MOUNTING HEIGHTS.
2. ALL EXPOSED HW PIPING, CW PIPING, AND DRAIN LINES BENEATH ALL LAVATORIES AND ALL ADA COMPLIANT SINKS MUST BE INSULATED TO PREVENT INJURY. REFER TO ARCHITECTURAL PLANS. INSULATE WITH MOLDED CLOSED CELL VINYL INSULATION - TRUEBRO, PLUMBEREX, OR EQUAL.
3. PROVIDE P-TRAP PRIMERS FOR ALL FLOOR DRAINS AND FLOOR SINKS (NOT ALL TRAP PRIMERS ARE INDICATED ON PLANS - REFERENCE DETAILS FOR ADDITIONAL INFORMATION). PROVIDE A BALL TYPE SHUT-OFF VALVE UPSTREAM OF PRIMER VALVE. SEE SPECIFICATIONS.
4. SEE SPECIFICATIONS FOR ALTERNATE APPROVED MANUFACTURERS.
5. HIGH EFFICIENCY WATER HEATERS: PROVIDE WITH CONDENSATE NEUTRALIZATION KIT BY JJM BOILER WORKS MODEL JM (OR EQUAL), SIZED PER EQUIPMENT CAPACITY.
6. BACKFLOW PREVENTION: THIS BUILDING IS PROVIDED WITH A BACKFLOW PREVENTION DEVICE ON THE MAIN WATER SERVICE AND REDUCED PRESSURE BACKFLOW PREVENTION ON THE FOLLOWING PIECES OF EQUIPMENT:
   --
   --
   --



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Minidoka School District
292 W 100 S, Rupert, ID 83350

DATE: 07/23/21
LKV PROJECT #: 2321

DRAWN BY: PY
CHECKED BY: BC

Project Status

DRAWING NO.:
P5.0
PLUMBING SCHEDULES

# ELECTRICAL LEGEND - LIGHTING

REFERENCE FIXTURE SCHEDULE FOR MOUNTING TYPE, MOUNTING HEIGHT, AND FIXTURE TYPE.

- DOUBLE FACE EXIT SIGN, CEILING MOUNTED, PROVIDE UNSWITCHED CONDUCTOR.
- WALL MOUNTED DOUBLE FACE EXIT SIGN PROVIDE UNSWITCHED CONDUCTOR. MOUNT AT +8'-0" UNO.
- SINGLE FACE EXIT SIGN, CEILING MOUNTED PROVIDE UNSWITCHED CONDUCTOR.
- WALL MOUNTED SINGLE FACE EXIT SIGN PROVIDE UNSWITCHED CONDUCTOR. MOUNT AT +8'-0" UNO.
- ARROW INDICATES DIRECTION TO BE SHOWN ON SIGN.
- 1'X1' LIGHT FIXTURE.
- 1'X1' LIGHT FIXTURE, PROVIDE EMERGENCY BATTERY BACKUP CONNECTED TO AN UNSWITCHED CONDUCTOR.
- TRACK LIGHT
- 1'X4' LIGHT FIXTURE.
- 1'X4' LIGHT FIXTURE, PROVIDE EMERGENCY BATTERY BACKUP CONNECTED TO AN UNSWITCHED CONDUCTOR.
- 2'X4' LIGHT FIXTURE.
- 2'X4' LIGHT FIXTURE, PROVIDE EMERGENCY BATTERY BACKUP CONNECTED TO AN UNSWITCHED CONDUCTOR.
- 2'X2' LIGHT FIXTURE.
- 2'X2' LIGHT FIXTURE, PROVIDE EMERGENCY BATTERY BACKUP CONNECTED TO AN UNSWITCHED CONDUCTOR.
- DIRECT/INDIRECT LIGHT FIXTURE. SEE SCHEDULE FOR LENGTH.
- DIRECT/INDIRECT LIGHT FIXTURE. SEE SCHEDULE FOR LENGTH. PROVIDE EMERGENCY BATTERY BACKUP CONNECTED TO AN UNSWITCHED CONDUCTOR
- STRIP LIGHT FIXTURE. SEE SCHEDULE FOR LENGTH.
- STRIP LIGHT FIXTURE. SEE SCHEDULE FOR LENGTH. PROVIDE EMERGENCY BATTERY BACKUP CONNECTED TO AN UNSWITCHED CONDUCTOR
- WALL MOUNTED LIGHT FIXTURE.
- WALL MOUNTED LIGHT FIXTURE, PROVIDE EMERGENCY BATTERY BACKUP CONNECTED TO AN UNSWITCHED CONDUCTOR.
- RECESSED LIGHT FIXTURE
- RECESSED LIGHT FIXTURE. PROVIDE EMERGENCY BATTERY BACKUP CONNECTED TO AN UNSWITCHED CONDUCTOR.
- ROUND LIGHT FIXTURE
- ROUND EMERGENCY LIGHT FIXTURE. PROVIDE EMERGENCY BATTERY BACKUP CONNECTED TO AN UNSWITCHED CONDUCTOR.
- WALL MOUNTED LIGHT FIXTURE.
- WALL MOUNTED EMERGENCY LIGHT FIXTURE. PROVIDE EMERGENCY BATTERY BACKUP CONNECTED TO AN UNSWITCHED CONDUCTOR.
- POLE LIGHT 1 HEAD WITH POLE
- TC — TIME CLOCK
- PCS — PHOTO CONTROL CELL LOCATED 12" ABOVE ROOF FACING NORTH.
- OS — OCCUPANCY SENSOR. PROVIDE RELAYS AND POWER PACKS AS REQUIRED
- D — LED DRIVER
- EMERGENCY EGRESS LIGHTING WITH OUT FIXTURE HEADS. CONNECT TO AN UNSWITCHED CONDUCTOR.
- EMERGENCY EGRESS LIGHTING. CONNECT TO AN UNSWITCHED CONDUCTOR.
- XXX — INDICATES FIXTURE TYPE. REFER TO FIXTURE SCHEDULE.
- EXTERIOR WALL PACK
- EMERGENCY EXTERIOR WALL PACK. PROVIDE EMERGENCY BATTERY BACKUP CONNECTED TO AN UNSWITCHED CONDUCTOR

# DEVICES

SWITCH, TYPE AS INDICATED. +46"AFF

| | |
|---|---|
| 2 | DOUBLE POLE |
| 3 | 3-WAY |
| 4 | 4-WAY |
| K | KEYED |
| P | PILOT LIGHT |
| D | DIMMER |
| HP | HORSEPOWER RATED |
| TO | THERMAL OVERLOAD |
| LV | LOW VOLTAGE |
| OS | OCCUPANCY SENSOR |
| OR | LOW VOLTAGE, MOMENTARY OVERRIDE |
| VS | VACANCY SENSOR |
| a | SUPERSCRIPT INDICATES LIGHTS TO BE SWITCHED TOGETHER |

- S^OS — OCCUPANCY SENSOR WITH MANUAL DIMMING, SET FOR 50% AUTOMATIC ON, AUTOMATIC OFF, WITH MANUAL DIMMING.
- DUPLEX CONVENIENCE OUTLET, +18" AFF UNO
- FLOOR MOUNT DUPLEX CONVENIENCE OUTLET
- EMERGENCY DUPLEX CONVENIENCE OUTLET, +18" AFF UNO
- SWITCHED DUPLEX CONVENIENCE OUTLET, +18" AFF UNO
- FLOOR MOUNTED SWITCHED DUPLEX CONVENIENCE OUTLET
- USB DUPLEX CONVENIENCE OUTLET, +18" AFF UNO
- USB FOURPLEX CONVENIENCE OUTLET, +18" AFF UNO
- FOURPLEX CONVENIENCE OUTLET. +18"AFF UNO
- FLOOR MOUNT FOURPLEX CONVENIENCE OUTLET
- CONNECTION POINT TO EQUIPMENT SPECIFIED. ELECTRICAL CONTRACTOR TO SUPPLY RACEWAY AND CONDUCTORS AND MAKE FINAL CONNECTION TO EQUIPMENT UNDER THIS SECTION. UNO
- FLOOR MOUNTED CONNECTION POINT, SEE NOTE ABOVE FOR REQUIREMENTS
- FLOOR MOUNTED JUNCTION BOX
- JUNCTION BOX
- WALL MOUNTED PUSH BUTTON, MOUNT AT SWITCH HEIGHT UNO
- HC — WALL MOUNTED PUSH BUTTON, HANDICAPPED MOUNT AT SWITCH HEIGHT UNO
- WALL MOUNTED PUSH BUTTON, MOUNT AT SWITCH HEIGHT UNO
- MOTOR STARTER/CONTACTOR, SIZE/POLES NEMA 1 UNO AS INDICATED
- COMBINATION STARTER AND DISCONNECT, SIZE/POLES, STARTER SIZE AS INDICATED, NEMA 1 UNO
- FUSED DISCONNECT SWITCH, SIZE/POLES, FUSE SIZES AS INDICATED, NEMA 1 UNO
- NON-FUSED DISCONNECT SIZE/ POLES AS INDICATED, NEMA 1 UNO
- X-X — THERMOSTAT, +46" AFF PROVIDE CONDUIT, J-BOX, CONDUCTORS AS REQUIRED TO CONTROL ASSOCIATED UNITS. UNO COORDINATE WITH DIVISION 15.
- POWER POLE - DUAL CHANNEL
- T — TRANSFORMER
- PANELBOARD. SEE SCHEDULE FOR TYPE.
- EQUIPMENT CABINET, SURFACE MOUNTED
- EQUIPMENT CABINET FLUSH MOUNTED
- SURFACE MULTI-OUTLET RACEWAY
- # / # — MECHANICAL EQUIPMENT CALL OUT
- # — KITCHEN EQUIPMENT CALLOUT

# ONE LINE

- DELTA WYE TRANSFORMER UNO
- PANEL NAME VOLTAGE PHASE — PANEL BOARD, SEE SCHEDULE FOR TYPE AND SIZE
- ##A / #P — CIRCUIT BREAKER, SIZE AND POLES INDICATED
- ##A — FUSE, SIZE AND TYPE INDICATED, PROVIDE FUSE FOR EACH POLE
- ##A / #P — INTERRUPTER SWITCH, SIZE AND POLES INDICATED
- ##A / #P — FUSED SWITCH, SIZE/POLES AND FUSE SIZE INDICATED
- ##A / #P — DRAW OUT CIRCUIT BREAKER, SIZE AND POLES INDICATED
- 125A 3P (S) — INDIVIDUAL BREAKER WITH SHUNT TRIP, SIZE AND POLES INDICATED. NEMA 1 UNO
- 125A 3P — INDIVIDUAL BREAKER, SIZE AND POLES INDICATED. NEMA 1 UNO
- GFP — GROUND FAULT PROTECTION
- TVSS — TRANSIENT VOLTAGE SURGE SUPPRESSION
- LSIGR — ADJUSTABLE BREAKER SETTINGS (PER SPECIFICATIONS): 'L'-LONG TIME 'S'-SHORT TIME 'I'-INSTANTANEOUS 'G'-GROUND FAULT 'R'-ENERGY REDUCING MAINTENANCE SWITCH W/STATUS INDICATOR
- GROUND
- ST — SHUNT TRIP COIL
- M — MOTOR
- 100A 3P — DISCONNECT SWITCH, SIZE AND POLES INDICATED. NEMA 1 UNO
- OVERHEAD SERVICE DROP
- GENERATOR SET, MAIN BREAKER SIZE INDICATED
- AUTOMATIC TRANSFER SWITCH (ATS)
- M — METER AND BASE
- N — NEUTRAL
- T — DRY TYPE TRANSFORMER
- PAD MOUNT TRANSFORMER

# ELECTRICAL ABBREVIATIONS

| | |
|---|---|
| A | AMPERES |
| AC | 6" ABOVE BACKSPLASH |
| AFF | ABOVE FINISHED FLOOR |
| AFG | ABOVE FINISHED GRADE |
| AF | AMP FRAME |
| AIC | AMPS INTERRUPTING CAPACITY |
| AT | AMP TRIP |
| ATS | AUTOMATIC TRANSFER SWITCH |
| AWG | AMERICAN WIRE GAUGE |
| BD | BOTTOM OF DECK |
| BS | BOTTOM OF STRUCTURE |
| C | CEILING MOUNTED |
| C | CONDUIT |
| CB | CIRCUIT BREAKER |
| CF | COMPACT FLUORESCENT |
| CKT | CIRCUIT |
| CO | CONDUIT ONLY, PROVIDE PULL-LINE |
| CT | CURRENT TRANSFORMER |
| CTL | CONTROL |
| DC | DIRECT CURRENT |
| (D) | DEMOLITION |
| DEMO | DEMOLITION |
| DET | DETAIL |
| DTT | DOUBLE TWIN TUBE |
| E | EMERGENCY |
| (E) | EXISTING |
| EC | ELECTRICAL CONTRACTOR |
| EL | EMERGENCY LIGHT |
| F | FUSE |
| (F) | FUTURE |
| FACP | FIRE ALARM CONTROL PANEL |
| G/GND | GROUND |
| GFCI | GROUND FAULT CIRCUIT INTERRUPTER |
| GFI | GROUND FAULT INTERRUPTER |
| HH | HAND HOLE |
| HID | HIGH INTENSITY DISCHARGE |
| HOA | HAND-OFF-AUTO |
| HPS | HIGH PRESSURE SODIUM |
| HVAC | HEATING, VENTILATION, & AIR CONDITIONING |
| IG | ISOLATED GROUND |
| IPCO | IDAHO POWER COMPANY |
| J-BOX | JUNCTION BOX |
| KA | KILOAMP |
| KVA | KILO VOLT-AMP |
| KW | KILOWATT |
| KWH | KILOWATT HOUR |
| LCP | LIGHTING CONTROL PANEL |
| MB | MAIN BREAKER |
| MBR | MAIN CIRCUIT BREAKER |
| MCC | MOTOR CONTROL CENTER |
| MDP | MAIN DISTRIBUTION PANEL |
| MLO | MAIN LUGS ONLY |
| MMC | MODULAR METERING CENTER |
| MH | METAL HALIDE |
| MSB | MAIN SWITCH BOARD |
| MTG | MOUNTING |
| N | NEUTRAL |
| (N) | NEW |
| NC | NORMALLY CLOSED |
| NEC | NATIONAL ELECTRICAL CODE |
| NIC | NOT IN CONTRACT |
| NL | NIGHT LIGHT |
| NO | NORMALLY OPEN |
| NTS | NOT TO SCALE |
| OH | OVERHEAD |
| OS | OCCUPANCY SENSOR |
| P | POLES |
| PC | PHOTO-CONTROL |
| PVC | POLYVINYL CHLORIDE |
| PWR | POWER |
| RE: | REFERENCE |
| REC | RECEPTACLE |
| (R) | RELOCATED |
| SF | SQUARE FEET |
| TBD | TO BE DETERMINED |
| TDR | TIME DELAY RELAY |
| TK | TOE KICK |
| TSP | TWISTED SHIELDED PAIR |
| TRT | TRIPLE TUBE |
| TTB | TELEPHONE TERMINAL BOARD |
| (TYP.) | TYPICAL |
| UC | UNDERCABINET |
| UG | UNDERGROUND |
| U.N.O. | UNLESS NOTED OTHERWISE |
| V | VOLT |
| VA | VOLT-AMPERE |
| W | WATT |
| WG | WIRE GUARD |
| WP | WEATHER PROOF/NEMA 3R |

| | |
|---|---|
| PROVIDED/ PROVIDE BY INSTALLED/ INSTALL | PROVIDE AND INSTALL / PROVIDED AND INSTALLED BY / PROVIDE AND INSTALL |

NOTE: THIS IS A STANDARD LIST OF COMMONLY USED ELECTRICAL ABBREVIATIONS. SOME OF THE ABBREVIATIONS SHOWN ABOVE MAY NOT BE USED IN THIS DRAWING PACKAGE.

# ELECTRICAL GENERAL NOTES

A. THESE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC IN NATURE; THEREFORE, THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL ELECTRICAL EQUIPMENT AND DEVICE LOCATIONS WITH ARCHITECTURAL, MECHANICAL, AND PLUMBING DIVISIONS PRIOR TO ROUGH-IN. REFER TO AND COORDINATE WITH ARCHITECTURAL, MECHANICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL WORK THAT IS REQUIRED BY THE ELECTRICAL CONTRACTOR.

B. ALL CONDUIT AND JUNCTION BOXES ARE TO BE CONCEALED UNLESS LOCATED WITHIN DEDICATED ELECTRICAL OR MECHANICAL ROOMS. USE OF SURFACE MOUNTED RACEWAYS IN ALL OTHER SPACES MUST BE APPROVED BY THE ARCHITECT FOR EACH LOCATION. WHERE SURFACE RACEWAYS ARE APPROVED, UTILIZE WIREMOLD, OR APPROVED EQUAL. SURFACE MOUNTED RACEWAYS PAINTED TO MATCH SURROUNDING WALLS.

C. REFER TO ARCHITECTURAL ELEVATIONS FOR OUTLET HEIGHTS WHERE THE SPECIFIC OUTLET HEIGHT IS NOT INDICATED. REFER TO THE ELECTRICAL LEGEND FOR THE DEFAULT OUTLET HEIGHT WHEN NOT INDICATED ON ELEVATIONS OR ON AT THE DEVICES.

D. PROVIDE PULL-LINE IN ALL EMPTY CONDUITS.

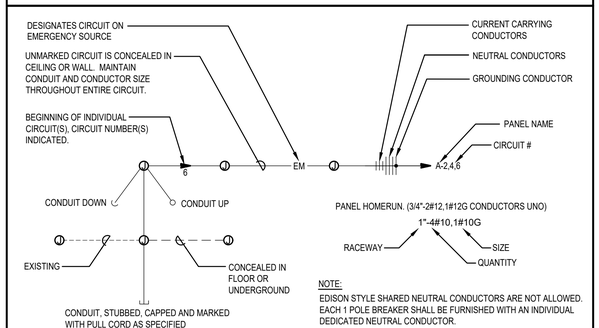
E. TERMINATE ALL LOW-VOLTAGE CONDUITS WITH INSULATED THROAT BUSHING.

F. MECHANICAL EQUIPMENT INDICATED IS SHOWN IN AN APPROXIMATE LOCATION. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.

# COMMUNICATIONS

- JUNCTION BOX FOR FUTURE TELEPHONE/DATA OUTLET. MOUNT AT 18" A.F.F. UNO. PROVIDE SINGLE-GANG MUD RING WITH BLANK COVER PLATE. PROVIDE 1" CONDUIT TO NEAREST ACCESSIBLE CEILING SPACE.
- #D,#T — TELEPHONE/DATA OUTLET. MOUNT AT 18" A.F.F. UNO. PROVIDE 1" CONDUIT TO NEAREST ACCESSIBLE CEILING. INSTALL QUANTITY OF DATA (#D) AND TELEPHONE (#T) CABLES INDICATED TO THE NEAREST DATA RACK. PROVIDE (2) DATA CABLES IF A CABLE QUANTITY IS NOT INDICATED.
- FLOOR MOUNTED BOX FOR FUTURE TELEPHONE/DATA OUTLET. JUNCTION BOX WITH SINGLE-GANG MUD RING. PROVIDE 1" CONDUIT TO NEAREST ACCESSIBLE CEILING SPACE. PROVIDE BLANK COVER PLATE.
- #D,#T — FLOOR MOUNTED TELEPHONE/DATA OUTLET. PROVIDE 1" CONDUIT TO NEAREST ACCESSIBLE CEILING. INSTALL QUANTITY OF DATA (#D) AND TELEPHONE (#T) CABLES INDICATED TO THE NEAREST DATA RACK. PROVIDE (2) DATA CABLES IF A CABLE QUANTITY IS NOT INDICATED.
- IC — INTERCOM SYSTEM CALL BUTTON. +46" UNO.
- SP — CEILING MOUNTED SPEAKER WITH BACKBOX
- WSP — WALL MOUNTED SPEAKER, WITH BACKBOX +80" UNO
- V — VOLUME CONTROL, +46" UNO
- TV — TELEVISION OUTLET, +18" AFF UNO. PROVIDE 1-1/4" CONDUIT TO NEAREST ACCESSIBLE CEILING SPACE
- TV — CEILING MOUNTED TELEVISION OUTLET
- TTB — TELEPHONE TERMINAL BOARD
- CT-XX — CABLE TRAY, 4" DEEP, WIRE BASKET STYLE, 'XX' INDICATES WIDTH PROVIDE ALL FITTINGS AND SUPPORT HARDWARE REQUIRED

# CIRCUITING SYMBOLS




NOTE:
EDISON STYLE SHARED NEUTRAL CONDUCTORS ARE NOT ALLOWED. EACH 1 POLE BREAKER SHALL BE FURNISHED WITH AN INDIVIDUAL DEDICATED NEUTRAL CONDUCTOR.

NOTE: THIS IS A STANDARD LIST OF COMMONLY USED ELECTRICAL SYMBOLS. SOME OF THE SYMBOLS SHOWN MAY NOT HAVE BEEN USED IN THIS DRAWING PACKAGE.


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Project No. 21-286

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Revisions
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Minidoka School District
292 W 100 S, Rupert, ID 83350

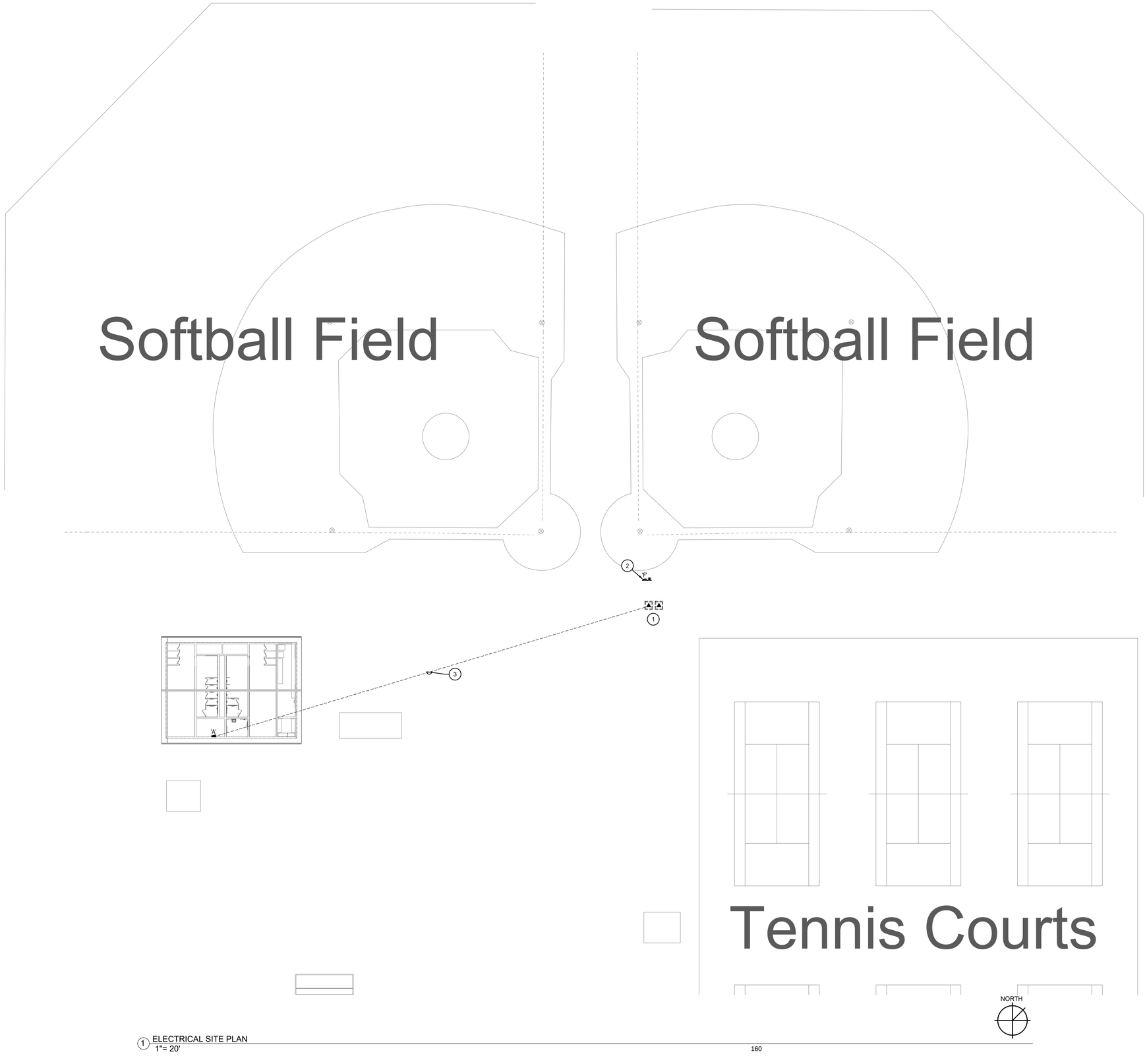
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E0.0
ELECTRICAL COVER SHEET

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1 ELECTRICAL SITE PLAN
1"= 20'

## KEYED NOTES:

(#) SYMBOL USED FOR NOTE CALLOUT.

1. APPROXIMATE LOCATION OF EXISTING PAD MOUNTED UTILITY TRANSFORMERS. SHOWN FOR REFERENCE.
2. APPROXIMATE LOCATION OF EXISTING ELECTRICAL PANEL AND UTILITY METER SERVING THE FIELD LIGHTING.
3. PROVIDE UNDERGROUND CONDUIT AND CONDUCTORS FROM THE EXISTING PAD MOUNTED, 240/120-VOLT, SINGLE-PHASE, UTILITY TRANSFORMER TO THE NEW TEAM BUILDING ELECTRICAL PANEL. COORDINATE FINAL ROUTE WITH THE EXISTING CONDITIONS AND THE OWNER PRIOR TO BEGINNING WORK. COORDINATE CONNECTION TO THE UTILITY TRANSFORMER WITH THE LOCAL ELECTRICAL UTILITY. RE:ONE-LINE DIAGRAM.

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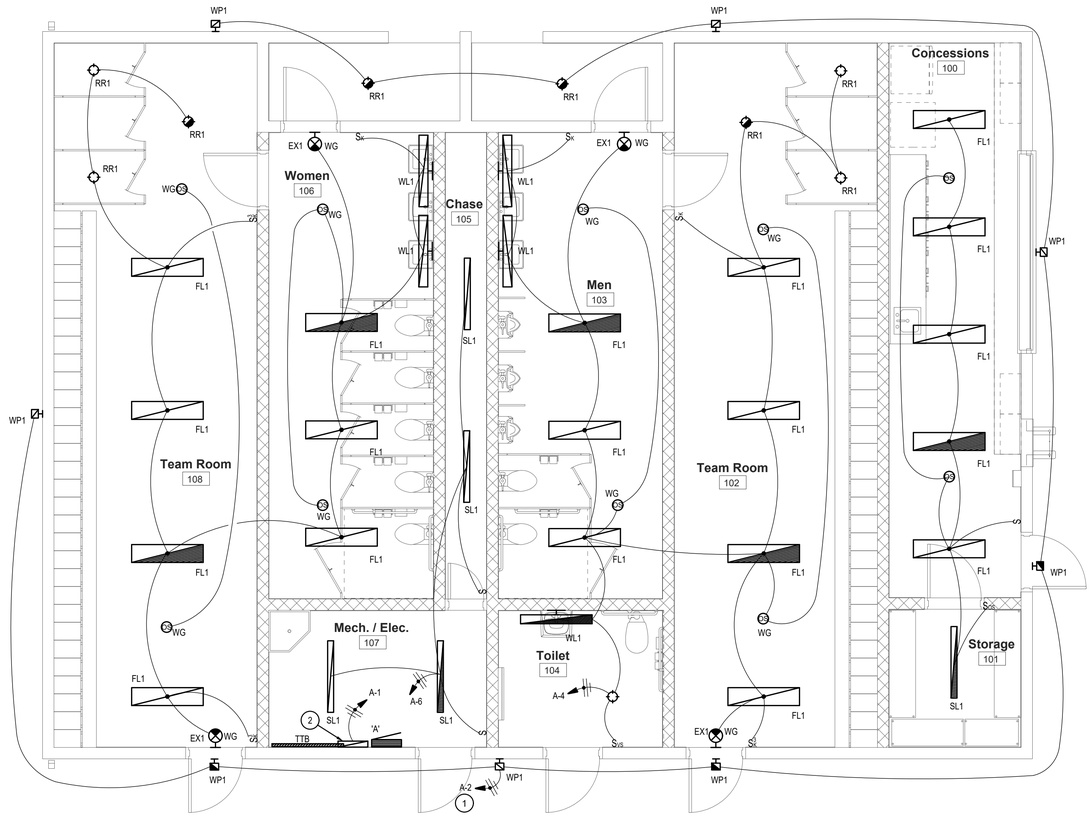
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DRAWING NO.:
E1.0
ELECTRICAL SITE PLAN




1 LIGHTING PLAN
1/4" = 1'-0"

## KEYED NOTES:

(#) SYMBOL USED FOR NOTE CALLOUT.

1. ROUTE CIRCUIT THROUGH EXTERIOR LIGHTING TIME CLOCK.
2. PROVIDE 7-DAY, PROGRAMMABLE, ASTRONOMICAL TIME CLOCK FOR CONTROL OF THE EXTERIOR BUILDING LIGHTING. PROGRAM LIGHTING ON/OFF HOURS AS DIRECTED BY THE OWNER.

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E2.1
LIGHTING PLAN

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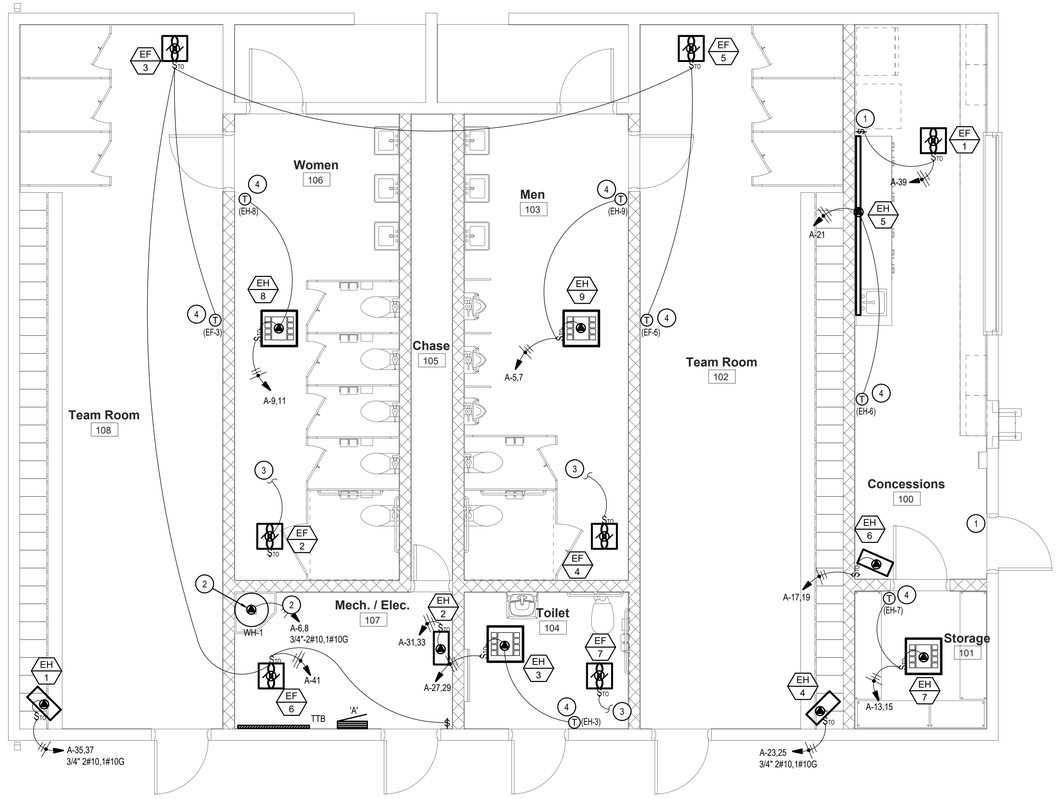
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## KEYED NOTES:

(#) SYMBOL USED FOR NOTE CALLOUT.

1. PROVIDE PILOT LIGHT SWITCH FOR EXHAUST FAN CONTROL. PILOT LIGHT SWITCH SHALL ILLUMINATE WHEN THE EXHAUST FAN IS ON. LABEL SWITCH "EXHAUST FAN".
2. CONNECT WATER HEATER AND ALL ASSOCIATED DEVICES AND EQUIPMENT.
3. CONNECT TO LIGHTING CIRCUIT IN THIS ROOM.
4. LINE VOLTAGE HEAT RISE T-STAT. 1/2" CONDUIT TO ASSOCIATED MECHANICAL UNIT. BOX, CONDUIT, AND CONDUCTORS TO BE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. COORDINATE WITH MECHANICAL CONTRACTOR.




NORTH

1 MECHANICAL POWER PLAN
1/4" = 1'-0"

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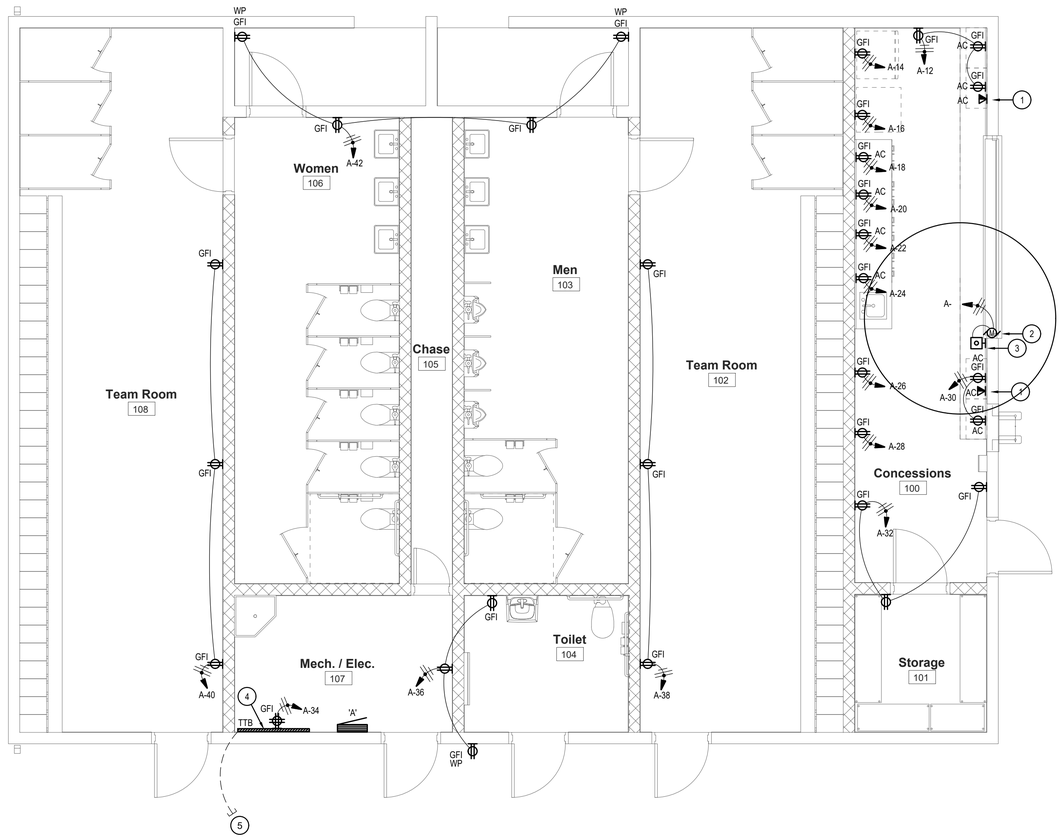
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E2.2
MECHANICAL POWER PLAN

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NORTH

1 ELECTRICAL PLAN
1/4" = 1'-0"

## KEYED NOTES:

(#) SYMBOL USED FOR NOTE CALLOUT.

1. JUNCTION BOX WITH BLANK COVER PLATE FOR FUTURE DATA OUTLET. PROVIDE 3/4" CONDUIT FROM THE JUNCTION BOX TO THE 'TTB' FOR FUTURE CABLING.
2. ELECTRICAL CONNECTION FOR MOTORIZED ROLL-UP DOOR. PROVIDE CONNECTION TO MOTOR, CONTROLLER, AND ALL ASSOCIATED SENSORS AND SAFETY EQUIPMENT. COORDINATE REQUIREMENTS WITH THE DOOR SUPPLIER PRIOR TO ROUGH-IN.
3. ROLL-UP DOOR CONTROLLER MOUNTED ABOVE THE COUNTER. PROVIDE JUNCTION BOX, CABLING, AND CONDUIT AS REQUIRED FOR CONNECTION.
4. TELEPHONE TERMINAL BOARD. RE: TELEPHONE TERMINAL BOARD DETAIL
5. PROVIDE A 2" CONDUIT FROM THE TTB TO A LOCATION 5-FEET OUTSIDE THE BUILDING FOOTPRINT FOR FUTURE COMMUNICATIONS CABLING. CAP CONDUIT AND MARK THE STUB OUT LOCATION.

| Revisions | | |
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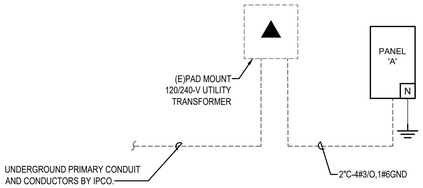
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E2.3
ELECTRICAL PLAN

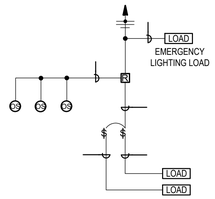



## DETAIL GENERAL NOTES:

A. CONDUIT, CONDUCTORS AND AIC CALCULATIONS FOR ALL SERVICE, PANEL AND EQUIPMENT FEEDERS INDICATED ON THE ONE-LINE HAVE BEEN SIZED BASED ON COPPER. THE CONTRACTOR MAY USE COMPRESSED ALUMINUM CONDUCTORS FOR THESE FEEDERS PROVIDING THE CONDUIT, CONDUCTOR SIZES AND AIC CALCULATIONS ARE ADJUSTED AS REQUIRED TO MEET ALL NATIONAL ELECTRICAL CODE REQUIREMENTS.

B. FURNISH AND INSTALL ENGRAVED LABEL ON THE FRONT OF THE MAIN SERVICE EQUIPMENT NOTING THE AVAILABLE FAULT CURRENT VALUE SHOWN.

# ONE-LINE DIAGRAM
NTS

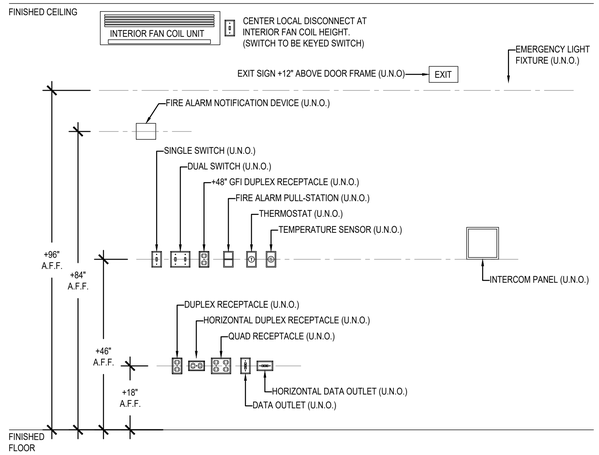



## DETAIL KEYED NOTES:

SYMBOL USED FOR NOTE CALLOUT.

1. UNSWITCHED LINE VOLTAGE POWER FEED FROM LOCAL PANEL.
2. POWER/RELAY PACK RATED FOR UP TO 3 SENSORS AND 15A LINE VOLTAGE SWITCHING. PROVIDE QUANTITY AS REQUIRED FOR A COMPLETE INSTALLATION.
3. LOW VOLTAGE OCCUPANCY SENSOR, UP TO 3 PER POWER PACK. PROVIDE WITH ISOLATED NO/NC AUXILIARY CONTACTS FOR HVAC INTERLOCK. QUANTITY AS INDICATED ON PLANS. LOCATION PER THE MANUFACTURERS RECOMMENDATIONS.
4. WALL MOUNTED LINE VOLTAGE SNAP SWITCH(ES). QUANTITY AND LOCATION AS INDICATED ON PLANS.
5. LOW VOLTAGE POWER AND CONTROL CONDUCTORS AS REQUIRED FOR A COMPLETE INSTALLATION.
6. LINE VOLTAGE SWITCHED LEG FROM RELAY PACK TO LOCAL WALL SWITCHES.
7. LINE VOLTAGE SWITCHED LEG FROM SWITCHES TO LIGHTING LOAD.
8. SECOND SWITCH FOR DUAL LEVEL LIGHTING WHERE INDICATED ON PLANS.

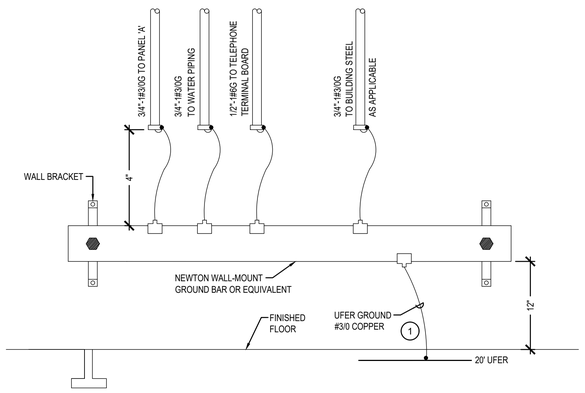
# OCCUPANCY SENSORS DETAIL
NTS




## DETAIL GENERAL NOTES:

1. PROVIDE FRAMING AS REQUIRED.

# STANDARD MOUNTING HEIGHTS
NTS




## DETAIL GENERAL NOTES:

A. ALL CONDUCTORS SHALL BE IN EMT CONDUIT UNLESS NOTED OTHERWISE. ALL CONDUIT SHALL HAVE A GROUNDING BUSHING AT EACH END.

B. ALL CONNECTIONS SHALL BE EXOTHERMIC WELD, LISTED PRESSURE CONNECTORS, LISTED CLAMPS OR OTHER LISTED MEANS.

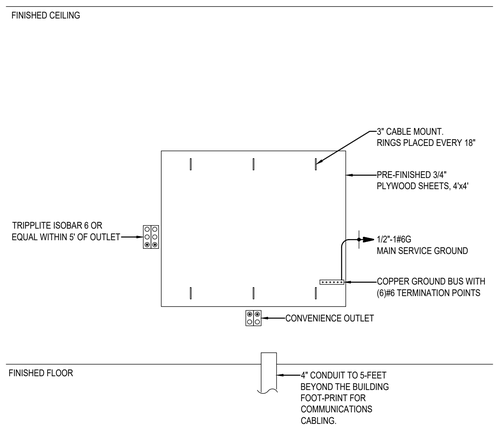
C. PROVIDE BONDING OF GAS PIPING PER NEC 250.104(B)(1).

## DETAIL KEYED NOTES:

(#) SYMBOL USED FOR NOTE CALLOUT.

1. UFER GROUND TO BE 20' OF #4 AWG COPPER OR 1/2" MINIMUM DIAMETER STEEL REINFORCING BAR PER 250.52.

# GROUNDING BAR DETAIL
NTS




# TELEPHONE TERMINAL BOARD DETAIL
NTS



MUSGROVE
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Idaho Falls, ID 83402
208.523.2862
www.musgrovepa.com
Project No. 21-286

LKV ARCHITECTS
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www.lkvarchitects.com
208.336.3443

PROFESSIONAL ENGINEER REGISTERED 10389 7/23/2021 STATE OF IDAHO KURT L ECHTENKAMP

| Revisions | Description | Date |
|---|---|---|
| 1 | | |

Minico HS Team Building
Minidoka School District
292 W 100 S, Rupert, ID 83350

DATE: 07/23/21
LKV PROJECT #: 2321

DRAWN BY: EH
CHECKED BY: KL

Project Status

DRAWING NO.:
E3.0
ELECTRICAL DETAILS

## COMcheck Software Version 4.1.5.3

# Interior Lighting Compliance Certificate

### Project Information

Energy Code: 2018 IECC
Project Title: Minico HS Team Building
Project Type: New Construction

Construction Site:
292 W 100 S
Rupert, ID 83350

Owner/Agent:

Designer/Contractor:
Musgrove Engineering
234 S Whisperwood Way
Boise, ID 83709
208-384-0585

### Additional Efficiency Package(s)

Credits: 1.0 Required 1.0 Proposed
Reduced Lighting Power, 1.0 credit

### Allowed Interior Lighting Power

| A Area Category | B Floor Area (ft2) | C Allowed Watts / ft2 | D Allowed Watts (B X C) |
|---|---|---|---|
| 1-CONCESSIONS (Common Space Types:Food Preparation) | 274 | 0.95 | 260 |
| 2-LOCKER ROOMS (Common Space Types:Locker Room) | 900 | 0.43 | 387 |
| 3-ELEC/MECH ROOM (Common Space Types:Electrical/Mechanical) | 91 | 0.39 | 35 |
| 4-RESTROOMS (Common Space Types:Restrooms) | 550 | 0.77 | 424 |
| 5-CHASE (Common Space Types:Storage >=50 - <=1000 sq.ft.) | 56 | 0.41 | 23 |
| | | Total Allowed Watts = | 1129 |

### Proposed Interior Lighting Power

| A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast | B Lamps/ Fixture | C # of Fixtures | D Fixture Watt. | E (C X D) |
|---|---|---|---|---|
| 1-CONCESSIONS (Common Space Types:Food Preparation) | | | | |
| LED 1: FL1: 1X4 FLAT PANEL: Other: | 1 | 5 | 28 | 140 |
| LED 3: SL1: 4' STRIP LIGHT: Other: | 1 | 1 | 28 | 28 |
| 2-LOCKER ROOMS (Common Space Types:Locker Room) | | | | |
| LED 1 copy 1: FL1: 1X4 FLAT PANEL: Other: | 1 | 8 | 28 | 224 |
| LED 2: RR1: 6" ROUND RECESSED: Other: | 1 | 6 | 10 | 62 |
| 3-ELEC/MECH ROOM (Common Space Types:Electrical/Mechanical) | | | | |
| LED 3 copy 1: SL1: 4' STRIP LIGHT: Other: | 1 | 2 | 28 | 55 |
| 4-RESTROOMS (Common Space Types:Restrooms) | | | | |
| LED 4: WL1: 4' WALL MOUNTED: Other: | 1 | 5 | 48 | 240 |
| LED 1 copy 2: FL1: 1X4 FLAT PANEL: Other: | 1 | 6 | 28 | 168 |
| 5-CHASE (Common Space Types:Storage >=50 - <=1000 sq.ft.) | | | | |
| LED 3 copy 1: SL1: 4' STRIP LIGHT: Other: | 1 | 2 | 28 | 55 |
| | | Total Proposed Watts = | | 972 |



**Interior Lighting PASSES: Design 14% better than code**

### Interior Lighting Compliance Statement

*Compliance Statement:* The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.3 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

KURT LECTHENBERG — Signature — 7/23/21
Name - Title — Date



## COMcheck Software Version 4.1.5.3

# Exterior Lighting Compliance Certificate

### Project Information

Energy Code: 2018 IECC
Project Title: Minico HS Team Building
Project Type: New Construction
Exterior Lighting Zone 3 (Other (LZ3))

Construction Site:
292 W 100 S
Rupert, ID 83350

Owner/Agent:

Designer/Contractor:
Musgrove Engineering
234 S Whisperwood Way
Boise, ID 83709
208-384-0585

### Allowed Exterior Lighting Power

| A Area/Surface Category | B Quantity | C Allowed Watts / Unit | D Tradable Wattage | E Allowed Watts (B X C) |
|---|---|---|---|---|
| Pedestrian and vehicular entrances and exits | 21 ft of door | 21 | Yes | 441 |
| Illuminated area of facade wall or surface | 800 ft2 | 0.11 | No | 90 |
| | | | Total Tradable Watts (a) = | 441 |
| | | | Total Allowed Watts = | 531 |
| | | | Total Allowed Supplemental Watts (b) = | 500 |

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
(b) A supplemental allowance equal to 500 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

### Proposed Exterior Lighting Power

| A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast | B Lamps/ Fixture | C # of Fixtures | D Fixture Watt. | E (C X D) |
|---|---|---|---|---|
| Pedestrian and vehicular entrances and exits (21 ft of door width): Tradable Wattage | | | | |
| LED 1: WP1: LED WALL PACK: Other: | 1 | 4 | 24 | 96 |
| LED 2: RR1: 6" ROUND RECESSED: Other: | 1 | 2 | 10 | 21 |
| Illuminated area of facade wall or surface (800 ft2): Non-tradable Wattage | | | | |
| LED 1 COPY: WP1: LED WALL PACK: Other: | 1 | 4 | 24 | 96 |
| | | | Total Tradable Proposed Watts = | 117 |

**Exterior Lighting PASSES: Design 88% better than code**

### Exterior Lighting Compliance Statement

*Compliance Statement:* The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.3 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

KURT LECHTENBERG — Signature — 7/23/21
Name - Title — Date



## LIGHTING FIXTURE SCHEDULE (21-286)

| TYPE | DESCRIPTION | MTG. | LAMPS | WATTS | MFG. & CATALOG NUMBER | OR EQUAL BY | NOTES |
|---|---|---|---|---|---|---|---|
| | CONTEMPORARY THERMOPLASTIC EXIT SIGN, | AS | | | LITHONIA NO. | LIGHTOLIER | |
| EX1 | GREEN STENCIL FACE, SINGLE FACE, WITH | NOTED | LED | 1 | LQM-S-3-120/277-ELN | SURELITES | 1 |
| | NICKEL-CADMIUM BATTERY, WHITE COLOR | ON PLANS | | | | LIGHTGUARD | |
| | 1X4, FLANGED FLAT PANEL LED | CEILING | LED | | LITHONIA NO. | PHILIPS | |
| FL1 | REMOTE EMERGENCY BATTERY TEST SWITCH WHERE | RECESSED | 3300 LUMENS | 28 | CPANL-1X4-24/33/44LM-40K-M4-DGA14 | COOPER, HUBBELL | 1 |
| | APPLICABLE | | 4000K | | (PROVIDE PS1055CPFMC BATTERY WHERE EMERGENCY LIGHT FIXTURE IS INDICATED) | H.E. WILLIAMS | |
| | 6" RECESSED CAN LIGHT, CLEAR AND | CEILING | LED | | LITHONIA NO. | LIGHTOLIER | |
| RR1 | SEMI-SPECULAR | RECESSED | 1000 LUMENS | 10.4 | LDN6-40/10-L06-AR-LSS-MVOLT-GZ10-EL10WCP | HALO COMMERCIAL | 1 |
| | | | 4000K | | | PRESCOLITE | |
| | 4FT LED STRIP LIGHT, ROUND DIFFUSE LENS | CEILING | LED | | LITHONIA NO. | PHILIPS | |
| SL1 | SURFACE MOUNTED | SURFACE | 4262 LUMENS | 27.58 | CLX-L48-4000LM-SEF-RDL-MVOLT-GZ10-40K-80CRI-PS1050-WH | METALUX, HUBBELL | 1 |
| | | | 4000K | | (PROVIDE PS1050 WHERE INDICATED) | H.E. WILLIAMS | |
| | WALL MOUNTED LED FIXTURE, | WALL | LED | | KENALL NO. | | |
| WL1 | HIGH IMPACT CLEAR PRISMATIC LENS, | MOUNTED | 3900L | 48 | N548-P-1-45L40K-DCC-1-DV | | 1 |
| | INTERNAL REFLECTOR | 8'-6" AFF | 4000K | | | | |
| | LED WALL PACK | WALL | LED | | LITHONIA NO. | | |
| WP1 | | MOUNTED | 1,900 LUMENS | 24 | WPX1-LED-P2-40K-MVOLT-E14WC-DDBXD | | 1 |
| | | 8'-6" AFF | 4000K | | (PROVIDE E14WC BATTERY WHERE EMERGENCY LIGHT FIXTURE IS INDICATED) | | |

**LIGHTING FIXTURE SCHEDULE NOTES:**

1 SUBSTITUTIONS WILL BE ALLOWED IF SUBMITTED PRIOR TO BID DATE BY THE GREATER OF: 7 BUSINESS DAYS OR THE TIME PERIOD SPECIFIED BY DIVISION 1 SPECIFICATIONS, AND IF DEEMED EQUAL BY THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING SUBSTITUTED FIXTURES MEET OR EXCEED THE SPECIFICATIONS OF THE FIXTURES SPECIFIED.

**PANEL: A** — PROJEC MINCO HIGH SCHOOL TEAM BUILDING

VOLTAGE: 240 / 120 V | 1 PH | 3 WIRE | AMPERE RATING: 225A | WITH 200A CB | MOUNTING: SURFACE
BASIS OF DESIGN PANEL TYPE: | NEMA ENCLOSURE TYPE: 1 | PANEL AIC RATING: 10000 AIC
CKT NOTES: | REMARKS: SINGLE SECTION PANEL, SERVICE ENTRANCE RATED

| CKT | DESCRIPTION | CKT NOTE | LOAD VA | LOAD AMPS | AMPS/ POLES | LOAD (VA) A | LOAD (VA) N/A | LOAD (VA) C | AMPS/ POLES | LOAD AMPS | LOAD VA | CKT NOTE | DESCRIPTION | CKT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | TIME CLOCK - EXTERIOR LIGHTING | | 120 | 1.0 | 20 1 | 540 | | | 20 1 | 3.5 | 420 | | LTG - EXTERIOR | 2 |
| 3 | ROLL-UP DOOR - CONCESSIONS | | 600 | 5.0 | 20 1 | | | 1179 | 20 1 | 4.8 | 579 | | LTG- EAST, EF-4,EF-7 | 4 |
| 5 | EH-9 | | 1500 | 12.5 | 20 2 | 1927 | | | 20 1 | 3.6 | 427 | | LTG - WEST, EF-2 | 6 |
| 7 | *** | | 1500 | 12.5 | ** * | | | 3500 | 30 2 | 16.7 | 2000 | | WH-1 | 8 |
| 9 | EH-8 | | 1500 | 12.5 | 20 2 | 3500 | | | ** * | 16.7 | 2000 | | *** | 10 |
| 11 | *** | | 1500 | 12.5 | ** * | | | 2040 | 20 1 | 4.5 | 540 | | REC - CONCESSIONS | 12 |
| 13 | EH-7 | | 1000 | 8.3 | 20 2 | 1180 | | | 20 1 | 1.5 | 180 | | REC - CONCESSIONS | 14 |
| 15 | *** | | 1000 | 8.3 | ** * | | | 1180 | 20 1 | 1.5 | 180 | | REC - CONCESSIONS | 16 |
| 17 | EH-6 | | 1500 | 12.5 | 20 2 | 1680 | | | 20 1 | 1.5 | 180 | | REC - CONCESSIONS | 18 |
| 19 | *** | | 1500 | 12.5 | ** * | | | 1680 | 20 1 | 1.5 | 180 | | REC - CONCESSIONS | 20 |
| 21 | EH-5 | | 1250 | 10.4 | 20 1 | 1430 | | | 20 1 | 1.5 | 180 | | REC - CONCESSIONS | 22 |
| 23 | EH-4 | | 2500 | 20.8 | 30 2 | | | 2680 | 20 1 | 1.5 | 180 | | REC - CONCESSIONS | 24 |
| 25 | *** | | 2500 | 20.8 | ** * | 2680 | | | 20 1 | 1.5 | 180 | | REC - CONCESSIONS | 26 |
| 27 | EH-3 | | 1000 | 8.3 | 20 2 | | | 1180 | 20 1 | 1.5 | 180 | | REC - CONCESSIONS | 28 |
| 29 | *** | | 1000 | 8.3 | ** * | 1360 | | | 20 1 | 3.0 | 360 | | REC - CONCESSIONS | 30 |
| 31 | EH-2 | | 1000 | 8.3 | 20 2 | | | 1540 | 20 1 | 4.5 | 540 | | REC - CONCESSIONS | 32 |
| 33 | *** | | 1000 | 8.3 | ** * | 1180 | | | 20 1 | 1.5 | 180 | | REC - TTB | 34 |
| 35 | EH-1 | | 2500 | 20.8 | 30 2 | | | 3040 | 20 1 | 4.5 | 540 | | REC - MECH ROOM | 36 |
| 37 | *** | | 2500 | 20.8 | ** * | 3040 | | | 20 1 | 4.5 | 540 | | REC - TEAM ROOM | 38 |
| 39 | EF-1 | | 81 | 0.7 | 20 1 | | | 621 | 20 1 | 4.5 | 540 | | REC- TEAM ROOM | 40 |
| 41 | EF-3, EF-5, EF-6 | | 270 | 2.3 | 20 1 | 990 | | | 20 1 | 6.0 | 720 | | REC- ENTRANCE | 42 |
| 43 | SPARE | | | 0.0 | 20 1 | | | 0 | 20 1 | 0.0 | | | SPARE | 44 |
| 45 | SPARE | | | 0.0 | 20 1 | 0 | | | 20 1 | 0.0 | | | SPARE | 46 |
| 47 | SPARE | | | 0.0 | 20 1 | | | 0 | 20 1 | 0.0 | | | SPARE | 48 |
| 49 | SPARE | | | 0.0 | 20 1 | 0 | | | 20 1 | 0.0 | | | SPARE | 50 |
| 51 | SPARE | | | 0.0 | 20 1 | | | 0 | 20 1 | 0.0 | | | SPARE | 52 |
| 53 | SPARE | | | 0.0 | 20 1 | 0 | | | 20 1 | 0.0 | | | SPARE | 54 |
| 55 | SPARE | | | 0.0 | 20 1 | | | 0 | 20 1 | 0.0 | | | SPARE | 56 |
| 57 | SPARE | | | 0.0 | 20 1 | 0 | | | 20 1 | 0.0 | | | SPARE | 58 |
| 59 | SPARE | | | 0.0 | 20 1 | | | 0 | 20 1 | 0.0 | | | SPARE | 60 |
| | | | | | | 19507.0 | | 18640.0 | VA | | | | | |
| | | | | | | 162.6 | | 155.3 | AMPS | | | | 38147 TOTAL VA | |



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Project No. 21-286

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208.336.3443

PROFESSIONAL ENGINEER REGISTERED 10389 7/23/2021 STATE OF IDAHO KURT L LECHTENBERG

Revisions
Description | Date
# |

Minico HS Team Building
Minidoka School District
292 W 100 S, Rupert, ID 83350

DATE: 07/23/21
LKV PROJECT #: 2321

DRAWN BY: EH
CHECKED BY: KL

Project Status

DRAWING NO.:
E4.0
ELECTRICAL SCHEDULES

PROJECT MANUAL

# MINIDOKA HIGH SCHOOL TEAM BUILDING

for

# Minidoka School District

Rupert, Idaho
July 20, 2021

LKV ARCHITECTS
2400 East Riverwalk Dr. | Boise, Idaho | 208.336.3443

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# PROJECT ARCHITECT AND ENGINEERS

## ARCHITECT:

LKV Architects
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Boise, Idaho 83706
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Amber Van Ocker, Architect

Email: amber@lkvarchitects.com

## MECHANICAL ENGINEER:

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Bill Carter
Email: billc@musgrovepa.com

## ELECTRICAL ENGINEER:

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# ADVERTISEMENT FOR BIDS
# MINICO HIGH SCHOOL
# TEAM BUILDING

The Minidoka School District is soliciting sealed bids for **Minico High School Team Building.** The bid submittal deadline is ***** **2021 at 2:00 PM MDT** at the District Office, 1018 D Street, Rupert, Idaho, 83350. Bids will be opened and read aloud. Bids received after the submittal deadline will not be considered and no bidder may withdraw their bid after the time set for opening or before bid award unless said award is delayed for a period exceeding sixty (60) days.

Specifications, including bidding documents, specific instructions for submission of bids, and conditions of agreement, are available from LKV Architects via email amber@lkvarchitects.com or at the District Maintenance Office, Jason Van Every 208-260-0855

A pre-bid meeting will be held on ****, 2021 at 11:00 AM MDT at the jobsite located at 292 W. 100 S. Rupert, Idaho.

> In following guidance from the Centers for Disease Control and Prevention (CDC), the District requires that Contractors, and their subcontractors, are responsible for taking all reasonably practical measures to prevent the spread of COVID-19. This will include following social distancing guidelines where practical, the wearing of a Face Covering (mask) in settings where social distancing measures are difficult to maintain, use of stringent hygiene measures, encouraging employees that are sick to stay home, limiting meetings that require close contact, practice respiratory etiquette, including covering coughs and sneezes, and discourage workers from using other workers' phones, tools or equipment where possible.

Each bid exceeding $50,000 must be accompanied by a bid bond with a surety company licensed to do business in Idaho or a certified/cashier's check drawn on an Idaho Bank in an amount not less than five per cent (5%) of the total bid, made payable to Minidoka School District. In the event of the successful bidder's failure to execute the contract, this bid surety may be forfeited to Minidoka School District at the sole discretion of the Board of Trustees.

The Board of Trustees of Minidoka School District reserves the right to disregard all non-conforming, non-responsive or conditional bids, to waive any minor informality/irregularity, to reject all bids, or to accept the bid or bids it deems best.

Dated *****, 2021
Minidoka Schoo District
Jason Van Every, Maintenance Director

Publish:
*****, 2021
*****, 2021

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# AIA® Document A701™ – 2018

## *Instructions to Bidders*

for the following Project:
*(Name, location, and detailed description)*

~~Security Vestibule Addition~~
~~Summerwind Elementary~~
~~3675 N. Jullion Way~~
~~Boise, Idaho~~Minico High School
Team Building
292 W. 100 S
Rupert, Idaho 83350

**THE OWNER:**
*(Name, legal status, address, and other information)*

~~West Ada School District~~
~~1303 E. Central Drive~~
~~Meridian, Idaho 83642~~Minidoka School District
1018 D Street
Rupert, Idaho 83350

**THE ARCHITECT:**
*(Name, legal status, address, and other information)*

LKV Architects
2400 East Riverwalk Dr.
Boise, Idaho 83706

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**ADDITIONS AND DELETIONS:** The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

FEDERAL, STATE, AND LOCAL LAWS MAY IMPOSE REQUIREMENTS ON PUBLIC PROCUREMENT CONTRACTS. CONSULT LOCAL AUTHORITIES OR AN ATTORNEY TO VERIFY REQUIREMENTS APPLICABLE TO THIS PROCUREMENT BEFORE COMPLETING THIS FORM.

It is intended that AIA Document G612™–2017, Owner's Instructions to the Architect, Parts A and B will be completed prior to using this document.

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## ARTICLE 1 DEFINITIONS

**§ 1.1** Bidding Documents include the Bidding Requirements and the Proposed Contract Documents. The Bidding Requirements consist of the advertisement or invitation to bid, Instructions to Bidders, supplementary instructions to bidders, the bid form, and any other bidding forms. The Proposed Contract Documents consist of the unexecuted form of Agreement between the Owner and Contractor and that Agreement's Exhibits, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, all Addenda, and all other documents enumerated in Article 8 of these Instructions.

**§ 1.2** Definitions set forth in the General Conditions of the Contract for Construction, or in other Proposed Contract Documents apply to the Bidding Documents.

**§ 1.3** Addenda are written or graphic instruments issued by the Architect, which, by additions, deletions, clarifications, or corrections, modify or interpret the Bidding Documents.

**§ 1.4** A Bid is a complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.

**§ 1.5** The Base Bid is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents, to which Work may be added or deleted by sums stated in Alternate Bids.

**§ 1.6** An Alternate Bid (or Alternate) is an amount stated in the Bid to be added to or deducted from, or that does not change, the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.

**§ 1.7** A Unit Price is an amount stated in the Bid as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, as described in the Bidding Documents.

**§ 1.8** A Bidder is a person or entity who submits a Bid and who meets the requirements set forth in the Bidding Documents.

**§ 1.9** A Sub-bidder is a person or entity who submits a bid to a Bidder for materials, equipment, or labor for a portion of the Work.

## ARTICLE 2 BIDDER'S REPRESENTATIONS

**§ 2.1** By submitting a Bid, the Bidder represents that:

- **.1** the Bidder has read and understands the Bidding Documents;
- **.2** the Bidder understands how the Bidding Documents relate to other portions of the Project, if any, being bid concurrently or presently under construction;
- **.3** the Bid complies with the Bidding Documents;
- **.4** the Bidder has visited the site, become familiar with local conditions under which the Work is to be performed, and has correlated the Bidder's observations with the requirements of the Proposed Contract Documents;
- **.5** the Bid is based upon the materials, equipment, and systems required by the Bidding Documents without exception; and
- **.6** the Bidder has read and understands the provisions for liquidated damages, if any, set forth in the form of Agreement between the Owner and Contractor.

## ARTICLE 3 BIDDING DOCUMENTS

### § 3.1 Distribution

**§ 3.1.1** Bidders shall obtain complete Bidding Documents, as indicated below, from the issuing office designated in the advertisement or invitation to bid, for the deposit sum, if any, stated therein.
*(Indicate how, such as by email, website, host site/platform, paper copy, or other method Bidders shall obtain Bidding Documents.)*

« »

**§ 3.1.2** Any required deposit shall be refunded to Bidders who submit a bona fide Bid and return the paper Bidding Documents in good condition within ten days after receipt of Bids. The cost to replace missing or damaged paper

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documents will be deducted from the deposit. A Bidder receiving a Contract award may retain the paper Bidding Documents, and the Bidder's deposit will be refunded.

**§ 3.1.3** Bidding Documents will not be issued directly to Sub-bidders unless specifically offered in the advertisement or invitation to bid, or in supplementary instructions to bidders.

**§ 3.1.4** Bidders shall use complete Bidding Documents in preparing Bids. Neither the Owner nor Architect assumes responsibility for errors or misinterpretations resulting from the use of incomplete Bidding Documents.

**§ 3.1.5** The Bidding Documents will be available for the sole purpose of obtaining Bids on the Work. No license or grant of use is conferred by distribution of the Bidding Documents.

**§ 3.2 Modification or Interpretation of Bidding Documents**

**§ 3.2.1** The Bidder shall carefully study the Bidding Documents, shall examine the site and local conditions, and shall notify the Architect of errors, inconsistencies, or ambiguities discovered and request clarification or interpretation pursuant to Section 3.2.2.

**§ 3.2.2** Requests for clarification or interpretation of the Bidding Documents shall be submitted by the Bidder in writing and shall be received by the Architect at least seven days prior to the date for receipt of Bids.
*(Indicate how, such as by email, website, host site/platform, paper copy, or other method Bidders shall submit requests for clarification and interpretation.)*

Email to Project Architect ~~or Project Manager~~

**§ 3.2.3** Modifications and interpretations of the Bidding Documents shall be made by Addendum. Modifications and interpretations of the Bidding Documents made in any other manner shall not be binding, and Bidders shall not rely upon them.

**§ 3.3 Substitutions**

**§ 3.3.1** The materials, products, and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance, and quality to be met by any proposed substitution.

**§ 3.3.2 Substitution Process**

**§ 3.3.2.1** Written requests for substitutions shall be received by the Architect at least ten days prior to the date for receipt of Bids. Requests shall be submitted in the same manner as that established for submitting clarifications and interpretations in Section 3.2.2.

**§ 3.3.2.2** Bidders shall submit substitution requests on a Substitution Request Form if one is provided in the Bidding Documents.

**§ 3.3.2.3** If a Substitution Request Form is not provided, requests shall include (1) the name of the material or equipment specified in the Bidding Documents; (2) the reason for the requested substitution; (3) a complete description of the proposed substitution including the name of the material or equipment proposed as the substitute, performance and test data, and relevant drawings; and (4) any other information necessary for an evaluation. The request shall include a statement setting forth changes in other materials, equipment, or other portions of the Work, including changes in the work of other contracts or the impact on any Project Certifications (such as LEED), that will result from incorporation of the proposed substitution.

**§ 3.3.3** The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of approval or disapproval of a proposed substitution shall be final.

**§ 3.3.4** If the Architect approves a proposed substitution prior to receipt of Bids, such approval shall be set forth in an Addendum. Approvals made in any other manner shall not be binding, and Bidders shall not rely upon them.

**§ 3.3.5** No substitutions will be considered after the Contract award unless specifically provided for in the Contract Documents.

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**§ 3.4 Addenda**

**§ 3.4.1** Addenda will be transmitted to Bidders known by the issuing office to have received complete Bidding Documents.

*(Indicate how, such as by email, website, host site/platform, paper copy, or other method Addenda will be transmitted.)*

Issued by email and school district. ~~website.~~

**§ 3.4.2** Addenda will be available where Bidding Documents are on file.

**§ 3.4.3** Addenda will be issued no later than four days prior to the date for receipt of Bids, except an Addendum withdrawing the request for Bids or one which includes postponement of the date for receipt of Bids.

**§ 3.4.4** Prior to submitting a Bid, each Bidder shall ascertain that the Bidder has received all Addenda issued, and the Bidder shall acknowledge their receipt in the Bid.

## ARTICLE 4 BIDDING PROCEDURES

**§ 4.1 Preparation of Bids**

**§ 4.1.1** Bids shall be submitted on the forms included with or identified in the Bidding Documents.

**§ 4.1.2** All blanks on the bid form shall be legibly executed. Paper bid forms shall be executed in a non-erasable medium.

**§ 4.1.3** Sums shall be expressed in both words and numbers, unless noted otherwise on the bid form. In case of discrepancy, the amount entered in words shall govern.

**§ 4.1.4** Edits to entries made on paper bid forms must be initialed by the signer of the Bid.

**§ 4.1.5** All requested Alternates shall be bid. If no change in the Base Bid is required, enter "No Change" or as required by the bid form.

**§ 4.1.6** Where two or more Bids for designated portions of the Work have been requested, the Bidder may, without forfeiture of the bid security, state the Bidder's refusal to accept award of less than the combination of Bids stipulated by the Bidder. The Bidder shall neither make additional stipulations on the bid form nor qualify the Bid in any other manner.

**§ 4.1.7** Each copy of the Bid shall state the legal name and legal status of the Bidder. As part of the documentation submitted with the Bid, the Bidder shall provide evidence of its legal authority to perform the Work in the jurisdiction where the Project is located. Each copy of the Bid shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further name the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached, certifying the agent's authority to bind the Bidder.

**§ 4.1.8** A Bidder shall incur all costs associated with the preparation of its Bid.

**§ 4.2 Bid Security**

**§ 4.2.1** Each Bid shall be accompanied by the following bid security:

*(Insert the form and amount of bid security.)*

5% of the total bid amount.

**§ 4.2.2** The Bidder pledges to enter into a Contract with the Owner on the terms stated in the Bid and shall, if required, furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds if required, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty. In the event the Owner fails to comply with Section 6.2, the amount of the bid security shall not be forfeited to the Owner.

**§ 4.2.3** If a surety bond is required as bid security, it shall be written on AIA Document A310™, Bid Bond, unless otherwise provided in the Bidding Documents. The attorney-in-fact who executes the bond on behalf of the surety shall

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affix to the bond a certified and current copy of an acceptable power of attorney. The Bidder shall provide surety bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

**§ 4.2.4** The Owner will have the right to retain the bid security of Bidders to whom an award is being considered until (a) the Contract has been executed and bonds, if required, have been furnished; (b) the specified time has elapsed so that Bids may be withdrawn; or (c) all Bids have been rejected. However, if no Contract has been awarded or a Bidder has not been notified of the acceptance of its Bid, a Bidder may, beginning« » days after the opening of Bids, withdraw its Bid and request the return of its bid security.

### § 4.3 Submission of Bids

**§ 4.3.1** A Bidder shall submit its Bid as indicated below:
*(Indicate how, such as by website, host site/platform, paper copy, or other method Bidders shall submit their Bid.)*

As indicated in the Advertisement for Bids

**§ 4.3.2** Paper copies of the Bid, the bid security, and any other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope. The envelope shall be addressed to the party receiving the Bids and shall be identified with the Project name, the Bidder's name and address, and, if applicable, the designated portion of the Work for which the Bid is submitted. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof.

**§ 4.3.3** Bids shall be submitted by the date and time and at the place indicated in the invitation to bid. Bids submitted after the date and time for receipt of Bids, or at an incorrect place, will not be accepted.

**§ 4.3.4** The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.

**§ 4.3.5** A Bid submitted by any method other than as provided in this Section 4.3 will not be accepted.

### § 4.4 Modification or Withdrawal of Bid

**§ 4.4.1** Prior to the date and time designated for receipt of Bids, a Bidder may submit a new Bid to replace a Bid previously submitted, or withdraw its Bid entirely, by notice to the party designated to receive the Bids. Such notice shall be received and duly recorded by the receiving party on or before the date and time set for receipt of Bids. The receiving party shall verify that replaced or withdrawn Bids are removed from the other submitted Bids and not considered. Notice of submission of a replacement Bid or withdrawal of a Bid shall be worded so as not to reveal the amount of the original Bid.

**§ 4.4.2** Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids in the same format as that established in Section 4.3, provided they fully conform with these Instructions to Bidders. Bid security shall be in an amount sufficient for the Bid as resubmitted.

**§ 4.4.3** After the date and time designated for receipt of Bids, a Bidder who discovers that it made a clerical error in its Bid shall notify the Architect of such error within two days, or pursuant to a timeframe specified by the law of the jurisdiction where the Project is located, requesting withdrawal of its Bid. Upon providing evidence of such error to the reasonable satisfaction of the Architect, the Bid shall be withdrawn and not resubmitted. If a Bid is withdrawn pursuant to this Section 4.4.3, the bid security will be attended to as follows:
*(State the terms and conditions, such as Bid rank, for returning or retaining the bid security.)*

As determined by the Owner.

## ARTICLE 5 CONSIDERATION OF BIDS

### § 5.1 Opening of Bids

If stipulated in an advertisement or invitation to bid, or when otherwise required by law, Bids properly identified and received within the specified time limits will be publicly opened and read aloud. A summary of the Bids may be made available to Bidders.

### § 5.2 Rejection of Bids

Unless otherwise prohibited by law, the Owner shall have the right to reject any or all Bids.

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### § 5.3 Acceptance of Bid (Award)

**§ 5.3.1** It is the intent of the Owner to award a Contract to the lowest responsive Bidder, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents. Unless otherwise prohibited by law, the Owner shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the Owner's judgment, is in the Owner's best interests.

**§ 5.3.2** Unless otherwise prohibited by law, the Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents, and to determine the lowest responsive Bidder on the basis of the sum of the Base Bid and Alternates accepted.

## ARTICLE 6 POST-BID INFORMATION

### § 6.1 Contractor's Qualification Statement

Bidders to whom award of a Contract is under consideration shall submit to the Architect, upon request and within the timeframe specified by the Architect, a properly executed AIA Document A305™, Contractor's Qualification Statement, unless such a Statement has been previously required and submitted for this Bid.

### § 6.2 Owner's Financial Capability

A Bidder to whom award of a Contract is under consideration may request in writing, fourteen days prior to the expiration of the time for withdrawal of Bids, that the Owner furnish to the Bidder reasonable evidence that financial arrangements have been made to fulfill the Owner's obligations under the Contract. The Owner shall then furnish such reasonable evidence to the Bidder no later than seven days prior to the expiration of the time for withdrawal of Bids. Unless such reasonable evidence is furnished within the allotted time, the Bidder will not be required to execute the Agreement between the Owner and Contractor.

### § 6.3 Submittals

**§ 6.3.1** After notification of selection for the award of the Contract, the Bidder shall, as soon as practicable or as stipulated in the Bidding Documents, submit in writing to the Owner through the Architect:

**.1** a designation of the Work to be performed with the Bidder's own forces;

**.2** names of the principal products and systems proposed for the Work and the manufacturers and suppliers of each; and

**.3** names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the Work.

**§ 6.3.2** The Bidder will be required to establish to the satisfaction of the Architect and Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents.

**§ 6.3.3** Prior to the execution of the Contract, the Architect will notify the Bidder if either the Owner or Architect, after due investigation, has reasonable objection to a person or entity proposed by the Bidder. If the Owner or Architect has reasonable objection to a proposed person or entity, the Bidder may, at the Bidder's option, withdraw the Bid or submit an acceptable substitute person or entity. The Bidder may also submit any required adjustment in the Base Bid or Alternate Bid to account for the difference in cost occasioned by such substitution. The Owner may accept the adjusted bid price or disqualify the Bidder. In the event of either withdrawal or disqualification, bid security will not be forfeited.

**§ 6.3.4** Persons and entities proposed by the Bidder and to whom the Owner and Architect have made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Owner and Architect.

## ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND

### § 7.1 Bond Requirements

**§ 7.1.1** If stipulated in the Bidding Documents, the Bidder shall furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder.

**§ 7.1.2** If the furnishing of such bonds is stipulated in the Bidding Documents, the cost shall be included in the Bid. If the furnishing of such bonds is required after receipt of bids and before execution of the Contract, the cost of such bonds shall be added to the Bid in determining the Contract Sum.

**§ 7.1.3** The Bidder shall provide surety bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

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**§ 7.1.4** Unless otherwise indicated below, the Penal Sum of the Payment and Performance Bonds shall be the amount of the Contract Sum.
*(If Payment or Performance Bonds are to be in an amount other than 100% of the Contract Sum, indicate the dollar amount or percentage of the Contract Sum.)*

« »

**§ 7.2 Time of Delivery and Form of Bonds**
**§ 7.2.1** The Bidder shall deliver the required bonds to the Owner not later than three days following the date of execution of the Contract. If the Work is to commence sooner in response to a letter of intent, the Bidder shall, prior to commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished and delivered in accordance with this Section 7.2.1.

**§ 7.2.2** Unless otherwise provided, the bonds shall be written on AIA Document A312, Performance Bond and Payment Bond.

**§ 7.2.3** The bonds shall be dated on or after the date of the Contract.

**§ 7.2.4** The Bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix to the bond a certified and current copy of the power of attorney.

## ARTICLE 8 ENUMERATION OF THE PROPOSED CONTRACT DOCUMENTS

**§ 8.1** Copies of the proposed Contract Documents have been made available to the Bidder and consist of the following documents:

**.1** AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor, unless otherwise stated below.
*(Insert the complete AIA Document number, including year, and Document title.)*

Refer to Project Manual

**.2** AIA Document A101™–2017, Exhibit A, Insurance and Bonds, unless otherwise stated below.
*(Insert the complete AIA Document number, including year, and Document title.)*

Refer to Project Manual

**.3** AIA Document A201™–2017, General Conditions of the Contract for Construction, unless otherwise stated below.
*(Insert the complete AIA Document number, including year, and Document title.)*

Refer to Project Manual

**.4** AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:
*(Insert the date of the E203-2013.)*

« »

**.5** Drawings

| Number | Title | Date |
|---|---|---|
| Refer to Cover Sheet | | |

**.6** Specifications

| Section | Title | Date | Pages |
|---|---|---|---|
| Refer to Project Manual TOC | | | |

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**.7** Addenda:

| Number | Date | Pages |
|---|---|---|
| | | |

**.8** Other Exhibits:
*(Check all boxes that apply and include appropriate information identifying the exhibit where required.)*

[ « » ] AIA Document E204™–2017, Sustainable Projects Exhibit, dated as indicated below:
*(Insert the date of the E204-2017.)*

« »

[ « » ] The Sustainability Plan:

| Title | Date | Pages |
|---|---|---|
| | | |

[ « » ] Supplementary and other Conditions of the Contract:

| Document | Title | Date | Pages |
|---|---|---|---|
| Refer to Project Manual | | | |

**.9** Other documents listed below:
*(List here any additional documents that are intended to form part of the Proposed Contract Documents.)*

Refer to Project Manual

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# SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

The following supplements modify, change, delete from or add to the Instructions to Bidders, AIA Document A701 - 2018. Where any Article of the Instructions to Bidders is modified or any Paragraph, Subparagraph or Clause thereof is modified or deleted by the Supplementary Instructions to Bidders, the unaltered provisions of that Article, Paragraph, Subparagraph or Clause shall remain in effect.

## ARTICLE 3 BIDDING DOCUMENTS

Add to Article 3, the following:

**3.2.4** Bidders and Sub-bidders shall field verify all dimensions pertaining to the Work and shall be responsible for the determination of all quantities of materials required for the completion of the Work. The bidder shall not rely on the scale drawings nor on indicated dimensions on the Bidding Documents in his determination of required materials quantities. No allowance shall be made for Bidder's failure to field verify dimensions.

## ARTICLE 4 BIDDING PROCEDURES

Add to or supplement Article 4, the following:

**4.1.9** Bidder shall prepare and submit his bid based on compliance with Executive Order 2006-40 and shall warrant that the bidder does not knowingly hire or engage any illegal aliens or persons not authorized to work in the United States; bidder takes steps to verify that it does not hire or engage any illegal aliens or persons not authorized to work in the United States; and that any misrepresentation in this regard or any employment of persons not authorized to work in the United States constitutes a material breach and shall be cause for termination of any contract resulting from his bid.

**4.2.1.1** To be considered, proposals must be accompanied by an acceptable security, in an amount not less than five (5) percent of the total amount of the bid including add alternates. The security may be in the form of a bond, or a certified or cashier's check.

**4.2.1.2** A successful bidder, who fails to sign the contract for the work or furnish the required bonds within 10 days following the receipt of notice of intent to award a contract, shall forfeit the security. The owner may then award the contract to the next lowest bidder.

**4.2.2** Delete the last sentence.

**4.2.3** A standard surety bid bond is required.

**4.3.1.1** The mailing envelope containing the bid shall be addressed as follows:

Minico High School
Team Building
Minidoka School District
1018 D Street
Rupert, Idaho 83350

**4.3.6** Along with his bid the bidder shall submit an affidavit certifying his compliance with Idaho Code, Title 72, Chapter 17, requiring the contractor and his subcontractors at the time of bid to provide a drug-free workplace program and to maintain such program throughout the duration of the contract.

## ARTICLE 5 CONSIDERATION OF BIDS

Add to Article 5, the following:

### 5.4 PUBLIC WORKS CONTRACTORS LICENSE

This Public Works project is not financed in whole or in part by Federal Aid Funds. Bid Proposals will be accepted from those contractors only (prime contractors, subcontractors, and/or specialty contractors) who, prior to the bid opening, hold current licenses as public works contractors in the State of Idaho.

### 5.5 EMPLOYMENT PRACTICES

Pursuant to Idaho Code 44-1001, EMPLOYMENT OF RESIDENTS OF IDAHO, the contractor must employ ninety-five (95%) bona fide Idaho residents as employees on any job under contract with Joint School District No. 2 dba West Ada School District except where under such contracts fifty (50) or less persons are employed the contractor may employ ten percent (10%) nonresidents, provided, however, in all cases employers must give preference to the employment of bona fide residents in the performance of said work.

### 5.6 NAMING OF SUBCONTRACTORS

Section 67-2310, Idaho Code, requires general (prime) contractors to include in their bid the name of the subcontractors who shall, in the event the contractor secures the contract, subcontract the plumbing, heating and air conditioning, and electrical work under the general (prime) contract. Failure to name subcontractors, as required, shall render any bid submitted by a general (prime) contractor unresponsive and void. Subcontractors named in accordance with the provisions of this section must possess an appropriate license or certificate of competency issued by the State of Idaho covering the contractor work classification in which the subcontractor is named.

The bidder shall complete Bid Proposal in its entirety for all categories of work listed and shall name the entity that will perform the work. Failure to complete Bid Proposal in full shall render a bid unresponsive and void.

With regard to possessing an appropriate license or certificate of competency all subcontractors listed by the general (prime) contractor must have at the time of the bid opening a current license in the appropriate category (class, type and specialty category) as issued by the Public Works Contractors State License Board. In addition, subcontractors shall have at the time of the bid opening a valid contractor's license as issued by the Idaho Division of Building Safety for their category or categories of work, as applicable.

### 5.7 IDAHO DOMICILED CONTRACTORS

Section 67-2348, Idaho Code, requires the Owner to apply a preference in determining which contractor submitted the lowest responsible bid. If the contractor who submitted the lowest dollar bid is domiciled in a state which has preference law which penalizes Idaho domiciled contractors then the Owner must apply preference. The preference that will be applied is the preference law of the domiciliary state of the contractor who submitted the lowest dollar bid.

Generally speaking, a contractor's domiciliary state is the state in which the contractor's home office is located. If federal funds are involved in the project then no preference will be used.

## ARTICLE 6 POST BID INFORMATION

Delete paragraph 6.2

## ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND

Modify and add to Article 7, the following:

In subparagraph 7.2.1, in the first sentence, delete “three days following the date of execution of the Contract” and substitute “seven days following the receipt of Notice of Intent to Award”.

**7.2.2.1** Performance bond and labor and material payment bond are required for this project; each in an amount of not less than 100% of the contract amount, and by a surety company authorized to do business in Idaho.

END OF SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

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# BID PROPOSAL

**TO: Minico High School**
**Team Room**
**Minidoka School District**

The Bidder, in compliance with your invitation for bids for the new Team Building at Minico High School, having examined the bidding and contract documents of the proposed work, and being familiar with all of the conditions surrounding the construction of the proposed project including the availability of materials and labor, hereby proposes to furnish all labor, materials and supplies, and to provide the service and insurance in accordance with the Contract Documents, within the time set forth therein, and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the Contract Documents.

Bidder hereby agrees to commence work under this contract on a date to be specified in written "Notice to Proceed" of the Owner and to adhere to the requirements of subparagraph 8.1.1.1 of the Supplementary Conditions regarding time for the performance of the work. Bidder further agrees to pay as liquidated damages, the sum of $ 500.00 for each consecutive calendar day after the established substantial completion date or adjusted date as established by change order as hereinafter provided in Subparagraph 9.11.1 of the Supplementary Conditions.

Bidder acknowledges receipt of Addendum No. ('s) _____

**BASE BID PROPOSAL:** Bidder agrees to perform all of the Base Bid work described in the Specifications and shown on the Drawings for the sum of:

_____

_____Dollars ($_____)

(Amounts shall be shown in both words and figures. In case of discrepancy, the amount shown in words will govern.)

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informality in the bidding.

The bidder agrees that this bid shall be good and may not be withdrawn for a period of 45 calendar days after the scheduled closing time for receiving bids.

The bid security attached in the amount of 5% of the bid amount is to become the property of the Owner in the event the contract and bond are not executed within the time set forth, as liquidated damages for the delay and additional expense to the Owner caused thereby.

Upon receipt of written notice of the acceptance of this bid, Bidder will execute the formal contract attached within 10 days and deliver a Surety Bond or Bonds as required by Article 7 of the Instructions to Bidders as modified by the Supplementary Instructions to Bidders. A bid bond is not required.

The names and addresses of the entities who will perform the work identified below, subject to approval of Owner and Architect, if Undersigned is awarded the Contract, are as follows:

Plumbing (PWCL Category 15400)

(Name) _____

(Address) _____

Idaho Public Works Contractors License No. _____

Idaho State Plumbing Contractors License No. _____

Heating, Ventilation & Air Conditioning - HVAC (PWCL Category 15700)

(Name) _____

(Address) _____

Idaho Public Works Contractors License No. _____

Idaho State HVAC Contractors License No. _____

Electrical (PWCL Category 16000)

(Name) _____

(Address) _____

Idaho Public Works Contractors License No. _____

Idaho State Electrical Contractors License No. _____

FAILURE TO NAME A PROPERLY LICENSED CONTRACTOR IN EACH OF THE ABOVE CATEGORIES WILL RENDER THE BID UNRESPONSIVE AND VOID.

Should the listing of subcontractors change due to selection of alternates or other similar circumstances, attach explanation.

The Undersigned notifies that he is of this date duly licensed as an Idaho Public Works Contractor and further that he possesses Idaho Public Works Contractor's License No. _____, and is domiciled in the State of _____.

Dated this _____ day of_____,_____.
(date) (month) (year)

Respectfully submitted by:

_____
(Company)

(Seal - if bid is by a corporation) _____
(Business Address)

_____

_____
(Authorized Signature)

_____
(Title)

_____
(Telephone Number)

_____
(FAX Number)

END OF BID PROPOSAL

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# IDAHO/NATIONAL SEX OFFENDER REGISTRY

Idaho Code §18-8329 prohibits any person who is registered or required to register under the Idaho Sex Offender Registration Act from being on school property if the person has reason to believe children under the age of 18 are present.

*State law prohibits a person who is currently registered or is required to register under the sex offender registration act to be on or remain on the premises of a school building or school grounds, or upon other properties posted with a notice that they are used by a school, when the person believes children under the age of 18 years are present and are involved in a school activity or when children are present within 30 minutes before or after a school activity.*

As a provider of goods and/or services to Minidoka School District, your company and those in your employment are subject to this law and district policy.

Please sign and return this letter confirming to the District that your company will prohibit any persons in your employ who are registered or required to register under the Idaho Sex Offender Registration Act from participation in company business with the District if such participation would require them to be present on school property. Further, by signing, you confirm that you have cross checked such employees against the Idaho Sex Offender Registry and the National Sex Offender Registry found at the following web links:

www.isp.idaho.gov/sor_id/ http://www.nsopr.gov/

In addition, by signing, you agree to provide MSD with a list of all employees (first, middle, last name and birthdate) assigned to work on MSD property if your company is awarded the project and will provide updated lists if/when new employees are assigned to the project. Further, you agree to provide lists of all subcontractor employees to MSD and will provide updated lists if/when new subcontractor employees are assigned to the project.

_____
Company/Contractor Name (Print)

_____
Signature of Company/Contractor Representative

_____ _____
Printed Name Date

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**CONTRACTOR/VENDOR AFFIDAVIT**

**CONCERNING ALCOHOL AND DRUG-FREE WORKPLACE**

STATE OF _____

COUNTY OF _____

Pursuant to the Idaho Code, Section 72-1717, I, the undersigned, being duly sworn, depose and certify that _____ is in compliance with the provisions of Idaho Code section 72-1717; that _____ provides a drug-free workplace program that complies with the provisions of Idaho Code, title 72, chapter 17 and will maintain such program throughout the life of a state construction contract and that _____ shall subcontract work only to subcontractors meeting the requirements of Idaho Code, section 72-1717(1)(a).

_____
Name of Contractor

_____
Address

_____
City and State

By: _____
(Signature)

Subscribed and sworn to before me this _____ day of _____, _____,

Commission expires:

_____
NOTARY PUBLIC, residing at

_____

_____

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DRAFT

# AIA® Document A201™ – 2017

## *General Conditions of the Contract for Construction*

**for the following PROJECT:**
*(Name and location or address)*

~~«Mary McPherson Elementary School~~
~~New Classroom Building»~~
~~«1050 E. Amity Road~~
~~Meridian, Idaho 83642»~~Minico High School
Team Room
292 W. 100 S
Rupert, Idaho 83350

**THE OWNER:**
*(Name, legal status and address)*

~~West Ada School District~~
~~1303 E. Central Dr.~~
~~Meridian, Idaho 83642~~
~~« »~~Minidoka School District
1018 D Street
Rupert, Idaho 83350

**THE ARCHITECT:**
*(Name, legal status and address)*

LKV Architects
2400 East Riverwalk Dr.
Boise, Idaho 83706
« »

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5 SUBCONTRACTORS

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7 CHANGES IN THE WORK

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9 PAYMENTS AND COMPLETION

10 PROTECTION OF PERSONS AND PROPERTY


**ADDITIONS AND DELETIONS:** The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

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11 INSURANCE AND BONDS

12 UNCOVERING AND CORRECTION OF WORK

13 MISCELLANEOUS PROVISIONS

14 TERMINATION OR SUSPENSION OF THE CONTRACT

15 CLAIMS AND DISPUTES

DRAFT

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## ARTICLE 1 GENERAL PROVISIONS

### § 1.1 Basic Definitions

#### § 1.1.1 The Contract Documents

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding or proposal requirements.

#### § 1.1.2 The Contract

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants, or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

#### § 1.1.3 The Work

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

#### § 1.1.4 The Project

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

#### § 1.1.5 The Drawings

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.

#### § 1.1.6 The Specifications

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

#### § 1.1.7 Instruments of Service

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

#### § 1.1.8 Initial Decision Maker

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

### § 1.2 Correlation and Intent of the Contract Documents

**§ 1.2.1** The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

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**§ 1.2.1.1** The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

**§ 1.2.2** Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

**§ 1.2.3** Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

### § 1.3 Capitalization

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles, or (3) the titles of other documents published by the American Institute of Architects.

### § 1.4 Interpretation

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

### § 1.5 Ownership and Use of Drawings, Specifications, and Other Instruments of Service

**§ 1.5.1** The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

**§ 1.5.2** The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

### § 1.6 Notice

**§ 1.6.1** Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.

**§ 1.6.2** Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

### § 1.7 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

### § 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™–2013, Project Building Information Modeling Protocol Form, shall be at the using or

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relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

## ARTICLE 2 OWNER

### § 2.1 General

**§ 2.1.1** The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

**§ 2.1.2** The Owner shall furnish to the Contractor, within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of, or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

### § 2.2 Evidence of the Owner's Financial Arrangements

**§ 2.2.1** Prior to commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 2.2.1, the Contract Time shall be extended appropriately.

**§ 2.2.2** Following commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract only if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due; or (3) a change in the Work materially changes the Contract Sum. If the Owner fails to provide such evidence, as required, within fourteen days of the Contractor's request, the Contractor may immediately stop the Work and, in that event, shall notify the Owner that the Work has stopped. However, if the request is made because a change in the Work materially changes the Contract Sum under (3) above, the Contractor may immediately stop only that portion of the Work affected by the change until reasonable evidence is provided. If the Work is stopped under this Section 2.2.2, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided in the Contract Documents.

**§ 2.2.3** After the Owner furnishes evidence of financial arrangements under this Section 2.2, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

**§ 2.2.4** Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after seven (7) days' notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose "confidential" information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree to maintain the confidentiality of such information.

### § 2.3 Information and Services Required of the Owner

**§ 2.3.1** Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

**§ 2.3.2** The Owner shall retain an architect lawfully licensed to practice architecture, or an entity lawfully practicing architecture, in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

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**§ 2.3.3** If the employment of the Architect terminates, the Owner shall employ a successor to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

**§ 2.3.4** The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

**§ 2.3.5** The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

**§ 2.3.6** Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

### § 2.4 Owner's Right to Stop the Work

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

### § 2.5 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect and the Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15.

## ARTICLE 3 CONTRACTOR

### § 3.1 General

**§ 3.1.1** The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

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

**§ 3.1.3** The Contractor shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

### § 3.2 Review of Contract Documents and Field Conditions by Contractor

**§ 3.2.1** Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.

**§ 3.2.2** Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as

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the information furnished by the Owner pursuant to Section 2.3.4, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

**§ 3.2.3** The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

**§ 3.2.4** If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner, subject to Section 15.1.7, as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

### § 3.3 Supervision and Construction Procedures

**§ 3.3.1** The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be solely responsible for the jobsite safety of such means, methods, techniques, sequences, or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely notice to the Owner and Architect, and shall propose alternative means, methods, techniques, sequences, or procedures. The Architect shall evaluate the proposed alternative solely for conformance with the design intent for the completed construction. Unless the Architect objects to the Contractor's proposed alternative, the Contractor shall perform the Work using its alternative means, methods, techniques, sequences, or procedures.

**§ 3.3.2** The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

**§ 3.3.3** The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

### § 3.4 Labor and Materials

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

**§ 3.4.2** Except in the case of minor changes in the Work approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

**§ 3.4.3** The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

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## § 3.5 Warranty

**§ 3.5.1** The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

**§ 3.5.2** All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

## § 3.6 Taxes

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

## § 3.7 Permits, Fees, Notices and Compliance with Laws

**§ 3.7.1** Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

**§ 3.7.2** The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

**§ 3.7.3** If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

### § 3.7.4 Concealed or Unknown Conditions

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 14 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may submit a Claim as provided in Article 15.

**§ 3.7.5** If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

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### § 3.8 Allowances

**§ 3.8.1** The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

**§ 3.8.2** Unless otherwise provided in the Contract Documents,

- **.1** allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- **.2** Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- **.3** whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

**§ 3.8.3** Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

### § 3.9 Superintendent

**§ 3.9.1** The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

**§ 3.9.2** The Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Architect may notify the Contractor, stating whether the Owner or the Architect (1) has reasonable objection to the proposed superintendent or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

**§ 3.9.3** The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

### § 3.10 Contractor's Construction and Submittal Schedules

**§ 3.10.1** The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project.

**§ 3.10.2** The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for the Architect's approval. The Architect's approval shall not be unreasonably delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, or fails to provide submittals in accordance with the approved submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

**§ 3.10.3** The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

### § 3.11 Documents and Samples at the Site

The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and

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similar required submittals. These shall be in electronic form or paper copy, available to the Architect and Owner, and delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

### § 3.12 Shop Drawings, Product Data and Samples

**§ 3.12.1** Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.

**§ 3.12.2** Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

**§ 3.12.3** Samples are physical examples that illustrate materials, equipment, or workmanship, and establish standards by which the Work will be judged.

**§ 3.12.4** Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

**§ 3.12.5** The Contractor shall review for compliance with the Contract Documents, approve, and submit to the Architect, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of Separate Contractors.

**§ 3.12.6** By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

**§ 3.12.7** The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples, or similar submittals, until the respective submittal has been approved by the Architect.

**§ 3.12.8** The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the Architect of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals, by the Architect's approval thereof.

**§ 3.12.9** The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such notice, the Architect's approval of a resubmission shall not apply to such revisions.

**§ 3.12.10** The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.

**§ 3.12.10.1** If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will

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specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals prepared by such professional. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

**§ 3.12.10.2** If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Architect at the time and in the form specified by the Architect.

### § 3.13 Use of Site

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

### § 3.14 Cutting and Patching

**§ 3.14.1** The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting, or patching shall be restored to the condition existing prior to the cutting, fitting, or patching, unless otherwise required by the Contract Documents.

**§ 3.14.2** The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or Separate Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner or a Separate Contractor except with written consent of the Owner and of the Separate Contractor. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Owner or a Separate Contractor, its consent to cutting or otherwise altering the Work.

### § 3.15 Cleaning Up

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

**§ 3.15.2** If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the Owner shall be entitled to reimbursement from the Contractor.

### § 3.16 Access to Work

The Contractor shall provide the Owner and Architect with access to the Work in preparation and progress wherever located.

### § 3.17 Royalties, Patents and Copyrights

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications, or other documents prepared by the Owner or Architect. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect.

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### § 3.18 Indemnification

**§ 3.18.1** To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

**§ 3.18.2** In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

## ARTICLE 4 ARCHITECT

### § 4.1 General

**§ 4.1.1** The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

**§ 4.1.2** Duties, responsibilities, and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner, Contractor, and Architect. Consent shall not be unreasonably withheld.

### § 4.2 Administration of the Contract

**§ 4.2.1** The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

**§ 4.2.2** The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.

**§ 4.2.3** On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) known deviations from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of, and will not be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

### § 4.2.4 Communications

The Owner and Contractor shall include the Architect in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols.

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**§ 4.2.5** Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

**§ 4.2.6** The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, whether or not the Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons or entities performing portions of the Work.

**§ 4.2.7** The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5, and 3.12. The Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

**§ 4.2.8** The Architect will prepare Change Orders and Construction Change Directives, and may order minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

**§ 4.2.9** The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

**§ 4.2.10** If the Owner and Architect agree, the Architect will provide one or more Project representatives to assist in carrying out the Architect's responsibilities at the site. The Owner shall notify the Contractor of any change in the duties, responsibilities and limitations of authority of the Project representatives.

**§ 4.2.11** The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

**§ 4.2.12** Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either, and will not be liable for results of interpretations or decisions rendered in good faith.

**§ 4.2.13** The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

**§ 4.2.14** The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

## ARTICLE 5 SUBCONTRACTORS

### § 5.1 Definitions

**§ 5.1.1** A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in

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number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a Separate Contractor or the subcontractors of a Separate Contractor.

**§ 5.1.2** A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

### § 5.2 Award of Subcontracts and Other Contracts for Portions of the Work

**§ 5.2.1** Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the Architect may notify the Contractor whether the Owner or the Architect (1) has reasonable objection to any such proposed person or entity or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

**§ 5.2.2** The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

**§ 5.2.3** If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

**§ 5.2.4** The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected if the Owner or Architect makes reasonable objection to such substitution.

### § 5.3 Subcontractual Relations

By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work that the Contractor, by these Contract Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

### § 5.4 Contingent Assignment of Subcontracts

**§ 5.4.1** Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

**.1** assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor; and

**.2** assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

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When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

**§ 5.4.2** Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

**§ 5.4.3** Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

## ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

### § 6.1 Owner's Right to Perform Construction and to Award Separate Contracts

**§ 6.1.1** The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

**§ 6.1.2** When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

**§ 6.1.3** The Owner shall provide for coordination of the activities of the Owner's own forces and of each Separate Contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with any Separate Contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to its construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, Separate Contractors, and the Owner until subsequently revised.

**§ 6.1.4** Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces or with Separate Contractors, the Owner or its Separate Contractors shall have the same obligations and rights that the Contractor has under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6, and Articles 10, 11, and 12.

### § 6.2 Mutual Responsibility

**§ 6.2.1** The Contractor shall afford the Owner and Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

**§ 6.2.2** If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a Separate Contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly notify the Architect of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the Architect of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner's or Separate Contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractor that are not apparent.

**§ 6.2.3** The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a Separate Contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a Separate Contractor's delays, improperly timed activities, damage to the Work or defective construction.

**§ 6.2.4** The Contractor shall promptly remedy damage that the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or Separate Contractor as provided in Section 10.2.5.

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**§ 6.2.5** The Owner and each Separate Contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

### § 6.3 Owner's Right to Clean Up

If a dispute arises among the Contractor, Separate Contractors, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

## ARTICLE 7 CHANGES IN THE WORK

### § 7.1 General

**§ 7.1.1** Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

**§ 7.1.2** A Change Order shall be based upon agreement among the Owner, Contractor, and Architect. A Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor. An order for a minor change in the Work may be issued by the Architect alone.

**§ 7.1.3** Changes in the Work shall be performed under applicable provisions of the Contract Documents. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work.

### § 7.2 Change Orders

**§ 7.2.1** A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor, and Architect stating their agreement upon all of the following:

- **.1** The change in the Work;
- **.2** The amount of the adjustment, if any, in the Contract Sum; and
- **.3** The extent of the adjustment, if any, in the Contract Time.

### § 7.3 Construction Change Directives

**§ 7.3.1** A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

**§ 7.3.2** A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

**§ 7.3.3** If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- **.1** Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- **.2** Unit prices stated in the Contract Documents or subsequently agreed upon;
- **.3** Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- **.4** As provided in Section 7.3.4.

**§ 7.3.4** If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited to the following:

- **.1** Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Architect;

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.2 Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;

.3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;

.4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and

.5 Costs of supervision and field office personnel directly attributable to the change.

**§ 7.3.5** If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

**§ 7.3.6** Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

**§ 7.3.7** A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

**§ 7.3.8** The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

**§ 7.3.9** Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

**§ 7.3.10** When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

### § 7.4 Minor Changes in the Work

The Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Architect's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Architect and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor change without prior notice to the Architect that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

## ARTICLE 8 TIME

### § 8.1 Definitions

**§ 8.1.1** Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

**§ 8.1.2** The date of commencement of the Work is the date established in the Agreement.

**§ 8.1.3** The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

**§ 8.1.4** The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

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### § 8.2 Progress and Completion

**§ 8.2.1** Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

**§ 8.2.2** The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and Owner.

**§ 8.2.3** The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

### § 8.3 Delays and Extensions of Time

**§ 8.3.1** If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner or Architect, of an employee of either, or of a Separate Contractor; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Contractor asserts, and the Architect determines, justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine.

**§ 8.3.2** Claims relating to time shall be made in accordance with applicable provisions of Article 15.

**§ 8.3.3** This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

## ARTICLE 9 PAYMENTS AND COMPLETION

### § 9.1 Contract Sum

**§ 9.1.1** The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

**§ 9.1.2** If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

### § 9.2 Schedule of Values

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit a schedule of values to the Architect before the first Application for Payment, allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Architect. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. Any changes to the schedule of values shall be submitted to the Architect and supported by such data to substantiate its accuracy as the Architect may require, and unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment.

### § 9.3 Applications for Payment

**§ 9.3.1** At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. The application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner or Architect require, such as copies of requisitions, and releases and waivers of liens from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents.

**§ 9.3.1.1** As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.

**§ 9.3.1.2** Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.

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**§ 9.3.2** Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage, and transportation to the site, for such materials and equipment stored off the site.

**§ 9.3.3** The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances, in favor of the Contractor, Subcontractors, suppliers, or other persons or entities that provided labor, materials, and equipment relating to the Work.

### § 9.4 Certificates for Payment

**§ 9.4.1** The Architect will, within seven days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; or (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Contractor and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Contractor and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1.

**§ 9.4.2** The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Architect. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

### § 9.5 Decisions to Withhold Certification

**§ 9.5.1** The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- **.1** defective Work not remedied;
- **.2** third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
- **.3** failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
- **.4** reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- **.5** damage to the Owner or a Separate Contractor;
- **.6** reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or

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.7 repeated failure to carry out the Work in accordance with the Contract Documents.

**§ 9.5.2** When either party disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15.

**§ 9.5.3** When the reasons for withholding certification are removed, certification will be made for amounts previously withheld.

**§ 9.5.4** If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Contractor shall reflect such payment on its next Application for Payment.

**§ 9.6 Progress Payments**

**§ 9.6.1** After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

**§ 9.6.2** The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

**§ 9.6.3** The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

**§ 9.6.4** The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

**§ 9.6.5** The Contractor's payments to suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

**§ 9.6.6** A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

**§ 9.6.7** Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors or provided by suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, create any fiduciary liability or tort liability on the part of the Contractor for breach of trust, or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

**§ 9.6.8** Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

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### § 9.7 Failure of Payment

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents, the amount certified by the Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided for in the Contract Documents.

### § 9.8 Substantial Completion

**§ 9.8.1** Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

**§ 9.8.2** When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

**§ 9.8.3** Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

**§ 9.8.4** When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

**§ 9.8.5** The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. Upon such acceptance, and consent of surety if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

### § 9.9 Partial Occupancy or Use

**§ 9.9.1** The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

**§ 9.9.2** Immediately prior to such partial occupancy or use, the Owner, Contractor, and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

**§ 9.9.3** Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

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### § 9.10 Final Completion and Final Payment

**§ 9.10.1** Upon receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection. When the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

**§ 9.10.2** Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment, (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

**§ 9.10.3** If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed, corrected, and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of the surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

**§ 9.10.4** The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

- **.1** liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;
- **.2** failure of the Work to comply with the requirements of the Contract Documents;
- **.3** terms of special warranties required by the Contract Documents; or
- **.4** audits performed by the Owner, if permitted by the Contract Documents, after final payment.

**§ 9.10.5** Acceptance of final payment by the Contractor, a Subcontractor, or a supplier, shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

## ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

### § 10.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract.

### § 10.2 Safety of Persons and Property

**§ 10.2.1** The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

- **.1** employees on the Work and other persons who may be affected thereby;

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.2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor; and

.3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

**§ 10.2.2** The Contractor shall comply with, and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, bearing on safety of persons or property or their protection from damage, injury, or loss.

**§ 10.2.3** The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.

**§ 10.2.4** When use or storage of explosives or other hazardous materials or equipment, or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

**§ 10.2.5** The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

**§ 10.2.6** The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

**§ 10.2.7** The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

**§ 10.2.8 Injury or Damage to Person or Property**

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

**§ 10.3 Hazardous Materials and Substances**

**§ 10.3.1** The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner and Architect of the condition.

**§ 10.3.2** Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of the material or substance or who are to perform the task of removal or safe containment of the material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed

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by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

**§ 10.3.3** To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

**§ 10.3.4** The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for hazardous materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

**§ 10.3.5** The Contractor shall reimburse the Owner for the cost and expense the Owner incurs (1) for remediation of hazardous materials or substances the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

**§ 10.3.6** If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall reimburse the Contractor for all cost and expense thereby incurred.

### § 10.4 Emergencies

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

## ARTICLE 11 INSURANCE AND BONDS

### § 11.1 Contractor's Insurance and Bonds

**§ 11.1.1** The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Owner, Architect, and Architect's consultants shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents.

**§ 11.1.2** The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

**§ 11.1.3** Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

**§ 11.1.4 Notice of Cancellation or Expiration of Contractor's Required Insurance.** Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice to the Owner of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the

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procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

**§ 11.2 Owner's Insurance**

**§ 11.2.1** The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

**§ 11.2.2 Failure to Purchase Required Property Insurance.** If the Owner fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the Contract Documents, the Owner shall inform the Contractor in writing prior to commencement of the Work. Upon receipt of notice from the Owner, the Contractor may delay commencement of the Work and may obtain insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance, the Owner shall reimburse the Contractor for all reasonable costs and damages attributable thereto.

**§ 11.2.3 Notice of Cancellation or Expiration of Owner's Required Property Insurance.** Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

**§ 11.3 Waivers of Subrogation**

**§ 11.3.1** The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect's consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

**§ 11.3.2** If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 11.3.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

**§ 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance**

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The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss. The Owner waives all rights of action against the Contractor and Architect for loss of use of the Owner's property, due to fire or other hazards however caused.

### §11.5 Adjustment and Settlement of Insured Loss

**§ 11.5.1** A loss insured under the property insurance required by the Agreement shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.5.2. The Owner shall pay the Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements the Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner.

**§ 11.5.2** Prior to settlement of an insured loss, the Owner shall notify the Contractor of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor does not object, the Owner shall settle the loss and the Contractor shall be bound by the settlement and allocation. Upon receipt, the Owner shall deposit the insurance proceeds in a separate account and make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work.

## ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

### § 12.1 Uncovering of Work

**§ 12.1.1** If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

**§ 12.1.2** If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an equitable adjustment to the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.

### § 12.2 Correction of Work

#### § 12.2.1 Before Substantial Completion

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, discovered before Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

#### § 12.2.2 After Substantial Completion

**§ 12.2.2.1** In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.5.

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**§ 12.2.2.2** The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

**§ 12.2.2.3** The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

**§ 12.2.3** The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

**§ 12.2.4** The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner or Separate Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

**§ 12.2.5** Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

### § 12.3 Acceptance of Nonconforming Work

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

## ARTICLE 13 MISCELLANEOUS PROVISIONS

### § 13.1 Governing Law

The Contract shall be governed by the law of the place where the Project is located, excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

### § 13.2 Successors and Assigns

**§ 13.2.1** The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

**§ 13.2.2** The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate the assignment.

### § 13.3 Rights and Remedies

**§ 13.3.1** Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

**§ 13.3.2** No action or failure to act by the Owner, Architect, or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed upon in writing.

### § 13.4 Tests and Inspections

**§ 13.4.1** Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Architect

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timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

**§ 13.4.2** If the Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

**§ 13.4.3** If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Architect's services and expenses, shall be at the Contractor's expense.

**§ 13.4.4** Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

**§ 13.4.5** If the Architect is to observe tests, inspections, or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

**§ 13.4.6** Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

### § 13.5 Interest

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate the parties agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

## ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

### § 14.1 Termination by the Contractor

**§ 14.1.1** The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, for any of the following reasons:

- **.1** Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- **.2** An act of government, such as a declaration of national emergency, that requires all Work to be stopped;
- **.3** Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- **.4** The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2.

**§ 14.1.2** The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

**§ 14.1.3** If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work not executed, and costs incurred by reason of such termination.

**§ 14.1.4** If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, or their agents or employees or any other persons or entities performing portions of the Work because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract

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Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

### § 14.2 Termination by the Owner for Cause

**§ 14.2.1** The Owner may terminate the Contract if the Contractor

- **.1** repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- **.2** fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;
- **.3** repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- **.4** otherwise is guilty of substantial breach of a provision of the Contract Documents.

**§ 14.2.2** When any of the reasons described in Section 14.2.1 exist, and upon certification by the Architect that sufficient cause exists to justify such action, the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- **.1** Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- **.2** Accept assignment of subcontracts pursuant to Section 5.4; and
- **.3** Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

**§ 14.2.3** When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

**§ 14.2.4** If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

### § 14.3 Suspension by the Owner for Convenience

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

**§ 14.3.2** The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

- **.1** that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or
- **.2** that an equitable adjustment is made or denied under another provision of the Contract.

### § 14.4 Termination by the Owner for Convenience

**§ 14.4.1** The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

**§ 14.4.2** Upon receipt of notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- **.1** cease operations as directed by the Owner in the notice;
- **.2** take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- **.3** except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

**§ 14.4.3** In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work

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properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement.

## ARTICLE 15 CLAIMS AND DISPUTES

### § 15.1 Claims

#### § 15.1.1 Definition

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

#### § 15.1.2 Time Limits on Claims

The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all Claims and causes of action not commenced in accordance with this Section 15.1.2.

#### § 15.1.3 Notice of Claims

**§ 15.1.3.1** Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

**§ 15.1.3.2** Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.

#### § 15.1.4 Continuing Contract Performance

**§ 15.1.4.1** Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

**§ 15.1.4.2** The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

#### § 15.1.5 Claims for Additional Cost

If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

#### § 15.1.6 Claims for Additional Time

**§ 15.1.6.1** If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

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

#### § 15.1.7 Waiver of Claims for Consequential Damages

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

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.1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and

.2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit, except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

### § 15.2 Initial Decision

**§ 15.2.1** Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

**§ 15.2.2** The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

**§ 15.2.3** In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

**§ 15.2.4** If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

**§ 15.2.5** The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

**§ 15.2.6** Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

**§ 15.2.6.1** Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days after receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

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**§ 15.2.7** In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

**§ 15.2.8** If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

### § 15.3 Mediation

**§ 15.3.1** Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.7, shall be subject to mediation as a condition precedent to binding dispute resolution.

**§ 15.3.2** The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

**§ 15.3.3** Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

**§ 15.3.4** The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

### § 15.4 Arbitration

**§ 15.4.1** If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. The Arbitration shall be conducted in the place where the Project is located, unless another location is mutually agreed upon. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

**§ 15.4.1.1** A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

**§ 15.4.2** The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

**§ 15.4.3** The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

### § 15.4.4 Consolidation or Joinder

**§ 15.4.4.1** Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party

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provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

**§ 15.4.4.2** Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

**§ 15.4.4.3** The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as those of the Owner and Contractor under this Agreement.

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## SUPPLEMENTARY CONDITIONS

The following supplements modify the "General Conditions of the Contract for Construction", AIA Document A201, 2017. Where a portion of the General Conditions is modified or deleted by these Supplementary Conditions, the unaltered portions of the General Conditions shall remain in effect.

### ARTICLE 2 OWNER

### 2.1 General

Add to 2.1.1 the following:

**2.1.1.1** Minidoka School District, 11018 D Street, Rupert, Idaho shall be the sole representative of the Owner, and here and after shall be designated as the Owner. Wherever in these specifications and contract the term "Owner" shall mean Minidoka School District as represented by an authorized representative.

### 2.2 Evidence of the Owner's Financial Arrangements

Delete Section 2.2

### 2.3 Information and Services Required of the Owner

Add the following Subparagraph 2.3.1.1 and 2.3.1.2:

**2.3.1.1** The Owner will pay directly to local jurisdictions for building and other permits required by such local jurisdictions. The Owner will apply for and obtain such permits.

**2.3.1.2** Except for permits and fees, including those required under subparagraph 3.7.1, which are the responsibility of the Contractor under the Contract Documents, the Owner will secure and pay for any permits and fees specifically indicated in the Contract Documents to be secured and paid for by the Owner.

Delete subparagraph 2.3.3

Delete subparagraph 2.2.5 and substitute the following:

**2.3.6** The Contractor will be furnished free of charge five (5) copies of Drawings and Project Manuals. Additional sets will be furnished at the cost of reproduction, postage and handling.

### ARTICLE 3 CONTRACTOR

### 3.2 Review of Contract Documents and Field Conditions by Contractor

Delete subparagraph 3.2.1 in its entirety.

Delete subparagraph 3.2.2 in its entirety and replace with the following:

**3.2.2** The Contractor shall carefully study and compare the various Drawings and other Contract Documents relative to the Work, as well as any information furnished by the Owner pursuant to Subparagraph 2.2.3, as modified, shall take field measurements of any existing conditions related to the Work and shall observe conditions at the site affecting the Work. Within ten (10) days from the Notice to Proceed, the Contractor shall certify in writing to the Architect that it has made the review required under this Subparagraph 3.2.2 and that it has discovered no errors, omissions or inconsistencies or identifying in as much detail as possible all errors, omissions, or inconsistencies the Contractor has discovered. Contractor shall have a continuing obligation during the Project to advise the Architect of any errors, omissions or inconsistencies it discovers. It is recognized that the Contractor's review is made in its capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents. The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, building codes and rules and regulations, but is for the purpose of identifying issues that could affect constructability, scheduling or cost, where such issues could be expected to be identified by a contractor with experience in projects of a similar size and nature.

Delete subparagraph 3.2.3 in its entirety and replace with the following:

**3.2.3** If the Contractor believes that additional cost or time is involved because of clarifications or instructions issued by the Architect in response to the review and certification required by Subparagraph 3.2.2, the Contractor shall make Claims as provided in Subparagraphs 4.3.6 and 4.3.7. No claim for additional time will be allowed with regard to the time required to complete the review and certification requirements of Subparagraph 3.2.2. A failure by the Contractor to provide the written certification as required shall constitute a substantial breach of the Contract and may result in termination for cause. If the Contractor fails to perform its obligations under Subparagraph 3.2.2, a subsequent claim for additional costs, damages or time that is related to such error, omission or inconsistency may be denied.

**3.6 Taxes**

Add to 3.6 the following:

**3.6.1** The Contractor, in consideration of securing the business of erecting or constructing public works in this State, recognizing that the business in which he is engaged is of a transitory character, and that in the pursuit thereof, his property used therein may be without the state when taxes, excises, or license fees to which he is liable become payable, agrees:

1. To pay promptly when due all taxes (other than on real property), excises and license fees due to the state, its sub-divisions, and municipal and quasi-municipal corporations therein, accrued or accruing during the term of this contract, whether or not the same shall be payable at the end of such term;

2. That if the said taxes, excises, and license fees are not payable at the end of said term, but liability for the payment thereof exists even though the same constitute liens upon his property, to secure the same to the satisfaction of the respective officers charged with the collection thereof; and

3. That, in the event of his default in the payment or securing of such taxes, excises, and license fees, to consent that the department, officer, board, or taxing unit entering into this contract may withhold from any payment due him hereunder the estimated amount of such accrued

and accruing taxes, excises, and license fees for the benefit of all taxing units to which said contractor is liable.

**3.6.2** Before entering into a contract, the Contractor shall be authorized to do business in the state and shall submit a properly executed Contractor's Affidavit Concerning Taxes. (Page CA-1, included in the Project Manual).

**3.6.3** Within ten days of receipt of forms from Owner, Contractor shall complete and return to Owner forms as required by tax collector, showing dates, names, addresses, contracting parties, including all subcontractors, and all other relevant information, which may be required.

### 3.7 Permits, Fees and Notices and Compliance with Laws

Delete subparagraph 3.7.1 and substitute the following:

**3.7.1** The Contractor shall apply for, obtain, and pay for plumbing and electrical permits and inspections required by the Authority Having Jurisdiction (AHJ). The Owner will apply for and obtain building and other permits and inspections required by any and all local jurisdictions. Contractor shall pay all fees and charges for the use of municipal or private property for storage of materials, parking, utility services, temporary obstructions, enclosures, refuse disposal, opening and patching of streets, etc., off of the property of the Owner arising from the construction and completion of the Work. Refer to Supplementary Condition 2.2.2.1 for permit fees provided by the Owner.

### 3.12 Shop Drawings, Product Data and Samples

In subparagraph 3.12.10.1, in the third sentence, delete “the Owner and”.

## ARTICLE 4 ARCHITECT

### 4.2 Administration of the Contract

Delete subparagraph 4.2.10 and substitute the following:

**4.2.10** The Architect will provide a project representative and indicate the limitations of his authority during the construction of the Work.

## ARTICLE 7 CHANGES IN THE WORK

### 7.2 Change Orders

Add to 7.2 the following:

**7.2.2** The amount allowed for overhead and profit on any change order is limited to the amounts indicated in subparagraph 7.3.11 of these Supplementary Conditions.

**7.2.3** Any Change Order prepared, including but not limited to those arising by reason of the parties’ mutual agreement or by mediation, shall constitute a final and full settlement of all matters relating to or affected by the change in the work, including, but not limited to, all direct, indirect and consequential costs associated with such change and any and all adjustments to the Contract Sum and Contract Time. In the event a Change Order increases the Contract Sum, the Contractor shall

include the work covered by such Change Order in the Application for Payment as if such work were originally part of the Project and Contract Documents.

**7.2.4** By the execution of a Change Order, the Contractor agrees and acknowledges that he has had sufficient time and opportunity to examine the change in work which is the subject of the Change Order and that he has undertaken all reasonable efforts to discover and disclose any concealed or unknown conditions which may to any extent affect the Contractor's ability to perform in accordance with the Change Order. Aside from those matters specifically set forth in the Change Order, the Owner shall not be obligated to make any adjustments to either the Contract Sum or Contract Time by reason of any conditions affecting the change in work addressed by the Change Order, which could have reasonably been discovered or disclosed by the Contractor's examination.

### 7.3 Construction Change Directives

In subparagraph 7.3.6 after the word "Architect" insert the following words: "in writing within forty-eight hours ".... The balance of the subparagraph remains unchanged.

In subparagraph 7.3.7, in the last sentence, delete "recorded as a" and substitute "incorporated into a future".

Add to 7.3 the following:

**7.3.11** For purposes of subparagraphs 7.2.2. of these Supplementary Conditions, the allowance for combined overhead and profit shall be limited as follows, unless otherwise provided in the Contract Documents:

**.1** for total changes of $10,000 or less in direct cost, the amount allowed for overhead, profit, bonds and insurance for the Contractor and all subcontractors of any tier, combined shall not exceed twenty percent (20%) of direct costs.

**.2** for total changes exceeding $10,000 in direct cost, the amount allowed for overhead, profit, bonds and insurance for the Contractor and all subcontractors of any tier, combined shall not exceed fifteen percent (15%) of direct costs.

**.3** the Contractor will determine the apportionment between the Contractor and its subcontractors of allowable amounts of overhead, profit, bonds and insurance.

## ARTICLE 8 TIME

### 8.1 Definitions

Add to subparagraph 8.1.1 the following:

**8.1.1.1** The Contractor shall commence work under this contract on the date specified in written "Notice to Proceed" by the Owner, and shall substantially complete the entire Work as defined by Subparagraph 9.8.1 no later than ***** **2021** and Final Completion no later than **** **2021.**

In subparagraph 8.1.2, delete the word "Agreement" and substitute the words "Notice to Proceed".

### 8.3 Delays and Extensions of Time

Delete subparagraph 8.3.3 and substitute the following:

**8.3.3** Notwithstanding any term, condition or provision to the contrary in this Contract, the remedies available to the Contractor for adjustments of Contract Time and Contract Sum by reason of delay shall be those set forth in these Supplementary Conditions.

**8.3.4** If the Contractor submits a progress report or schedule indicating, or otherwise expressing an intention to achieve completion of the Work prior to any completion date required by the Contract Documents or expiration of the Contract Time, no liability of the Owner to the Contractor for any failure of the Contractor to so complete the Work shall be created or implied.

## ARTICLE 9 PAYMENTS AND COMPLETION

### 9.3 Applications for Payment

Add to 9.3.1. the following:

**9.3.1.3** The form of Application for Payment shall be AIA Form G702 or another form acceptable to both Owner and Architect.

Add to 9.3.2 the following:

Off site storage will not be approved at locations more than thirty (30) miles from the project site or outside the State. Any materials stored off site and paid for by the Owner shall be physically marked as being the property of the Owner. The Contractor must provide at least thirty (30) days advance written notice of its request to store off site. Such notice must include a description of the type, quantities, locations, and values of materials involved for the next billing cycle. All requests for payment must indicate the type, quantities, and value of materials or equipment for which payment is requested. The Architect must have unrestricted access to the stored materials during all business hours and may physically inventory all invoice materials and may physically inspect the storage conditions. The Contractor must provide written consent of surety to off-site storage of materials and equipment and to payment for such materials and equipment prior to incorporation in the Work. Consent must be of surety. Consent of local broker or agent is not acceptable. The Contractor must maintain and must provide to the Architect, upon request, a current log of stored materials and equipment, which reflects when materials are used or added. The Contractor must obtain and maintain on all materials and equipment stored off-site and in transit all risk property insurance at replacement cost, with the Owner listed as loss payee.

### 9.6 Progress Payments

Add to 9.6.1 the following:

**9.6.1.1** Until conditions set forth in paragraph 9.10 are met, the Owner shall pay ninety-five percent (95%) of the amount due the Contractor on account of progress payments. If the Architect determines that the Contractor has made or is making satisfactory progress on any uncompleted portions of the work, the Owner may, at its discretion, release a portion of the retainage to the Contractor prior to the actual final completion of the conditions set forth in Paragraph 9.10.

**9.6.1.2** Progress Payments shall fall due thirty (30) days after the Architect's Certificate for Payment is received by the Owner.

Add to 9.6.2 the following:

**9.6.2.1** The Contractor shall not withhold from a subcontractor or supplier more than the percentage withheld from a payment certificate for the subcontractor's or supplier's portion of the work.

Delete subparagraph 9.6.7

**9.7 Failure of Payment**

Delete paragraph 9.7

**9.8 Substantial Completion**

In subparagraph 9.8.5 delete the last two sentences.

**9.10 Final Completion and Final Payment**

In subparagraph 9.10.1, delete the words "… and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable." from the end of the second sentence.

Add to 9.10.1 the following:

**9.10.1.1** The final retainage shall become due and payable to the Contractor in not more than thirty (30) days after issuance of the final Certificate for Payment by the Architect, provided that the conditions of subparagraph 9.10.2 are fully satisfied.

Add to Article 9 the following:

**9.11 Liquidated Damages**

**9.11.1** The Owner will suffer financial loss in an amount that is difficult to quantify if the Project is not Substantially Complete on the date set forth in the Contract Documents. The Contractor (and his Surety) shall be liable for and shall pay to the Owner the sums hereinafter stipulated as fixed, agreed and liquidated damages, and not as a penalty, for each calendar day of delay until the Work is substantially completed, based on the substantial completion date defined in Paragraph 8.1.1.1 above:

**Five Hundred DOLLARS ($500.00)**

**ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY**

**10.1 Safety Precautions and Programs**

Add to 10.1 the following:

**10.1.2** The Contractor shall maintain, in compliance with Idaho Code, Title 72, Chapter 17, a drug-free workplace program throughout the duration of this contract and shall only subcontract work to subcontractors who have programs that comply with Idaho Code, Title 72, Chapter 17.

**10.3 Hazardous Materials**

Add to 10.3.1 the following:

**10.3.1.1** Reference to asbestos or polychlorinated biphenyl (PCB) in this Article does not negate the appropriate abatement of asbestos and PCB containing materials as specifically required by the Contract Documents.

**10.4 Emergencies**

In subparagraph 10.6.1 delete the last sentence.

**ARTICLE 11 INSURANCE AND BONDS**

**11.1 Contractor's Liability Insurance**

Add to 11.1.1 the following:

**11.1.1.1** The insurance required by Subparagraph 11.1.1 shall be written for not less than the following limits:

1. Workers' Compensation:

| | | |
|---|---|---|
| (a) | State: | Statutory |
| (b) | Employer's Liability: | $1,000,000 per Accident<br>$1,000,000 Disease, Policy Limit<br>$1,000,000 Disease, Each Employee |

2. Comprehensive or commercial general liability including premises operation; owners and contractors protective liability, products and completed operations liability, personal injury l iability (including employee acts), broad form property damage liability and blanket contractual liability:

   (a) For any claim for bodily injury, property damage, personal injury or due to a contractual liability, limits of not less than $1,000,000 per occurrence.

   (b) For products and completed operations coverage, limits of $2,000,000 aggregate coverage is to be maintained for a period of two (2) years following final payment.

   (c) For the hazards of explosion, collapse, and underground, commonly referred to as XCU, coverage shall be required if the exposures exist. This coverage may be provided by the subcontractor if the State and prime contractor are named as additional insureds.

3. Business auto liability (including owned, non-owned and hired vehicles) in an amount of not less than $1,000,000 combined single limit.

4. If the General Liability coverages are provided by a Commercial Liability policy, the:

    (a) General Aggregate shall be not less than $2,000,000.

    (b) Fire legal liability shall be provided in an amount not less than $50,000 per occurrence.

5. Umbrella Excess Liability:

    (a) An umbrella policy may be used in combination with other policies to provide a minimum coverage of $1,000,000.

**11.1.1.2** The Contractor shall require all subcontractors of any tier to provide Commercial General Liability Insurance with liability limits of not less than $1,000,000 for bodily injury and property damage, and Business Automobile Liability Insurance for all owned, non-owned and hired vehicles with liability limits of not less than $1,000,000.

**11.1.1.3** If this insurance is written on the Comprehensive General Liability policy form, the Certificates shall be AIA Document G705, Certificate of Insurance or ACORD form 25. If this insurance is written on a Commercial General Liability policy form, ACORD form 25S will be acceptable.

## ARTICLE 13 MISCELLANEOUS PROVISIONS

### 13.1 Governing Law

Add to 13.1 the following:

**13.1.1** Each Contractor and his subcontractors and sub-subcontractors shall comply with all Idaho Statutes with specific reference to Public Works Contractor's State License Law, Title 54, Chapter 19, Idaho Code, as amended.

**13.1.2** Pursuant to Idaho Code 44-1001, EMPLOYMENT OF RESIDENTS OF IDAHO, the contractor must employ ninety-five (95%) bona fide Idaho residents as employees on any job under contract with Joint School District No. 2 dba West Ada School District except where under such contracts fifty (50) or less persons are employed the contractor may employ ten percent (10%) nonresidents, provided, however, in all cases employers must give preference to the employment of bona fide residents in the performance of said work.

### 13.2 Successors and Assigns

In subparagraph 13.2.1, in the second sentence, delete “Except as provided in Subparagraph 13.2.2,”.

Delete subparagraph 13.2.2.

Add to Article 13 the following:

**13.6 Equal Opportunity**

**13.6.1** The Contractor shall maintain policies of employment as follows:

**13.6.1.1** The Contractor and the Contractor's Subcontractors shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, age or national origin. The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, religion, color, sex, age or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the policies of non-discrimination.

**13.8.1.2** The Contractor and the Contractor's Subcontractors shall, in all solicitation or advertisements for employees placed by them or on their behalf, state that all qualified applicants will receive consideration for employment without regard to race, religion, color, sex, age or national origin.

**ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT**

**14.1 Termination by the Contractor**

In subparagraph 14.1.1, in the first sentence, delete the number "30" and substitute the number "60".

Delete subparagraphs 14.1.1.3 and 14.1.1.4.

Delete subparagraph 14.1.2.

In subparagraph 14.1.3 delete “or 14.1.2”.

In subparagraph 14.1.3 delete the words “costs incurred by reason of such termination, and damages.”

Delete subparagraph 14.1.4.

**14.2 Termination by the Owner for Cause**

In subparagraph 14.2.2.3 delete the last sentence.

**14.4 Termination by the Owner for Convenience**

Delete subparagraph 14.4.3 and substitute the following:

**14.4.3** In the case of such termination for the Owner convenience, the Contractor shall be entitled to receive payment from the Owner on the same basis provided in Subparagraph 14.1.3, as modified.

## ARTICLE 15 CLAIMS AND DISPUTES

### 15.1 Claims

Add to 15.1.6 the following:

**15.1.6.1** The Contractor shall not be entitled to an adjustment in Contract Time or in Contract Sum for any delay or failure of performance to the extent such delay or failure was caused by the Contractor or anyone for whose acts the Contractor is responsible. The Contractor shall be entitled to an equitable adjustment in Contract Time, and may be entitled to an equitable adjustment in Contract Sum, if the cost or time of Contractor's performance is delayed or changed due to the fault of the Owner. To the extent any delay or failure of performance was concurrently caused by the Owner and Contractor, the Contractor shall be entitled to an adjustment in the Contract Time for that portion of the delay or failure of performance that was concurrently caused, but shall not be entitled to an adjustment in Contract Sum. In the event that the Contractor is entitled to an adjustment in Contract Sum, the Owner will pay only for the following verifiable costs directly associated with the time extension or delay: 1) the actual labor costs, fringe benefits, employment taxes and insurance related to the Project Superintendent; 2) the cost associated with the fair rental value of the Project Superintendent's vehicle directly related to the time extension; 3) the direct costs attributable to the extension for the field office facility, including telephone lines, utilities, power, lights, water, and sewer (toilets). Mark-up on these costs will not be allowed. The Contractor shall make all reasonable efforts to prevent and mitigate the effects of any delay regardless of cause.

### 15.4 Arbitration

Add the following sentences to the beginning of subparagraph 15.4.1:

**"**The Contractor and the Owner shall not be obligated to resolve any Claim or dispute related to this Contract by arbitration. Upon agreement of the parties and following the exhaustion of mediation, any Claim related to this Contract may be submitted to arbitration, either binding or non-binding, upon mutually agreeable terms and conditions. In the absence of such agreement, any reference in this Contract to arbitration is deemed void and has no force or effect."

END OF SUPPLEMENTARY CONDITIONS

DRAFT

# AIA® Document A101™ – 2017

## *Standard Form of Agreement Between Owner and Contractor*

*where the basis of payment is a Stipulated Sum*

**AGREEMENT** made as of the « *** » day of ****** » in the year « 2021 »
*(In words, indicate day, month and year.)*

**BETWEEN** the Owner:
*(Name, legal status, address and other information)*

~~Joint School District No.2 dba~~
~~West Ada School District~~
~~1303 E. Central Drive~~
~~Meridian, Idaho 83640~~Minidoka School District
1018 D Street
Rupert, Idaho 83350

and the Contractor:
*(Name, legal status, address and other information)*

Contractor

for the following Project:
*(Name, location and detailed description)*

~~Security Vestibule Addition~~
~~Summerwind Elementary School~~
~~3675 N. Jullion Way~~
~~Boise, Idaho~~Minico High School
Team Building
292 W 100 S
Rupert, Idaho 83350

The Architect:
*(Name, legal status, address and other information)*

LKV Architects
2400 E. Riverwalk Drive
Boise, Idaho 83706

The Owner and Contractor agree as follows.

To complete all work associated with the Contract Documents for the new ~~Security Vestibule Addition at Summerwind Elementary~~Team Building at Minico High School.

**ADDITIONS AND DELETIONS:** The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

The parties should complete A101™–2017, Exhibit A, Insurance and Bonds, contemporaneously with this Agreement. AIA Document A201™–2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

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## TABLE OF ARTICLES

1 THE CONTRACT DOCUMENTS

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**User Notes:** (3B9ADA42)

2 THE WORK OF THIS CONTRACT

3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

4 CONTRACT SUM

5 PAYMENTS

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9 ENUMERATION OF CONTRACT DOCUMENTS

EXHIBIT A INSURANCE AND BONDS

### ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

### ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

### ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

**§ 3.1** The date of commencement of the Work shall be:
*(Check one of the following boxes.)*

[ «» ] The date of this Agreement.

[] A date set forth in a notice to proceed issued by the Owner.

[ «» ] Established as follows:

The Project shall meet Substantial ~~Final~~ Completion no later ~~then ****** 2021~~than ***** 2021.

«»

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of this Agreement.

**§ 3.2** The Contract Time shall be measured from the date of commencement of the Work.

**§ 3.3 Substantial Completion**

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**§ 3.3.1** Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:
*(Check one of the following boxes and complete the necessary information.)*

[ X ] By the following date: Substantial Completion-: *****, ***2021. Final Completion: *****, ****2021

**§ 3.3.2** Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work are to be completed prior to Substantial Completion of the entire Work, the Contractor shall achieve Substantial Completion of such portions by the following dates:

| Portion of Work | Substantial Completion Date |
|---|---|
| Substantially Completion: ****_***** 2021<br>Final Completion: *****_***** 2021 | |

**§ 3.3.3** If the Contractor fails to achieve Substantial Completion as provided in this Section 3.3, liquidated damages, if any, shall be assessed as set forth in Section 4.5.

## ARTICLE 4 CONTRACT SUM

**§ 4.1** The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be «TBD » ($ «TBD » ), subject to additions and deductions as provided in the Contract Documents.

**§ 4.2 Alternates**

**§ 4.2.1** Alternates, if any, included in the Contract Sum:

| Item | Price |
|---|---|
| | |

**§ 4.2.2** Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement.
*(Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)*

| Item | Price | Conditions for Acceptance |
|---|---|---|
| « » | | |

**§ 4.3** Allowances, if any, included in the Contract Sum:
*(Identify each allowance.)*

| Item | Price |
|---|---|
| « » | |

**§ 4.4** Unit prices, if any:
*(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)*

| Item | Units and Limitations | Price per Unit ($0.00) |
|---|---|---|
| « » | | |

**§ 4.5** Liquidated damages, if any:
*(Insert terms and conditions for liquidated damages, if any.)*

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«The Owner will suffer financial loss in an amount that is difficult to quantify if the Project is not Substantially Complete on the date set forth in the Contract Documents. The Contractor (and its Surety) shall be liable for and shall pay to the Owner the sums hereinafter stipulated as fixed, agreed as liquidated damages, not as penalty, for each calendar day of delay until the Work is substantially completed: Five hundred dollars and No cents ($500.00). »

**§ 4.6** Other:
*(Insert provisions for bonus or other incentives, if any, that might result in a change to the Contract Sum.)*

« »

## ARTICLE 5 PAYMENTS

### § 5.1 Progress Payments

**§ 5.1.1** Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

**§ 5.1.2** The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

« »

**§ 5.1.3** Provided that an Application for Payment is received by the Architect not later than the «5th» day of a month, the Owner shall make payment of the amount certified to the Contractor not later than the «last» day of the «same» month. If an Application for Payment is received by the Architect after the application date fixed above, payment of the amount certified shall be made by the Owner not later than «Sixty» ( «60 » ) days after the Architect receives the Application for Payment.
*(Federal, state or local laws may require payment within a certain period of time.)*

**§ 5.1.4** Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Architect may require. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.

**§ 5.1.5** Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

**§ 5.1.6** In accordance with AIA Document A201™–2017, General Conditions of the Contract for Construction, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

**§ 5.1.6.1** The amount of each progress payment shall first include:

**.1** That portion of the Contract Sum properly allocable to completed Work;

**.2** That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing; and

**.3** That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified.

**§ 5.1.6.2** The amount of each progress payment shall then be reduced by:

**.1** The aggregate of any amounts previously paid by the Owner;

**.2** The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A201–2017;

**.3** Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;

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.4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A201–2017; and

.5 Retainage withheld pursuant to Section 5.1.7.

**§ 5.1.7 Retainage**

**§ 5.1.7.1** For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold the following amount, as retainage, from the payment otherwise due:

*(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)*

«five percent (5%) »

**§ 5.1.7.1.1** The following items are not subject to retainage:

*(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)*

«NA »

**§ 5.1.7.2** Reduction or limitation of retainage, if any, shall be as follows:

*(If the retainage established in Section 5.1.7.1 is to be modified prior to Substantial Completion of the entire Work, including modifications for Substantial Completion of portions of the Work as provided in Section 3.3.2, insert provisions for such modifications.)*

«NA »

**§ 5.1.7.3** Except as set forth in this Section 5.1.7.3, upon Substantial Completion of the Work, the Contractor may submit an Application for Payment that includes the retainage withheld from prior Applications for Payment pursuant to this Section 5.1.7. The Application for Payment submitted at Substantial Completion shall not include retainage as follows:

*(Insert any other conditions for release of retainage upon Substantial Completion.)*

«NA »

**§ 5.1.8** If final completion of the Work is materially delayed through no fault of the Contractor, the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document A201–2017.

**§ 5.1.9** Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

**§ 5.2 Final Payment**

**§ 5.2.1** Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

.1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Article 12 of AIA Document A201–2017, and to satisfy other requirements, if any, which extend beyond final payment; and

.2 a final Certificate for Payment has been issued by the Architect.

.3 the Architect has received a Consent of Surety Form (AIA Document G707) signed by the Surety who issued the Performance Bonds on behalf of the Contractor.

.4 the Owner has received a Tax Release from the Idaho State Tax Commission.

**§ 5.2.2** The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect's final Certificate for Payment, or as follows:

« »

**§ 5.3 Interest**

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Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.
*(Insert rate of interest agreed upon, if any.)*

«five» % «(5% Per Annum)»

## ARTICLE 6 DISPUTE RESOLUTION

### § 6.1 Initial Decision Maker

The Architect will serve as the Initial Decision Maker pursuant to Article 15 of AIA Document A201–2017, unless the parties appoint below another individual, not a party to this Agreement, to serve as the Initial Decision Maker.
*(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)*

«»Jason Van Every
«»Maintenance Director
«»Mindoka School District
« »

### § 6.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of AIA Document A201–2017, the method of binding dispute resolution shall be as follows:
*(Check the appropriate box.)*

[ «» ] Arbitration pursuant to Section 15.4 of AIA Document A201–2017

[ «X» ] Litigation in a court of competent jurisdiction

[ «» ] Other *(Specify)*

«»

If the Owner and Contractor do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction.

## ARTICLE 7 TERMINATION OR SUSPENSION

**§ 7.1**Termination by the Contractor

**§ 7.1.1** The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, for any of the following reasons:

**.1** Issuance of an order of a court or other public authority having jurisdiction that requires all work to be stopped;

**.2** An act of government, such as a declaration of national emergency, that requires all work to be stopped;

**.3** Because the Owner has not made payment on a Certificate for Payment within forty-five (45) days of the time stated in the Contract Documents.

**§ 7.1.2** The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 7.3, constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

**§ 7.1.3** If one of the reasons described in Section 7.1.1 or 7.1.2 exists, the Contractor may, upon seven days' notice to the Owner, terminate the Contract and recover from the Owner payment for the Work executed and costs incurred by reason of such termination.

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**§ 7.1.4** If the Work is stopped for a period of 60 consecutive days' through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, or their agents or employees or any other persons or entities performing portions of the Work because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' notice to the Owner, terminate the Contract and recover from the Owner as provided in Section 7.1.3.

«NA »

**§ 7.2 Termination by the Owner for Cause**

**§ 7.2.1** The Owner may terminate the Contract if the Contractor

**.1** refuses or fails to supply enough properly skilled workers or proper materials;

**.2** fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;

**.3** Disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or

**.4** otherwise is guilty of substantial breach of a provision of the Contract Documents.

**§ 7.2.2** When any of the reasons described in Section 7.2.1 exist, and upon certification by the Owner that sufficient cause exists to justify such action, the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

**.1** Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;

**.2** Accept assignment of subcontracts; and

**.3** Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

**§ 7.2.3** When the Owner terminates the Contract for one of the reasons stated in Section 7.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

**§ 7.2.4** If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

**§ 7.3 Suspension by the Owner for Convenience**

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

**§ 7.3.2** The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 7.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

**.1** that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or

**.2** that an equitable adjustment is made or denied under another provision of the Contract.

**§ 7.4 Termination by the Owner for Convenience**

**§ 7.4.1** The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

**§ 7.4.2** Upon receipt of notice from the Owner of such termination for the Owner's convenience, the Contractor shall

**.1** cease operations as directed by the Owner in the notice:

**.2** take actions necessary, or that the Owner may direct, for the protection and preservation of the Work;

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and
**.3** except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

**§ 7.4.3** In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination Subcontracts.

## ARTICLE 8 MISCELLANEOUS PROVISIONS

**§ 8.1** Where reference is made in this Agreement to a provision of AIA Document A201–2017 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

**§ 8.2** The Owner's representative:
*(Name, address, email address, and other information)*

~~«Joe Yochum, Assistant Superintendent »~~
~~«West Ada School District »~~
~~«1303 E. Central Drive »~~
~~«Meridian, ID 83642 »~~Jao

**§ 8.3** The Contractor's representative:
*(Name, address, email address, and other information)*

**§ 8.4** Neither the Owner's nor the Contractor's representative shall be changed without ten days' prior notice to the other party.

**§ 8.5 Insurance and Bonds**

**§ 8.5.1** The Owner and the Contractor shall purchase and maintain insurance as set forth in the following paragraphs, and elsewhere in the Contract Documents.

**§ 8.5.1.1** Before commencing the Trade Contract Work and as a condition to payment, Trade Contractor shall procure and maintain in force Workers' Compensation / Employers' Liability Insurance, Business Automobile Liability Insurance, and Commercial General Liability Insurance (CGL). The CGL policy shall include coverage for liability arising from premises, operations, independent contractors, products-completed operations, personal injury and advertising injury, contractual liability, and broad from property damage, Trade Contractor shall maintain completed operations liability insurance for one year after Substantial Completion, or as required by the Trade Contract Documents, whichever is longer. Trade Contractor's liability policies, as required in this subsection, shall be written on an occurrence basis with at least the following limits of liability.

**§ 8.5.1.1a** Workers' Compensation in accordance with the laws of the State in which the Project is located.

**§ 8.5.1.1b** Employers' Liability Insurance
$1,000,000 Bodily Injury by Accident Each Accident
$1,000,000 Bodily Injury by Disease Policy Limit
$1,000,000 Bodily Injury by Disease Each Employee

**§ 8.5.1.1c** Business Automobile Liability Insurance $1,000,000 Each Accident

**§ 8.5.1.1d** Commercial General Liability Insurance$1,000,000 Each Occurrence
$2,000,000 General Aggregate
$2,000,000 Products / completed Operations Aggregate

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**§ 8.5.1.2** Employers' Liability, Business Automobile Liability, and Commercial Liability coverages required under subsection 8.5.1. may be arranged for the full limits required by a combination of underlying policies with the balance provided by Excess of Umbrella Liability policies.

**§ 8.5.1.3** Trade Contractor shall maintain in effect all insurance coverage required under this section with insurance companies lawfully authorized to do business in the jurisdiction in which the Project is located. If Trade Contractor fails to obtain or maintain any insurance coverage required under this Agreement, Owner may purchase such coverage and charge the expenses to Trade Contractor, or terminate this Agreement.

**§ 8.5.1.4** To the extent commercially available to Trade Contractor from its current insurance company, insurance policies required under subsection 8.5.1 shall contain a provision that the insurance company or its designee must give Owner written notice transmitted in paper or electronic format within ten (10) Business Days after cancelation of coverage by the insurance company. Prior to commencing the Work and upon renewal or replacement of the insurance policies, Trade Contractor shall furnish Owner with certificates of insurance until one year after Substantial Completion or longer if required by the Trade Contract documents. In addition, if any insurance policy required under subsection 8.5.1 is not to be immediately replaced without lapse in coverage when it expires, exhausts its limits, or is to be canceled, Trade Contractor shall give Owner prompt written notice upon actual or constructive knowledge of such condition.

**§ 8.5.2** Trade Contractor's Bonds
Payment and Performance Bonds for 100% of the Trade Contract value are required by the Owner

**§ 8.6** Notice in electronic format, pursuant to Article 1 of AIA Document A201–2017, may be given in accordance with AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, if completed, or as otherwise set forth below:
*(If other than in accordance with AIA Document E203–2013, insert requirements for delivering notice in electronic format such as name, title, and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)*

« »

**§ 8.7** Other provisions:
**§ 8.7.1** Pursuant to Idaho Code 44-1001, EMPLOYMENT OF RESIDENTS OF IDAHO, the contractor must employ ninety-five (95%) bona fide Idaho residents as employees on any job under contract with Joint School District No. 2 dba West Ada School District except where under such contracts fifty (50) or less persons are employed the contractor may employ ten percent (10%) nonresidents, provided, however, in all cases employers must give preference to the employment of bona fide residents in the performance of said work. ~~**Contractor shall comply with Idaho Code 44-1001, which provides as follows:**~~

~~EMPLOYMENT OF RESIDENTS OF IDAHO — WAGE SCALE — FEDERAL FUNDS.~~
~~In all state, county, municipal, and school construction, repair, and maintenance work under any of the laws of this state the contractor, or person in charge thereof must employ ninety-five percent (95%) bona fide Idaho residents as employees on any such contracts except for procurement authorized in section 67-2808(2), Idaho Code, or where under such contracts fifty (50) or less persons are employed the contractor may employ ten percent (10%) nonresidents, provided however, in such a case employers must give preference to the employment of bona fide Idaho residents in the performance of such work; provided, that in work involving the expenditure of federal aid funds this act shall not be enforced in such a manner as to conflict with or be contrary to the federal statutes prescribing a labor preference to honorably discharged members of the United States armed forces, including airmen, soldiers, sailors, and marines, prohibiting as unlawful any other preference or discrimination among the citizens of the United States.~~

**§ 8.7.1.1** Idaho Code 63-1503 COLLECTION OF TAXES FROM PUBLIC WORKS CONTRACTORS. The Contractor, in consideration of securing the business of erecting or constructing public works in this state, recognizing that the business in which it is engaged is of a transitory character, and that in the pursuit thereof, his property used therein may be without the state when taxes, excises, or license fees to which Contractor is liable become payable, agrees:

**.1** To pay promptly when due all taxes, (other than on real property), excises and license fees due to the

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state, its subdivisions, and municipal and quasi-municipally corporations therein, accrued or accruing during the term of this contract, whether or not the same shall be payable at the end of such term;
**.2** That is the said taxes, excises, and license fees are not payable at the end of said term, but liability for the payment thereof exist, even though the same constitute liens upon Contractor's property, to secure the same to the satisfaction of the respective officers charged with the collection thereof; and
**.3** That, in the event of Contractor's default in the payment or securing of such taxes, excises, and license fees, to consent that the department, offices, board or taxing unit entering into this contract may withhold from any payment due Contractor hereunder the estimated amount of such accrued and accruing taxes, excises, and license fees for the benefit of all taxing units to which the Contract is liable.

**§ 8.7.2** Laws, Regulations, etc. The Work shall strictly comply with all federal, state, local and municipal laws, rules, regulations, statutes, ordinances and other directives (hereinafter referred to "Laws"), applicable to the Work on the Project, including, but not limited to, labor, wage, equal opportunity employment, environmental and safety Laws. All work, in addition to that specifically required by this Contract, but necessary to fully comply with such Laws, will be furnished by CONTRACTOR as part of this Contract without additional compensation. In the event CONTRACTOR observes any work on the Project which CONTRACTOR believes is not in compliance with such Laws, CONTRACTOR shall immediately notify OWNER in writing of such non-compliance.

**§ 8.7.3** Assignment Prohibited. CONTRACTOR agrees not to assign or sublet Contract or the Work or any right to payment or other Contract right or portion of the Work without the prior written consent of the OWNER.

**§ 8.7.4** CONTRACTOR herby certifies that it has an established safety policy as required by the Occupational, Safety and Health Administration (OSHA), which requires regular safety meetings, CONTRACTOR agrees to conduct weekly safety meetings regarding its Work under this agreement and shall promptly prepare minutes of such meetings and provide copies of such minutes to OWNER, if requested, as the Work progresses. CONTRACTOR agrees to comply with all requirements of OSHA relating to the Work and shall maintain and provide all applicable material safety data sheets in accordance with OSHA requirements.

**§ 8.7.5** Materials, Tools and Equipment. All materials delivered by or on account of the CONTRACTOR and intended to be incorporated into the construction of the Project hereunder, shall become the property of the OWNER as delivered, but the CONTRACTOR may repossess himself of any surplus remaining at the completion of this Contract. All scaffolding, apparatus, ways, works, machinery and plans brought upon the premises by the CONTRACTOR shall remain his property, but in the case of default, and completion of the Work by the OWNER, OWNER shall be entitled to use such scaffolding, apparatus, ways, works, machinery and plans without cost or liability for depreciation or damaged by such use and without prejudice to OWNER'S other rights or remedies for any damage or loss sustained by reason of said default.

**§ 8.7.6** Delay. Non-violent union picketing does not constitute a justified delay in the Project on the part of the CONTRACTOR.

**§ 8.7.7** Attorney Fees. If CONTRACTOR or OWNER files suit against the other, which suit is in any way connected with this Contract, the prevailing party shall be entitled to recover a reasonable sum for attorney fees and costs from the other party, including costs and fees on any appeal. In addition, in the event OWNER is required to defend any action arising out of or relating to CONTRACTOR'S obligation hereunder, including and suit, arbitration or other legal proceeding, CONTRACTOR shall pay OWNER's reasonable costs and attorney fees, including costs and fees on any appeal.

**§ 8.7.8** The OWNER may require notarized lien releases from CONTRACTOR and its subcontractors and suppliers or may issue joint checks at OWNER'S sole discretion at any time. As a condition for any progress payment or final payment, the OWNER may require the CONTRACTOR to provide the names and addresses of all its employees, subcontractors and suppliers providing any labor and/or material for any portion of the Work and shall provide evidence of payment of employee withholding taxes.

**§ 8.7.9 Quality Control and Supervision of Work.**
**§ 8.7.9.1** Continuous control of the quality of the Work is the essence of this Contract. Failure of the CONTRACTOR to establish and maintain quality control of the Work shall be default of this agreement.

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CONTRACTOR shall establish a quality control program satisfactory to the OWNER'S consent. Failure to maintain proper supervision on the site shall constitute default of this agreement.

**§ 8.7.9.2** The Work shall be administered and directed by CONTRACTOR'S project supervisor experienced in the Work and acceptable to OWNER who shall be assigned to the Project upon execution of this agreement. CONTRACTOR'S project supervisor shall be present on site at all times Work is performed or materials delivered, and CONTRACTOR shall not charge project supervisors during the Project without OWNER'S consent. Failure to maintain proper supervision on site shall constitute default of this agreement.

**§ 8.7.9.3** CONTRACTOR shall be responsible for the continuous quality control of the Work, protection of the Work and other work at the site and for clean-up and maintenance of the site of the Work. OWNER may, at any time, require removal and replacement of CONTRACTOR'S project supervisor and CONTRACTOR shall be liable for any costs, including overhead costs, incurred by OWNER in assuring or maintaining quality control of the Work.

« »

## ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

**§ 9.1** This Agreement is comprised of the following documents:

**.1** AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor, as amended for this project

**.2** AIA Document A201™–2017, General Conditions of the Contract for Construction

*(Insert the date of the E203-2013 incorporated into this Agreement.)*

« »

**.3** Drawings

| Number | Title | Date |
|---|---|---|
| «See attached Exhibit A » | | |

**.4** Specifications

| Section | Title | Date | Pages |
|---|---|---|---|
| «See attached Exhibit A » | | | |

**.5** Addenda, if any:

| Number | Date | Pages |
|---|---|---|
| « » | | |

Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are also enumerated in this Article 9.

**.6** Other Exhibits:

*(Check all boxes that apply and include appropriate information identifying the exhibit where required.)*

[ « » ] AIA Document E204™–2017, Sustainable Projects Exhibit, dated as indicated below:
(Insert the date of the E204-2017 incorporated into this Agreement.)

« »

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[ « » ] The Sustainability Plan:

| Title | Date | Pages |
|---|---|---|
| « » | | |

[ « » ] Supplementary and other Conditions of the Contract:

| Document | Title | Date | Pages |
|---|---|---|---|
| « » | | | |

.7 Other documents, if any, listed below:

*(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201™–2017 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)*

« »

This Agreement entered into as of the day and year first written above.

| | |
|---|---|
| « » | « » |
| **OWNER** *(Signature)* | **CONTRACTOR** *(Signature)* |
| ~~«Joe Yochum, Assistant Superintendent »~~« » | |
| *(Printed name and title)* | *(Printed name and title)* |

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## Contractor's Affidavit Concerning Taxes

STATE OF_____)

) ss.

COUNTY OF_____)

Pursuant to the Idaho Code, Title 63, Chapter 15, I, the undersigned, being duly sworn, depose and certify that all taxes, excises and license fees due to taxing units in the State of Idaho, for which I or my property is liable then due or delinquent, have been paid, or secured to the satisfaction of the respective taxing units.

_____

Name of Contractor

_____

Address

_____

City and State

By:_ Signature

Subscribed and sworn to before me this_____day of_____, 2021.

Notary Public Residing at _____

_____

Commission Expires: _____

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## CONSENT OF SURETY COMPANY TO FINAL PAYMENT

AIA Document G707, Consent of Surety Company to Final Payment is hereby included by reference and shall be a part of the Contract Documents. Final Payment will not be made until the owner has received a release from the Idaho State Tax Commission. Copies of AIA Document G707 are available for review at the offices of the Owner. Copies of the document may be purchased from the American Institute of Architects or its local distributor. The Boise AIA office telephone number is 208 388.8536.

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## CONTRACTORS AFFIDAVIT OF PAYMENT OF DEBTS AND CLAIMS

AIA Document G706, Contractors Affidavit of Payment of Debts and Claims is hereby included by reference and shall be a part of the Contract Documents. Copies of AIA Document G706 are available for review at the offices of the Owner. Copies of the document may be purchased from the American Institute of Architects of its local distributor. The Boise AIA office telephone number is (208) 388.8536.

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SECTION 011000 - SUMMARY OF WORK AND GENERAL REQUIREMENTS

PART 1 - GENERAL

1.1. RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

1.2. DESCRIPTION OF THE PROJECT

A. The scope of this project, located at the existing Minico High School, includes the construction of a new 2,250 square foot Team Building. Scope of work shall include masonry walls, wood frame construction, hollow metal doors and frames, interior finishes including cabinetry, paint, flooring, gypsum board ceiling, mechanical, plumbing and electrical work. All associated site work and all as required by, specified in, and shown on the Contract Documents. Utility extensions, well drilling, and septic system construction will be provided by others. Connections to those utilities will be considered part of the project.

1.3. CONTRACT DOCUMENTS

A. The Contract Documents for the Work are entitled:

Minico High School
Team Building
292 W 100 S
Rupert, Idaho 83350

B. The Contract Documents are dated July 2021

C. The Contract Documents for the Work shall be as defined in Paragraph 1.1.1 of the General Conditions of the Contract for Construction, AIA Document A201 – 2017.

1.4. TYPE OF CONTRACT

A. Project will be constructed with a single contract.

1.5. WORK PHASES

A. The Work shall be conducted in a single phase.

1.6. COORDINATION OF CONTRACT

A. Web-Based Project Software: Project software administered by General Contractor shall be required for purposes of managing communication and documents during the construction stage.

1. See Section 013100 "Project Management and Coordination." for requirements for using web-based Project software.

1.7 PHASED CONSTRUCTION

A. The Work shall be conducted in a single phase.

1.8 WORK UNDER SEPARATE CONTRACTS

A. General: Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying Work under this Contract or other contracts. Coordinate the Work of this Contract with work performed under separate contracts.

1. Installation of on-site domestic well and septic system.

1.9 OWNER-FURNISHED PRODUCTS

B. Owner will furnish products indicated. The Work includes receiving, unloading, handling, storing, protecting, and installing Owner-furnished products.

C. Owner-Furnished Products:

1. Installation of on-site domestic well and septic system.

2. 8” concrete masonry units to be provided by the owner. The general contractor is to review the current amount of CMU units and determine if the Owner’s stock is adequate for the project.

1.10. USE OF PREMISES

A. General: Contractor shall have use of premises only as required for construction operations. Contractor’s use of premises is also limited by Owner’s right and intention to self- perform work or to retain other contractors for portions of the project.

B. Contractor shall maintain roads and streets surrounding the project site in an accessible and clean condition throughout the construction period.

1. Roads and streets surrounding the project site shall not be blocked to vehicle traffic at any time by operations under this Contract, except as is necessary to support construction operations.
2. Contractor and construction personnel shall not park equipment or personal vehicles along roads and streets surrounding the project site, nor in a manner to disrupt traffic flow

or access to any adjacent properties.

3. Contractor shall not enter adjacent properties, private driveways, etc., for any reason. Do not use adjacent properties or private driveways for vehicle turn around.
4. Contractor shall not drive on, park on, or store equipment or materials on properties adjacent to the site without the express written permission of the owner of such properties. Materials stored on adjacent properties shall not be considered as "stored on site" for determining amounts of payments owed to Contractor.

## 1.11. OWNER'S OCCUPANCY REQUIREMENTS

A. Owner Occupancy: Owner will occupy the building and site areas adjacent to the construction area during the entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations.

1. Provide not less than 72 hours notice to Owner of activities that will affect Owner's operations.

## 1.12. WORK RESTRICTIONS

A. On-Site Work Days and Hours: Work days and hours are not restricted, except as required to comply with local ordinances and regulations.

B. Existing Utility Interruptions: 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 seven days in advance of proposed utility interruptions.
2. Do not proceed with utility interruptions without the Owner's written permission.
3. The Contractor shall make every effort to minimize the time that building services and equipment operation is interrupted by Work under this Contract.

## 1.13. SPECIFICATION FORMATS AND CONVENTIONS

A. Specification Format: The Specifications are organized into Divisions and Sections using the 50-division format and CSI/CSC's "MasterFormat" numbering system.

1. Section Identification: The Specifications use Section numbers and titles to help cross-referencing in the Contract Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete because all available Section numbers are not used. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of Sections in the Contract Documents.
2. Division 01: Sections in Division 01 govern the execution of the Work of all Sections in the Specifications.

B. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred, as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.

    a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

C. Requirements of Drawings and Specifications: All items of Work shown or noted on the Drawings and / or described in the Project Manual shall be provided by the Contractor as a part of his Work. Should an item be shown or noted on the Drawings and not described in the Project Manual, the Contractor shall provide the item at no additional cost to the Owner. Should an item be described in the Project Manual and not shown or noted on the Drawings, the Contractor shall provide the item at no additional cost to the Owner."

## 1.14. FIRE RATED ASSEMBLIES

A. Fire rated construction shall conform to any requirements of fire rated assemblies referenced on the Drawings or described in the Specifications.

1. The Contractor shall provide all components necessary to conform to any and all referenced assemblies.

## 1.15. OWNERSHIP OF REMOVALS

A. The Contractor shall be responsible for any and all demolition and removal as may be necessary and required to fulfill the requirements of the Contract Documents.

B. All removals shall belong to the Contractor and shall be removed from the premises by him and legally disposed of at his expense.

## 1.16. WORK NOT NOTED, DETAILED, OR SPECIFIED

A. All work required for a complete installation or assembly shall be included in the Contractor's bid. Where minor portions of required work are not noted, detailed or specified, such work shall be done in accordance with proven construction practice, industry standards, or as directed by Architect. Such required work shall be done at no additional cost to Owner.

## 1.17. DIMENSIONS AND MEASUREMENTS

A. Contractor shall field verify all dimensions pertaining to the work and shall be responsible for

the determination of all quantities of materials required for the work and for the accuracy of all dimensions of materials and items fabricated for this project. Contractor shall not rely on the scale drawings in the project Drawings in the determination of exact quantities or dimensions.

1.18. GENERAL INSTALLATION PROVISIONS

A. Inspection of Conditions: Require the Installer of each major component to inspect both the substrate and conditions under which Work is to be performed. Installation of affected components shall not proceed until unsatisfactory conditions have been corrected in an acceptable manner.

B. Manufacturer's Instructions. Contractor shall comply with manufacturer's installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.

C. Contractor shall inspect materials or equipment immediately upon delivery and prior to installation and shall reject damaged and defective items.

D. Contractor shall provide all attachment and connection devices and methods necessary for securing Work. Secure Work true to line and level. Allow for expansion and building movement.

E. Visual Effects: Contractor shall provide uniform joint widths in exposed Work. Arrange joints in exposed Work to obtain the best visual effect. Refer questionable choices to Architect for final decision.

F. Contractor shall check and recheck measurements, dimensions, and elevations before starting each installation and shall be responsible for the accuracy of all measurements, dimensions, and elevations.

G. Contractor shall install each component during acceptable weather conditions.

I. Blocking and Backing: Contractor shall provide blocking and backing for all items for which blocking and backing is required. Verify blocking and backing requirements and provide such blocking and backing at no additional cost to the Owner, whether or not such items are indicated on the Drawings.

1.19. CLEANING AND PROTECTION

A. During handling and installation, The Contractor shall clean and protect construction in progress, adjoining materials in place, and existing construction. Apply protective coverings where required to ensure protection from damage or deterioration at Substantial Completion.

B. Limiting Exposures: The Contractor shall supervise construction activities to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging or otherwise deleterious exposure from any source during the construction period. Roof shall be rendered completely watertight at the conclusion of each day’s work.

C. The Contractor shall clean and maintain completed construction as frequently as necessary through the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

1.20. REQUIREMENTS OF DRAWINGS AND SPECIFICATIONS

A. All items of Work shown or noted on the Drawings and / or described in the Project Manual shall be provided by the Contractor as a part of his Work. Should an item be shown or noted on the Drawings and not described in the Project Manual, the Contractor shall provide the item at no additional cost to the Owner. Should an item be described in the Project Manual and not shown or noted on the Drawings, the Contractor shall provide the item at no additional cost to the Owner.

END OF SECTION 011000

SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications.

1.3 MINOR CHANGES IN THE WORK

A. Architect will issue supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710, "Architect's Supplemental Instructions."

1.4 PROPOSAL REQUESTS

A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.

1. Proposal Requests issued by Architect are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
2. Within time specified in Proposal Request after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.

a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
c. Include costs of labor and supervision directly attributable to the change.
d. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

B. Contractor-Initiated Proposals: If latent or unforeseen conditions require modifications to the Contract, Contractor may propose changes by submitting a request for a change to Architect.

1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
4. Include costs of labor and supervision directly attributable to the change.
5. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
6. Comply with requirements in Division 01 Section "Product Requirements" if the proposed change requires substitution of one product or system for product or system specified.

C. Proposal Request Form: Use AIA Document G709 for Contractor Proposals, initiated proposals.

1.5 CHANGE ORDER PROCEDURES

A. On Owner's approval of a Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on form provided by Owner.

1.6 CONSTRUCTION CHANGE DIRECTIVE

A. Construction Change Directive: Architect may issue a Construction Change Directive on form provided by Owner. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.

B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.

1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012600

SECTION 012900 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.

1.3 DEFINITIONS

A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 SCHEDULE OF VALUES

A. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.

1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including the following:

a. Application for Payment forms with Continuation Sheets.
b. Submittals Schedule.
c. Contractor's Construction Schedule.

2. Submit the Schedule of Values to Architect at earliest possible date but no later than seven days before the date scheduled for submittal of initial Application for Payment.

B. Format and Content: Use the Project Manual table of contents as a guide to establish line items for the Schedule of Values. Provide at least one line item for each Specification Section.

1. Identification: Include the following Project identification on the Schedule of Values:

a. Project name and location.
b. Name of Architect.
c. Architect's project number.
d. Contractor's name and address.
e. Date of submittal.

2. Submit draft of AIA Document G703 Continuation Sheets or other equivalent form approved by Architect and Owner.
3. Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:

    a. Related Specification Section or Division.
    b. Description of the Work.
    c. Change Orders (numbers) that affect value.

        1) Change Orders shall be fully executed with all necessary signatures before they are included in the Schedule of Values.
        2) Construction Change Directive cost changes shall be incorporated into fully executed Change Order (s) before they are included in the Schedule of Values.

    d. Dollar value.

        1) Percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.

4. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide several line items for principal subcontract amounts, where appropriate.
5. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
6. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.

    a. Differentiate between items stored on-site and items stored off-site. Include evidence of insurance or bonded warehousing.

7. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
8. Provide a separate line item for the value of project closeout activities.
9. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.

    a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense, at Contractor's option.

10. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

## 1.5 APPLICATIONS FOR PAYMENT

A. Each Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.

1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.

B. Payment Application Times: Progress payments shall be submitted to Architect on or before the agreed date of each month. The period covered by each Application for Payment is one month, ending on the last day of the month.

C. Payment Application Forms: Use AIA Document G702 or other equivalent form approved by Owner and Architect.

1. Entries on continuation sheet shall be consistent with approved Schedule of Values.

D. Application Preparation: Complete every entry on form. Execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incorrect or incomplete applications without action.

1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
2. Include amounts of Change Orders issued before last day of construction period covered by application.

E. Transmittal: Submit one signed original copy of each Application for Payment to Architect by a method ensuring receipt within 24 hours.

1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.

F. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:

1. List of subcontractors.
2. Schedule of Values.
3. Contractor's Construction Schedule (preliminary if not final).
4. Products list.
5. Submittals Schedule (preliminary if not final).
6. List of Contractor's staff assignments.
7. List of Contractor's principal consultants.

G. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete, less the value of project closeout activities.

1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

H. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following on forms acceptable to Owner.

1. Evidence of completion of Project closeout requirements.
2. Contractor's Affidavit of Payment of Debts and Claims.
3. Release of Claims.
4. Consent of Surety to Final Payment.
5. Evidence that claims have been settled.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012900

SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative provisions for coordinating construction operations on Project by the General Contractor including, but not limited to, the following:

1. Coordination.
2. Administrative and supervisory personnel.
3. Project meetings.
4. Requests for Interpretation (RFIs).
5. Digital Project Management Procedures and Requirements.
6. Pre-installation meetings.
7. General installation provisions.

1.3 DEFINITIONS

A. RFI: Request from Contractor seeking interpretation or clarification of the Contract Documents.

1.4 COORDINATION

A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections that depend on each other for proper installation, connection, and operation.

1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
3. Make adequate provisions to accommodate items scheduled for later installation.
4. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.

B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.

1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Contractor's Construction Schedule.
2. Preparation of the Schedule of Values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Progress meetings.
6. Preinstallation conferences.
7. Project closeout activities.
8. Startup and adjustment of systems.
9. Project closeout activities.

D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.

E. Mechanical and Electrical Coordination: All mechanical subcontract work (insulation, plumbing, fire sprinkler, air distribution, sheet metal, steam, balancing and controls, etc..) on this project, shall be the sole responsibility of one Mechanical Subcontractor. In turn, this Mechanical Subcontractor shall answer to the General Contractor. This Mechanical Subcontractor shall be responsible for coordination between the trades above to make sure that all the interface between the different mechanical subs are in place, assuring that all the above systems are in proper working condition.

Coordination of Space:

1. Coordinate use of Project space, including structural and architectural elements, and sequence of installation of fire suppression, plumbing HVAC, communications, security and all other electrical work which is indicated diagrammatically on Drawings. Follow routings shown for pipes, ducts and conduits as closely as practicable, with due allowance for available physical space; make runs parallel with lines of building. Utilize space efficiently to maximize accessibility for other installations, for maintenance and for repairs.
2. In finished areas, except as otherwise shown, conceal pipes, ducts, wiring and the like in the construction, coordinate locations of fixtures and outlets with finish elements.

3. Resolve all “tight” or restricted conditions involving work of various sections in advanced of installation of mechanical and electrical work.

4. Prior to proceeding with work in these areas, Contractor shall be responsible for preparing supplementary drawings for review showing all Work in “tight” areas, and provide minor adjustments and additional work necessary to overcome “tight” condition, at no increase in Contract Sum. “Tight” areas shall be identified by the Contractor; however, the Owner reserves the right to require supplementary drawings for any areas affected by the construction activity whether or not identified as “tight” by the Contractor. (“tight” shall be defined here as “a condition so close in structure as to prevent passage; allowing little or no room for free motion or movement.”)

1.5 SUBMITTALS

A. Key Personnel Names: Prior to starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.

1.6 ADMINISTRATIVE AND SUPERVISORY PERSONNEL

A. General: In addition to Project superintendent, provide other administrative and supervisory personnel as required for proper performance of the Work.

1.7 PROJECT MEETINGS

A. General: Meetings and conferences will be held at Project site, unless otherwise indicated.

B. Preconstruction Conference: Contractor will schedule a preconstruction conference before the start of construction, at a time convenient to all parties. The conference will be held at Project site or another convenient location. Contractor will conduct the meeting.

1. Attendees: Authorized representatives of Owner; Architect, Architect's consultants; Contractor; Contractor's superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Discuss items of significance that could affect progress.
3. Minutes: Contractor will record and distribute meeting minutes.

C. Progress Meetings: Contractor will conduct progress meetings at two week intervals. Dates of meetings will be coordinated with preparation of payment requests on a monthly basis.

1. Attendees: In addition to representatives of Owner, Architect, Architect's consultants, Contractor, and Contractor's superintendent, each subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.

    a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to

do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

1) Review schedule for next period.

b. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

c. Review present and future needs of each entity present.

3. Minutes: Contractor will record and distribute the meeting minutes.

1.8 REQUESTS FOR INTERPRETATION (RFIs)

A. Procedure: Immediately on discovery of the need for interpretation of the Contract Documents, prepare and submit an RFI on a form acceptable to Owner and Architect.

1. RFIs shall originate with Contractor. RFIs submitted by entities other than Contractor will be returned with no response.
2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.

B. Content of the RFI: Include a detailed, legible description of item needing interpretation and the following:

1. Project name.
2. Date.
3. Name of Contractor.
4. Name of Architect.
5. RFI number, numbered sequentially.
6. Specification Section number and title and related paragraphs, as appropriate.
7. Drawing number and detail references, as appropriate.
8. Field dimensions and conditions, as appropriate.
9. Contractor's suggested solution(s). If Contractor's solution(s) impact the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
10. Contractor's signature.
11. Attachments: Include drawings, descriptions, measurements, photos, Product Data, Shop Drawings, and other information necessary to fully describe items needing interpretation.

a. Supplementary drawings prepared by Contractor shall include dimensions, thicknesses, and details of affected materials, assemblies, and attachments.

C. Architect's Action: Architect will review each RFI, determine action required, and return it. Allow ten working days for Architect's response for each RFI. RFIs received after 3:00 p.m. will be considered as received the following working day.

1. The following RFIs will be returned without action:

a. Requests for approval of submittals.

b. Requests for approval of substitutions.
c. Requests for coordination information already indicated in the Contract Documents.
d. Requests for adjustments in the Contract Time or the Contract Sum.
e. Requests for interpretation of Architect's actions on submittals.
f. Incomplete RFIs or RFIs with numerous errors.

2. Architect's action may include a request for additional information, in which case Architect's time for response will start again.
3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 01 Section "Contract Modification Procedures."

a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 5 days of receipt of the RFI response.

D. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within three days if Contractor disagrees with response.

1.9 DIGITAL PROJECT MANAGEMENT PROCEDURES AND REQUIREMENTS

A. Use of Architect's Digital Data Files: Digital data files of Architect's CAD drawings will be provided by Architect for Contractor's use during construction.

1. Digital data files may be used by Contractor in preparing coordination drawings, Shop Drawings, and Project record Drawings.
2. Architect makes no representations as to the accuracy or completeness of digital data files as they relate to Contract Drawings.
3. Contractor shall execute a data licensing agreement in the form of AIA Document C106 Digital Data Licensing Agreement

a. Subcontractors, and other parties granted access by Contractor to Architect's digital data files shall execute a data licensing agreement in the form of AIA Document C106.

B. Web-Based Project Software: The General Contractor shall be required to utilize a web-based Project software site similar to “Procore” for purposes of hosting and managing Project communication and documentation until Final Completion.

1. Web-based Project software site includes, at a minimum, the following features:

a. Compilation of Project data, including Contractor, subcontractors, Architect, architect's consultants, Owner, and other entities involved in Project. Include names of individuals and contact information.
b. Access control for each entity for each workflow process, to determine entity's digital rights to create, modify, view, and print documents.
c. Document workflow planning, allowing customization of workflow between project entities.

d. Creation, logging, tracking, and notification for Project communications required in other Specification Sections, including, but not limited to, RFIs, submittals, Minor Changes in the Work, Construction Change Directives, and Change Orders.
e. Track status of each Project communication in real time, and log time and date when responses are provided.
f. Procedures for handling PDFs or similar file formats, allowing markups by each entity. Provide security features to lock markups against changes once submitted.
g. Processing and tracking of payment applications.
h. Processing and tracking of contract modifications.
i. Creating and distributing meeting minutes.
j. Document management for Drawings, Specifications, and coordination drawings, including revision control.
k. Management of construction progress photographs.
l. Mobile device compatibility, including smartphones and tablets.

C. PDF Document Preparation: Where PDFs are required to be submitted to Architect, prepare as follows:

1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
2. Name file with submittal number or other unique identifier, including revision identifier.
3. Certifications: Where digitally submitted certificates and certifications are required, provide a digital signature with digital certificate on where indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

3.1 GENERAL INSTALLATION PROVISIONS.

A. Inspection of Conditions: Require the installer of each major component to inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.

B. Manufacturer's Instructions: Comply with manufacturer's installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.

C. Inspect materials or equipment immediately upon delivery and again prior to installation. Reject damaged and defective items.

D. Visual Effects: Provide uniform joint widths in exposed Work. Arrange joints in exposed Work to obtain the best visual effect. Refer questionable choices to the Architect for final decision.

E. Recheck measurements and dimensions before starting each installation.

F. Install each component during weather conditions and Project status that will ensure the best possible results. Isolate each part of the completed construction from incompatible material as necessary to prevent deterioration.

G. Close openings in exterior surfaces to protect installed work from weather and extremes of temperature and humidity.

H. Coordinate temporary enclosures with required inspections and tests, to minimize the necessity of uncovering completed construction for that purpose.

END OF SECTION 013100

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SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Submittal schedule requirements.
2. Administrative and procedural requirements for submittals.

1.3 SUBMITTAL SCHEDULE

A. Submittal Schedule: Submit, as an action submittal, a list of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and Engineers and additional time for handling and reviewing submittals required by those corrections.

1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
2. Initial Submittal: Submit concurrently with startup construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's construction schedule.

    a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.

4. Format: Arrange the following information in a tabular format:

    a. Scheduled date for first submittal.
    b. Specification Section number and title.
    c. Submittal Category: Action; informational.
    d. Name of subcontractor.
    e. Description of the Work covered.
    f. Scheduled date for Architect and Construction Manager final release or approval.
    g. Scheduled dates for purchasing.
    h. Scheduled date of fabrication.

i. Scheduled dates for installation.
j. Activity or event number.

## 1.4 SUBMITTAL FORMATS

A. Submittal Information: Include the following information in each submittal:

1. Project name.
2. Date.
3. Name of Architect.
4. Name of Construction Manager.
5. Name of Contractor.
6. Name of firm or entity that prepared submittal.
7. Names of subcontractor, manufacturer, and supplier.
8. Unique submittal number, including revision identifier. Include Specification Section number with sequential alphanumeric identifier; and alphanumeric suffix for resubmittals.
9. Category and type of submittal.
10. Submittal purpose and description.
11. Number and title of Specification Section, with paragraph number and generic name for each of multiple items.
12. Drawing number and detail references, as appropriate.
13. Indication of full or partial submittal.
14. Location(s) where product is to be installed, as appropriate.
15. Other necessary identification.
16. Remarks.
17. Signature of transmitter.

B. Options: Identify options requiring selection by Architect.

C. Deviations and Additional Information: On each submittal, clearly indicate deviations from requirements in the Contract Documents, including minor variations and limitations; include relevant additional information and revisions, other than those requested by Architect and Construction Manager on previous submittals. Indicate by highlighting on each submittal or noting on attached separate sheet.

D. PDF Submittals: Prepare submittals as PDF package, incorporating complete information into each PDF file. Name PDF file with submittal number.

E. Submittals for Web-Based Project Software: Prepare submittals as PDF files, or other format indicated by Project software website.

## 1.5 SUBMITTAL PROCEDURES

A. Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.

1. Web-Based Project Software: Prepare submittals in PDF form, and upload to web-based Project software website. Enter required data in web-based software site to fully identify submittal.

B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
4. Coordinate transmittal of submittals for related parts of the Work specified in different Sections so processing will not be delayed because of need to review submittals concurrently for coordination.

    a. Architect and Consulting Engineers reserve the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.

1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required.
2. Resubmittal Review: Allow 7 days for review of each resubmittal.
3. Sequential Review: Where sequential review of submittals by Architect's consultants, Owner, or other parties is indicated, allow 21 days for initial review of each submittal.

4. Concurrent Consultant Review: Where the Contract Documents indicate that submittals may be transmitted simultaneously to Architect and to Architect's consultants, allow 15 days for review of each submittal.

D. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.

E. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

F. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect and Construction Manager action stamp.

## 1.6 SUBMITTAL REQUIREMENTS

A. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.

1. If information must be specially prepared for submittal because standard published data are unsuitable for use, submit as Shop Drawings, not as Product Data.
2. Mark each copy of each submittal to show which products and options are applicable.
3. Include the following information, as applicable:

    a. Manufacturer's catalog cuts.
    b. Manufacturer's product specifications.
    c. Standard color charts.
    d. Statement of compliance with specified referenced standards.
    e. Testing by recognized testing agency.
    f. Application of testing agency labels and seals.
    g. Notation of coordination requirements.
    h. Availability and delivery time information.

4. For equipment, include the following in addition to the above, as applicable:

    a. Wiring diagrams that show factory-installed wiring.
    b. Printed performance curves.
    c. Operational range diagrams.
    d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.

5. Submit Product Data before Shop Drawings, and before or concurrent with Samples.

B. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data unless submittal based on Architect's digital data drawing files is otherwise permitted.

1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:

    a. Identification of products.
    b. Schedules.
    c. Compliance with specified standards.
    d. Notation of coordination requirements.
    e. Notation of dimensions established by field measurement.
    f. Relationship and attachment to adjoining construction clearly indicated.
    g. Seal and signature of professional engineer if specified.

2. Paper Sheet Size: Except for templates, patterns, and similar full-size Drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches (215 by 280 mm), but no larger than 30 by 42 inches (750 by 1067 mm).

C. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other materials.

1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
2. Identification: Permanently attach label on unexposed side of Samples that includes the following:

a. Project name and submittal number.
b. Generic description of Sample.
c. Product name and name of manufacturer.
d. Sample source.
e. Number and title of applicable Specification Section.
f. Specification paragraph number and generic name of each item.

3. Email Transmittal: Provide PDF transmittal. Include digital image file illustrating Sample characteristics, and identification information for record.
4. Web-Based Project Software: Prepare submittals in PDF form, and upload to web-based Project software website. Enter required data in web-based software site to fully identify submittal.
5. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.

    a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
    b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.

6. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.

    a. Number of Samples: Submit one full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.

7. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.

    a. Number of Samples: Submit two sets of Samples. Architect and Construction Manager will retain one Sample set; remainder will be returned.

        1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
        2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit samples that show approximate limits of variations.

D. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:

1. Type of product. Include unique identifier for each product indicated in the Contract Documents or assigned by Contractor if none is indicated.
2. Manufacturer and product name, and model number if applicable.
3. Number and name of room or space.
4. Location within room or space.

E. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.

F. Design Data: Prepare and submit written and graphic information indicating compliance with indicated performance and design criteria in individual Specification Sections. Include list of assumptions and summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Number each page of submittal.

G. Certificates:

1. Certificates and Certifications Submittals: Submit a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity. Provide a notarized signature where indicated.
2. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
3. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
4. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
5. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
6. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.

H. Test and Research Reports:

1. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
2. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
3. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
4. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed

before installation of product, for compliance with performance requirements in the Contract Documents.

5. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
6. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:

    a. Name of evaluation organization.
    b. Date of evaluation.
    c. Time period when report is in effect.
    d. Product and manufacturers' names.
    e. Description of product.
    f. Test procedures and results.
    g. Limitations of use.

## 1.7 DELEGATED-DESIGN SERVICES

A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.

1. If criteria indicated are insufficient to perform services or certification required, submit a written request for additional information to Architect.

B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF file copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.

1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

## 1.8 CONTRACTOR'S REVIEW

A. Action Submittals and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.

B. Contractor's Approval: Indicate Contractor's approval for each submittal with or indication in web-based Project software. Include name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

1.9 ARCHITECT'S AND CONSULTING ENGINEERS REVIEW

A. Action Submittals: Architect will review each submittal, indicate corrections or revisions required.

1. PDF Submittals: Architect will indicate, via markup on each submittal, the appropriate action.

2. Submittals by Web-Based Project Software: Architect will indicate, on Project software website, the appropriate action.

B. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.

C. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect and Construction Manager.

D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.

E. Architect will return without review submittals received from sources other than Contractor.

F. Submittals not required by the Contract Documents will be returned by Architect without action.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013300

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for quality assurance and quality control.

B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.

1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
3. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.

1.3 DEFINITIONS

A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.

B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect

C. Mockups: Full-size, physical assemblies that are constructed on-site. Mockups are used to verify selections made under sample submittals, to demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction, coordination, testing, or operation; they are not Samples. Approved mockups establish the standard by which the Work will be judged.

D. Laboratory Mockups: Full-size, physical assemblies that are constructed at testing facility to verify performance characteristics.

E. Preconstruction Testing: Tests and inspections that are performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.

F. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with industry standards.

G. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.

H. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.

I. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

J. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.

1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to trades people of the corresponding generic name.

K. Experienced: When used with an entity, "experienced" means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

## 1.4 CONFLICTING REQUIREMENTS

A. General: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect for a decision before proceeding.

B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

## 1.5 SUBMITTALS

A. Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

B. Reports: Prepare and submit certified written reports FOR contractor provided tests and inspections that include the following:

1. Date of issue.
2. Project title and number.
3. Name, address, and telephone number of testing agency.
4. Dates and locations of samples and tests or inspections.
5. Names of individuals making tests and inspections.
6. Description of the Work and test and inspection method.
7. Identification of product and Specification Section.
8. Complete test or inspection data.
9. Test and inspection results and an interpretation of test results.
10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
12. Name and signature of laboratory inspector.
13. Recommendations on retesting and reinspecting.

C. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

## 1.6 QUALITY ASSURANCE

A. General: Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

B. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.

C. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

D. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.

F. Specialists: Certain sections of the Specifications require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.

1. Requirement for specialists shall not supersede building codes and regulations governing the Work.

G. Testing Agency Qualifications: An independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 548; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.

H. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

I. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:

1. Contractor responsibilities include the following:

a. Provide test specimens representative of proposed products and construction.
b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
c. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
d. Build site-assembled test assemblies and mockups using installers who will perform same tasks for Project.
e. Build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed Work.
f. When testing is complete, remove test specimens, assemblies, mockups, and laboratory mockups; do not reuse products on Project.

2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect, Owner, and Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.

J. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:

1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect.

2. Notify Architect ten days in advance of dates and times when mockups will be constructed.
3. Demonstrate the proposed range of aesthetic effects and workmanship.
4. Obtain Architect's approval of mockups before starting work, fabrication, or construction.

    a. Allow ten days for initial review and each re-review of each mockup.

5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
6. Demolish and remove mockups when directed, unless otherwise indicated.

## 1.7 QUALITY CONTROL

A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.

1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
2. Payment for these services will be made from testing and inspecting allowances, as authorized by Change Orders.
3. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor.

B. Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.

1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.

    a. Contractor’s testing agency shall be acceptable to Owner and Architect.
    b. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.

2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.

C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 01 Section "Submittal Procedures."

D. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.

E. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.

1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
6. Do not perform any duties of Contractor.

F. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel but not less than 24 hours in advance of operations requiring tests and inspections. Provide the following:

1. Access to the Work.
2. Incidental labor and facilities necessary to facilitate tests and inspections.
3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
4. Facilities for storage and field curing of test samples.
5. Delivery of samples to testing agencies.
6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
7. Security and protection for samples and for testing and inspecting equipment at Project site.

G. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

1. Schedule times for tests, inspections, obtaining samples, and similar activities.

## 1.8 SPECIAL TESTS AND INSPECTIONS

A. Special Tests and Inspections: Owner will engage a qualified testing agency and / or special inspector to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner, and as follows:

1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviewing the completeness and adequacy of those procedures to perform the Work.

2. Notifying Architect and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect with copy to Contractor and to authorities having jurisdiction.
4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
6. Retesting and reinspecting corrected work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

A. Prepare a record of tests and inspections. Include the following:

1. Date test or inspection was conducted.
2. Description of the Work tested or inspected.
3. Date test or inspection results were transmitted to Architect.
4. Identification of testing agency or special inspector conducting test or inspection.

B. Maintain log at Project site. Post changes and modifications as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.

3.2 REPAIR AND PROTECTION

A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

1. Provide materials and comply with installation requirements specified in other Specification Sections. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible.
2. Comply with the Contract Document requirements for Division 01 Section "Cutting and Patching."

B. Protect construction exposed by or for quality-control service activities.

C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

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SECTION 014200 - REFERENCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 DEFINITIONS

A. General: Basic Contract definitions are included in the Conditions of the Contract.

B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.

C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."

D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."

E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.

F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.

G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.

H. "Provide": Furnish and install, complete and ready for the intended use.

I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.3 INDUSTRY STANDARDS

A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.

C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.

1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

1.4 ABBREVIATIONS AND ACRONYMS

A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Thomson Gale's "Encyclopedia of Associations" or in Columbia Books' "National Trade & Professional Associations of the U.S."

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 014200

SECTION 015000 – CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

B. Related Sections include the following:

1. Divisions 2 through 33 for specific requirements for products in those Sections.

1.2 DEFINITIONS

A. Permanent Enclosure: As determined by Architect, permanent or temporary roofing is complete, insulated, and weather-tight; exterior walls are insulated and weather-tight; and all openings are closed with permanent construction or substantial temporary closures.

1.3 USE CHARGES

A. General: Cost or use charges for temporary facilities shall be included in the Contract Sum. Allow other entities to use temporary services and facilities without cost, including, but not limited to, the following:

1. Owner's construction forces.
2. Occupants of Project.
3. Architect.
4. Testing agencies.
5. Personnel of authorities having jurisdiction.

1.4 QUALITY ASSURANCE

A. Standards: Comply with ANSI A10.6, NECA's "Temporary Electrical Facilities," and NFPA 241.

1. Trade Jurisdictions: Assigned responsibilities for installation and operation of temporary utilities are not intended to interfere with trade regulations and union jurisdictions.
2. Electrical Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.

B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

1.5 PROJECT CONDITIONS

A. Temporary Utilities: At earliest feasible time, when acceptable to Owner, change over from use of temporary service to use of permanent service.

1. Temporary Use of Permanent Facilities: Installer of each permanent service shall assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

B. Conditions of Use: The following conditions apply to use of temporary services and facilities by all parties engaged in the Work:

1. Keep temporary services and facilities clean and neat.
2. Relocate temporary services and facilities as required by progress of the Work.

PART 2 – PRODUCTS

2.1 MATERIALS

A. General: Provide new materials. Undamaged, previously used materials in serviceable condition may be used if approved by Architect. Provide materials suitable for use intended.

2.2 EQUIPMENT

A. General: Provide equipment suitable for use intended.

B. Field Offices and Sheds: Will not be allowed on site without approval of the Owner. Locate as per the direction of the Owner.

C. Fire Extinguishers: Hand carried, portable, UL rated. Provide class and extinguishing agent as indicated or a combination of extinguishers of NFPA-recommended classes for exposures.

1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.

D. Drinking Water Fixtures: Bottled water drinking water units including paper cup supply.

1. Where power is accessible, provide electric water coolers to maintain dispensed water temperature at 45 to 55 degrees F.

E. Heating Equipment: Unless Owner authorizes use of permanent heating system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic controls.

1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.

2. Heating Units: Listed and labeled, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use for type of fuel being consumed.

F. Electrical Outlets: Properly configured, NEMA-polarized outlets to prevent insertion of 110-to 120-V plugs into higher voltage outlets; equipped with ground-fault circuit interrupters, reset button, and pilot light.

G. Power Distribution System Circuits: Where permitted and overhead and exposed for surveillance, wiring circuits, not exceeding 125-V ac, 20-A rating, and lighting circuits may be nonmetallic sheathed cable.

PART 3 – EXECUTION

3.1 INSTALLATION, GENERAL

A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of Work. Relocate and modify facilities as required.

B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are not longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITIES

A. General: Engage appropriate local utility company to install temporary service or connect to existing service. Where utility company provides only part of the service, provide the remainder with matching, compatible materials and equipment. Comply with utility company recommendations.

1. Provide adequate capacity at each stage of construction.

B. Water Service:

1. Owner will pay cost of temporary water. Exercise measures to conserve water. Utilize Owner's existing water system, extend and supplement with temporary devices as needed to maintain specified conditions for construction operations.
2. Contractors will pay to extend branch piping with outlets located so water is available by hoses with threaded connections for individual use. Provide temporary pipe insulation to prevent freezing.
3. Provide rubber hoses as necessary to serve Project site.

C. Sanitary Facilities: The General Contractor shall be required to provide and maintain temporary toilets and wash facilities.

D. Heating and Ventilation: The General Contractor will provide temporary heating and ventilating fans as required for curing or drying of completed installation or for protecting installed construction from adverse effects of low temperatures or high humidity, or to prevent the accumulation of dust, fumes, vapors or gases. Select equipment from that specified that will not have a harmful effect on completed

installations or elements being installed.

1. Maintain a minimum temperature of 50 degrees F in permanently enclosed portions of building for normal construction activities, and 65 degrees F for finishing activities and areas where finished Work has been installed.

E. Electrical Power Service: Provide weatherproof, grounded electric power service and distribution system of sufficient size, capacity, and power characteristics during construction period. Include meters, transformers, overload-protected disconnecting means, automatic ground-fault interrupters, and main distribution switchgear.

1. The Contractor will provide a temporary power source at the project site and a distribution system to the new building area and the staging area from the temporary power source.
2. The voltage provided at point of distribution will be 120/208, single phase, except as noted in electrical drawings for provision of temporary power when modifying electrical.
3. All Contractors shall provide their own UL approved extension cords and any adapters required.
4. Provide waterproof connectors to connect separate lengths of electrical power cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage ratio.
5. All Contractors shall provide supplementary electrical power to handle welding machines or furnish gasoline operated welders, at their option.
6. Contractor shall provide labor to relocate, as required, distribution boxes to each desired location.

F. Lighting:

1. The General Contractor shall provide temporary light strings for general lighting purposes. Lamps will be furnished, installed and maintained by the General Contractor. The General Contractor shall provide labor for installing and moving light strings to desired locations. The above General Contractor-provided lighting shall provide all required work lighting in sufficient quantity and quality to adequately execute the work.
2. Specifically, the Contractors responsible for the execution of the work which will affect the final appearance of surfaces (i.e., CMU, gypsum, drywall, lath and plaster, painting, etc.) shall provide rolling lighting assemblies sufficient to deliver 50 foot candles of illumination on these surfaces while work is actually in progress.
3. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
4. Maintain lighting in corridors and hallways during normal construction time frames to ensure safe routes of passage.

F. Telephone Service: The General Contractor shall provide Contractor's telephone service at the General Contractor's field office for local telephone calls. Long distance calls will be permitted provided the charges are reversed or are previously approved and paid for

by the party originating the call. Other telephone services are the responsibility of the Contractor.

G. Facsimile: Provide for facsimile service and a dedicated telephone line to field office at time of project mobilization.

3.3 SUPPORT FACILITIES

A. General: Comply with the following:

1. Locate field offices, storage sheds, sanitary facilities, and other temporary construction and support facilities for easy access.
2. Maintain support facilities until near Substantial Completion. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.

B. Dewatering Facilities and Drains: Comply with requirements in applicable Division 2 Sections for temporary drainage and dewatering facilities and operations not directly associated with construction activities included in individual Sections. Where feasible, use same facilities. Maintain project site, excavations, and construction free of water.

1. Grade site to drain. Provide, operate, and maintain pumping equipment.
2. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.

C. Erosion and Sediment Control:

1. Contractor shall plan and execute construction by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas. Prevent erosion and sedimentation.
2. Minimize surface area of bare soil exposed at one time.
3. Provide temporary measures including berms, dikes, drains, and other devices to prevent water flow.
4. Construct fill and waste areas by selective placement to avoid erosive surface silts or clays.
5. Periodically inspect earthwork to detect evidence of erosion and sedimentation; promptly apply corrective measures.

D. Storm Water Control: Provide earthen embankments and similar barriers in and around excavations and subgrade construction, sufficient to prevent flooding by runoff of storm water from heavy rains.

E. Project Identification and Temporary Signs: Prepare Project identification and other signs in sizes indicated. Install signs to inform public and persons seeking entrance to Project. Do not permit installation of unauthorized signs.

1. Engage an experienced sign painter to apply graphics for Project identification signs. Comply with details indicated at the end of this Section.

2. Prepare temporary signs to provide directional information to construction personnel and visitors.
3. Construct signs of exterior type Grade B-B high density concrete form overlay plywood in sizes and thickness indicated. Support on posts or framing of preservative-treated wood or steel.
4. Paint sign panel and applied graphics with exterior grade alkyd gloss enamel over exterior primer.
5. All signage requires approval of Owner prior to installation.

F. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations.

G. Field Surveying and Layout: The General Contractor shall provide overall initial layout of building structures and overall control information including building corner points, floor elevation, parking lot edges, asphalt grade breaks, and location of major utility locations as shown on the drawings. Detailed surveying required by each Contractor for his own work will be the responsibility of that Contractor. Any staking destroyed by Contractor's activities must be promptly re-staked and shall be the responsibility of that Contractor to replace.

## 3.4 SECURITY AND PROTECTION

A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination, pollution or other undesirable effects. Avoid using tools and equipment that produce harmful noise. Restrict use of noisemaking tools and equipment to hours that will minimize complaints from persons or firms near Project site.

B. Security Enclosure and Lockup: Contractor shall be responsible for and provide security program during the construction period.

1. Protect Work and existing premises from theft, vandalism, and unauthorized entry.
2. Initiate program at project mobilization.
3. Maintain program throughout construction period until Owner occupancy.

C. Security Restrictions:

1. Do not work on Saturdays, Sundays, or Holidays without Owner approval.

D. Barricades, Warning Signs, and Lights: Contractor shall provide barriers to prevent unauthorized entry to construction areas and protect existing facilities and adjacent properties from damage from construction operations. Comply with standards and code requirements for erecting structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and public of possible hazard. Where appropriate and needed, provide lighting, including flashing warning lights.
1. Contractor shall provide 6' high fence around their individual construction staging site, equip with vehicular and pedestrian gates with locks.
2. Contractor shall be responsible for protection of their stored materials on site.

3. Contractor shall provide protection for non-owned vehicular traffic, stored materials, site, and structures from damage.
4. Contractors are responsible for fall protection for their portions of work, including but not limited to safety lines, railings and warning signs.

E. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weather tight enclosure for building exterior.

1. The General Contractor shall provide and direct the installation of temporary enclosures where needed for containment of heat. Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions and effects.
2. Vertical openings: Close openings of 25 sq. ft. or less with plywood or similar materials.
3. Horizontal openings: Close openings in floor or roof decks and horizontal surfaces with load-bearing, wood framed construction.
4. Install tarpaulins securely using fire-retardant-treated wood framing and other materials.

F. Temporary Fire Protection: Until fire-protection needs are supplied by permanent facilities, install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241.

1. Provide fire extinguishers, installed on walls on mounting brackets, visible and accessible from space being served, with sign mounted above.

    a. Field Offices: Class-A stored-pressure water-type extinguishers.
    b. Other Locations: Class ABC dry-chemical extinguishers or a combination of extinguishers of NFPA-recommended classes for exposures.
    c. Locate fire extinguishers where conventional and effective for their intended purpose.

2. Store combustible materials in containers in fire-safe locations.
3. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire-protection facilities and other access routes for firefighting. Prohibit smoking on school property.
4. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition.
5. Permanent Fire Protection: At earliest feasible date in each area of Project, complete installation of permanent fire-protection facility, including connected services, and place into operation and use. Instruct key personnel on use of facilities.
6. Develop and supervise an overall fire-prevention and first-aid fire-protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.

G. Provide protection for plant life designated to remain. Replace damaged plant life.

3.5 DUST CONTROL

A. Contractor shall execute Work by methods to minimize raising dust from construction operations.

B. Provide positive means to prevent air-borne dust from dispersing into atmosphere

3.6 PARKING

A. Construction personnel parking is to be provided by Owner and shall be located as per the Owner.

B. Do not allow heavy vehicles or construction equipment in finished parking areas.

C. Permanent Pavements And Parking Facilities:

1. Prior to 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.

E. Maintenance: Maintain traffic and parking areas in sound condition free of excavated material, construction equipment, products, mud, snow, and ice.

F. Mud From Site Vehicles: Contractor to provide means of removing mud from vehicle wheels before entering streets.

4.7 TRAFFIC REGULATIONS, SIGNS AND SIGNALS

A. Contractor shall be responsible for traffic regulation; and when required, provide a written traffic plan.

1. Post Mounted and Wall Mounted Traffic Control and Informational Signs: As approved by authority having jurisdiction.
2. Automatic Traffic Control Signals: As approved by local jurisdictions.
3. Traffic Cones and Drums, Flares and Lights: As approved by authority having jurisdiction.
4. Flag Persons: Provide trained and equipped flag persons to regulate traffic when construction operations or traffic encroach on public traffic lanes.
5. Flares and Lights: Use flares and lights during hours of low visibility to delineate traffic lanes and to guide traffic.
6. Haul Routes: Consult with authority having jurisdiction, establish public thoroughfares to be used for haul routes and site access.
7. Provide signs at approaches to site and on site, at crossroads, detours, parking areas, and elsewhere as needed to direct construction and affected public traffic.
8. Provide, operate, and maintain [automatic] traffic control signals to direct and maintain orderly flow of traffic in areas under Contractor's control, and areas affected by Contractor's operations.

9. Relocate as Work progresses, to maintain effective traffic control.
10. Remove equipment and devices when no longer required at Substantial Completion.
11. Repair damage caused by installation.
12. Remove post settings.

4.8 ACCESS AND CONSTRUCTION AIDES

A. Roof Top Access: Access to all areas will be the responsibility of the Contractor requiring access. All vertical and horizontal access shall be maintained in a safe state, meeting OSHA standards for by Contractors requiring access.

B. Temporary Vertical Transportation: Contractor shall provide temporary ladders, ramps, material hoists, scaffolding, cranes and other devices required for the Work, including guys, bracing and other required devices.

3.9 PROGRESS CLEANING AND WASTE REMOVAL

A. Contractors shall be responsible for own waste removal/disposal and maintaining areas free of waste materials, debris and rubbish. Demolition materials are to be removed and disposed of in a legal manner by any contractor performing demolition work.

1. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

B. Contractors shall broom clean work areas daily.

C. If Contractor fails to clean up his work area in a timely and satisfactory manner after 24-hours notice, the Construction Manager will cause the clean up to be done by others at the expense of the Contractor.

3.10 PROTECTION OF INSTALLED WORK BY CONTRACTOR

A. Contractors to protect their installed Work and provide special protection where specified in individual Specification Sections. This includes covering work with visqueen or heat blankets to protect from freezing or adverse weather conditions. General Contractor shall be responsible for costs for tenting and heating of those elements.

B. Provide temporary and removable protection for installed Products. Control activity in immediate work area to prevent damage.

C. Protect finished floors, stairs, walls, ceilings and soffits, finished openings and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.

D. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.

E. Prohibit traffic across landscaped areas.

## 3.11 OPERATION, TERMINATION, AND REMOVAL

A. Maintenance: Maintain facilities in good operating condition until removal. Protect from damage caused by freezing temperatures and similar elements.

1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
2. Prevent water-filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.

B. Temporary Facility Changeover: Except for using permanent fire protection as soon as available, do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.

C. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

1. Materials and facilities that constitute temporary facilities are the property of Contractor.
2. Remove underground installations to minimum depth of 2 feet. Grade site as indicated on Drawings.
3. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.
4. Clean and repair damage caused by installation or use of temporary work.
5. Restore existing and permanent facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.
6. At Substantial Completion, clean and renovate permanent facilities used during construction period. Comply with final cleaning requirements in Division 1 Section “Closeout Procedures.”

## 3.12 MISCELLANEOUS

A. Pets are not allowed on job-site.

B. Firearms are not allowed on job-site.

C. Loud or distractive music is not allowed on job-site. Contractors to comply with local noise ordinances to protect workers and public.

D. Smoking is unlawful on School Property.

E. Per Idaho Code 18-8329, the General Contractor will prohibit any persons in their employ who are registered or are required to register under the sex offender registration act from participation on this project if such participation would require them to enter upon school property.

END OF SECTION 015000

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SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and product substitutions.

B. Contractor shall incorporate into the Work only those products specified, indicated as basis-of-design products, those products approved in Addenda prior to bidding, or as approved after award of Contract under conditions set forth in Paragraphs 1.4 and 2.2 below.

1.3 DEFINITIONS

A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.

1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
2. New Products: Items that have not previously been incorporated into another project or facility**,** except that products consisting of recycled-content materials are allowed, unless explicitly stated otherwise. Products salvaged or recycled from other projects are not considered new products.
3. Comparable Product: Product that is demonstrated and approved through submittal process, or where indicated as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

B. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

C. Basis-of-Design Product Specification: Where a specific manufacturer's product is named and accompanied by the words "basis of design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics.

1.4 SUBMITTALS

A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Documentation: Show compliance with requirements for substitutions and the following, as applicable:

a. Statement indicating why specified material or product cannot be provided.
b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
e. Samples, where applicable or requested.
f. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
h. Research/evaluation reports evidencing compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.
i. Detailed comparison of Contractor's Construction Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating lack of availability or delays in delivery.
j. Cost information, including a proposal of change, if any, in the Contract Sum.
k. Contractor's certification that proposed substitution complies with requirements in the Contract Documents and is appropriate for applications indicated.
l. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

2. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within 10 days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or 10 days of receipt of additional information or documentation, whichever is later.

a. Form of Acceptance: Change Order.
b. Use product specified if Architect cannot make a decision on use of a proposed substitution within time allocated.

## 1.5 QUALITY ASSURANCE

A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.

1. Contractor is responsible for providing products and construction methods compatible with all other products and construction methods of other contractors.

## 1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.

B. Delivery and Handling:

1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.

C. Storage:

1. Store products to allow for inspection and measurement of quantity or counting of units.
2. Store materials in a manner that will not endanger Project structure.
3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
4. Store cementitious products and materials on elevated platforms.
5. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
6. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
7. Protect stored products from damage and liquids from freezing.
8. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

## 1.7 PRODUCT WARRANTIES

A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

1. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
2. Special Warranty: Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.

B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution. Submit a draft for approval before final execution.

1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
2. Specified Form: When specified forms are included with the Specifications, prepare a written document using appropriate form properly executed.
3. Refer to Divisions 02 through 49 Sections for specific content requirements and particular requirements for submitting special warranties.

C. Submittal Time: Comply with requirements in Division 01 Section "Closeout Procedures."

## PART 2 - PRODUCTS

### 2.1 PRODUCT SELECTION PROCEDURES

A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, that are new at time of installation.

1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
4. Where products are accompanied by the term "as selected," Architect will make selection.
5. Where products are accompanied by the term "match sample," sample to be matched is Architect's.
6. Descriptive, performance, and reference standard requirements in the Specifications establish "salient characteristics" of products.
7. Or Equal: Where products are specified by name and accompanied by the term "or equal" or "or approved equal" or "or approved," comply with provisions in Part 2 "Comparable Products" Article to obtain approval for use of an unnamed product.

B. Product Selection Procedures:

1. Product: Where Specifications name a single product and manufacturer, provide the named product that complies with requirements.
2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements.

3. Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed that complies with requirements.
4. Manufacturers: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements.
5. Available Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.
6. Available Manufacturers: Where Specifications include a list of manufacturers, provide a product by one of the manufacturers listed, or an unnamed manufacturer, that complies with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.
7. Product Options: Where Specifications indicate that sizes, profiles, and dimensional requirements on Drawings are based on a specific product or system, provide the specified product or system. Comply with provisions in Part 2 "Product Substitutions" Article for consideration of an unnamed product or system.
8. Basis-of-Design Product: Where Specifications name a product, provide the specified product. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Products by other manufacturers are subject to approval prior to bidding.
9. Visual Matching Specification: Where Specifications require matching an established Sample, select a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.

    a. If no product available within specified category matches and complies with other specified requirements, comply with provisions in Part 2 "Product Substitutions" Article for proposal of product.

10. Visual Selection Specification: Where Specifications include the phrase "as selected from manufacturer's colors, patterns, textures" or a similar phrase, select a product that complies with other specified requirements.

    a. Standard Range: Where Specifications include the phrase "standard range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, density, or texture from manufacturer's product line that does not include premium items.
    b. Full Range: Where Specifications include the phrase "full range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

## 2.2 PRODUCT SUBSTITUTIONS

A. Timing: Following award of Contract, Architect will consider requests for substitution for products specified, or approved by addendum under any or all of the following conditions:

1. The specified product cannot be provided within the Contract Time. The request will not be considered if the product cannot be provided as a result of the Contractor’s failure to pursue the Work promptly or coordinate activities properly.

2. The specified product cannot receive necessary approvals by governing authorities, and the requested substitution con be approved.
3. A substantial advantage is offered the Owner, in terms of cost, time, energy conservation or other considerations of merit, after deducting offsetting responsibilities the Owner may be required to bear. Additional responsibilities for the Owner may include additional compensation to the Architect for redesign and evaluation services, increased cost of other construction by the Owner or separate Contractors, and similar considerations.
4. The specified product cannot be provided in a manner that is compatible with other materials, or cannot be properly coordinated, warranted, or insured, and where the Contractor certifies that the substitution will overcome the deficiency.

B. By making a request for substitution, contractor warrants that:

1. Requested substitution does not require extensive revisions to the Contract Documents.
2. Requested substitution is consistent with the Contract Documents and will produce indicated results.
3. Substitution request is fully documented and properly submitted.
4. Requested substitution will not adversely affect Contractor's Construction Schedule.
5. Requested substitution has received necessary approvals of authorities having jurisdiction.
6. Requested substitution is compatible with other portions of the Work.
7. Requested substitution has been coordinated with other portions of the Work.
8. Requested substitution provides specified warranty.
9. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000

SECTION 017300 - EXECUTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:

1. Construction layout.
2. General installation of products.
3. Coordination of Owner-installed products.
4. Progress cleaning.
5. Starting and adjusting.
6. Protection of installed construction.
7. Correction of the Work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.

1. Before construction, verify the location and points of connection of new utility services.

B. Utilities: The existence and location of underground and other utilities and construction indicated as existing or by others is not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction affecting the Work.

1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; and underground electrical services.
2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.

C. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

1. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:

    a. Description of the Work.
    b. List of detrimental conditions, including substrates.
    c. List of unacceptable installation tolerances.
    d. Recommended corrections.

2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
3. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
4. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
5. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

## 3.2 PREPARATION

A. Existing Utility Information: Furnish information to local utility that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.

B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Architect. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents.

## 3.3 CONSTRUCTION LAYOUT

A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect promptly.

B. General: Engage a land surveyor or professional engineer to lay out the Work using accepted surveying practices.

1. Field verify existing grade information indicated on Drawings. Inform Architect of discrepancies for resolution before proceeding.
2. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
3. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
4. Inform installers of lines and levels to which they must comply.
5. Check the location, level and plumb, of every major element as the Work progresses.
6. Notify Architect when deviations from required lines and levels exceed allowable tolerances.
7. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.

C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and invert elevations.

D. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.

E. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect.

## 3.4 FIELD ENGINEERING

A. Identification: Owner will identify existing benchmarks, control points, and staked property corners, if any.

B. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.

1. Do not change or relocate existing benchmarks or control points without prior written approval of Architect. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Architect before proceeding.
2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.

C. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.

1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.

## 3.5 INSTALLATION

A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

1. Make vertical work plumb and make horizontal work level.
2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
4. Maintain minimum headroom clearance of 8 feet (2.4 m) in spaces without a suspended ceiling.

B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.

C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.

F. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.

G. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.

1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
2. Allow for building movement, including thermal expansion and contraction.
3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

H. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.

I. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

## 3.6 OWNER-INSTALLED PRODUCTS

A. Site Access: Provide access to Project site for Owner's construction forces.

B. Coordination: Coordinate construction and operations of the Work with work performed by Owner's construction forces.

1. Construction Schedule: Inform Owner of Contractor's preferred construction schedule for Owner's portion of the Work. Adjust construction schedule based on a mutually agreeable timetable. Notify Owner if changes to schedule are required due to differences in actual construction progress.
2. Preinstallation Conferences: Include Owner's construction forces at preinstallation conferences covering portions of the Work that are to receive Owner's work. Attend preinstallation conferences conducted by Owner's construction forces if portions of the Work depend on Owner's construction.

## 3.7 PROGRESS CLEANING

A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.

1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F (27 deg C).
3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.

B. Site: Maintain Project site free of waste materials and debris.

C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.

1. Remove liquid spills promptly.
2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.

D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.

F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

G. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.

H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

## 3.8 STARTING AND ADJUSTING

A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.

B. Adjust operating components for proper operation without binding. Adjust equipment for proper operation.

C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

D. Manufacturer's Field Service: If a factory-authorized service representative is required to inspect field-assembled components and equipment installation, comply with qualification requirements in Division 01 Section "Quality Requirements."

## 3.9 PROTECTION OF INSTALLED CONSTRUCTION

A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

B. Comply with manufacturer's written instructions for temperature and relative humidity.

## 3.10 CORRECTION OF THE WORK

A. Repair or remove and replace defective construction. Restore damaged substrates and finishes. Comply with requirements in Division 01 Section "Cutting and Patching."

1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.

B. Restore permanent facilities used during construction to their specified condition.

C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.

D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.

E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION 017300

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SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:

1. Inspection procedures.
2. Warranties.
3. Final cleaning.

1.3 SUBSTANTIAL COMPLETION

A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.

1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
2. Advise Owner of pending insurance changeover requirements.
3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
5. Prepare and submit Project Record Documents.
6. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
7. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
8. Complete startup testing of systems.
9. Submit test/adjust/balance records.
10. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
11. Advise Owner of changeover in heat and other utilities.
12. Submit preliminary manuals required by Specifications Section 017823 (two copies) for review by Architect.
13. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
14. Complete final cleaning requirements, including touchup painting.

15. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for Final Completion.

## 1.4 FINAL COMPLETION

A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:

1. Submit a final Application for Payment according to Division 01 Section "Payment Procedures."
2. Submit copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
4. Submit final manuals required by Specifications Section 017823, corrected in accordance with the Architect’s review of the preliminary operations and maintenance manuals submitted at the time of Substantial Completion.
5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.

B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

## 1.5 WARRANTIES

A. Submittal Time: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.

B. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.

C. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.

1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch (215-by-280-mm) paper.
2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.

D. Provide additional copies of each warranty to include in operation and maintenance manuals.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

## PART 3 - EXECUTION

### 3.1 FINAL CLEANING

A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:

a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.

c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
d. Remove tools, construction equipment, machinery, and surplus material from Project site.
e. Remove snow and ice to provide safe access to building.
f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
h. Sweep concrete floors broom clean in unoccupied spaces.
i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.
j. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
k. Remove labels that are not permanent.
l. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.

    1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.

m. Wipe surfaces of mechanical and electrical equipment**,** elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
n. Replace parts subject to unusual operating conditions.
o. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
p. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
q. Clean ducts, blowers, and coils if units were operated without filters during construction.
r. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.
s. Leave Project clean and ready for occupancy.

C. Pest Control: Make a final inspection and rid Project of rodents, insects, and other pests.

D. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION 017700

SECTION 033000 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section specifies cast-in place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes, for the following:

1. Footings.
2. Foundation walls.
3. Slabs-on-grade (interior and exterior).
4. Site concrete.

1.3 DEFINITIONS

A. Cementitious Materials: Portland cement.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated.

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

C. Steel Reinforcement Shop Drawings: Placing drawings that detail fabrication, bending, and placement. Include bar sizes, lengths, material, grade, bar schedules, stirrup spacing, bent bar diagrams, bar arrangement, splices and laps, mechanical connections, tie spacing, hoop spacing, and supports for concrete reinforcement.

1. Corner bars for providing continuity of horizontal reinforcing around footing, foundation wall, and other concrete item corners are required and shall be shown on shop drawings.
2. Approval of shop drawings by the Architect shall not relieve the Contractor of providing all reinforcing noted, shown, or implied by the project Contract Documents.

D. Vapor Retarder and Related Accessories.

E. Curing and Sealing Materials.

1.5 QUALITY ASSURANCE

A. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, obtain aggregate from one source, and obtain admixtures through one source from a single manufacturer.

B. ACI Publications: Comply with the following American Concrete Institute (ACI) unless modified by requirements in the Contract Documents:

1. ACI 301, "Specification for Structural Concrete," Sections 1 through 5.
2. ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."

C. Comply with all applicable portions of the International Building Code, 2015 Edition, Chapter 19.

D. Concrete Testing Service: The Owner will engage a qualified independent testing agency to perform material evaluation tests and to design concrete mixtures.

1. Materials and installed work may require testing and retesting at any time during progress of Work. Retesting of rejected materials for installed Work shall be done at Contractor's expense.

E. Special Inspections: The Owner shall engage an inspection agency to provide special inspection per Structural Notes on Drawings and as required by the International Building Code. Costs for such inspection shall be paid directly to the inspection agency by the Owner.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Steel Reinforcement: Deliver, store, and handle steel reinforcement to prevent bending and damage.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:

1. Products: Subject to compliance with requirements, provide one of the products specified.
2. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

B. Products and/or manufacturers other than those specified are subject to the Architect's approval prior to bidding.

## 2.2 FORM-FACING MATERIALS

A. Smooth-Formed Finished Concrete: Form-facing panels that will provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.

1. Plywood, metal, or other approved panel materials.
2. Exterior-grade plywood panels, suitable for concrete forms, complying with DOC PS 1, and as follows:

    a. High-density overlay, Class 1 or better.
    b. Medium-density overlay, Class 1 or better; mill-release agent treated and edge sealed.
    c. Structural 1, B-B or better; mill oiled and edge sealed.
    d. B-B (Concrete Form), Class 1 or better; mill oiled and edge sealed.

B. Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.

C. Void Forms: Biodegradable paper surface, treated for moisture resistance, structurally sufficient to support weight of plastic concrete and other superimposed loads.

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

1. Formulate form-release agent with rust inhibitor for steel form-facing materials.

E. Form Ties: Factory-fabricated, removable or snap-off metal or glass-fiber-reinforced plastic form ties designed to resist lateral pressure of fresh concrete on forms and to prevent spalling of concrete on removal.

1. Furnish units that will leave no corrodible metal closer than 1 inch (25 mm) to the plane of exposed concrete surface.
2. Furnish ties that, when removed, will leave holes no larger than 1 inch (25 mm) in diameter in concrete surface.
3. Furnish ties with integral water-barrier plates to walls indicated to receive dampproofing or waterproofing, if any.

## 2.3 STEEL REINFORCEMENT

A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (Grade 420), deformed.

B. Plain-Steel Wire: ASTM A 82, as drawn galvanized.

C. Plain-Steel Welded Wire Reinforcement: ASTM A 185, plain, fabricated from as-drawn steel wire into flat sheets.

2.4 REINFORCEMENT ACCESSORIES

A. Joint Dowel Bars: ASTM A 615/A 615M, Grade 60 (Grade 420), plain-steel bars, cut bars true to length with ends square and free of burrs.

B. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place. Manufacture bar supports from plastic or precast concrete according to CRSI's "Manual of Standard Practice," of greater compressive strength than concrete.

2.5 CONCRETE MATERIALS

A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project:

1. Portland Cement: ASTM C 150, Type I or II gray.

a. Fly Ash: ASTM C 618.

B. Normal-Weight Aggregates: ASTM C 33, coarse aggregate, graded. Provide aggregates from a single source with documented service record data of at least 10 years' satisfactory service in similar applications and service conditions using similar aggregates and cementitious materials.

1. Maximum Coarse-Aggregate Size: 3/4 inch (19mm) nominal.
2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.

C. Water: ASTM C 94/C 94M and potable.

2.6 ADMIXTURES

A. Air-Entraining Admixture: ASTM C 260.

B. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride. Do not use calcium chloride or admixtures containing calcium chloride.

1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
2. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.

3. Profile: As indicated.
4. Dimensions: As indicated.

2.7 VAPOR RETARDERS

A. Plastic Vapor Retarder: ASTM E 1745, Class A. Include manufacturer's recommended adhesive or pressure-sensitive tape and penetration boots or seals.

1. Products:

a. Fortifiber Corporation; Moistop Ultra 15.
b. Raven Industries Inc.; Vapor Block 15.
c. Reef Industries, Inc.; Griffolyn Type-105.
d. Meadows, W.R., Inc.; Perminator 15 mil.

## 2.8 FLOOR AND SLAB TREATMENTS

A. Penetrating Liquid Floor Treatment: Clear, chemically reactive, waterborne solution of inorganic silicate or siliconate materials and proprietary components; odorless; colorless; that penetrates, hardens, and densifies concrete surfaces.

1. Products:
   a. Dayton Superior Corporation; Day-Chem Sure Hard.
   b. L&M Construction Chemicals, Inc.; Seal Hard.
   c. Meadows, W. R., Inc.; Liqui-Hard.

## 2.9 CURING MATERIALS

A. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.

1. Products:
   a. Dayton Superior Corporation; Sure Film.
   b. L&M Construction Chemicals, Inc.; E-Con.
   c. Meadows, W. R., Inc.; Sealtight Evapre.

B. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating.

1. Products:
   a. Dayton Superior Corporation; Day Chem Rez Cure (J-11-W).
   b. L&M Construction Chemicals, Inc.; L&M Cure R.
   c. Meadows, W. R., Inc.; 1100 Clear.

## 2.10 RELATED MATERIALS

A. Expansion- and Isolation-Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber.

B. Bonding Agent: ASTM C 1059, Type II, non-redispersible, acrylic emulsion or styrene butadiene.

## 2.11 CONCRETE MIXTURES, GENERAL

A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301.

1. Use a qualified independent testing agency for preparing and reporting proposed mixture designs based on laboratory trial mixtures.

B. Cementitious Materials: At footings and foundation walls only, fly ash may be to reduce the total amount of portland cement which would otherwise be used. Limit percentage, by weight, of cementitious materials other than portland cement in concrete as follows:

1. Fly Ash: 15 percent.

C. Limit water-soluble, chloride-ion content in hardened concrete to 0.06 percent by weight of cement.

D. Admixtures: Use admixtures according to manufacturer's written instructions.

1. Use water-reducing or high-range water-reducing admixture in concrete, as required, for placement and workability.
2. Use water-reducing admixture in pumped concrete, concrete for heavy-use industrial slabs and parking structure slabs, concrete required to be watertight, and concrete with a water-cementitious materials ratio below 0.45.

## 2.12 CONCRETE MIXTURES FOR BUILDING ELEMENTS

A. Footings: Proportion normal-weight concrete mixture as follows:

1. Minimum Compressive Strength 3,500 psi (20.7 MPa) at 28 days.
2. Maximum Water-Cementitious Materials Ratio: 0.45.
3. Slump Limit: 4 inches (100 mm) plus or minus 1 inch (25 mm).
4. Air Content: 5 percent, plus or minus 1.5 percent at point of delivery.

B. Foundation Walls: Proportion normal-weight concrete mixture as follows:

1. Minimum Compressive Strength 3,500 psi (24.1 MPa) at 28 days.
2. Maximum Water-Cementitious Materials Ratio: 0.45.
3. Slump Limit: 4 inches (100 mm) plus or minus 1 inch (25 mm).
4. Air Content: 5 percent, plus or minus 1.5 percent at point of delivery.

C. Slabs-on-Grade Exterior: Proportion normal-weight concrete mixture as follows:

1. Minimum Compressive Strength: 4,000 psi (31 MPa) at 28 days.
2. Maximum Water - Cementitious Materials Ratio: 0.45.
3. Slump Limit: 4 inches (100 mm).
4. Air Content: 5 percent, plus or minus 1.5 percent at point of delivery.

D. Slab-on-Grade Interior: Proportion normal-weight concrete mixture as follows:

1. Minimum Compressive Strength 4,000 psi (24.1 MPa) 28 days.
2. Maximum Water - Cementitious Materials Ratio: 0.45.
3. Slump Limit: 4 inches (100 mm).
4. Air Content: Do not allow air content of troweled finished floors to exceed 3 percent.

2.13 FABRICATING REINFORCEMENT

A. Fabricate steel reinforcement according to Concrete Reinforcing Steel Institute's (CRSI) "Manual of Standard Practice."

B. Corner bars for providing continuity of horizontal reinforcing around footing, foundation wall and other concrete item corners are required.

2.14 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M, and furnish batch ticket information.

1. When air temperature is between 85 and 90 deg F (30 and 32 deg C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F (32 deg C), reduce mixing and delivery time to 60 minutes.

PART 3 - EXECUTION

3.1 FORMWORK

A. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.

B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.

C. Limit concrete surface irregularities, designated by ACI 347R as abrupt or gradual, as follows:

1. Class A, 1/8 inch (3.2 mm) for smooth-formed finished surfaces.
2. Class B, 1/4 inch (6 mm) for rough-formed finished surfaces.

D. Construct forms tight enough to prevent loss of concrete mortar.

E. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical.

1. Install keyways, reglets, recesses, and the like, for easy removal.
2. Do not use rust-stained steel form-facing material.

F. Set edge forms, bulkheads, and intermediate screed strips for slabs to achieve required elevations and slopes in finished concrete surfaces. Provide and secure units to support screed strips; use strike-off templates or compacting-type screeds.

G. Provide temporary openings for cleanouts and inspection ports where interior area of formwork is inaccessible. Close openings with panels tightly fitted to forms and securely braced to

prevent loss of concrete mortar. Locate temporary openings in forms at inconspicuous locations.

H. Chamfer exterior corners and edges of permanently exposed concrete only if and where indicated.

I. Form openings, chases, offsets, sinkages, keyways, reglets, blocking, screeds, and bulkheads required in the Work. Determine sizes and locations from trades providing such items.

J. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.

K. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.

L. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.

## 3.2 EMBEDDED ITEMS

A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

1. Install anchor rods, accurately located, to elevations required and complying with tolerances in Section 7.5 of AISC's "Code of Standard Practice for Steel Buildings and Bridges."

B. All sleeves, anchor bolts, dowels, and reinforcing items, together with anchors, weld plates, bearing plates, etc. to be set in concrete, shall be positioned and securely anchored in place prior to placement of concrete. Such items shall not be pushed into freshly placed concrete.

## 3.3 REMOVING AND REUSING FORMS

A. General: Formwork for sides of beams, walls, columns, and similar parts of the Work that does not support weight of concrete may be removed after cumulatively curing at not less than 50 deg F (10 deg C) for 24 hours after placing concrete, if concrete is hard enough to not be damaged by form-removal operations and curing and protection operations are maintained.

1. Leave formwork for beam soffits, joists, slabs, and other structural elements that supports weight of concrete in place until concrete has achieved at least 70 percent of its 28-day design compressive strength.
2. Remove forms only if shores have been arranged to permit removal of forms without loosening or disturbing shores.

B. Clean and repair surfaces of forms to be reused in the Work. Split, frayed, delaminated, or otherwise damaged form-facing material will not be acceptable for exposed surfaces. Apply new form-release agent.

C. When forms are reused, clean surfaces, remove fins and laitance, and tighten to close joints. Align and secure joints to avoid offsets. Do not use patched forms for exposed concrete surfaces unless approved by Architect.

## 3.4 SHORES AND RESHORES

A. Comply with ACI 318 (ACI 318M) and ACI 301 for design, installation, and removal of shoring and reshoring.

1. Do not remove shoring or reshoring until measurement of slab tolerances is complete.

B. Plan sequence of removal of shores and reshore to avoid damage to concrete. Locate and provide adequate reshoring to support construction without excessive stress or deflection.

## 3.5 VAPOR RETARDERS

A. Plastic Vapor Retarders: Place, protect, and repair vapor retarders according to ASTM E 1643 and manufacturer's written instructions.

1. Lap joints 6 inches (150 mm) and seal with manufacturer's recommended tape.
2. Seal all penetrations (pipe, conduit, etc) with manufacturer’s prefabricated penetration seals.

## 3.6 STEEL REINFORCEMENT

A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.

1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.

B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials that would reduce bond to concrete.

C. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.

1. Weld reinforcing bars according to American Welding Society (AWS) D1.4, if any where indicated.

D. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.

E. Install welded wire reinforcement in longest practicable lengths elevated on plastic or concrete bar supports spaced to minimize sagging. Lap edges and ends of adjoining sheets at least one mesh spacing and wire tie. Offset laps of adjoining sheet widths to prevent continuous laps in either direction. Lace overlaps with wire.

## 3.7 JOINTS

A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.

B. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Architect.

1. Place joints perpendicular to main reinforcement. Continue reinforcement across construction joints, unless otherwise indicated. Do not continue reinforcement through sides of strip placements of floors and slabs.
2. Form keyed joints as indicated. Embed keys at least 1-1/2 inches (38 mm) into concrete.
3. Space vertical joints in walls as indicated.
4. Use a bonding agent at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.

C. Contraction Joints in Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness as follows:

1. Tooled Grooved Joints: Form contraction joints in exterior concrete slabs after initial floating by grooving and finishing each edge of joint to a radius of 1/8 inch (3.2 mm). Repeat grooving of contraction joints after applying surface finishes. Eliminate groover tool marks on concrete surfaces.
2. Sawed Joints: Form contraction joints in interior concrete slabs with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch- (3.2-mm-) wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.

D. Isolation Joints in Slabs-on-Grade: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.

1. Extend joint-filler strips full width and depth of joint, terminating flush with finished concrete surface, unless otherwise indicated.
2. Terminate full-width joint-filler strips not less than 1/2 inch (13 mm) or more than 1 inch (25 mm) below finished concrete surface where joint sealants, specified in Division 07 Section "Joint Sealants," are indicated.
3. Install joint-filler strips in lengths as long as practicable. Where more than one length is required, lace or clip sections together.

E. Doweled Joints: Install dowel bars and support assemblies at joints if and where indicated. Lubricate or asphalt coat one-half of dowel length to prevent concrete bonding to one side of joint.

## 3.8 CONCRETE PLACEMENT

A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed.

B. Do not add water to concrete during delivery, at Project site, or during placement unless approved by Architect in writing.

C. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.

1. Deposit concrete in horizontal layers of depth to not exceed formwork design pressures and in a manner to avoid inclined construction joints.
2. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301.
3. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations to rapidly penetrate placed layer and at least 6 inches (150 mm) into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity. At each insertion, limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing mixture constituents to segregate.

D. Deposit and consolidate concrete for floors and slabs in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.

1. Consolidate concrete during placement operations so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
2. Maintain reinforcement in position on chairs during concrete placement.
3. Screed slab surfaces with a straightedge and strike off to correct elevations.
4. Slope surfaces uniformly to drains where required.
5. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, before excess bleedwater appears on the surface. Do not further disturb slab surfaces before starting finishing operations.

E. Cold-Weather Placement: Comply with ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.

1. When average high and low temperature is expected to fall below 40 deg F (4.4 deg C) for three successive days, maintain delivered concrete mixture temperature within the temperature range required by ACI 301.
2. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators.

F. Hot-Weather Placement: Comply with ACI 301 and as follows:

1. Maintain concrete temperature below 90 deg F (32 deg C) at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
2. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade uniformly moist without standing water, soft spots, or dry areas.

## 3.9 FINISHING FORMED SURFACES

A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections that exceed specified limits on formed-surface irregularities.

1. Apply to concrete surfaces not exposed to public view.

B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defects. Remove fins and other projections that exceed specified limits on formed-surface irregularities.

1. Apply to concrete surfaces exposed to public view, including upper portions of foundation walls. Do not rub or "sack" finish exposed concrete.

C. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces, unless otherwise indicated.

## 3.10 FINISHING FLOORS AND SLABS

A. General: Comply with ACI 302.1R recommendations for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.

B. Scratch Finish: While still plastic, texture concrete surface that has been screeded and bull-floated or darbied. Use stiff brushes, brooms, or rakes to produce a profile amplitude of 1/4 inch (6 mm) in 1 direction.

1. Apply scratch finish to surfaces indicated to receive concrete floor toppings and to receive mortar setting beds for bonded cementitious floor finishes.

C. Float Finish: Consolidate surface with power-driven floats or by hand floating if area is small or inaccessible to power driven floats. Restraighten, cut down high spots, and fill low spots. Repeat float passes and restraightening until surface is left with a uniform, smooth, granular texture.

1. Apply float finish to surfaces indicated to receive trowel finish.

D. Trowel Finish: After applying float finish, apply first troweling and consolidate concrete by hand or power-driven trowel. Continue troweling passes and restraighten until surface is free of trowel marks and uniform in texture and appearance. Grind smooth any surface defects that would telegraph through applied coatings or floor coverings.

1. Apply a trowel finish to surfaces exposed to view or to be covered with resilient flooring, carpet, ceramic or quarry tile set over a cleavage membrane, paint, or another thin-film-finish coating system.
2. Finish surfaces to the following tolerances, according to ASTM E 1155 (ASTM E 1155M), for a randomly trafficked floor surface:

a. Specified overall values of flatness, F(F) 35; and of levelness, F(L) 30; with minimum local values of flatness, F(F) 25; and of levelness, F(L) 20; for slabs-on-grade.

E. Trowel and Fine-Broom Finish: Apply a first trowel finish to surfaces where ceramic or quarry tile is to be installed by either thickset or thin-set method. While concrete is still plastic, slightly scarify surface with a fine broom.

1. Comply with flatness and levelness tolerances for trowel finished floor surfaces.

F. Broom Finish at Exterior Concrete: Apply a light broom finish to exterior concrete sidewalks, steps, and ramps, and elsewhere as indicated.

1. Immediately after trowel finishing, slightly scarify trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route. Coordinate required final finish with Architect before application.

## 3.11 MISCELLANEOUS CONCRETE ITEMS

A. Filling In: Fill in holes and openings left in concrete structures, unless otherwise indicated, after work of other trades is in place. Mix, place, and cure concrete, as specified, to blend with in-place construction. Provide other miscellaneous concrete filling indicated or required to complete the Work.

B. Curbs: Provide monolithic finish to interior curbs by stripping forms while concrete is still green and by steel-troweling surfaces to a hard, dense finish with corners, intersections, and terminations slightly rounded.

C. Equipment Bases and Foundations: Provide machine and equipment bases and foundations as shown on Drawings. Set anchor bolts for machines and equipment at correct elevations, complying with diagrams or templates from manufacturer furnishing machines and equipment.

## 3.12 CONCRETE PROTECTING AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.

B. Evaporation Retarder: Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h (1 kg/sq. m x h) before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.

C. Formed Surfaces: Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces. If forms remain during curing period, moist cure after loosening forms. If removing forms before end of curing period, continue curing for the remainder of the curing period.

D. Unformed Surfaces: Begin curing immediately after finishing concrete. Cure unformed surfaces, including floors and slabs, concrete floor toppings, and other surfaces.

E. Cure concrete according to ACI 308.1, by one or a combination of the following methods:

1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:

    a. Water.
    b. Continuous water-fog spray.
    c. Absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12-inch (300-mm) lap over adjacent absorptive covers.

2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches (300 mm), and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.

    a. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive penetrating liquid floor treatments.
    b. Cure concrete surfaces to receive floor coverings with either a moisture-retaining cover or a curing compound.

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

    a. After curing period has elapsed, remove curing compound without damaging concrete surfaces by method recommended by curing compound manufacturer.

## 3.13 LIQUID FLOOR TREATMENTS

A. Penetrating Liquid Floor Treatment: Prepare, apply, and finish penetrating liquid floor treatment according to manufacturer's written instructions.

1. Remove curing compounds, sealers, oil, dirt, laitance, and other contaminants and complete surface repairs.
2. Do not apply to concrete that is less than 28 days' old.
3. Apply liquid until surface is saturated, scrubbing into surface until a gel forms; rewet; and repeat brooming or scrubbing. Rinse with water; remove excess material until surface is dry. Apply a second coat in a similar manner if surface is rough or porous.

B. Sealing Coat: Uniformly apply a continuous sealing coat of curing and sealing compound to hardened concrete by power spray or roller according to manufacturer's written instructions.

## 3.14 CONCRETE SURFACE REPAIRS

A. Defective Concrete: Repair and patch defective areas when approved by Architect. Remove and replace concrete that cannot be repaired and patched to Architect's approval.

B. Patching Mortar: Mix dry-pack patching mortar, consisting of one part portland cement to two and one-half parts fine aggregate passing a No. 16 (1.18-mm) sieve, using only enough water for handling and placing.

C. Repairing Formed Surfaces: Surface defects include color and texture irregularities, cracks, spalls, air bubbles, honeycombs, rock pockets, fins and other projections on the surface, and stains and other discolorations that cannot be removed by cleaning.

1. Immediately after form removal, cut out honeycombs, rock pockets, and voids more than 1/2 inch (13 mm) in any dimension in solid concrete, but not less than 1 inch (25 mm) in depth. Make edges of cuts perpendicular to concrete surface. Clean, dampen with water, and brush-coat holes and voids with bonding agent. Fill and compact with patching mortar before bonding agent has dried. Fill form-tie voids with patching mortar or cone plugs secured in place with bonding agent.
2. Repair defects on surfaces exposed to view by blending white portland cement and standard portland cement so that, when dry, patching mortar will match surrounding color. Patch a test area at inconspicuous locations to verify mixture and color match before proceeding with patching. Compact mortar in place and strike off slightly higher than surrounding surface.
3. Repair defects on concealed formed surfaces that affect concrete's durability and structural performance as determined by Architect.

D. Repairing Unformed Surfaces: Test unformed surfaces, such as floors and slabs, for finish and verify surface tolerances specified for each surface. Correct low and high areas. Test surfaces sloped to drain for trueness of slope and smoothness; use a sloped template.

1. Repair finished surfaces containing defects. Surface defects include spalls, popouts, honeycombs, rock pockets, crazing and cracks in excess of 0.01 inch (0.25 mm) wide or that penetrate to reinforcement or completely through unreinforced sections regardless of width, and other objectionable conditions.
2. After concrete has cured at least 14 days, correct high areas by grinding.
3. Correct localized low areas during or immediately after completing surface finishing operations by cutting out low areas and replacing with patching mortar. Finish repaired areas to blend into adjacent concrete.
4. Correct other low areas scheduled to receive floor coverings with a repair underlayment. Prepare, mix, and apply repair underlayment and primer according to manufacturer's written instructions to produce a smooth, uniform, plane, and level surface. Feather edges to match adjacent floor elevations.
5. Correct other low areas scheduled to remain exposed with a repair topping. Cut out low areas to ensure a minimum repair topping depth of 1/4 inch (6 mm) to match adjacent floor elevations. Prepare, mix, and apply repair topping and primer according to manufacturer's written instructions to produce a smooth, uniform, plane, and level surface.
6. Repair defective areas, except random cracks and single holes 1 inch (25 mm) or less in diameter, by cutting out and replacing with fresh concrete. Remove defective areas with clean, square cuts and expose steel reinforcement with at least a 3/4-inch (19-mm)

clearance all around. Dampen concrete surfaces in contact with patching concrete and apply bonding agent. Mix patching concrete of same materials and mixture as original concrete except without coarse aggregate. Place, compact, and finish to blend with adjacent finished concrete. Cure in same manner as adjacent concrete.

7. Repair random cracks and single holes 1 inch (25 mm) or less in diameter with patching mortar. Groove top of cracks and cut out holes to sound concrete and clean off dust, dirt, and loose particles. Dampen cleaned concrete surfaces and apply bonding agent. Place patching mortar before bonding agent has dried. Compact patching mortar and finish to match adjacent concrete. Keep patched area continuously moist for at least 72 hours.

E. Perform structural repairs of concrete, subject to Architect's approval, using epoxy adhesive and patching mortar.

F. Repair materials and installation not specified above may be used, subject to Architect's approval.

## 3.15 FIELD QUALITY CONTROL

A. Testing and Inspecting: Owner will engage a special inspector (if and as required) and a qualified testing and inspecting agency to perform field tests and inspections as required by applicable codes, by agencies having jurisdiction, and as directed by the Architect, and to prepare test reports.

B. Inspections may include the following:

1. Steel reinforcement placement.
2. Steel reinforcement welding.
3. Headed bolts and studs.
4. Verification of use of required design mixture.
5. Concrete placement, including conveying and depositing.
6. Curing procedures and maintenance of curing temperature.
7. Verification of concrete strength before removal of shores and forms from beams and slabs.

C. Concrete Tests: Testing of composite samples of fresh concrete obtained according to ASTM C 172.

1. Sampling Fresh Concrete: ASTM C 172, except modified for slump to comply with ASTM C 94.

a. Slump: ASTM C 143 / C 143M.
b. Air content: ASTM C 231, pressure method for normal weight concrete.
c. Concrete Temperature: ASTM C 1064 / C 1064M.
d. Compression Test Specimen: ASTM C 31 / C 31 M; one set of four standard cylinders for each compressive-strength test.
e. Compressive-Strength Tests: ASTM C 39 / C 39 M; one specimen tested at 7 days, two specimens tested at 28 days, and one specimen retained in reserve for later testing if required.

f. When strength of field-cured cylinders is less than 85 percent of companion laboratory-cured cylinders, evaluate current operations and provide corrective procedures for protecting and curing the in-place concrete.

2. Strength level of concrete will be considered satisfactory only if no individual strength test result falls below specified compressive strength.

D. Flatness and Levelness: Measure floor and slab flatness and levelness according to ASTM E 1155 (ASTM E 1155M) within 48 hours of finishing.

E. Reporting: Test results will be reported in writing to Construction Manager, Architect, Structural Engineer, ready-mix producer, and Contractor. Reports of compressive strength tests shall contain the Project identification name, date of concrete placement, name of concrete testing service, concrete type and class, location of concrete batch in structure, design compressive strength at 28 days, actual, slump, actual air entertainment, and compressive breaking strength, and type of break for both 7-day tests and 28-day tests.

F. Nondestructive Testing: Impact hammer, sonoscope, or other nondestrcutive device may be permitted but shall not be used as the sole basis for acceptance or rejection.

G. Additional Tests: The Testing Agency will make additional tests of in-place concrete when test results indicate specified concrete strengths and other characteristics have not been attained in the structure, as directed by the Architect. The Testing Agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42 / C 42 M, or by other methods as directed.

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SECTION 042000 - UNIT MASONRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes unit masonry assemblies consisting of the following:

1. Concrete masonry units (CMUs), load bearing. (CMU units provided by Owner)
2. Decorative concrete masonry units, load bearing. (CMU units provided by Owner)
3. Mortar and grout.
4. Reinforcing steel.
5. Miscellaneous masonry accessories.
6. Masonry-cell insulation.

**B. It is the intent of the Owner to provide the concrete masonry units from remaining material utilized by a previous project. The General Contractor shall inspect the existing material and determine if there are enough units to complete the project. If there is not enough material to complete the project this contract shall provide the required additional units. Size, color, and texture of the new units shall match the existing material as best as possible.**

C. Products installed, but not furnished, under this Section include the following:

1. Hollow metal door frames, furnished under Division 08 Section “Hollow Metal Doors and Frames”. Refer to such Division 08 Section for installation requirements for hollow metal door frames.
2. Anchor bolts, furnished under Division 05 Sections “Structural Steel Framing” and “Metal Fabrications”.

1.3 DEFINITIONS

A. Reinforced Masonry: Masonry containing reinforcing steel in grouted cells.

1.4 PERFORMANCE REQUIREMENTS

A. Provide structural unit masonry that develops indicated net-area compressive strengths ($f'_m$) at 28 days.

1.5 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: For the following:

1. Masonry Units: Show sizes, profiles, coursing, and locations of special shapes.
2. Reinforcing Steel: Detail bending and placement of unit masonry reinforcing bars. Comply with American Concrete Institute (ACI) ACI 315, "Details and Detailing of Concrete Reinforcement." Show elevations of reinforced walls.

C. Samples for Initial Selection: For the following:

1. Colored mortar samples.

D. Samples for Verification: For each type and color of the following:

1. Concrete masonry units, in the form of full size units. Final verification of CMU colors is subject to approval of full size samples.
2. Pigmented and colored-aggregate mortar. Make Samples using same sand and mortar ingredients to be used on Project. Label Samples to indicate types and amounts of pigments used.
3. Accessories embedded in masonry.

E. List of Materials Used in Constructing Mockups: List generic product names together with manufacturers, manufacturers' product names, model numbers, lot numbers, batch numbers, source of supply, and other information as required to identify materials used. Include mix proportions for mortar and grout and source of aggregates.

1. Submittal is for information only. Neither receipt of list nor approval of mockup constitutes approval of deviations from the Contract Documents unless such deviations are specifically brought to the attention of Architect and approved in writing.

F. Material Certificates: Include statements of material properties indicating compliance with requirements including compliance with standards and type designations within standards. Provide for each type and size of the following:

1. Masonry units.

a. Include material test reports substantiating compliance with requirements.
b. For masonry units used in structural masonry, include data and calculations establishing average net-area compressive strength of units.

2. Preblended, dry mortar mixes. Include description of type and proportions of ingredients.
3. Grout mixes. Include description of type and proportions of ingredients.
4. Reinforcing bars.
5. Joint reinforcement.
6. Anchors, ties, and metal accessories.

G. Mix Designs: For each type of mortar and grout. Include description of type and proportions of ingredients.

1. Include test reports, per ASTM C 780, for mortar mixes required to comply with property specification.
2. Include test reports, per ASTM C 1019 for grout mixes required to comply with compressive strength requirement.

H. Cold-Weather Procedures: Detailed description of methods, materials, and equipment to be used to comply with cold-weather requirements.

1.6 QUALITY ASSURANCE

A. Source Limitations for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, through one source from a single manufacturer for each product required.

B. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from a single manufacturer for each cementitious component and from one source or producer for each aggregate.

C. Preconstruction Testing Service: Owner will engage a qualified independent testing agency to perform preconstruction testing indicated below. Payment for these services will be made by Owner. Retesting of materials that fail to meet specified requirements shall be done at Contractor's expense.

1. Concrete Masonry Unit Tests: For each different concrete masonry unit indicated, units will be tested for strength, absorption, and moisture content per ASTM C 140. Tests shall be performed at place of manufacture. Only lots tested and found to be in compliance with specified requirements shall be delivered to project site.
2. Mortar Test (Property Specification): For each mix required, per ASTM C 780.
3. Grout Test (Compressive Strength): For each mix required, per ASTM C 1019.
4. Prism Test: For each type of construction required, per ASTM C 1314.

D. Fire-Resistance Ratings: Where indicated or required, provide materials and construction identical to those of assemblies with fire-resistance ratings determined per ASTM E 119 by a testing and inspecting agency, by equivalent concrete masonry thickness, or by other means, as acceptable to authorities having jurisdiction.

E. Sample Panel: Build sample panel to verify selections made under sample submittals and to demonstrate aesthetic effects

1. Build sample panel 32 inches long by 32 inches high by full thickness. Construct in specified CMU color with specified mortar color, half split face units and half smooth face units..
2. Clean one-half of exposed face of panel with masonry cleaner indicated.
3. Protect approved sample panel from the elements with weather-resistant membrane.
4. Approval of sample panel is for color, texture, and blending of masonry units; relationship of mortar and sealant colors to masonry unit colors; tooling of joints; aesthetic qualities of workmanship; and other material and construction qualities specifically approved by Architect in writing.

a. Approval of sample panel does not constitute approval of deviations from the Contract Documents contained in sample panel unless such deviations are specifically approved by Architect in writing.

5. Locate sample panel at construction site with south facing orientation at location directed by Architect.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Store masonry units 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. If units become wet, do not install until they are dry.

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. Deliver preblended, dry mortar mix in moisture-resistant containers designed for lifting and emptying into dispensing silo. Store preblended, dry mortar mix in delivery containers on elevated platforms, under cover, and in a dry location or in a metal dispensing silo with weatherproof cover.

E. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

1.8 PROJECT CONDITIONS

A. Protection of Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.

1. Extend cover a minimum of 24 inches (600 mm) down both sides and hold cover securely in place.

B. Do not apply uniform floor or roof loads for at least 12 hours and concentrated loads for at least 3 days after building masonry walls or columns.

C. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.

1. Protect base of walls from rain-splashed mud and from mortar splatter by spreading coverings on ground and over wall surface.
2. Protect sills, ledges, and projections from mortar droppings.
3. Protect surfaces of window and door frames, as well as similar products with painted and integral finishes, from mortar droppings.

4. Turn scaffold boards near the wall on edge at the end of each day to prevent rain from splashing mortar and dirt onto completed masonry.

D. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in TMS 602/AC1530.1/ ASCE 6, Article 1.8 C, when ambient temperature is or will likely fall below 40 degrees F (4 degrees C).

1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F (4 deg C) and above and will remain so until masonry has dried, but not less than 7 days after completing cleaning.

E. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in TMS 602/AC1530.1/ASCE 6, Article 1.8 D, when ambient air temperature exceeds 100 degrees F, or 90 degrees F with a wind velocity greater than 8 mph.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:

1. Products: Subject to compliance with requirements, provide one of the products specified.
2. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

B. Products and/or manufacturers other than those specified are subject to the Architect's approval prior to bidding.

### 2.2 MASONRY UNITS, GENERAL

A. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to exceed tolerances and to contain chips, cracks, or other defects exceeding limits stated in the standard. Do not use units where such defects, including dimensions that vary from specified dimensions by more than stated tolerances, will be exposed in the completed Work or will impair the quality of completed masonry.

### 2.3 CONCRETE MASONRY UNITS (CMUs)

A. Shapes: Provide shapes indicated and as follows:

1. Provide special shapes for lintels, corners, jambs, sashes, movement joints, headers, bonding, and other special conditions.
2. Provide square-edged units for outside corners at exterior and/or at decorative masonry unless otherwise indicated.

3. Provide square edge units for outside corners at interior locations.

B. Integral Water Repellent: Provide units made with integral water repellent for exposed units.

1. Integral Water Repellent: Liquid polymeric, integral water-repellent admixture that does not reduce flexural bond strength. Units made with integral water repellent, when tested as a wall assembly made with mortar containing integral water-repellent manufacturer's mortar additive according to ASTM E 514, with test period extended to 24 hours, show no visible water or leaks on the back of test specimen.

a. Products:

1) Addiment Incorporated; Block Plus W-10.
2) Grace Construction Products, a unit of W. R. Grace & Co. - Conn.; Dry-Block.
3) Master Builders, Inc.; Rheopel.

C. Concrete Masonry Units: ASTM C 90 load bearing units.

1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of 1900 psi.
2. Weight Classification: Medium weight.
3. Size (Width): Manufactured to dimensions 3/8 inch less than nominal 8 inch wide by 4 inch high and 8 inch high dimensions.
4. Pattern and Texture: Standard smooth face.
5. Colors: Standard grey, for use at non-exposed and painted locations.
6. Available Products:

a. Basalite Concrete Products, Meridian, Idaho.
b. Buehner Block Company, Inc., Salt Lake City, Utah.

7. Maximum Moisture Content: 30 percent as tested prior to delivery to project site.

D. Decorative Concrete Masonry Units: ASTM C 90, load bearing units and non-load bearing units.

1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of 1900 psi.
2. Weight Classification: Medium weight.
3. Size: Manufactured to dimensions 3/8 inch less than nominal 8” x 8” x 16” load bearing units.
4. Pattern and Texture: To match the existing Owner supplied units:

a. Integrally colored smooth face and split-face pattern for use at exterior, exposed locations.
b. All exterior units to be installed in a running bond.

5. Colors: Decorative CMU colors shall be as follows.

a. Units exposed to the exterior shall match the Owner’s existing masonry colors.

6. Available Products:

    a. Basalite Concrete Products, Meridian, Idaho
    b. Buehner Block Company, Inc., Salt Lake City, Utah.

7. Maximum Moisture Content: 30 percent as tested prior to delivery to project site.

## 2.4 MASONRY LINTELS

A. General: Provide masonry lintels complying with requirements below.

B. Masonry Lintels: Built-in-place masonry lintels made from lintel and bond beam concrete masonry units with reinforcing bars placed as indicated and filled with coarse grout Temporarily support built-in-place lintels until cured.

## 2.5 MORTAR AND GROUT MATERIALS

A. Portland Cement: ASTM C 150, Type I or II, except Type III may be used for cold-weather construction. Provide natural color or white cement as required to produce mortar color indicated.

B. Hydrated Lime: ASTM C 207, Type S.

C. Mortar Pigments: Natural and synthetic iron oxides and chromium oxides, compounded for use in mortar mixes. Use only pigments with a record of satisfactory performance in masonry mortar.

1. Products:

    a. Bayer Corporation, Industrial Chemicals Div.; Bayferrox Iron Oxide Pigments.
    b. Davis Colors; True Tone Mortar Colors.
    c. Solomon Grind-Chem Services, Inc.; SGS Mortar Colors.

D. Aggregate for Mortar: ASTM C 144, ASTM C270M, or ASTM C1142.

1. For mortar that is exposed to view, use washed aggregate consisting of natural sand or crushed stone.
2. Colored-Mortar Aggregates: Natural sand or crushed stone of color necessary to produce required mortar color.

E. Aggregate for Grout: ASTM C 404 or ASTM C476.

F. Water-Repellent Admixture: Liquid water-repellent mortar admixture intended for use with concrete masonry units, containing integral water repellent by same manufacturer.

1. Available Products:

    a. Addiment Incorporated; Mortar Tite.
    b. Grace Construction Products, a unit of W. R. Grace & Co. - Conn.; Dry-Block Mortar Admixture.

c. Master Builders, Inc.; Color Cure Mortar Admix or Rheomix Rheopel.

G. Water: Potable.

2.6 REINFORCEMENT

A. Uncoated Steel Reinforcing Bars: ASTM A 615/A 615M or ASTM A 996/A 996M, Grade 60 (Grade 420).

1. Use ASTM A 706, Grade 60, weldable reinforcing bars where indicated or required.

2.7 MISCELLANEOUS ANCHORS AND TIES

A. Unit Type Inserts in Concrete: Cast-iron or malleable-iron wedge-type inserts.

B. Anchor Bolts: Headed or L-shaped steel bolts complying with ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); with ASTM A 563 (ASTM A 563M) hex nuts and, where indicated, flat washers; hot-dip galvanized to comply with ASTM A 153/A 153M, Class C; of dimensions indicated.

C. Postinstalled Anchors: Provide chemical or torque-controlled expansion anchors, with capability to sustain, without failure, a load equal to six times the load imposed when installed in solid or grouted unit masonry and equal to four times the load imposed when installed in concrete, as determined by testing per ASTM E 488 conducted by a qualified independent testing agency.

1. Corrosion Protection: Carbon-steel components zinc plated to comply with ASTM B 633, Class Fe/Zn 5 (5 microns) for Class SC 1 service condition (mild).

2.8 MISCELLANEOUS MASONRY ACCESSORIES

A. Compressible Filler: Premolded filler strips complying with ASTM D 1056, Grade 2A1; compressible up to 35 percent; of width and thickness indicated; formulated from neoprene, urethane, or PVC.

B. Preformed Control-Joint Gaskets: Made from styrene-butadiene-rubber compound, complying with ASTM D 2000, Designation M2AA-805 or PVC, complying with ASTM D 2287, Type PVC-65406 and designed to fit standard sash block and to maintain lateral stability in masonry wall; size and configuration as indicated.

C. Reinforcing Bar Positioners: Wire units designed to fit into mortar bed joints spanning masonry unit cells with loops for holding reinforcing bars in center of cells. Units are formed from 0.142-inch (3.6-mm) steel wire, hot-dip galvanized after fabrication. Provide units with either two loops or four loops as needed for number of bars indicated.

1. Products:

a. Dayton Superior Corporation, Dur-O-Wal Division; D/A 810, D/A 812 or D/A 817.

b. Heckmann Building Products Inc.; No. 376 Rebar Positioner.
c. Hohmann & Barnard, Inc.; #RB or #RB-Twin Rebar Positioner.
d. Wire-Bond; O-Ring or Double O-Ring Rebar Positioner.

## 2.9 MASONRY-CELL FILL INSULATION

A. Foamed-In-Place Insulation: Two component thermal insulation produced by combining a plastic resin and catalyst foaming agent complying with ASTM C 177.

1. Manufacturers: Subject to compliance with requirements, provide product by the following:

a. Tailored Chemical Products; Core-Fill 500.
b. Or approved equal.

B. Install insulation into masonry unit cells after walls are completed and grout has been poured and cured a minimum of twenty-eight (28) days.

## 2.10 MASONRY CLEANERS

A. Proprietary Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging masonry surfaces. Use product expressly approved for intended use by cleaner manufacturer and manufacturer of masonry units being cleaned.

1. Manufacturers:

a. Diedrich Technologies, Inc.
b. EaCo Chem, Inc.
c. ProSoCo, Inc.

## 2.11 MORTAR AND GROUT MIXES

A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures, unless otherwise indicated.

1. Do not use calcium chloride in mortar or grout.
2. Limit cementitious materials in mortar to portland cement and lime.

B. Preblended, Dry Mortar Mix: Furnish dry mortar ingredients in form of a preblended mix. Measure quantities by weight to ensure accurate proportions, and thoroughly blend ingredients before delivering to Project site.

C. Mortar for Unit Masonry: Comply with ASTM C 270. Provide the following types of mortar for applications stated unless another type is indicated or needed to provide required compressive strength of masonry.

1. For reinforced masonry, use Type S.

2. Minimum mortar compressive strength shall be 2,000 lbs. / sq. m. at 28 days.

D. Pigmented Mortar: At all integrally colored unit masonry, use colored cement product or select and proportion pigments with other ingredients to produce color required. Do not add pigments to colored cement products.

1. Pigments shall not exceed 10 percent of portland cement by weight.
2. Mix to match samples approved by Architect.
3. Mortar color shall match adjacent unit masonry color. One color is required.

E. Grout for Unit Masonry: Comply with ASTM C 476.

1. Use coarse grout proportioned per International Building Code and referenced ASTM standard.
2. Provide grout with a slump of 8 to 11 inches (200 to 280 mm) as measured according to ASTM C 143/C 143M.
3. Minimum grout compressive strength shall be 2,000 lbs. / sq. m. at 28 days.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

A. Examine conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.

1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of work.
2. Verify that foundations are within tolerances specified.
3. Verify that reinforcing dowels are properly placed.

B. Before installation, examine rough-in and built-in construction for piping systems to verify actual locations of piping connections.

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

### 3.2 INSTALLATION, GENERAL

A. Thickness: Build single-wythe walls to actual widths of masonry units, using units of widths indicated.

B. Build chases and recesses to accommodate items specified in this and other Sections.

C. Leave openings for equipment to be installed before completing masonry. After installing equipment, complete masonry to match the construction immediately adjacent to opening.

D. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.

E. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures.

1. Mix units from several pallets or cubes as they are placed.

F. Comply with construction tolerances in ACI 530.1/ASCE 6/TMS 602 and with the following:

1. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than 1/8 inch in 10 feet (3 mm in 3 m), 1/4 inch in 20 feet (6 mm in 6 m), or 1/2 inch (12 mm) maximum.
2. For vertical alignment of exposed head joints, do not vary from plumb by more than 1/4 inch in 10 feet (6 mm in 3 m), or 1/2 inch (12 mm) maximum.
3. For conspicuous horizontal lines, such as lintels, sills, parapets, and reveals, do not vary from level by more than 1/8 inch in 10 feet (3 mm in 3 m), 1/4 inch in 20 feet (6 mm in 6 m), or 1/2 inch (12 mm) maximum.
4. For exposed bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch (3 mm), with a maximum thickness limited to 1/2 inch (12 mm). Do not vary from bed-joint thickness of adjacent courses by more than 1/8 inch (3 mm).
5. For exposed head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch (3 mm). Do not vary from adjacent bed-joint and head-joint thicknesses by more than 1/8 inch (3 mm).
6. For faces of adjacent exposed masonry units, do not vary from flush alignment by more than 1/16 inch (1.5 mm) except due to warpage of masonry units within tolerances specified for warpage of units.
7. For exposed bed joints and head joints of stacked bond, do not vary from a straight line by more than 1/16 inch (1.5 mm) from one masonry unit to the next.

## 3.3 LAYING MASONRY WALLS

A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.

B. Bond Pattern for Exposed Masonry: Lay exposed masonry in bond patterns indicated on Drawings; do not use units with less than nominal 4-inch (100-mm) horizontal face dimensions at corners or jambs.

C. Lay concealed masonry with all units in a wythe in running bond or bonded by lapping not less than 4-inches (100-mm). Bond and interlock each course of each wythe at corners. Do not use units with less than nominal 4-inch (100-mm) horizontal face dimensions at corners or jambs.

D. Stopping and Resuming Work: Stop work by racking back units in each course from those in course below; do not tooth. When resuming work, clean masonry surfaces that are to receive mortar, remove loose masonry units and mortar, and wet brick if required before laying fresh masonry.

E. Built-in Work: As construction progresses, build in items specified in this and other Sections. Fill in solidly with masonry around built-in items.

F. Fill space between steel frames and masonry solidly with mortar, unless otherwise indicated.

G. Where built-in items are to be embedded in cores of hollow masonry units, place a layer of metal lath, wire mesh, or plastic mesh in the joint below and rod mortar or grout into core.

H. Fill cores in hollow concrete masonry units with grout 24 inches (600 mm) under bearing plates, beams, lintels, posts, and similar items, unless otherwise indicated.

I. Conduit shall not be permitted in reinforced CMU cores, bond beams, or lintels except as approved by Architect for specific locations.

## 3.4 MORTAR BEDDING AND JOINTING

A. Lay hollow concrete masonry units as follows:

1. With face shells fully bedded in mortar and with head joints of depth equal to bed joints.
2. With webs fully bedded in mortar in all courses of piers, columns, and pilasters.
3. With webs fully bedded in mortar in grouted masonry, including starting course on footings.
4. With entire units, including areas under cells, fully bedded in mortar at starting course on footings where cells are not grouted.

B. Lay solid masonry units with completely filled bed and head joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not deeply furrow bed joints or slush head joints.

C. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness, unless otherwise indicated.

## 3.5 MASONRY-CELL INSULATION

A. Install foam insulation into cavities to fill void spaces. Maintain inspection ports to show presence of insulation at extremities of each pour area. Close the ports after filling has been confirmed.

## 3.6 CONTROL AND EXPANSION JOINTS

A. General: Install control and expansion joint materials in unit masonry as masonry progresses. Do not allow materials to span control and expansion joints without provision to allow for in-plane wall or partition movement.

B. Form control joints in concrete masonry as follows:

1. Install preformed control-joint gaskets designed to fit standard sash block.

## 3.7 LINTELS

A. Provide masonry lintels where shown and where openings of more than 16 inches for block-size units are shown without structural steel or other supporting lintels.

B. Provide minimum bearing of 8 inches (200 mm) at each jamb, unless otherwise indicated.

## 3.8 REINFORCED UNIT MASONRY INSTALLATION

A. Temporary Formwork and Shores: Construct formwork and shores as needed to support reinforced masonry elements during construction.

1. Construct formwork to provide shape, line, and dimensions of completed masonry as indicated. Make forms sufficiently tight to prevent leakage of mortar and grout. Brace, tie, and support forms to maintain position and shape during construction and curing of reinforced masonry.
2. Do not remove forms and shores until reinforced masonry members have hardened sufficiently to carry their own weight and other temporary loads that may be placed on them during construction.

## 3.9 PLACING REINFORCEMENT

A. General: Clean reinforcement of loose rust, mill scale, earth, ice or other materials which will reduce bond to mortar or grout. Do not use reinforcement bars with kinks or bends not shown on drawings or final shop drawings, or bars with reduced cross-section due to excessive rusting or other causes.

B. Position reinforcement accurately at the spacing indicated. Support and secure vertical bars against displacement. Horizontal reinforcement may be placed as the masonry work progresses. Where vertical bars are shown in close proximity, provide a clear distance between bars of not less than the nominal bar diameter or 1" (whichever is greater.)

C. For columns, piers and pilasters, provide a clear distance between vertical bars as indicated, but not less than 1 1/2 times the nominal bar diameter or 1 1/2", whichever is greater. Provide lateral ties as indicated.

D. Provide lapped splices, unless otherwise indicated. In splicing vertical bars or attaching to dowels, lap ends, place in contact and wire tie. Offset splices in bond beams with multiple bars.

1. Provide not less than minimum lap indicated, or if not indicated, 40 bar diameters.

E. Place vertical reinforcement prior to laying of masonry units. Extend above elevation of maximum pour height as required for splicing. Support in position at top and bottom and at vertical intervals not exceeding 4 ft. Wire tie all vertical reinforcement splices and all vertical/horizontal reinforcement intersections.

1. As an alternative to placing and tying of vertical reinforcement prior to laying of masonry units, wire positioning devices may be placed in masonry cores during laying of masonry units and sections of reinforcing bars may be placed prior to grouting of cores and centered by hand during grouting.

F. Place horizontal beam reinforcement as the masonry units are laid. Wire tie all horizontal reinforcement splices.

G. Do not allow conduit, piping, switch or outlet boxes, etc. in reinforced grouted cores, bond beams, or lintels unless approved by Architect for specific locations.

H. Conform to all requirements of Chapter 21, International Building Code, 2012 Edition.

3.10 GROUTING

A. Grouting Technique: Use low-lift-grouting techniques subject to requirements which follow:

B. Provide minimum clear dimension of 2" and clear area of 8 sq. in. in vertical cores to be grouted.

C. Place vertical reinforcement prior to laying of masonry units. Extend above elevation of maximum pour height as required for splicing. Support in position at vertical intervals not exceeding 4 ft.

D. Lay masonry units to maximum pour height. Do not exceed 5' height, or if bond beam occurs below 5' height, stop pour at 1/2" below top of masonry at bond beam.

E. Pour grout using chute or container with spout. Rod or vibrate grout during placing. Place grout continuously; do not interrupt pouring of grout for more than one hour. Terminate grout pours 1 1/2" below top course of pour, except at tops of walls. Where bond beams occur, stop grout pour 1/2" below top of masonry, except at tops of walls.

F. Bond Beams: Place horizontal beam reinforcement in bond beams; lap at corners and intersections as shown. Place grout in bond beam course before installing masonry above bond beam.

G. Place horizontal beam reinforcement as the masonry units are laid.

H. Embed lateral tie reinforcement in mortar joints where indicated. Place as masonry units are laid, at spacing shown.

I. Preparation of Grout Spaces: Prior to grouting, inspect and clean grout spaces. Remove dust, dirt, mortar droppings, loose pieces of masonry and other foreign materials from grout spaces. Clean reinforcement and adjust to proper position. Clean top surface of structural members supporting masonry to ensure bond. After final cleaning and inspection, cleanout holes and brace closures to resist grout pressures.

J. Do not place grout until entire height of masonry to be grouted has attained sufficient strength to resist displacement of masonry units and breaking of mortar bond. Install shores and bracing, if required, before starting grouting operations.

K. Limit grout pours to sections which can be completed in one working day with not more than one-hour interruption of pouring operation. Place grout in lifts which do not exceed 5'. Rod or vibrate each grout lift during pouring operation.

L. Place grout in lintels or beams over openings in one continuous pour.

M. Grout all cells below floor level solid. Grout walls solid at locations indicated on Drawings.

N. Conform to all requirements of International Building Code, 2012 Edition.

## 3.11 FIELD QUALITY CONTROL

A. Inspectors: Owner will engage qualified independent inspectors to perform inspections and prepare reports. Allow inspectors access to scaffolding and work areas, as needed to perform inspections.

1. Place grout only after inspectors have verified compliance of grout spaces and grades, sizes, and locations of reinforcement.

B. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to perform field tests and inspections indicated below and prepare test reports:

1. Payment for these services will be made by Owner.
2. Retesting of materials failing to comply with specified requirements shall be done at Contractor's expense.

C. Concrete Masonry Unit Test: For each type of unit provided, per ASTM C 140.

D. Mortar Test (Property Specification): For each mix provided, per ASTM C 780. Test mortar for mortar air content and compressive strength.

E. Grout Test (Compressive Strength): For each mix provided, per ASTM C 1019.

F. Prism Test: For each type of construction provided, per ASTM C 1314 at 7 days and at 28 days.

1. Prepare one set of prisms for testing at 7 days and one set for testing at 28 days for each type/color/texture of masonry.

G. Evaluation of Quality Control Tests: Masonry will be considered satisfactory if results from construction quality control tests comply with minimum requirements indicated.

H. Special Inspections required by the International Building Code will be performed by an inspection agency engaged by the Owner and paid directly by the Owner. The Contractor shall fully and completely cooperate with the inspection agency to allow such special inspections to be properly done. See Structural Notes on Drawings.

I. Moisture Content Test: For masonry units prior to delivery to the site.

## 3.12 REPAIRING, POINTING, AND CLEANING

A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.

B. Pointing: During the tooling of joints, enlarge voids and holes, except weep holes, and completely fill with mortar. Point up joints, including corners, openings, and adjacent

construction, to provide a neat, uniform appearance. Prepare joints for sealant application, where indicated.

C. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.

D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:

1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
2. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of masonry.
3. Protect adjacent surfaces from contact with cleaner by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape.
4. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing surfaces thoroughly with clear water.
5. Clean masonry with a proprietary acidic cleaner recommended and/or approved by CMU manufacturer and applied according to product manufacturer's written instructions.
6. Clean concrete masonry by cleaning method indicated in National Concrete Masonry Association (NCMA) TEK 8-2A applicable to type of stain on exposed surfaces.

3.13 MASONRY WASTE DISPOSAL

A. Salvageable Materials: Unless otherwise indicated, excess masonry materials are Contractor's property. At completion of unit masonry work, remove from Project site.

B. Masonry Waste: Remove masonry waste and legally dispose of off Owner's property.

END OF SECTION 042000

SECTION 061000 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Dimensional lumber.
2. Wood blocking, backing, plates, and nailers.
3. Preservative treated lumber.
4. Fasteners and hangers.

1.3 DEFINITIONS

A. Dimension Lumber: Lumber of 2 inches nominal (38 mm actual) or greater but less than 5 inches nominal (114 mm actual) in least dimension.

B. Lumber grading agencies, and the abbreviations used to reference them, include the following:

1. WWPA: Western Wood Products Association.

1.4 SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.

1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
2. Product information and structural property data for engineered wood products and structural data and shop drawings for engineered joists (roof trusses) prepared, stamped, and signed by licensed Idaho professional engineer.

B. Research/Evaluation Reports: For the following, showing compliance with building code in effect for Project:

1. Wood-preservative treated wood.

1.5 DELIVERY, STORAGE, AND HANDLING

A. 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 WOOD PRODUCTS, GENERAL

A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.

1. Factory mark each piece of lumber 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 lumber.
3. Provide dressed lumber, S4S, unless otherwise indicated.

2.2 WOOD-PRESERVATIVE-TREATED LUMBER

A. Preservative Treatment by Pressure Process: American Wood Preservers' Association (AWPA) AWPA C2.

1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.

B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or does not comply with requirements for untreated material.

C. Mark lumber with treatment quality mark of an inspection agency approved by the American Lumber Standards Committee (ALSC) Board of Review.

D. Application: Treat items indicated on Drawings as "WPT."

2.3 PRESERVATIVE WOOD TREATMENT BY PRESSURE PROCESS

A. General: Where lumber is indicated as preservative-treated wood or is specified herein to be treated, comply with applicable requirements of AWPA Standards C2 (Lumber). Mark each treated item with the AWPB or SPIB Quality Mark Requirements.

B. Pressure-treat above-ground items with water-borne preservatives to a minimum retention of 0.25 pcf. For interior uses, after treatment, kiln-dry lumber to a maximum moisture content of 19 percent. Treat indicated items.

1. All wood members in direct contact with concrete or masonry shall be pressure treated as specified herein.

2.4 DIMENSION LUMBER

A. For light framing (non structural, 2” to 4” thick, 2 to 8” wide) including non-load bearing studs, blocking, curbs, etc.

1. No. 2 and better

a. Douglas Fir and Douglas Fir-Larch graded under WWPA or WCLIB rules.

B. For structural light framing and structural framing (2” to 4” thick, 2” and wider) including joists, load bearing studs, plates, ledgers, lintels, beams, etc.

1. No. 2 and better

a. Douglas Fir and Douglas Fir-Larch graded under WWPA or WCLIB rules.

C. Moisture content following kiln drying shall not exceed 19 percent.

2.5 MISCELLANEOUS LUMBER

A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:

1. Blocking.
2. Backing.
3. Nailers.

B. For items of dimension lumber size, provide No. 2 grade or better lumber with 19 percent maximum moisture content and the following species:

1. Douglas Fir or Douglas Fir-Larch; WWPA.

C. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.

2.6 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.

1. Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

B. Nails, Brads, and Staples: ASTM F 1667.

C. Power-Driven Fasteners: NES NER-272.

D. Wood Screws: The American Society of Mechanical Engineers International (ASME) ASME B18.6.1.

E. Lag Bolts: ASME B18.2.1 (ASME B18.2.3.8M).

F. Bolts: Steel bolts complying with ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); with ASTM A 563 (ASTM A 563M) hex nuts and, where indicated, flat washers.

G. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.

1. Material: Carbon-steel components, zinc plated to comply with ASTM B 633, Class Fe/Zn 5.
2. Material: Stainless steel with bolts and nuts complying with ASTM F 593 and ASTM F 594, Alloy Group 1 or 2 (ASTM F 738M and ASTM F 836M, Grade A1 or A4).

H. Fastening Requirements: Fastener types, sizes, and spacings shall be as specified on Drawings and per requirements of the 2015 International Building Code.

## 2.7 METAL FRAMING ANCHORS

A. Basis-of-Design Products: Subject to compliance with requirements, provide metal framing anchor and hanger products indicated on Drawings by the following:

1. Simpson Strong-Tie Co., Inc.

Equivalent products to those specified require architect / engineer review and approval prior to Bid.

B. Allowable Design Loads: Provide products with allowable design loads, as published by manufacturer, that meet or exceed those of basis-of-design products. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.

C. Galvanized Steel Sheet: Hot-dip, zinc-coated steel sheet complying with ASTM A 653/A 653M, G60 (Z180) coating designation.

## 2.10 MISCELLANEOUS MATERIALS

A. Sill Sealer Gaskets: Glass fiber resilient insulation fabricated in strip form for use as a sill sealer;1 inch nominal thickness compressible to 1/32 inch; selected from manufacturer’s standard widths to suit width of sill members indicated; in rolls of 50 feet or 100 feet in length. (For use at all exterior wall sill plates).

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate blocking, backing, plates, nailers and similar supports to comply with requirements for attaching other construction.

B. Metal Framing Anchors: Install metal framing to comply with manufacturer's written instructions.

C. Provide blocking, backing, plates, and nailers as indicated and as required to support facing materials, fixtures, specialty items, trim, and other items as indicated.

D. Sort and select lumber so that natural characteristics will not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.

E. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.

1. Use copper naphthenate.

F. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated on Drawings and as required by the 2015 edition of the IBC.

3.2 WOOD GROUNDS, NAILERS, BLOCKING, AND SLEEPERS

A. Install wood grounds, nailers, blocking, and sleepers where shown and where required for screeding or attachment of other work. Form to shapes as shown and cut as required for true line and level of work to be attached. Coordinate location with other work involved.

B. Attach to substrates as required to support applied loading. Countersink bolts and nuts flush with surfaces, where indicated. Provide washers at all nuts.

C. Preservative treated sill plates shall be free of wanes exceeding ½ inch measured perpendicular to length of plate. Install over sill sealer gasket at all building perimeter walls.

3.3. WOOD FURRING

A. Install plumb and level with closure strips at edges and openings. Shim with wood as required for tolerance of finished work.

1. Firestop furred spaces on walls at each floor level and at ceiling line with wood blocking or noncombustible materials, accurately fitted to close furred spaces.

3.4. WOOD FRAMING, GENERAL

A. Framing Standard: Comply with N.F.P.A. "Manual for Wood Frame Construction," and with all applicable provisions of the International Building Code, 2015 Edition, Chapter 23.

B. Install framing members of size and spacing indicated.

C. Anchor and nail as shown, and to comply with the most restrictive provisions of the following:

1. National Evaluation Report No. NER-272 for pneumatic or mechanical driven staples, P-Nails, and allied fasteners.
2. Table 2304.9.1 of the International Building Code, 2015 Edition.
3. Published requirements of manufacturers of engineered framing members, proprietary sheathing products, and metal framing anchors.

D. Framing with Engineered Wood Products: Install engineered joist products in compliance with manufacturer's instuctions.

E. Do not splice structural members between supports.

F. Firestop concealed spaces of wood framed walls and partitions at spacing not to exceed 8'-0" o.c. vertically. Where firestops are not automatically provided by the framing system used, use closely fitted wood blocks of nominal 2-inch-thick lumber of the same width as framing members.

3.5. STUD FRAMING

A. General: Arrange studs so that wide face of stud is perpendicular to direction of wall or partition and narrow face is parallel. Install single bottom plate and double top plates using 2-inch-thick members whose widths equal that of studs. Set exterior wall sill plates on sill sealer gasket. Nail or anchor plates to supporting construction.

B. Construct corners and intersections with not less than 3 studs. Install miscellaneous blocking and framing as shown and as required for support of facing materials, fixtures, specialty items, and trim.

1. Install continuous horizontal blocking row at each 8 foot level in partitions over 8 feet high using nominal 2-inch thick members of same width as wall or partitions.

C. Frame openings with multiple studs and headers per notes and details on Drawings. Install nailed header members of thickness equal to width of studs, provide furring, or provide full width horizontal member on top and bottom of narrower header member. Set headers on edge and support on jamb studs.

1. For nonbearing partitions, install double-jamb studs and headers per Drawings, but not less than 3 ½ inches deep for openings 4 feet and less in width, and not less than 5 ½ inches deep for wider openings.
2. For load-bearing partitions, install per notes and requirements on Drawings but not less than double-jamb studs for openings 4 feet and less in width, and triple-jamb studs for wider openings. Install headers of type and depth shown or noted on Drawings.

END OF SECTION 061000

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SECTION 061600 - SHEATHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Wall sheathing.
2. Roof sheathing.
3. Miscellaneous sheathing.
4. Fasteners.

1.3 SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product. Indicate component materials, dimensions, and specified criteria.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Stack plywood and other panels flat with spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 WOOD PANEL PRODUCTS, GENERAL

A. Plywood: DOC PS 1.

B. Oriented Strand Board: DOC PS 2.

C. Thickness: As needed to comply with requirements specified, but not less than thickness indicated.

D. Factory mark panels to indicate compliance with applicable standard.

2.2 WALL SHEATHING

A. Oriented-Strand-Board or Plywood Wall Sheathing: Exposure 1, APA Rated ½" nominal thickness.

1. Span Rating: Not less than 24/16.
2. Actual Thickness: Not less than 15/32".
3. Edge Condition: Square.

2.3 ROOF SHEATHING

A. Oriented-Strand-Board or Plywood Roof Sheathing: Exposure 1, APA Rated 1/2" nominal thickness.

1. Span Rating: Not less than 40/20.
2. Actual Thickness: Not less than 15/32".
3. Edge Condition: Square.

2.4 MISCELLANEOUS SHEATHING

A. Oriented – Strand Board, Exposure 1, at concealed locations or plywood, DOC PS 1, Exposure 1 C-D plugged, fire retardant treated where indicated, at exposed to view locations.

2.5 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.

1. For roof and wall sheathing, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M or of Type 304 stainless steel.

B. Nails, Brads, and Staples: ASTM F 1667.

C. Power-Driven Fasteners: NES NER-272.

D. Wood Screws: ASME B18.6.1.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Do not use materials with defects that impair quality of sheathing or pieces that are too small to use with minimum number of joints or optimum joint arrangement.

B. Cut panels at penetrations, edges, and other obstructions of work; fit tightly against abutting construction, unless otherwise indicated.

C. Securely attach to substrate by fastening as indicated on Drawings and complying with the following:

1. NES NER-272 for power-driven fasteners.
2. Table 2304.9.1, "Fastening Schedule," 2015 "International Building Code."

D. Use common wire nails, unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections. Install fasteners without splitting wood.

E. Coordinate wall and roof sheathing installation with flashing and joint-sealant installation so these materials are installed in sequence and manner that prevent exterior moisture from passing through completed assembly.

F. Do not bridge building expansion joints; cut and space edges of panels to match spacing of structural support elements.

G. Coordinate sheathing installation with installation of materials installed over sheathing so sheathing is not exposed to precipitation or left exposed at end of the workday when rain is forecast.

## 3.2 WOOD STRUCTURAL PANEL INSTALLATION

A. General: Comply with applicable recommendations in APA Form No. E30S, "Engineered Wood Construction Guide," for types of structural-use panels and applications indicated.

B. Fastening Methods: Fasten panels as indicated below:

1. Roof Sheathing:

   a. Nail to wood trusses, engineered joists, and related roof framing.
   b. Space panels 1/8 inch (3 mm) apart at edges and ends.
   c. Refer to the notes on the Drawings for fastener type, size, and spacing.
   d. Install roof sheathing with ply clips.

2. Wall Sheathing

   a. Nail to wood studs, plates, blocking and related wall framing.
   b. Refer to notes on the Drawings for standard fastener type, size, and spacing.
   c. Refer to Shear Wall Schedule on Drawings for shear wall fasteners and spacings.

END OF SECTION 061600

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SECTION 061753 - SHOP-FABRICATED WOOD TRUSSES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Wood roof trusses, gable design.
2. Wood truss bracing and blocking.
3. Wood truss accessories.

B. Related Sections include the following:

1. Division 06 Section "Sheathing" for roof sheathing.

1.3 DEFINITIONS

A. Metal-Plate-Connected Wood Trusses: Planar structural units consisting of metal-plate-connected members fabricated from dimension lumber and cut and assembled before delivery to Project site.

B. TPI: Truss Plate Institute, Inc.

C. 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. SPIB: The Southern Pine Inspection Bureau.
4. WCLIB: West Coast Lumber Inspection Bureau.
5. WWPA: Western Wood Products Association.

1.4 PERFORMANCE REQUIREMENTS

A. Structural Performance: Provide metal-plate-connected wood trusses capable of withstanding design loads within limits and under conditions indicated. Comply with requirements in TPI 1 unless more stringent requirements are specified below.

1. Design Loads: See Structural Notes on Drawings.

## 1.5 SUBMITTALS

A. Shop Drawings: Prepared by or under the supervision of a qualified professional engineer. Show fabrication and installation details for trusses. Shop drawings shall be stamped and signed by an Idaho licensed engineer responsible for their preparation.

1. Show location, pitch, span, camber, configuration, and spacing for each type of truss required.
2. Indicate sizes, stress grades, and species of lumber.
3. Indicate locations of permanent bracing required to prevent buckling of individual truss members due to design loads and show point loads associated with roof top equipment.
4. Indicate type, size, material, finish, design values, orientation, and location of metal connector plates.
5. Show splice details and bearing details.
6. For installed products indicated to comply with design loads, include structural analysis data signed and sealed by Idaho licensed professional engineer responsible for their preparation.

B. Product Certificates: For metal-plate-connected wood trusses, signed by officer of truss fabricating firm.

C. Qualification Data: For metal-plate manufacturer, professional engineer fabricator and Installer.

D. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the ALSC Board of Review.

E. Research/Evaluation Reports: For the following, showing compliance with building code in effect for Project:

1. Wood-preservative-treated lumber.
2. Fire-retardant-treated wood.
3. Metal-plate connectors.
4. Metal truss accessories.

## 1.6 QUALITY ASSURANCE

A. Metal Connector-Plate Manufacturer Qualifications: A manufacturer that is a member of TPI and that complies with quality-control procedures in TPI 1 for manufacture of connector plates.

1. Manufacturer's responsibilities include providing professional engineering services needed to assume engineering responsibility.
2. Engineering Responsibility: Preparation of Shop Drawings and comprehensive engineering analysis by a qualified professional engineer.

B. Fabricator Qualifications: Shop that participates in a recognized quality-assurance program that complies with quality-control procedures in TPI 1 and that involves third-party inspection by an independent testing and inspecting agency acceptable to Architect and authorities having jurisdiction.

C. Source Limitations for Connector Plates: Obtain metal connector plates from a single manufacturer. Connector plates shall be ICE-ES approved.

D. Comply with applicable requirements and recommendations of the following publications:

1. TPI 1, "National Design Standard for Metal Plate Connected Wood Truss Construction."
2. TPI DSB, "Recommended Design Specification for Temporary Bracing of Metal Plate Connected Wood Trusses."
3. TPI HIB, "Commentary and Recommendations for Handling, Installing & Bracing Metal Plate Connected Wood Trusses."

E. Wood Structural Design Standard: Comply with applicable requirements in AF&PA's "National Design Specifications for Wood Construction" and its "Supplement."

## 1.7 DELIVERY, STORAGE, AND HANDLING

A. Handle and store trusses to comply with recommendations of TPI HIB, "Commentary and Recommendations for Handling, Installing & Bracing Metal Plate Connected Wood Trusses."

1. Store trusses flat, off of ground, and adequately supported to prevent lateral bending.
2. Protect trusses from weather by covering with waterproof sheeting, securely anchored.
3. Provide for air circulation around stacks and under coverings.

B. Inspect trusses showing discoloration, corrosion, or other evidence of deterioration. Discard and replace trusses that are damaged or defective.

## 1.8 COORDINATION

A. Time delivery and erection of trusses to avoid extended on-site storage and to avoid delaying progress of other trades whose work must follow erection of trusses.

# PART 2 - PRODUCTS

## 2.1 DIMENSION LUMBER

A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.

1. Factory mark each piece of lumber with grade stamp of grading agency.
2. For exposed lumber indicated to receive a stained or natural finish, omit grade stamp and provide certificates of grade compliance issued by grading agency.
3. Provide dressed lumber, S4S.
4. Provide dry lumber with 19 percent maximum moisture content at time of dressing.

B. Grade and Species: For truss chord and web members, provide dimension lumber of any species, graded visually or mechanically, and capable of supporting required loads without exceeding allowable design values according to AF&PA's "National Design Specifications for Wood Construction" and its "Supplement."

C. Grade and Species: Provide visually graded dimension lumber for truss chord and web members, of not less than the following grade and any of the following species:

1. Grade for Chord Members: Select Structural No. 1 or No. 2.
2. Grade for Web Members: No. 2, No. 3, or same grade as indicated for chord members.
3. Species: Douglas fir-larch; WCLIB or WWPA.

D. Grade and Species: Provide dimension lumber of any species for truss chord and web members, graded as follows and of the following minimum design values for size of member required according to AF&PA's "National Design Specifications for Wood Construction" and its "Supplement":

1. Grading Method: Visual or mechanical.
2. Design Values: As indicated on Drawings.

E. Minimum Chord Size For Roof Trusses: 2 by 6 inches nominal for both top and bottom chords at trusses with clear bottom chord span exceeding 40’-0”, where top chord eave extensions exceed 2 feet, and elsewhere as required structurally.

F. Permanent Bracing: Provide wood bracing that complies with requirements for miscellaneous lumber in Division 06 Section Rough Carpentry. Miscellaneous Rough Carpentry.

## 2.2 METAL CONNECTOR PLATES

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Alpine Engineered Products, Inc.
2. Cherokee Metal Products, Inc.; Masengill Machinery Company.
3. CompuTrus, Inc.
4. Eagle Metal Products.
5. Jager Building Systems, Inc.
6. MiTek Industries, Inc.; a subsidiary of Berkshire Hathaway Inc.
7. Robbins Engineering, Inc.
8. TEE-LOK Corporation; a subsidiary of Berkshire Hathaway Inc.
9. Truswal Systems Corporation.

C. General: Fabricate connector plates to comply with TPI 1.

D. Hot-Dip Galvanized Steel Sheet: ASTM A 653/A 653M; Structural Steel (SS), high-strength low-alloy steel Type A (HSLAS Type A), or high-strength low-alloy steel Type B (HSLAS Type B); G60 (Z180) coating designation; and not less than 0.036 inch (0.9 mm) thick.

1. Use for interior locations where stainless steel is not indicated.

## 2.3 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.

1. Where trusses are exposed to weather, in ground contact, made from pressure-preservative treated wood, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

B. Nails, Brads, and Staples: ASTM F 1667.

C. Power-Driven Fasteners: NES NER-272.

D. Wood Screws: ASME B18.6.1.

E. Lag Bolts: ASME B18.2.1.

F. Bolts: Steel bolts complying with ASTM A 307, Grade A with ASTM A 563 hex nuts and, where indicated, flat washers.

## 2.4 METAL TRUSS ACCESSORIES

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

C. Basis-of-Design Products: Subject to compliance with requirements, provide products indicated on Drawings or equivalent products by one of the following:

1. Cleveland Steel Specialty Co.
2. Harlen Metal Products, Inc.
3. KC Metals Products, Inc.
4. Simpson Strong-Tie Co., Inc.
5. Southeastern Metals Manufacturing Co., Inc.
6. USP Structural Connectors.

Equivalent products to those specified on Drawings require architect / engineer and review approval.

D. Allowable Design Loads: Provide products with allowable design loads, as published by manufacturer, that meet or exceed those indicated of basis-of-design products of products of

manufacturers listed. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.

E. Galvanized Steel Sheet: Hot-dip, zinc-coated steel sheet complying with ASTM A 653/A 653M, G60 (Z180) coating designation.

1. Use for interior locations where stainless steel is not indicated.

F. Stainless-Steel Sheet: ASTM A 666, Type 304, 316.

1. Use for exterior locations and where indicated.

G. Truss Tie-Downs: Bent strap tie for fastening roof trusses to wall studs below, 1-1/2 inches (38 mm) wide by 0.050 inch (1.3 mm) thick, or clips as noted on Drawings. Fasten to side of truss, top plates, and side of stud below.

H. Roof Truss Clips: Angle clips for bracing bottom chord of roof trusses at non-load-bearing walls, 1-1/4 inches (32 mm) wide by 0.050 inch (1.3 mm) thick. Clip is fastened to truss through slotted holes to allow for truss deflection.

I. Roof Truss Hangers: U-shaped hangers, full depth of roof truss, with 1-3/4-inch- (44-mm-) long seat; formed from metal strap 0.062 inch (1.6 mm) thick with tabs bent to extend over and be fastened to supporting member.

J. Roof Truss Bracing/Spacers: U-shaped channels, 1-1/2 inches (38 mm) wide by 1 inch (25 mm) deep by 0.040 inch (1.0 mm) thick, made to fit between 2 adjacent trusses and accurately space them apart, and with tabs having metal teeth for fastening to trusses.

## 2.5 MISCELLANEOUS MATERIALS

A. Galvanizing Repair Paint: SSPC-Paint 20, with dry film containing a minimum of 94 percent zinc dust by weight.

B. Protective Coatings: SSPC-Paint 22, epoxy-polyamide primer or SSPC-Paint 16, coal-tar epoxy-polyamide paint.

## 2.6 FABRICATION

A. Cut truss members to accurate lengths, angles, and sizes to produce close-fitting joints.

B. Fabricate metal connector plates to sizes, configurations, thicknesses, and anchorage details required to withstand design loads for types of joint designs indicated.

C. Assemble truss members in design configuration indicated; use jigs or other means to ensure uniformity and accuracy of assembly with joints closely fitted to comply with tolerances in TPI 1. Position members to produce design camber indicated.

1. Fabricate wood trusses within manufacturing tolerances in TPI 1.

D. Connect truss members by metal connector plates located and securely embedded simultaneously in both sides of wood members by air or hydraulic press.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

A. Install wood trusses only after supporting construction is in place and is braced and secured.

B. If trusses are delivered to Project site in more than one piece, assemble trusses before installing.

C. Hoist trusses in place by lifting equipment suited to sizes and types of trusses required, exercising care not to damage truss members or joints by out-of-plane bending or other causes.

D. Install and brace trusses according to TPI recommendations and as indicated.

E. Install trusses plumb, square, and true to line and securely fasten to supporting construction.

F. Space trusses as indicated; adjust and align trusses in location before permanently fastening.

G. Anchor trusses securely at bearing points; use metal truss tie-downs or floor truss hangers as applicable. Install fasteners through each fastener hole in truss accessories according to manufacturer's fastening schedules and written instructions.

H. Securely connect each truss ply required for forming built-up girder trusses.

1. Anchor trusses to girder trusses as indicated.

I. Install and fasten permanent bracing during truss erection and before construction loads are applied. Anchor ends of permanent bracing where terminating at walls or beams.

1. Install bracing to comply with Division 06 Section Rough Carpentry.
2. Install and fasten strongback bracing vertically against vertical web of parallel-chord trusses where indicated.

J. Install wood trusses within installation tolerances in TPI 1.

K. Do not cut or remove truss members.

L. Replace wood trusses that are damaged or do not meet requirements.

1. Do not alter trusses in field.

### 3.2 REPAIRS AND PROTECTION

A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

B. Protect rough carpentry from weather. If, despite protection, rough carpentry becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

C. Repair damaged galvanized coatings on exposed surfaces with galvanized repair paint according to ASTM A 780 and manufacturer's written instructions.

D. Protective Coating: Clean and prepare exposed surfaces of metal connector plates. Brush apply primer, when part of coating system, and one coat of protective coating.

1. Apply materials to provide minimum dry film thickness recommended by coating system manufacturer.

END OF SECTION 061753

SECTION 064023 – PLASTIC-LAMINATE FACED ARCHITECTURAL CABINETS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Plastic-laminate faced cabinets.
2. Plastic-laminate countertops.

1.3 DEFINITIONS

A. This section includes wood furring, shims, and hanging strips for installing architectural cabinet items unless concealed within other construction (i.e. blocking) before cabinet installation.

1.4 SUBMITTALS

A. Product Data: For panel products, high-pressure decorative laminate, adhesive for bonding plastic laminate, solid-surfacing material, and cabinet hardware and accessories.

B. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.

1. Show fabrication and attachment details in large scale, section views.
2. Show locations and sizes of required furring, blocking, hanging strips etc., including concealed blocking and reinforcement needed but specified in other Sections.
3. Show locations and sizes of cutouts and holes for plumbing fixtures, faucets, and other items installed in architectural woodwork.

C. Samples for Selection:

1. Plastic laminates.
2. PVC edge material.
3. Thermoset decorative panels.

## 1.5 QUALITY ASSURANCE

A. Fabricator Qualifications: Shop that employs skilled workers who custom-fabricate products similar to those required for this Project and whose products have a record of successful in-service performance.

B. Installer Qualifications: Skilled finish carpenters specializing in installation of cabinets and pre-manufactured millwork with minimum three years installation experience.

C. Quality Standard: Unless otherwise indicated, comply with AWI's "Architectural Woodwork Quality Standards" for grades of interior architectural cabinets indicated for construction, finishes, installation, and other requirements.

## 1.6 DELIVERY, STORAGE, AND HANDLING

A. Do not deliver cabinetry until painting and similar operations that could damage cabinets have been completed in installation areas. If cabinetry must be stored in other than installation areas, store only in areas where environmental conditions comply with requirements specified in "Project Conditions" Article.

## 1.7 PROJECT CONDITIONS

A. Environmental Limitations: Do not deliver or install cabinetry until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.

B. Field Measurements: Where cabinetry is indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication, and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1. Locate concealed framing, blocking, and reinforcements that support cabinetry by field measurements before being enclosed, and indicate measurements on Shop Drawings.
2. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating cabinets without field measurements. Provide allowance for trimming at site, and coordinate construction to ensure that actual dimensions correspond to established dimensions.

## 1.8 COORDINATION

A. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to ensure that interior architectural cabinets can be supported and installed as indicated.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Provide materials that comply with requirements of AWI's quality standard for each type of cabinetry component and quality grade specified, unless otherwise indicated.

B. Wood Products: Comply with the following:

1. Hardboard: AHA A135.4.
2. Particleboard: ANSI A208.1, Grade M-2.
3. Softwood Plywood: DOC PS 1**,** Medium Density Overlay.

C. Thermoset Decorative Panels: Particleboard finished with thermally fused, melamine-impregnated decorative paper complying with LMA SAT-1.

1. Provide PVC or polyester edge banding complying with LMA EDG-1 on components with exposed or semiexposed edges.

D. High-Pressure Decorative Laminate: NEMA LD 3, grades as indicated or, if not indicated, as required by woodwork quality standard.

1. Manufacturer: Subject to compliance with requirements, provide high-pressure decorative laminates by one of the following:

a. Formica Corporation.
b. Nevamar Company, LLC; Decorative Products Div.
c. Panolam Industries International Incorporated.
d. Wilsonart International; Div. of Premark International, Inc.

2. Products by other manufacturers are subject to Architect’s approval prior to bidding.

2.2 FIRE-RETARDANT-TREATED MATERIALS

A. General: Where fire-retardant-treated materials are indicated, use materials complying with requirements in this Article that are acceptable to authorities having jurisdiction and with fire-test-response characteristics specified.

1. Do not use treated materials that do not comply with requirements of referenced woodworking standard or that are warped, discolored, or otherwise defective.
2. Use fire-retardant-treatment formulations that do not bleed through or otherwise adversely affect finishes. Do not use colorants to distinguish treated materials from untreated materials.
3. Identify fire-retardant-treated materials with appropriate classification marking of UL, U.S. Testing, Timber Products Inspection, or another testing and inspecting agency acceptable to authorities having jurisdiction.

B. Fire-Retardant-Treated Lumber and Plywood by Pressure Process: Comply with performance requirements of AWPA C20 (lumber) and AWPA C27 (plywood). Use the following treatment type:

1. Exterior Type: Organic-resin-based formulation thermally set in wood by kiln drying.
2. Interior Type A: Low-hygroscopic formulation.
3. Mill lumber after treatment within limits set for wood removal that do not affect listed fire-test-response characteristics, using a woodworking plant certified by testing and inspecting agency.
4. Mill lumber before treatment and implement special procedures during treatment and drying processes that prevent lumber from warping and developing discolorations from drying sticks or other causes, marring, and other defects affecting appearance of treated woodwork.
5. Kiln-dry materials before and after treatment to levels required for untreated materials.

C. Fire-Retardant Particleboard: Panels complying with the following requirements, made from softwood particles and fire-retardant chemicals mixed together at time of panel manufacture to achieve flame-spread index of 25 or less and smoke-developed index of 25 or less per ASTM E 84.

1. For panels 3/4 inch (19 mm) thick and less, comply with ANSI A208.1 for Grade M-2 except for the following minimum properties: modulus of rupture, 1600 psi (11 MPa); modulus of elasticity, 300,000 psi (2070 MPa); internal bond, 80 psi (550 kPa); and screw-holding capacity on face and edge, 250 and 225 lbf (1100 and 1000 N), respectively.
2. For panels 13/16 to 1-1/4 inches (20 to 32 mm) thick, comply with ANSI A208.1 for Grade M-1 except for the following minimum properties: modulus of rupture, 1300 psi (9 MPa); modulus of elasticity, 250,000 psi (1720 MPa); linear expansion, 0.50 percent; and screw-holding capacity on face and edge, 250 and 175 lbf (1100 and 780 N), respectively.
3. Product: Subject to compliance with requirements, provide "Duraflake FR" by Weyerhaeuser or approved equal.

## 2.3 CABINET HARDWARE AND ACCESSORIES

A. General: Provide cabinet hardware and accessory materials associated with architectural cabinets.

B. Frameless Concealed Hinges (European Type): BHMA A156.9, B01602, 170 degrees of opening.

C. Wire Pulls: Back mounted, solid metal 4 inches (100 mm) long, 5/16 inch (8 mm) in diameter.

D. Catches: Magnetic catches, BHMA A156.9, B03141. Magnetic catches are not required with self closing hinges. Interior double door catch, Ives elbow catch IV2 or equivalent.

E. Shelf Rests: BHMA A156.9, B04013; metal (nickel plated), one-pin type with spiked or ribbed anti-slide feature. Hafele 282.24.720 or equivalent.

F. Drawer Slides: BHMA A156.9, B05091.

1. Heavy Duty (Grade 1HD-100 and Grade 1HD-200): Side mounted; full-extension type; zinc-plated steel ball-bearing slides.
2. Box Drawer Slides: Grade 1HD-100; for drawers not more than 6 inches (150 mm) high and 24 inches (600 mm) wide.
3. File Drawer Slides: Grade 1HD-200; for drawers more than 6 inches (150 mm) high or 24 inches (600 mm) wide. Hanging file folder track to be Blum Metafile or equivalent.
4. Pencil Drawer Slides: Grade 1; for drawers not more than 3 inches (75 mm) high and 24 inches (600 mm) wide.

G. Door Locks: BHMA A156.11, E07121. All locks within a given room shall be keyed alike. Locks in different rooms shall be keyed differently.

H. Drawer Locks: BHMA A156.11, E07041. All locks within a given room shall be keyed alike.. Locks in different rooms shall be keyed differently.

I. Grommets for Cable Passage through Countertops: 3-inch (51-mm) OD, black, molded-plastic grommets and matching plastic caps with slot for wire passage.

J. Coat Hooks: Ives 580 A15, satin nickel finish, or equal.

K. Exposed Hardware Finishes: For exposed hardware, provide finish that complies with BHMA A156.18 for BHMA finish number indicated.

1. Satin Chromium Plated Dull: BHMA 626 (US26D).

L. For concealed hardware, provide manufacturer's standard finish that complies with product class requirements in BHMA A156.9.

1. US26D Dull Chrome.

M. Hanger Rod: 1-1/16 inch diameter by length required chrome hanger rod with full flange chrome supports for screw attachment by U.S. Futaba, Inc. or equal.

N. Metal L-Shaped Counter Brackets: Constructed of 1/8” steel, powder coated, with cable tray conduit access. Mockett SWS2, 18” Inter-Arc Work Support www.mockett.com. U.S. Futaba Heavy Duty Workstation Bracket is also approved.

## 2.4 MISCELLANEOUS MATERIALS

A. Furring, Blocking, Shims, and Hanging Strips: Fire-retardant-treated softwood lumber, kiln dried to less than 15 percent moisture content, treated per American Wood Preservers Association (AWPA) AWPA C20.

B. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide nonferrous-metal or hot-dip galvanized anchors and inserts on inside face of exterior walls and elsewhere as required for corrosion resistance. Provide toothed-steel or lead expansion sleeves for drilled-in-place anchors.

C. Adhesives, General: Do not use adhesives that contain urea formaldehyde.

D. VOC Limits for Installation Adhesives and Glues: Use installation adhesives that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):

1. Wood Glues: 30 g/L.
2. Contact Adhesive: 250 g/L.

E. Adhesive for Bonding Plastic Laminate: Contact cement.

1. Adhesive for Bonding Edges: Hot-melt adhesive or adhesive specified above for faces.

## 2.5 FABRICATION, GENERAL

A. Interior Cabinet Grade: Unless otherwise indicated, provide interior cabinets complying with referenced quality standard.

B. Wood Moisture Content: Comply with requirements of referenced quality standard for wood moisture content in relation to ambient relative humidity during fabrication and in installation areas.

C. Fabricate cabinetry to dimensions, profiles, and details indicated.

D. Complete fabrication, including assembly and hardware application, to maximum extent possible before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.

1. Trial fit cabinet assemblies at fabrication shop that cannot be shipped completely assembled. Install dowels, screws, bolted connectors, and other fastening devices that can be removed after trial fitting. Verify that various parts fit as intended and check measurements of assemblies against field measurements indicated on Shop Drawings before disassembling for shipment.

E. Shop-cut openings to maximum extent possible to receive hardware, appliances, plumbing fixtures, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.

1. Seal edges of openings in countertops with a coat of varnish.

## 2.6 PLASTIC-LAMINATE CABINETS

A. Grade: Custom.

B. AWI Type of Cabinet Construction: Flush Overlay.

C. Laminate Cladding for Exposed Surfaces: High-pressure decorative laminate complying with the following requirements:

1. Horizontal Surfaces Other Than Tops: Grade HGS.

2. Vertical Surfaces: Grade HGS.
3. Edges: PVC edge banding, 0.12 inch (3 mm) thick, matching laminate in color, pattern, and finish.

D. Materials for Semiexposed Surfaces:

1. Surfaces Other Than Drawer Bodies: Thermoset decorative panels.

a. Edges of Plastic-Laminate Shelves: PVC edge banding, 0.12 inch (3 mm) thick, matching laminate in color, pattern, and finish.
b. For semiexposed backs of panels with exposed plastic-laminate surfaces, provide surface of high-pressure decorative laminate, Grade VGS. See Drawings for locations of thermoset decorative (melamine) surfacing at cabinet interiors.

2. Drawer Sides and Backs: Thermoset decorative panels.
3. Drawer Bottoms: Thermoset decorative panels.

E. Concealed Backs of Panels with Exposed Plastic Laminate Surfaces: High-pressure decorative laminate, Grade BKL. See Drawings for locations of thermoset decorative (melamine) surfacing at cabinet interiors.

F. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed laminate surfaces complying with the following requirements:

1. As selected by Architect from laminate manufacturer's full range of colors and patterns and as follows:

a. Wood grains with matte finish and grain direction vertical on all vertical cabinet surfaces.

G. Provide dust panels of 1/4-inch (6.4-mm) plywood or tempered hardboard above compartments and drawers, unless located under tops.

## 2.7 PLASTIC-LAMINATE COUNTERTOPS

A. Grade: Custom.

B. High-Pressure Decorative Laminate Grade: HGS.

C. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed laminate surfaces complying with the following requirements:

1. As selected by Architect from manufacturer's full range in one or both of the following categories:

a. Solid colors without pattern, matte finish.
b. Non-wood grain patterns, matte finish.

D. Edge Treatment: PVC edge banding, 0.12 inch (3 mm) thick, matching laminate in color, pattern, and finish, at vertical countertop edges.

E. Core Material: Particleboard made with water resistant exterior glue.

F. Backer Sheet: Provide plastic-laminate backer sheet, Grade BKL, on underside of countertop substrate.

## PART 3 - EXECUTION

### 3.1 PREPARATION

A. Before installation, condition cabinetry to average prevailing humidity conditions in installation areas.

B. Before installing architectural cabinets, examine shop-fabricated work for completion and complete work as required, including removal of packing and backpriming.

### 3.2 INSTALLATION

A. Grade: Install cabinetry to comply with requirements for the same grade specified in Part 2 for fabrication of type of woodwork involved.

B. Assemble cabinets and complete fabrication at Project site to comply with requirements for fabrication in Part 2, to extent that it was not completed in the shop.

C. Install cabinetry level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb (including tops) to a tolerance of 1/8 inch in 96 inches (3 mm in 2400 mm).

D. Scribe and cut cabinets to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.

E. Fire-Retardant-Treated Wood: Handle, store, and install fire-retardant-treated wood to comply with chemical treatment manufacturer's written instructions, including those for adhesives used to install woodwork.

F. Anchor cabinetry to anchors or blocking built in or directly attached to substrates. Secure floor mounted cabinets and shelving to walls with countersunk, capped screws and/or blind nailing at 32 inches o.c. into wood framing or blocking as required for complete installation. Secure wall hung closed cabinets through back, near top and bottom, at ends and not more than 16 inches (400 mm) o.c. with No. 10 wafer-head screws sized for 1-inch (25-mm) penetration into wood framing, blocking, or hanging strips or No. 10 wafer-head sheet metal screws through metal backing or metal framing behind wall finish. Secure wall hung open cabinets and shelving with countersunk, capped screws at top and bottom at no less than 12 inches o.c.

G. Cabinets: Install without distortion so doors and drawers fit openings properly and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation. Complete installation of hardware and accessory items as indicated.

1. Install cabinets with no more than 1/8 inch in 96-inch (3 mm in 2400-mm) sag, bow, or other variations from a straight line.

H. Countertops: Anchor securely by screwing through corner blocks of base cabinets or other supports into underside of countertop.

1. Align adjacent solid-surfacing-material countertops and form seams to comply with manufacturer's written recommendations using adhesive in color to match countertop. Carefully dress joints smooth, remove surface scratches, and clean entire surface.
2. Install countertops with no more than 1/8 inch in 96-inch (3 mm in 2400-mm) sag, bow, or other variation from a straight line.
3. Secure backsplashes to tops with concealed metal brackets at 16 inches (400 mm) o.c. and to walls with adhesive.
4. Caulk space between backsplash and wall with sealant specified in Division 07 Section "Joint Sealants."

I. Touch up finishing work specified in this Section after installation of woodwork. Fill screw holes with matching filler where exposed.

## 3.3 ADJUSTING AND CLEANING

A. Repair damaged and defective cabinetry, where possible, to eliminate functional and visual defects; where not possible to repair, replace woodwork. Adjust joinery for uniform appearance.

B. Clean, lubricate, and adjust hardware.

C. Clean exposed and semiexposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

END OF SECTION 064023

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SECTION 071113 - BITUMINOUS DAMPPROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Cold-applied, cut-back asphalt dampproofing.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated. Include recommendations for method of application, primer, number of coats, coverage or thickness, and protection course.

B. Material Certificates: For each product, signed by manufacturers.

1.4 QUALITY ASSURANCE

A. Source Limitations: Obtain primary dampproofing materials and primers through one source from a single manufacturer. Provide secondary materials recommended by manufacturer of primary materials.

1.5 PROJECT CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit dampproofing to be performed according to manufacturers' written instructions.

B. Ventilation: Provide adequate ventilation during application of dampproofing in enclosed spaces. Maintain ventilation until dampproofing has cured.

## PART 2 - PRODUCTS

### 2.1 COLD-APPLIED, CUT-BACK ASPHALT DAMPPROOFING

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Henry Company.
2. Karnak Corporation.
3. Meadows, W. R., Inc.

B. Dampproofing Brush and Spray Coats: ASTM D 4479, Type I, fibered.

### 2.2 MISCELLANEOUS MATERIALS

A. Cut-Back Asphalt Primer: ASTM D 41.

B. Patching Compound: As recommended by Dampproofing Manufacturer.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

A. Examine substrates, with Installer present, for compliance with requirements for surface smoothness and other conditions affecting performance of work.

1. Proceed with dampproofing application only after substrate construction and penetrating work have been completed and unsatisfactory conditions have been corrected.
2. Test for surface moisture according to ASTM D 4263.

### 3.2 PREPARATION

A. Protection of Other Work: Mask or otherwise protect adjoining exposed surfaces from being stained, spotted, or coated with dampproofing. Prevent dampproofing materials from entering and clogging weep holes and drains.

B. Clean substrates of projections and substances detrimental to work; fill voids, seal joints, and apply bond breakers if any, as recommended by prime material manufacturer.

C. Apply patching compound for filling and patching tie holes, honeycombs, reveals, and other imperfections.

## 3.3 APPLICATION, GENERAL

A. Comply with manufacturer's written recommendations unless more stringent requirements are indicated or required by Project conditions to ensure satisfactory performance of dampproofing.

1. Apply cut-back asphalt primer.
2. Apply (2) coats dampproofing at coverage rate or thickness recommended by Manufacturer.
3. Apply additional coats if recommended by manufacturer or if required to achieve coverages indicated.
4. Allow each coat of dampproofing to cure 24 hours before applying subsequent coats.
5. Allow 24 hours drying time prior to backfilling.

B. Apply dampproofing to footings and foundation walls.

1. Apply from finished-grade line to top of footing, extend over top of footing, and down a minimum of 6 inches (150 mm) over outside face of footing.
2. Extend 12 inches (300 mm) onto intersecting walls and footings, but do not extend onto surfaces exposed to view when Project is completed.

## 3.4 CLEANING

A. Remove dampproofing materials from surfaces not intended to receive dampproofing.

END OF SECTION 071113

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SECTION 071900 - WATER REPELLENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes penetrating water-repellent coatings for the following vertical surfaces:

1. Concrete Masonry Units.

1.3 PERFORMANCE REQUIREMENTS

A. Performance Testing: Provide water repellents that comply with test-performance requirements indicated, as evidenced by reports of tests performed by manufacturer by a qualified independent testing agency on manufacturer's standard products applied to substrates simulating those on Project using same application methods to be used for Project.

B. Absorption: Minimum 90 percent reduction of absorption after 24 hours in comparison of treated and untreated specimens.

C. Water Penetration and Leakage through Masonry: Minimum 90 percent reduction in leakage rate in comparison of treated and untreated specimens, per ASTM E 514.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated.

1. Include manufacturer's printed statement of VOC content.

B. Manufacturer Certificates: Signed by manufacturers certifying that water repellents comply with requirements.

C. Qualification Data: For Installer.

D. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for assemblies.

E. Warranty: Special warranty specified in this Section.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: An employer of workers trained and approved by manufacturer.

B. Test Application: Apply a finish sample for each type of water repellent and substrate required. Duplicate finish of approved sample.

1. Locate each test application as directed by Architect.
2. Size: 25 sq. ft. (2.3 sq. m).
3. Final approval by Architect of water-repellent application will be from test applications.

1.6 PROJECT CONDITIONS

A. Limitations: Proceed with application only when the following existing and forecasted weather and substrate conditions permit water repellents to be applied according to manufacturers' written instructions and warranty requirements:

1. Ambient temperature is above 40 deg F (4.4 deg C).
2. Masonry surfaces and mortar have cured for more than 28 days.
3. Masonry walls are not treated prior to 30 days after building close-in.
4. Rain or snow is not predicted within 24 hours.
5. Application proceeds more than seven days after surfaces have been wet.
6. Substrate is not frozen, or surface temperature is above 40 deg F (4.4 deg C).
7. Windy conditions do not exist that may cause water repellent to be blown onto vegetation or surfaces not intended to be treated.

1.7 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer and applicator agree(s) to repair or replace materials that fail to maintain water repellency specified in Part 1 "Performance Requirements" Article within specified warranty period.

1. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Products: Subject to compliance with requirements, provide one of the products listed in other Part 2 articles.

1. Products by other manufacturers are subject to Architect’s approval prior to bidding.

B. Proprietary-Blend, Penetrating Water Repellent: Clear, consisting of 1 or several different resins (silanes or siloxanes), polymers, stearates, or oils plus other compounds or products of components; and with 3.3 lb/gal. (400 g/L) or less of VOCs.

1. Products:

    a. RainGuard “Vandlguard Five”
    b. Prosoco “Blok-Guard Anti-Graffiti Control II”

## PART 3 - EXECUTION

### 3.1 PREPARATION

A. Clean substrate of substances that might interfere with penetration or performance of water repellents. Test for moisture content, according to water-repellent manufacturer's written instructions, to ensure that surface is dry enough.

B. Test for pH level, according to water-repellent manufacturer's written instructions, to ensure chemical bond to silicate minerals.

C. Protect adjoining work, including sealant bond surfaces, from spillage or blow-over of water repellent. Cover adjoining and nearby surfaces of aluminum and glass if there is the possibility of water repellent being deposited on surfaces. Cover live plants and grass.

D. Coordination with Sealants: Do not apply water repellent until sealants for joints adjacent to surfaces receiving water-repellent treatment have been installed and cured.

    1. Water-repellent work may precede sealant application only if sealant adhesion and compatibility have been tested and verified using substrate, water repellent, and sealant materials identical to those used in the work.

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

### 3.2 APPLICATION

A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect the substrate before application of water repellent and to instruct Applicator on the product and application method to be used.

B. Apply a mist coat of water repellent to break surface tension and to assist in penetration prior to application of saturation coat.

C. Apply a heavy-saturation spray coating of water repellent on surfaces indicated for treatment using low-pressure spray equipment. Comply with manufacturer's written instructions for using airless spraying procedure, unless otherwise indicated. Apply from bottom up, with a controlled 8 inches to 10 inches of rundown.

D. Comply with manufacturer's written instructions. Consult manufacturer's technical representative if written instructions are not applicable to Project conditions.

E. Apply to all exterior masonry surfaces.

3.3 CLEANING

A. Immediately clean water repellent from adjoining surfaces and surfaces soiled or damaged by water-repellent application as work progresses. Repair damage caused by water-repellent application. Comply with manufacturer's written cleaning instructions.

END OF SECTION 071900

SECTION 072100 - THERMAL INSULATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Perimeter wall insulation (supporting backfill).
2. Concealed building insulation, blanket and batt.
3. Blown insulation.
4. Expandable foam insulation.
5. Vapor retarders.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

1.4 QUALITY ASSURANCE

A. Source Limitations: Obtain each type of building insulation through one source from a single manufacturer.

B. Fire-Test-Response Characteristics: Provide insulation and related materials with the fire-test-response characteristics indicated, as determined by testing identical products per test method indicated below by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify materials with appropriate markings of applicable testing and inspecting agency.

1. Surface-Burning Characteristics: ASTM E 84.
2. Fire-Resistance Ratings: ASTM E 119.
3. Combustion Characteristics: ASTM E 136..

1.5 DELIVERY, STORAGE, AND HANDLING

A. Protect insulation materials from physical damage and from deterioration by moisture, soiling, and other sources. Store inside and in a dry location. Comply with manufacturer's written instructions for handling, storing, and protecting during installation.

B. Protect plastic insulation as follows:

1. Do not expose to sunlight, except to extent necessary for period of installation and concealment.
2. Protect against ignition at all times. Do not deliver plastic insulating materials to Project site before installation time.
3. Complete installation and concealment of plastic materials as rapidly as possible in each area of construction.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:

1. Products: Subject to compliance with requirements, provide one of the products specified.
2. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

B. Products by other manufacturers are subject to approval by the Architect prior to bidding.

### 2.2 FOAM-PLASTIC BOARD INSULATION

A. Extruded-Polystyrene Board Insulation: ASTM C 578, of type and density indicated below, with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively:

1. Manufacturers:

a. DiversiFoam Products.
b. Dow Chemical Company.
c. Owens Corning.
d. Pactiv Building Products Division.

2. Type IV, 1.60 lb/cu. ft. (26 kg/cu. m), unless otherwise indicated.

### 2.3 GLASS-FIBER BLANKET AND BATT INSULATION

A. Manufacturers:

1. CertainTeed Corporation.
2. Guardian Fiberglass, Inc.
3. Johns Manville.
4. Knauf Fiber Glass.
5. Owens Corning.

B. Unfaced, Glass-Fiber Blanket Insulation: ASTM C 665, Type I (blankets without membrane facing); consisting of fibers; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively; passing ASTM E 136 for combustion characteristics.

C. Where glass-fiber blanket insulation is indicated by the following thicknesses, provide blankets in batt or roll form with thermal resistances indicated:

1. 3-1/2 inches (89 mm) thick with a thermal resistance of 15 deg F x h x sq. ft./Btu at 75 deg F (1.9 K x sq. m/W at 24 deg C).
2. 5 ½ inches (140mm) thick with a thermal resistance of 21 deg F x h x sq. f.t./BTU at 75 deg F (3.3K x sq. m/w at 24 deg C).

## 2.4 EXPANDABLE FOAM INSULATION

A. Manufacturers / Products of Expandable Foam Insulation:

1. Products subject to Architect approval for specific applications required.

## 2.5 VAPOR RETARDERS

A. Fire-Retardant, Reinforced-Polyethylene Vapor Retarders: 2 outer layers of polyethylene film laminated to an inner reinforcing layer consisting of either nonwoven grid of nylon cord or polyester scrim and weighing not less than 22 lb/1000 sq. ft. (10 kg/100 sq. m), with maximum permeance rating of 0.1317 perm (7.56 ng/Pa x s x sq. m) and with flame-spread and smoke-developed indexes of not more than 5 and 60, respectively.

1. Products:

a. Raven Industries Inc.; DURA-SKRIM 2FR.
b. Reef Industries, Inc.; Griffolyn T-55 FR.

B. Vapor-Retarder Tape: Pressure-sensitive tape of type recommended by vapor-retarder manufacturer for sealing joints and penetrations in vapor retarder.

C. Vapor-Retarder Fasteners: Pancake-head, self-tapping steel drill screws; with fender washers.

D. Single-Component Nonsag Urethane Sealant: ASTM C 920, Type I, Grade NS, Class 25, Use NT related to exposure, and Use O related to vapor-barrier-related substrates.

## 2.6 AUXILIARY INSULATING MATERIALS

A. Vapor-Retarder Tape: Pressure-sensitive tape of type recommended by insulation manufacturers for sealing joints and penetrations in vapor-retarder facings.

## 2.7 GLASS-FIBER BLOWN INSULATION

A. Glass fiber per ASTM C764. Thickness as required to achieve thermal resistance of 38 deg. F x h x sq. ft. / BTU at 75 deg. F.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Installer present, for compliance with requirements of Sections in which substrates and related work are specified and for other conditions affecting performance.

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

3.2 PREPARATION

A. Clean substrates of substances harmful to insulation or vapor retarders, including removing projections capable of puncturing vapor retarders or of interfering with insulation attachment.

3.3 INSTALLATION, GENERAL

A. Comply with insulation manufacturer's written instructions applicable to products and application indicated.

B. Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed at any time to ice, rain, and snow.

C. Extend insulation in thickness indicated to envelop entire area to be insulated. Cut and fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.

D. Water-Piping Coordination: If water piping is located within insulated exterior walls, coordinate location of piping to ensure that it is placed on warm side of insulation and insulation encapsulates piping.

E. For preformed insulating units, provide sizes to fit applications indicated and selected from manufacturer's standard thicknesses, widths, and lengths. Apply single layer of insulation units to produce thickness indicated unless multiple layers are otherwise shown or required to make up total thickness.

3.4 INSTALLATION OF PERIMETER INSULATION

A. On vertical surfaces, set insulation units in adhesive applied according to manufacturer's written instructions. Use adhesive recommended by insulation manufacturer.

1. If not otherwise indicated, extend insulation a minimum of 24 inches (610 mm) below exterior grade line.

B. Bevel top edges of insulation as indicated on the Drawings.

C. Protect below-grade insulation on vertical surfaces from damage during backfilling by applying protection course with joints butted. Set in adhesive according to insulation manufacturer's written instructions.

D. Protect top edge of insulation from damage during concrete work.

## 3.5 INSTALLATION OF GENERAL BUILDING INSULATION

A. Apply insulation units to substrates by method indicated, complying with manufacturer's written instructions. If no specific method is indicated, bond units to substrate with adhesive or use mechanical anchorage to provide permanent placement and support of units.

B. Install mineral-fiber insulation in cavities formed by framing members according to the following requirements:

1. Use insulation widths and lengths that fill the cavities formed by framing members. If more than one length is required to fill cavity, provide lengths that will produce a snug fit between ends.
2. Place insulation in cavities formed by framing members to produce a friction fit between edges of insulation and adjoining framing members.
3. Maintain 3-inch (76-mm) clearance of insulation around recessed lighting fixtures.
4. For wood-framed wall cavities where cavity heights exceed 96 inches (2438 mm), support unfaced blankets mechanically.

C. Install expandable foam insulation in cavities around exterior door units per manufacturer’s instructions.

D. Install blown insulation in attic spaces to a uniform depth of 12 inches.

## 3.6 INSTALLATION OF VAPOR RETARDERS

A. General: Extend vapor retarder to extremities of areas to be protected from vapor transmission. Secure in place prior to installation of gypsum board. Extend vapor retarder to cover miscellaneous voids in insulated substrates.

B. Seal vertical joints in vapor retarders over framing by lapping not less than two wall studs.

C. Before installing vapor retarder, apply urethane sealant to wood framing including still plates, wood studs, and framing around door and window openings. Seal overlapping joints in vapor retarders with vapor-retarder tape according to vapor-retarder manufacturer's written instructions. Seal butt joints with vapor-retarder tape. Locate all joints over framing members or other solid substrates.

D. Firmly attach vapor retarders to wood framing and solid substrates with vapor-retarder fasteners as recommended by vapor-retarder manufacturer.

E. Seal joints caused by pipes, conduits, electrical boxes, and similar items penetrating vapor retarders with vapor-retarder tape to create an airtight seal between penetrating objects and vapor retarder.

F. Repair tears or punctures in vapor retarders immediately before concealment by other work. Cover with vapor-retarder tape or another layer of vapor retarder.

3.7 PROTECTION

A. Protect installed insulation and vapor retarders from damage due to harmful weather exposures, physical abuse, and other causes. Provide temporary coverings or enclosures where insulation is subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.

END OF SECTION 072100

SECTION 072700 – INFILTRATION BARRIERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Infiltration barrier at exterior wall sheathing and miscellaneous locations.

1.3 SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product.

1.4 QUALITY ASSURANCE

A. Fire-Test-Response Characteristics: For assemblies with fire-resistance ratings, provide materials and construction identical to those of assemblies tested for fire resistance per ASTM E 119 by a testing and inspecting agency acceptable to authorities having jurisdiction.

PART 2 - PRODUCTS

2.1 INFILTRATION BARRIER MATERIALS

A. Infiltration Barrier: Engineered textured – surface membranes for application over sheathing at exterior wall and miscellaneous locations.

1. Dupont Tyvek “Commercial Wrap”, (1) layer.

B. Products by other manufacturers are subject to approval prior to bidding.

2.2 MISCELLANEOUS MATERIALS

A. Flexible Flashing: Composite, self-adhesive, flashing product for use at window and door openings.

1. Products: Subject to compliance with requirements, provide of the following:

a. Grace Construction Products, a unit of W. R. Grace & Co. “Bituthene”.

## PART 3 - EXECUTION

### 3.1 INSTALLATION, GENERAL

A. Coordinate air barrier installation with installation of metal wall and soffit panels, trim, etc.

### 3.2 INFILTRATION BARRIER INSTALLATION

A. General: Cover exterior sheathing with infiltration barrier applied in accordance with manufacturer’s printed instructions. Install with fasteners of type and at spacings recommended by manufacturer. Lap and seal seams per manufacturer’s recommendations.

### 3.3 FLEXIBLE FLASHING INSTALLATION

A. Apply flexible flashing at all penetrations to comply with manufacturers written instructions and with details on the Drawings. Install over top of infiltration barrier material and adhere to surface of penetrating item.

END OF SECTION 072700

SECTION 074113 - METAL ROOF PANELS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Standing-seam metal roof panels.
2. Underlayment materials.
3. Miscellaneous metal framing, if and as required for specific metal roof panel system.
4. Other components of metal roof panel system.

1.3 DEFINITIONS

A. Metal Roof Panel Assembly: Metal roof panels, attachment system components, miscellaneous metal framing, thermal insulation, and accessories necessary for a complete weathertight roofing system.

1.4 PERFORMANCE REQUIREMENTS

A. General Performance: Metal roof panels shall comply with performance requirements without failure due to defective manufacture, fabrication, installation, or other defects in construction.

B. Delegated Design: Design metal roof panel assembly, including comprehensive engineering analysis by a qualified professional engineer currently licensed to practice structural engineering in the State of Idaho, using performance requirements and design criteria indicated, is the responsibility of the roof panel manufacturer.

C. Air Infiltration: Air leakage through assembly of not more than 0.06 cfm/sq. ft. of roof area when tested according to ASTM E 1680 at the following test-pressure difference:

1. Test-Pressure Difference: Positive and negative 6.24 lbf/sq. ft.

D. Water Penetration: No water penetration when tested according to ASTM E 1646 as follows:

1. Test-Pressure Difference: 12 lbf/sq. ft.

E. Wind-Uplift Resistance: Provide metal roof panel assemblies that comply with the following:

1. The determination of required wind uplift resistance and panel attachments shall be the responsibility of the roof panel manufacturer, including comprehensive engineering analysis per Paragraph 1.4.B. above.

2. Wind uplift calculations shall conform to American Society of Civil Engineers (ASCE) ASCE 7-02. System attachment calculations shall be based on such wind uplift calculations and on component / system test results per ASTM E 1592.

F. Structural Performance: Provide metal roof panel assemblies capable of withstanding the effects of gravity loads and the following loads and stresses within limits and under conditions indicated, based on testing according to ASTM E 1592:

1. Wind Loads: Determine loads according to ASCE 7-02.
2. Roof Snow Loads: 25 lb./sq. ft.

G. Thermal Movements: Allow for unlimited thermal movements resulting from ambient and surface temperature changes. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. Temperature Change (Range): 120 degrees F, ambient; 180 degrees F, material surfaces.

1.5 SUBMITTALS

A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of roof panel and accessory.

B. Shop Drawings: Show fabrication and installation layouts of metal roof panels; details of edge conditions, side-seam and endlap joints, panel profiles, corners, all anchorages, trim, flashings, curb flashings, closures, and accessories; and special details including hip and valley details. Distinguish between factory and field-assembled work.

1. Shop drawings shall be prepared by, and shall carry the seal of, a professional engineer currently licensed to practice structural engineering in the State of Idaho.
2. Shop drawings shall include complete roof plans indicating exact locations of all panel clips, anchors, etc.
3. Shop drawings shall completely detail the following:

    a. All miscellaneous metal framing required. Note that structural roof deck shall be provided by the contractor at no additional cost to the owner. All attachments of such framing shall be indicated.
    b. All roofing system clips, anchors, etc., together with bearing plates and all fasteners, shall be indicated.
    c. All edge and upper edge attachments shall be fully detailed, including structural attachments and fasteners required to resist drag loads.
    d. All roof edge and eave attachments shall be fully detailed.
    e. All roof edge, upper edge, edge and eave flashing details.
    f. All curb and other penetration flashings.
    g. All other components of the roofing system.
4. Shop drawings shall be specific to the conditions encountered for this project. Shop drawings which rely solely on standard details will be returned without action. Refer to the Drawings for substrates to which metal roof panel system is attached.

C. Structural Calculations: Provide complete structural calculations for the roofing system prepared by, and carrying the seal of, a professional engineer currently licensed to practice structural engineering in the State of Idaho. Such structural calculations shall include calculations necessary to support all conditions indicated on the system Shop Drawings. Structural calculations shall be based on the requirements of Paragraph 1.4 above. Such calculations shall include thermal expansion/contraction calculations.

D. Samples for Selections: For each type of metal roof panel indicated with factory-applied color finishes.

E. Manufacturer Certificates: Signed by manufacturer certifying that roof panels comply with performance requirements specified in "Performance Requirements" Article.

1. Submit evidence of meeting performance requirements.

F. Qualification Data: For qualified installer and professional engineer.

G. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for each product.

H. Warranties: Samples of warranties.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: An employer of workers trained and approved by manufacturer.

B. Testing Agency Qualifications: The testing agency utilized by the metal roof panel manufacturer to determine its system performance shall be qualified according to ASTM E 329 for testing indicated.

C. Source Limitations: Obtain each type of metal roof panels from single source from single manufacturer.

D. All roof panels shall be continuous from eave to ridge. On site panel fabrication is required. Such fabrication shall be done using roof panel manufacturer owned portable, plant quality equipment operated by factory trained personnel.

E. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for fabrication and installation.

1. Build mockup of typical roof field area, including anchors, insulation, steel deck, and other components. Build mockup of typical ridge, typical upper ridge and typical valley, including engineered anchoring requirements**.** Build markup of typical curb flashing.
2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.

F. Preinstallation Conference: Conduct conference at the project site immediately prior to beginning roof panel installation.

1. Meet with Contractor, Architect, the Owner’s inspecting agency representative (optional), metal roof panel Installer and metal roof panel manufacturer's authorized technical representative.
2. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
3. Review methods and procedures related to metal roof panel installation, including manufacturer's written instructions.
4. Examine deck substrate conditions for compliance with requirements, including flatness and attachment to structural members.
5. Review structural loading limitations of deck during and after roofing.
6. Review flashings, special roof details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect metal roof panels.
7. Review markups required by Paragraph 1.6.E above.
8. Review governing regulations and requirements for insurance, certificates, and testing and inspecting if applicable.
9. Review temporary protection requirements for metal roof panel assembly during and after installation.
10. Review roof observation and repair procedures after metal roof panel installation.
11. Document proceedings, including corrective measures and actions required, and furnish copy of record to each participant.
12. The contractor shall remove portions of any previously installed roof assemblies below the metal roof panels, sufficient to allow verification of proper installation and to replace such assemblies following inspections.

G. Inspections and Reports by Technical Representative

1. The roof panel manufacturer’s technical representative shall make field inspections of the roofing work in progress as required to allow specified warranties to be issued. Such technical representative shall submit reports of inspections to the parties named in Paragraph 1.6.F.1. above. Such reports shall include reports of observations, instructions given, remedial action required, and a statement that the work is or is not done in a manner that will allow required warranties to be issued.
2. The roof panel manufacturer’s technical representative shall inform the Construction Manager and Architect at least three days in advance of his scheduled inspections.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver components, sheets, metal roof panels, and other manufactured items so as not to be damaged or deformed. Package metal roof panels for protection during transportation and handling.

B. Unload, store, and erect metal roof panels in a manner to prevent bending, warping, twisting, and surface damage.

C. Stack metal roof panels on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal roof panels to ensure dryness. Do not store metal roof panels in contact with other materials that might cause staining, denting, or other surface damage.

D. Protect strippable protective covering on metal roof panels from exposure to sunlight and high humidity, except to extent necessary for period of metal roof panel installation.

E. Protect foam-plastic insulation as follows:

1. Do not expose to sunlight, except to extent necessary for period of installation and concealment.
2. Protect against ignition at all times. Do not deliver foam-plastic insulation materials to Project site before installation time.
3. Complete installation and concealment of plastic materials as rapidly as possible in each area of construction.

1.8 PROJECT CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit metal roof panel work to be performed according to manufacturer's written instructions and warranty requirements.

B. Field Measurements: Verify actual dimensions of construction contiguous with metal roof panels by field measurements before fabrication.

1.9 COORDINATION

A. Coordinate sizes and locations of roof curbs, equipment supports, and roof penetrations with actual equipment provided.

B. Coordinate metal roof panels with rain drainage work, flashing, trim, and construction of decks, parapets, walls, and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

1.10 WARRANTIES

A. Special Warranty on Panel Finishes: Provide the metal roof panel manufacturer's written warranty in which manufacturer agrees to repair finish or replace metal roof panels that show evidence of deterioration of factory-applied finishes within specified warranty period.

1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:

a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.

2. Finish Warranty Period: 20 years from date of Substantial Completion.
3. Provide two signed copies.

B. Special Weathertightness Warranty: Provide the metal roof panel manufacturer's written warranty in which manufacturer agrees to repair or replace metal roof panel assemblies that fail to remain weathertight, including leaks, within specified warranty period, at no additional cost to the Owner.

1. Weathertight Warranty Period: 20 years from date of Substantial Completion.
2. Provide two signed copies.

PART 2 - PRODUCTS

2.1 PANEL MATERIALS

A. Metallic-Coated Steel Sheet: Restricted flatness steel sheet metallic coated by the hot-dip process and prepainted by the coil-coating process to comply with ASTM A 755/A 755M.

1. Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A 792/A 792M, structural quality.
2. Surface: Smooth flat finish.
3. Exposed Coil-Coated Finish:

a. Metallic or Metallescent Fluoropolymer: AAMA 621 with factory applied baked on coat fluoropolymer finish containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

4. Concealed Finish: Apply pretreatment and manufacturer's standard acrylic or polyester backer finish, consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil (0.013 mm).

B. Panel Sealants:

1. Butyl-Rubber-Based, Solvent-Release Sealant: ASTM C 1311, and as recommended in writing by roof panel manufacturer.

2.3 VAPOR RETARDER

A. Vapor Retarder: 3 – ply laminate combining two layers of fire retardant low density polyethylene and reinforcing core; permeance .035 gr./hr. sq. ft. in Hg per ASTM E 96

1. Approved Product:

a. Griffolyn TX-1200 FR with Griftape FR foil tape, 4 inches wide.

2. Products by other manufacturers are subject to Architect’s approval prior to bidding.

2.5 UNDERLAYMENT MATERIALS

B. Self-Adhering, High-Temperature Sheet: 30 to 60 mils (0.76 to 1.0 mm) thick minimum (depending on manufacturer), consisting of slip-resisting, polyethylene-film top surface laminated to layer of butyl or SBS-modified asphalt adhesive, with release-paper backing; cold applied. Provide primer when recommended by underlayment manufacturer.

1. Thermal Stability: Stable after testing at 240 deg F (116 deg C); ASTM D 1970.

2. Low-Temperature Flexibility: Passes after testing at minus 20 deg F (29 deg C); ASTM D 1970.
3. Products: Subject to compliance with requirements, provide one of the following:

   a. Grace Construction Products; a unit of Grace, W. R. & Co.; Ultra. (30 mil)
   b. Polyglass Polystick MTS (60 mil)

4. Products by other manufacturers are subject to approval by Architect prior to bidding.

## 2.6 MISCELLANEOUS MATERIALS

A. Panel Fasteners: Self-tapping screws, bolts, nuts, self-locking rivets and bolts, end-welded studs, and other suitable fasteners designed to withstand design loads. Provide exposed fasteners with heads matching color of metal roof panels by means of plastic caps or factory-applied coating. Provide EPDM, PVC, or neoprene sealing washers.

## 2.7 MISCELLANEOUS METAL FRAMING (Note: Contractor shall provide all miscellaneous metal framing above structural roof deck if and as required for specific metal roof panel system at no additional cost to the owner.

A. Miscellaneous Metal Framing, Gereral: ASTM C 645, cold-formed metallic-coated steel sheet, ASTM A 653/A 653M, G60 (Z180) hot dip galvanized.

B. Hat-Shaped, Rigid Furring Channels:

1. Minimum Thickness: As required to meet performance requirements.
2. Depth: As required to meet performance requirements.

C. Cold-Rolled Furring Channels:

1. Nominal Thickness: As required to meet performance requirements.
2. Size: As required to meet performance requirements.

D. Z-Shaped Furring:

1. Nominal Thickness: As required to meet performance requirements.
2. Dimensions: As required to meet performance requirements.

E. Fasteners for Miscellaneous Metal Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten miscellaneous metal framing members to substrates.

## 2.8 STANDING-SEAM METAL ROOF PANELS

A. General: Provide factory-formed metal roof panels designed to be installed by lapping and interconnecting raised side edges of adjacent panels with joint type indicated and mechanically attaching panels to supports using concealed clips in side laps. Include clips, cleats, pressure plates, and accessories required for weathertight installation.

B. Vertical-Rib, Seamed-Joint, Standing-Seam Metal Roof Panels: Formed with vertical ribs at panel edges and intermediate stiffening ribs symmetrically spaced between ribs; designed for installation by mechanically attaching panels to supports using concealed clips located under panels and mechanically seaming panels together, with or without seam covers

1. Basis-of-Design Product: Subject to compliance with requirements, provide the following:

   a. AEP Span – Span-Lok HP

2. Material: Coated steel sheet per paragraph 2.1.A Above, 24 ga. nominal thickness.

   a. Exterior Finish: Metallic Fluoropolymer.
   b. Color: AEP Span standard colors as selected by the Architect.
   c. Panel Width: 16 inch panel coverage.
   d. Standing Seam Height: 2 inches, minimum.
   e. Anchor Clips: Manufacturer's clips designed to accomodate thermal movement indicated by structural calculations (verification required).
   f. Sealant: In seam sealant or gasket as standard with manufacturer.

## 2.9 ACCESSORIES

A. Roof Panel Accessories: Provide components approved by roof panel manufacturer and as required for a complete metal roof panel assembly including trim, copings, fasciae, corner units, ridge closures, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal roof panels unless otherwise indicated.

1. Closures: Provide closures at eaves and ridges, fabricated of same metal as metal roof panels.
2. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch- (25-mm-) thick, flexible closure strips; cut or premolded to match metal roof panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.
3. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.

B. Flashing and Trim: Formed from same material as roof panel, minimum 0.018 inch thickness. Provide flashing and trim as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, eaves, rakes, corners, bases, framed openings, ridges, valleys, fasciae, and fillers. Finish flashing and trim with same finish system as adjacent metal roof panels. If required, insert special requirements for ridge closures, corner units, copings, fasciae, and fillers.

## 2.11 FABRICATION

A. Fabricate and finish metal roof panels and accessories by manufacturer's standard procedures and processes and as necessary to fulfill indicated performance requirements. Comply with indicated profiles and with dimensional and structural requirements.

B. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of panel.

C. Fabricate metal roof panel side laps with factory-installed captive gaskets or separator strips that provide a tight seal and prevent metal-to-metal contact, in a manner that will seal weathertight and minimize noise from movements within panel assembly.

D. Sheet Metal Accessories: Fabricate flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to the design, dimensions, metal, and other characteristics of item indicated.

1. Form exposed sheet metal accessories that are without excessive oil canning, buckling, and tool marks and that are true to line and levels indicated, with exposed edges folded back to form hems.
2. End Seams for Other Than Aluminum: Fabricate nonmoving seams with flat-lock seams. Tin edges to be seamed, form seams, and solder.
3. Sealed Joints: Form nonexpansion but movable joints in metal to accommodate elastomeric sealant to comply with SMACNA standards.
4. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces of accessories exposed to view.
5. Fabricate cleats and attachment devices of size and metal thickness recommended by (SMACNA) Sheet Metal and Air Conditioning Contractors' National Association's "Architectural Sheet Metal Manual" or by metal roof panel manufacturer for application, but not less than thickness of metal being secured.

## 2.12 FINISHES

A. Comply with National Association of Architectural Metal Manufacturers' "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. 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.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, metal roof panel supports, and other conditions affecting performance of the Work.

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

3.2 PREPARATION

A. Clean substrates of substances harmful to insulation, including removing projections capable of interfering with insulation attachment.

3.3 UNDERLAYMENT INSTALLATION

A. Self-Adhering Sheet Underlayment: Apply primer if required by manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation. Install (1) layer over the entire roof surface, wrinkle free, in shingle fashion to shed water, with 3 inch side laps and with end laps of not less than 6 inches (150 mm) staggered 24 inches (600 mm) between courses. Overlap side edges not less than 3-1/2 inches (90 mm). Roll laps with roller. Cover underlayment within 14 days.

3.7 METAL ROOF PANEL INSTALLATION, GENERAL

A. Provide metal roof panels of full length from eave to ridge or upper edge.

B. Thermal Movement. Rigidly fasten metal roof panels to structure at ridges. Allow remainder of panel to move freely for unlimited thermal expansion and contraction. Predrill panels for fasteners.

1. Fasten metal roof panels in accordance with manufacturer's engineered shop drawings supported by engineer's calculations.
2. Avoid attaching accessories through roof panels in a manner that will inhibit thermal movement.

C. Install metal roof panels as follows:

1. Install roof panel system in accordance with manufacturer's printed instructions and approved shop drawings with field mechanical scanning.
2. Field cutting of metal panels by torch is not permitted.
3. End Splices: Not permitted

D. Fasteners:

1. Steel Roof Panels: Use stainless-steel fasteners for surfaces exposed to the exterior and galvanized-steel fasteners for surfaces exposed to the interior.
2. Sizes and spacings of fasteners shall conform to roof panel manufacturer's engineered shop drawings and details. Retain first paragraph below for metal panel systems that anchor to substrates with a clip system.

E. Anchor Clips: Anchor metal roof panels and other components of the Work securely in place, using manufacturer's approved fasteners according to manufacturers' written instructions.

F. Joint Sealers: Install gaskets, joint fillers, and sealants where indicated and where required for weatherproof performance of metal roof panel assemblies. Provide types of gaskets, fillers, and sealants indicated or, if not indicated, types recommended by metal roof panel manufacturer.

## 3.8 METAL ROOF PANEL INSTALLATION

A. Standing-Seam Metal Roof Panels: Fasten metal roof panels to supports with concealed clips at each standing-seam joint at location, spacing, and with fasteners recommended by manufacturer and in accordance with roof panel manufacturer's engineered shop drawings and details.

1. Install clips to supports with self-tapping fasteners.
2. Install pressure plates at concealed clips.
3. Field Seaming: Fully interlock seam system, including sealants and/or gaskets, and mechanically seam joints full length of panels in accordance with manufacturer's printed instructions.

## 3.9 MISCELLANEOUS METAL FRAMING INSTALLATION

A. Install miscellaneous metal framing if and as shown and detailed on metal roof panel manufacturer's shop drawings.

## 3.10 ACCESSORY INSTALLATION

A. General: Install accessories with positive anchorage to building and weathertight mounting and provide for thermal expansion. Coordinate installation with flashings and other components.

1. Install components required for a complete metal roof panel assembly including trim, copings, ridge closures, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items.

B. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners

where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant

1. Install exposed flashing and trim that is without excessive oil canning, buckling, and tool marks and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and to result in waterproof and weather-resistant performance.

B. Curb flashings provide curb flashings at all locations of mechanical equipment indicated on mechanical drawings. Install flashing around bases where they meet metal roof panels.

C. Pipe Flashing: Form flashing around pipe penetration and metal roof panels. Fasten and seal to metal roof panels as recommended by manufacturer.

3.12 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Engage a factory-authorized technical representative to inspect metal roof panel installation, including accessories, during roofing installation as required to qualify the roofing assemblies for required warranties. Report results in writing.

D. Remove and replace applications of metal roof panels where inspections indicate that they do not comply with specified requirements.

E. Additional inspections, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.12 CLEANING

A. Remove temporary protective coverings and strippable films, if any, as metal roof panels are installed unless otherwise indicated in manufacturer's written installation instructions. On completion of metal roof panel installation, clean finished surfaces as recommended by metal roof panel manufacturer. Maintain in a clean condition during construction.

B. Replace metal roof panels that have been damaged or have deteriorated beyond successful repair. Repair minor scratches, etc., by finish touchup or similar minor repair procedures.

END OF SECTION 074113

SECTION 074213 - FORMED METAL WALL PANELS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Exposed-fastener, lap-seam metal wall panels.
2. Metal sub-framing.

B. All auxiliary materials, including metal furring and supports, steel vented hat channel, "Z" channel supports for attachment of wall panels are included under this Specifications Section.

C. Work described in this section includes single-skin, metal cladding panels for rainscreen-principle wall system, complete with sub-structural metal framing, perimeter and penetration flashing, and closures.

D. Related work specified elsewhere:

1. Division 05: Steel studs, girts, and furring.
2. Division 06: Gypsum sheathing.
3. Division 07: Flashing and sheet metal, water resistive air barriers, thermal insulation, and joint sealants.

1.3 PERFORMANCE REQUIREMENTS

A. General Performance: Metal wall panels shall comply with performance requirements without failure due to defective manufacture, fabrication, installation, or other defects in construction.

B. Delegated Design: Design metal wall panel assembly, including but not limited to all connections and fastening to primary structure, and the comprehensive engineering analysis by a qualified professional engineer currently licensed to practice structural engineering in the State of Oregon, using performance requirements and design criteria indicated, is the responsibility of the wall panel manufacturer.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. General, Rainscreen Wall Assembly Components: Complete submittals shall be made jointly and simultaneously for all components of the Rainscreen wall assembly, including:

a. Exterior wall sheathing board, if applicable;
b. Air and water resistive barrier;
c. Vapor retarders and/or barriers, if applicable;
d. Rainscreen wall continuous exterior insulation.
e. Metal wall cladding panels and subframing components;
f. All other trim, flashing, sealants, and components necessary for a complete wall assembly as required by these specifications.

B. Shop Drawings:

1. Show complete rain screen wall system with air and water barrier(s), vapor retarder (if applicable), continuous exterior insulation, subframing system, metal cladding panels, ventilation components, flashings and accessories in elevation, sections, and details. Include metal thicknesses and finishes, panel lengths, joining details, anchorage details, flashings and special fabrication provisions for termination and penetrations. Indicate relationships with adjacent and interfacing work.
2. Include fabrication and installation layouts of metal panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment system, trim, flashings, closures, and accessories; and special details.
3. Accessories: Include details of the flashing, trim, and anchorage systems.
4. All components shall be integrated into a single comprehensive and complete shop drawing set prepared by the metal cladding system manufacturer.

C. Samples for Initial Selection: For each type of metal panel indicated with factory-applied finishes.

1. Include Samples of trim and accessories involving color selection.

D. Samples for Verification: For each type of exposed finish, prepared on Samples of size indicated below:

1. Metal Panels: 12 inches (305 mm) long by actual panel width. Include fasteners, closures, and other metal panel accessories.

E. Product data including manufacturer’s product specifications, standard details, certified product test results, installation instructions, and general recommendations, as applicable to materials and finishes for each component and for total soffit panel system.

1. Samples for selection purposes in form of manufacturer’s color charts or chips showing full range of colors, textures, and patterns available for soffit panels with factory-applied finishes.

2. Shop Drawings showing details of edge conditions, joints, corners, panel profiles, supports, anchorages, trim, flashings, closures, and special details. Distinguish between factory and field assembly work.

## 1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: For metal panels to include in maintenance manuals.

## 1.6 QUALITY ASSURANCE

A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

## 1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver components, metal panels, and other manufactured items so as not to be damaged or deformed. Package metal panels for protection during transportation and handling.

B. Unload, store, and erect metal panels in a manner to prevent bending, warping, twisting, and surface damage.

C. Stack metal panels horizontally on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal panels to ensure dryness, with positive slope for drainage of water. Do not store metal panels in contact with other materials that might cause staining, denting, or other surface damage.

## 1.8 FIELD CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit assembly of metal panels to be performed according to manufacturers' written instructions and warranty requirements.

## 1.9 COORDINATION

A. Coordinate sizes and locations of windows, doors, and wall penetrations with actual equipment provided.

B. Coordinate metal wall cladding system with wall sheathing, air and water resistive barriers, thermal insulation, rain drainage work, flashing, trim, and construction of other adjoining work to provide a leak proof, secure, and noncorrosive installation.

## 1.10 WARRANTY

A. Special Warranty on Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal panels that show evidence of deterioration of factory-applied finishes within specified warranty period.

1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:

    a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
    b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
    c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.

2. Finish Warranty Period: 20 years from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

A. Structural Performance: Provide metal wall panel systems capable of withstanding the effects of the following loads, based on testing according to ASTM E 1592:

1. Wind Loads: As indicated on Drawings.
2. Other Design Loads: As indicated on Drawings.

B. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects.

### 2.2 EXPOSED-FASTENER, LAP-SEAM METAL WALL PANELS

A. General: Provide factory-formed metal panels designed to be field assembled by lapping side edges of adjacent panels and mechanically attaching panels to supports using exposed fasteners in side laps. Include accessories required for weathertight installation.

B. Box-Rib-Profile, Exposed-Fastener Metal Wall Panels: Formed with raised, box-shaped ribs, evenly spaced across panel width, and with rib/recess sides angled 60 degrees or more.

1. Basis of Design Metal Wall Panel Manufacturer and System: Subject to compliance with requirements, provide metal wall panel system equal to the following:

    a. Metal Sales; “IC-72-Wall Panel”

2. Metallic-Coated Steel Sheet: Aluminum-zinc alloy-coated steel sheet complying with ASTM A 792/A 792M, Class AZ50 coating designation; structural quality. Prepainted by the coil-coating process to comply with ASTM A 755/A 755M.

    a. Nominal Thickness: 0.0236 inch (0.60 mm) - 24 gauge.
    b. Exterior Finish: Fluorocarbon PVDF (Kynar 500).
    c. Color: As selected by Architect from manufacturer's full range.

3. Rib Spacing: 7.2 inches (102 mm) o.c.
4. Panel Coverage: 36 inches (914 mm).
5. Panel Height: 1.5 inch.

## 2.3 METAL SOFFIT PANELS

A. General: Provide factory-formed metal soffit panels designed to be installed by lapping and interconnecting side edges of adjacent panels and mechanically attaching through panel to supports using concealed fasteners in side laps. Include accessories required for weathertight installation.

B. Metal Soffit Panels: Equal to "Berridge" thinline panel with 3-5/8" exposure with concealed fasteners with interlocking sidelap.

1. Product: Subject to compliance with requirements, provide soffit panels by the same manufacturer as metal roof panels.
2. Material: Fluoropolymer finished aluminum-Zinc alloy coated steel sheet, 24 ga., or equivalent aluminum material.

    a. Exterior Finish: Metallic fluoropolymer.
    b. Color: Match finish and color of metal wall panels or as selected by Architect.

## 2.4 METAL SUBFRAMING

A. Miscellaneous Metal Framing, General: ASTM C 645, cold-formed metallic-coated steel sheet, ASTM A 653, G90 (Z275) hot-dip galvanized.

B. Fasteners for Metal Subframing: Of type, material, size, corrosion resistance, holding power and other properties required to fasten miscellaneous metal subframing members through insulation and sheathing boards into structural wall framing or substrates.

## 2.5 SHEET MATERIALS

A. Structural Quality Galvanized Steel Sheet: Hot-dip zinc-coated steel sheet complying with ASTM A 446 with G90 coating complying with ASTM A 525, Grade C or to suit manufacturer's standards.

B. Commercial Quality Galvanized Steel Sheet: Comply with ASTM A 526 with G90 coating complying with ASTM A 525.

C. Structural Quality Aluminum-Zinc Alloy-Coated Steel Sheet: Hot-dip aluminum-zinc coated steel sheet complying with ASTM A 792 with class AZ-50 coating; Grade 40 or to suit manufacturer's standards.

## 2.6 METAL FINISHES

A. General: Apply coatings either before or after forming and fabricating panels, as required by coating process and as required for maximum coating performance capability. Protect coating either by application of strippable film or by packing plastic film or other suitable material between panels in a manner to properly protect the finish. Furnish air-drying spray finish in matching color for touch-up.

1. Color of Wall and Soffit Panels: As selected by the Architect from any of the manufacturer's available colors, including premium priced colors.

B. Fluoropolymer Coating (Wall Panels): Manufacturer's standard two-coat, thermocured, full-strength 70 percent "Kynar 500" coating consisting of a primer and a minimum 0.75-mil dry film finish coat thickness with a total minimum dry film thickness of 0.9 mil and 30 percent reflective gloss when tested in accordance with ASTM D 523.

1. Durability: Provide coating that has been field tested under normal range of weathering conditions for minimum of 20 years without significant peel, blister, flake, chip, crack, or check in finish; without chalking in excess of No. 8 in accordance with ASTM D 659; and without fading in excess of 5 NBS units.

C. Coatings for metal trims and accessories shall be identical to wall panels to which they are attached or associated, in terms of color, surface texture, composition, and performance.

## 2.7 MISCELLANEOUS MATERIALS

A. Miscellaneous Metal Subframing and Furring: ASTM C 645, cold-formed, metallic-coated steel sheet, ASTM A 653/A 653M, G90 (Z275 hot-dip galvanized) coating designation or ASTM A 792/A 792M, Class AZ50 (Class AZM150) aluminum-zinc-alloy coating designation unless otherwise indicated. Provide manufacturer's standard sections as required for support and alignment of metal panel system.

B. Framing and Supports: Provide furring, supports, and other items associated with the wall panel systems of materials and to shapes and sizes as shown on Drawings.

1. Conform to all specified requirements in Specifications Section 055000 – Metal Fabrication.
2. Wall panel manufacturer shall provide the necessary type and spacing of panel fasteners required to withstand the design loads.

C. Panel Accessories: Provide components required for a complete, weathertight panel system including trim, copings, fasciae, mullions, sills, corner units, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal panels unless otherwise indicated.

1. Closures: Provide closures at eaves and rakes, fabricated of same metal as metal panels.
2. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.
3. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch- (25-mm-) thick, flexible closure strips; cut or premolded to match metal panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.

D. Flashing and Trim: Provide flashing and trim formed from same material as metal panels as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, bases, drips, sills, jambs, corners, endwalls, framed openings, rakes, fasciae, parapet caps, soffits, reveals, and fillers. Finish flashing and trim with same finish system as adjacent metal panels.

E. Panel Fasteners: Corrosion-resistant self-tapping screws designed to withstand design loads. Provide exposed fasteners with heads matching color of metal panels by means of plastic caps or factory-applied coating. Provide EPDM or PVC sealing washers for exposed fasteners.

F. Panel Sealants: Provide sealant type recommended by manufacturer that are compatible with panel materials, are nonstaining, and do not damage panel finish.

1. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch (13 mm) wide and 1/8 inch (3 mm) thick.
2. Joint Sealant: ASTM C 920; elastomeric polyurethane or silicone sealant; of type, grade, class, and use classifications required to seal joints in metal panels and remain weathertight; and as recommended in writing by metal panel manufacturer.
3. Butyl-Rubber-Based, Solvent-Release Sealant: ASTM C 1311.

## 2.8 FABRICATION

A. General: Fabricate and finish metal panels and accessories at the factory, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.

B. On-Site Fabrication: Subject to compliance with requirements of this Section, metal panels may be fabricated on-site using UL-certified, portable roll-forming equipment if panels are of same profile and warranted by manufacturer to be equal to factory-formed panels. Fabricate according to equipment manufacturer's written instructions and to comply with details shown.

C. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of panel.

D. Fabricate metal panel joints with factory-installed captive gaskets or separator strips that provide a weathertight seal and prevent metal-to-metal contact, and that minimize noise from movements.

E. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's recommendations and recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item indicated.

1. Form exposed sheet metal accessories that are without excessive oil canning, buckling, and tool marks and that are true to line and levels indicated, with exposed edges folded back to form hems.
2. Seams for Aluminum: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints for additional strength.
3. Seams for Other Than Aluminum: Fabricate nonmoving seams in accessories with flat-lock seams. Tin edges to be seamed, form seams, and solder.
4. Sealed Joints: Form nonexpansion, but movable, joints in metal to accommodate sealant and to comply with SMACNA standards.
5. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces of accessories exposed to view.

6. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal recommended in writing by metal panel manufacturer.

    a. Size: As recommended by SMACNA's "Architectural Sheet Metal Manual" or metal wall panel manufacturer for application but not less than thickness of metal being secured.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, metal panel supports, and other conditions affecting performance of the Work.

1. Examine wall framing to verify that girts, angles, channels, studs, and other structural panel support members and anchorage have been installed within alignment tolerances required by metal wall panel manufacturer.
2. Examine wall sheathing to verify that sheathing joints are supported by framing or blocking and that installation is within flatness tolerances required by metal wall panel manufacturer.

    a. Verify that air- or water-resistive barriers have been installed over sheathing or backing substrate to prevent air infiltration or water penetration.

B. Examine roughing-in for components and systems penetrating metal panels to verify actual locations of penetrations relative to seam locations of metal panels before installation.

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

### 3.2 PREPARATION

A. Miscellaneous Supports: Install subframing, furring, and other miscellaneous panel support members and anchorages according to ASTM C 754 and metal panel manufacturer's written recommendations.

### 3.3 METAL PANEL INSTALLATION

A. General: Install metal panels according to manufacturer's written instructions in orientation, sizes, and locations indicated. Install panels perpendicular to supports unless otherwise indicated. Anchor metal panels and other components of the Work securely in place, with provisions for thermal and structural movement.

1. Shim or otherwise plumb substrates receiving metal panels.
2. Flash and seal metal panels at perimeter of all openings. Fasten with self-tapping screws. Do not begin installation until air- or water-resistive barriers and flashings that will be concealed by metal panels are installed.
3. Install screw fasteners in predrilled holes.

4. Locate and space fastenings in uniform vertical and horizontal alignment.
5. Install flashing and trim as metal panel work proceeds.
6. Locate panel splices over, but not attached to, structural supports. Stagger panel splices and end laps to avoid a four-panel lap splice condition.
7. Align bottoms of metal panels and fasten with blind rivets, bolts, or self-tapping screws. Fasten flashings and trim around openings and similar elements with self-tapping screws.
8. Provide weathertight escutcheons for pipe- and conduit-penetrating panels.

B. Fasteners:

1. Steel Panels: Use stainless-steel fasteners for surfaces exposed to the exterior; use galvanized-steel fasteners for surfaces exposed to the interior. Refer to requirements in Paragraph 2.7.E above.
2. Aluminum Panels: Use aluminum or stainless-steel fasteners for surfaces exposed to the exterior; use aluminum or galvanized-steel fasteners for surfaces exposed to the interior.

C. Metal Protection: Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action as recommended in writing by metal panel manufacturer.

D. Lap-Seam Metal Panels: Fasten metal panels to supports with fasteners at each lapped joint at location and spacing recommended by manufacturer.

1. Lap ribbed or fluted sheets one full rib. Apply panels and associated items true to line for neat and weathertight enclosure.
2. Provide metal-backed washers under heads of exposed fasteners bearing on weather side of metal panels.
3. Locate and space exposed fasteners in uniform vertical and horizontal alignment. Use proper tools to obtain controlled uniform compression for positive seal without rupture of washer.
4. Install screw fasteners with power tools having controlled torque adjusted to compress washer tightly without damage to washer, screw threads, or panels. Install screws in predrilled holes.
5. Flash and seal panels with weather closures at perimeter of all openings.

E. Watertight Installation:

1. Apply a continuous ribbon of sealant or tape to seal lapped joints of metal panels, using sealant or tape as recommend by manufacturer on side laps of nesting-type panels; and elsewhere as needed to make panels watertight.
2. Provide sealant or tape between panels and protruding equipment, vents, and accessories.
3. At panel splices, nest panels with minimum 6-inch (152-mm) end lap, sealed with sealant and fastened together by interlocking clamping plates.

F. Accessory Installation: Install accessories with positive anchorage to building and weathertight mounting, and provide for thermal expansion. Coordinate installation with flashings and other components.

1. Install components required for a complete metal panel system including trim, copings, corners, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items. Provide types indicated by metal wall panel manufacturer; or, if not indicated, provide types recommended by metal panel manufacturer.

G. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams that are permanently watertight.

1. Install exposed flashing and trim that is without buckling and tool marks, and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and achieve waterproof performance.
2. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet (3 m) with no joints allowed within 24 inches (610 mm) of corner or intersection. Where lapped expansion provisions cannot be used or would not be sufficiently waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with mastic sealant (concealed within joints).

## 3.4 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Engage a factory-authorized service representative to test and inspect completed metal wall panel installation, including accessories.

B. Remove and replace metal wall panels where tests and inspections indicate that they do not comply with specified requirements.

## 3.5 CLEANING AND PROTECTION

A. Remove temporary protective coverings and strippable films, if any, as metal panels are installed, unless otherwise indicated in manufacturer's written installation instructions. On completion of metal panel installation, clean finished surfaces as recommended by metal panel manufacturer. Maintain in a clean condition during construction.

B. After metal panel installation, clear weep holes and drainage channels of obstructions, dirt, and sealant.

C. Replace metal panels that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION 074213

SECTION 076200 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Manufactured Products:

a. Manufactured reglets and counterflashings.

2. Formed Products:

a. Formed roof sheet metal fabrications.
b. Formed wall sheet metal fabrications.
c. Formed equipment support flashing.
d. Formed parapet copings, gutters, downspouts and flashings.

1.3 PERFORMANCE REQUIREMENTS

A. General: Sheet metal flashing and trim assemblies as indicated shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight.

B. Thermal Movements: Provide sheet metal flashing and trim that allows for thermal movements from ambient and surface temperature changes.

1. Temperature Change (Range): 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each manufactured product and accessory, including prefinished metal materials.

B. Samples for Selection: For each type of sheet metal flashing, trim, and accessory indicated with factory-applied color finishes involving color selection, 1’-0” x 1’-0” size samples of requested colors.

C. Qualification Data: For qualified fabricator.

## 1.5 QUALITY ASSURANCE

A. Fabricator Qualifications: Shop that employs skilled workers who custom fabricate sheet metal flashing and trim similar to that required for this Project and whose products have a record of successful in-service performance.

B. Sheet Metal Flashing and Trim Standard: Comply with Sheet Metal and Air Conditioning Contractors National Association's (SMACNA) "Architectural Sheet Metal Manual" unless more stringent requirements are specified or shown on Drawings.

## 1.6 DELIVERY, STORAGE, AND HANDLING

A. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting, or other surface damage. Store sheet metal flashing and trim materials away from uncured concrete and masonry.

B. Protect strippable protective covering on sheet metal flashing and trim from exposure to sunlight and high humidity, except to the extent necessary for the period of sheet metal flashing and trim installation.

## 1.7 WARRANTY

A. Special Warranty on Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace sheet metal flashing and trim that shows evidence of deterioration of factory-applied finishes within specified warranty period.

1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:

a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.

2. Finish Warranty Period: 20 years from date of Substantial Completion.

# PART 2 - PRODUCTS

## 2.1 PERFORMANCE REQUIREMENTS

A. Sheet metal flashing and trim assemblies, including cleats, anchors, and fasteners, shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight.

B. Sheet Metal Standard for Flashing and Trim: Comply with SMACNA's "Architectural Sheet Metal Manual" requirements for dimensions and profiles shown unless more stringent requirements are indicated.

C. SPRI Wind Design Standard: Manufacture and install copings and roof edge flashings tested in accordance with ANSI/SPRI/FM 4435/ES-1 and capable of resisting the following design pressure:

1. Design Pressure: 120 mph, Exposure B.

D. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

## 2.2 SHEET METALS

A. General: Protect mechanical and other finishes on exposed surfaces from damage by applying a strippable, temporary protective film before shipping.

B. Metallic-Coated Steel Sheet: Restricted flatness steel sheet, metallic coated by the hot-dip process and prepainted by the coil-coating process to comply with ASTM A 755/A 755M.

1. Zinc-Coated (Galvanized) Steel Sheet: ASTM A 653/A 653M, G90 (Z275) coating designation; structural quality.
2. Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A 792/A 792M, Class AZ50 coating designation, Grade 40 (Class AZM150 coating designation, Grade 275); structural quality.
3. Surface: Smooth, flat
4. Exposed Coil-Coated Finish: (Prefinished Steel):

    a. Two-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

5. Color for prefinished steel: As selected by Architect from a full range of colors.

6. Concealed Finish: Pretreat with manufacturer’s standard white or light colored acrylic or polyester backer finish, consisting of prime coat and wash coat with minimum total dry film thickness of 0.5 mil (0.013mm)

7. TPO coated metal shall be as specified in Specifications Section 075423.

## 2.3 UNDERLAYMENT MATERIALS

A. Felt: ASTM D 226, Type II (No. 30), asphalt-saturated organic felt, nonperforated.

B. Self-Adhering, High-Temperature Sheet: Minimum 30 to 40 mils (0.76 to 1.0 mm) thick, consisting of slip-resisting polyethylene-film top surface laminated to layer of butyl or SBS-modified asphalt adhesive, with release-paper backing; cold applied. Provide primer when recommended by underlayment manufacturer.

1. Thermal Stability: ASTM D 1970; stable after testing at 240 deg F (116 deg C).
2. Low-Temperature Flexibility: ASTM D 1970; passes after testing at minus 20 deg F (29 deg C).
3. Products: Subject to compliance with requirements, provide one of the following:

    a. Carlisle Coatings & Waterproofing Inc.; CCW WIP 300HT.
    b. Grace Construction Products, a unit of W. R. Grace & Co.; Ultra.
    c. Owens Corning; WeatherLock Metal High Temperature Underlayment.

C. Slip Sheet: Building paper, 3-lb/100 sq. ft. (0.16-kg/sq. m) minimum, rosin sized.

## 2.4 MISCELLANEOUS MATERIALS

A. General: Provide materials and types of fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and recommended by manufacturer of primary sheet metal or manufactured item unless otherwise indicated.

B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads and recommended by manufacturer of primary sheet metal or manufactured item.

1. General: Blind fasteners or self-drilling screws, gasketed, with hex-washer head.

    a. Exposed Fasteners: Heads matching color of sheet metal using plastic caps or factory-applied coating.
    b. Blind Fasteners: High-strength aluminum or stainless-steel rivets suitable for metal being fastened.

2. Fasteners for Zinc-Coated (Galvanized) or Aluminum-Zinc Alloy-Coated Steel Sheet: Hot-dip galvanized steel according to ASTM A 153/A 153M or ASTM F 2329 or Series 300 stainless steel.

C. Solder:

1. For Zinc-Coated (Galvanized) Steel: ASTM B 32, Grade Sn50, 50 percent tin and 50 percent lead or Grade Sn60, 60 percent tin and 40 percent lead.

D. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch (13 mm) wide and 1/8 inch (3 mm) thick.

E. Elastomeric Sealant: ASTM C 920, elastomeric polyurethane polymer sealant; low modulus; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.

F. Butyl Sealant: ASTM C 1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type expansion joints with limited movement.

G. Bituminous Coating: Cold-applied asphalt emulsion complying with ASTM D 1187.

H. Asphalt Roofing Cement: ASTM D 4586, asbestos free, of consistency required for application.

## 2.5 FABRICATION, GENERAL

A. General: Custom fabricate sheet metal flashing, trim, and roof drainage items to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply and to design, dimensions, geometry, metal thickness, and other characteristics of item indicated on the Drawings. Fabricate items at the shop to greatest extent possible.

1. Fabricate sheet metal flashing and trim in thickness or weight needed to comply with performance requirements, but not less than that indicated for each application.
2. Obtain field measurements for accurate fit before shop fabrication.
3. Form sheet metal flashing and trim without excessive oil canning, buckling, and tool marks and true to line and levels indicated, with exposed edges folded back to form hems.
4. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces exposed to view.

B. Fabrication Tolerances: Fabricate sheet metal flashing and trim that is capable of installation to a tolerance of 1/4 inch in 20 feet (6 mm in 6 m) on slope and location lines as indicated and within 1/8-inch (3-mm) offset of adjoining faces and of alignment of matching profiles.

C. Sealed Joints: Form nonexpansion but movable joints in metal to accommodate elastomeric sealant.

D. Expansion Provisions: Where lapped expansion provisions cannot be used, form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with butyl sealant concealed within joints.

E. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal.

F. Seams: Fabricate nonmoving seams in galvanized (non prefinished) steel sheet with flat-lock seams. Tin edges to be seamed, form seams, and solder.

G. Seams: Fabricate nonmoving seams in prefinished steel sheet with flat-lock seams. Form seams and seal with elastomeric sealant unless otherwise recommended by sealant manufacturer for intended use. Rivet joints where necessary for strength.

H. Do not use graphite pencils to mark metal surfaces.

## 2.2 ROOF-DRAINAGE SHEET METAL FABRICATIONS

A. Hanging Gutters:

1. Fabricate to cross section required, complete with end pieces, outlet tubes, and other accessories as required.
2. Fabricate in minimum 96-inch- (2400-mm-) long sections.
3. Furnish flat-stock gutter brackets and flat-stock gutter spacers and straps fabricated from same metal as gutters, of size recommended by cited sheet metal standard, but with thickness not less than twice the gutter thickness.
4. Fabricate expansion joints, expansion-joint covers, and gutter accessories from same metal as gutters. Shop fabricate interior and exterior corners.
5. Gutter Profile: Style F in accordance with cited sheet metal standard.
6. Gutter Size: 5-1/2” wide x 5” tall.
7. Expansion Joints: Lap type.
8. Gutters with Girth up to 15 Inches (380 mm): Fabricate from the following materials:

    a. Galvanized Steel: 0.032 inch thick.

    b. Finish: Two-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions. Color to be selected by Architect from a full range of color options.

B. Downspouts: Fabricate rectangular downspouts to dimensions indicated on Drawings, complete with mitered elbows. Furnish with metal hangers from same material as downspouts and anchors.

1. Fabricated Hanger Style: Fig. 1-35H in accordance with SMACNA's "Architectural Sheet Metal Manual."
2. Downspout Profile: 3” x 4”
3. Fabricate from the following materials:

    a. Galvanized Steel: 0.022 inch (0.56 mm) thick.

    b. Finish: Two-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions. Color to be selected by Architect from a full range of color options. To match gutter color.

# PART 3 - EXECUTION

## 3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions and other conditions affecting performance of the Work.

1. Verify compliance with requirements for installation tolerances of substrates.
2. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.

B. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.

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

## 3.2 UNDERLAYMENT INSTALLATION

A. General: Install underlayment if and as indicated on Drawings.

## 3.3 INSTALLATION, GENERAL

A. General: Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement. Use fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.

1. Install sheet metal flashing and trim true to line and levels indicated. Provide uniform, neat seams with minimum exposure of solder, welds, and sealant.
2. Install sheet metal flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.
3. Install exposed sheet metal flashing and trim without excessive oil canning, buckling, and tool marks.
4. Install sealant tape where indicated.
5. Torch cutting of sheet metal flashing and trim is not permitted.
6. Do not use graphite pencils to mark metal surfaces.

B. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating or by other permanent separation as recommended by SMACNA.

1. Underlayment: Where installing metal flashing directly on cementitious or wood substrates, install a course of felt underlayment and cover with a slip sheet.

C. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet (3 m) with no joints allowed within 24 inches (600 mm) of corner or intersection. Where lapped expansion provisions cannot be used or would not be sufficiently watertight, form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with sealant concealed within joints.

D. Seal joints as shown and as required for watertight construction.

E. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Pre-tin edges of sheets to be soldered to a width of 1-1/2 inches (38 mm), except reduce pre-tinning where pre-tinned surface would show in completed Work.

F. Rivets: Rivet joints where indicated and where necessary for strength.

## 3.4 ROOF DRAINAGE SYSTEM INSTALLATION

A. General: Install sheet metal roof drainage items to produce complete roof drainage system according to SMACNA recommendations and as indicated. Coordinate installation of roof perimeter flashing with installation of roof drainage system.

B. Hanging Gutters:

1. Join sections with joints sealed with sealant.
2. Provide for thermal expansion.
3. Attach gutters at eave or fascia to firmly anchor them in position.
4. Provide end closures and seal watertight with sealant.
5. Slope to downspouts.
6. Fasten gutter spacers to front and back of gutter.
7. Anchor back of gutter that extends onto roof deck with cleats spaced not more than 24 inches (600 mm) apart.
8. Anchor gutter with gutter brackets spaced not more than 24 inches (600 mm) apart to roof deck unless otherwise indicated, and loosely lock to front gutter bead.

C. Downspouts:

1. Join sections with 1-1/2-inch (38-mm) telescoping joints.
2. Provide hangers with fasteners designed to hold downspouts securely to walls.
3. Locate hangers at top and bottom and at approximately 60 inches (1500 mm) o.c.
4. Connect downspouts to underground drainage system.

## 3.5 ROOF, WALL, AND OTHER FLASHING INSTALLATION

A. General: Install sheet metal flashing and trim to comply with SMACNA's "Architectural Sheet Metal Manual" and as indicated. Provide concealed fasteners where possible, set units true to line, and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.

## 3.6 ERECTION TOLERANCES

A. Installation Tolerances: Shim and align sheet metal flashing and trim within installed tolerance of 1/4 inch in 20 feet (6 mm in 6 m) on slope and location lines as indicated and within 1/8-inch (3-mm) offset of adjoining faces and of alignment of matching profiles.

## 3.7 CLEANING AND PROTECTION

A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.

B. Clean and neutralize flux materials. Clean off excess solder.

C. Clean off excess sealants.

D. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions. On completion of installation, remove unused materials and clean finished surfaces. Maintain in a clean condition during construction.

E. Replace sheet metal flashing and trim that have been damaged or that have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION 076200

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SECTION 079200 - JOINT SEALANTS GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes joint sealants for applications indicated on the Drawings that are not specifically included under any other specifications section.

1.3 PERFORMANCE REQUIREMENTS

A. Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.

B. Provide joint sealants for interior applications that establish and maintain airtight and water-resistant continuous joint seals without staining or deteriorating joint substrates.

1.4 SUBMITTALS

A. Product Data: For each joint-sealant product indicated.

B. Samples for Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.

1.5 QUALITY ASSURANCE

A. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.

1.6 PROJECT CONDITIONS

A. Do not proceed with installation of joint sealants under the following conditions:

1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F (5 deg C).
2. When joint substrates are wet.
3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
4. Contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Products: Subject to compliance with requirements, provide one of the products listed in other Part 2 articles.

B. Products by other manufacturers are subject to Architect's approval prior to bidding.

2.2 MATERIALS, GENERAL

A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer, based on testing and field experience.

B. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

2.3 ELASTOMERIC JOINT SEALANTS

A. Elastomeric Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied chemically curing sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.

B. Stain-Test-Response Characteristics: Where elastomeric sealants are specified to be nonstaining to porous substrates, provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.

C. Suitability for Immersion in Liquids. Where elastomeric sealants are indicated for Use I for joints that will be continuously immersed in liquids, provide products that have undergone testing according to ASTM C 1247 and qualify for the length of exposure indicated by reference to ASTM C 920 for Class 1 or 2. Liquid used for testing sealants is deionized water, unless otherwise indicated.

D. Single-Component Neutral-Curing Silicone Sealant: Use this sealant for joints subject to movement at interior and exterior locations for metals, glass, and ceramic type materials.

1. Products:

a. Dow Corning Corporation; 790.
b. Tremco; Spectrem 1
c. GE Silicones; SilPruf SCS2000.
d. Pecora Corporation; 864.

E. Single-Component Mildew-Resistant Acid-Curing Silicone Sealant: Use this sealant for joints in toilet rooms and interior wet areas.

1. Products:

a. Dow Corning Corporation; 786 Mildew Resistant.
b. GE Silicones; Sanitary SCS1700.
c. Tremco; Tremsil 200.

F. Single-Component Nonsag Urethane Sealant: Use this sealant for joints subject to movement are building exterior at stucco, concrete, and masonry, including expansion / control joints in walls and at interior locations where indicated.

1. Products:

a. Sika Corporation, Inc.; Sikaflex - 1a.
b. Sonneborn, Division of ChemRex Inc.; NP 1.
c. Tremco; Vulkem 116.

## 2.4 SOLVENT-RELEASE JOINT SEALANTS

A. Butyl-Rubber-Based Solvent-Release Joint Sealant: Comply with ASTM C 1085. Use this sealant in connection with exterior sheet metal work.

1. Products:

a. Bostik Findley; Bostik 300.
b. Fuller, H. B. Company; SC-0296.
c. Fuller, H. B. Company; SC-0288.
d. Pecora Corporation; BC-158.
e. Polymeric Systems Inc.; PSI-301
f. Sonneborn, Division of ChemRex Inc.; Sonneborn Multi-Purpose Sealant.
g. Tremco; Tremco Butyl Sealant.

## 2.5 LATEX JOINT SEALANTS

A. Latex Sealant: Comply with ASTM C 834, Type P, Grade NF. Use this sealant for general interior caulking and at drywall, CMU, and wood construction to be painted.

B. Products:
1. Pecora Corporation; AC-20+.
2. Sonneborn, Division of ChemRex Inc.; Sonolac.
3. Tremco; Tremflex 834.

## 2.6 ACOUSTICAL JOINT SEALANTS

A. Acoustical Sealant for Exposed and Concealed Joints: Manufacturer's standard nonsag, paintable, nonstaining latex sealant complying with ASTM C 834 and the following:

1. Product effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.
2. Products:

a. Pecora Corporation; AC-20 FTR Acoustical and Insulation Sealant.
b. United States Gypsum Co.; SHEETROCK Acoustical Sealant.

2.7 JOINT-SEALANT BACKING

A. General: Provide sealant backings of material and type that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

B. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin), O (open-cell material), B (bicellular material with a surface skin) or any of the preceding types, as approved in writing by joint-sealant manufacturer for joint application indicated, and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance:

C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

2.8 MISCELLANEOUS MATERIALS

A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.

C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.

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

## 3.2 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:

1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
2. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air.
3. Remove laitance and form-release agents from concrete.
4. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.:

B. Joint Priming: Prime joint substrates**,** where recommended in writing by joint-sealant manufacturer**,** based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

## 3.3 INSTALLATION OF JOINT SEALANTS

A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.

B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

C. Acoustical Sealant Application Standard: Comply with recommendations in ASTM C 919 for use of joint sealants in acoustical applications as applicable to materials, applications, and conditions indicated.

D. Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.

1. Do not leave gaps between ends of sealant backings.
2. Do not stretch, twist, puncture, or tear sealant backings.
3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.

E. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.

F. Install sealants using proven techniques that comply with the following and at the same time backings are installed:

1. Place sealants so they directly contact and fully wet joint substrates.
2. Completely fill recesses in each joint configuration.
3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

G. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.

1. Remove excess sealant from surfaces adjacent to joints.
2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
3. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.

## 3.4 CLEANING

A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

## 3.5 PROTECTION

A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

END OF SECTION 079200

SECTION 081113 - HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Standard hollow metal doors. (solid and with louvers)
2. Standard hollow metal door frames.

1.3 DEFINITIONS

A. Minimum Thickness: Minimum thickness of base metal without coatings.

B. SDI Designations: Reference to Steel Door Institute (SDI).

C. Standard Hollow Metal Work: Hollow metal work fabricated according to ANSI/SDI A250.8.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated. Include construction details, material descriptions, core descriptions, fire-resistance rating, and finishes.

B. Shop Drawings: Include the following:

1. Elevations of each door design.
2. Details of doors, including vertical and horizontal edge details and metal thicknesses.
3. Frame details for each frame type, including dimensioned profiles and metal thicknesses.
4. Locations of reinforcement and preparations for hardware.
5. Details of each different wall opening condition.
6. Details of anchorages, joints, field splices, and connections.
7. Details of accessories.
8. Details of moldings, removable stops, and glazing.
9. Details of conduit and preparations for power, signal, and control systems, if any.

C. Other Action Submittals:

1. Schedule: Provide a schedule of hollow metal work prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings. Coordinate with door hardware schedule.

D. Oversize Construction Certification: For assemblies required to be fire rated and exceeding limitations of labeled assemblies.

## 1.5 QUALITY ASSURANCE

A. Source Limitations: Obtain hollow metal work from single source from single manufacturer.

B. Fire-Rated Door Assemblies (if noted): Assemblies complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated.

1. Oversize Fire-Rated Door Assemblies: For units exceeding sizes of tested assemblies, provide certification by a qualified testing agency that doors comply with standard construction requirements for tested and labeled fire-rated door assemblies except for size.

C. All fire rated doors and frames shall be tested and labeled in conformance to the requirements of Section 716 of the International Building Code, 2015 Edition.

D. Provide doors and frames complying with Steel Door Institute "Recommended Specifications Standard Steel Doors and Frames", ANSI/SDI-100, and doors and frames that meet or exceed Hollow Metal Manufacturers Association (HMMA) manufacturing tolerances and that meet or exceed HMMA installation tolerances.

## 1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver hollow metal work palletized, wrapped, or crated to provide protection during transit and Project-site storage. Do not use nonvented plastic.

1. Provide additional protection to prevent damage to finish of factory-finished units.

B. Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.

C. Store hollow metal work under cover at Project site. Place in stacks of five units maximum in a vertical position with heads up, spaced by blocking, on minimum 4-inch- (102-mm-) high wood blocking. Do not store in a manner that traps excess humidity.

1. Provide minimum 1/4-inch (6-mm) space between each stacked door to permit air circulation.

## 1.7 PROJECT CONDITIONS

A. Field Measurements: Verify actual dimensions of openings by field measurements before fabrication.

1.8 COORDINATION

A. Coordinate installation of anchorages for hollow metal frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.

B. Coordinate all specified exterior and interior doors that are shown on the Hardware Schedule to be designated for installation of future access control hardware and systems. The hollow metal doors at these locations shall be fabricated with an interior horizontal cable raceway for extension of wiring from hinge to latch for electronic access control wiring.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Amweld Building Products, LLC.
2. Ceco Door Products; an Assa Abloy Group company.
3. Curries Company; an Assa Abloy Group company.
4. Fleming Door Products Ltd.; an Assa Abloy Group company.
5. Kewanee Corporation (The).
6. Mesker Door Inc.
7. Steelcraft; an Ingersoll-Rand company.

2.2 MATERIALS

A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.

B. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.

C. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B; with minimum G60 (Z180) or A60 (ZF180) metallic coating.

D. Frame Anchors: ASTM A 591/A 591M, Commercial Steel (CS), 40Z (12G) coating designation; mill phosphatized.

1. For anchors built into exterior walls, steel sheet complying with ASTM A 1008/A 1008M or ASTM A 1011/A 1011M, hot-dip galvanized according to ASTM A 153/A 153M, Class B.

E. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.

F. Powder-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with clips or other accessory devices for attaching hollow metal frames of type indicated.

G. Grout: ASTM C 476, except with a maximum slump of 4 inches (102 mm), as measured according to ASTM C 143/C 143M.

H. Mineral-Fiber Insulation: ASTM C 665, Type I (blankets without membrane facing); consisting of fibers manufactured from slag or rock wool with 6- to 12-lb/cu. ft. (96- to 192-kg/cu. m) density; with maximum flame-spread and smoke-development indexes of 25 and 50, respectively; passing ASTM E 136 for combustion characteristics.

I. Glazing: Comply with requirements in Division 08 Section "Glazing."

J. Bituminous Coating: Cold-applied asphalt mastic, SSPC-Paint 12, compounded for 15-mil (0.4-mm) dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

## 2.3 STANDARD HOLLOW METAL DOORS

A. General: Provide doors of design indicated, not less than thickness indicated; fabricated with smooth surfaces, without visible joints or seams on exposed faces unless otherwise indicated. Comply with ANSI/SDI A250.8.

1. Design: Flush panel.
2. Core Construction: Manufacturer's standard polystyrene, polyurethane, polyisocyanurate, or vertical steel-stiffener core.

    a. Fire Door Core: As required to provide fire-protection and temperature-rise ratings indicated.
    b. Thermal-Rated (Insulated) Doors: At building exterior and where indicated, provide doors fabricated with thermal-resistance value (R-value) of not less than 6.0 deg F x h x sq. ft./Btu (1.057 K x sq. m/W) when tested according to ASTM C 1363.

        1) Locations: Exterior doors.

3. Vertical Edges for Single-Acting Doors: Manufacturer's standard.

    a. Beveled Edge: 1/8 inch in 2 inches (3 mm in 50 mm).

4. Top and Bottom Edges: Closed with flush or inverted 0.042-inch- (1.0-mm-) thick, end closures or channels of same material as face sheets.
5. Tolerances: Comply with SDI 117, "Manufacturing Tolerances for Standard Steel Doors and Frames."

B. Exterior Doors: Face sheets fabricated from metallic-coated steel sheet. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model and ANSI/SDI A250.4 for physical performance level:

1. Level 4 and Physical Performance Level A (Maximum Duty), Model 1 (Full Flush), 0.067”.

C. Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 with reinforcing plates from same material as door face sheets.

D. Fabricate concealed stiffeners and hardware reinforcement from either cold- or hot-rolled steel sheet.

E. Openings in doors for lights and / or louvers shall be cut and perimeter reinforced at place of door manufacture. Do not field cut openings in doors.

## 2.4 STANDARD HOLLOW METAL FRAMES

A. General: Comply with ANSI/SDI A250.8 and with details indicated for type and profile.

B. Exterior Frames: Fabricated from metallic-coated steel sheet.

1. Fabricate frames with mitered or coped corners.
2. Fabricate frames as full profile welded unless otherwise indicated.
3. Frames for Level 4 Steel Doors: 0.053-inch- (1.3-mm-) thick steel sheet.

C. Interior Frames: Fabricated from cold-rolled steel sheet.

1. Fabricate frames with mitered or coped corners.
2. Fabricate frames as face welded unless otherwise indicated.
3. Frames for Wood Doors: 0.053-inch- (1.3-mm-) thick steel sheet.
4. Frames for Borrowed Lights: 0.053-inch- (1.3-mm-) thick steel sheet.

D. Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 with reinforcement plates from same material as frames.

## 2.5 FRAME ANCHORS

A. Jamb Anchors:

1. Masonry Type: Adjustable strap-and-stirrup or T-shaped anchors to suit frame size, not less than 0.042 inch (1.0 mm) thick, with corrugated or perforated straps not less than 2 inches (50 mm) wide by 10 inches (250 mm) long; or wire anchors not less than 0.177 inch (4.5 mm) thick.
2. Steel Stud-Wall Type: Designed to engage stud, welded to back of frames; not less than 0.042 inch (1.0 mm) thick.
3. Postinstalled Expansion Type for In-Place Concrete or Masonry: Minimum 3/8-inch- (9.5-mm-) diameter bolts with expansion shields or inserts. Provide pipe spacer from frame to wall, with throat reinforcement plate, welded to frame at each anchor location. Use subject to approval of the Architect for specific conditions.

B. Floor Anchors: Formed from same material as frames, not less than 0.042 inch (1.0 mm) thick, and as follows:

1. Monolithic Concrete Slabs: Clip-type anchors, with two holes to receive fasteners.

## 2.6 STOPS AND MOLDINGS

A. Moldings for Glazed Lites in Doors: Minimum 0.032 inch (0.8 mm) thick, fabricated from same material as door face sheet in which they are installed.

B. Fixed Frame Moldings: Formed integral with hollow metal frames, a minimum of 5/8 inch (16 mm) high unless otherwise indicated.

C. Loose Stops for Glazed Lites in Frames: Minimum 0.032 inch (0.8 mm) thick, fabricated from same material as frames in which they are installed.

## 2.7 LOUVERS

A. Provide louvers for interior doors, where indicated, that comply with SDI 111C, with blades or baffles formed of 0.020-inch- ((0.5-mm-)) thick, cold-rolled steel sheet set into 0.032-inch- (0.8-mm-) thick steel frame.

1. Sightproof Louver: Stationary louvers constructed with inverted V-shaped or Y-shaped blades.

2. Louvers shall be located in Doors 108a and 102a. Louvers shall be 12” x 12” installed low on the door.

## 2.8 ACCESSORIES

A. Mullions and Transom Bars: Join to adjacent members by welding or rigid mechanical anchors.

B. Grout Guards: Formed from same material as frames, not less than 0.016 inch (0.4 mm) thick.

## 2.9 FABRICATION

A. Fabricate hollow metal work to be rigid and free of defects, warp, or buckle. Accurately form metal to required sizes and profiles, with minimum radius for thickness of metal. Where practical, fit and assemble units in manufacturer's plant. To ensure proper assembly at Project site, clearly identify work that cannot be permanently factory assembled before shipment.

B. Tolerances: Fabricate hollow metal work to tolerances indicated in SDI 117.

C. Hollow Metal Doors:

1. Exterior Doors: Provide weep-hole openings in bottom of exterior doors to permit moisture to escape. Seal joints in top edges of doors against water penetration.
2. Glazed Lites: Factory cut openings in doors.
3. Electrical Raceways: Provide hollow metal doors to receive electrified hardware with concealed wiring harness and standardized Molex™ plug connectors on both ends to accommodate up to twelve wires. Coordinate connectors on end of the wiring harness to plug directly into the electrified hardware and the through-wire transfer hardware or wiring harness specified in hardware sets in Division 08 Sections "Door Hardware" and "Access Control Hardware". Wire nut connections are not acceptable.

D. Hollow Metal Frames: Where frames are fabricated in sections due to shipping or handling limitations, provide alignment plates or angles at each joint, fabricated of same thickness metal as frames.

1. Welded Frames: Weld joints continuously; grind, fill, dress, and make smooth, flush, and invisible.
2. Sidelight and Transom Bar Frames: Provide closed tubular members with no visible face seams or joints, fabricated from same material as door frame. Fasten members at crossings and to jambs by butt welding.
3. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.
4. Grout Guards: Weld guards to frame at back of hardware mortises in frames to be grouted.
5. Floor Anchors: Weld anchors to bottom of jambs and mullions with at least four spot welds per anchor.
6. Jamb Anchors: Provide number and spacing of anchors as follows:

    a. Masonry Type: Locate anchors not more than 18 inches (457 mm) from top and bottom of frame. Space anchors not more than 32 inches (813 mm) o.c. and as follows:

        1) Two anchors per jamb up to 60 inches (1524 mm) high.
        2) Three anchors per jamb from 60 to 90 inches (1524 to 2286 mm) high.
        3) Four anchors per jamb from 90 to 120 inches (2286 to 3048 mm) high.

    b. Stud-Wall Type: Locate anchors not more than 18 inches (457 mm) from top and bottom of frame. Space anchors not more than 32 inches (813 mm) o.c. and as follows:

        1) Three anchors per jamb up to 60 inches (1524 mm) high.
        2) Four anchors per jamb from 60 to 90 inches (1524 to 2286 mm) high.
        3) Five anchors per jamb from 90 to 96 inches (2286 to 2438 mm) high.

    c. Postinstalled Expansion Type: Locate anchors not more than 6 inches (152 mm) from top and bottom of frame. Space anchors not more than 26 inches (660 mm) o.c.

7. Door Silencers: Except on weather-stripped or gasketed doors, drill stops to receive door silencers as follows. Keep holes clear during construction.

    a. Single-Door Frames: Drill stop in strike jamb to receive three door silencers.
    b. Double-Door Frames: Drill stop in head jamb to receive two door silencers.

E. Fabricate concealed stiffeners, edge channels, and hardware reinforcement from either cold- or hot-rolled steel sheet.

F. Hardware Preparation: Factory prepare hollow metal work to receive templated mortised hardware; include cutouts, reinforcement, mortising, drilling, and tapping according to the Door Hardware Schedule and templates furnished as specified in Division 08 Section "Door Hardware."

1. Locate hardware as indicated, or if not indicated, according to ANSI/SDI A250.8.
2. Reinforce doors and frames to receive nontemplated, mortised and surface-mounted door hardware.

3. Comply with applicable requirements in ANSI/SDI A250.6 and ANSI/DHI A115 Series specifications for preparation of hollow metal work for hardware.
4. Coordinate locations of conduit and wiring boxes for electrical connections, if any, with Division 26 Sections.

G. Stops and Moldings: Provide stops and moldings around glazed lites where indicated. Form corners of stops and moldings with butted or mitered hairline joints.

1. Single Glazed Lites: Provide fixed stops and moldings welded on secure side of hollow metal work.
2. Multiple Glazed Lites: Provide fixed and removable stops and moldings so that each glazed lite is capable of being removed independently.
3. Provide fixed frame moldings on outside of exterior and on secure side of interior doors and frames.
4. Provide loose stops and moldings on inside of hollow metal work.
5. Coordinate rabbet width between fixed and removable stops with type of glazing and type of installation indicated.

## 2.10 STEEL FINISHES

A. Prime Finish: Apply manufacturer's standard primer immediately after cleaning and pretreating.

1. Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with ANSI/SDI A250.10 acceptance criteria; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.

# PART 3 - EXECUTION

## 3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Examine roughing-in for embedded and built-in anchors to verify actual locations before frame installation.

C. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.

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

## 3.2 PREPARATION

A. Remove welded-in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces.

B. Prior to installation, adjust and securely brace welded hollow metal frames for squareness, alignment, twist, and plumbness to the following tolerances:

1. Squareness: Plus or minus 1/16 inch (1.6 mm), measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
2. Alignment: Plus or minus 1/16 inch (1.6 mm), measured at jambs on a horizontal line parallel to plane of wall.
3. Twist: Plus or minus 1/16 inch (1.6 mm), measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
4. Plumbness: Plus or minus 1/16 inch (1.6 mm), measured at jambs on a perpendicular line from head to floor.

C. Drill and tap doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.

## 3.3 INSTALLATION

A. General: Install hollow metal work plumb, rigid, properly aligned, and securely fastened in place; comply with Drawings and manufacturer's written instructions.

B. Hollow Metal Frames: Install hollow metal frames of size and profile indicated. Comply with ANSI/SDI A250.11.

1. Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces, leaving surfaces smooth and undamaged.

    a. At fire-protection-rated openings, install frames according to National Fire Protection Association (NFPA) NFPA 80.
    b. Where frames are fabricated in sections because of shipping or handling limitations, field splice at approved locations by welding face joint continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces.
    c. Install frames with removable glazing stops located on secure side of opening.
    d. Install door silencers in frames before grouting.
    e. Remove temporary braces necessary for installation only after frames have been properly set and secured.
    f. Check plumbness, squareness, and twist of frames as walls are constructed. Shim as necessary to comply with installation tolerances.
    g. Field apply bituminous coating to backs of frames that are filled with grout.

2. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor, and secure with postinstalled expansion anchors.

    a. Floor anchors may be set with powder-actuated fasteners instead of postinstalled expansion anchors if so indicated and approved on Shop Drawings.

3. Metal-Stud Partitions: Solidly pack mineral-fiber insulation behind frames.
4. Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with grout.

5. Concrete Walls: Solidly fill space between frames and concrete with grout. Take precautions, including bracing frames, to ensure that frames are not deformed or damaged by grout forces.
6. In-Place Concrete or Masonry Construction: Secure frames in place with postinstalled expansion anchors. Countersink anchors, and fill and make smooth, flush, and invisible on exposed faces.
7. In-Place Gypsum Board Partitions: Secure frames in place with postinstalled expansion anchors through floor anchors at each jamb. Countersink anchors, and fill and make smooth, flush, and invisible on exposed faces.

8. Installation Tolerances: Adjust hollow metal door frames for squareness, alignment, twist, and plumb to the following tolerances:

    a. Squareness: Plus or minus 1/16 inch (1.6 mm), measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
    b. Alignment: Plus or minus 1/16 inch (1.6 mm), measured at jambs on a horizontal line parallel to plane of wall.
    c. Twist: Plus or minus 1/16 inch (1.6 mm), measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
    d. Plumbness: Plus or minus 1/16 inch (1.6 mm), measured at jambs at floor.

C. Hollow Metal Doors: Fit hollow metal doors accurately in frames, within clearances specified below. Shim as necessary.

1. Non-Fire-Rated Standard Steel Doors:

    a. Jambs and Head: 1/8 inch (3 mm) plus or minus 1/16 inch (1.6 mm).
    b. Between Edges of Pairs of Doors: 1/8 inch (3 mm) plus or minus 1/16 inch (1.6 mm).
    c. Between Bottom of Door and Top of Threshold: Maximum 3/8 inch (9.5 mm).
    d. Between Bottom of Door and Top of Finish Floor (No Threshold): Maximum 3/4 inch (19 mm).

2. Fire-Rated Doors: Install doors with clearances according to NFPA 80.

D. Glazing: Secure stops with countersunk flat- or oval-head machine screws spaced uniformly not more than 9 inches (230 mm) o.c. and not more than 2 inches (50 mm) o.c. from each corner.

## 3.4 ADJUSTING AND CLEANING

A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including hollow metal work that is warped, bowed, or otherwise unacceptable.

B. Remove grout and other bonding material from hollow metal work immediately after installation.

C. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.

D. Metallic-Coated Surfaces: Clean abraded areas and repair with galvanizing repair paint according to manufacturer's written instructions.

END OF SECTION 081113

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SECTION 083323 - OVERHEAD COILING DOORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Rollup Counter doors.

a. Crank up counter door operation.

B. Refer to the Drawings for types, locations, and sizes of counter doors.

1.3 PERFORMANCE REQUIREMENTS

A. Seismic Performance: Overhead coiling doors shall withstand the effects of earthquake motions determined according to SEI/ASCE 7.

1. The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified.
2. Seismic Component Importance Factor: 1.5.

B. Operation Cycles: Provide overhead coiling door components and operators capable of operating for not less than number of cycles indicated for each door. One operation cycle is complete when a door is opened from the closed position to the fully open position and returned to the closed position.

1.4 SUBMITTALS

A. Product Data: For each type and size of overhead coiling door and accessory. Include the following:

1. Construction details, material descriptions, dimensions of individual components, profiles for slats, and finishes.
2. Rated capacities, operating characteristics, electrical characteristics, and furnished accessories.

B. Shop Drawings: For each installation and for special components not dimensioned or detailed in manufacturer's product data. Include plans, elevations, sections, details, and attachments to other work.

1. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
2. Wiring Diagrams: For power, signal, and control wiring.

C. Qualification Data: For qualified Installer.

D. Maintenance Data: For overhead coiling doors to include in maintenance manuals.

## 1.5 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for both installation and maintenance of units required for this Project.

B. Source Limitations: Obtain overhead coiling doors from single source from single manufacturer.

1. Obtain operators and controls from overhead coiling door manufacturer.

# PART 2 - PRODUCTS

## 2.1 DOOR CURTAIN MATERIALS AND CONSTRUCTION

A. Door Curtains: Fabricate overhead coiling-door curtain of interlocking metal slats, designed to withstand wind loading indicated, in a continuous length for width of door without splices. Unless otherwise indicated, provide slats of thickness and mechanical properties recommended by door manufacturer for performance, size, and type of door indicated, and as follows:

1. Steel Door Curtain Slats: Galvanized Steel, 20 Gauge, Grade 40 Steel with GalvaNex Coating system.

B. Endlocks for Counter Doors: Manufacturer's standard locks on not less than alternate curtain slats for curtain alignment and resistance against lateral movement.

C. Bottom Bar for Service Doors: Consisting of two angles, each not less than 1-1/2 by 1-1/2 by 1/8 inch (38 by 38 by 3 mm) thick; fabricated from manufacturer's standard hot-dip galvanized steel, stainless steel, or aluminum extrusions to match curtain slats and finish.

D. Bottom Bar for Counter Doors: Manufacturer's standard continuous channel or tubular shape, fabricated from manufacturer's standard hot-dip galvanized steel, stainless steel, or aluminum extrusions to match curtain slats and finish.

E. Curtain Jamb Guides: Manufacturer's standard angles or channels and angles of same material and finish as curtain slats with sufficient depth and strength to retain curtain, to allow curtain to operate smoothly, and to withstand loading. Slot bolt holes for guide adjustment. Provide removable stops on guides to prevent overtravel of curtain.

2.2 HOOD

A. General: Form sheet metal hood to entirely enclose coiled curtain and operating mechanism at opening head. Contour to fit end brackets to which hood is attached. Roll and reinforce top and bottom edges for stiffness. Form closed ends for surface-mounted hoods and fascia for any portion of between-jamb mounting that projects beyond wall face. Equip hood with intermediate support brackets as required to prevent sagging.

1. Galvanized Steel, 20 Gauge, Grade 40 Steel with GalvaNex Coating system.

2.3 LOCKING DEVICES

A. Slide Bolt: Fabricate with side-locking bolts to engage through slots in tracks located on both left and right jamb sides, operable from coil side.

2.4 COUNTERBALANCING MECHANISM

A. General: Counterbalance doors by means of manufacturer's standard mechanism with an adjustable-tension, steel helical torsion spring mounted around a steel shaft and contained in a spring barrel connected to top of curtain with barrel rings. Use grease-sealed bearings or self-lubricating graphite bearings for rotating members.

2.5 MANUAL DOOR OPERATORS

A. Crank-up Door Operation: Crank hoist operator including crank gear box, steel crank drive shaft and geared reduction unit. Fabricate gear box to completely enclose operating mechanism and be oil-tight.

2.6 DOOR ASSEMBLY

A. Counter Doors: Overhead coiling doors formed with curtain of interlocking metal slats.

1. Manufacturers / Products: Subject to compliance with requirements, provide the following:

a. Crank-up counter Door.

1) Cookson Company / Type ESC 10. Located at Concessions Room.
2) Slat Gauge 20.

2. Products by other manufacturers are subject to Architect’s approval prior to bidding.

B. Operation Cycles: Not less than 20,000.

C. Door Curtain Material: Galvanized steel with GalvaNex coating system.

D. Door Curtain Slats: Flat profile slats of 1-1/4-inch (32-mm) center-to-center height.

E. Curtain Jamb Guides: With exposed finish matching curtain slats.

F. Integral Frame, Hood, and Fascia for Counter Door: Galvanized Steel, 20 gauge, with GalvaNex coating system.

1. Mounting: Jamb mounted.

G. Locking Devices: Equip door with slide bolt.

1. Locking Device Assembly: Single jamb side locking bars, operable from inside.

H. Manual Door Operator: Crank-up operation.

I. Door Finish:

1. GalvaNex Coating System, color as selected by architect.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

A. Examine substrates areas and conditions, with Installer present, for compliance with requirements for substrate construction and other conditions affecting performance of the Work.

B. Examine locations of electrical connections.

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

### 3.2 INSTALLATION

A. Install overhead coiling doors and operating equipment complete with necessary hardware, anchors, inserts, hangers, and equipment supports; according to manufacturer's written instructions and as specified.

B. Install overhead coiling doors, hoods, and operators at the mounting locations indicated for each door.

C. Accessibility: Install overhead coiling doors, switches, and controls along accessible routes in compliance with regulatory requirements for accessibility.

### 3.3 ADJUSTING

A. Adjust hardware and moving parts to function smoothly so that doors operate easily, free of warp, twist, or distortion.

B. Lubricate bearings and sliding parts as recommended by manufacturer.

## 3.4 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain overhead coiling doors.

END OF SECTION 083323

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SECTION 087100 - DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Commercial door hardware for the following:

a. Swinging doors.
b. Other doors to the extent indicated.

2. Cylinders for doors specified in other Sections.

B. Related Sections include the following:

1. Division 08 Section "Hollow Metal Doors and Frames"
2. Division 08 Section "Overhead Coiling Doors"

C. Products furnished, but not installed, under this Section include the following. Coordinating, purchasing, delivering, and scheduling remain requirements of this Section.

1. Thresholds, weather stripping, and cylinders for locks specified in other Sections.

1.3 REFERENCED STANDARDS

A. Provide hardware in accordance with the following standards in addition to those specified in Division 01 Section “References”.

1. American National Standards Institute (ANSI), A117.1: Accessible and Usable Buildings and Facilities, edition as adopted by local Authority Having Jurisdiction (AHJ).

2. Builders Hardware Manufacturer’s Association (BHMA)

a. ANSI/BHMA A156.2: Bored and Preassembled Locks and Latches, 2011 edition
b. ANSI/BHMA A156.3: Exit Devices, 2008 edition
c. ANSI/BHMA A156.4: Door Controls - Closers, 2008 edition
d. ANSI/BHMA A156.13: Mortise Locks and Latches, 2012 edition
e. ANSI/BHMA A156.15: Release Devices – Closer Holder, Electromagnetic, and Electromechanical, 2011 edition
f. ANSI/BHMA A156.18: Materials and Finishes, 2006 edition

g. ANSI/BHMA A156.19: Power Assist and Low Energy Power Operated Doors, 2007 edition

3. Door and Hardware Institute (DHI)

a. Recommended Locations for Architectural Hardware for Flush Wood Doors, 1993 edition
b. Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames, 2004 edition
c. Installation Guide for Doors and Hardware, 1994 edition
d. Keying Systems and Nomenclature, 2003 edition
e. Sequence and Format for the Hardware Schedule, 2001 edition

4. National Fire Protection Association (NFPA)

a. NFPA 70: National Electrical Code, edition as adopted by local AHJ.
b. NFPA 80: Standard for Fire Doors and Other Opening Protectives, edition as adopted by local AHJ.
c. NFPA 252: Standard Methods of Fire Tests of Door Assemblies, edition as adopted by local AHJ.

## 1.4 SUBMITTALS

A. Product Data: Include construction and installation details, material descriptions, dimensions of individual components and profiles, and finishes.

B. Samples for Verification: For exposed door hardware of each type, in specified finish, full size. Tag with full description for coordination with the door hardware sets. Submit Samples before, or concurrent with, submission of the final door hardware sets, if requested.

1. Samples will be returned to Contractor. Units that are acceptable and remain undamaged through submittal, review, and field comparison process may, after final check of operation, be incorporated into the Work, within limitations of keying requirements.

C. Qualification Data: For Installer

D. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for locks, latches, and closers as requested.

E. Maintenance Data: For each type of door hardware to include in maintenance manuals. Include final hardware and keying schedule.

F. Warranty: Special warranty specified in this Section.

G. Door Hardware Sets: Prepared by or under the supervision of Architectural Hardware Consultant, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final door hardware sets with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.

1. Format: Use same scheduling sequence and format and use same door numbers as in the Contract Documents.
2. Content: Include the following information:

a. Identification number, location, hand, fire rating, and material of each door and frame.
b. Type, style, function, size, quantity, and finish of each door hardware item.
c. Complete designations of every item required for each door or opening including name and manufacturer.
d. Fastenings and other pertinent information.
e. Location of each door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
f. Explanation of abbreviations, symbols, and codes contained in schedule.
g. Mounting locations for door hardware.
h. Door and frame sizes and materials.
i. Description of each electrified door hardware function, including location, sequence of operation, and interface with other building control systems.
j. Sequence of Operation: Include description of component functions that occur in the following situations: authorized person wants to enter; authorized person wants to exit; unauthorized person wants to enter; unauthorized person wants to exit.
k. List of related door devices specified in other Sections for each door and frame.

3. Submittal Sequence: Submit the final door hardware sets at earliest possible date, particularly where approval of the door hardware sets must precede fabrication of other work that is critical in Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the door hardware sets.

H. Keying Schedule: Prepared by or under the supervision of Architectural Hardware Consultant, detailing Owner's final keying instructions for locks. Include schematic keying diagram and index each key set to unique door designations.

## 1.5 QUALITY ASSURANCE

A. Installer Qualifications: An employer of workers trained and approved by lock manufacturer.

1. Installer's responsibilities include supplying and installing door hardware and providing a qualified Architectural Hardware Consultant available during the course of the Work to consult with Contractor, Architect, and Owner about door hardware and keying.
2. Installer shall have warehousing facilities in Project's vicinity.
3. Scheduling Responsibility: Preparation of door hardware and keying schedules.
4. Engineering Responsibility: Preparation of data for electrified door hardware, including Shop Drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this Project.

B. Architectural Hardware Consultant Qualifications: A person who is currently certified by DHI as an Architectural Hardware Consultant and who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project.

C. Source Limitations: Obtain each type and variety of door hardware from a single manufacturer, unless otherwise indicated.

## 1.6 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up for door hardware delivered to Project site.

B. Tag each item or package separately with identification related to the final door hardware sets, and include basic installation instructions, templates, and necessary fasteners with each item or package.

C. Deliver keys to Owner's Representative by registered mail or overnight package service.

## 1.7 COORDINATION

A. Coordinate layout and installation of recessed hardware with floor construction. Cast anchoring inserts into concrete. Concrete, reinforcement, and formwork requirements are specified in Division 03.

B. Templates: Distribute door hardware templates for doors, frames, and other work specified to be factory prepared for installing door hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

C. Coordinate with aluminum entrance door supplier for door hardware installation.

## 1.8 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

    a. Structural failures including excessive deflection, cracking, or breakage.
    b. Faulty operation of operators and door hardware.
    c. Deterioration of metals, metal finishes, and other materials beyond normal weathering and use.

2. Warranty Period: Three (3) years from date of Substantial Completion, except as follows:

    a. Continuous Hinges: Lifetime of Building
    b. Mortise Locks: Five (5) years from date of Substantial Completion.
    c. Grade 1 Cylindrical Locks: Ten (10) years from date of Substantial Completion.
    d. Exit Devices: Three (3) years from date of Substantial Completion.
    e. Manual Closers: Thirty (30) years from date of Substantial Completion.

1.9 MAINTENANCE SERVICE

A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

B. Maintenance Service: Beginning at Substantial Completion, provide six (6) months' full maintenance by skilled employees of door hardware Installer. Include quarterly preventive maintenance, repair or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper door hardware operation. Provide parts and supplies same as those used in the manufacture and installation of original products.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design: Subject to compliance with performance requirements.

| | | |
|---|---|---|
| 1. | Hinges: | Ives, Hager, Stanley, McKinney, Bommer |
| 2. | Continuous Hinges: | Ives, Stanley, Hager, Select, McKinney, Pemko |
| 3. | Operating Door Trim: | Ives, Rockwood, Hager, Trimco |
| 4. | Decorative Door Pulls: | Ives, Rockwood, Hager, Burns |
| 5. | Locks and Latches: | Schlage, Owner’s Standard |
| 6. | Cylinders and Cores: | Primus Exterior, Everest Interior |
| 7. | Exit Devices: | Von Duprin, Owner’s Standard |
| 8. | Mechanical Door Closers: | LCN, Owner’s Standard |
| 9. | Closer Release Devices: | LCN , Rixson, ABH, Sargent |
| 10. | Accessories and Trim: | Ives, Rockwood, Hager, Trimco |
| 11. | Overhead Stops and Holders: | Glynn Johnson, Rixson, ABH, Sargent |
| 12. | Saddle and Panic Thresholds: | Zero, National Guard, Pemko |
| 13. | Weather Strip and Gasket: | Zero, National Guard, Pemko |
| 14. | Miscellaneous Hardware: | Ives, Rockwood, Hager, Trimco |

2.2 SCHEDULED HARDWARE

A. Requirements for design, grade, function, finish, size, and other distinctive qualities of each type of finish hardware are indicated in the "Hardware Schedule" at the end of this Section. Products are identified by using hardware designation numbers of the following:

1. Manufacturer's Product Designations: The product designation and name of one manufacturer are listed for each hardware type required for the purpose of establishing minimum requirements. Provide either the product designated or, where more than one manufacturer is specified under the Article "Manufacturers" in Part 2 for each hardware type, the comparable product of one of the other manufacturers that complies with requirements.

## 2.3 MATERIALS AND FABRICATION

A. General
   1. Manufacturer's Name Plate: Do not use manufacturers' products that have manufacturer's name or trade name displayed in a visible location (omit removable nameplates) except in conjunction with required fire-rated labels and as otherwise acceptable to Architect.

      a. Manufacturer's identification will be permitted on rim of lock cylinders only.

   2. Base Metals: Produce hardware units of basic metal and forming method indicated using manufacturer's standard metal alloy, composition, temper, and hardness, but in no case of lesser (commercially recognized) quality than specified for applicable hardware units for finish designations indicated.
   3. Provide hardware manufactured to conform to published templates generally prepared for machine screw installation. Do not provide hardware that has been prepared for self-tapping sheet metal screws, except as specifically indicated.

B. Fasteners
   1. Furnish screws for installation with each hardware item. Provide Phillips flat-head screws except as otherwise indicated. Furnish stainless steel (exposed under any condition) screws to match hardware finish or, if exposed in surfaces of other work, to match finish of this other work as closely as possible including "prepared for paint" surfaces to receive painted finish.
   2. Provide concealed fasteners for hardware units that are exposed when door is closed except to the extent no standard units of type specified are available with concealed fasteners. Use through bolts only as indicated in this section unless their use is the only means of reinforcing the work adequately to fasten the hardware securely. Where thru-bolts are used as a means of reinforcing the work, provide sleeves for each thru-bolt or use sex screw fasteners.

## 2.4 HINGES

A. Acceptable Products:

| | | | |
|---|---|---|---|
| 1. | Ives: | 5BB1 | 5BB1HW |
| 2. | Hager: | BB1279 | BB1168 |
| 3. | Stanley: | FBB179 | FBB168 |
| 4. | McKinney: | TB2714 | T4B3386 |
| 5. | Bommer: | BB5000 | BB5004 |

B. Requirements:

   1. Quantity: Provide the following, unless otherwise indicated:

      a. Two Hinges: For doors with heights up to 60 inches.
      b. Three Hinges: For doors with heights 61 to 90 inches.

   2. Template Requirements: Except for hinges and pivots to be installed entirely (both leaves) into wood doors and frames, provide only template-produced units.
   3. Hinge Weight: As indicated in hardware sets.
   4. Hinge Base Metal: Unless otherwise indicated, provide the following:

a. Exterior Hinges: Stainless steel with stainless-steel pin.
b. Interior Hinges: Steel with steel pin.
c. Hinges for Fire-Rated Assemblies: Steel with steel pin.

5. Hinge Options: Where indicated in door hardware sets or on Drawings:

a. Safety Stud: Designed for stud in one leaf to engage hole in opposing leaf.
b. Non-removable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for out-swinging doors.
c. Corners: Square.

6. Fasteners: Comply with the following:

a. Machine Screws: For metal doors and frames. Install into drilled and tapped holes.
b. Wood Screws: For wood doors and frames.
c. Threaded-to-the-Head Wood Screws: For fire-rated wood doors.

## 2.5 CONTINUOUS HINGES

A. Acceptable Products:

| | | | |
|---|---|---|---|
| 1. | Ives: | 112HD | 224HD |
| 2. | Stanley: | 661HD | 662HD |
| 3. | Hager: | 780-112HD | 780-224HD |
| 4. | Select: | SL11HD | SL24HD |
| 5. | McKinney: | MCK-12HD | MCK-25HD |
| 6. | Pemko: | FMSLFHD | FMHD |

B. Requirements:

1. Geared Continuous Hinges: Shall utilize a single gear section for the door leaf and a separate gear section for the frame side of the door. Provide full mortise or surface applied hinge as scheduled in each set. Geared hinges are to be UL 10C tested and approved for 90 minutes.

a. To be used on all aluminum doors and all oversized (over 36” in width) wood or hollow metal doors or any door considered to be high frequency .
1) High frequency doors are exit device doors, kitchens, locker rooms, public restrooms.

## 2.6 OPERATING DOOR TRIM

A. Door Bolts

1. Acceptable Products:

| | | |
|---|---|---|
| a. | Ives: | FB358/FB458 |
| b. | Rockwood: | 557/555 |
| c. | Hager: | 283D/282D |

d. Trimco: 3915/3917

2. Requirements:

a. Provide bolt model recommended by manufacturer for door material type.
b. Provide 1 inch throw stainless steel bolt with 12 inch length unless otherwise scheduled in the sets.
c. Provide a dust proof strike for bottom bolt at all locations where there is not a threshold.

B. Push Plates, Pull Plates, and Pulls

1. Acceptable Products:

| | | | | | |
|---|---|---|---|---|---|
| a. | Ives: | 8200 | 8303 | 9100 | 8112-5 |
| b. | Rockwood: | 70C | 111x70C | 47 | 130 |
| c. | Hager: | 30S | 31J | 130S | 7N |
| d. | Trimco: | 1001 | 1018 | 1741 | 1102T |

2. Requirements:

a. Push Plate: Provide 6 inch by 16 inch by .050 inch push plate constructed of stainless steel. Bevel all four edges.
b. Pull Plate: Provide 4 inch by 16 inch by .050 inch push plate constructed of stainless steel, bevel all four edges. Provide 10 inch center to center (CTC) pull constructed of stainless steel with a diameter of 1 inch.
c. Offset Pull: Provide 10 inch center to center (CTC) pull with a 4 inch offset constructed of stainless steel with a diameter of 1 inch.
d. Push bar: Push bar shall be constructed of stainless steel with a diameter of 1 inch.
e. Push/Pull Bar: Provide 10 inch center to center (CTC) pull with a 4 inch offset and door pull equal to door width less 3 inches. Push/pull bar shall be constructed of stainless steel with a diameter of 1 inch.

## 2.7 LOCKS AND LATCHES

A. General:

1. Lock Chassis: Shall be made from steel, with locking spindles of stainless steel.
2. Latch Bolt: Shall be constructed of stainless steel with 3/4 inch throw on mortise locks and 1/2 inch throw otherwise. Latch to be deadlocking on keyed functions.
3. Lever Trim: Shall be pressure cast brass, bronze, zinc, or steel with wrought rose design. Levers are to be solid with no voids or plastic inserts.
4. Fire Rating: Lock shall be listed for up to 3 hours.
5. Strike Plates: Provide ANSI 4-7/8 inch strike plates. At pairs of doors, provide strike with 7/8 inch flat lip. At single doors, provide round-lipped strike with lip length as required to minimally clear jamb and trim. Provide dust box at each strike location.

B. Mortise Locks

1. Acceptable Products:

a. Schlage: L Series, 06B Trim Design

b. Match existing facility standard

2. Requirements:

a. ANSI Grade: BHMA/ANSI A156.13, Series 1000, Grade 1.
b. Deadbolt: Shall be constructed of stainless steel and include security roller pins. Shall have a minimum 1 inch throw.
c. Spring Cages: Lock shall have individual external spring cages for each lever.
d. Lever Spindles: Provide lockset with independent, breakaway type lever spindles. Spindles that are continuous through the lock case are not acceptable.
e. Hub Blocking: Provide lockset with a hub blocking plate to resist unauthorized entry.
f. Thumbturns: Provide thumbturns as enlarged, ADA designated style thumbturns.
g. Visual Indicator: Where scheduled, provide visual indicator showing “Vacant” or “Occupied”.

C. Grade 1 Bored Locks

1. Acceptable Products:

a. Schlage: ND Series, Rhodes Lever
b. Match existing facility standard

2. Provide cylindrical locks exceeding the ANSI/BHMA A156.2 Grade 1 performance standards for strength, security & durability in the categories below:

a. Abusive locked lever torque – minimum 3,100 inch-pounds without gaining access
b. Offset lever pull - minimum 1,600 foot pounds without gaining access Simulates pry-bar attacks
c. Vertical lever impact - minimum 100 impacts without gaining access Simulates sledgehammer-blows to trim, very aggressive abuse
d. Cycle life - minimum 16 million cycles Cycle life speaks to robustness of lock, ensuring operation after 10M cycles (BHMA requirement is 1M).
    1) With no visible lever sag Working after 15M cycles is not the same as working well. No droop and wobble means the lock still works like new after the test.
    2) Without the use of performance aids (i.e. set screws, spacers, etc.) Set screws and spacers are a poor fix for droop and wobble. Both add to installation complexity, and set screws can be tamper targets.
e. Door Prep: Provide lockset to install using a standard ANSI 161 door preparation.
f. Anti-Rotation Plate: Provide lockset with a mechanically interlocked anti-rotation plate. Anti-Rotation teeth or “bite tabs” are not acceptable. Locks without any rotation prevention devices are not acceptable.
g. Lever Return Springs: Provide each lever with two compression type return springs that are easily accessible without dismantling the lock chassis. Locks utilizing tension or torsion lever return springs are unacceptable. Locks with internal springs that require dismantling the lock chassis are unacceptable.
h. Lever Spindles: Provide lock with either milled or 1-piece deep drawn spindles. 2-piece interlocking stamped spindles are not acceptable.
i. Multi-Functionality: Provide modular lockset with capability to convert to a new lock function by changing key cams.

j. Vandal Resistant Lever: Where scheduled, provide lockset with lever that freely rotates even when locked to resist vandalism and abuse.

D. Deadbolts

1. Requirements:

a. Provide deadbolts by same manufacturer as the provided locksets.
b. Provide chassis type, function, and grade as scheduled.

## 2.8 CYLINDERS AND CORES

A. Exterior locks and exit devices, and access control locks:

1. Primus, Owner's Standard

a. Full Size Interchangeable Core (FSIC)

B. Interior locks and exit devices:

1. Everest, match existing keysystems

a. Full Size Interchangeable Core (FSIC)

C. Requirements:

1. Full Size Interchangeable Cylinders where scheduled: Provide cylinders of quantity and type and with the appropriate cam/tailpiece to be compatible with the locking hardware provided.

a. Temporary Construction Keying: Provide each cylinder housing and/or lock lever with keyed construction core during the construction period. Cores will remain property of the contractor and will be returned upon installation of owner's permanent key system.
b. Permanent Cores: Provide factory keyed cores that are utility patented. Ship cores directly to owner's representative. At substantial completion, accompany the owner's representative while replacing temporary construction cores with the owner's permanent key system.

2. Keys: Provide cylinder manufacturer's standard keys. Keys shall be shipped separate from cores directly to owner's representative. For estimating purposes, provide keys in the following quantities:

| | | | |
|---|---|---|---|
| a. | Construction Control Keys: | 2 | each |
| b. | Construction Change Keys: | 12 | each |
| c. | Permanent Control Keys: | 2 | each |
| d. | Split Key Voiding Keys: | 2 | each |
| e. | Permanent Master Keys: | 2 | each |
| f. | Permanent Change Keys: | 4 | per core |

## 2.9 EXIT DEVICES

A. Exterior Doors:

1. Von Duprin: XP98 Series (Exterior), 98 Series (Interior)
2. Match existing facility standard

B. Requirements:

1. ANSI Grade: BHMA/ANSI A156.3, Grade 1.
2. Device Construction:

   a. Exit device(s) shall have a mechanism case constructed of extruded aluminum, base plates constructed of cold rolled or cast steel, push pad of extruded aluminum with stainless steel covering or wrought stainless steel, and end caps with flush mounted, sloped design. At full-glass doors, provide exit devices with no exposed fasteners or rivets visible through glass. Where required by stile width, provide narrow-stile type device.
   b. Latchbolt: Provide Pullman-type deadlocking latch bolts constructed of stainless steel. Where specified provide high security Pullman-type latchbolt that collapses to be square faced under high pull forces. Latch return springs shall be compression type. Tension and Torsion latch return springs are not acceptable.
   c. Dogging Mechanism: where dogging or latch-retraction options are not specifically scheduled for non-fire rated doors, provide device with a key activated dogging mechanism .
   d. Plastic or nylon used for the push pad, or parts in the dogging mechanism or latchbolt mechanism are unacceptable.
   e. Sound Dampening: Device shall be provided with factory-installed sound dampening materials.
   f. Provide device type, function, and trim style as indicated in hardware schedules.

3. Where exit device(s) are provided for fire rated door, provide with fire listing and label indicating “Fire Exit Hardware”. If device is mounted on wood doors, provide sex nuts and bolts.
4. Provide shim kits, filler plates, and other accessories as required for each opening.
5. Unless otherwise indicated in the sets, provide device with roller-type strike.
6. Where scheduled, provide removable mullions by same manufacturer as provided exit devices. Provide mullion stabilizers, key removable option, strike preps, and fire rating as indicated in sets.

## 2.10 MECHANICAL DOOR CLOSERS

A. General:

1. Valves: Closers shall have separate valves for latch speed, main speed, and back check. Valves shall be staked to prevent accidental removal. Internal Pressure Relief Valves (PRVs) are prohibited. Provide closers at exterior doors with “Advanced Variable Backcheck” for further protection from wind and abuse forces.
2. Provide the appropriate closer body, handing, and brackets to mount closer inside the building on the least-public side of the door.

a. Where closers are to be mounted parallel arm, provide with heavy duty, fully forged arms.
b. Where closers are to be mounted regular arm and the opening can otherwise be opened to 180 degrees, provide closer with the appropriate special templating to allow 180 degree door swing. Where a special template is not available for 180 degree swing, provide closer arm with integrated stop.

3. Integrated Stop Closer Arms: Where a closer with integrated stop is required, provide the appropriate closer and arm as follows:

a. Parallel arm with spring-cushioned stop arm: Provide where door is otherwise able to open to 95 degrees and requires a parallel arm mount closer.
b. Parallel arm with dead stop arm: Provide where door is obstructed from opening to 95 degrees and requires a parallel arm mount closer.
c. Regular arm with push side surface-mounted overhead stop: Provide where door closer should mount on pull side of door.

4. Hold Open Arms: Provide closer arms with mechanical hold-opens as scheduled.
5. Provide closers with any special templates, brackets, plates, or other accessories required for interface with header, door, wall, and other hardware. Provide closers with screw packs containing SRT screws and machine screws. Through-bolts are not to be used.
6. Closers shall be provided with all-weather fluid and shall not require readjustment from 120 degrees F to -30 degrees F. Fluid shall be non-flaming and shall not fuel door or floor covering fires. Upon request, provide data indicating thermal properties of fluid.
7. Closers shall close and latch door when adjusted to meet accessibility requirements for door opening force: 8.5 lbs at exterior doors, 5 lbs at interior doors, and 15 lbs at labeled fire doors.

B. Heavy Duty Door Closers:

1. Acceptable Products:

a. LCN: 4040XP/4011/4111
b. Match existing facility standard

2. Requirements:

a. ANSI Grade: BHMA/ANSI A156.4, Grade 1.
b. Closer Construction: Closer shall have cast iron body with 1-1/2 inch steel piston, double heat treated pinion, 5/8 inch bearing journals, and full complement needle or caged ball bearings. Closer shall be adjustable from sizes 1 through 6.
c. Provide closers with spring size adjustment dial for ease of adjusting.

## 2.11 ARCHITECTURAL DOOR TRIM

A. Protection Plates and Edge Guards

1. Acceptable Products:

a. Ives: 8400 Series
b. Rockwood: K1050

c. Hager: 194S
d. Trimco: K Series

2. Requirements:

a. Provide .050 inch thick stainless steel protection plates with height as scheduled. Plate shall have four beveled edges and countersunk screws. Provide plate with width as follows:

1) Pairs of Doors: Provide plate to be 1 inch less door width.
2) Single Doors: Provide plate to be 2 inches less door width on push side, pull side mounted plates to be 1 inch less door width.

b. Where plate exceeding 16 inches in height is scheduled on fire rated door, provide visual UL marking on plate and fasten using adhesive rather than screws.

B. Door Stops and Holders

1. Acceptable Products:

a. Ives: WS407
b. Rockwood: 405/406
c. Hager: 236W
d. Trimco: 1270

2. Requirements:

a. Provide stops and holders as indicated in the HW sets.
b. Where wall bumpers are scheduled, provide concave rubber bumper where the adjacent lever trim incorporates a push-button. Otherwise, provide convex rubber bumpers.

## 2.12 OVERHEAD STOPS AND HOLDERS

A. Acceptable Products:

| | | | |
|---|---|---|---|
| 1. | Glynn Johnson: | 100 Series | 90 Series |
| 2. | Rixson-Firemark: | 6 Series | 9 Series |
| 3. | ABH: | 1000 Series | 9000 Series |
| 4. | Sargent: | 100 Series | 90 Series |

B. Requirements:

1. Provide overhead stops and holders as scheduled, sized per manufacturer's recommendations based on door width.
2. Provide concealed overhead stops with adjustable jamb bracket.
3. Where possible without conflicting with other hardware, mount surface overhead stops on least public side of door.
4. Provide stops with any special templates, brackets, plates, or other accessories required for interface with header, door, wall, and other hardware.

## 2.13 SADDLE AND PANIC THRESHOLDS

A. Acceptable Products:

| | | |
|---|---|---|
| 1. | Zero International: | 655A |
| 2. | National Guard: | 425HD |
| 3. | Pemko: | 1715A |

B. Requirements:

1. Saddle thresholds: Provide with length equal to the width of the opening.
2. Panic thresholds: Provide with length equal to the overall frame width. Provide with mitered and welded ends.
3. Where floor closers are scheduled with thresholds, provide threshold with factory cut outs to be compatible with the provided floor closer.
4. Provide stainless steel machine screws and lead anchors for each threshold.

## 2.14 WEATHERSTRIP AND GASKET

A. General:

1. Provide weather strip and gasketing as scheduled.
2. Size weather strip and gasket to provide a continuous seal around opening and at meeting stiles.

B. Perimeter Seals

1. Acceptable Products:

| | | | |
|---|---|---|---|
| a. | Zero: | 429A | 188S-BK |
| b. | National Guard: | 700SA | 5050B |
| c. | Pemko: | 2891AS | S88D |

C. Astragals, Meeting Stiles, and Mullion Seals

1. Acceptable Products:

| | | |
|---|---|---|
| a. | Zero: | 8780N |
| b. | National Guard: | 5100 |
| c. | Pemko: | 5100SB |

2. Requirements

   a. Where overlapping astragals are scheduled on exterior doors, provide with thru-bolts.
   b. Where overlapping astragals are scheduled on out-swinging doors, provide for mounting on the pull-side of the active leaf. Otherwise, provide for mounting on the push-side of the inactive leaf.

D. Door Bottoms

1. Acceptable Products:

| | | | | |
|---|---|---|---|---|
| a. | Zero: | 8198AA | 360AA | 39A |
| b. | National Guard: | C627A | 4440SA | 200NA |
| c. | Pemko: | 3452CNB | 420A | 3452CNB |

2.15 MISCELLANEOUS HARDWARE

A. Silencers

1. Acceptable Products:

| | | | |
|---|---|---|---|
| a. | Ives: | SR64 | SR65 |
| b. | Rockwood: | 608 | 609 |
| c. | Hager: | 307D | 308D |
| d. | Trimco: | 1229A | 1229B |

2. Requirements:

a. Where indicated on single openings, provide 3 each rubber silencers on lock jamb.
b. Where indicated on paired openings, provide 2 each rubber silencers on header.
c. Where indicated on dutch door openings, provide 4 each rubber silencers on lock jamb.

2.16 FINISHES

A. Match items to the manufacturer's standard color and texture finish for the latch and locksets (or push-pull units if no latch or locksets).

B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware.

C. The designations used in schedules and elsewhere to indicate hardware finishes are those listed in ANSI/BHMA A156.18, "Materials and Finishes," including coordination with the traditional U.S. finishes shown by certain manufacturers for their products.

D. The designations used in schedules and elsewhere to indicate hardware finishes are the industry-recognized standard commercial finishes, except as otherwise noted.

1. Brushed Chrome and/or Stainless Steel Appearance

a. Brushed Stainless Steel, no coating: ANSI 630.
b. Satin Chrome, Clear Coated: ANSI 626, ANSI 652.
c. Powder Coated Aluminum finish: ANSI 689.
d. Saddle and Panic Thresholds: Mill Aluminum finish.
e. Weatherstrip and Gasket: Clear Anodized Aluminum finish.

PART 3 - EXECUTION

## 3.1 EXAMINATION

A. Examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.

B. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.

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

## 3.2 PREPARATION

A. Steel Doors and Frames: Comply with DHI A115 Series.

1. Surface-Applied Door Hardware: Drill and tap doors and frames according to ANSI A250.6.

B. Wood Doors: Comply with DHI A115-W Series.

## 3.3 INSTALLATION

A. Pre-installation conference shall be conducted prior to installation of hardware at Project site. Meet with the, Owner, Contractor, installer, and manufacturer's representatives. A separate pre-installation conference shall be conducted prior to the installation of electronic security hardware with the electrical contractor Review catalogs, brochures, templates, installation instructions, and the approved hardware schedule. Survey installation procedures and workmanship, with special emphasis on unusual conditions, as to ensure correct technique of installation, and coordination with other work. Notify participants at least ten, 10 working days before conference.

B. Hardware Installers must have a minimum of five (5) years' experience in installation of hardware. Provide verification of installer's qualification to Consultant for approval. All installers to attend review meetings with the hardware distributor.

C. Install hardware using only manufacturer supplied and approved fasteners in strict adherence with manufacturers published installation instructions.

D. Install head seal prior to installation of "PA"-parallel arm mounted door closers and push side mounted door stops/holders. Trim, cut and notch thresholds and saddles neatly to minimally fit the profile of the door frame. Install thresholds and saddles in a bed of caulking completely sealing the underside from water and air penetration.

E. Counter sink through bolt of door pull under push plate during installation.

F. Mounting Heights: Mount door hardware units at heights indicated, as follows, unless otherwise indicated or required to comply with governing regulations.

1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."

2. Custom Steel Doors and Frames: DHI's "Recommended Locations for Builders' Hardware for Custom Steel Doors and Frames."
3. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."

G. Install each door hardware item to comply with manufacturer's written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 09 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.

1. Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.
2. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.

H. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 07 Section "Joint Sealants."

## 3.4 FIELD QUALITY CONTROL

A. Architectural Hardware Consultant: Architect shall engage a qualified Architectural Hardware Consultant to perform inspections and to prepare inspection reports.

B. Architectural Hardware Consultant shall inspect door hardware and state in each report whether installed work complies with or deviates from requirements, including whether door hardware is properly installed and adjusted.

## 3.5 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

1. Door Closers: Unless otherwise required by authorities having jurisdiction, adjust sweep period so that, from an open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches (75 mm) from the latch, measured to the leading edge of the door.

B. Occupancy Adjustment: Approximately six months after date of Substantial Completion, Installer's Architectural Hardware Consultant shall examine and readjust, including adjusting operating forces, each item of door hardware as necessary to ensure function of doors, door hardware, and electrified door hardware.

## 3.6 CLEANING AND PROTECTION

A. Clean adjacent surfaces soiled by door hardware installation.

B. Clean operating items as necessary to restore proper function and finish.

C. Provide final protection and maintain conditions that ensure that door hardware is without damage or deterioration at time of Substantial Completion.

## 3.7 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain door hardware and door hardware finishes. Refer to Division 01 Section "Demonstration and Training."

## 3.8 DOOR HARDWARE SETS

A. The following schedule of hardware sets shall be considered a guide and the supplier is cautioned to refer to general conditions, special conditions, and the full requirements of this section. It shall be the hardware supplier's responsibility to furnish all required hardware.

B. Where items of hardware are not definitely or correctly specified and are required for completion of the Work, a written statement of such omission, error, conflict, or other discrepancy shall be sent to the Architect, prior to date specified for receipt of bids, for clarification by addendum.

C. Adjustments to the Contract Sum will not be allowed for omissions or items of hardware not clarified prior to bid opening.

**HW SET NO: 01**
DOOR NUMBER: (3) Coiling Doors

| | | | | |
|---|---|---|---|---|
| 1 EA | PRIMUS MORT. CYL. | 20-700 | 626 | SCH |

**HW SET NO: 02**
DOOR NUMBER: (Includes but is not limited to the following doors)
100, 103, 105, 108, 112

| | | | | |
|---|---|---|---|---|
| 1 EA | CONT. HINGE | 224HD | 628 | IVE |
| 1 EA | VANDL CLASSROOM LOCK | ND96JD RHO | 626 | SCH |
| 1 EA | PRIMUS CORE | 20-740 | 626 | SCH |
| 1 EA | SURFACE CLOSER | 4111 AVB SHCUSH MC TBWMS | 689 | LCN |
| 1 EA | CUSH SHOE SUPPORT | 4110-30 | 689 | LCN |
| 1 EA | SEAL SET | 429A | A | ZER |
| 1 EA | DOOR SWEEP | 8198AA | AL | ZER |
| 1 EA | THRESHOLD | 655A MSLA-10 | AL | ZER |

**HW SET NO: 03**
DOOR NUMBER: (Includes but is not limited to the following doors)
102, 104, 106, 111, 107

| | | | | |
|---|---|---|---|---|
| 1 EA | CONT. HINGE | 224HD | 628 | IVE |
| 1 EA | VANDL STOREROOM LOCK | ND96JD RHO | 626 | SCH |
| 1 EA | PRIMUS CORE | 20-740 | 626 | SCH |
| 1 EA | SURFACE CLOSER | 4111 AVB SHCUSH MC TBWMS | 689 | LCN |
| 1 EA | CUSH SHOE SUPPORT | 4110-30 | 689 | LCN |
| 1 EA | SEAL SET | 429A | A | ZER |
| 1 EA | DOOR SWEEP | 8198AA | AL | ZER |
| 1 EA | THRESHOLD | 655A MSLA-10 | AL | ZER |

**HW SET NO: 04**
DOOR NUMBER: (Includes but is not limited to the following doors)
109

| | | | | |
|---|---|---|---|---|
| 1 EA | CONT. HINGE | 224HD | 628 | IVE |
| 1 EA | KEYED PRIVACY W/ INDICATOR | LV9056J 06B L583-363 L283-722 | 626 | SCH |
| 1 EA | PRIMUS CORE | 20-740 | 626 | SCH |
| 1 EA | SURFACE CLOSER | 4111 AVB SHCUSH MC TBWMS | 689 | LCN |
| 1 EA | CUSH SHOE SUPPORT | 4110-30 | 689 | LCN |
| 1 EA | SEAL SET | 429A | A | ZER |
| 1 EA | DOOR SWEEP | 8198AA | AL | ZER |
| 1 EA | THRESHOLD | 655A MSLA-10 | AL | ZER |

**HW SET NO: 05**
DOOR NUMBER: (Includes but is not limited to the following doors)
101

| | | | | |
|---|---|---|---|---|
| 2 EA | CONT. HINGE | 224HD | 628 | IVE |
| 1 EA | MANUAL FLUSH BOLT | FB458 (TOP) | 626 | IVE |
| 1 EA | VANDL CLASSROOM LOCK | ND94JD RHO | 626 | SCH |
| 1 EA | PRIMUS CORE | 20-740 | 626 | SCH |
| 1 EA | SEAL SET | 429A | A | ZER |
| 1 EA | MULLION SEAL | 8780N | N | ZER |
| 2 EA | DOOR SWEEP | 8198AA | AL | ZER |
| EA | THRESHOLD | 655A MSLA-10 | AL | ZER |

END OF SECTION 087100

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SECTION 092900 - GYPSUM BOARD

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Interior gypsum board.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples: For the following products:

1. Trim Accessories: Full-size Sample in 12-inch- (300-mm-) long length for each trim accessory indicated.
2. Textured Finishes: for each textured finish indicated and on same backing indicated for Work, 4 feet by 4 feet minimum.

1.4 QUALITY ASSURANCE

A. Mockups: Before beginning gypsum board installation, install mockups of at least 100 sq. ft. (9 sq. m) in surface area to demonstrate aesthetic effects and set quality standards for materials and execution.

1. Install mockups for the following:

a. Each level of gypsum board finish indicated for use in exposed locations.
b. Each texture finish indicated.

2. Apply or install final decoration indicated, including painting and wallcoverings, on exposed surfaces for review of mockups.
3. Simulate finished lighting conditions for review of mockups.
4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.5 DELIVERY, STORAGE AND HANDLING

A. Store materials inside under cover and keep them dry and protected against weather, condensation, direct sunlight, construction traffic, and other potential causes of damage. Stack panels flat and supported on risers on a flat platform to prevent sagging.

1.6 FIELD CONDITIONS

A. Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.

B. Do not install paper-faced gypsum panels until installation areas are enclosed and conditioned.

C. Do not install panels that are wet, those that are moisture damaged, and those that are mold damaged.

1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Fire-Resistance-Rated Assemblies: If and where fire-resistance-rated assemblies are indicated, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.

B. STC-Rated Assemblies: If and where STC-rated assemblies are indicated, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.

2.2 GYPSUM BOARD, GENERAL

A. Size: Provide maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.

2.3 INTERIOR GYPSUM BOARD

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. American Gypsum.
2. CertainTeed Corp.
3. Georgia-Pacific Gypsum LLC.
4. Lafarge North America Inc.

5. National Gypsum Company.
6. PABCO Gypsum.
7. Temple-Inland.
8. USG Corporation.

B. Moisture- and Mold-Resistant Gypsum Board: ASTM C 1396/C 1396M. With moisture- and mold-resistant core and paper surfaces.

1. Core: 5/8 inch (15.9 mm), Type X.
2. Long Edges: Tapered.
3. Mold Resistance: ASTM D 3273, score of 10.

## 2.4 TRIM ACCESSORIES

A. Interior Trim: ASTM C 1047.

1. Material: Galvanized or aluminum-coated steel sheet.
2. Shapes:

a. Cornerbead.
b. LC-Bead: J-shaped; exposed long flange receives joint compound.
c. Expansion (control) joint.
d. Curved-Edge Cornerbead: With notched or flexible flanges.

## 2.5 JOINT TREATMENT MATERIALS

A. General: Comply with ASTM C 475/C 475M.

B. Joint Tape:

1. Interior Gypsum Board: Paper.
2. Exterior Gypsum Soffit Board: Paper.
3. Glass-Mat Gypsum Sheathing Board: 10-by-10 glass mesh.Tile Backing Panels: As recommended by panel manufacturer.

C. Joint Compound for Interior Gypsum Board: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.

1. Prefilling: At open joints and damaged surface areas, use setting-type taping compound.
2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use drying-type, all-purpose compound.
3. Fill Coat: For second coat, use drying-type, all-purpose compound.
4. Finish Coat: For third coat, use drying-type, all-purpose compound.
5. Skim Coat: For final coat of Level 5 finish, use -type, all-purpose compound.

## 2.6 AUXILIARY MATERIALS

A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.

B. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.

1. Use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112 inch (0.84 to 2.84 mm) thick.
2. For fastening cementitious backer units, use screws of type and size recommended by panel manufacturer.

C. Acoustical Joint Sealant: Manufacturer's standard nonsag, paintable, nonstaining latex sealant complying with ASTM C 834. Product effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.

1. Products: Subject to compliance with requirements, provide one of the following:

a. Accumetric LLC; BOSS 824 Acoustical Sound Sealant.
b. Grabber Construction Products; Acoustical Sealant GSC.
c. Pecora Corporation; AC-20 FTR.
d. Specified Technologies, Inc.; Smoke N Sound Acoustical Sealant.
e. USG Corporation; SHEETROCK Acoustical Sealant.

2. Acoustical joint sealant shall have a VOC content of 250 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

D. Thermal Insulation: As specified in Division 07 Section "Thermal Insulation."

E. Vapor Retarder: As specified in Division 07 Section "Thermal Insulation."

## PART 3 - EXECUTION

### 3.1 EXAMINATION

A. Examine areas and substrates including welded hollow-metal frames and framing, with Installer present, for compliance with requirements and other conditions affecting performance.

B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.

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

### 3.2 APPLYING AND FINISHING PANELS, GENERAL

A. Comply with ASTM C 840.

B. Install ceiling panels across framing to minimize the number of abutting end joints and to avoid abutting end joints in central area of each ceiling. Stagger abutting end joints of adjacent panels not less than one framing member.

C. Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1/16 inch (1.5 mm) of open space between panels. Do not force into place.

D. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.

E. Form control and expansion joints with space between edges of adjoining gypsum panels.

F. Cover both faces of support framing with gypsum panels in concealed spaces (above ceilings, etc., except in chases braced internally.

1. Unless concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than 8 sq. ft. (0.7 sq. m) in area.
2. Fit gypsum panels around ducts, pipes, and conduits.
3. Where partitions intersect structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by structural members; allow 1/4- to 3/8-inch- (6.4- to 9.5-mm-) wide joints to install sealant.

G. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments, except floors. Provide 1/4- to 1/2-inch- (6.4- to 12.7-mm-) wide spaces at these locations and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.

H. Attachment to Framing: Attach panels so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.

I. Install sound attenuation blankets before installing gypsum panels unless blankets are readily installed after panels have been installed on one side.

## 3.3 APPLYING INTERIOR GYPSUM BOARD

A. Single-Layer Application:

1. On ceilings, apply gypsum panels before wall/partition board application to greatest extent possible and at right angles to framing unless otherwise indicated.
2. Fastening Methods: Apply gypsum panels to supports with steel drill screws.

## 3.4 INSTALLING TRIM ACCESSORIES

A. General: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.

B. Control Joints: Install control joints at locations indicated on Drawings.

C. Interior Trim: Install in the following locations:

1. Cornerbead: Use at outside corners.
2. LC-Bead: Use at exposed panel edges.
3. Curved-Edge Cornerbead: Use at curved openings.

## 3.5 FINISHING GYPSUM BOARD

A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.

B. Prefill open joints and damaged surface areas.

C. Apply joint tape over gypsum board joints, except for trim products specifically indicated as not intended to receive tape.

D. Gypsum Board Finish Levels: Finish panels to levels indicated below and according to ASTM C 840:

1. Level 1: Ceiling plenum areas, concealed areas, and where indicated.
2. Level 2: Panels that are substrate for tile. Panels that are substrate for acoustical tile.
3. Level 3: Panel surfaces that are substrate for wall coverings, including FRP panels.
4. Level 4: At panel surfaces that will be exposed to view and painted. Apply light orange peel texture.

    a. Primer and its application to surfaces are specified in other Division 09 Sections.

5. Level 5: Where indicated on Drawings.

    a. Primer and its application to surfaces are specified in other Division 09 Sections.

E. Texture: Apply light sprayed texture to all gypsum board surfaces exposed to view unless noted otherwise.

    a. Primer shall be applied prior to application of sprayed texture.

## 3.6 PROTECTION

A. Protect adjacent surfaces from drywall compound and promptly remove from floors and other non-drywall surfaces. Repair surfaces stained, marred, or otherwise damaged during drywall application.

B. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.

C. Remove and replace panels that are wet, moisture damaged, and mold damaged.

1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION 092900

SECTION 096513 - RESILIENT BASE AND ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Resilient base.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Samples for Color Selection: For each type of product indicated.

1.4 QUALITY ASSURANCE

A. Fire-Test-Response Characteristics: As determined by testing identical products according to ASTM E 648 or NFPA 253 by a qualified testing agency.

1. Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store resilient products and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F (10 deg C) or more than 90 deg F (32 deg C).

1.6 PROJECT CONDITIONS

A. Maintain ambient temperatures within range recommended by manufacturer, but not less than 70 deg F (21 deg C) or more than 95 deg F (35 deg C), in spaces to receive resilient products during the following time periods:

1. 48 hours before installation.
2. During installation.
3. 48 hours after installation.

B. Until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer, but not less than 55 deg F (13 deg C) or more than 95 deg F (35 deg C).

C. Install resilient products after other finishing operations, including painting, have been completed.

1.7 EXTRA MATERIALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Furnish not less than 10 linear feet (3 linear m) for every 500 linear feet (150 linear m) or fraction thereof, of each type, color, pattern, and size of resilient product installed.

PART 2 - PRODUCTS

2.1 RESILIENT BASE

A. Resilient Base:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Burke Mercer Flooring Products; Division of Burke Industries, Inc.
b. Flexco, Inc.
c. Johnsonite.
d. Roppe Corporation, USA.

2. Products by other Manufacturers are subject to approval by Architect prior to bidding.

B. Resilient Base Standard: ASTM F 1861.

1. Material Requirement: Type TS (rubber, vulcanized thermoset).
2. Manufacturing Method: Group I (solid, homogeneous).
3. Style: Cove (base with toe).

C. Minimum Thickness: 0.125 inch (3.2 mm).

D. Height: As indicated on Drawings.

E. Lengths: Cut lengths 48 inches (1219 mm) long or coils in manufacturer's standard length.

F. Outside Corners: Job formed.

G. Inside Corners: Job formed.

H. Colors and Profiles: As selected by Architect from manufacturer’s full range. A maximum of three colors will be selected

2.2 INSTALLATION MATERIALS

A. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement based or blended hydraulic-cement-based formulation provided or approved by manufacturer for applications indicated.

B. Adhesives: Water-resistant type recommended by manufacturer to suit resilient products and substrate conditions indicated.

1. Use adhesives that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):

a. Cove Base Adhesives: Not more than 50 g/L.
b. Rubber Floor Adhesives: Not more than 60 g/L.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

B. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of resilient products.

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

3.2 PREPARATION

A. Prepare substrates according to manufacturer's written instructions to ensure adhesion of resilient products.

B. Concrete Substrates for Resilient Base and Accessories: Prepare according to ASTM F 710.

1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
2. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by manufacturer. Do not use solvents.

C. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound and remove bumps and ridges to produce a uniform and smooth substrate.

D. Do not install resilient products until they are same temperature as the space where they are to be installed.

1. Move resilient products and installation materials into spaces where they will be installed at least 48 hours in advance of installation.

E. Sweep and vacuum clean substrates to be covered by resilient products immediately before installation.

## 3.3 RESILIENT BASE INSTALLATION

A. Comply with manufacturer's written instructions for installing resilient base.

B. Apply resilient base to walls, columns, pilasters, casework and cabinets in toe spaces, and other permanent fixtures in rooms and areas where base is required.

C. Install resilient base in lengths as long as practicable without gaps at seams and with tops of adjacent pieces aligned.

D. Tightly adhere resilient base to substrate throughout length of each piece, with base in continuous contact with horizontal and vertical substrates.

E. Do not stretch resilient base during installation.

F. On masonry surfaces or other similar irregular substrates, fill voids along top edge of resilient base with manufacturer's recommended adhesive filler material.

G. Job-Formed Corners:

1. Outside Corners: Use straight pieces of maximum lengths possible. Form without producing discoloration (whitening) at bends.
2. Inside Corners: Use straight pieces of maximum lengths possible.

## 3.4 CLEANING AND PROTECTION

A. Comply with manufacturer's written instructions for cleaning and protection of resilient products.

B. Perform the following operations immediately after completing resilient product installation:

1. Remove adhesive and other blemishes from exposed surfaces.
2. Sweep and vacuum surfaces thoroughly.
3. Damp-mop surfaces to remove marks and soil.

C. Protect resilient products from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.

D. Cover resilient products until Substantial Completion.

END OF SECTION 096513

SECTION 099123 - PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes surface preparation and the application of paint systems on the following interior substrates:

1. Gypsum board.
2. Concrete and concrete masonry.
3. Concrete floor sealer.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Samples for Color Selections: For each type of topcoat product indicated.

1.4 QUALITY ASSURANCE

A. MPI Standards:

1. Products: Complying with Master Painters Institute (MPI) standards indicated and listed in "MPI Approved Products List."
2. Preparation and Workmanship: Comply with requirements in "MPI Architectural Painting Specification Manual" for products and paint systems indicated.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F (7 deg C).

1. Maintain containers in clean condition, free of foreign materials and residue.
2. Remove rags and waste from storage areas daily.

1.6 PROJECT CONDITIONS

A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F (10 and 35 deg C).

B. Do not apply paints when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

1.7 EXTRA MATERIALS

A. Furnish extra materials described below that are from same production run (batch mix) as materials applied and that are packaged for storage and identified with labels describing contents.

1. Quantity: Furnish an additional 5 percent, but not less than 1 gal. (3.8 L) of each material and color applied.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Benjamin Moore & Co.
2. Columbia Paint & Coatings.
3. Kelly-Moore Paints.
4. PPG Architectural Finishes, Inc.
5. Sherwin-Williams Company (The).
6. Rodda Paint Company

2.2 PAINT, GENERAL

A. Material Compatibility:

1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.

B. Typical Paint Colors: As selected by Architect from manufacturer's full range, including colors requiring deep tone tint base. A maximum of 2 interior colors will be selected. A maximum of 2 of any of the colors selected may be selected for use on walls in any single room or space for which paint is indicated.

2.3 PRIMERS/SEALERS

A. Interior Latex Primer/Sealer: MPI #50.

B. Interior Latex Block Filler: MPI #4.

C. Interior Latex Wood Primer: MPI #39

2.4 METAL STEEL PRIMER

A. Quick Dry Primer (Alkyd): MPI #76.

B. Anti-Corrosive Primer (Alkyd): MPI #79.

C. Interior Alkyd Primer/Sealer: MPI #45.

2.5 LATEX PAINTS

A. Latex: MPI #60, MPI #118, MPI #133 and MPI #151.

B. High-Performance Architectural Latex MPI # 140 and MPI # 141.

C. High-Performance Architectural Latex (Semigloss): MPI #141 (Gloss Level 5).

D. Light Industrial Latex, interior (Gloss Level 3): MPI #52

2.6 WOOD SUBSTRATES

A. Interior Latex, high performance architectural, (Semigloss): MPI #141 (Gloss Level 5).

2.7 CONCRETE SEALER

A. Interior / Exterior Water Based: MPI #99.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of work.

B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:

1. Concrete and Concrete Masonry: 12 percent.
2. Wood: 15 percent.

3. Gypsum Board and Plaster: 12 percent.

C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.

D. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry.

1. Beginning coating application constitutes Contractor's acceptance of substrates and conditions.

## 3.2 PREPARATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates indicated.

B. Remove plates, machined surfaces, and similar items already in place that are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
2. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.

C. Clean substrates of substances that could impair bond of paints, including dirt, oil, grease, and incompatible paints and encapsulants.

1. Remove incompatible primers and reprime substrate with compatible primers as required to produce paint systems indicated.

D. Concrete and Concrete Masonry Substrates: Remove release agents, curing compounds, efflorescence, and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.

E. Steel Substrates: Remove rust and loose mill scale. Clean using methods recommended in writing by paint manufacturer.

F. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal fabricated from coil stock by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.

1. Prime edges, ends, faces, undersides, and backsides of wood.
2. After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when dried.

G. Gypsum Board Substrates: Do not begin paint application until finishing compound is dry and sanded smooth. Pre-prime all surfaces prior to application of spray texture.

3.3 APPLICATION

A. Apply paints according to manufacturer's written instructions.

1. Use applicators and techniques suited for paint and substrate indicated.
2. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
3. Paint front and backsides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.
4. Minimum total prime, intermediate, and top coat dry film thickness shall be 5.0 mils, and greater as required.

B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.

C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.

D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

E. Painting Mechanical and Electrical Work: Paint items exposed in equipment rooms and occupied spaces including, but not limited to, the following:

1. Mechanical Work:

a. Uninsulated metal piping.
b. Uninsulated plastic piping.
c. Pipe hangers and supports.
d. Tanks that do not have factory-applied final finishes.
e. Visible portions of internal surfaces of metal ducts, without liner, behind air inlets and outlets.
f. Duct, equipment, and pipe insulation having cotton or canvas insulation covering or other paintable jacket material.
g. Mechanical equipment that is indicated to have a factory-primed finish for field painting.
h. Visible roof top mechanical equipment whether or not factory primed or finish coated.

2. Electrical Work:

a. Switchgear.
b. Panelboards.
c. Electrical equipment that is indicated to have a factory-primed finish for field painting.

## 3.4 FIELD QUALITY CONTROL

A. Testing of Paint Materials: Owner reserves the right to invoke the following procedure at any time and as often as Owner deems necessary during the period when paints are being applied:

1. Owner will engage the services of a qualified testing agency to sample paint materials being used. Samples of material delivered to Project site will be taken, identified, sealed, and certified in presence of Contractor.
2. Testing agency will perform tests for compliance with product requirements.
3. Owner may direct Contractor to stop applying paints if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying-paint materials from Project site, pay for testing, and repaint surfaces painted with rejected materials. Contractor will be required to remove rejected materials from previously painted surfaces if, on repainting with complying materials, the two paints are incompatible.

## 3.5 CLEANING AND PROTECTION

A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.

B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.

C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

## 3.6 PAINTING SCHEDULE

A. Exposed to View CMU and Concrete Substrates (interior locations):

1. High-Performance Architectural Latex System:

a. Block Filler: Block filler, latex, interior/exterior, MPI #4.
b. Intermediate Coat: Latex, interior, high performance architectural, matching topcoat.
c. Topcoat: Latex, interior, high performance architectural, (Gloss Level 4), MPI #140 and/or

B. Exterior CMU and Concrete Substrates:

1. Latex System:

a. Topcoat (Two Coats): Latex, SWA100 Exterior Acrylic.

E. Gypsum Board Substrates:

1. High-Performance Architectural Latex System:

    a. Pre-Prime Coat: Primer sealer, latex, interior, MPI #50.
    b. Prime Coat: Prime sealer, latex, interior MPI #50.
    c. Intermediate Coat: Latex, interior, high performance architectural, matching topcoat.
    d. Topcoat: Latex, interior, high performance architectural, (Gloss Level 4), MPI #140 and/or.

2. Water Based Semi-Gloss Epoxy System.

    a. Prime Coat: Provide a compatible primer for the specific surface.
    b. Intermediate Coat: Latex, interior, matching topcoat.
    c. Topcoat: MPI #251, Light industrial coating, interior water based, Gloss Level 3.

G. Concrete Floor Sealing:

1. Interior/Exterior Water Based:

    a. First Coat: MPI #99
    b. Top Coat: MPI #99

END OF SECTION 099123

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SECTION 102113 – METAL TOILET COMPARTMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Painted steel compartments configured as toilet enclosures and urinal screens.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

B. Shop Drawings: For toilet compartments. Include plans, elevations, sections, details, and attachments to other work.

1. Show locations of centerlines of toilet fixtures.

C. Samples for Color Selection: For each type of unit indicated. Include samples of hardware and accessories involving material and color selection.

1.4 QUALITY ASSURANCE

A. Regulatory Requirements: Comply with applicable provisions in ICC/ANSI A117.1 for toilet compartments designated as accessible.

1.5 PROJECT CONDITIONS

A. Field Measurements: Verify actual locations of toilet fixtures, walls, columns, ceilings, and other construction contiguous with toilet compartments by field measurements before fabrication.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Stainless-Steel Sheet: ASTM A 666, Type 304, stretcher-leveled standard of flatness.

B. Stainless-Steel Castings: ASTM A 743/A 743M.

2.2 PAINTED STEEL TOILET PARTITIONS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Accurate Partitions Corporation.
2. American Sanitary Partition Corporation.
3. Ampco, Inc.
4. Bobrick Washroom Equipment, Inc.
5. Flush Metal Partition Corp.
6. General Partitions Mfg. Corp.
7. Global Steel Products Corp.
8. Knickerbocker Partition Corporation.
9. Metpar Corp.

B. Products by other manufacturers are subject to approval by Architect prior to bidding.

C. Toilet-Enclosure Style: Overhead braced, Floor anchored.

D. Urinal-Screen Style: Wall hung.

E. Door, Panel, and Pilaster Construction: Seamless, metal facing sheets pressure laminated to core material; with continuous, interlocking molding strip or lapped-and-formed edge closures; corners secured by welding or clips and exposed welds ground smooth. Exposed surfaces shall be free of pitting, seam marks, roller marks, stains, discolorations, telegraphing of core material, or other imperfections.

1. Core Material: Manufacturer's standard sound-deadening honeycomb of resin-impregnated kraft paper in thickness required to provide finished thickness of 1 inch (25 mm) for doors and panels and 1-1/4 inches (32 mm) for pilasters.
2. Grab-Bar Reinforcement: Provide concealed internal reinforcement for grab bars mounted on units of size and material adequate for panel to withstand applied downward load on grab bar of at least 250 lbf (1112 N), when tested according to ASTM F446, without deformation of panel.
3. Tapping Reinforcement: Provide concealed reinforcement for tapping (threading) at locations where machine screws are used for attaching items to units.

F. Pilaster Shoes and Sleeves (Caps): Fabricated from stainless-steel sheet, not less than 0.031-inch (0.79-mm) nominal thickness and 3 inches (76 mm) high, finished to match hardware.

G. Brackets (Fittings):

1. Full-Height (Continuous) Type: Manufacturer's standard design; stainless steel.

H. Steel Sheet Finish: Immediately after cleaning and pretreating, apply manufacturer's standard baked-on finish, including thermosetting, electrostatically applied, and powder coatings. Comply with coating manufacturer's written instructions for applying and baking

1. Facing Sheet Finish: One color in each room.
2. Colors and Patterns: As selected by Architect from manufacturer's full range.
3. A maximum of 2 colors will be selected.

## 2.3 ACCESSORIES

A. Hardware and Accessories: Manufacturer's standard design, heavy-duty operating hardware and accessories.

1. Material: Stainless steel.
2. Hinges: Manufacturer's full-length piano type that swings to a closed or partially open position.
3. Latch and Keeper: Manufacturer's standard surface-mounted latch unit designed for emergency access and with combination rubber-faced door strike and keeper. Provide units that comply with regulatory requirements for accessibility at compartments designated as accessible.
4. Coat Hook: Manufacturer's standard combination hook and rubber-tipped bumper, sized to prevent in-swinging door from hitting compartment-mounted accessories.
5. Door Bumper: Manufacturer's standard rubber-tipped bumper at out-swinging doors.
6. Door Pull: Manufacturer's standard unit at out-swinging doors that complies with regulatory requirements for accessibility. Provide units on both sides of doors at compartments designated as accessible.

B. Overhead Bracing: Manufacturer's standard continuous, extruded-aluminum head rail with anti-grip profile and in manufacturer's standard finish.

C. Anchorages and Fasteners: Manufacturer's standard exposed fasteners of stainless steel finished to match the items they are securing, with theft-resistant-type heads. Provide sex-type bolts for through-bolt applications. For concealed anchors, use stainless steel.

## 2.4 FABRICATION

A. Overhead-Braced Units: Provide manufacturer's standard corrosion-resistant supports, leveling mechanism, and anchors at pilasters to suit floor conditions. Provide shoes at pilasters to conceal supports and leveling mechanism.

B. Floor-Anchored Units: Provide manufacturer's standard corrosion-resistant anchoring assemblies with leveling adjustment nuts at pilasters for structural connection to floor. Provide shoes at pilasters to conceal anchorage.

C. Door Size and Swings: Unless otherwise indicated, provide 24-inch- (610-mm-) wide, in-swinging doors for standard toilet compartments and 36-inch- (914-mm-) wide, out-swinging

doors with a minimum 32-inch- (813-mm-) wide, clear opening for compartments designated as accessible.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

A. General: Comply with manufacturer's written installation instructions. Install units rigid, straight, level, and plumb. Secure units in position with manufacturer's recommended anchoring devices.

1. Maximum Clearances:

a. Pilasters and Panels: 1/2 inch (13 mm).
b. Panels and Walls: 1 inch (25 mm).

B. Overhead-Braced Units: Secure pilasters to floor and level, plumb, and tighten. Set pilasters with anchors penetrating not less than 1-3/4 inches (44 mm) into structural floor unless otherwise indicated in manufacturer's written instructions. Secure continuous head rail to each pilaster with no fewer than two fasteners. Hang doors to align tops of doors with tops of panels, and adjust so tops of doors are parallel with overhead brace when doors are in closed position.

C. Floor-Anchored Units: Set pilasters with anchors penetrating not less than 2 inches (51 mm) into structural floor unless otherwise indicated in manufacturer's written instructions. Level, plumb, and tighten pilasters. Hang doors and adjust so tops of doors are level with tops of pilasters when doors are in closed position.

D. Urinal Screens: Attach with anchoring devices to suit supporting structure. Set units level and plumb, rigid, and secured to resist lateral impact.

### 3.2 ADJUSTING

A. Hardware Adjustment: Adjust and lubricate hardware according to hardware manufacturer's written instructions for proper operation. Set hinges on in-swinging doors to hold doors open approximately 30 degrees from closed position when unlatched. Set hinges on out-swinging doors to return doors to fully closed position.

END OF SECTION 102113

SECTION 102800 - TOILET AND BATH ACCESSORIES

PART 1 - GENERAL

1.1. RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including Division-1 Specification Sections, apply to this Section.

1.2. SUMMARY

A. This Section includes the following Contractor furnished and installed stainless steel toilet accessory items:

1. Grab Bars.
2. Toilet Paper Dispensers.
3. Paper Towel Dispenser.
3. Toilet Seat Cover Dispensers.
4. Framed Mirrors.
5. Mop Rack.

1.3. SUBMITTALS

A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.

B. Product data for each toilet accessory item specified, including details of construction relative to materials, dimensions, gages, profiles, method of mounting, specified options, and finishes.

1.4. QUALITY ASSURANCE

A. Single-Source Responsibility: Provide products of same manufacturer for each type of accessory unit and for units exposed to view in same areas.

1.5. PROJECT CONDITIONS

A. Coordination: Coordinate accessory locations, installation, and sequencing with other work to avoid interference and to assure proper installation, operation, adjustment, cleaning, and servicing of toilet accessory items.

B. Provide backing and blocking in walls and required for mounting of all toilet and bath accessories.

PART 2 - PRODUCTS

2.1. ACCEPTABLE MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, provide products by one of the following manufacturers.

1. Bobrick Washroom Equipment, Inc.
2. Bradley Corporation

2.2. MATERIALS

A. Stainless Steel: AISI Type 302/304, with polished No. 4 finish, 22-gage (.034-inch) minimum thickness, unless otherwise indicated.

B. Galvanized Steel Mounting Devices: ASTM A 153, hot-dip galvanized after fabrication.

C. Fasteners: Screws, bolts, and other devices of same material as accessory unit or of galvanized steel where concealed.

2.3. GRAB BARS

A. Stainless Steel Type: Provide grab bars with wall thickness not less than 18 gauge (.050 inch) and as follows:

1. Mounting: Concealed, manufacturer's standard flanges and anchorages.
2. Mounting Height: As per Drawings.
3. Clearance: 1-1/2 inches clearance between wall surface and inside face of bar.
4. Gripping Surfaces: Smooth, satin finish.
5. Heavy-Duty Size: Outside diameter of 1-1/2 inches.
6. Lengths: See Drawings.

2.4. TOILET PAPER DISPENSERS

A. Double-roll chrome plated steel.

1. Controlled delivery brake spring type.

B. Manufacturer / Model:

1. Bobrick Model B – 265 or approved equal.
2. Provide where designated on the Drawings.

2.5 TOILET SEAT COVER DISPENSERS

A. Surface–mounted satin finish stainless steel.

B. Manufacturer/Model:

1. Bobrick Model B – 221 or approved equal.
2. Provide where designated on the Drawings.

2.6 PAPER TOWEL UNITS

A. Surface-mounted satin finish stainless steel.

B. Manufacturer/Model:

1. Bobrick Model B-2620 or approved equal.
2. Provide where designated on the Drawings.

2.7 MIRROR UNITS

A. Standard Stainless Steel Framed Mirror Units: Fabricate frame with channel shapes of not less than 20 gage (.040 inch.), with square corners carefully mitered to hairline joints and mechanically interlocked. Provide in Type 430 bright polished finish.

B. Framed Mirror Unit Fabrication: Fabricate frames for glass mirror units to accommodate wood, felt, plastic, or other glass edge protection material. Provide mirror backing and support system that will permit rigid, tamperproof glass installation and prevent accumulation of moisture, as follows:

1. Provide galvanized steel backing sheet, not less than 22 gage (.034 inch) and full mirror size, with nonabsorptive filler material. Corrugated cardboard is not an acceptable filler material.

C. Mirror Unit Hangers: Provide system of mounting mirror units that will permit rigid, tamperproof, and theft proof installation , as follows:

1. One –piece galvanized steel wall hanger device with spring action locking mechanism to hold mirror unit in position with no exposed screws or bolts.

D. Size and Quantities:

1. 18”x36”
2. Provide (1) above each sink in all restrooms.

2.8 STAINLESS STEEL SHELF/MOP HOLDER

A. Stainless steel wall mounted shelf.

B. Manufacturer/Model

1. Bobrick B-239 x 34 or approved equal.
2. Provide (1) at the mop sink in the Mechanical Room.

PART 3 – EXECUTION

3.1 INSTALLATION

A. Install all toilet and bath accessories according to manufacturer's instructions and requirements.

1. Attach grab bars and paper product dispensers to in-wall solid wood blocking by others.

B. Secure mirrors to walls in concealed, tamperproof manner with special hangers, toggle bolts, or screws. Set units plumb, level, and square at locations indicated, in accordance with manufacturer's instructions for type of substrate involved.

END OF SECTION 102800

DIVISION 22 – PLUMBING

SECTION 220000 – PLUMBING GENERAL REQUIREMENTS

PART 1 - GENERAL

1.1 SCOPE:

A. General:

1. The Bidding Requirements, Contract Requirements, and the General Requirements (Division 01) of these specifications shall govern all parts of the work.

B. Work Included:

1. Install work in accordance with these specifications and the accompanying plans. Furnish all labor, material, and equipment together with all incidental items not specifically shown or specified which are required by good practice to provide the complete plumbing systems as described.

C. Coordination and Site Visits:

1. This section of the work requires examination of and reference to all architectural, structural, utility, and electrical drawings for construction conditions that may affect the work. Inspect the building site and existing facilities for verification of existing conditions. Base all measurements from established benchmarks. Any discrepancy between actual measurements and those indicated, which prevents following good practices or the intent of the drawings and specifications, shall be reported to the Architect/Engineer, and work halted until instructions are received from the Architect/Engineer.

1.2 CODES, PERMITS, FEES:

A. Install all work in accordance with applicable codes and standards. Obtain all required permits; pay all required fees including utility connections or extensions, in connection with this portion of the construction. Obtain all required certificates of inspection for the work.

PART 2 - PRODUCTS

2.1 MATERIALS AND WORKMANSHIP:

A. Materials:

1. All materials and equipment shall be of first quality, new, full size and weight, standard in every respect, and suitable for the space required. Use the same manufacturer for products of similar class or service, such as valves and pumps. Protect all materials against loss, theft, or damage before and after installation.

2. Furnish and install all necessary foundations, supports, pads, bases, and piers required for all materials and equipment furnished under this contract.

3. Provide all required firestopping at piping penetrations of fire rated walls, floors, ceilings, and roofs. Firestopping shall be Dow Corning Fire Stop Sealant 2000 or Fire Stop Foam 2001, or approved equal.

4. Provide a heat-expanding fire collar for all non-metallic piping up to 6" size at penetrations of fire rated walls, floors, and ceilings per ASTME 814.

B. Workmanship:

1. All materials and equipment shall be installed in a neat and workmanlike manner by competent specialists for each subtrade. Work shall be installed to the satisfaction of the Architect/Engineer with unsatisfactory work removed and reinstalled to his satisfaction at no extra cost to the Owner.

2. Provide all cutting and patching necessary to install the work specified in this section. Patching shall match adjacent surfaces. No structural members shall be cut without the approval of the Architect/Engineer. Provide all sleeves and inserts required before the floors and walls are built.

3. Locate all equipment that must be serviced in fully accessible positions. Provide clearance for removal of replacement parts and components, and with necessary couplings or flanges to remove the component for maintenance.

2.2 SUBMITTALS AND SUBSTITUTIONS:

A. Prebid Approval:

1. Manufacturer's trade names and catalog numbers stated herein are intended to indicate the quality of equipment or materials desired. All manufacturers not specifically listed require prior approval. Submit catalog data, including specifications, of the proposed equipment to the Architect/Engineer for his approval at least 10 calendar days prior to bid opening. Notice of such approvals will be published in an addendum. Approval of listed alternate equipment manufacturers is for bidding only. Final approval is to be based on requirements of the plans and specifications.

B. Submittals:

1. Within thirty days after award of this contract, provide an electronic copy of a complete list of all materials and equipment proposed for this project. List shall contain make, type, manufacturer's name, and trade designation of all materials and equipment. Submittal shall also include manufacturer's complete specification for each item, including ratings, and dimensions as required to check space requirements. The scheduled equipment is the basis of design for physical size, etc. Alternate manufacturers shall not exceed the weight or physical size. Any changes to the Architectural, Structural and Mechanical systems due to alternate manufactures shall be the responsibility of the Contractor and Supplier. Submittals for fixtures, trim, and other plumbing related items, requiring submittals, shall be submitted in a single complete package. Individual items will not be reviewed independently unless approved by the Engineer.

2. Approval of submittals shall not relieve the contractor from responsibility for deviations from the plans or specifications, unless he has, in writing, called the Architect's /Engineer's attention to deviations at the time of submission, and obtained his written approval. Approval of submittals does not relieve the contractor from responsibility for errors in shop drawings or literature.

C. Equipment Requiring Submittals:

1. Plumbing Fixtures & Trim

PART 3 - EXECUTION

3.1 ACCESSIBILITY & SAFETY:

A. Accessibility:

1. All equipment which must be serviced or operated shall be located in fully accessible position. Minor changes from the drawings may be made to allow for better accessibility. All changes shall be approved prior to actual installation.

2. Access panels shall be provided if required for accessibility. Access panels to be steel, flanged, hinged doors by Cendrex, model AHD, or equal. Size as required for installation. Subcontractor shall furnish the required panels to the General Contractor and the required location for all access panels, unless otherwise specified in the Architectural specifications. Panels shall be installed by the General Contractor.

B. Safety:

1. No water piping shall run immediately over or within a 3-foot plan view clearance of any electrical panel or motor starter. Where piping must be located within these zones, install piping inside a conduit to prevent water access to electrical equipment.

3.2 COORDINATION:

A. Coordinate all work with the various trades involved to provide a complete and satisfactory installation. The exact details of piping and equipment are not shown. No additional compensation will be made for offsets or relocation required in coordination with other trades.

B. Alterations required due to improper supervision by the subcontractor shall be made at no extra cost, to the satisfaction of the Architect/Engineer.

3.3 EXCAVATION & BACKFILL:

A. Excavate trenches required for underground piping to proper elevation and grade. Provide trenches with solid bottoms to allow support of piping along entire length with excavation at bells as required for jointing and inspection. Provide repairing of finished surfaces, and all required shoring, bracing, pumping, and protection for safety of persons and property. Observe all Local or State Safety Codes. Verify that elevations of existing utilities will allow for proper grading of piping connecting to existing utilities.

B. Excavation and Backfill shall be in accordance with the requirements of Division 31, of these specifications.

3.4 IDENTIFICATION AND CODING:

A. General:

1. The Contractor shall use ASME 13 standards for all piping identifications, color coding, and compliance.

B. Painting:

1. All painting of equipment, accessories, and piping shall be furnished and applied under the Architectural section of these specifications. All painting shall be completed before any identification markings are applied.

C. Piping:

1. Identify all piping as to the service of the pipe and the direction of flow. The letters shall be 3/4 inch high on piping two inches or smaller, and 1-1/4 inches high on piping up to six inches. Flow arrows shall be at least six inches long. The letters and flow arrows shall be made by precut stencils and oil base paint, one inch high and black, or

factory fabricated plastic pipe markers. Piping shall be identified at 25 foot maximum intervals, on long continuous lines; adjacent to each item of equipment; on each riser and junction, and on both sides of all wall penetrations. Underground piping shall be identified with bright colored continuously printed plastic tape of not less than 6" wide by 4 mil thick, manufactured for direct burial service. Install directly above all buried pipe, 6 to 8 inches below finished grade.

3.5 TESTING:

A. Piping:

1. All plumbing piping (drainage, water, gas) shall be tested in accordance with the requirements of local adopted plumbing code, latest edition. Other piping systems shall be tested hydrostatically to 1.5 times the operating pressure but not less than 100 psi, for a minimum period of two hours. If the test pressure falls more than 5 percent during the test period, the leak shall be located, repaired, and the test repeated.

2. Piping shall be tested before insulation has been installed. Delicate control mechanisms shall be removed during tests to prevent shock damage. The use of chemicals or compounds to stop leaks shall not be permitted.

B. Systems:

1. All plumbing systems shall be tested at the completion of the building to establish that the systems operate as specified and required.

3.6 CLEANING AND ADJUSTING:

A. Thoroughly clean all parts of the system at the completion of the work. Flush all water circulating systems with fresh water and then drain. Clean all strainers and refill system. Adjust all devices for proper operation and lubricate all equipment as required. Repaint any painted surface that has been damaged.

B. All potable water systems shall be flushed and disinfected after tests are completed. Disinfection shall be in accordance with local municipal and State Plumbing Inspector's criteria. In lieu of such criteria, the following procedure shall be followed for disinfection:

1. Completely flush system. Add alkali or acid (hydrochloric) to bring water ph level to between 7.4 and 7.6.

2. Inject chlorine (liquid, powder, tablet, or gas) throughout the system to obtain 50 to 80 mg/L residual.

3. Bleed water from outlets to ensure distribution, and test for residual at a minimum of 15 percent of the outlets.

4. Maintain disinfection in system for 24 hours.

5. If final disinfectant residual tests less than 25 mg/L, repeat treatment.

6. Flush disinfectant from system until residual is equal to that of incoming water, or 1.0 mg/L.

7. Take samples no sooner than 24 hours after flushing, from 10 percent of the outlets and the incoming water.

3.7 PROJECT CLOSEOUT:

A. Operations & Maintenance Manual:

The Contractor shall provide an operations and maintenance manual at least thirty days prior to completion of work. The

manual shall be of the three ring binder type, entitled "Operations and Maintenance Manual", with the job name and year of completion also included. O & M manuals shall be submitted in a single package. Individual items will not be accepted independently unless approved by the Engineer. The manual shall include, as a minimum:

1. Maintenance instructions for all equipment, including lubrication requirements.

2. Fixture suppliers names, addresses, and telephone numbers.

3. Fixture catalog cuts, ratings tables, model numbers, serial numbers, and accessories.

4. Parts numbers for all replaceable parts.

5. Valve tagging chart as hereinbefore specified.

6. Guarantee letter as specified below.

7. Any additional information required to enable the Owner to properly maintain the building plumbing system.

8. After approval of the Operations and Maintenance Manual by the Architect/Engineer, the Contractor shall furnish two copies of the manual to the Owner.

B. As-Built-Drawings:

1. Provide two sets of red-line mechanical drawings showing the work as it was actually installed. The drawings shall indicate all departures from the contract drawings and shall locate all underground utility lines with dimensions from established building lines. Make all notations neat and legible, with red indelible pencil. At the completion of the work, these as-built drawings shall be signed and dated by the Plumbing Contractor and returned to the Architect/Engineer.

C. Guarantee:

1. All work furnished under this section shall be guaranteed in writing to be free from defective work or materials for a period of one year after acceptance of the contract. All repairs or replacements because of defective materials or workmanship or noncompliance with code shall be provided without additional cost to the Owner. Contractor shall furnish a letter indicating above guarantee with space for date of acceptance and expiration of guarantee. Letter shall be included in O & M Manual.

END OF SECTION 220000

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SECTION 220100 - PLUMBING

PART 1 - GENERAL

1.1 SCOPE:

A. This section covers the work necessary for the plumbing system, complete. The Plumbing General Requirements, Section 220000, are to be included as a part of this section of the specifications.

1.2 CODES:

A. The plumbing system shall be installed in accordance with the requirements of local adopted plumbing code, latest edition, International Fuel Gas Code, latest edition; and all local and State Codes.

1.3 FIXTURES & EQUIPMENT:

A. General:

1. Plumbing fixtures and equipment shall be as listed on the drawings. In addition to those specifically listed, the following manufacturers are approved for bidding only. All other manufacturers require prior approval. Final approval for installation is based on submittal data furnished:
   a. Flush Valve Water Closets: American Standard, Briggs, Kohler, Mansfield, Sloan & Zurn.
   b. Urinals: American Standard, Briggs, Gerber, Kohler, Mansfield, Sloan, Toto & Zurn.
   c. Vitreous China Sinks: American Standard, Crane, Kohler, Mansfield, Sloan, Toto, & Zurn.
   d. Stainless Steel Sinks: Elkay, Just.
   e. Faucets: American Standard, AMTC, Aquaspec, CHG Encore Saniguard, Chicago Faucets, Delta, Elkay, Gerber, Geberit, Kohler, Moen, T&S Brass, Symmons, Sloan & Zurn.
   f. Valves and Trim: Brasscraft, Dearborn Brass, ProFlo, Sloan & T&S Brass.
   g. Flush Valves: American Standard Selectronic, AMTC, Delany, Delta, Kohler, Moen (sensor-operated only) Sloan, & Zurn.
   i. Carriers and Drainage Products: Jay R. Smith, MIFAB, Neenah Foundry, NDS, Sun Drainage, Wade, Watts, & Zurn.
   j. Toilet Seats: American Standard, Beneke, Church, Kohler, Plumb Tech & Zurn.
   k. Mixing Valves: Acorn Controls, Lawler, Leonard, Powers, Stingray, Symmons, Watts, & Wilkins.
   l. Service Sinks: Acorn, Fiat, Mustee, Proflo, Stern Williams, & Zurn.
   m. Water Heaters (Tank): American, A.O. Smith, Bock, Bradford-White, Heat Transfer-Phoenix, Lochinvar Shield, PVI, & Rheem.
   n. System Valves: Apollo, Nebco & Red-White Valve Corp.
   o. Backflow Preventers: Conbraco/Apollo, Watts, & Wilkins.
   p. Hose Bibbs: Josam, J.R. Smith, Prier, Woodford, & Zurn.

2. Plumbing Fixture Standards:
   All plumbing fixtures shall meet or exceed the following standards:
   a. ANSI A112.6.1 - Supports for Off-the Floor Plumbing Fixtures for Public Use.
   b. ANSI A112.18.1 - Finished and Rough Brass Plumbing Fixture Fittings.
   c. ANSI A112.19.1 - Enameled Cast Iron Plumbing Fixtures.
   d. ANSI A112.19.2 - Vitreous China Plumbing Fixtures.
   e. ANSI A112.19.3 - Stainless Steel Plumbing Fixtures (Designed for Residential Use).
   f. ANSI A112.19.4 - Porcelain Enameled Formed Steel Plumbing Fixtures.
   g. ANSI A112.19.5 - Trim for Water-Closet Bowls, Tanks, and Urinals.
   h. ANSI/ASSE 1012 - Backflow Preventers with Immediate Atmospheric Vent.

i. ANSI/ASSE 1011 - Hose Connection Vacuum Breakers.
j. ANSI/ASSE 1013 - Backflow Preventers, Reduced Pressure Principle.
k. ANSI/ASSE 1015 – Backflow Preventers, Double Check Principle
l. ANSI/ASSE 1019 - Wall Hydrants, Frost Proof Automatic Draining Anti-Backflow Types.
m. AWSI/ASSE 1020 – Pressure Vacuum Breaker
n. AWSI/ASSE – 1-52 – Hose Connection, Double Check
o. ANSI A112.21.1 - Floor Drains.
p. ANSI A112.26.1 - Water Hammer Arresters.
q. PDI WH-201 - Water Hammer Arresters.

PART 2 - PRODUCTS

2.1 PLUMBING FIXTURES & TRIM:

A. All plumbing fixtures shall be provided complete with all required trim for a complete and operational system. All piping penetrations through finished walls shall be provided with chrome escutcheons. All plumbing fixtures shall be caulked and sealed to surrounding surfaces. All sink traps shall be provided with a cleanout plug in the bottom of the trap. All interior exposed pipe, valves, and fixture trim shall be chrome plated, including kitchen compartment sinks. Braided stainless steel pipe risers are approved for concealed locations only, such as behind casework doors or lav shields. Each fixture shall be provided with stop valves and the stop valves shall be quarter-turn brass ball type. All fixtures and trim must be lead free. All floor drains and floor sinks shall be provided with trap primers (PPP, Zurn or Wade as needed for appropriate use. Provide ball valve type shut-off valve upstream of all trap primer valves).

2.2 PIPING AND FITTINGS:

A. General:

1. Underground sanitary sewer and storm drain lines shall be installed at 1/4" per foot slope, unless otherwise indicated. If such slope is not possible due to existing inverts, approval shall be obtained from the Architect/Engineer and the authority having jurisdiction before any piping is installed at a lesser slope.

2. Connections between piping of dissimilar materials shall be made with dielectric waterway fittings or unions.

3. Provide standard manufactured water hammer arresters at all flush valves. Size and locate per manufacturers recommendations. Provide access panels for access to all water hammer arresters.

B. Domestic & Non-Potable Hot and Cold Water:

1. Piping inside building above slab or above grade in crawl space shall be ASTM B88, Type "L", hard drawn copper. Fittings shall be ANSI/ASME B16.22 cast brass, or ANSI/ASME B16.29 wrought copper. Joints shall be ANSI/ASTM B32 solder, Grade 95-5, lead free.
   a. Cold Water Only Option- ANSI/ASME B16.18 cast bronze, or ANSI/ASME B16.22 wrought copper. Joints shall be copper-tube dimensioned grooved joint couplings, and Flush Seal style gasket. (Gasket shall be UL classified in accordance with ANSI/NSF-61 for potable water service.) Victaulic Style 606, Gruvlok style 6400, Grinnell Universal Tongue and Groove 672, Shurjoint C305, or equal.
   b. Piping Option – Mechanically Formed Extruded Outlets:
      1) Mechanically formed extruded outlets shall be perpendicular to the axis of the run tube (header). They shall be formed by drilling a pilot hole and drawing out the tube surface to form a collar having a height of not less than three times the thickness of the branch wall and shall conform to ASME B31.9 and NFPA 99. T-Drill or approved equal.
      2) Branch tubes shall not restrict the flow in the run tube. To ensure this by conforming the branch tube to the shape of the inner curve of the run tube, a dimple / depth stop shall be formed in the

branch tube to ensure that penetration into the collar is of the correct depth. For inspection purposes, a second dimple shall be placed 0.25 inch above the first dimple. Dimples shall be aligned with the tube run.

3) Branches can be formed up to the run tube size as shown in ASTM F 2014. Forming procedures shall be in accordance with the tool manufacturer's recommendations.
4) Joints shall be made with the use of approved brazing alloys BCup2 thru BCup5 (0-15% silver content). Brazed with a filler that has a melting point above 540 deg. Centigrade (1000 deg. F). **Soft soldered joints are not allowed.**
5) K and L copper types allowed.
6) Soft and Hard copper allowed.
7) Each model used for making branch connections shall be permanently marked with manufacturer's name and appropriate model number.
8) Mechanically formed extruded outlets can (but not limited to) be used on commercial and residential buildings.
9) Fitter / Plumber shall be trained and certified to operate the equipment.

2. Piping underground within 5 feet of the building line, smaller than 4 inches, shall be ASTM B88, Type "K", hard drawn copper. Piping below floor slab, smaller than 4 inches, shall be type "K", soft annealed copper. Fittings shall be ANSI/ASME B16.29 wrought copper. Joints shall be ANSI/ASTM B32 solder, Grade 95-5, lead free. No joints shall be installed beneath concrete floor slabs, unless approved by the Engineer. Underground or underslab copper piping shall be provided with a polyethylene jacket, ANSI/AWWA C105, or shall be wrapped with double layer, half-lapped, 10 mil polyethylene tape.
   a. Underground (below slab) Piping Option- ½" to 4", High Density Polyethylene (HDPE) pressure pipe. ASTM D3350, ASTM D3035 & ASTM F714. AWWA C901 & AWWAC906, NSF. Fittings shall be HDPE, solvent weld. Piping shall be rated for not less than 150 psig.
   b. Trap Primer Piping (below floor or concealed only) –
      1) ½" Wirsbo Aquapex Tubing or equal.
      2) ½" type K hard drawn copper, wrapped as indicated above.

3. Piping underground beyond 5 feet from building line shall be Schedule 40 PVC, ASTM D1785 or D2241. Fittings shall be PVC, ANSI/ASTM D2466. Joints shall be solvent weld, ASTM D2855, or gasketed, ASTM F477. Piping shall be rated for not less than 150 psig pressure.

C. Sanitary Sewer and Vent:

1. Piping and fittings shall be Schedule 40 PVC-DWV (cellular core), per ASTM F1488 and ASTM F891, solvent welded per solvent manufacturer's instructions, or ABS Schedule 40 piping and fittings per either ASTM D2661 or ASTM F628 with solvent cement conforming to ASTM D2235. All sewer risers (2 story or more) shall be service weight cast iron, no-hub or single-hub, ASTM A74. All piping penetrations through fire rated walls, floors, or ceilings, and all piping located above ceilings used as return air plenums shall also be cast iron or galvanized steel, ASTM A53. Underground PVC-DWV piping shall be installed per ASTM D-2321.

2. Piping and fittings beyond 5 feet from the building line shall be PVC, ASTM D3033 or D3034, SDR 35. Joints shall be ASTM F477 with elastomeric gaskets. Underground piping shall be installed per ASTM D-2321.

3. All 90 degree waste line elbows shall be formed per the latest issue of the adopted plumbing code, latest edition.

4. All flush valve fixtures that are installed back to back shall have offset waste outlet fittings.

5. Cleanouts shall be provided at each horizontal drainage pipe, at its upper terminal, and each run of piping which is more than 100 feet and shall be provided for each 100 feet developed length, or fraction thereof of such piping. An additional cleanout shall be provided for each aggregate horizontal change of direction exceeding one hundred and thirty-five degrees, per applicable plumbing code. This shall be provided regardless of what is shown on the drawings.

6. All floor drains, floor sinks, and hub drains shall be installed with a trap primer.

a. Flush Valve Primer: Trap primer shall be Precision plumbing products model FVP-1VB with vacuum breaker.
b. Pressure Activated Primer: Trap primer shall be Precision Plumbing products Model CPO-500 with DU distribution unit if required.
c. Tail Piece Primer: Trap primer shall be Precision Plumbing Products Model LTP-1500 with ½" braided stainless steel flexible priming make up water line and chrome plated escutcheons plates.

7. All vent's through roof (VTR'S) shall be extended at least 1 foot above the roof surface, or to the top of the closest adjacent parapet wall, whichever is greater.

D. Hanger and Supports:

1. Pipe hangers shall be provided to adequately support all piping systems. Hangers shall be vertically adjustable to provide for proper pitch and drainage. Hangers shall allow for expansion and contraction of the piping system. Reference "General Regulations" of the latest edition of the adopted plumbing code, latest edition.

2. Hangers for pipe sizes 1/2 to 6 inches shall be adjustable clevis type, or unistrut saddles with all-thread hanger rod.

3. Hangers for hot pipe, sizes 6 inches and over shall be adjustable steel yoke, cast iron roll, double hanger type.

4. Vertical pipes shall be supported with steel riser clamps. Spacing interval requirements per "General Regulations" of the latest edition of the adopted plumbing code, latest edition.

5. All insulated piping shall be provided with minimum 18 gauge galvanized insulation shields, 12 inches long, and oversized hangers. Pipe sizes 2 inches and over shall also be provided with 12 inch long calcium silicate insulating blocks between the piping and the galvanized insulation shield.
a. Alternate: Insulated pipe support inserts may be provided at hanger, support, and guide locations on piping requiring insulation. The insert should consist of either Hydrous Calcium Silicate or Polyisocyanurate Foam insulation (Urethane) encircling the entire circumference of the pipe with a 360 deg. PVC (1.524 mm thick) or galvanized steel jacket and installed during the installation of the piping system. These insulated pipe support inserts shall be provided by the Mechanical Contractor and installed by the same during pipe support installation.

6. Hanger rod sizing and spacing for pipe shall be as follows:

| Pipe Size | Minimum Rod Diameter | Maximum Spacing |
|---|---|---|
| To 1-1/4 inches | 3/8 inch | 6.5 feet |
| To 2 inches | 3/8 inch | 10 feet |
| To 3 inches | 1/2 inch | 10 feet |
| To 6 inches | 5/8 inch | 10 feet |
| 8 to 12 inches | 7/8 inch | 12 feet |
| PVC & ABS (all sizes) | 3/8 inch | 4 feet |
| Cast Iron No-Hub | 5/8 inch | 5 feet and at joints |

7. Provide hangers within 12 inches of each horizontal elbow.

8. Provide hangers with minimum 1-1/2 inches vertical adjustment.

2.3 INSULATION:

A. General:

1. Installer Qualifications: Skilled mechanics who have successfully completed an apprenticeship program or another craft training program certified by the Department of Labor, Bureau of Apprenticeship and Training.

2. Fire-Test-Response Characteristics: Insulation and related materials NFPA 255, UL Classified per UL 723 or meeting ASTM E 84, by a testing and inspecting agency acceptable to authorities having jurisdiction. Factory label insulation and jacket materials and adhesive, mastic, tapes, and cement containers, with appropriate markings of applicable testing and inspecting agency.
   a. Insulation Installed Indoors: Flame-spread index of 25 or less, and smoke-developed index of 50 or less.
   b. Insulation Installed Outdoors: Flame=spread index of 75 or less, and smoke-developed index of 150 or less.

B. Piping:

1. All domestic, hot and cold water lines shall be insulated with preformed insulation.
   a. Fiberglass insulation with a vapor barrier jacket. Insulation shall have a conductivity not exceeding 0.28 Btu-inch/hour-sq. ft.-degrees F. Laps and butt joints shall be sealed with pressure sensitive joint sealing tape of the same finish as the insulation jacket to provide a continuous vapor seal. Fittings and valves shall be insulated with PVC fitting covers and fiberglass insulation inserts, or with hydraulic setting insulating cement and four ounce canvass jacket with vapor barrier adhesive.
   b.

   Insulation thicknesses shall be as follows:

| System | Pipe Sizes ½" and above |
|---|---|
| Domestic Cold Water (pot. & non-pot.) | ½" |
| Domestic Hot Water & Recirc. (pot. & non-pot.) | 1" |

2. Insulation shall be installed in strict accordance with manufacturer's instructions.

3. Insulation shall be continuous through penetrations.

4. All insulation shall be installed in a neat and workmanlike manner.

2.4 VALVES & STRAINERS:

A. Ball Valves:

1. Valves 2-inches and smaller shall be lead free cast bronze body, chrome-plated brass ball, teflon seats, and lever handle, 600 psi CWP. Valves shall comply with MSS SP-110, NSF/ANSI 61, NSF/ANSI 372 Lead Free. Valves over 2-inches shall be cast steel body, chrome plated steel ball, teflon seats, and lever handle. Victaulic, Anvil Gruvlok, Grinnell, or Shurjoint ball valves are acceptable if grooved piping is used. Valves mounted higher than 7'-0" A.F.F. shall be provided with chain, wheel, and guides. Basis of design: Apollo #77CLF-A Series or equal.

PART 3 - EXECUTION

3.1 WORKMANSHIP:

A. General:

1. Install all piping, fixtures, equipment, and accessories as shown, and in strict accordance with the plumbing laws, rules, and regulations of the State and/or City. All work shall be done in a neat and orderly fashion and left in a condition satisfactory to the Architect/Engineer.

B. Piping:

1. All piping shall be run parallel or perpendicular to established building lines. Install piping so as to allow for expansion. Waste and vent piping occurring above floor slab shall be installed true and plumb. Extend vents at least 1 foot above roof, or to the top of the closest adjacent parapet wall, whichever is greater, and provide watertight flashing sleeves. Excavation and backfill shall be in accordance with Section 220000 of these specifications.

C. Fixtures:

1. Install fixtures true and plumb with building walls. Caulk all plumbing fixtures at joints along walls, countertops, and other intersecting surfaces. Locate fixtures as shown and per manufacturer's instructions. Furnish all required trim for fixtures to provide a complete and workable installation.

3.2 TESTS:

A. General:

1. All piping, fixtures, and equipment shall be inspected and approved before concealing or covering. All work shall be tested as required by Section 220000 of these specifications and shall be leak proof before inspection is requested. All tests shall be repeated if required by those making the inspection.

2. All potable water systems shall be flushed and disinfected in accordance with Section 220000 of these specifications. Following disinfection, system shall be flushed and water sampled to show compliance with requirements of public health authority having jurisdiction. If tested water does not meet requirements, disinfecting shall be repeated until water quality meets requirements.

B. Fixtures and Equipment:

1. Fill all plumbing fixtures with water and check for leaks or retarded flow. Repair as required. Adjust each piece of plumbing equipment as required to ensure proper functioning. Leave all fixtures and equipment in first class operating condition.

2. The Plumbing Contractor is responsible for all backflow devices to be inspected by a certified backflow technician before use of the building potable water system.

C. Smoke Test:

1. A smoke test shall be performed on the entire waste and vent system before building occupancy. After all fixtures are permanently connected and traps are filled with water, fill entire drainage systems with smoke under pressure of 1.3 pKa (1 inch of water) with a smoke machine. If leaks are detected, they shall be repaired and the smoke test shall be performed again until no leaks are found.

MUSGROVE ENGINEERING
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***PIPING SYSTEM TEST REPORT***

STRUCTURE/BUILDING: _____ TEST NUMBER: _____

LOCATION: _____ CONTRACT NO._____

DESCRIPTION OF SYSTEM/PIPING BEING TESTED: _____

_____

_____

| Description of Test Performed | Test Pressure | Test Duration | Pass/Fail |
|---|---|---|---|
| Hydrostatic: _____ | P.S.I. | _____ | _____ |
| Inert Gas: _____ | P.S.I. | _____ | _____ |
| Compressed Air: _____ | P.S.I. | _____ | _____ |
| Waste & Vent Smoke Test**:** _____ | 1" Water Column | _____ | _____ |

NAME AND TITLE OF PERSON IN CHARGE OF PERFORMING TEST'S FOR CONTRACTOR:

*Name:* _____ *Title:* _____

*Signature:* _____

*I hereby certify that the above described system has been tested as indicated above and found to be entirely satisfactory as required in the contract specifications.*

*Signature of Inspector:* _____ *Date:* _____

*REMARKS:* _____

_____

_____

_____

_____

END OF SECTION 220100

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DIVISION 23 – HEATING VENTILATING AND AIR CONDITIONING

SECTION 230000 - HVAC GENERAL REQUIREMENTS

PART 1 - GENERAL

1.1 SCOPE:

A. General:

1. The Bidding Requirements, Contract Requirements, and the General Requirements (Division 1) of these specifications shall govern all parts of the work.

B. Work Included:

1. Install work in accordance with these specifications and the accompanying plans. Furnish all labor, material, and equipment together with all incidental items not specifically shown or specified which are required by good practice to provide the complete mechanical systems as described.

2. The HVAC Contractor(s) and all Sub-tier Contractors shall provide installed equipment cut sheets and purchase orders required for utility rebates.

C. Coordination and Site Visits:

1. This section of the work requires examination of and reference to all architectural, structural, utility, and electrical drawings for construction conditions that may affect the work. Inspect the building site and existing facilities for verification of existing conditions. Base all measurements from established benchmarks. Any discrepancy between actual measurements and those indicated, which prevents following good practices or the intent of the drawings and specifications, shall be reported to the Architect/Engineer, and work halted until instructions are received from the Architect/Engineer.

1.2 CODES, PERMITS, FEES:

A. Install all work in accordance with applicable codes and standards. Obtain all required permits; pay all required fees including utility connections or extensions, in connection with this portion of the construction. Obtain all required certificates of inspection for the work.

PART 2 - PRODUCTS

2.1 MATERIALS AND WORKMANSHIP:

A. Materials:

1. All materials and equipment shall be of first quality, new, full size and weight, standard in every respect, and suitable for the space required. Use the same manufacturer for products of similar class or service, such as valves, pumps, controls, and air handlers. Protect all materials against loss, theft, or damage before and after installation.

2. Furnish equipment that will operate under all conditions of load without any sound or vibration that is objectionable in the opinion of the Architect/Engineer. Vibration or noise considered objectionable will be corrected by the

Subcontractor at his expense.

3. Furnish and install all necessary foundations, supports, pads, bases, and piers required for all materials and equipment furnished under this contract.

4. Provide all required firestopping at duct penetrations of fire rated walls, floors, ceilings, and roofs. Firestopping shall be Dow Corning Fire Stop Sealant 2000 or Fire Stop Foam 2001, or approved equal.

B. Workmanship:

1. All materials and equipment shall be installed in a neat and workmanlike manner by competent specialists for each subtrade. Work shall be installed to the satisfaction of the Architect/Engineer with unsatisfactory work removed and reinstalled to his satisfaction at no extra cost to the Owner.

2. Provide all cutting and patching necessary to install the work specified in this section. Patching shall match adjacent surfaces. No structural members shall be cut without the approval of the Architect/Engineer. Provide sleeves at all piping penetrations of exterior walls and floors on grade. Provide all sleeves and inserts required before new floors and walls are built.

3. Locate all equipment that must be serviced in fully accessible positions. Provide clearance for removal of replacement parts and components, and with necessary couplings or flanges to remove the component for maintenance.

C. Protection of Equipment During Construction:

1. At the end of each shift, all duct openings and open ends shall be covered with a plastic poly sheeting film to protect against dust and construction contamination from entering the ductwork.

2.2 SUBMITTALS AND SUBSTITUTIONS:

A. Prebid Approval:

1. Manufacturer’s trade names and catalog numbers stated herein are intended to indicate the quality of equipment or materials desired. All manufacturers not specifically listed require prior approval. Submit catalog data, including specifications, of the proposed equipment to the Architect/Engineer for his approval at least 10 calendar days prior to bid opening. Notice of such approvals will be published in an addendum. Approval of listed alternate equipment manufacturers is for bidding only. Final approval is to be based on requirements of the plans and specifications.

B. Submittals:

1. Within thirty days after award of this contract, provide an electronic copy of a complete list of all materials and equipment proposed for this project. List shall contain make, type, manufacturer's name, and trade designation of all materials and equipment. Submittal shall also include manufacturer's complete specification for each item, including capacities, ratings, etc., and dimensions as required to check space requirements. The scheduled equipment is the basis of design for capacity, weights, physical size, etc. Alternate manufacturers shall not exceed the weight or physical size. Any changes to the Architectural, Structural, Mechanical, Electrical, and Control systems due to alternate manufactures shall be the responsibility of the Contractor and Supplier. Submittals for each major trade (i.e., dryside HVAC, wetside HVAC, or Plumbing) shall be submitted in a single complete package. Individual items will not be reviewed independently unless approved by the Engineer.

2. Approval of submittals shall not relieve the contractor from responsibility for deviations from the plans or specifications, unless he has, in writing, called the Architect's /Engineer's attention to deviations at the time of submission, and obtained his written approval. Approval of submittals does not relieve the contractor from

responsibility for errors in shop drawings or literature.

C. Equipment Requiring Submittals:

1. Electric Heaters

2. Exhaust Fans

3. Louvers (Submit with Color Chart)

PART 3 - EXECUTION

3.1 ACCESSIBILITY & SAFETY:

A. Accessibility:

1. All equipment which must be serviced or operated shall be located in fully accessible position. Minor changes from the drawings may be made to allow for better accessibility. All changes shall be approved prior to actual installation.

2. Access panels shall be provided if required for accessibility. Access panels to be steel, flanged, hinged doors by Cendrex, or equal. Sized as required for installation. Subcontractor shall furnish the required panels to the General Contractor and the required location for all access panels, unless otherwise specified in the Architectural specifications. Panels shall be installed by the General Contractor.

B. Safety:

1. Subcontractor shall provide guards for all belt drives and rotating machinery.

3.2 COORDINATION:

A. Coordinate all work with the various trades involved to provide a complete and satisfactory installation. The exact details of ductwork and equipment are not shown. No additional compensation will be made for offsets or relocation required in coordination with other trades.

B. Alterations required due to improper supervision by the subcontractor shall be made at no extra cost, to the satisfaction of the Architect/Engineer.

3.3 ELECTRICAL:

A. Electric motors required for equipment specified in this section shall be provided and installed by this Subcontractor. Motor starters, disconnects, relays, pilot lights, etc., are in general, to be furnished and installed by the Electrical Contractor. Starters, relays, controls, etc., which are factory assembled into packaged equipment shall be furnished by the Mechanical Contractor under this section of the specifications.

B. All motors shall be provided with adequate starting and protective equipment as specified or required. Motor capacity shall be sufficient to operate driven device under all conditions of operation and load without overload. Minimum horsepower shall be as specified.

3.4 IDENTIFICATION AND CODING:

A. Painting:

1. All painting of mechanical equipment, accessories and ductwork shall be furnished and applied under the Architectural section of these specifications. All painting shall be completed before any identification markings are applied.

B. Equipment:

1. Identify all equipment with a black Formica label, with white reveal when engraved. Lettering to be 3/16 inch high minimum. In general, identify equipment as to area served in addition to title and code number of the equipment as taken from the plans.

3.5 TESTING:

A. Systems:

1. All systems, including heating, ventilating and air conditioning, shall be tested at the completion of the building to establish that the systems operate as specified and required. Testing shall be performed after air balancing is completed.

2. All controls shall be calibrated accurately and all equipment shall be adjusted for satisfactory operation. Excessive vibration or noise from any system shall be corrected.

3. The air conditioning system shall be tested for satisfactory operation when the outside air temperature reaches 60 degrees F. or warmer. All other systems shall be tested at building completion. All tests shall be performed in the presence of the Architect/Engineer or his representative.

3.6 BALANCING:

A. Scope:

1. Prior to final acceptance by the Owners, all air systems shall be balanced to deliver the quantities as specified or directed. The air balance shall be performed by an independent agency specializing in balancing and is certified by the National Environmental Balancing Bureau.

2. The Mechanical Contractor shall provide assistance to the Balancing Contractor by identifying all installed mechanical systems and assisting access to all installed mechanical systems. All mechanical systems shall be completely operational and functional prior to the Balancing Contractor performing their specified work.

B. Air balancing:

1. Balancing of the air system shall consist of:
   a. Adjust all air volumes to the quantities shown, with allowable variation of plus 10, minus 10 percent.
   b. Record all system, zone, diffuser, grille, and register C.F.M. Use volume control devices to regulate air quantities only to the extent that adjustments do not create objectionable air motion or sound levels. Balancing Engineer shall work with the Contractor to set minimum & maximum CFM quantities for zone dampers, or zone dampers/heaters.
   c. Test and record all system static pressures, inlet and discharge, on all packaged units, fans, and terminal units. Vary total system air quantities by adjustment of fan speeds. Provide drive changes as necessary. Vary branch air quantities by damper regulation.
   d. Test and record motor full load amps and nameplate amps.
   e. Test and record entering and leaving temperatures at all coils.
   f. Adjust all automatically operated dampers, in cooperation with the Control Contractor, to the required

settings. Adjust outside air automatic dampers, outside air, return air, and exhaust dampers for design conditions within specified tolerances. Where modulating dampers or economizers are provided, take measurements at full return air, minimum outside air, and 100 percent outside air mode of operation.

g. Adjust diffusers and grilles for proper deflection, throw, and coverage. Eliminate drafts and excessive noise where possible.

h. Mark final positions of all balance dampers with a red felt pen.

i. Air systems shall be balanced in accordance with standard procedures and recognized practices of the Associated Air Balance Council, and the Testing Adjusting, and Balancing Bureau.

C. Balance Reports:

1. Submit four copies of the air system balance report to the Architect/Engineer for evaluation and approval. Reports shall be on TABB/SMACNA forms that indicate information addressing each of the testing methods, readings, and adjustments.

3.7 CLEANING AND ADJUSTING:

A. Thoroughly clean all air conditioning units, air handling units, and all associated parts of the system at the completion of the work. Install new, clean air filters in all systems. Adjust all devices for proper operation and lubricate all equipment as required. Repaint any painted surface that has been damaged.

3.8 PROJECT CLOSEOUT:

A. Operations & Maintenance Manual:
The Contractor shall provide an operations and maintenance manual at least thirty days prior to completion of work. The manual shall be of the three-ring binder type, entitled "Operations and Maintenance Manual", with the job name and year of completion also included. O & M manuals shall be submitted in a single package. In addition, the contractor shall provide two consolidated electronic versions on two separate thumb drives. Individual items will not be accepted independently unless approved by the Engineer. The manual shall include, as a minimum:

1. Maintenance instructions for all equipment, including lubrication requirements.

2. Equipment suppliers' names, addresses, and telephone numbers.

3. Equipment catalog cuts, ratings tables, model numbers, serial numbers, and accessories.

4. Parts numbers for all replaceable parts.

5. Air and/or water systems balance report as hereinbefore specified.

6. Control diagram or drawing and operation sequence.

7. Valve tagging chart as hereinbefore specified.

8. Filter chart listing unit callout, size of filters, and quantity of filters.

9. Guarantee letter as specified below.

10. Any additional information required to enable the Owner to properly maintain the building mechanical system.

11. Mechanical Equipment Start-up forms, which are included in this specification, if they are required.

12. After approval of the Operations and Maintenance Manual by the Architect/Engineer, the Contractor shall furnish

two copies of the manual to the Owner.

B. Mechanical System Training Period:

1. After the mechanical system is completely installed and operational, the mechanical contractor shall provide a minimum of 2 hours training and instruction time for the building Owner or his representative. During this period, the contractor shall instruct the Owner in the operation and maintenance of all parts of the mechanical system, using the O & M manual where applicable. The contractor shall provide a copy of the Project Owner Mechanical Systems Training Form (attached to this specification), with proper signatures, to the Engineer prior to substantial completion and ensure that a copy is inserted into the project O & M manuals.

C. As-Built-Drawings:

1. Provide two sets of red-line mechanical drawings showing the work as it was actually installed. The drawings shall indicate all departures from the contract drawings. Make all notations neat and legible, with red indelible pencil. At the completion of the work, these as-built drawings shall be signed and dated by the Mechanical Contractor, and returned to the Architect/Engineer.

D. Guarantee:

1. All work furnished under this section shall be guaranteed in writing to be free from defective work or materials for a period of one year after acceptance of the contract. All repairs or replacements because of defective materials or workmanship or noncompliance with code shall be provided without additional cost to the Owner. Contractor shall furnish a letter indicating above guarantee with space for date of acceptance and expiration of guarantee. Letter shall be included in O & M Manual.

END OF SECTION 230000

**NAME OF PROJECT:** _____

_____

**OWNER MECHANICAL SYSTEM TRAINING FORM**

Upon completion of the equipment and systems installation and connections, the contractor shall assemble all required equipment factory representative and subcontractors together for system Owner training.

These people shall assist in Owner training their system(s) and remain at the site until the total system operations is acceptable and understood by the Owner's representative(s), maintenance and/or operation personnel, on operation and maintenance of their equipment. To prove acceptance of operation and instruction by the Owner's representative(s), the contractor shall provide a copy of this form, with proper signatures, to the Engineer prior to substantial completion, and ensure that a copy is inserted into the project Operation and Maintenance manuals.

> "I, the Contractor, associated factory representative and subcontractors, have started each system and the total system(s); and have proven their normal operation to the Owner's representative(s) and maintenance/operation personnel and have instructed him/them _____, hours in the operation and maintenance thereof."

| | |
|---|---|
| _____ | _____ |
| Owner's Representative | Contractor |
| _____ | _____ |
| Signature | Signature |
| _____ | _____ |
| Date | Date |

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SECTION 230100 - HEATING, VENTILATING, AND AIR CONDITIONING

PART 1 - GENERAL

1.1 SCOPE

A. This section covers the work necessary for the heating, ventilating, and air conditioning system, complete. The HVAC General Requirements, Section 230000, is to be included as a part of this section of the specifications.

1.2 CODES & STANDARDS

A. The heating, ventilating, and air conditioning system shall be installed in accordance with the latest edition of the following codes and standards:

1. International Mechanical Code (IMC)

2. International Building Code (IBC)

3. American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE)

4. National Fire Protection Association (NFPA)

5. Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA)

PART 2 - PRODUCTS

2.1 EXHAUST FANS

A. Exhaust Fans shall be as indicated on plans or approved alternate manufacturer.

2.2 ELECTRIC HEATERS

A. Electric heaters shall be as indicated on plans or approved alternate manufacturer.

2.3 AIR DISTRIBUTION

A. Ductwork:

1. Low pressure ductwork shall be fabricated from galvanized sheet metal, unless otherwise indicated. Construction requirements shall be in accordance with SMACNA - HVAC Duct Construction Standards, metal and flexible, latest edition. All sheet metal ductwork shall be sealed with McGill United Sheet Duct Sealer or equal, in accordance with the International Energy Compliance Code, latest edition. Adjustable ( twist ) elbows are not allowed. Low pressure ductwork shall be constructed to the following SMACNA static pressure standards:
   a. Supply air ductwork = 2" W.G.
   b. Return, Exhaust, Outside Air Intake ductwork = 1" W.G.

1. Shower and locker room exhaust ductwork shall be constructed of galvanized sheet metal, in accordance with

SMACNA standards.

2. Flexible ducts shall be listed per UL-181 standard as Class 1 flexible, acoustical insulated air duct and complying with NFPA Standards 90A and 90B. Ducts shall be insulated with a minimum R-5 value, and shall have a maximum vapor transmission value of .05 perms. Ducts shall be factory made with and composed of: a PE liner duct permanently bonded to a coated spring steel wire helix. Duct shall be chlorine free and carry a ten-year warranty for the labor to replace the duct should there be a factory defect. Low permeability outer vapor barrier of fiberglass bidirectional reinforced metalized laminate shall complete the composite. Pressure rating shall be 6" w.g. and maximum length shall be 6 feet. Attach to duct take-off, diffuser, register, or grille only, with nylon or stainless steel duct clamp or tie. Flexmaster 1-M, or approved equal.

B. Duct Accessories:

1. Turning vanes shall be installed in all rectangular or square elbows. Vanes shall be installed in vane side rails. Vanes shall be single wall vanes, and be fabricated and installed per SMACNA standards.

2. Volume dampers shall be fabricated from galvanized steel in accordance with SMACNA standards. Dampers shall have a continuous galvanized steel shaft on ducts 13” diameter or larger, with damper regulators and end bearings. Dampers located above inaccessible ceilings (hard ceilings) shall be furnished with concealed ceiling damper regulators. Dampers shall be pressure rated equal to the design duct pressure rating. Dampers shall be provided at all diffuser and supply/exhaust grille takeoffs, regardless if indicated on the plans. Dampers are not required on the return air takeoffs unless specifically indicated.

3. Flexible connections shall be provided at all rotating fan equipment. Connectors shall be of fire, water, and weather resistant material.

C. Diffusers, Registers, Louvers, Grilles, Weathercaps:

1. See Drawings for requirement.

D. Duct Cleanliness:

1. Ductwork Delivery To Site
   a. During ductwork being delivered from the premises of the manufacturer, care must be taken to prevent damage during transportation and off-loading.

2. Temporary Storage
   a. Job site duct material storage areas should be clean, dry, and located away from high dust generating processes such as masonry or tile cutters, cutoff saws, drywall sanding, mortar and plaster mixers, roof pitch kettles, portable electric generators, and main walkways that will be constantly broom swept. The general contractor should designate a suitable area for temporary storage.
   b. To prevent ductwork material damage from standing water, storage locations should include pallets or blocking to keep fabricated metal ductwork above the floor surface. If there is a risk of water runoff from above or dusty areas cannot be avoided, coverage should be used to protect stored materials.

3. Installation
   a. Before the installation of individual duct sections, they are to be inspected to ensure that they are free from all debris.
   b. All ductwork risers must be covered to prevent the entry of debris into the duct.
   c. Downward facing and horizontal ductwork openings will not be required to be covered.
   d. Access covers shall be firmly fitted in position on completion of each section of the work. Open ends on completed ductwork and overnight work-in-progress shall be sealed.
   e. The working area should be clean and dry and protected from the elements.
   f. The internal surfaces of the uninsulated ductwork shall be wiped to remove excess dust immediately prior

to installation.

2.4 CONTROL SYSTEM

A. General:

1. The Mechanical Contractor shall be responsible for a complete and operable control system, including equipment, installation, and accessories required to perform the required control functions. All control conduit and wiring shall be furnished by the Electrical Contractor. Thermostats, sub-base switches, remote control devices, etc., shall be supplied by the Mechanical Contractor and installed and connected by the Mechanical Contractor. The Mechanical Contractor shall furnish the Electrical Contractor with wiring diagrams for all mechanical equipment and controls.

2. The Mechanical Contractor shall be responsible for installing all control valves, water flow switches, temperature wells, control dampers, and related equipment which is furnished by the Control Contractor.

3. The control system shall be basically electric, with supplementary electronic devices as required.

B. Control Equipment and Accessories:

1. Thermostats:
   a. Thermostats shall be 7-day programmable type, with automatic changeover from heating to cooling, be provided with auxiliary contacts.
   b. Thermostats shall be provided with lockable covers.
   c. Thermostats installed on exterior walls shall be mounted on an insulating block, or on foam insulation filled J-box.
   d. All thermostats shall have a mounting height of 46 inches, to the centerline of the device, unless otherwise noted on electrical drawings.

PART 3 - EXECUTION

3.1 WORKMANSHIP

A. General:

1. Install all materials and equipment as shown and in strict accordance with the applicable codes for the State and/or city. Plans do not attempt to show exact details of all piping and ductwork, and no extra payment will be allowed for offsets required due to obstructions by other trades. All work shall be done in a neat and orderly fashion and left in a condition satisfactory to the Architect/Engineer.

2. All piping shall be run parallel or perpendicular to established building lines. Install piping so as to allow for expansion. Install all valves with stems horizontal or above. Install air vents at all high points. Provide all piping which passes through walls, floors, or ceilings with standard weight pipe sleeves.

B. Louvers:

1. All louvers shall be installed tight on their respective mounting surfaces and shall be accurately centered on ceiling tile, recesses, windows, or doors.

C. Ductwork:

1. All sheet metal work shall be done by qualified, experienced mechanics in accordance with the requirements of ASHRAE and the latest edition of the applicable SMACNA Manual. All ductwork shall be installed in a neat and orderly manner, and shall be adequately supported to prevent vibration or sagging. All sheet metal ductwork shall be sealed with United-Sheet Metal Duct Sealer or equal.

END OF SECTION 230100

SECTION 260500 - ELECTRICAL GENERAL PROVISIONS

PART 1 - GENERAL

1.1 CONDITIONS AND REQUIREMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

B. Provisions of this Section shall apply to all Sections of Division 26, 27, and 28.

1.2 SCOPE OF WORK

A. Furnish and install all materials and equipment and provide all labor required and necessary to complete the work shown on the drawings and/or specified in all Sections of Division 26 and all other work and miscellaneous items, not specifically mentioned, but reasonably inferred for a complete installation, including all accessories required for testing the system. It is the intent of the drawings and specifications that all systems be complete and ready for operation.

1.3 CODE COMPLIANCE

A. All work and materials shall comply with the latest rules, codes and regulations, including, but not limited to, the following:

1. Occupational Safety and Health Act Standards (OSHA)
2. NFPA #70 – National Electric Code (NEC)
3. ADA Standards – Americans with Disabilities Act
4. ANSI/IEEE C-2 – National Electrical Safety Code
5. NECA – Standard of Installation
6. International Building Code
7. International Fire Code
8. International Energy Conservation Code
9. NFPA #72 – Fire Code
10. NFPA #101 – Life Safety Code
11. All other applicable Federal, State and local laws and regulations.

B. Work to be executed and inspected in accordance with local codes and ordinances. Permits, fees or charges for inspection or other services shall be paid for by the contractor. Local codes and ordinances are to be considered as minimum requirements and must be properly executed without expense to the owner; but do not relieve the contractor from work shown that exceeds minimum requirements.

1.4 CONDITIONS AT SITE

A. Visit to site is recommended of all bidders prior to submission of bid. All will be held to have familiarized themselves with all discernible conditions and no extra payment will be allowed for work required because of these conditions, whether specifically mentioned or not.

B. Lines of other service that are damaged as a result of this work shall be promptly repaired at no expense to the owner to the complete satisfaction of the owner.

1.5 DRAWINGS AND SPECIFICATIONS

A. All drawings and all specifications shall be considered as a whole and work of this Division shown anywhere therein shall be furnished under this Division.

B. Drawings are diagrammatic and indicate the general arrangement of equipment and wiring. Most direct routing of conduits and wiring is not assured. Exact requirements shall be governed by architectural, structural and mechanical conditions of the job. Consult all other drawings in preparation of the bid. Extra lengths of wiring or addition of pull or junction boxes, etc., necessitated by such conditions shall be included in the bid. Check all information and report any apparent discrepancies before submitting bid.

C. Change to location, type, function, brand name, finish, etc., shall not be made without permission of engineer.

D. Some equipment is specifically designated on the drawings. It is not the intent to sole source any item unless explicitly stated. Items have been specified based upon design requirements. All bidders are encouraged to submit products for approval. Prior approval must be obtained as required by these contract documents. Bids submitted with non-approved items will be considered invalid and bidders will be held to provide approved materials at no additional cost to the owner. Submittals received by the engineer after award of contract on non-approved equipment will not be reviewed nor will they be returned.

E. Where conflicting direction is given within the specifications and drawings, the contractor shall include the most expensive option in the bid.

1.6 SAFETY AND INDEMNITY

A. Safety: The contractor shall be solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of the work. This requirement will apply continuously and not be limited to normal working hours.

B. No act, service, drawing review or construction review by the owner is intended to include review of the adequacy of the contractor's safety measures in, on, or near the construction site.

1.7 CONSTRUCTION OBSERVATION BY THE ENGINEER

A. Prior to covering: any major portion of the materials installed under this section, notify the engineer so that an observation can be made. Notification shall be made at least three (3) working days in advance of the date the items will be covered.

1.8 INSTRUCTION OF OWNER'S PERSONNEL

A. The contractor shall conduct an on-site instructional tour of the entire project. The personnel designated by the owner shall be instructed in: operation of all electrical systems, trouble-shooting procedures, preventative maintenance procedures, uses of Operation and Maintenance manuals, maintenance and cleaning of lighting fixtures and operation of all special systems.

1.9 PROJECT COMPLETION

A. Upon completion of all work and operational checks on all systems, the contractor shall request that a final construction observation be performed.

B. The engineer shall compile a punch list of items to be completed or corrected. The contractor shall notify the engineer upon completion of the items.

1.10 GUARANTEE

A. All work under this section shall be guaranteed in writing to be free of defective work, materials, or parts for a period of one (1) year after final acceptance of the work under this contract or the period indicated under the Division 1 specifications whichever is longer.

B. Repair, revision or replacement of any and all defects, failure or inoperativeness shall be done by the contractor at no cost to the owner.

PART 2 - PRODUCTS

2.1 MATERIAL APPROVAL

A. The design, manufacturer and testing of electrical equipment and materials shall conform to or exceed latest applicable NEMA, IEEE or ANSI standards.

B. All materials must be new, unless noted otherwise, and UL listed. Materials that are not covered by UL testing standards shall be tested and approved by an independent testing laboratory or a governmental agency, which laboratory shall be acceptable to the owner and code enforcing agency.

2.2 SHOP DRAWINGS AND MATERIALS LIST

A. Submit an electronic copy, unless noted otherwise under Division 1, of the Division 26, 27 and 28 shop drawings and material lists proposed for this project to the architect/engineer for review.

2.3 OPERATION AND MAINTENANCE MANUALS

A. Submit an electronic copy, unless noted otherwise under Division 1, of the Operation and Maintenance Manuals for all Division 26, 27 and 28 equipment to the architect/engineer.

2.4 RECORD DRAWINGS

A. Submit record drawings to owner.

2.5 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Deliver, store, and handle materials in a manner to prevent damage.

B. Protect equipment from weather and dampness.

PART 3 - EXECUTION

3.1 WORKMANSHIP AND CONTRACTOR'S QUALIFICATIONS

A. Only quality workmanship will be accepted. Haphazard or poor installation practice will be cause for rejection of work.

B. Provide experienced foreman with a minimum of three years experience working on this type of building placed in charge of this work at all times.

## 3.2 COORDINATION

A. Coordinate work with other trades to avoid conflict and to provide correct rough-in and connection for equipment furnished under trades that require electrical connections. Inform contractors of other trades of the required access to and clearances around electrical equipment to maintain serviceability and code compliance.

B. Verify equipment dimensions and requirements with provisions specified under this Section. Check actual job conditions before fabricating work. Report necessary changes in time to prevent needless work. Changes or additions subject to additional compensation, which are made without the authorization of the owner, shall be at contractor's risk and expense.

## 3.3 MANUFACTURER'S INSTRUCTIONS

A. All installations are to be made in accordance with manufacturer's recommendations. A copy of such recommendations shall at all times be kept in the job superintendent's office and shall be available to the engineer.

B. Follow manufacturer's instructions where they cover points not specifically indicated on drawings and specifications. If they are in conflict with the drawings and specifications obtain clarification from the engineer before starting work.

## 3.4 QUALITY ASSURANCE

A. The contractor shall insure that all workmanship, all materials employed, all required equipment and the manner and method of installation conforms to accepted construction and engineering practices, and that each piece of equipment is in satisfactory working condition to satisfactorily perform its functional operation.

B. Provide quality assurance tests and operational check on all components of the electrical distribution system, all lighting fixtures, and special systems.

## 3.5 CUTTING AND PATCHING

A. Perform all cutting and fittings required for work of this section in rough construction of the building.

B. All patching of finished construction of building shall be performed under the sections of specifications covering these materials.

C. No joists, beams, girders or columns shall be cut by any contractor without obtaining written permission from the architect/engineer.

END OF SECTION 260500

SECTION 260519 - CONDUCTORS AND CABLES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes building wires and cables and associated connectors, splices, and terminations for wiring systems rated 600 V and less.

1.3 SUBMITTALS

A. Submit shop drawings and product data.

1.4 COORDINATION

A. Coordinate layout and installation of cables with other installations.

B. Revise locations and elevations from those indicated, as required to suit field conditions and as approved by the owner.

PART 2 - PRODUCTS

2.1 BUILDING WIRES AND CABLES

A. Conductors: Stranded, copper, 600 volt insulation, type THHN/THWN, THHN/THWN-2, XHHN/XHHW.

B. Conductors:

1. Solid or stranded for No. 10 and smaller, stranded for No. 8 and larger, copper, 600 volt insulation, type THHN/THWN. Aluminum conductors not allowed unless noted otherwise.
2. Insulation Types: THWN-2 for underground, THWN for wet locations, THHN for dry locations; XHHN/XHHW for GFI branch circuits and feeders fed from GFCI breakers.

C. Color-code 240/120-V system secondary service, feeder, and branch-circuit conductors throughout the secondary electrical system as follows:

1. Phase A: Black.
2. Phase B: Red.
3. Neutral: White.
4. Ground: Green.

D. Wire connectors and splices: units of size, ampacity rating, material, type and class suitable for service indicated.

E. Signal and communication circuits:

1. Special cables as indicated on the drawings.
2. Conductors for general use: stranded copper conductor, #16 AWG minimum, with THWN-2 insulation for underground, THWN for wet locations and THHN insulation for dry locations.

PART 3 - EXECUTION

3.1 GENERAL WIRING METHODS

A. Examine raceways and building finishes to receive wires and cables for compliance with requirements for installation tolerances and other conditions affecting performance of wires and cables. Do not proceed with installation until unsatisfactory conditions have been corrected.

B. Use no wire smaller than #12 AWG for power and lighting circuits and no smaller than #18 AWG for control wiring.

C. The contractor is responsible for upsizing conductor sizes to ensure the maximum voltage drop of any branch circuit does not exceed 3%. For reference, use No. 10 AWG conductor for 20 Amp, 120 volt branch circuits longer than 75 feet.

D. Place an equal number of conductors for each phase of a circuit in the same raceway or conduit.

E. Splice only in junction or outlet boxes.

F. Neatly train or lace wiring inside boxes, equipment, and panelboards.

G. Make conductor lengths for parallel circuits equal.

H. Provide a separate neutral conductor for each ungrounded conductor. Ungrounded conductors may share a neutral when all of the following conditions are met:

1. The ungrounded conductors are connected to a multi-pole breaker or breakers that are clipped together with a UL listed means that provide a common trip.
2. The ungrounded conductors contained in the same conduit or raceway.
3. The ungrounded conductors all originate from a separate and unique phase bus in the panel.

3.2 INSTALLATION

A. Install wires and cables as indicated, according to manufacturer's written instructions, and the “National Electrical Installation Standards" by NECA.

B. Remove existing wires from raceway before pulling in new wires and cables.

C. Pull Conductors: Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.

D. Use pulling means; including fish tape, cable, rope, and basket weave wire/cable grips that will not damage cables or raceway.

E. Install exposed cables parallel and perpendicular to surfaces of exposed structural members, and follow surface contours where possible.

F. Support cables above accessible ceilings; do not rest on ceiling tiles. Do not fasten cables to ceiling support wires. Use cable ties to support cables from structure.

## 3.3 CONNECTIONS

A. Conductor Splices: Keep to minimum.

B. Install splices and tapes that possess equivalent or better mechanical strength and insulation ratings than conductors being spliced.

C. Use splice and tap connectors compatible with conductor material.

D. Wiring at Outlets: Install conductor at each outlet, with at least 12 inches of slack.

E. Connect outlets and components to wiring and to ground as indicated and instructed by manufacturer.

F. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values.

G. Terminate spare conductors with electrical tape.

## 3.4 LABELING

A. Provide Brady wire markers or equivalent on all conductors. All wire shall be labeled in each box and panel with the circuit number and panel identification.

## 3.5 FIELD QUALITY CONTROL

A. Inspect wire and cable for physical damage.

B. Perform continuity testing on all power and equipment branch circuit conductors. Verify proper phasing connections.

END OF SECTION 260519

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SECTION 260526 - GROUNDING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including Fixed Price Construction Contract and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes grounding of electrical systems and equipment. Grounding requirements specified in this Section may be supplemented by special requirements of systems described in other Sections.

1.3 SYSTEM DESCRIPTION

A. Ground the electrical service system neutral at service entrance equipment to concrete encased electrode, metal underground water pipe, and effectively grounded metal frame of building.

B. Provide communications system grounding conductor to point of service entrance ground.

C. Bond together system neutrals, service equipment enclosures, exposed non-current carrying metal parts of electrical equipment, metal raceway systems, grounding conductors in raceways and cables, receptacle ground connectors, and plumbing systems.

PART 2 - PRODUCTS

2.1 GROUNDING CONDUCTORS

A. For insulated conductors, comply with Section 260519 - Conductors and Cables.

B. Material: Copper.

C. Equipment Grounding Conductors: Insulated with green-colored insulation. Where green insulation is not available, on larger sizes, black insulation shall be used and suitably identified with green tape at each junction box or device enclosure.

D. Underground Conductors: Bare, tinned, stranded, unless otherwise indicated.

E. Bare Copper Conductors: Medium hard drawn copper conductor, stranded, sized as shown on the drawings.

F. Hardware: Bolts, nuts and washers shall be bronze; cadmium plated steel or other non-corrosive material, approved for the purpose.

G. Grounding Bus: Bare, annealed copper bars of rectangular cross section, with insulators.

2.2 CONNECTOR PRODUCTS

A. Comply with IEEE 837 and UL 467; listed for use for specific types, sizes, and combinations of conductors and connected items.

B. Bolted Connectors: Bolted-pressure-type connectors, or compression type.

C. Welded Connectors: Exothermic-welded type, in kit form, and selected per manufacturer's written instructions.

D. Below grade compression fittings: Thomas & Betts, Series 52000, 53000, and 54000 or equivalent.

E. Use connector and sealant approved for purpose on all below grade clamp or compression type connections.

2.3 GROUNDING ELECTRODES

A. Ground Rods: Copper-clad steel, 5/8 inch diameter, minimum length 8 feet.

PART 3 - EXECUTION

3.1 APPLICATION

A. Use only copper conductors for both insulated and bare grounding conductors in direct contact with earth, concrete, masonry, crushed stone, and similar materials.

B. In raceways, use insulated equipment grounding conductors.

C. Exothermic-Welded Connections: Use for connections to structural steel and for underground connections.

D. Equipment Grounding Conductor Terminations: Use bolted pressure clamps.

E. Grounding Bus: Install in electrical and telephone equipment rooms, in rooms housing service equipment, and elsewhere as indicated.

1. Use insulated spacer; space 1 inch from wall and support from wall 6 inches above finished floor, unless otherwise indicated.

F. Underground Grounding Conductors: Use copper conductor, No. 2/0 AWG minimum. Bury at least 24 inches below grade.

3.2 EQUIPMENT GROUNDING CONDUCTORS

A. Comply with NEC Article 250, for types, sizes, and quantities of equipment grounding conductors, unless specific types, larger sizes, or more conductors than required by NEC are indicated.

B. Install equipment grounding conductors in all feeders and circuits.

C. Install insulated equipment grounding conductor with circuit conductors for the following items, in addition to those required by NEC:

1. Feeders and branch circuits.
2. Lighting circuits.
3. Receptacle circuits.
4. Single-phase motor and appliance branch circuits.

5. Three-phase motor and appliance branch circuits.
6. Flexible raceway runs.

D. Nonmetallic Raceways: Install an equipment grounding conductor in nonmetallic raceways bonded to outlet or equipment, sized per Section 250 of the NEC.

G. Signal and Communication Systems: For telephone, alarm, voice and data, and other communication systems, provide No. 4 AWG minimum insulated grounding conductor in raceway from grounding electrode system to each service location, terminal cabinet, wiring closet, and central equipment location.

1. Service and Central Equipment Locations and Wiring Closets: Terminate grounding conductor on grounding bar.
2. Terminal Cabinets: Terminate grounding conductor on cabinet grounding terminal.

## 3.3 INSTALLATION

A. Ground Rods: Where indicated, install at least three rods spaced at least one-rod length from each other and located at least the same distance from other grounding electrodes.

1. Drive ground rods until tops are 2 inches below finished floor or final grade, unless otherwise indicated.
2. Interconnect ground rods with grounding electrode conductors. Use exothermic welds, unless otherwise indicated. Make connections without exposing steel or damaging copper coating.

B. Grounding Conductors: Route along shortest and straightest paths possible, unless otherwise indicated. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.

C. Bonding Straps and Jumpers: Install so vibration by equipment mounted on vibration isolation hangers and supports is not transmitted to rigidly mounted equipment. Use exothermic-welded connectors for outdoor locations, unless a disconnect-type connection is required; then, use a bolted clamp. Bond straps directly to the basic structure taking care not to penetrate any adjacent parts. Install straps only in locations accessible for maintenance.

D. Metal Water Service Pipe: Provide insulated copper grounding conductors, in conduit, from building's main service equipment, or grounding bus, to main metal water service entrances to building. Connect grounding conductors to main metal water service pipes by grounding clamp connectors. Where a dielectric main water fitting is installed, connect grounding conductor to street side of fitting. Bond metal grounding conductor conduit or sleeve to conductor at each end.

E. UFER Ground (Concrete-Encased Grounding Electrode): Fabricate according to NEC 250, using a minimum of 20 feet of bare copper conductor not smaller than No. 4 AWG. Bond grounding conductor to reinforcing steel in at least four locations and to anchor bolts. Extend grounding conductor below grade and connect to building grounding grid or to a grounding electrode external to concrete.

## 3.4 CONNECTIONS

A. General: Make connections so galvanic action or electrolysis possibility is minimized. Select connectors, connection hardware, conductors, and connection methods so metals in direct contact will be galvanically compatible.

1. Use electroplated or hot-tin-coated materials to ensure high conductivity and to make contact points closer to order of galvanic series.
2. Make connections with clean, bare metal at points of contact.
3. Make aluminum-to-steel connections with stainless-steel separators and mechanical clamps.
4. Make aluminum-to-galvanized steel connections with tin-plated copper jumpers and mechanical clamps.
5. Coat and seal connections having dissimilar metals with inert material to prevent future penetration of moisture to contact surfaces.

B. Exothermic-Welded Connections: Comply with manufacturer's written instructions. Welds that are puffed up or that show convex surfaces indicating improper cleaning are not acceptable.

C. Equipment Grounding Conductor Terminations: For No. 8 AWG and larger, use pressure-type grounding lugs. No. 10 AWG and smaller grounding conductors may be terminated with winged pressure-type connectors.

D. Noncontact Metal Raceway Terminations: If metallic raceways terminate at metal housings without mechanical and electrical connection to housing, terminate each conduit with a grounding bushing. Connect grounding bushings with a bare grounding conductor to grounding bus or terminal in housing. Bond electrically non-continuous conduits at entrances and exits with grounding bushings and bare grounding conductors, unless otherwise indicated.

E. Tighten screws and bolts for grounding and bonding connectors and terminals according to manufacturer's published torque-tightening values.

F. Compression-Type Connections: Use hydraulic compression tools to provide correct circumferential pressure for compression connectors. Use tools and dies recommended by connector manufacturer. Provide embossing die code or other standard method to make a visible indication that a connector has been adequately compressed on grounding conductor.

G. Moisture Protection: If insulated grounding conductors are connected to ground rods or grounding buses, insulate entire area of connection and seal against moisture penetration of insulation and cable.

## 3.5 EQUIPMENT GROUND

A. Ground non-current carrying metal parts of electrical equipment enclosures, frames, conductor raceways or cable trays to provide a low impedance path for line-to-ground fault current and to bond all non-current carrying metal parts together. Install a grounding conductor in each raceway system. Equipment grounding conductor shall be electrically and mechanically continuous from the electrical circuit source to the equipment to be grounded. Size grounding conductors per NEC 250 unless otherwise shown on the drawings.

B. Install metal raceway couplings, fittings, and terminations secure and tight to ensure good grounding continuity. Provide grounding conductor sized per NEC through all raceway and conduit systems.

C. Lighting fixtures shall be securely connected to equipment grounding conductors. Outdoor lighting standards shall have a factory installed ground lug for terminating the grounding conductor.

D. Motors shall be connected to equipment ground conductors with a bolted solderless lug connection on the metal frame.

## 3.6 FIELD QUALITY CONTROL

A. Inspect grounding and bonding system conductors and connections for tightness and proper installation.

B. Test ground system per Section 260501.

END OF SECTION 260526

SECTION 260529 - SUPPORTING DEVICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 WORK INCLUDED

A. Conduit and equipment supports.

B. Fastening hardware.

1.3 RELATED WORK

A. Division 3 - Concrete Work. Concrete equipment pads.

1.4 COORDINATION

A. Coordinate size, shape and location of concrete pads with Division 3.

1.5 QUALITY ASSURANCE

A. Support systems shall be adequate for weight of equipment and conduit, including wiring, which they carry.

PART 2 - PRODUCTS

2.1 MATERIAL

A. Support Channel: Galvanized or painted steel.

B. Hardware: Corrosion resistant.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Fasten hanger rods, conduit clamps, and outlet and junction boxes to building structure using expansion anchors or beam clamps. Do not use spring steel clips and clamps.

B. Use toggle bolts or hollow wall fasteners in hollow masonry, plaster, or gypsum board partitions and walls; expansion anchors or preset inserts in solid masonry walls; self-drilling anchors or expansion anchor on concrete surfaces; sheet metal screws in sheet metal studs; and wood screws in wood construction.

C. Do not fasten supports to piping, ductwork, mechanical equipment, or conduit.

D. Do not use powder-actuated anchors.

E. Do not drill structural steel members.

F. Fabricate supports from structural steel or steel channel, rigidly welded or bolted to present a neat appearance. Use hexagon head bolts with spring lock washers under all nuts.

G. In wet locations install free-standing electrical equipment on concrete pads.

H. Install surface-mounted cabinets and panelboards with minimum of four anchors.

I. Bridge studs top and bottom with channels to support flush-mounted cabinets and panelboards in stud walls.

J. All supports and attachments shall meet project seismic zone requirements.

END OF SECTION 260529

SECTION 260533 - RACEWAYS AND BOXES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes raceways, fittings, boxes, enclosures, and cabinets for electrical wiring.

1.3 DEFINITIONS

A. EMT: Electrical metallic tubing.

B. FMC: Flexible metal conduit.

C. IMC: Intermediate metal conduit.

D. LFMC: Liquidtight flexible metal conduit.

E. RMC: Rigid metal conduit.

F. RNC: Rigid Polyvinyl Chloride conduit.

G. PVC: Rigid Polyvinyl Chloride conduit

H. HDPE: High Density Polyethylene Conduit

1.4 SUBMITTALS

A. Product Data: For surface raceways, wireways and fittings, floor boxes, hinged-cover enclosures, and cabinets.

1.5 COORDINATION

A. Coordinate layout and installation of raceways and boxes with other construction elements to ensure adequate headroom, working clearance, and access.

PART 2 - PRODUCTS

2.1 METAL CONDUIT AND TUBING

A. Rigid Steel Conduit: ANSI C80.1.

B. IMC: ANSI C80.6.

C. PVC coated Steel Conduit and Fittings: NEMA RN 1; rigid steel conduit with external 40 mil PVC coating and internal two mil urethane coating.

D. EMT and Fittings: ANSI C80.3. Fittings: Set-screw type.

E. FMC: Zinc-coated steel.

F. LFMC: Flexible steel conduit with PVC jacket. Fittings: NEMA FB 1; compatible with conduit/tubing materials.

2.2 NONMETALLIC CONDUIT AND TUBING

A. RNC: NEMA TC 2, Schedule 40 PVC. Fittings: NEMA TC 3; match to conduit and material.

2.3 METAL WIREWAYS

A. Material: Sheet metal sized and shaped as indicated.

B. Fittings and Accessories: Include covers, couplings, offsets, elbows, expansion joints, adapters, hold-down straps, end caps, and other fittings to match and mate with wireways as required for complete system.

C. Finish: Manufacturer's standard enamel finish.

2.4 OUTLET AND DEVICE BOXES

A. Sheet Metal Boxes: NEMA OS 1, galvanized steel.

B. Cast-Metal Boxes: NEMA FB 1, Type FD, cast box with gasketed cover.

2.6 PULL AND JUNCTION BOXES

A. Small Sheet Metal Boxes: NEMA OS 1, galvanized steel.

B. Cast-Metal Boxes: NEMA FB 1, cast aluminum with gasketed cover.

2.7 ENCLOSURES AND CABINETS

A. Hinged-Cover Enclosures: NEMA 250, Type 1, 3R, or 4, with continuous hinge cover and flush latch, key operable.

1. Metal Enclosures: Steel, finished inside and out with manufacturer's standard enamel.

B. Cabinets: NEMA 250, Type 1, galvanized steel box with removable interior panel and removable front, finished inside and out with manufacturer's standard enamel. Hinged door in front cover with flush latch and concealed hinge. Key latch to match panelboards. Include metal barriers to separate wiring of different systems and voltage, and include accessory feet where required for freestanding equipment.

2.9 INNERDUCT

A. Innerduct: NEMA TC 5. UL Listed, corrugated, specifically designed for optical fiber cable pathways.

B. Acceptable Manufactures: Arnco, Carlon, Dura-line, and Pyramid.

C. Composition:

1. Non-plenum rated: Polyethylene (PE), or High Density Polyethylene (HDPE).
2. Plenum rated: per manufacturer.

D. Nominal Size: 1" (inside diameter), minimum.

E. Pulling Strength: minimum of 600 pounds.

F. Color: Orange, solid.

G. Fittings and Innerduct Bodies: Manufacturer's recommended fittings including couplings, adapters, end caps, end bells, expansion couplings, plugs, sleeves, a full compliment of connective devices, and all other components to make the system work.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine surfaces to receive raceways, boxes, enclosures, and cabinets for compliance with installation tolerances and other conditions affecting performance of raceway installation. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 WIRING METHODS

A. Outdoors: Use the following wiring methods:

1. Exposed: Rigid steel or IMC.
2. Concealed: Rigid steel or IMC.
3. Underground, Single Run: RNC or PVC Externally Coated Rigid Steel Conduit where required by NEC 517.13.
4. Underground, Grouped: RNC or PVC Externally Coated Rigid Steel Conduit where required by NEC 517.13.
5. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): LFMC.
6. Boxes and Enclosures: NEMA 250, Type 3R or Type 4.

B. Indoors: Use the following wiring methods:

1. Exposed: EMT or "Wiremold" metallic raceways or equal.
2. Exposed in public areas: "Wiremold" metallic raceways or equal. Use of exposed raceways in public areas must be approved by the architect prior to installation for each location. Use of exposed EMT in areas visible to the public is not allowed unless specifically approved by the architect prior to installation. Replacement of unapproved installations of exposed raceways will be at the expense of the contractor if deemed necessary by the architect or engineer.
3. Concealed: EMT or MC-Cable. Note: MC-Cable is not approved for "homeruns"
4. Concealed in Patient Care Areas: EMT or Hospital Grade MC-Cable where allowed by code. Note: Hospital Grade MC-Cable is not approved for "homeruns"
5. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): FMC; except in wet or damp locations, use LFMC.

6. Damp or Wet Locations: Rigid steel conduit.
7. Boxes and Enclosures: NEMA 250, Type 1, except as follows:
    a. Damp or Wet Locations: NEMA 250, Type 4, stainless steel.

3.3 INSTALLATION

A. Install raceways, boxes, enclosures, and cabinets as indicated, according to manufacturer's written instructions.

B. Minimum Raceway Size: 1/2-inch trade size. 3/4-inch minimum for “homeruns”.

C. Conceal conduit and EMT, unless otherwise indicated, within finished walls, ceilings, and floors.

D. Keep raceways at least 6 inches away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.

E. Install raceways level and square and at proper elevations. Provide adequate headroom.

F. Complete raceway installation before starting conductor installation.

G. Route exposed conduit and conduit above accessible ceilings parallel and perpendicular to walls and adjacent piping.

H. Use temporary closures to prevent foreign matter from entering raceways.

I. Protect stub-ups from damage where conduits rise through floor slabs. Arrange so curved portion of bends is not visible above the finished slab.

J. Make bends and offsets so ID is not reduced. Keep legs of bends in the same plane and straight legs of offsets parallel, unless otherwise indicated.

K. Use raceway fittings compatible with raceways and suitable for use and location. For intermediate steel conduit, use threaded rigid steel conduit fittings, unless otherwise indicated.

L. Run concealed raceways, with a minimum of bends, in the shortest practical distance considering the type of building construction and obstructions, unless otherwise indicated.

M. Raceways Embedded in Slabs: Install in middle third of slab thickness where practical, and leave at least 1-inch concrete cover.

    1. Secure raceways to reinforcing rods to prevent sagging or shifting during concrete placement.
    2. Space raceways laterally to prevent voids in concrete.
    3. Run conduit larger than 1-inch trade size parallel to or at right angles to main reinforcement. Where at right angles to reinforcement, place conduit close to slab support.
    4. Transition from nonmetallic tubing to rigid steel conduit or IMC before rising above floor.

N. Install exposed raceways parallel to or at right angles to nearby surfaces or structural members, and follow the surface contours as much as practical.

    1. Run parallel or banked raceways together, on common supports where practical.
    2. Make bends in parallel or banked runs from same centerline to make bends parallel. Use factory elbows only where elbows can be installed parallel; otherwise, provide field bends for parallel raceways.

O. Join raceways with fittings designed and approved for the purpose and make joints tight.

1. Make raceway terminations tight. Use bonding bushings or wedges at connections subject to vibration. Use bonding jumpers where joints cannot be made tight.
2. Use insulating bushings to protect conductors.

P. Tighten set screws of threadless fittings with suitable tools.

Q. Terminations: Where raceways are terminated with locknuts and bushings, align raceways to enter squarely and install locknuts with dished part against the box. Where terminations are not secure with 1 locknut, use 2 locknuts: 1 inside and 1 outside the box.

R. Where raceways are terminated with threaded hubs, screw raceways or fittings tightly into the hub so the end bears against the wire protection shoulder. Where chase nipples are used, align raceways so the coupling is square to the box and tighten the chase nipple so no threads are exposed.

S. Install pull wires in empty raceways. Utilize polyester line with not less than 200-lb tensile strength. Leave at least 12 inches of slack at each end of the pull wire.

T. Telephone and Signal System Raceways: In addition to the above requirements, install raceways in maximum lengths of 150 feet and with a maximum of two 90-degree bends or equivalent. Separate lengths with pull or junction boxes where necessary to comply with these requirements.

U. Install raceway sealing fittings according to manufacturer's written instructions. Locate fittings at suitable, approved, and accessible locations and fill them with UL-listed sealing compound. For concealed raceways, install each fitting in a flush steel box with a blank cover plate having a finish similar to that of adjacent plates or surfaces. Install raceway sealing fittings at the following points:

1. Where conduits pass from warm to cold locations, such as the boundaries of refrigerated spaces.
2. Where conduit pass from the interior to the exterior of a building.
3. Where otherwise required by NEC.

V. Apply firestopping to cable and raceway penetrations of fire-rated floor, ceiling, and wall assemblies to achieve fire-resistance rating of the assembly. Boxes installed in fire-rated floor, ceiling, and wall assemblies shall result in no larger than a 16 square-inch penetration in the fire-rated wall surface and the quantity of penetrations shall not be greater than 100 square-inches for every 100 square feet of fire-rated wall area. Where boxes are located on both sides of a fire-rated wall, the boxes shall have a minimum of a 24” horizontal spacing, where a 24” horizontal spacing cannot be achieved, furnish and install listed fire-rated putty on the boxes as required by the IBC.

W. Route conduit through roof openings for piping and ductwork where possible; otherwise, install roof penetrations in accordance with roofing system requirements. Coordinate with roofing installer.

X. Stub-up Connections: Extend conduits through concrete floor for connection to freestanding equipment. Install with an adjustable top or coupling threaded inside for plugs set flush with the finished floor. Extend conductors to equipment with rigid steel conduit; FMC may be used 6 inches above the floor. Install screwdriver-operated, threaded flush plugs flush with floor for future equipment connections.

Y. Flexible Connections: Use maximum of 6 feet of flexible conduit for recessed and semi-recessed lighting fixtures; for equipment subject to vibration, noise transmission, or movement; and for all motors. Use liquidtight flexible conduit in wet or damp locations. Install separate ground conductor across flexible connections.

Z. PVC Externally Coated, Rigid Steel Conduits: Use only fittings approved for use with that material. Patch all nicks and scrapes in PVC coating after installing conduits.

AA. Surface Raceways: Install a separate, green, ground conductor in raceways from junction box supplying the raceways to receptacle or fixture ground terminals.

BB. Conduits shall not be routed on or above the roof without prior approval from the Engineer. Instead, the branch circuits shall be routed at the structure level below the roof to feed roof-top equipment. When approval is granted to route conduits on or above the roof, the conduits shall be strapped to COOPER industries DB series support blocks at intervals not exceeding NEC requirements. The conduits shall not be rested directly on the roof. It shall be permissible to penetrate the roof adjacent mechanical or electrical equipment to power that respective equipment.

## 3.4 SUPPORT INSTALLATION

A. Install support devices to securely and permanently fasten and support electrical components.

B. Install individual and multiple raceway hangers and riser clamps to support raceways. Provide U-bolts, clamps, attachments, and other hardware necessary for hanger assemblies and for securing hanger rods and conduits.

C. Support parallel runs of horizontal raceways together on trapeze- or bracket-type hangers, at least every 8 feet.

D. Size supports for multiple raceway installations so capacity can be increased by a 25 percent minimum in the future.

E. Support individual horizontal raceways with separate, malleable-iron pipe hangers or clamps.

F. Install 1/4-inch diameter or larger threaded steel hanger rods, unless otherwise indicated.

G. Spring-steel fasteners specifically designed for supporting single conduits or tubing may be used instead of malleable-iron hangers for 1-1/2-inch and smaller raceways serving lighting and receptacle branch circuits above suspended ceilings and for fastening raceways to slotted channel and angle supports.

H. Arrange supports in vertical runs so the weight of raceways and enclosed conductors is carried entirely by raceway supports, with no weight load on raceway terminals.

I. Simultaneously install vertical conductor supports with conductors.

J. Separately support cast boxes that are threaded to raceways and used for fixture support. Support sheet-metal boxes directly from the building structure or by bar hangers. If bar hangers are used, attach bar to raceways on opposite sides of the box and support the raceway with an approved fastener not more than 24 inches from the box.

K. Install metal channel racks for mounting cabinets, panelboards; disconnect switches, control enclosures, pull and junction boxes, transformers, and other devices unless components are mounted directly to structural elements of adequate strength.

L. Install sleeves for cable and raceway penetrations of concrete slabs and walls unless core-drilled holes are used. Install sleeves for cable and raceway penetrations of masonry and fire-rated gypsum walls and of all other fire-rated floor and wall assemblies. Install sleeves during erection of concrete and masonry walls.

M. Securely fasten electrical items and their supports to the building structure, unless otherwise indicated. Do not fasten supports to piping, ductwork, mechanical equipment, or conduit. Perform fastening according to the following unless other fastening methods are indicated:

1. Masonry: Toggle bolts on hollow masonry units and expansion bolts on solid masonry units.
2. New Concrete: Concrete inserts with machine screws and bolts.
3. Existing Concrete: Expansion bolts.
4. Steel: Spring-tension clamps on steel.
5. Light Steel: Sheet-metal screws.
6. Fasteners: Select so the load applied to each fastener does not exceed 25 percent of its proof-test load.

N. Do not drill structural steel members.

O. All supports and attachments shall meet project seismic zone requirements.

3.5 BOX INSTALLATION

A. Do not install boxes back-to-back in walls.

B. Locate boxes in masonry walls to require cutting of masonry unit edge only. Coordinate masonry cutting to achieve neat openings for boxes.

C. Provide knockout closures for unused openings.

D. Support boxes independently of conduit except for cast boxes that are connected to two rigid metal conduits, both supported within 12 inches of box.

E. Use 4" boxes with multiple-gang mudring where more than one device are mounted together; do not use sectional boxes. Provide barriers to separate wiring of different voltage systems.

F. Install boxes in walls without damaging wall insulation.

G. Coordinate mounting heights and locations of outlets mounted above counters, benches, and backsplashes.

H. Position outlets to locate lighting fixtures as shown on reflected ceiling plans.

I. In inaccessible ceiling areas, position outlets and junction boxes within 6 inches of recessed luminaire, to be accessible through luminaire ceiling opening.

J. Provide recessed outlet boxes in finished areas; secure boxes to interior wall and partition studs, accurately positioning to allow for surface finish thickness. Use stamped steel stud bridges for flush outlets in hollow stud walls, and adjustable steel channel fasteners for flush ceiling outlet boxes.

K. Align wall-mounted outlet boxes for switches, thermostats, and similar devices.

L. For boxes installed in metal construction, use rigid support metal bar hangers or metal bar fastened to two studs or with metal screws to metal studs.

M. Set floor boxes level and adjust to finished floor surface.

N. Set floor boxes level and trim after installation to fit flush to finished floor surface.

O. Install hinged-cover enclosures and cabinets plumb. Support at each corner.

P. Locate pull and junction boxes above accessible ceilings or in unfinished areas. Support pull and junction boxes independent of conduit.

Q. Minimum box size to be 4" square by 2 1/8" deep.

3.6 LABELING

A. Label coverplate of all pull and junction boxes by system served. Indicate panel circuits for power and lighting boxes.

3.7 CLEANING

A. On completion of installation, including outlet fittings and devices, inspect exposed finish. Remove burrs, dirt, and construction debris and repair damaged finish, including chips, scratches, and abrasions.

END OF SECTION 260533

SECTION 260543 – UNDER SLAB AND UNDERGROUND ELECTRICAL WORK

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

### 1.2 SUMMARY

A. This Section includes under slab conduits and related electrical work.

## PART 2 - PRODUCTS

### 2.1 CONDUIT

A. All shall be provided with fittings and accessories approved for the purpose. Refer to Section 260533.

### 2.2 BARE COPPER GROUND CONDUCTOR

A. Medium hard drawn copper conductor, # 4/0 AWG stranded (unless otherwise noted).

## PART 3 - EXECUTION

### 3.1 GENERAL

A. Electrical system layouts indicated on the drawings are generally diagrammatic but shall be followed as closely as actual construction and work of other trades will permit.

### 3.2 CONDUIT INSTALLATION

A. Plastic conduit shall be installed on 2-inch sand base and covered by 2-inch sand back fill. Multiple runs shall maintain 3-inch minimum separation between runs. Plastic conduit shall not be installed in rock base.

B. Underground conduit entering building shall be provided with one 10-foot section of rigid steel conduit at point of penetration of foundation, footing or basement wall, with approximately equal lengths inside and outside building line. Ream the smaller inside diameter conduit smooth to prevent conductor damage.

C. Stagger conduit couplings by a minimum of 12 inches. All risers to grade shall be rigid steel.

D. All rigid steel conduits shall be encased in 3-inch minimum concrete envelope.

E. After completion of concrete encased duct bank, a 12-inch mandrel, ¼ inch less in diameter than a conduit, shall be pulled through each conduit.

F. Install 1/8-inch diameter pull line in each underground conduit.

G. Burial depths of conduits shall comply with the NEC (minimum).

H. Provide underground type plastic line markers: permanent, brightly colored, continuously printed plastic tape, intended for direct burial service, not less than 6 inches wide, reading “Caution Buried Electrical Line.” Install continuous line markers located directly over buried line at 6 inches above top of conduit, during back filling operation.

END OF SECTION 260543

SECTION 260800 – LIGHTING SYSTEMS COMMISSIONING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Specification Sections, apply to this Section.

1.2 SUMMARY:

A. This Section includes requirements for commissioning the lighting system and its controls.

B. The registered design professional is responsible to provide evidence of lighting systems commissioning and completion in accordance to the provisions of this section.

1.3 DEFINITIONS:

A. Architect: Includes Architect identified in the Contract for Construction between Owner and Contractor, plus consultant/design professionals responsible for design of HVAC, electrical, communications, controls for HVAC systems, and other related systems.

B. RDP: Registered Design Professional

C. Systems, Subsystems, and Equipment: Where these terms are used together or separately, they shall mean "as-built" systems, subsystems, and equipment.

1.4 COMMISSIONING DOCUMENTATION:

A. Commissioning Plan: A commissioning plan will be developed by a registered design professional or approved agency and shall include the following items:

1. A narrative description of the activities that will be accomplished during each phase of commissioning, including the personnel intended to accomplish each of the activities.

2. A listing of the specific equipment, appliances or systems to be tested and a description of the tests to be performed.

3. Functions to be tested.

4. Conditions under which the test will be performed.

5. Measurable criteria for performance

B. Test Checklists: RDP, with assistance of Architect/Engineer, shall develop test checklists for each system, subsystem, or equipment including interfaces and interlocks, and include a separate entry, with space for comments, for each item to be tested. Prepare separate checklists for each mode of operation and provide space to indicate whether the mode under test responded as required. Provide space for testing personnel to sign off on each checklist.

1. Name and identification of tested item.

2. Test number.

3. Time and date of test.

4. Indication of whether the record is for a first test or retest following correction of a problem or issue.

5. Date of the test and name of parties involves as applicable.

6. Individuals present for test.

7. Deficiencies/Issues/Results of test.

8. Note if re-test is necessary.

C. Test and Inspection Reports: RDP shall record test data, observations, and measurements on test checklists. Photographs, forms, and other means appropriate for the application shall be included with data. RDP shall compile test and inspection reports and tests and inspection certificates and include them in systems manual and commissioning report.

D. Corrective Action Documents: RDP shall document corrective action taken for systems and equipment that fail tests. Include required modifications to systems and equipment and revisions to test procedures, if any. Retest systems and equipment requiring corrective action and document retest results.

E. Issues Log: RDP shall prepare and maintain an issues log that describes design, installation, and performance issues that are at variance with the Contract Documents. Identify and track issues as they are encountered, documenting the status of unresolved and resolved issues.

1. Creating an Issues Log Entry:
   a. Identify the issue with unique numeric or alphanumeric identifier by which the issue may be tracked.
   b. Assign a descriptive title of the issue.
   c. Identify date and time of the issue.
   d. Identify test number of test being performed at the time of the observation, if applicable, for cross-reference.
   e. Identify system, subsystem, and equipment to which the issue applies.
   f. Identify location of system, subsystem, and equipment.
   g. Include information that may be helpful in diagnosing or evaluating the issue.
   h. Note recommended corrective action.
   i. Identify commissioning team member responsible for corrective action.
   j. Identify expected date of correction.
   k. Identify person documenting the issue.

2. Documenting Issue Resolution:
   a. Log date correction is completed or the issue is resolved.
   b. Describe corrective action or resolution taken. Include description of diagnostic steps taken to determine root cause of the issue, if any.
   c. Identify changes to the Contract Documents that may require action.
   d. State that correction was completed and system, subsystem, and equipment is ready for retest, if applicable.
   e. Identify person(s) who corrected or resolved the issue.
   f. Identify person(s) documenting the issue resolution.

3. Issues Log Report: On a periodic basis, but not less than for each commissioning team meeting, RDP shall

prepare a written narrative for review of outstanding issues and a status update of the issues log. As a minimum, RDP shall include the following information in the issues log and expand it in the narrative:

a. Issue number and title.
b. Date of the identification of the issue.
c. Name of the commissioning team member assigned responsibility for resolution.
d. Expected date of correction.

F. Commissioning Report: RDP shall document results of the commissioning process including unresolved issues and performance of systems, subsystems, and equipment. The commissioning report shall indicate whether systems, subsystems, and equipment have been completed and are performing according to the Contract Documents. The commissioning report shall include, but is not limited to, the following:

1. Lists and explanations of substitutions; compromises; variances in the Contract Documents; record of conditions; and, if appropriate, recommendations for resolution. This report shall be used to evaluate systems, subsystems, and equipment and shall serve as a future reference document during Owner occupancy and operation. It shall describe components and performance that exceed requirements of the Contract Documents. It may also include a recommendation for accepting or rejecting systems, subsystems, and equipment.

2. Commissioning plan.

3. Testing plans and reports.

4. Corrective modification documentation.

5. Issues log.

6. Completed test checklists.

G. Systems Manual: RDP shall gather required information and compile systems manual. Systems manual shall include, but is not limited to, the following:

1. Submittal Data stating equipment installed and selected options for each piece of equipment requiring maintenance.

2. Operation and maintenance data on each piece of equipment requiring maintenance. Required routine maintenance actions shall be clearly identified.

3. Name and address of at least one service agency.

4. Lighting controls system maintenance and calibration information.

5. A narrative of how each system is intended to operate, including recommended setpoints.

PART 2 – PRODUCTS – Not Used

PART 3 - EXECUTION

3.1 TESTING:

A. Testing shall ensure that the control hardware and software are calibrated, adjusted, programmed and in proper working condition in accordance with the construction documents and manufacturers installation instructions.

B. Testing shall ensure that the lighting controls meet all provisions of the applicable energy code.

C. Perform tests using design conditions whenever possible. Where occupant sensors, time switches, programmable schedule control, photosensor's or daylighting controls are installed, the following procedures shall be performed:

1. Confirm that the placement, sensitivity and time-out adjustments for occupant sensors yield acceptable performance.

2. Confirm that the time switches and programmable schedule controls are programmed to turn the lights off.

3. Confirm that the placement and sensitivity adjustments for photosensor controls reduce electric light based on the amount of usable daylight in the space as specified.

END OF SECTION 260800

SECTION 260923 - LIGHTING CONTROL DEVICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes time switches, photoelectric relays, occupancy sensors, and multi-pole lighting relays and contactors.

B. Related Sections include the following:

1. Section 262726 - Wiring Devices for wall-box dimmers and manual light switches.

1.3 SUBMITTALS

A. Submit shop drawings and product data, including all wiring diagrams.

PART 2 - PRODUCTS

2.1 GENERAL LIGHTING CONTROL DEVICE REQUIREMENTS

A. Line-Voltage Surge Protection: Include in all 120- and 277-V solid-state equipment. Comply with UL 1449.

2.2 TIME SWITCHES

A. Description: Electromechanical-dial type complying with UL 917.

1. Astronomic dial.
2. Two contacts, rated 30 A at 277-V ac, unless otherwise indicated.
3. Eight-day program uniquely programmable for each weekday and holidays.
4. Skip-day mode.

2.3 PHOTOELECTRIC RELAYS

A. Description: Solid state, with single-pole, double-throw dry contacts rated to operate connected relay or contactor coils or microprocessor input, and complying with UL 773A.

B. Light-Level Monitoring Range: 0 to 3500 fc, with an adjustment for turn-on/turn-off levels.

C. Time Delay: Prevents false operation.

D. Outdoor Sealed Units: Weather tight housing, resistant to high temperatures and equipped with sun-glare shield and ice preventer.

## 2.4 OCCUPANCY SENSORS

A. Occupancy sensors indicated on the plans are to establish room controls and sensor quantities. The contractor is to verify sensor placement with the local manufacturer's representative or the manufacture to ensure proper coverage and functionally of the specific sensor(s) installed. The contractor is to return and make any adjustments necessary to the occupancy sensor settings and/or placement needed to maintain proper functionality within 30 days after the owner/tenant takes occupancy of the project.

B. Lighting control system shall include all occupancy sensors, power packs, and control wiring required to form a complete system.

C. All occupancy sensors shall be dual/multi technology, manufactured by Unenco, Wattstopper, Lightolier Controls, Sensor Switch, or pre-approved equal unless otherwise noted.

D. Ceiling and Wall Mount Units: Shall utilize dual/multi technology detection methods. Unit receives control power from a separately mounted auxiliary power and control unit, and operates power switching contacts in that unit.

E. Switch-Box-Mounting Units: Shall utilize dual/multi technology detection methods. Unit receives power directly from switch leg of the 120- or 277-V ac circuit it controls and operates integral power switching contacts. Unit is to have integral manual controls and is to be mounted at standard switch height.

F. Operation: Turns lights on when room or covered area is occupied and off when unoccupied, unless otherwise indicated.

1. Time Delay for Turning Lights Off: Adjustable over a range from 1 to 20 minutes, minimum. Time delay to be set at 20 minutes unless otherwise directed. Contractor shall verify time delay with the owner/tenant prior to final occupancy.
2. Manual Override Switch: Where indicated on drawings; turns lights off manually regardless of elapsed time delay.
3. Sensor shall be located and/or adjusted to detect occupancy within 1-foot of entry into room or area controlled by the occupancy sensor.

G. Auxiliary Power and Control Units: As follows:

1. Relays rated for a minimum of 20-A normal ballast load.
2. Sensor Power Supply: Rated to supply the number of connected sensors.
3. Relays shall have an auxiliary contact(s) for integration with HVAC or other building control systems.

H. Passive-Infrared Type: Detects occupancy by a combination of heat and movement in zone of coverage.

I. Ultrasonic Type: Emits a beam of ultrasonic energy and detects occupancy through use of Doppler's principle in discerning movement in zone of coverage by sensing a change in pattern of reflected ultrasonic energy. Ultrasonic frequency shall be 25 Khz or greater and sensor shall be temperature and humidity resistant.

J. Dual-Technology Type: Uses a combination of passive-infrared and ultrasonic or microphonic detection methods to distinguish between occupied and unoccupied conditions for area covered. Particular technology or combination of technologies that controls each function (ON or OFF) is selectable in the field by operating controls on unit.

K. All sensors shall be capable of operating normally with electronic ballast and compact fluorescent systems.

L. Coverage of sensors shall remain constant after sensitivity control has been set. No automatic reduction shall occur in coverage due to the cycling of air conditioner or heating fans.

M. All sensors shall have readily accessible, user adjustable controls for time delay and sensitivity. Controls shall be recessed to limit tampering.

N. In the event of failure, a bypass manual “override on” feature shall be provided on each sensor. When bypass is utilized, lighting shall remain on constantly. The override feature shall be designed for use by building maintenance personnel and shall not be readily accessible by building occupants.

O. All sensors shall provide an LED indication light to verify that motion is being detected and that the unit is working.

P. All sensors shall have no leakage current in OFF mode and shall have voltage drop protection.

## 2.5 MULTIPOLE CONTACTORS AND RELAYS

A. Description: Electrically operated and mechanically held, and complying with UL 508 and NEMA ICS 2.

1. Current Rating for Switching: UL listing or rating consistent with type of load served.
2. Control Coil Voltage: Match control power source.

# PART 3 - EXECUTION

## 3.1 INSTALLATION

A. Install equipment level and plumb and according to manufacturer's written instructions.

## 3.2 CONTROL WIRING INSTALLATION

A. Install wiring between sensing and control devices according to manufacturer's written instructions.

B. Wiring Method: Install all wiring in raceways.

C. Bundle, train, and support wiring in enclosures.

D. Ground equipment.

E. Connections: Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values.

## 3.3 IDENTIFICATION

A. Provide Brady wire markers or equivalent on all conductors.

## 3.4 FIELD QUALITY CONTROL

A. Inspect control components for defects and physical damage.

B. Verify settings of photoelectric devices with photometer.

C. Electrical Tests: Use particular caution when testing devices containing solid-state components. Perform the following according to manufacturer's written instructions:

1. Continuity tests of circuits.
2. Operational Tests: Set and operate devices to demonstrate their functions and capabilities in a methodical sequence that cues and reproduces actual operating functions.

D. Correct deficiencies, make necessary adjustments, and retest. Verify that specified requirements are met.

3.5 CLEANING

A. Cleaning: Clean equipment and devices internally and externally using methods and materials recommended by manufacturers, and repair damaged finishes.

END OF SECTION 260923

SECTION 262416 - PANELBOARDS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes load centers and panelboards, overcurrent protective devices, and associated auxiliary equipment rated 600 V and less for the following types:

1. Lighting and appliance branch-circuit panelboards.
2. Distribution panelboards.

B. Related sections:
1. Section 260526 - Grounding.

1.3 SUBMITTALS

A. Product Data: For each type of panelboard, overcurrent protective device, accessory, and component indicated. Include dimensions and manufacturers' technical data on features, performance, electrical characteristics, ratings, and finishes.

B. Shop Drawings: For each panelboard and related equipment.

1. Dimensioned plans, elevations, sections, and details. Show tabulations of installed devices, equipment features, and ratings. Include the following:

a. Enclosure types and details for types other than NEMA 250, Type 1.
b. Bus configuration, current, and voltage ratings.
c. Short-circuit current rating of panelboards and overcurrent protective devices.
d. UL listing for series rating of installed devices.
e. Features, characteristics, ratings, and factory settings of individual overcurrent protective devices and auxiliary components.

C. Panelboard Schedules: For installation in panelboards. Submit final versions after load balancing.

D. Maintenance Data: For panelboards and components, include the following:

1. Manufacturer's written instructions for testing and adjusting overcurrent protective devices.
2. Time-current curves, including selectable ranges for each type of overcurrent protective device.

1.4 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in the NEC, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

B. Comply with NEMA PB 1.

C. Comply with the NEC.

1.5 COORDINATION

A. Coordinate layout and installation of panelboards and components with other construction that penetrates walls or is supported by them, including electrical and other types of equipment, raceways, piping, and encumbrances to workspace clearance requirements.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers:

1. Panelboards, Overcurrent Protective Devices and Accessories:

a. Eaton Corp.; Cutler-Hammer Products.
b. General Electric Co.; Electrical Distribution & Control Div.
c. Siemens
d. Square D Co.; Schneider Electric Brands
e. Or approved equal.

2.2 FABRICATION AND FEATURES

A. Enclosures: Flush or surface mounted cabinets (as indicated on drawings). Construct cabinets with code gauge galvanized steel. Provide minimum 20" wide cabinets and extra wiring space where incoming feed-through or parallel lines are shown. NEMA PB 1, Type 1, to meet environmental conditions at installed location.

1. Outdoor Locations: NEMA 250, Type 3R.

B. Front: Secured to box with concealed trim clamps. For surface-mounted fronts, match box dimensions; for flush-mounted fronts, overlap box.

C. Doors: Provide door-in-door construction, made of cold-rolled steel. Inner door shall provide access to breaker handles and outer door shall provide access to wiring space as well. Inner door shall be completely flush with no visible bolts, screw-heads or hinges and with flush catch and lock. Outer door shall have concealed hinges, flush catch and lock to match inner door, located in line with inner door catch. (Tee bar handles are not acceptable).

D. Finish: Manufacturer's standard enamel finish over corrosion-resistant treatment or primer coat.

E. Directory Card: With transparent protective cover, mounted inside metal frame, inside panelboard door.

F. Bus: Hard-drawn copper, 98 percent conductivity. Attach circuit breakers to bus so that circuits 1, 3, and 5; 2, 4, and 6, or any three similarly numbered circuits form one three-phase, four-wire circuit.

G. Main and Neutral Lugs: Compression or mechanical type suitable for use with conductor material.

H. Equipment Ground Bus: Adequate for feeder and branch-circuit equipment ground conductors; bonded to box.

I. Future Devices: Mounting brackets, bus connections, and necessary appurtenances required for future installation of devices.

J. Isolated Equipment Ground Bus: Where indicated on drawings - Adequate for branch-circuit equipment ground conductors; insulated from box.

K. Extra-Capacity Neutral Bus: Where indicated on drawings, neutral bus rated 200 percent of phase bus and UL listed as suitable for nonlinear loads. Where indicated on plans, On 120/208Y Panels fed by K factor Type Transformer.

L. Skirt for Surface-Mounted Panelboards: Same gage and finish as panelboard front with flanges for attachment to panelboard, wall, and ceiling or floor. Where indicated on plans.

M. Gutter Barrier: Arrange to isolate individual panel sections.

N. Feed-through Lugs: Compression or mechanical type suitable for use with conductor material. Locate at opposite end of bus from incoming lugs or main device. For two-section panels.

O. Panels located adjacent to each other shall have identically sized enclosures and trims.

## 2.3 PANELBOARD SHORT-CIRCUIT RATING

A. UL label indicating series-connected rating with integral or remote upstream devices. Include size and type of upstream device allowable, branch devices allowable, and UL series-connected short-circuit rating. If not series rated: Fully rated to interrupt symmetrical short-circuit current available at terminals or the rating indicated on the plans, whichever is higher.

## 2.4 LIGHTING AND APPLIANCE BRANCH-CIRCUIT PANELBOARDS

A. Branch Overcurrent Protective Devices:

1. 120/208Y-Volt & 120/240-Volt branch circuit panelboards: Quick-make, quick-break, molded case plug-in type designed for the specified voltage with minimum 22,000 amperes rms short circuit rating.
2. Provide multi-pole units with common trip elements.
3. Breaker shall have center-tripped position in addition to the ON and OFF positions.
4. Provide lockouts for all circuits that should not be inadvertently tripped (as indicated on the drawings).

## 2.5 OVERCURRENT PROTECTIVE DEVICES

A. Feeder Circuit Breaker Assemblies 150 Amp and below:

1. Feeder Circuit breakers 150 Amp and below shall be thermal Magnetic Circuit breaker: Inverse time current element for low level overloads, and instantaneous magnetic trip element for short circuits, unless otherwise indicated or required to meet Section 2.4 C above. Minimum features below:

    a. UL listed for 80 percent load application unless otherwise indicated on plans.
    b. Circuit Breaker shall allow the UL listed field installation internal accessories (Auxiliary Switch, Shunt Trip, Undervoltage release, Bell Alarm Switch) without removal of cover to install. Circuit Breaker shall include Accessories as indicated on plans.
    c. Circuit breaker handle accessories shall provide provisions for locking handle in the ‘ON’ or ‘OFF’ position

2. Where specifically indicated or required by NEC

a. Adjustable [L] Long time time-delay and ampere setting with Long time pickup ( ampere setting ) determined by interchangeable rating plug.
b. Adjustable [S] Short time-delay and pick-up.
c. Adjustable [I] Instantaneous trip.
d. Adjustable [G] Ground fault pick-up and delay where indicated or required be NEC.
e. Where Indicated special zone control interlocking for main breaker and future main and tie breaker of double-ended substation switchboard
f. Short circuit, overload and ground fault trip indicators.
g. Trip device of circuit breakers shall be of same type for tripping coordination.

B. General Breaker Requirements:

1. Minimum interrupting capacity shall match the minimum required interrupt rating of the panel.
2. Standard frame sizes, trip ratings, and number of poles.
3. Lugs: Mechanical or compression style, suitable for number, size, trip ratings, and material of conductors.
4. Application Listing: Appropriate for application; Type SWD for switching fluorescent lighting loads; Type HACR for heating, air-conditioning, and refrigerating equipment.
5. GFCI Circuit Breakers: Single- and two-pole configurations with 5-mA trip sensitivity.
6. Shunt Trip: 120-V trip coil energized from separate circuit.

## PART 3 -EXECUTION

### 3.1 INSTALLATION

A. Install panelboards and accessories according to NEMA PB 1.1.

B. Clearances: Minimum code required clearances around panelboards must be maintained.

C. Mounting Heights: Top of trim 78 inches above finished floor, unless otherwise indicated.

D. Mounting: Plumb and rigid without distortion of box. Mount recessed panelboards with fronts uniformly flush with wall finish.

E. Mounting Hardware: Provide all necessary blocking, channels and other hardware for securing panelboards to wall, column or other parts of building structure.

F. Circuit Directory: Create a directory to indicate installed circuit loads after balancing panelboard loads. Obtain approval before installing. Use a computer or typewriter to create directory; handwritten directories are not acceptable.

G. Install filler plates in unused spaces.

H. Wiring in Panelboard Gutters: Arrange conductors into groups and bundle and wrap with wire ties after completing load balancing.

### 3.2 IDENTIFICATION

A. Identify field-installed conductors, interconnecting wiring, and components.

B. Panelboard Nameplates: Label each panelboard with engraved metal or laminated-plastic nameplate mounted with corrosion-resistant screws. Label shall include panel designation, voltage and phase in minimum ¼" high letters.

3.3 CONNECTIONS

A. Install equipment grounding connections for panelboards with ground continuity to main electrical ground bus.

B. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values.

3.4 FIELD QUALITY CONTROL

A. After installing panelboards and after electrical circuitry has been energized, demonstrate product capability and compliance with requirements

1. Procedures: Perform each visual and mechanical inspection and electrical test indicated in NETA ATS, Section 7.6 for molded-case circuit breakers. Certify compliance with test parameters.
2. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.

C. Balancing Loads: After Substantial Completion, measure load balancing and make circuit changes as follows:

1. Measure as directed during period of normal system loading.
2. Perform load-balancing circuit changes outside normal occupancy/working schedule of the facility and at time directed.
3. After circuit changes, recheck loads during normal load period. Record all load readings before and after changes and submit test records.
4. Tolerance: Difference exceeding 20 percent between phase loads, within a panelboard, is not acceptable. Rebalance and recheck as necessary to meet this minimum requirement.

3.5 ADJUSTING

A. Set field-adjustable switches and circuit breaker trip ranges.

B. Adjust all operating mechanisms for free mechanical movement.

3.6 CLEANING

A. On completion of installation, inspect interior and exterior of panelboards. Remove paint splatters and other spots. Vacuum dirt and debris; do not use compressed air to assist in cleaning. Repair exposed surfaces to match original finish.

END OF SECTION 262416

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SECTION 262726 - WIRING DEVICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes receptacles, switches, and finish plates.

1.3 DEFINITIONS

A. GFCI: Ground-fault circuit interrupter.

1.4 SUBMITTALS

A. Submit shop drawings and product data.

1.5 COORDINATION

A. Receptacles for Owner-Furnished Equipment: Match plug configurations.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers:

B. Wiring Devices:

1. Bryant; Hubbell, Inc.
2. GE Company; GE Wiring Devices.
3. Hubbell Wiring Device – Kellems
4. Leviton Manufacturing Co., Inc.
5. Pass & Seymour/Legrand; Wiring Devices Div.
6. Cooper Wiring Devices
7. Or approved equal.

2.2 RECEPTACLES

A. General Requirements for All Devices:

B. Each device shall have an amperage rating not less than that of the branch circuit(s) overcurrent protection device. White color, unless noted otherwise.

C. Wiring Devices, Components, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

D. All devices shall be Commercial Specification Grade (Construction specification grade is prohibited), unless noted otherwise.

E. All Convenience Receptacles, shall be Heavy-Duty 125 V, 20 A: Comply with NEMA WD 1, NEMA WD 6 Configuration 5-20R, UL 498, and FS W-C-596. Subject to compliance with requirements, provide Hubbell Wiring Device-Kellems; 5362 Series or similar

F. Straight-Blade: All devices shall be Tamper Resistant where required by the National Electric Code and/or local amendments.

G. Tamper Resistant—Convenience Receptacles: 125 V, 20 A: Comply with NEMA WD 1, NEMA WD 6 Configuration 5-20R, UL 498 Supplement sd, and FS W-C-596. Subject to compliance with requirements, provide Hubbell Wiring Device-Kellems; HBL5362xxTR Series or similar.

H. GFCI Receptacles: Duplex convenience receptacle with integral ground fault current interrupter. Provide one device for each location, daisy-chaining devices to achieve GFCI protection is not approved for this project.

I. Duplex GFCI Convenience Receptacles, 125 V, 20 A.

J. Straight Blade, non-feed through type.

K. Comply with NEMA WD 1, NEMA WD 6, UL 498, UL 943 Class A, and FS W-C-596.

L. Include indicator light that shows when the GFCI has malfunctioned and no longer provides proper GFCI protection.

M. Subject to compliance with requirements, provide Hubbell Wiring Device-Kellems; GFRST20xx Series or similar.

N. General Description: Straight Blade, 125 V, 20 A, Configuration 5-20R. Comply with NEMA WD 1, NEMA WD 6, UL 498, UL 1449, and FS W-C-596, with integral TVSS in line to ground, line to neutral, and neutral to ground.

O. Subject to compliance with requirements, provide Hubbell Wiring Device-Kellems; HBL5362SA Series or similar.

P. Devices: Listed and labeled as isolated-ground receptacles.

Q. Isolation Method: Integral to receptacle construction and not dependent on removable parts.

R. General Description: Straight Blade, 125 V, 20 A, Configuration 5-20R. Comply with NEMA WD 1, NEMA WD 6, UL 498, UL 1449, and FS W-C-596, with integral TVSS in line to ground, line to neutral, and neutral to ground.

S. Subject to compliance with requirements, provide Hubbell Wiring Device-Kellems; HBL5362SA Series or similar.

## 2.3 SWITCHES

A. Snap Switches: General-duty, quiet type, rated 20 amperes, 120/277 volts AC. Handle: white plastic. Pilot light type (where indicated): lighted handle.

B. Dimmer Switches: Modular, full-wave, solid-state units with integral, quiet on/off switches and audible and electromagnetic noise filters.

C. Control: Continuously adjustable slide. Single-pole or three-way switch to suit connections.

2.4 WALL PLATES

A. Single and combination types match corresponding wiring devices.

1. Cover plate: Stainless steel.
2. Cover plate for surface mounted devices: Galvanized steel.
3. Weatherproof cover plate: While in use, gasketed, cast metal, hinged device covers.
4. Plate-Securing Screws: Metal with head color to match plate finish.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install devices and assemblies plumb and secure.

B. Install wall plates when painting is complete.

C. Do not share neutral conductor on load side of dimmers.

D. Arrangement of Devices: Unless otherwise indicated, mount flush, vertically, with height as indicated or six inches above counters.

E. Group adjacent switches under single, multigang wall plates.

F. Protect devices and assemblies during painting.

G. Install wall switches with off position down.

H. Install cover plates on switch, receptacle, and blank outlets.

3.2 IDENTIFICATION

A. Switches and receptacles: Identify panelboard and circuit number from which served. Use machine-printed, pressure-sensitive, abrasion-resistant label tape on the outside of the face plate for receptacles and on the inside of the face plate for switches; utilize durable wire markers or tags within all outlet boxes. Labels shall be Brother ½" TZ tape, black ink on clear, extra-strength adhesive tape, with size 18 text or engineer approved equal. Use matching label printer.

3.3 CONNECTIONS

A. Connect wiring device grounding terminal to outlet box with bonding jumper.

B. Connect wiring device grounding terminal to branch-circuit equipment grounding conductor.

C. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values.

3.4 FIELD QUALITY CONTROL

A. Test wiring devices for proper polarity and ground continuity. Check each device to verify operation.

B. Test GFCI operation according to manufacturer's written instructions.

C. Replace damaged or defective components.

3.5 CLEANING

A. Internally clean devices, device outlet boxes, and enclosures. Replace stained or improperly painted wall plates or devices.

END OF SECTION 262726

SECTION 265100 - INTERIOR LIGHTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes interior lighting fixtures, lighting fixtures mounted on exterior building surfaces and recessed in canopies, lamps, ballasts, emergency lighting units, and accessories.

B. Related Sections include the following:

1. Section 260923 Lighting Control Devices.

1.3 SUBMITTALS

A. Product Data: For each type of lighting fixture indicated, arranged in order of fixture designation. Include data on features and accessories.

B. Maintenance data for lighting fixtures.

C. Emergency lighting units including battery and charger.

1.4 QUALITY ASSURANCE

A. Fixtures, Emergency Lighting Units, and Accessories: Listed and labeled as defined in the NEC, Article 100, by a testing agency acceptable to authorities having jurisdiction.

B. Comply with the NEC.

C. FM Compliance: Fixtures for hazardous locations shall be listed and labeled for indicated class and division of hazard by FM.

D. NFPA 101 Compliance: Comply with visibility and luminance requirements for exit signs.

1.5 COORDINATION

A. Coordinate layout and installation of lighting fixtures and suspension system with other construction that penetrates ceilings or is supported by them, including HVAC equipment, fire-suppression system, partition assemblies, and other construction.

1.6 WARRANTY

A. Special Warranty for Emergency Lighting Batteries: Manufacturer's standard form in which manufacturer of battery-powered emergency lighting unit agrees to repair or replace components of rechargeable batteries that fail in materials or workmanship within specified warranty period.

1. Warranty Period for Emergency Lighting Unit Batteries: Five years from date of Substantial Completion. Full warranty shall apply for first year, and prorated warranty for the remaining four years.

B. Special Warranty for Ballasts: Manufacturer's standard form in which ballast manufacturer agrees to repair or replace ballasts that fail in materials or workmanship within specified warranty period.

1. Warranty Period for Electronic Ballasts: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Products: As indicated on the drawings.

2.2 FIXTURES AND FIXTURE COMPONENTS, GENERAL

A. Metal Parts: Free from burrs, sharp corners, and edges.

B. Sheet Metal Components: Steel, unless otherwise indicated. Form and support to prevent warping and sagging.

C. Doors, Frames, and Other Internal Access: Smooth operating, free of light leakage under operating conditions, and designed to permit maintenance without use of tools. Designed to prevent doors, frames, lenses, diffusers, and other components from falling accidentally during maintenance and when secured in operating position.

D. Lenses, Diffusers, Covers, and Globes: 100 percent virgin acrylic plastic or annealed crystal glass, unless otherwise indicated.

1. Plastic: High resistance to yellowing and other changes due to aging, exposure to heat, and ultraviolet radiation.
2. Lens Thickness: 0.125 inch minimum, unless greater thickness is indicated.

2.5 EXIT SIGNS

A. General Requirements: Comply with UL 924 and the following:

1. Sign Colors and Lettering Size: Comply with authorities having jurisdiction.

B. Internally Lighted Signs: As follows:

1. Lamps for AC Operation: Light-emitting diodes, 70,000 hours minimum rated lamp life.

C. Self-Powered Exit Signs (Battery Type): Integral automatic charger in a self-contained power pack.

1. Battery: Sealed, maintenance-free, nickel-cadmium type.
2. Charger: Fully automatic, solid-state type with sealed transfer relay.
3. Operation: Relay automatically energizes lamp from battery when circuit voltage drops to 80 percent of nominal voltage or below. When normal voltage is restored, relay disconnects lamps from battery, and battery is automatically recharged and floated on charger.

4. Test Push Button: Push-to-test type, in unit housing, simulates loss of normal power and demonstrates unit operability.
5. LED Indicator Light: Indicates normal power on. Normal glow indicates trickle charge; bright glow indicates charging at end of discharge cycle.
6. Remote Test – Where indicated on the drawings: Switch in hand-held remote device aimed in direction of tested unit initiates coded infrared signal. Signal reception by factory-installed infrared receiver in tested unit triggers simulation of loss of its normal power supply, providing visual confirmation of either proper or failed emergency response.
7. Integral Self-Test – Where indicated on the drawings: Factory-installed electronic device automatically initiates code-required test of unit emergency operation at required intervals. Test failure is annunciated by an integral audible alarm and flashing red LED.

## 2.6 EMERGENCY LIGHTING UNITS

A. Internal Type: Self-contained, modular, battery-inverter unit, factory mounted within lighting fixture body and compatible with ballast. Comply with UL 924.

1. Emergency Connection: Operate fixture continuously for 90 minutes. Connect unswitched circuit to battery-inverter unit and switched circuit to fixture ballast.
2. Test Push Button and Indicator Light: Visible and accessible without opening fixture or entering ceiling space. Provide integral to fixture or mounted adjacent to fixture.
   a. Push Button: Push-to-test type, in unit housing, simulates loss of normal power and demonstrates unit operability.
   b. Indicator Light: LED indicates normal power on. Normal glow indicates trickle charge; bright glow indicates charging at end of discharge cycle.
3. Battery: Sealed, maintenance-free, nickel-cadmium type.
4. Charger: Fully automatic, solid-state, constant-current type with sealed power transfer relay.
5. Battery: Sealed, maintenance-free, nickel-cadmium type.
6. Charger: Fully automatic, solid-state type with sealed transfer relay.
7. Night-Light Connection: Where night-light option is called out in the drawings, operate one fluorescent lamp continuously.

B. External Type: Self-contained, modular, battery-inverter unit, suitable for powering one or more fluorescent lamps, remote mounted from lighting fixture. Comply with UL 924.

1. Emergency Connection: Operate 1 fixture continuously for 90 minutes. Connect unswitched circuit to battery-inverter unit and switched circuit to fixture ballast.
2. Battery: Sealed, maintenance-free, nickel-cadmium type.
3. Charger: Fully automatic, solid-state, constant-current type.
4. Housing: NEMA 250, Type 1 enclosure.
5. Test Push Button: Push-to-test type, in unit housing, simulates loss of normal power and demonstrates unit operability.
6. LED Indicator Light: Indicates normal power on. Normal glow indicates trickle charge; bright glow indicates charging at end of discharge cycle.

## 2.8 FIXTURE SUPPORT COMPONENTS

A. Single-Stem Hangers: 1/2-inch steel tubing with swivel ball fitting and ceiling canopy. Finish same as fixture.

B. Twin-Stem Hangers: Two, 1/2-inch steel tubes with single canopy arranged to mount a single fixture. Finish same as fixture.

C. Rod Hangers: 3/16-inch- minimum diameter, cadmium-plated, threaded steel rod.

D. Hook Hangers: Integrated assembly matched to fixture and line voltage and equipped with threaded attachment, cord, and locking-type plug.

E. Aircraft Cable Support: Use cable, anchorages, and intermediate supports recommended by fixture manufacturer.

F. Wires: ASTM A 641/A 641M, Class 3, soft temper, zinc-coated steel, 12 gage (2.68 mm)

2.9 FINISHES

A. Fixtures: Manufacturer's standard, unless otherwise indicated.

1. Paint Finish: Applied over corrosion-resistant treatment or primer, free of defects.
2. Metallic Finish: Corrosion resistant.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Fixtures: Set level, plumb, and square with ceiling and walls, and secure according to manufacturer's written instructions and approved submittal materials.

B. Furnish and install a protective barrier around fixtures that are not insulation-contact-rated (non-IC-rated) in locations where insulation is installed. The protective barrier shall be installed to yield a 4" air-gap from the fixture on all sides and top.

C. Support for Fixtures in or on Grid-Type Suspended Ceilings: Attach supports to building structure.

1. Install a minimum of four ceiling support system rods or wires for each fixture. Locate not more than 6 inches from fixture corners.
2. Support Clips: Fasten to fixtures and to ceiling grid members at or near each fixture corner.
3. Fixtures of Sizes Less Than Ceiling Grid: Arrange as indicated on reflected ceiling plans or center in acoustical panel, and support fixtures independently with at least two 3/4-inch metal channels spanning and secured to ceiling tees.

3.2 CONNECTIONS

A. Ground equipment.

1. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values.

3.3 FIELD QUALITY CONTROL

A. Inspect each installed fixture for damage. Replace damaged fixtures and components.

B. Tests: As follows:

1. Verify normal operation of each fixture after installation.
2. Emergency Lighting: Interrupt electrical supply to demonstrate proper operation.

C. Malfunctioning Fixtures and Components: Replace or repair, then retest. Repeat procedure until units operate properly.

3.4 CLEANING AND ADJUSTING

A. Clean fixtures internally and externally after installation. Use methods and materials recommended by manufacturer.

B. Adjust aimable fixtures to provide required light intensities.

END OF SECTION 265100

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The District has a firm commitment to performance evaluation of District personnel, whatever their category and level, through the medium of a formalized system. The primary purpose of such evaluation is to assist personnel in professional development in achieving District goals, and to assist with decisions regarding personnel actions. This policy applies to all certificated personnel, both pupil instructional personnel and non-instructional personnel.

Each certificated staff member shall receive at least one (1) written evaluation to be completed by no later than June 1st for each annual contract year of employment and shall use multiple measures that are research based and aligned to the Charlotte Danielson Framework for Teaching Second Edition. The evaluation of instructional certificated personnel shall annually include a minimum of two (2) documented observations, one (1) of which shall be completed prior to January 1. In situations where certificated personnel are unavailable for two documented classroom observations, due to situations such as long-term illness, late year hire, etc., one documented classroom observation is acceptable. All evaluations and accompanying documentation must be finalized by both the employee and the administrator no later than Wednesday before the regular board meeting in May each year.

**Evaluation Philosophy**

The primary purposes of the teacher evaluation system processes are is quality assurance (increasing student learning/growth) and professional learning (improving the quality of instruction). It is essential that both teachers and administrators (operating from the perception of building collaborative relationships) view performance evaluation as a supportive process that will result in enhanced student growth and improved professional learning, performance, and morale. Teacher evaluation is best viewed as a highly individualized experience - a personal journey, in which educators view themselves as professionals committed to continuous improvement. Therefore, teachers are encouraged to meet with their administrator at the beginning of each school year to determine the best measure for gathering evidence to inform professional practice for their summative evaluation, as there are many options available, in addition to the two documented observations. These include requests from the teacher for multiple walk-throughs and additional observations by their administrator *prior* to the summative evaluation, artifacts, videoed lessons, or portfolios demonstrating proficiency in each domain.

**Objectives**

The formal performance evaluation system is designed to:

1. Maintain or improve each employee's job satisfaction and morale by letting him/her know that the supervisor is interested in his/her job progress and personal development.
2. Serve as a systematic guide for supervisors in planning each employee's further training.
3. Assure considered opinion of an employee's performance and focus maximum attention on achievement of assigned duties.
4. Assist in determining and recording special talents, skills, and capabilities that might otherwise not be noticed or recognized.
5. Assist in planning personnel moves and placements that will best utilize each employee's

capabilities.

6. Provide an opportunity for each employee to discuss job problems and interests with his/her supervisor.
7. Assemble substantiating data for use as a guide, although not necessarily the sole governing factor, for such purposes as wage adjustments, promotions, disciplinary action, and termination.

**Responsibility**

The **Superintendent**, or the Superintendent's designee, shall have the overall responsibility for the administration and monitoring of the District Performance Evaluation Program and will ensure the fairness and efficiency of its execution, including:

1. Distributing proper forms in a timely manner.
2. Ensuring completed forms are returned for filing.
3. Reviewing forms for completeness.
4. Identifying discrepancies.
5. Ensuring proper safeguard and filing of completed forms.
6. Creating and implementing a plan for ongoing training for evaluators and certificated personnel on the District's evaluation standards, forms, and processes and a plan for collecting and using data gathered from evaluations;
7. Creating a plan for ongoing review of the District's Performance Evaluation Program that includes stakeholder, input from teachers, Board Members, administrators, parents/guardians, and other interested parties;
8. Creating a procedure for remediation for employees that receive evaluations indicating that remediation would be appropriate course of actions; and
9. Creating an individualized evaluation rating system for how evaluations will be used to identify proficiency and record growth over time with a minimum of three rankings used to differentiate performance of certificate holders including: unsatisfactory being equal to a rating of 1; basic being equal to a rating of 2; and proficient being equal to a rating of 3. A fourth rating of distinguished being equal to 4 may also be used.

The **Immediate Supervisor** is the employee's evaluator and has responsibility for:

1. Continuously observing and evaluating an employee's job performance including a minimum of two documented observations annually for certificated personnel, one of which shall be completed prior to January 1 of each year.
2. Holding periodic counseling sessions with each employee to discuss job performance.
3. Completing Performance Evaluation Forms as required.
4. Completing training on the District's Performance Evaluation Program.

**Evaluation Process**

**Evaluation Forms**

Evaluation forms are aligned to *Charlotte Danielson's Framework for Teaching Second Edition* and will be used for teachers and specialist positions including school counselors, library/media specialists, school psychologists, therapeutic specialists, behavior specialists, instructional specialists, and school nurses. Forms will consist of the following:

1. Individualized Professional Learning Plan
2. Rubrics of Components of Professional Practice
3. Summative Performance Evaluation

Evaluation forms should be reviewed annually and revised as necessary to indicate any significant changes in duties and/or responsibilities. The form is designed to increase planning and relate performance to assigned responsibilities through joint understanding between the immediate supervisor (evaluator) and the employee as to the job description and major performance objectives. Revisions in evaluation forms will be submitted for approval by the board of trustees.

**Observations**

Periodic classroom observations will be included in the evaluation process with a minimum of two documented observations annually for certificated personnel, one of which shall be completed prior to January 1. Observation documentation shall be shared with the employee. In situations where certificated personnel are unavailable for two documented classroom observations, due to situations such as long-term illness, late year hire, etc., one documented classroom observation is acceptable.

**Multiple Measures of Professional Practice**

A majority of the evaluation of certificated personnel will be comprised of Professional Practice (domains 2 and 3) based on the *Charlotte Danielson Framework for Teaching Second Edition*. The evaluation of certificated personnel shall include:

1. Parent/Guardian input (must be included)
2. Student input (for secondary schools);
3. ~~Multiple measures may also include:~~
4. ~~Teacher professional portfolios that demonstrate proficiency in each Domains~~

The measure will be selected in collaboration with the teacher and principal by **October 1** of each year. If not in agreement, the principal will make the final selection.

Parental or guardian input forms will be made available (in English and Spanish) on the main District website. The parent input survey will be available to parents during Parent Teacher /Student Led Conferences. This parent input survey will be used to gather input regarding certificated staff and their interactions with parents and students. Approximately 20% of each certificated staff member's parents will be randomly selected to complete the survey when they attend Parent Teacher/Student Led Conferences. These results will then be compiled and used in the completion of each certified staff member's summative evaluation under Domain 4

(Communicating with Families). The results of the survey will be shared with the staff member after the results have been compiled prior to **March 1** of each year. As data is gathered and careful attention will be paid to trends developing over time.

**Student Achievement**

Instructional staff evaluations must include measureable student achievement as defined in Section 33-1001, Idaho Code, applicable to the subjects and grade ranges taught by the instructional staff. All other certificated staff evaluations must include measureable student achievement or student success indicators, as defined in Section 33-1001, Idaho Code, as applicable to the position. This portion of the evaluation may be calculated using current and/or the immediate past year's data and may use one or both years of data. Student achievement plans will be developed or reviewed each year to specify which measures of student achievement data will be used. Plans must be submitted by building principals and approved by the board of trustees by **October 1** of each year. Student achievement will account for ten percent (10%) of the overall rating score for the employee.

**Charlotte Danielson Framework**: The evaluation will be aligned with minimum State standards and based upon the *Charlotte Danielson Framework for Teaching Second Edition* and will include, at a minimum, the following general criteria upon which the Professional Practice portion will be based. Individual domain and component ratings must be determined based on a combination of professional practice and student achievement as specified above.

**Teacher Evaluation Framework**

The general criteria upon which the performance evaluation system will be based are as follows:

- **Domain 1: Planning & Preparation (10%)**
  - **Demonstrating Knowledge of Content and Pedagogy;**
  - **Demonstrating Knowledge of Students;**
  - **Setting Instructional Outcomes;**
  - **Demonstrating Knowledge of Resources;**
  - **Designing Coherent Instruction; and**
  - **Designing Student Assessments**
- **Domain 2: The Classroom Environment (30%)**
  - **Creating an Environment of Respect and Rapport;**
  - **Establishing a Culture for Learning;**
  - **Managing Classroom Procedures;**
  - **Managing Student Behavior; and**
  - **Organizing Physical Space**
- **Domain 3: Instruction and Use of Assessment (30%)**

- **Communicating with Students;**
- **Using Questioning and Discussion Techniques;**
- **Engaging Students in Learning;**
- **Using Assessment in Instruction; and**
- **Demonstrating Flexibility and Responsiveness**

- **Domain 4: Professional Responsibilities (20%)**
  - **Reflecting on Teaching;**
  - **Maintaining Accurate Records;**
  - **Communicating with Families;**
  - **Participating in a Professional Community;**
  - **Growing and Developing Professionally; and**
  - **Showing Professionalism**

An overall rating score will be calculated for each employee using the attached rubric with scale. Evaluations are scored as follows: The scores for each component within a domain will be averaged together to provide an average score for each domain. Each domain will be weighted as outlined above to arrive at the overall rating score for the evaluation.

**Meetings with the Employee**

**Self-Assessment**

Per IDAPA 08.02.02.007.06 employees will complete an Individual Professional Learning Plan (IPLP) based on the *Charlotte Danielson Framework for Teaching Second Edition* identifying goals based on the employee's areas of strength and areas of needed growth. IPLPs must be completed and reviewed with the immediate supervisor (evaluator) on or before **October 1**. ~~Those wishing to qualify for an advanced professional endorsement must also complete a self-evaluation.~~

**Counseling Sessions**

Counseling sessions between supervisors and employees may be scheduled periodically. During these sessions, an open dialogue should occur which allows the exchange of performance oriented information. The employee should be informed of how he/she has performed to date. In the case of derogatory comments, the employee should be informed of the steps necessary to improve performance to the desired level. Counseling sessions should include, but not be limited to, the following: job responsibilities, performance of duties, and attendance. A memorandum for record will be prepared following each counseling session and placed in the employee's personnel file.

**Communication of Results**

Each evaluation shall include an evaluation conference with the affected employee. At the scheduled meeting with the employee, the supervisor will:

1. Discuss the evaluation with the employee, emphasizing strong and weak points in job performance. Commend the employee for a job well done if applicable and discuss specific corrective action if warranted. Set mutual goals for the employee to reach before the next performance evaluation. Recommendations should specifically state methods to correct weaknesses and/or prepare the employee for future promotions.
2. Allow the employee to make any written comments he/she desires. Inform the employee that he/she may turn in a written rebuttal of any portion of the evaluation within seven (7) days and outline the process for rebuttal. Have the employee sign the evaluation form indicating that he/she has been given a copy and initial after supervisor's comments.

No earlier than seven (7) days following the meeting, if the supervisor has not received any written rebuttal, the supervisor will forward the original evaluation form to the Superintendent, or the designee, for review. The supervisor will also retain a copy of the completed form. The evaluation will then be forwarded to the Business Office and placed in the employee's personnel file.

**Rebuttals**

Within seven (7) working days from the date of the evaluation meeting with their supervisor the employee may file a written rebuttal of any portion of the evaluation form. The written rebuttal shall state the specific content of the evaluation form with which the employee disagrees, a statement of the reason(s) for disagreement, and the amendment to the evaluation form requested.

If a written rebuttal is received by the supervisor within seven (7) working days, the supervisor may conduct additional meetings or investigative activities necessary to address the rebuttal. Subsequent to these activities, and within a period of ten (10) working days, the supervisor may provide the employee with a written response either amending the evaluation as requested by the employee or stating the reason(s) why the supervisor will not amend the evaluation as requested.

If the supervisor chooses to amend the evaluation form as requested by the employee then the amended copy of the evaluation form will be provided to, and signed by, the employee. The original amended evaluation form will then be forwarded to the Superintendent, or the designee, for review. It will then be forwarded to the District Service Center and placed in the employee's personnel file. The supervisor will also retain a copy of the completed form.

If the supervisor chooses not to amend the evaluation form as requested by the employee then the evaluation form along with the written rebuttal, and the supervisor's response, if any, will be forwarded to the Superintendent, or the designee, for review. It will then be forwarded to the Business Office and placed in the employee's personnel file. The supervisor will also retain a copy of the completed form including any rebuttals and responses.

**Reporting**

Any subsequent changes to the District's evaluation plan shall be resubmitted to the State Department of Education for approval. The District shall report the summative rankings, the number of components rated as unsatisfactory, whether a majority of the certificated personnel's students met their measurable student achievement or growth targets or student success indicators as well as what measures were used, and whether an individualized professional learning plan is in place for all certificated personnel evaluations, annually to the State Department of Education.

**Action**

Should any action be taken as a result of an evaluation to not renew an individual's contract the District will comply with the requirements and procedures established by State law.

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**LEGAL REFERENCE:** **IDAPA 08.02.02.120 Local District Evaluation Policy**
**I.C. § 33-514A Issuance of Limited Contract**
**I.C. § 33-515 Issuance of Renewable Contracts**
**I.C. § 33-518 Employee Personnel Files**
**I.C. § 33-514 Issuance of Annual Contracts- Support Programs- Categories of Contracts – Optional Placement;**
**I.C. § 33-1001 Section 16**
**I.C. § 33-1001Definitions**

**ADOPTED:**
**March 11, 2010**

**AMENDED/REVISED:**
**April 19, 2010; August 16, 2010; June 18, 2012; September 17, 2012; June 17, 2013; June 16, 2014; September 15, 2014; December 15, 2014; November 20, 2017; March 19, 2018**

**ATTACHMENTS:**
**Summative Performance Evaluation Form**
**Parent Input Form (English & Spanish Versions)**
**Components of Professional Practice for Teachers Rubric with Scale**
**Teacher Evaluation Scoring Rubric**
**Certificated Employee Self-Assessment**