Addendum No:	06	**Issue Date:**	03/04/2024
Project:	Muscoy Elementary School San Bernardino Unified School District	**To Drawings + Specifications dated**	11/09/2023

Prepared By: PBK Architects, Inc.
8163 Rochester Ave#100
Rancho Cucamonga, CA 91730

PBK Project No: 220281

NOTICE TO BIDDERS

A. Receipt of this Addendum shall be acknowledged on the Proposal Form.

B. This Addendum forms part of the Contract documents for the above referenced project and shall beincorporated integrally therewith.

C. Each bidder shall make necessary adjustments and submit his proposal with full knowledge of all modifications, clarifications, and supplemental data included therein. Where provisions of the followingsupplemental data differ from those of the original Contract Documents, this Addendum shall govern.

GENERAL ITEMS

Item No. 06.01: **EXTENSION OF BID OPENING**
Adjustment of bid opening date to Tuesday, March 12.

Item No. 06.02: **IRRIGATION EXHIBIT 6A**
Add Irrigation Exhibit 6A

Item No. 06.03: **PLAYGROUND SURFACE**
Playground Surfacing should be “pour in place.”

Item No. 06.04: **PLAYGROUND CRITICAL FALL HEIGHT AND REQUIRED THICKNESS**
The “Critical Fall Height” is 7 ft. Therefore, thickness should be 3.5 per specs.

Item No. 06.05: **PLAYGROUND SURFACE COLOR**
Color to be determined by District/ Architect**.**

Item No. 06.06: **“STUDENT MUST HAVE SUFFICIENT PLAY AREA”**
“Sufficient Play Area” means: all gated areas not to impede remaining play spaces and not affected by the area of work.

Item No. 06.07: **BASE BID VS ADDITIVE BID**
Base Bid: is everything that is site work and playground upgrades.
Additive Bid: alternate is the work for the classroom modernization based off the Addendum No. 01 Drawings.

Item No. 06.08: **DISTRICT ALLOWANCE**
Increase District Allowance from $60,000.00 USD to $160,000.00 USD.

SPECIFICATIONS

Item No. 06.09: 3**2 18 16.13 – PLAYGROUND PROTECTIVE SURFACING**
Add new spec section 32 18 16.13- playground protective surfacing

Item No. 06.10: **32 84 00 – PLANTING IRRIGATION**
Add new spec. section 32 84 00 – Planting Irrigation

Item No. 06.11: **32 94 43 – TREE GRATES**
Removed from the specifications book in its entirety

DRAWINGS

Item No. 06.12: **C2.1 DEMOLITION PLAN**
a) Civil Drawings documenting Delta "1" changes
b) Revised sloped walkway to match Architectural.

Item No. 06.13: **C3.1: GRADING**
Revised Planter curb design

Item No. 06.14: **C3.2 GRADING**
Civil Drawings documenting Delta "1" changes

Item No. 06.15: **C3.3: HORIZONTAL CONTROL PLAN**
Revised Planter by Building E

Item No. 06.16: **C3.5: STROM DRAIN PLAN**
Added "keyed notes" # 38 and 39

Item No. 06.17: **G0.02: SITE ACCESSIBILITY PLAN**
Revised Planter and Path of Travel

Item No. 06.18: **A1.10: ENLARGED SITE PLAN**
a) Revised Planter, stairs size and finishes.
b) Revised to match with Civil Demolition Plan.

Item No. 06.19: **A1.12: ENLARGED SITE PLAN - EAST**
Revised planter, curb, and the finishes

Item No. 06.20: **A1.13: ENLARGED CURB PLAN**
a) Revised Curb dimensions.
b) Revised detail to reference 6/S1.01

End of Addendum No. 06

IRRIGATION EXHIBIT 6A

6

IRRIGATION NOTES

1. ALL LOCAL MUNICIPAL AND STATE LAWS, RULES AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONSAND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR.

2. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, STRUCTURES AND SERVICES BEFORE COMMENCING WORK. THE LOCATIONS OF UTILITIES, STRUCTURES AND SERVICES SHOWN IN THESE PLANS ARE APPROXIMATE ONLY. ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE.

3. THE CONTRACTOR SHALL OBTAIN THE PERTINENT ENGINEERING OR ARCHITECTURAL PLANS BEFORE BEGINNING WORK.

4. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS REQUIRED TO PERFORM THE WORK INDICATED HEREIN BEFORE BEGINNING WORK.

5. THIS DESIGN IS DIAGRAMMATIC. ALL EQUIPMENT SHOWN IN PAVED AREAS IS FOR DESIGN CLARITY ONLY AND IS TO BE INSTALLED WITHIN PLANTING AREAS.

6. THE CONTRACTOR SHALL NOT WILLFULLY INSTALL ANY EQUIPMENT AS SHOWN ON THE PLANS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN CONDITIONS EXIST THAT WERE NOT EVIDENT AT THE TIME THESE PLANS WERE PREPARED. ANY SUCH CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO ANY WORK OR THE IRRIGATION CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ANY FIELD CHANGES DEEMED NECESSARY BY THE OWNER.

7. INSTALL ALL EQUIPMENT AS SHOWN IN THE DETAILS AND SPECIFICATIONS. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH LOCAL CITY, COUNTY AND STATE REQUIREMENTS FOR BOTH EQUIPMENT AND INSTALLATION.

8. ALL PIPE UNDER PAVED AREAS TO BE INSTALLED IN SLEEVING TWICE THE DIAMETER OF THE PIPE CARRIED. SEE LEGEND FOR TYPE. ALL WIRE UNDER PAVED AREAS TO BE INSTALLED IN A SCH. 40 SLEEVE THE SIZE REQUIRED TO EASILY PULL WIRE THROUGH. ALL SLEEVES TO BE INSTALLED WITH A MINIMUM DEPTH AS SHOWN ON THE SLEEVING DETAILS. SLEEVES TO EXTEND AT LEAST 12" PAST THE EDGE OF THE PAVING.

9. ALL REMOTE CONTROL VALVES TO BE INSTALLED AS SHOWN ON THE INSTALLATION DETAILS. INSTALL ALL REMOTE CONTROL VALVES WITHIN 18" OF HARDSCAPE.

10. CONTRACTOR SHALL INSTALL ADDITIONAL CHECK VALVES TO HEADS AND LATERALS AS REQUIRED TO PREVENT LOW HEAD DRAINAGE.

11. THE CONTRACTOR IS REQUIRED TO CONTACT DIGALERT OR 811 A MINIMUM OF TWO (2) DAYS PRIOR TO THE START OF ANY EXCAVATIONS ON THE PROJECT AND SPECIFICALLY PRIOR TO THE INSTALLATION OF ANY GROUNDING RODS. DIAL 811 OR LOG ONTO WWW.DIGALERT.ORG TO START A PROJECT TICKET. DIGALERT AND 811 IS A FREE SERVICE PROVIDED TO THE PROJECT. FAILURE TO CONTACT AND HAVE THE EXISTING UTILITIES IDENTIFIED, LOCATED AND MARKED SHALL MAKE THE CONTRACTOR SOLELY RESPONSIBLE FOR ANY AND ALL DAMAGES.

IRRIGATION EXHIBIT 6A

6

EXISTING IRRIGATION NOTES:

A. CONTRACTOR SHALL MAINTAIN EXISTING MAINLINES IN WORKING ORDER. COORDINATE ALL INTERRUPTIONS OF OPERATION OF THE EXISTING IRRIGATION TO A MINIMUM. COORDINATE ALL INTERRUPTIONS WITH THE OWNER'S REPRESENTATIVE.

B. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXISTING IRRIGATION EQUIPMENT DAMAGED DURING CONSTRUCTION AND IF DAMAGED, SHALL REPLACE WITH SAME MANUFACTURER AND MODEL.

C. ANY EXISTING IRRIGATION CONTROL VALVES CONNECTED TO EXISTING CONTROLLER SHALL BE RECONNECTED TO EXISTING CONTROLLER. CONFIRM PROPER CONTROLLER OPERATION AND INSTALLATION WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK AND UPON COMPLETION OF WORK.

D. CONTRACTOR SHALL CONFIRM THE EXISTING CONTROLLER MAKE AND MODEL AND SHALL CONFIRM THAT SAID CONTROLLER HAS ADEQUATE OPEN STATIONS TO OPERATE ANY ADJUSTED AND ALL PROPOSED IRRIGATION SYSTEM MODIFICATIONS. NOTIFY OWNER'S AUTHORIZED REPRESENTATIVE SHOULD ANY DISCREPANCIES BE NOTED.

E. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR/MODIFICATION/REROUTING OF ALL ADJACENT IRRIGATION SYSTEM EQUIPMENT THAT IS AFFECTED BY NEW CONSTRUCTION IMPROVEMENTS. CONTRACTOR SHALL REPAIR SAID SYSTEMS TO A LIKE NEW MANNER, PROVIDING NO LESS THAN 100% OF HEAD RADIUS COVERAGE IN ALL AREAS WITH SYSTEM LAYOUT AS APPROVED BY OWNER'S AUTHORIZED REPRESENTATIVE. CONTRACTOR SHALL CONFIRM ALL AREAS REQUIRING MODIFICATION WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO BIDDING WORK AND PRIOR TO COMMENCING WORK.

F. CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE REMOVAL AND DISPOSAL OF ALL EXISTING IRRIGATION EQUIPMENT AFFECTED BY THE NEW CONSTRUCTION IMPROVEMENTS, IF NECESSARY. CONTRACTOR SHALL VERIFY ALL EQUIPMENT TO BE REMOVED AND DISPOSED OF IN FIELD PRIOR TO BIDDING WORK AND PRIOR TO COMMENCING WORK.

G. CONTRACTOR SHALL FIELD VERIFY DEPTH AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO BIDDING WORK AND AGAIN PRIOR TO COMMENCING WORK. VERIFICATION SHALL BE DOCUMENTED AND DELIVERED TO OWNER'S REPRESENTATIVE.

H. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PLACEMENT OF ALL SCH. 40 PVC SLEEVING UNDER PAVING, WALLS AND CURBS AT NO LESS THAN 24" BELOW GRADE AND NO LESS THAN 2X DIAMETER OF IRRIGATION PIPE IN AREAS WHERE PIPE CROSSING WILL OCCUR. WHEN PIPE SIZE IS NOT AVAILABLE USE 6" SLEEVING MATERIAL. CONFIRM CROSSINGS WITH OWNER'S REPRESENTATIVE PRIOR TO PAVING AND HARDSCAPE CONSTRUCTION.

I. EXISTING IRRIGATION IN AREAS ADJACENT TO THE LIMITS OF WORK SHALL BE PROTECTED IN PLACE FOR CONTINUED USE. CONTRACTOR SHALL VERIFY THE EXTENT OF THE EXISTING SYSTEM AND MAKE ADJUSTMENTS TO CAP OFF OR MODIFY THE EXITING SYSTEM TO MEET THE NEW LANDSCAPE CONDITION IF NECESSARY.

J. CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING WITHIN THE DRIPLINE OF EXISTING TREES. NO MECHANICAL TRENCHING WITHIN THE DRIPLINE OF THE EXISTING TREE WILL BE ALLOWED. CONTRACTOR SHALL REFER TO ARBORIST REPORT FOR ADDITIONAL PRECAUTIONS REQUIRED FOR THE EXISTING TREES. VERIFY ALL LAYOUT IN FIELD WITH OWNER'S AUTHORIZED REPRESENTATIVE.

IRRIGATION EXHIBIT 6A

6

RECLAIMED WATER IRRIGATION NOTES:

1. ALL PRESSURE MAINLINE PIPING FOR THE RECLAIMED WATER IRRIGATION SYSTEM SHALL BE INSTALLED TO MAINTAIN A MIN. 10' HORIZONTAL SEPARATION FROM POTABLE WATER PIPING.

2. WHERE RECLAIMED WATER AND POTABLE WATER MAINLINES CROSS, THE RECLAIMED WATER MAINLINE WILL BE INSTALLED BELOW THE POTABLE WATER PIPING, AND WILL BE ENCLOSED IN A 4" PVC PURPLE COLORED PIPE SLEEVE WHICH EXTENDS A MIN. OF 5' ON EITHER SIDE OF POTABLE WATER PIPING. PROVIDE A VERTICAL CLEARANCE OF 6".

3. ALL RECLAIMED WATER LINES TO BE SCH. 40 PVC, PURPLE IN COLOR, WITH CONTINUOUS LETTERING STATING "CAUTION, RECLAIMED WATER DO NOT DRINK." ALL LETTERING IS TO BE FACTORY APPLIED DURING MANUFACTURING PROCESS.

4. ALL VALVE BOXES SHALL BE PURPLE IN COLOR WITH LOCKING COVERS. ALL VALVES AND APPURTENANCES SHALL HAVE T CHRISTY RECLAIMED WATER TAGS ATTACHED AS SHOWN ON PLAN. ALL SPRINKLER HEADS WILL HAVE FACTORY INSTALLED RECLAIMED WATER COVERS.

5. CROSS CONNECTIONS BETWEEN RECLAIMED WATER LINES AND ALL OTHER PIPING ON SITE IS PROHIBITED. THIS INCLUDES TEMPORARY CONNECTIONS SUCH AS HOSES BETWEEN QUICK COUPLING VALVES, HOSE BIBBS, ETC.

6. ALL WORK TO CONFORM TO REQUIREMENTS FOR THE USE OF RECLAIMED WATER FOR IRRIGATION SYSTEMS AS REQUIRED BY FEDERAL, STATE, AND CITY STANDARDS. THIS WILL INCLUDE REQUIREMENTS OF THE HEALTH DEPARTMENT AND WATER DEPARTMENT.

SECTION 32 18 16.13 PLAYGROUND PROTECTIVE SURFACING

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. Provide all labor, materials, and tools necessary for the complete installation of a poured in place safety surfacing system as outlined in these specifications. The system should consist of but not necessarily be limited to the following:
   1. Section includes: Resilient playground surfacing poured in place system.

B. Related work: Playground equipment and resilient playground surfacing sub base.
   1. Section 31 00 00: Earthwork.
   2. Section 32 16 00: Site Concrete.

C. Reference Standards:
   1. ASTM D624 Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers.
   2. ASTM D2859 Standard Test Method for Flammability of Finished Textile Floor Covering Materials.
   3. ASTM E303 Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester.
   4. ASTM F1292 Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment.
   5. ASTM F1951 Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment.
   6. ASTM D412 Standard Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers- Tension.
   7. ASTM C108 Standard Test Method for determining the static coefficient of friction of ceramic tile and other like surfaces by the horizontal dynamometer pull meter method – This standard replaces ASTM D2047

1.3 DEFINITIONS

A. EPDM granules: EPDM rubber (ethylene propylene diene monomer(M-class) rubber), a type of synthetic rubber, is an elastomer characterized by a wide range of applications. The M refers to its classification in ASTM standard D-1418; the M class includes rubbers having a saturated chain of the polymethylene type.

B. Critical Fall Height: A critical fall height (CFH) is the maximum height of fall from play equipment to the ground. It is important to note that safety surfaces do not prevent injury but aim to lessen the severity of any injury that may occur on falls from height.

C. Fall Height: Fall height is a measurement defined as the “vertical distance between a designated play surface and the protective surfacing beneath it.

D. TPV: Thermoplastic Vulcanized Elastomer. Developed using resin and synthetic rubber with higher UV stabilization.

E. E.SBR: Styrene-butadiene or styrene-butadiene rubber (SBR) describe families of synthetic rubbers derived from styrene and butadiene

1.4 SUBMITTALS

A. Prospective manufacturers and/or installers of the poured in place safety surfacing system should be required to comply with the following:
   1. Provide plans, sections and details conforming to the Construction Documents. Including manufacturers Specifications to best outline this specification. Provide list of subcontractors and work schedule to best meet timeline provided by General Contractor.
      a. The installer must provide competent workmen skilled in this specific type of poured in place safety surfacing system installation. The designated supervisory personnel on the project must be competent in the installation of this material, including mixing of the materials, and spreading and compacting the materials correctly.
   2. Installation should be in accordance with ASTM F1292 for Impact Attenuation of surface system under and around playground equipment. The poured in place system to be installed in compliance with the Critical Fall Height as determined by the Playground Equipment.
   3. IPEMA Certification specific to poured in place safety surfacing.
   4. IPEMA certification specific to ½" layer of 1-3mm EPDM over cushion layer. .5mm TPV or EPDM IPEMA certification not acceptable.
   5. Manufacturer should provide written instructions for recommended maintenance practices.
   6. Manufacturer should submit color samples for customer verification. Color samples shall be 6" x 6" of ½" top wearcourse layer with aromatic or aliphatic binder – per client selection or specification; or 8 oz clear plastic jars with specified colored granules. Sample submittal format per client preference.

1.01 QUALITY ASSURANCE

A. Manufacturer should have manufactured and installed playground poured in place safety surfaces for a minimum of 5 years, and meet current ASTM F 1292 Test Criteria. The installation of the poured in place product should be completed by FLEXGROUND SURFACES, INC. Manufacturer's detailed installation procedures should be submitted to the Architect and made part of the Bid Specifications.

B. The manufacturer must be experienced in the manufacturing of a poured in place safety surfacing system and provide references of five (5) specific installations in the last three (3) years.

C. The installer must provide competent workmen skilled in this specific type of poured in place safety surfacing system installation. The designated supervisory personnel on the project must be competent in the installation of this material, including mixing of the materials, and spreading and compacting the materials correctly.

D. Installation should be in accordance with ASTM F1292 for Impact Attenuation of surface system under and around playground equipment. The poured in place system to be installed in compliance with the Critical Fall Height as determined by the Playground Equipment.

E. Accessibility Requirements:
   1. Ground surfaces on accessible routes, clear floor or ground spaces, and turning spaces for play areas shall comply with CBC Section 11B-705.1.1.4:
      b. Ground surfaces shall be inspected and maintained regularly and frequently to ensure continued compliance with ASTM F1951.

c. Ground surfaces located within use zones shall comply with ASTM F1292.

1.02 WARRANTY AND MAINTENANCE

A. Surfacing manufacturer must provide the following:
   2. The poured in place safety surfacing manufacturer should provide a warranty to the owner that covers defects in materials and workmanship of the rubber for a period of FIVE (5) years from the date of Substantial Completion. Warranty requires system installation by Flexground Surfaces, Inc. trained employees.
   3. The manufacturer's warranty should include general wear and tear. The warranty should specifically exclude vandalism, high heel punctures, acts of war or acts of nature beyond the control of the owner or the manufacturer.
   4. All poured in place warranties should be limited to repair or replacement of the affected areas and should include all necessary materials, labor, transportation costs, etc. to complete said repairs. All warranties are contingent on the full payment by the owner of all pertinent invoices and adherence to any required maintenance procedures.
   5. The manufacturer should instruct the owner's personnel on proper maintenance and repair of the FLEXGROUND safety surface.

PART 2 PRODUCTS

2.1 MATERIALS

A. Basis of Design Product and Accessories:
   1. Manufacturer: **Flexground, Poured in-Place Safety Surfacing, 2140 E. Cedar Street, Tempe, AZ 85281 – 602-954-0000** **info@flexground.com** **Sandi Walsh 916-472-6904**
   2. Substitutions allowed with Architect's approval.

2.2 POURED IN-PLACE SAFETY SURFACING:

A. FLEXGROUND Dual durometer poured in place system with a wearing layer upper membrane and an underlying impact attenuation cushion layer.
   1. The finished surface should be porous and capable of being installed at varying thickness to comply with the Critical Fall Height requirements of the playground equipment.

B. FLEXGROUND primer is a 100% solids urethane primer/sealer.
   1. Designed with low viscosity and penetrating priming urethane.
   2. The cushion layer should be a mixture of black recycled SBR rubber buffings mixed with a 100% solids moisture cured MDI Polyurethane binder or aliphatic (100 pounds of SBR rubber buffings to 12 pounds of binder)
   3. Installed at the appropriate thickness designated by manufacturer.
      a. 5/8" chunk rubber with correct amount of urethane for impact attenuation and longevity may be used.
      b. **Chunk rubber shall not include SBR derived from rubber tires.** It must be high quality pre-consumed recycled rubber containing EPDM.
      c. The cushion layer should be porous.

C. The FLEXGROUND wearing surface should be manufactured from a mixture of a 1-3mm virgin peroxide cured Ethylene Propylene Diene Monomer (EPDM) rubber granules bonded by FLEXGROUND binder, 100% solids moisture cured Polyurethane binder or **aliphatic** (110 pounds of EPDM to 22 pounds of binder), and applied to a minimum thickness of ½" (12.7 mm) over the cushion layer.

D. The system color selected from Manufacturer's Color Chart.

E. ADA Accessible Ramp.
1. Sized to meet minimum width: 60 inches.
2. Maximum slope to be 1:20.
3. Contrasting color for ramp.

PART 3 EXECUTION

A. SITE PREPARATION AND BASE
1. The sub-base will have a slope of 2%.
2. The base aggregate should consist of a minimum of four inches (4") free-draining stone compacted to 95%. Finish slope of porous aggregate should be 2% from the centerline of the area to the perimeter, and the grade should not vary more than a quarter inch (¼") in ten feet (10').
3. The sub base should be installed in two inch (2") lifts to appropriate thickness.
4. The sub-base should be compacted using vibrating tamper, to approximately 95% Proctor density.
5. The sub-grade should no longer have any vegetation.
6. Sublevel grade is to be compacted prior to the ABC aggregate installation. Particular attention should be paid to areas of disturbed earth such as where footers for playground equipment enter the ground. Concrete should be poured to the top of sublevel surface.
7. The poured in place safety surfacing manufacturer and architect will accept the aggregate base in writing prior to the installation of the poured in place system.
8. Any alterations must be agreed between all parties.
9. For concrete surfaces, shot blast, acid etch or power scarify as required to obtain optimum bond of the cushion layer to the concrete is required. Remove sufficient material to provide a sound surface, free of glaze, efflorescence, or form release agents. Remove grease, oil, and other penetrating contaminants.
10. For concrete or asphalt surface that is not enclosed (i.e. a curb to curb pour), the concrete shall have keyway cuts 1.5" wide by 1.5" deep so that the system can be bull nosed down into the notch area.

B. INSTALLATION
1. The poured in place safety surfacing installer should strictly adhere to the installation procedures outlined under these sections. Any variance from these requirements should be accepted in writing by the manufacturer's onsite representative and submitted to the architect/owner, verifying that the changes do not in any way affect the warranty.
2. Perimeter:
   a. A urethane primer should be applied to concrete, asphalt or wood surfaces at a rate of 200-250 square feet per gallon. The entire area does not need to be primed at once, instead, prime about 700 square feet at a time. This procedure should be continued until all areas are complete.
   b. The urethane primer should be applied to any playground equipment that will be surrounded by the poured in place safety surfacing system
3. Cushion Layer
   a. The components of the poured in place safety surfacing should be mixed on site in a mixer to ensure a comprehensive mix according to manufacturer's instructions.
   b. The cushion layer comprised of SBR buffings shall be mixed with the MDI moisture cure polyurethane binder at a rate of 12% of the total weight of the material thoroughly so that the binder is evenly dispersed into the rubber base. The cushion layer comprised of non-tire derived SBR & EPDM Chunk Rubber shall be mixed with the appropriate amount of urethane so that the binder is evenly dispersed into the rubber base.
   c. Toluene Diphenel Isocyanate (TDI) shall not be used.

d. The cushion layer mix should then be spread and troweled to the appropriate depth based on critical fall height requirement and allow to cure for 24 hours.

4. Wear Course Layer
   a. The wear course layer should be mixed with 1-3mm EPDM granules and urethane binder at a rate of 20% of the total weight of the materials so the granules are covered thoroughly and evenly.
   b. The wear course layer mix should be spread and troweled to a depth of a half inch (½") immediately after the application of primer.
   c. Where seams are required due to color change, a step configuration will be constructed to maintain wear surface integrity. Step seam shall overlap a minimum of 4". Butt seams are not acceptable.
   d. The finished texture should be slip resistant, smooth and even.
   e. The poured in place surface should be allowed to cure for 24-72 hours or until dry to the touch.

C. SITE GENERAL

D. Trailer/ Large truck access will be necessary for the installation. In the case that access for trailer/truck is not available the owner or general contractor will be responsible for transporting material to the job site.

E. Crew is responsible for protecting the surface only while on site. General Contractor or owner shall be responsible for the security of the surfacing overnight during installation, as well as during the surfacing's curing period upon completion of the install.

F. Crew will leave site clean and shall remove all trash and debris.

G. Owner/General contractor shall provide a dumpster for all waste and trash.

END OF SECTION 32 18 16.13

SECTION 328400 - PLANTING IRRIGATION

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. It is the intent of the specifications and drawings that the finished system is complete in every respect and shall be ready for operation satisfactory to the Owner.

B. The work shall include all materials, labor, services, transportation, and equipment necessary to perform the work as indicated on the drawings, in these specifications, and as necessary to complete the contract.

1.3 CONSTRUCTION DRAWINGS

A. Due to the scale of the drawings, it is not possible to indicate all offsets, fittings, sleeves, etc. which may be required. The Contractor shall carefully investigate the structural and finished conditions affecting all of his work and plan his work accordingly, furnishing such fittings, etc. as may be required to meet such conditions. Drawings are generally diagrammatic and indicative of the work to be installed. The work shall be installed in such a manner as to avoid conflicts between irrigation systems, planting, and architectural features.

B. All work called for on the drawings by notes or details shall be furnished and installed whether or not specifically mentioned in the specifications. When an item is shown on the plans but not shown on the specifications or vice versa, it shall be deemed to be as shown on both. The Landscape Architect shall have final authority for clarification.

C. The Contractor shall not willfully install the irrigation system as shown on the drawings when it is obvious in the field that obstructions, grade differences or discrepancies in area dimensions exist that might not have been considered in engineering. Such obstructions or differences should be brought to the attention of the Landscape Architect as soon as detected. In the event this notification is not performed, the Irrigation Contractor shall assume full responsibility for any revision necessary.

1.4 QUALITY ASSURANCE

A. A licensed irrigator or a licensed irrigation technician shall be on-site at all times while the landscape irrigation system is being installed.
   1. When an irrigator is not on-site, the irrigator shall be responsible for ensuring that a licensed irrigation technician is on-site to supervise the installation of the irrigation system.

B. Contractor shall also submit as part of the bid submittal Proof of Insurance: type(s), coverage limits, carrier, and effective and renewal date of policy(s).

C. All work shall be installed by skilled personnel, proficient in the trades required, in a neat, orderly and responsible manner with recognized standards of workmanship. The contractor shall have had considerable experience on a minimum of three (3) projects completed in the last three (3) years of similar size and complexity of this project. The contractor shall furnish as part of the bid for the Contractor's review, a description of each project which shall include:
   1. Name of Project
   2. Location

3. Contractor's name, address and business phone no.
4. Scope of work
5. Contract amount

D. Provide at least one English speaking person who shall be present at all times during execution of this portion of the work and who shall be thoroughly familiar with the type of materials being installed and the manufacturer's recommended methods of installation and who shall direct all work performed under this section.

E. Manufacturer's directions and detailed drawings shall be followed in all cases where the manufacturer of articles used in this contract furnish directions covering points not shown in the drawings and specifications.

F. All local, municipal, and state laws, rules and regulations governing or relating to any portion of this work are hereby incorporated into and made a part of these specifications, and their provisions shall be carried out by the Contractor. Anything contained in these specifications shall not be construed to conflict with any of the above rules and regulations of the same. However, when these specifications and drawings call for or describe materials, workmanship, or construction of a better quality, higher standard, or larger size than is required by the above rules and regulations, the provisions of these specifications and drawings shall take precedence.

G. All materials supplied for this project shall be new and free from any defects. All defective materials shall be replaced immediately at no additional cost to Owner.

H. The Contractor shall secure the required licenses and permits including payments of charges and fees, give required notices to public authorities, verify permits secured or arrangements made by others affecting the work of this section.

1.5 SUBMITTALS

A. Submittals Materials List:
   1. After award of contract and before any irrigation system materials are ordered from suppliers or delivered to the job site, submit to the Owner a complete list of all irrigation system materials, or processes proposed to be furnished and installed as part of this contract.
   2. The submittals materials list shall include the following information:
      a. A title sheet with the job name, the contractor’s name, contractor’s address and telephone number, submittal date and submittal number.
      b. An index sheet showing the item number (i.e. 1,2,3, etc.); an item description (i.e. sprinkler head); the manufacturer’s name (i.e. Hunter Industries); the item model number (i.e. I-40-ADV/36V); and the page(s) in the submittal set that contain the catalog cuts.
      c. The catalog cuts shall be one or two pages copied from the most recent manufacturer’s catalog that indicate the product submitted. Do not submit parts lists, exploded diagrams, price lists or other extra information.
      d. The catalog cuts shall clearly indicate the manufacturer’s name and the item model number. The item model number, all specified options and specified sizes shall be circled on the catalog cuts.
      e. Submittals for equipment indicated on the legend without manufacturer names, or “as approved”, shall contain the manufacturer, Class or Schedule, ASTM numbers and/or other certifications as indicated in these specifications.
   3. Submittal materials list format requirements:
      a. Submittals shall be provided as one complete package for the project. Multiple partial submittals will not be reviewed.
      b. Submittal package shall be stapled or bound in such a way as to allow for disassembly for review processing. Submittals shall not have tabs, tab sheets,

spiral binding, or any other type of binding that will interfere with automated copying of submittals.

c. Submittal package shall have all pages numbered in the lower right hand corner. Page numbers shall correspond with submittal index.

d. Re-submitted packages must be revised to include only the equipment being re-submitted. Equipment previously reviewed and accepted shall not be re-submitted in the materials list/index sheet or in the catalog cut sheet package.

B. Substitutions: If the Irrigation Contractor wishes to substitute any equipment or materials for those equipment or materials listed on the irrigation drawings and specifications, he may do so by providing the following information to the Landscape Architect or Owner's authorized representative for approval.

1. Provide a written statement indicating the reason for making the substitution.
2. Provide catalog cut sheets, technical data, and performance information for each substitute item.
3. Provide in writing the difference in installed price if the item is accepted.

C. The Landscape Architect or Owner’s authorized representative will allow no substitutions without prior written acceptance.

D. Manufacturer's warranties shall not relieve the Contractor of his liability under the guarantee. Such warranties shall only supplement the guarantee.

E. The Landscape Architect or Owner’s authorized representative will not review the submittal package unless provided in the format described above.

1.6 EXISTING CONDITIONS

A. The Contractor shall verify and be familiar with the locations, size and detail of points of connection provided as the source of water and electrical supply connection to the irrigation system.

B. Irrigation design is based on the available static water pressure shown on the drawings. Contractor shall verify static water on the project prior to the start of construction. Should a discrepancy exist, notify the Landscape Architect and Owner's authorized representative prior to beginning construction.

C. Prior to cutting into the soil, the Contractor shall locate all cables, conduits, sewer septic tanks, and other utilities as are commonly encountered underground and he shall take proper precautions not to damage or disturb such improvements. If a conflict exists between such obstacles and the proposed work, the Contractor shall promptly notify the Landscape Architect and Owner who will arrange for relocations. The Contractor will proceed in the same manner if a rock layer or any other such conditions are encountered.

D. The Contractor shall protect all existing utilities and features to remain on and adjacent to the project site during construction. Contractor shall repair, at his own cost; all damage resulting from his operations or negligence.

E. The Irrigation Contractor shall coordinate with the General Contractor for installation of required sleeving as shown on the plans prior to paving operations.

F. The Contractor shall verify and be familiar with the existing irrigation systems in areas adjacent to and within the Project area of work.

G. The Contractor shall protect all existing irrigation systems, in areas adjacent to and within the project area of work, from damage due to his operations.

H. Contractor shall notify Owner's Representative if any existing system is temporarily shut off, capped or modified. Provide 48-hour notice, prior to turning off or modifying any existing irrigation system.

I. The Contractor shall repair or replace all existing irrigation systems, in areas adjacent to and within the project area of work, damaged by the construction of this project. Adjacent irrigation systems shall be made completely operational and provide complete coverage of the existing landscaped areas. All repairs shall be complete to the satisfaction of the Owner's Representative.

J. The contractor shall provide bore holes under any existing pavement or paving encountered for the required lateral, mainline and low voltage control wire sleeving. Bore holes under 2 inches in diameter and smaller shall be made with a BulletMole® underground boring tool as manufactured by Dimension Tools, LLC (Contact telephone number (888)-650-5554 or at www.bulletmole.com). Bore holes larger than 2 inches in diameter shall be made with an approved mechanical boring tool. No air jacking or hydraulic boring of any kind shall be allowed.

1.7 INSPECTIONS

A. The Contractor shall permit the Landscape Architect and Owner's authorized representative to visit and inspect at all times any part of the work and shall provide safe access for such visits.

B. Where the specifications require work to be tested by the Contractor, it shall not be covered over until accepted by the Landscape Architect, Owner's authorized representative, and/or governing agencies. The Contractor shall be solely responsible for notifying the Landscape Architect, Owner, and governing agencies, a minimum of 48 hours in advance, where and when the work is ready for testing. Should any work be covered without testing or acceptance, it shall be, if so ordered, uncovered at the Contractor's expense.

C. Inspections will be required for the following at a minimum:
1. Pre-construction meeting.
2. System layout.
3. Pressure test of irrigation mainline (Four hours at 125 PSI or 120% of static water pressure, whichever is greater.) Mainline pressure loss during test shall not exceed 2 PSI.
4. Coverage test of irrigation system. Test shall be performed prior to any planting.
5. Final inspection prior to start of maintenance period.
6. Final acceptance prior to turnover.

D. Site observations and testing will not commence without the field record drawings as prepared by the Irrigation Contractor. Record drawings must complete and up to date for each site visit.

E. Work that fails testing and is not accepted will be retested. Hourly rates and expenses of the Landscape Architect, Owner's authorized representative, and governing agencies for re-inspection or retesting will be paid by the Irrigation Contractor at no additional expense to Owner.

1.8 STORAGE AND HANDLING

A. Use all means necessary to protect irrigation system materials before, during, and after installation and to protect the installation work and materials of all other trades. In the event of damage, immediately make all repairs and replacements necessary to the acceptance of the Landscape Architect and Owner and at no additional cost to the Owner.

B. Exercise care in handling, loading, unloading, and storing plastic pipe and fittings under cover until ready to install. Transport plastic pipe only on a vehicle with a bed long enough to allow the pipe to lay flat to avoid undue bending and concentrated external load.

1.9 CLEANUP AND DISPOSAL

A. Dispose of waste, trash, and debris in accordance with applicable laws and ordinances and as prescribed by authorities having jurisdiction. Bury no such waste material and debris on the site. Burning of trash and debris will not be permitted. The Contractor shall remove and dispose of rubbish and debris generated by his work and workmen at frequent intervals or when ordered to do so by the Owner's authorized representative.

B. At the time of completion the entire site will be cleared of tools, equipment, rubbish and debris which shall be disposed of off-site in a legal disposal area.

1.10 TURNOVER ITEMS

A. Record Drawings:
   1. Record accurately on one set of drawings all changes in the work constituting departures from the original contract drawings and the actual final installed locations of all required components as shown below.
   2. The record drawings shall be prepared to the satisfaction of the Owner. Prior to final inspection of work, submit record drawings to the Landscape Architect or Owner's authorized representative.
   3. All record drawings shall be prepared using AutoCAD 2011 drafting software and the original irrigation drawings as a base. No manual drafted record drawings shall be acceptable. The Contractor may obtain digital base files from the Landscape Architect or Owner's authorized representative.
   4. If the Contractor is unable to provide the AutoCAD drafting necessary for the record drawings the irrigation designer does provide record drawing drafting as a separate service.
   5. Prior to final inspection of work, submit record drawings plotted onto vellum sheets for review by the Landscape Architect or Owner's authorized representative. After acceptance by the Landscape Architect, City Inspector or Owner's authorized representative re-plot the record drawings onto reproducible Mylar sheets. The Contractor shall also provide record drawing information on a digital AutoCAD Release 2011 drawing file. All digital files shall be provided on a compact disc (CD) clearly marked with the project name, file descriptions and date.
      a. Record drawing information and dimensions shall be collected on a day-to-day basis during the installation of the pressure mainline to fully indicate all routing locations and pipe depths. Locations for all other irrigation equipment shall be collected prior to the final inspection of the work.
      b. Two dimensions from two permanent points of reference such as buildings, sidewalks, curbs, streetlights, hydrants, etc. shall be shown for each piece of irrigation equipment shown below. Where multiple components are installed with no reasonable reference point between the components, dimensioning may be made to the irrigation equipment. All irrigation symbols shall be clearly shown matching the irrigation legend for the drawings. All lettering on the record drawings shall be minimum 1/8 inch in size.
   6. Show locations and depths of the following items:
      a. Point of connection (including water POC, backflow devices, master control valves, flow sensors, etc.)
      b. Routing of sprinkler pressure main lines (dimensions shown at a maximum of 100 feet along routing)
      c. Isolation valves
      d. Automatic remote control valves (indicate station number and size)
      e. Quick coupling valves

f. Drip air relief and flush valves
g. Routing of control wires where separate from irrigation mainline
h. Irrigation controllers (indicate controller number and station count)
i. Related equipment (as may be directed)

B. Controller Charts:
1. Provide one controller chart for each automatic controller. Chart shall show the area covered by the particular controller. The areas covered by the individual control valves shall be indicated using colored highlighter pens. A minimum of six individual colors shall be used for the controller chart unless less than six control valves are indicated.
2. Landscape Architect or Owner's authorized representative must approve record drawings before controller charts are prepared.
3. The chart is to be a reduced copy of the actual "record" drawing. In the event the controller sequence is not legible when the drawing is reduced, it shall be enlarged to a readable size.
4. When completed and approved, the chart shall be hermetically sealed between two pieces of plastic, each piece being a minimum 20 mils in thickness.

C. Operation and Maintenance Manuals:
1. Two individually bound copies of operation and maintenance manuals shall be delivered to the Landscape Architect or Owner's authorized representative at least 10 calendar days prior to final inspection. The manuals shall describe the material installed and the proper operation of the system.
2. Each complete, bound manual shall include the following information:
3. Index sheet stating Contractor's address and telephone number, duration of guarantee period, list of equipment including names and addresses of local manufacturer representatives.
a. Operating and maintenance instructions for all equipment.
b. Spare parts lists and related manufacturer information for all equipment.

D. Equipment:
1. Supply as a part of this contract the following items:
a. Two (2) wrenches for disassembly and adjustment of each type of sprinkler head used in the irrigation system.
b. Three 30-inch sprinkler keys for manual operation of control valves.
c. Two keys for each automatic controller.
d. One valve box cover key or wrench.
e. Six extra sprinkler heads of each size and type.
2. The above equipment shall be turned over to Owner's authorized representative at the final inspection.

1.11 COMPLETION

A. At the time of the pre-maintenance period inspection, the Landscape Architect, Owner's authorized representative, and governing agencies will inspect the work, and if not accepted, will prepare a list of items to be completed by the Contractor. Punch list to be checked off by contractor and submitted to Landscape Architect or Owner’s Authorized representative prior to any follow-up meeting. This checked off list to indicate that all punch list items have been completed. At the time of the post-maintenance period or final inspection the work will be re-inspected and final acceptance will be in writing by the Landscape Architect, Owner's authorized representative, and governing agencies.

B. The Owner's authorized representative shall have final authority on all portions of the work.

C. After the system has been completed, the Contractor shall instruct Owner's authorized representative in the operation and maintenance of the irrigation system and shall furnish a complete set of operating and maintenance instructions.

D. Any settling of trenches which may occur during the one-year period following acceptance shall be repaired to the Owner's satisfaction by the Contractor without any additional expense to the Owner. Repairs shall include the complete restoration of all damage to planting, paving or other improvements of any kind as a result of the work.

1.12 GUARANTEE

A. The entire sprinkler system, including all work done under this contract, shall be unconditionally guaranteed against all defects and fault of material and workmanship, including settling of backfilled areas below grade, for a period of one (1) year following the filing of the Notice of Completion.

B. Should any problem with the irrigation system be discovered within the guarantee period, it shall be corrected by the Contractor at no additional expense to Owner within ten (10) calendar days of receipt of written notice from Owner. When the nature of the repairs as determined by the Owner constitute an emergency (i.e. broken pressure line) the Owner may proceed to make repairs at the Contractor's expense. Any and all damages to existing improvement resulting either from faulty materials or workmanship, or from the necessary repairs to correct same, shall be repaired to the satisfaction of the Owner by the Contractor, all at no additional cost to the Owner.

C. Guarantee shall be submitted on Contractors own letterhead as follows:

GUARANTEE FOR SPRINKLER IRRIGATION SYSTEM

We hereby guarantee that the sprinkler irrigation system we have furnished and installed is free from defects in materials and workmanship, and the work has been completed in accordance with the drawings and specifications, ordinary wear and tear and unusual abuse, or neglect excepted. We agree to repair or replace any defective material during the period of one year from date of filing of the Notice of Completion and also to repair or replace any damage resulting from the repairing or replacing of such defects at no additional cost to the Owner. We shall make such repairs or replacements within 10 calendar days following written notification by the Owner. In the event of our failure to make such repairs or replacements within the time specified after receipt of written notice from Owner, we authorize the Owner to proceed to have said repairs or replacements made at our expense and we will pay the costs and charges therefore upon demand.

PROJECT NAME:
PROJECT LOCATION:

CONTRACTOR NAME:
ADDRESS:

TELEPHONE:

SIGNED:

DATE:

PART 2 - MATERIALS

2.1 SUMMARY

Use only new materials of the manufacturer, size and type shown on the drawings and specifications. Materials or equipment installed or furnished that do not meet Landscape

Architect's, Owner's, or governing agencies standards will be rejected and shall be removed from the site at no expense to the Owner.

2.2 PIPE

A. Pressure supply lines 2 inches in diameter downstream of backflow prevention unit shall be SCH 40 solvent weld PVC conforming to ASTM D1785.

B. Non-pressure lines 3/4 inch in diameter and larger downstream of the remote control valve shall be SCH 40 solvent weld PVC conforming to ASTM D1785.

C. All PVC piping used in a reclaimed water system shall be color-coded purple in color marked on two sides with reclaimed water warning statements “Caution-Reclaimed Water”. Reclaimed water piping must be accepted by the local reclaimed water governing agencies.

2.3 METAL PIPE AND FITTINGS

A. Brass pipe shall be 85 percent red brass, ANSI, IPS Standard 125 pounds, Schedule 40 screwed pipe.

B. Fittings shall be medium brass, screwed 125-pound class.

C. Copper pipe and fittings shall be Type "K" sweat soldered, or brazed as indicated on the drawings.

D. Fittings shall be sweat soldered type.

2.4 PLASTIC PIPE AND FITTINGS

A. Pipe shall be marked continuously with manufacturer's name, nominal pipe size, schedule or class, PVC type and grade, National Sanitation Foundation approval, Commercial Standards designation, and date of extrusion.

B. All plastic pipe shall be extruded of an improved PVC virgin pipe compound in accordance with ASTM D2672, ASTM D2241 or ASTM D1785.

C. All solvent weld PVC fittings shall be standard weight Schedule 40 (and Schedule 80 where specified on the irrigation detail sheet, all mainline fittings shall be Schedule 80 PVC) and shall be injection molded of an improved virgin PVC fitting compound. Slip PVC fittings shall be the "deep socket" bracketed type. Threaded plastic fittings shall be injection molded. All tees and ells shall be side gated. All fittings shall conform to ASTM D2464 and ASTM D2466.

D. All threaded nipples shall be standard weight Schedule 80 with molded threads and shall conform to ASTM D1785.

E. All solvent cementing of plastic pipe and fittings shall be a two-step process, using primer and solvent cement applied per the manufacturer's recommendations. Cement shall be of a fluid consistency, not gel-like or ropy. Solvent cementing shall be in conformance with ASTM D2564 and ASTM D2855.

F. When connection is plastic to metal, female adapters shall be hand tightened, plus one turn with a strap wrench. Joint compound shall be non-lead base Teflon paste, tape, or equal.

2.5 VALVES

A. Automatic Control Valves:

1. Automatic control valves shall be of the manufacturer, size, and type indicated on the drawings.
2. Automatic control valves shall be electrically operated.

2.6 VALVE BOXES

A. Valve boxes shall be fabricated from a durable, weather-resistant plastic material resistant to sunlight and chemical action of soils.

B. The valve box cover shall be purple in color and secured with a hidden latch mechanism or bolts.

C. The cover and box shall be capable of sustaining a load of 1,500 pounds.

D. Valve box extensions shall be by the same manufacturer as the valve box.

E. The plastic irrigation valve box cover shall be an overlapping type.

F. Automatic control valve boxes shall be 16"x11"x12" ‘nominal’ rectangular size. Valve box covers shall be marked "RCV" with the valve identification number, "heat branded" onto the cover in 1-1/4 inch high letters / numbers.

G. Valve box cover shall be purple in color and permanently marked (attached tags are not acceptable) on valve box cover plate with the words “Warning-Reclaimed Water-Do Not Drink”.

2.7 ELECTRICAL

A. All electrical equipment shall be NEMA Type 3, waterproofed for exterior installations.

B. All electrical work shall conform to local codes and ordinances.

2.8 LOW VOLTAGE CONTROL WIRING

A. Remote control wire shall be direct-burial AWG-UF type, size as indicated on the drawings, and in no case smaller than 14 gauge.

B. Connections shall be of the manufacturer, size, and type indicated on the drawings.

C. Common wires shall be white in color. Control wires shall be red (where two or more controllers are used, the control wires shall be a different color for each controller. These colors shall be noted on the "Record Drawings" plans located on controller door).

D. Ground wires shall be green in color or bare copper and in no case smaller than 6 gauge.

2.9 IRRIGATION HEADS

A. Irrigation heads shall be of the manufacturer, size, type, with radius of throw, operating pressure, and discharge rate indicated on the drawings.

B. Irrigation heads shall be used as indicated on the drawings.

C. Irrigation heads shall have purple reclaimed water warning cover.

2.10 MISCELLANEOUS EQUIPMENT

A. Landscape Fabric:
   1. Landscape fabric for valve box assemblies shall be 5.0- oz. weight woven polypropylene weed barrier. Landscape fabric shall have a burst strength of 225 PSI, a puncture strength of 60 lbs. and capable of water flow of 12 gallons per minute per square foot.
   2. Type: DeWitt Pro 5 Weed Barrier or approved equal.

B. Equipment such as flow sensors, rain sensors, freeze sensors, flush valves, air relief valves, wye strainers, and master valves shall be of the manufacturer, size and type indicated on the drawings.

PART 3 - EXECUTION

3.1 SITE CONDITIONS

A. Inspections:
   1. Prior to all work of this section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
   2. Verify that irrigation system may be installed in strict accordance with all pertinent codes and regulations, the original design, the referenced standards, and the manufacturer's recommendations.

B. Discrepancies:
   1. In the event of discrepancy, immediately notify the Landscape Architect or Owner's authorized representative.
   2. Do not proceed with installation in areas of discrepancy until all discrepancies have been resolved.

C. Grades:
   1. Before starting work, carefully check all grades to determine that work may safely proceed, keeping within the specified material depths with respect to finish grade.
   2. Final grades shall be accepted by the Engineer before work on this section will be allowed to begin.

D. Field Measurements:
   1. Make all necessary measurements in the field to ensure precise fit of items in accordance with the original design. Contractor shall coordinate the installation of all irrigation materials with all other work.
   2. All scaled dimensions are approximate. The Contractor shall check and verify all size dimensions prior to proceeding with work under this section.
   3. Exercise extreme care in excavating and working near existing utilities. Contractor shall be responsible for damages to utilities, which are caused by his operations or neglect.

E. Diagrammatic Intent:
   The drawings are essentially diagrammatic. The size and location of equipment and fixtures are drawn to scale where possible. Provide offsets in piping and changes in equipment locations as necessary to conform with structures and to avoid obstructions or conflicts with other work at no additional expense to Owner.

F. Layout:
   1. Prior to installation, the Contractor shall stake out all pressure supply lines, routing and location of sprinkler heads, valves, backflow preventer, and automatic controller.
   2. Layout irrigation system and make minor adjustments required due to differences between site and drawings. Where piping is shown on drawings under paved areas, but running parallel and adjacent to planted areas, install the piping in the planted areas.

G. Water Supply:
Connections to, or the installation of, the water supply shall be at the locations shown on the drawings. Minor changes caused by actual site conditions shall be made at no additional expense to Owner.

H. Electrical Service:
1. Connections to the electrical supply shall be at the locations shown on the drawings. Minor changes caused by actual site conditions shall be made at no additional expense to Owner.
2. Contractor shall make electrical connections to the irrigation controller. Electrical power source to controller locations shall be provided by others.
3. Contractor shall make electrical connections to the irrigation controller. 230-volt single-phase electrical power source to pump assembly location shall be provided by others per NEC codes.

3.2 TRENCHING

A. Excavations shall be straight with vertical sides, even grade, and support pipe continuously on bottom of trench. Trenching excavation shall follow layout indicated on drawings to the depths below finished grade and as noted. Where lines occur under paved area, these dimensions shall be considered below subgrade.

B. Provide minimum cover of 18 inches on pressure supply lines 2 ½ inches and smaller.

C. Provide minimum cover of 24 inches on pressure supply lines 3 inches and larger.

D. Provide minimum cover of 18 inches for control wires.

E. Provide minimum cover of 36 inches on pressure supply lines under vehicular travel ways.

F. Provide minimum cover of 12 inches for non-pressure lines.

G. Pipes installed in a common trench shall have a 4-inch minimum space between pipes.

3.3 BACKFILLING

A. Backfill material on all lines shall be the same as adjacent soil free of debris, litter, and rocks over 1/2 inches in diameter.

B. Backfill shall be tamped in 4-inch layers under the pipe and uniformly on both sides for the full width of the trench and the full length of the pipe. Backfill materials shall be sufficiently damp to permit thorough compaction, free of voids. Backfill shall be compacted to dry density equal to adjacent undisturbed soil and shall conform to adjacent grades.

C. Flooding in lieu of tamping is not allowed.

D. Under no circumstances shall truck wheels be used to compact backfill.

E. Provide sand backfill a minimum of 4 inches over and under all piping under paved areas.

3.4 PIPING

A. Piping under existing pavement may be installed by jacking, boring, or hydraulic driving. No hydraulic driving is permitted under asphalt pavement.

B. Cutting or breaking of existing pavement is not permitted.

C. Carefully inspect all pipe and fittings before installation, removing dirt, scale, burrs, and reaming. Install pipe with all markings up for visual inspection and verification.

D. Remove all dented and damaged pipe sections.

E. All lines shall have a minimum clearance of 4 inches from each other and 12 inches from lines of other trades.

F. Parallel lines shall not be installed directly over each other.

G. In solvent welding, use only the specified primer and solvent cement and make all joints in strict accordance with the manufacturer's recommended methods including wiping all excess solvent from each weld. Allow solvent welds at least 15 minutes setup time before moving or handling and 24 hours curing time before filling.

H. PVC pipe shall be installed in a manner, which will provide for expansion and contraction as recommended by the pipe manufacturer.

I. Center load all plastic pipe prior to pressure testing.

J. All threaded plastic-to-plastic connections shall be assembled using Teflon tape or Teflon paste.

K. For plastic-to-metal connections, work the metal connections first. Use a non-hardening pipe dope an all threaded plastic-to-metal connections, except where noted otherwise. All plastic-to-metal connections shall be made with plastic female adapters.

3.5 CONTROLLER

A. The irrigation system shall be programmed to operate during the periods of minimal use of the design area.

3.6 CONTROL WIRING

A. Low voltage control wiring shall occupy the same trench and shall be installed along the same route as the pressure supply lines whenever possible.

B. Where more than one wire is placed in a trench, the wiring shall be taped together in a bundle at intervals of 10 feet. Bundle shall be secured to the mainline with tape at intervals of 20 feet.

C. All connections shall be of an approved type and shall occur in a valve box. Provide an 18-inch service loop at each connection.

D. A continuous run of wire shall be used between a controller and each remote control valve. Under no circumstances shall splices be used without prior approval.

3.7 VALVES

A. Automatic control valves are to be installed in the approximate locations indicated on the drawings.

B. Valve shall be installed in shrub areas whenever possible.

C. Install all valves as indicated in the detail drawings.

D. Valves to be installed in valve boxes shall be installed one valve per box.

3.8 VALVE BOXES

A. Valve boxes shall be installed in shrub areas whenever possible.

B. Each valve box shall be installed on a foundation of 3/4 inch gravel backfill, 3 cubic feet minimum. Valve boxes shall be installed with their tops 1/2 inch above the surface of surrounding finish grade in lawn areas and 2 inches above finish grade in ground cover areas.

3.9 IRRIGATION HEADS

A. Irrigation heads shall be installed as indicated on the drawings.

B. Spacing of heads and inline drip tubing shall not exceed maximum indicated on the drawings.

C. Irrigation heads shall be installed 6” from hardscape edges in planted areas and 4” from hardscape edges in turf areas.

3.10 MISCELLANEOUS EQUIPMENT

A. Install all assemblies specified herein according to the respective detail drawings or specifications, using best standard practices.

3.11 FLUSHING THE SYSTEM

A. Prior to installation of irrigation heads, the valves shall be opened and a full head of water used to flush out the lines and risers.

B. Irrigation heads shall be installed after flushing the system has been completed.

3.12 ADJUSTING THE SYSTEM

A. Contractor shall adjust valves, align heads, and check the coverage of each system prior to coverage test.

B. If it is determined by the Landscape Architect or Owner's authorized representative that additional adjustments or nozzle changes will be required to provide proper coverage, all necessary changes or adjustments shall be made prior to any planting.

C. The entire system shall be operating properly before any planting operations commence.

D. Automatic control valves are to be adjusted so that the irrigation heads operate at the pressure recommended by the manufacturer.

3.13 TESTING AND OBSERVATION

A. Do not allow or cause any of the work of this section to be covered up or enclosed until it has been observed, tested and accepted by the Landscape Architect, Owner, and governing agencies.

B. The Contractor shall be solely responsible for notifying the Landscape Architect, Owner, and governing agencies, a minimum of 48 hours in advance, where and when the work is ready for testing.

C. When the sprinkler system is completed, the Contractor shall perform a coverage test of each system in its entirety to determine if the water coverage for the planted areas is complete and adequate in the presence of the Landscape Architect.

D. The Contractor shall furnish all materials and perform all work required to correct any inadequacies of coverage due to deviations from the plans, or where the system has been willfully installed as indicated on the drawings when it is obviously inadequate, without bringing this to the attention of the Landscape Architect. This test shall be accepted by the Landscape Architect and accomplished before starting any planting.

E. Areas to be maintained for the formal maintenance period shall start maintenance at the same time, as directed by the Landscape Architect, Owner, and governing agencies. Partial areas will not be released into maintenance prior to completion of items listed in the pre-maintenance review. The maintenance period may not be phased.

F. If, after the maintenance review, the irrigation systems are not accepted by the Landscape Architect, the contractor shall reimburse the Architect for additional site visits, or additional time required to review work. All additional time will be billed at the Architect's hourly rate and will be paid for by the contractor at no additional cost to the owner.

G. Final inspection will not commence without record drawings as prepared by the Irrigation Contractor.

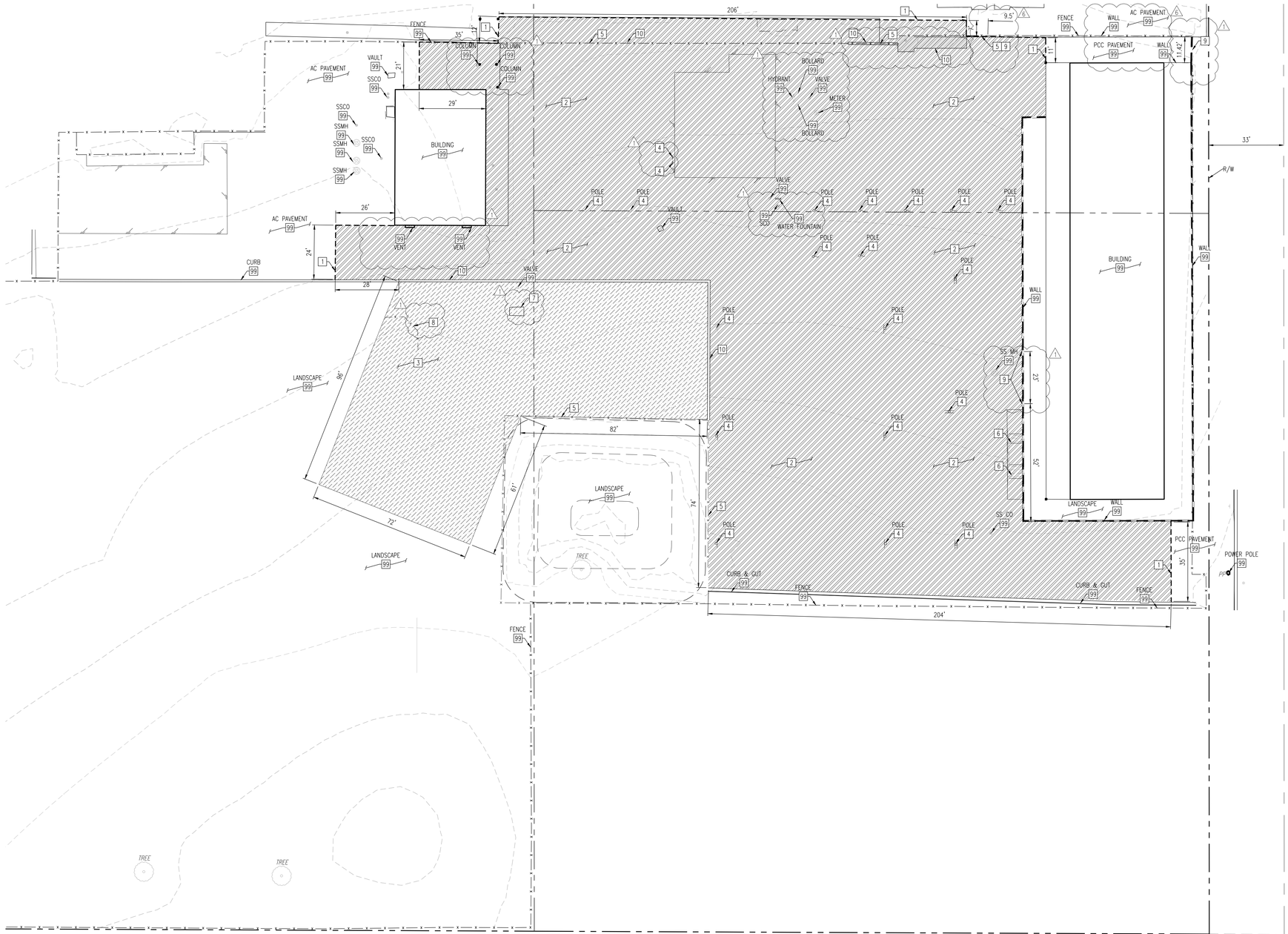
3.14 MAINTENANCE

During the maintenance period the Contractor shall adjust and maintain the irrigation system in a fully operational condition providing complete irrigation coverage to all intended plantings.

3.15 COMPLETION CLEANING

Clean up shall be made as each portion of the work progresses. Refuse and excess dirt shall be removed from the site, all walks and paving shall be swept, and any damage sustained on the work of others shall be repaired to original conditions.

END OF SECTION



CONSTRUCTION NOTES

1. SAWCUT PAVEMENT TO A CLEAN, STRAIGHT EDGE
2. REMOVE AC PAVEMENT AND DISPOSE
3. CLEAR AND GRUB, DISPOSE
4. REMOVE SPORTS POLE AND FOUNDATION AND DISPOSE
5. REMOVE FENCE AND DISPOSE
6. REMOVE WALL AND STAIRS
7. REMOVE DRINKING FOUNTAIN AND CONCRETE PAD
8. CHAIN LINK BASEBALL BACKSTOP
9. SAWCUT AND REMOVE CONCRETE WALL
10. REMOVE PCC CURB AND DISPOSE
11. REMOVE PCC PAVEMENT AND DISPOSE

99 PROTECT IN PLACE, ITEM PER PLAN

DEMOLITION PLAN LEGEND & ABBREVIATIONS

- PCC DEMOLITION
- AC DEMOLITION
- CLEAR AND GRUB
- BUILDING DEMOLITION
- CURB/CURB & GUTTER REMOVAL
- SAWCUT

AC	ASPHALT CONCRETE
ADA	AMERICAN WITH DISABILITIES ACT
BMP	BEST MANAGEMENT PRACTICES
CAB	CRUSHED AGGREGATE BASE
CY	CUBIC YARD
DF	DEEPENED FOOTING
EA	EACH
EX	EXISTING
FG	FINISHED GRADE
FL	FLOW LINE
FS	FINISHED SURFACE
GB	GRADE BREAK
HP	HIGH POINT
HDPE	HIGH-DENSITY POLYETHYLENE
HORIZ	HORIZONTAL
ICV	IRRIGATION CONTROL VALVE
INV	INVERT
L	LENGTH
L/A	LANDSCAPE AREA
LF	LINEAR FEET
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
OC	ON CENTER
PCC	PORTLAND CONCRETE CEMENT
P/L	PROPERTY LINE
PR	PROPOSED
R/W	RIGHT OF WAY
SCO	SEWER CLEAN OUT
SF	SQUARE FEET
SMH	SEWER MANHOLE
STA	STATION
TC	TOP OF CURB
TF	TOP OF FOOTING
TG	TOP OF GRATE
TOP	TOP OF PIPE
TW	TOP OF WALL
TYP	TYPICAL

SCALE 1"=20'

0 10' 20' 40'

GRAPHIC SCALE

1 DEMOLITION PLAN
1" = 20'-0"

PBK

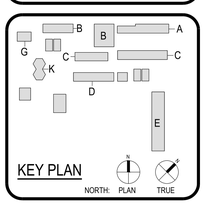
ARCHITECT PBK Architects, Inc.
PBK.com
RANCHO CUCAMONGA
8163 Rochester Avenue, Suite 100
Rancho Cucamonga
California 91730
P 909-987-0909

MUSCOY ELEMENTARY SCHOOL

PROJECT ADDRESS:
2119 BLAKE STREET
SAN BERNARDINO, CA 92407

DSA SUBMITTAL

DSA APPL NO.: 04-121983 DSA FILE NO.: 36-55



Consultant

REGISTERED PROFESSIONAL ENGINEER
JEFFREY D. METTER
No. 64696
Civil
STATE OF CALIFORNIA

CLIENT
SAN BERNARDINO CITY USD

DATE	PROJECT NUMBER
Issue Date	220281

REVISIONS

No.	Description	Date
1	DISTRICT COMMENTS	1/12/24
2	DISTRICT COMMENTS	2/22/24

DSA SUBMITTAL

DEMOLITION PLAN

VALUED ENGINEERING, INC
CIVIL ENGINEERING • LAND SURVEYING • LAND PLANNING
1529 W. 13TH STREET, UNIT C, UPLAND, CA 91786
PHONE: (909) 982-4601

C2.1

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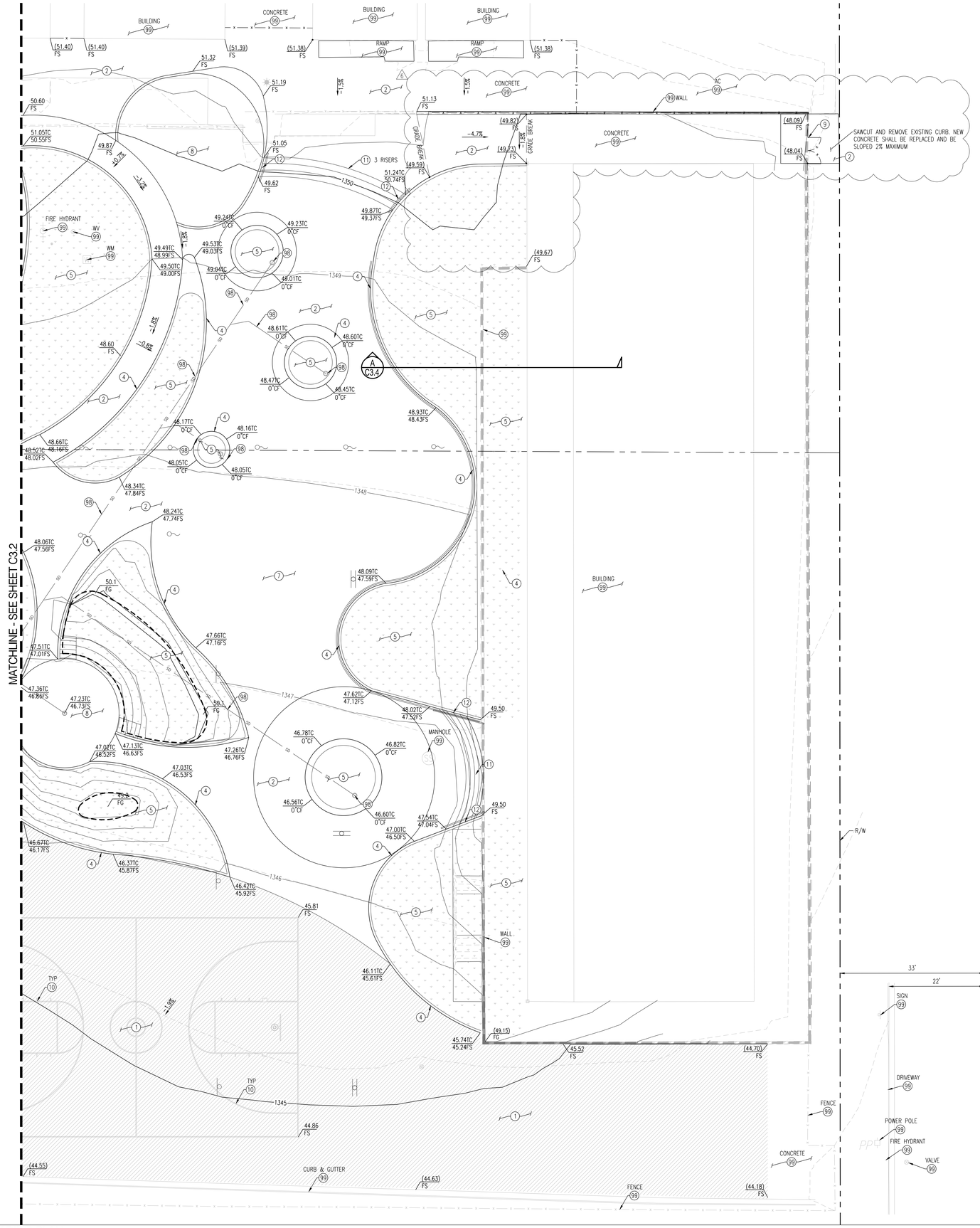

1 GRADING PLAN
1" = 10'-0"

CONSTRUCTION NOTES

1. CONSTRUCT 5" THINK AC PAVEMENT OVER 9" CAB COMPACTED TO 95% COLOR PER ARCHITECTURAL PLANS BY OTHERS. PAVEMENT JOINTS PER DETAIL A/C5.1
2. CONSTRUCT 4" THICK PCC PAVEMENT OVER 4" CAB COMPACTED. COLOR AND FINISH PER ARCHITECTURAL PLANS BY OTHERS. PAVEMENT JOINTS PER DETAIL A/C5.1
3. CONSTRUCT 6" WIDTH CURB ONLY PER DETAIL B/C5.1
4. CONSTRUCT 12" WIDTH CURB ONLY PER DETAIL B/C5.1
5. CONSTRUCT LANDSCAPE PER LANDSCAPE ARCHITECTURAL PLANS BY OTHERS 6/A1.10
6. CONSTRUCT SYNTHETIC TURF PER ARCHITECTURAL PLANS BY OTHERS 18/A1.09
7. CONSTRUCT PLAYGROUND SAFETY SURFACING PER ARCHITECTURAL PLANS BY OTHERS 6/A1.10
8. CONSTRUCT DECOMPOSED GRANITE SURFACE PER ARCHITECTURAL PLANS BY OTHERS 6/A1.10
9. FURNISH AND INSTALL CHAIN LINK FENCE AND GATES PER ARCHITECTURAL PLANS BY OTHERS 2/A1.07
10. PAINT AND STRIPE PER ARCHITECTURAL PLANS BY OTHERS 4/A1.09 6/A1.09
11. CONSTRUCT PCC STAIRS ON GRADE PER ARCHITECTURAL PLANS
12. CONSTRUCT HANDRAILS PER ARCHITECTURAL PLANS 13/A1.10
13. CONSTRUCT DRINKING FOUNTAIN PER ARCHITECTURAL PLANS 4/20.02
98. SEE SHEET C3.5 FOR STORM DRAIN ITEMS
99. PROTECT IN PLACE, ITEM PER PLAN

GRADING PLAN LEGEND & ABBREVIATIONS

- AC PAVEMENT
- PCC PAVEMENT
- LANDSCAPE
- SYNTHETIC TURF
- PLAYGROUND SAFETY SURFACE
- DECOMPOSED GRANITE

AC	ASPHALT CONCRETE
ADA	AMERICAN WITH DISABILITIES ACT
BMP	BEST MANAGEMENT PRACTICES
CAB	CRUSHED AGGREGATE BASE
CY	CUBIC YARD
DF	DEEPENED FOOTING
EA	EACH
EX	EXISTING
FG	FINISHED GRADE
FL	FLOW LINE
FS	FINISHED SURFACE
GB	GRADE BREAK
HP	HIGH POINT
HDPE	HIGH-DENSITY POLYETHYLENE
HORIZ	HORIZONTAL
ICV	IRRIGATION CONTROL VALVE
INV	INVERT
L	LENGTH
L/A	LANDSCAPE AREA
LF	LINEAR FEET
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
OC	ON CENTER
PCC	PORTLAND CONCRETE CEMENT
P/L	PROPERTY LINE
PR	PROPOSED
R/W	RIGHT OF WAY
SCO	SEWER CLEAN OUT
SF	SQUARE FEET
SMH	SEWER MANHOLE
STA	STATION
TC	TOP OF CURB
TF	TOP OF FOOTING
TG	TOP OF GRATE
TOP	TOP OF PIPE
TW	TOP OF WALL
TYP	TYPICAL

PBK

ARCHITECT
PBK Architects, Inc.
PBK.com
RANCHO CUCAMONGA
8163 Rochester Avenue, Suite 100
Rancho Cucamonga
California 91730
P 909-987-0909

MUSCOY ELEMENTARY SCHOOL

PROJECT ADDRESS:
2119 BLAKE STREET
SAN BERNARDINO, CA 92407

DSA SUBMITTAL

DSA APPL NO.: 04-121983 DSA FILE NO.: 36-55

KEY PLAN
NORTH: PLAN TRUE

Consultant

REGISTERED PROFESSIONAL ENGINEER
JEFFREY D. METTNER
No. 64696
CIVIL
STATE OF CALIFORNIA

CLIENT
SAN BERNARDINO CITY USD

DATE	PROJECT NUMBER
Issue Date	220281

REVISIONS

No.	Description	Date
1/6	DISTRICT COMMENTS	7/29/24

DSA SUBMITTAL

GRADING

C3.1 1/6

VALUED ENGINEERING, INC
CIVIL ENGINEERING ● LAND SURVEYING ● LAND PLANNING
1529 W. 13TH STREET, UNIT G, UPLAND, CA 91786
PHONE: (909) 982-4601

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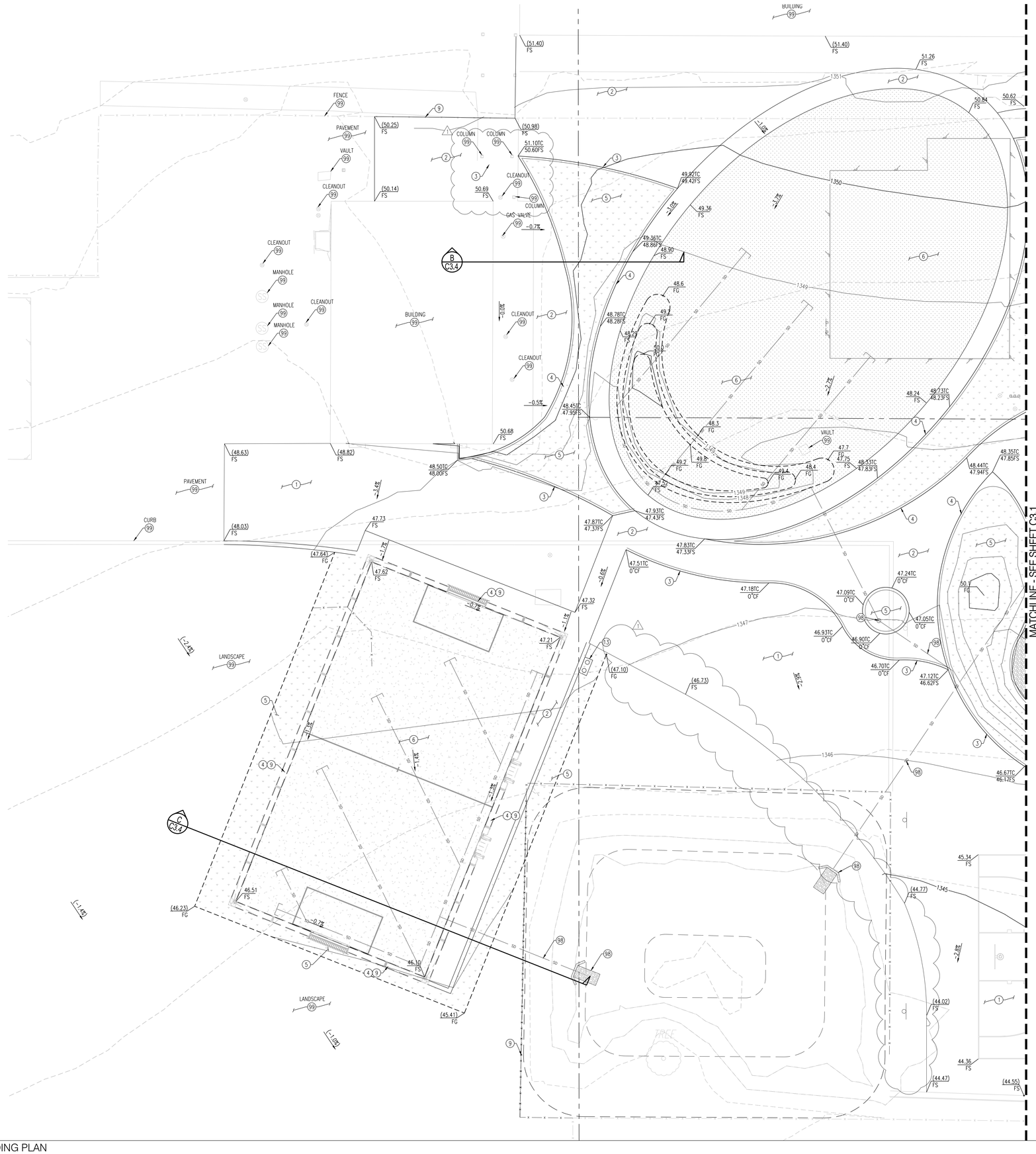

CONSTRUCTION NOTES

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GRADING PLAN LEGEND & ABBREVIATIONS

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TG	TOP OF GRATE
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TW	TOP OF WALL
TYP	TYPICAL

SCALE 1"=10'

0 5' 10' 20'

GRAPHIC SCALE

2 GRADING PLAN
1" = 10'-0"

PBK

ARCHITECT PBK Architects, Inc. PBK.com
RANCHO CUCAMONGA
8163 Rochester Avenue, Suite 100
Rancho Cucamonga
California 91730
P 909-987-0909

MUSCOY ELEMENTARY SCHOOL

PROJECT ADDRESS:
2119 BLAKE STREET
SAN BERNARDINO, CA 92407

DSA SUBMITTAL

DSA APPL NO.: 04-121983 DSA FILE NO.: 36-55

KEY PLAN
NORTH: PLAN TRUE

Consultant

REGISTERED PROFESSIONAL ENGINEER
JEFFREY D. METTEN
No. 64696
CIVIL
STATE OF CALIFORNIA

CLIENT
SAN BERNARDINO CITY USD

DATE	PROJECT NUMBER
Issue Date	220281

REVISIONS

No.	Description	Date
1	DISTRICT COMMENTS	1/12/24
6	DISTRICT COMMENTS	2/22/24

DSA SUBMITTAL

GRADING

VALUED ENGINEERING, INC
CIVIL ENGINEERING ● LAND SURVEYING ● LAND PLANNING
1529 W. 13TH STREET, UNIT G, UPLAND, CA 91786
PHONE: (909) 982-4601

C3.2 6

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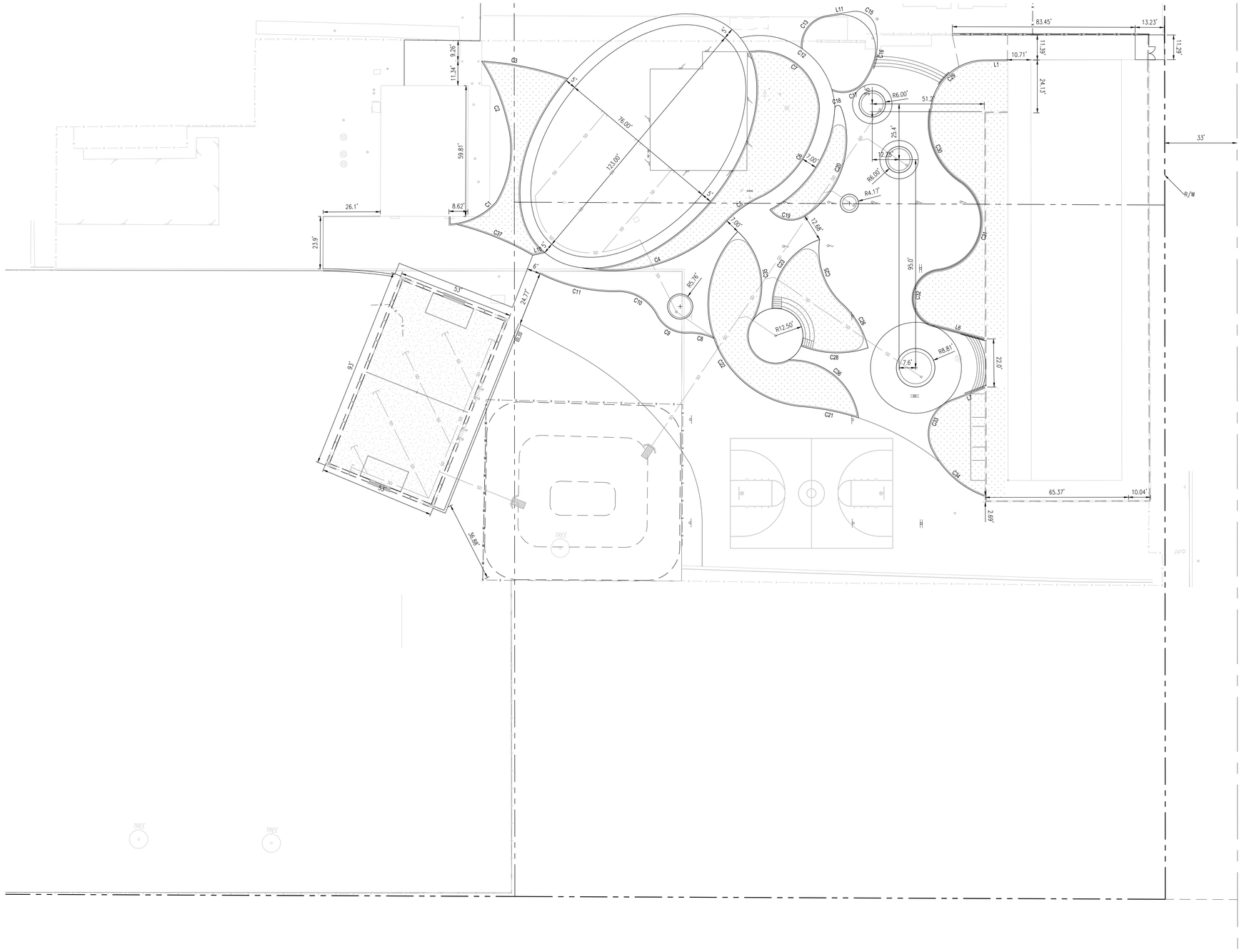

LINE AND CURVE TABLE

Curve Table			
Curve #	Length	Radius	Delta
C1	41.06	29.00	081°07'04"
C2	58.21	49.00	068°03'57"
C3	51.12	140.00	020°55'22"
C4	70.47	71.00	056°52'19"
C5	22.23	54.00	023°35'06"
C6	49.91	49.00	058°21'39"
C7	46.42	27.50	096°42'45"
C8	12.42	25.00	028°27'31"
C9	17.18	15.00	065°37'15"
C10	22.22	20.00	063°39'05"
C11	36.50	75.00	027°52'53"
C12	61.61	34.50	102°18'41"
C13	20.74	14.00	084°51'33"
C15	13.18	9.50	079°30'41"
C16	24.97	31.00	046°09'42"
C17	18.40	12.50	084°19'55"
C18	3.60	1.46	141°08'55"
C19	16.92	12.00	080°47'01"
C20	57.74	41.50	079°43'09"
C21	27.33	117.50	013°19'44"
C22	105.52	47.00	128°38'11"
C23	40.98	32.00	073°22'06"
C25	31.73	33.50	054°16'04"
C26	24.25	39.00	035°37'39"
C28	31.25	44.50	040°14'09"
C29	36.40	24.89	083°46'51"
C30	38.83	32.00	069°31'13"
C31	53.84	22.50	137°05'47"
C32	33.07	13.00	145°45'04"
C33	26.88	16.50	093°19'43"
C34	33.14	43.00	044°09'33"
C35	44.95	33.00	078°02'23"
C36	45.62	31.00	084°19'33"
C37	37.21	134.50	015°51'10"

Line Table		
Line #	Length	Direction
L1	10.422	S89° 25' 43.05"W
L6	25.788	S75° 01' 49.02"E
L7	16.457	S69° 07' 04.39"W
L10	5.620	N77° 31' 31.39"E
L11	12.173	N80° 57' 51.48"E

SCALE 1"=20'

0 10' 20' 40'

GRAPHIC SCALE

VALUED ENGINEERING, INC
CIVIL ENGINEERING • LAND SURVEYING • LAND PLANNING
1529 W. 13TH STREET, UNIT G, UPLAND, CA 91786
PHONE: (909) 982-4601

1 HROIZONTAL CONTROL PLAN
1" = 20'-0"

PBK

ARCHITECT PBK Architects, Inc.
PBK.com
RANCHO CUCAMONGA
8163 Rochester Avenue, Suite 100
Rancho Cucamonga
California 91730
P 909-987-0909

MUSCOY ELEMENTARY SCHOOL

PROJECT ADDRESS:
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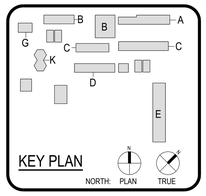
SAN BERNARDINO, CA 92407

DSA SUBMITTAL

DSA APPL NO.: 04-121983 DSA FILE NO.: 36-55



Consultant

REGISTERED PROFESSIONAL ENGINEER
JEFFREY D. MEITER
No. 64696
CIVIL
STATE OF CALIFORNIA

CLIENT
SAN BERNARDINO CITY USD

DATE	PROJECT NUMBER
Issue Date	220281

REVISIONS

No.	Description	Date
6	DISTRICT COMMENTS	7/29/24

DSA SUBMITTAL

HORIZONTAL CONTROL PLAN

C3.3

6

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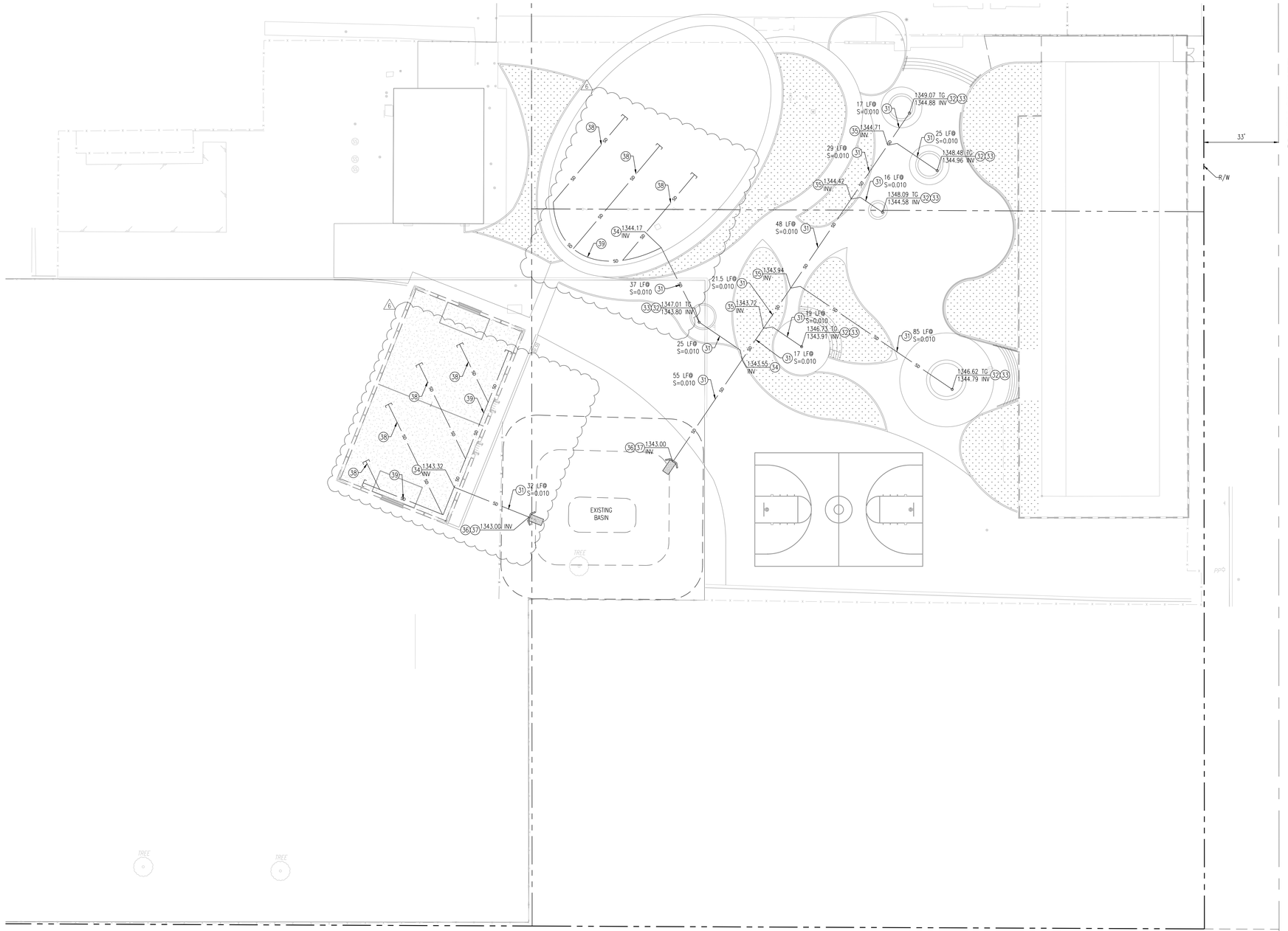
0" 1"



CONSTRUCTION NOTES

(31) FURNISH AND INSTALL 12" HDPE STORM DRAIN PIPE BY ADVANCE DRAINAGE SYSTEMS

(32) FURNISH AND INSTALL 24" FLEXSTORM INLET FILTER (OR APPROVED EQUAL) PER DETAIL (C/C5.1)

(33) FURNISH AND INSTALL 24" DROP INLET CATCH BASIN BY BROOKS PRODUCTS WITH TRAFFIC RATED GRATE (OR APPROVED EQUAL) PER DETAIL (D/C5.1)

(34) FURNISH AND INSTALL 12" HDPE 90° BEND BY ADVANCE DRAINAGE SYSTEMS

(35) FURNISH AND INSTALL 12" HDPE 45° BEND BY ADVANCE DRAINAGE SYSTEMS

(36) FURNISH AND INSTALL CONCRETE HEADWALL PER DETAIL (E/C5.1)

(37) FURNISH AND INSTALL RIP-RAP PER DETAIL (F/C5.1)

(38) FURNISH AND INSTALL 1" X 12" PERFORATED HDPE PIPE SPACED AT 20' O.C. PER ARCHITECTURAL DETAIL (2A/A1.03)

(39) FURNISH AND INSTALL 6" PERFORATED HDPE BY ADVANCED DRAINAGE SYSTEMS.

SCALE 1"=20'

0 10' 20' 40'

GRAPHIC SCALE

STORM DRAIN PLAN
1" = 20'-0"

PBK

ARCHITECT
PBK Architects, Inc.
PBK.com
RANCHO CUCAMONGA
8163 Rochester Avenue, Suite 100
Rancho Cucamonga
California 91730
P 909-987-0909

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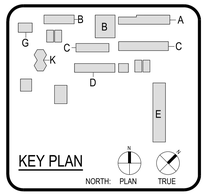

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REVISIONS

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6	DISTRICT COMMENTS	2/22/24

DSA SUBMITTAL

STORM DRAIN PLAN

VALUED ENGINEERING, INC
CIVIL ENGINEERING • LAND SURVEYING • LAND PLANNING
1529 W. 13TH STREET, UNIT G, UPLAND, CA 91786
PHONE: (909) 982-4601

C3.5

6

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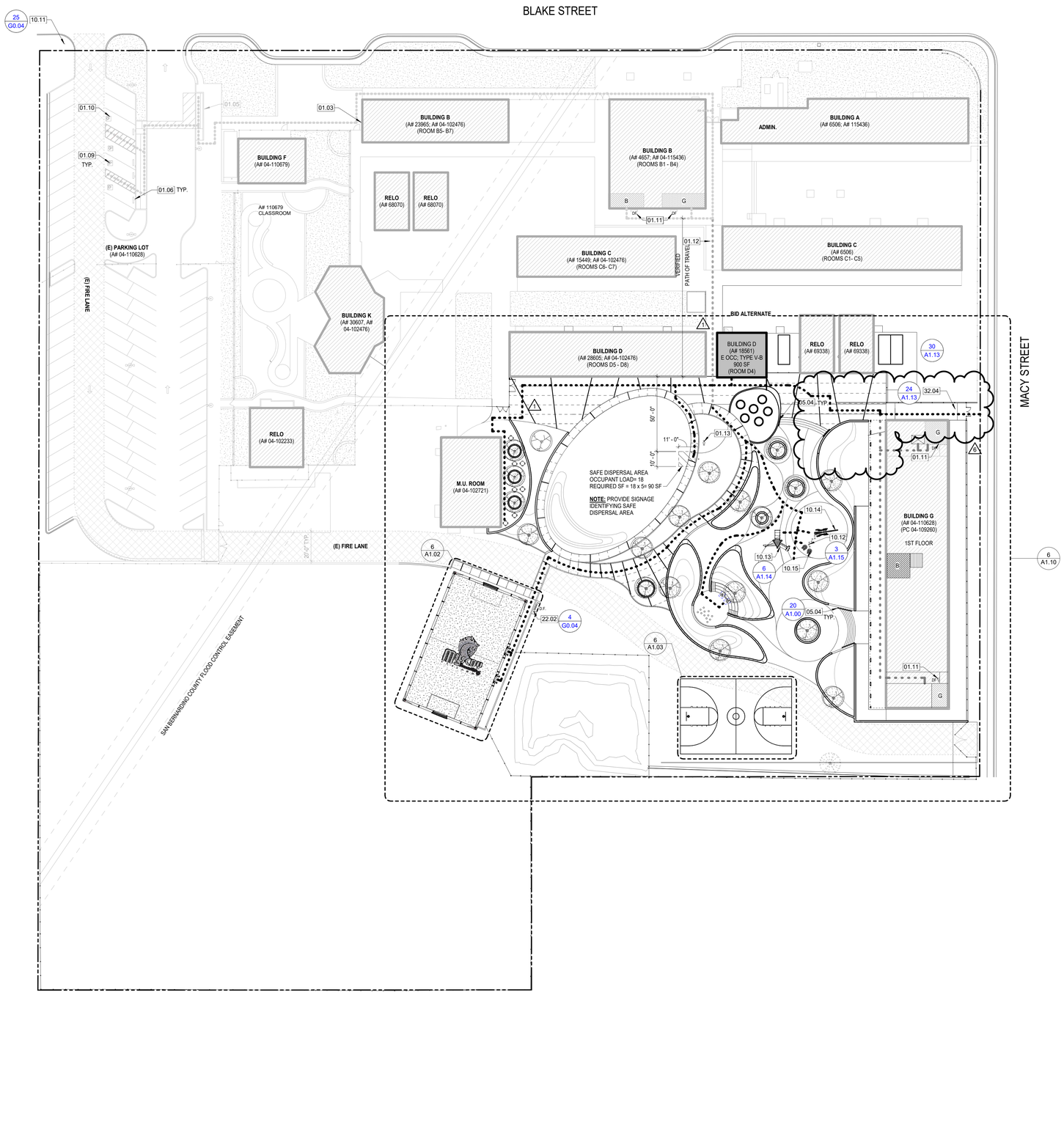
0" 1"



NORTH

PATH OF TRAVEL

DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT:
THE POT INDENTIFIED IN THESE CONSTRUCTION DCOUMENTS IS COMPLIANT WITH THE CURRENT APPLICABLE CALIFORNIA BUILDING CODE ACCESSIBILITY PROVISIONS FOR **PATH OF TRAVEL REQUIREMENTS FOR ALTERATIONS, ADDITIONS AND STRUCTURAL REPAIRS**, AS PART OF THE DESIGN OF THIS PROJECT, THE POT WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WERE DETERMINED TO BE NONCOMPLIANT 1) HAVE BEEN IDENTIFIED AND 2) THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WITHIN THE SCOPE OF THIS PROJECTS WORK THROUGH DETAILS, DRAWINGS AND SPECIFICATIONS INCORPORATED INTO THESE CONSTRUCTION DOCUMENTS. ANY NONCOMPLIANT ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED ON VALUATION THRESHHOLD LIMITATIONS OR A FINDING OF UNREASONABLE HARDSHIP ARE SO INDICATED IN THESE CONSTRUCTION DOCUMENTS. DURING CONSTRUCTION, IF POT ITEMS WITHIN THE SCOPE OF THE PROJECT REPRESENTED AS CODE COMPLIANT ARE FOUND TO BE NONCONFORMING BEYOND REASONABLE CONSTRUCTION TOLERANCES, THEY SHALL BE BROUGHT INTO COMPLIANCE WITH THE CBC AS A PART OF THIS PROJECT BY MEANS OF A CONSTRUCTION CHANGE DOCUMENT.

ACCESSIBILITY LEGEND

- PATH OF TRAVEL TO BE PROVIDED
- (E) PATH OF TRAVEL PER A# 04-110628
- (E) PATH OF TRAVEL PER A# 04-115436
- PROPERTY LINE
- (E) BUILDING NOT IN SCOPE
- (E) CLASSROOM TO BE REMODELED
- AREA OF SAFE DISPERSAL
- ACCESSIBLE TOILET ROOMS PER A# 04-110628 & A# 04-115436
  B = BOYS
  G = GIRLS
- (E) ELEVATOR

ACCESSIBILITY KEYED NOTES

#	Description
01.03	EXISTING ACCESSIBLE PATH OF TRAVEL DIRECTIONAL SIGN PER A# 04-115436
01.05	EXISTING PASSENGER LOADING SIGN PER A# 04-110628
01.06	EXISTING ACCESSIBLE PARKING SIGN PER A# 04-110628
01.09	EXISTING ACCESSIBLE PARKING PER A# 04-110628
01.10	EXISTING ACCESSIBLE VAN PARKING PER A# 04-110628
01.11	EXISTING ACCESSIBLE DRINKING FOUNTAIN PER A# 04-115436
01.12	EXISTING 1:20 SLOPED WALK IN THE DIRECTION OF PATH OF TRAVEL, 1:48 CROSS SLOPE AND NO VERTICAL CHANGES IN LEVEL GREATER THAN 1/4 INCH HIGH
01.13	EXISTING FIRE HYDRANT TO REMAIN
05.04	FREESTANDING HANDRAIL AT CONCRETE STAIRS
10.11	ACCESSIBLE PARKING AND TOW-AWAY SIGN TO BE PROVIDED
10.12	LOG STEPPER TO BE PROVIDED, TYP. OF 8 (GROUND LEVEL PLAY COMPONENT)
10.13	SLIDE PLATFORM TO BE PROVIDED. (ELEVATED PLAY COMPONENT)
10.14	MUSTANG PLAY SCULPTURE PLAY STRUCTURE TO BE PROVIDED. (ELEVATED PLAY COMPONENT)
10.15	HORSESHOE WOBBLE BOARDS TO BE PROVIDED. TYP. OF 2 (GROUND LEVEL PLAY COMPONANT) REFER TO SPECS
22.02	NEW ACCESSIBLE PEDESTAL DRINKING FOUNTAIN TO BE PROVIDED, REFER TO PLUMBING DWGS
32.04	ACCESSIBLE SLOPPED WALK TO BE PROVIDED PER THIS CONTRACT

DSA CERTIFICATION LIST

1. ORIGINAL CAMPUS DRAWINGS: **A# 4657** CLOSED WITH DSA CERTIFICATION ON 10/22/1946
2. NEW ADMIN. AND CLASSROOM BUILDING: **A# 6506** DSA APPROVED ON 3/8/1949
3. CLASSROOM BUILDING ADDITION: **A# 15449** DSA APPROVED IN 1957
4. MODULAR CLASSROOM ADDITION: **A# 18561** DSA APPROVED ON 4/28/1959
5. NEW CLASSROOM BUILDING: **A# 23965** DSA APPROVED ON 8/26/1963
6. RELO CLASSROOM ADDITION: **A# 28605** DSA APPROVED ON 1/3/1967
7. NEW KINDERGARTEN CLASSROOM BUILDING: **A# 30607** DSA APPROVED ON 9/12/1968
8. RELO CLASSROOM ADDITION: **A# 04-102233** CLOSED WITH DSA CERTIFICATION ON 10/23/2003
9. RELO CLASSROOM ADDITION: **A# 68070** CLOSED WITH DSA CERTIFICATION ON 5/4/2005
10. RELO CLASSROOM ADDITION: **A# 69338** CLOSED WITH DSA CERTIFICATION ON 5/4/2005
11. NEW M.P. BUILDING: **A# 04-102721** CLOSED WITH DSA CERTIFICATION ON 10/19/2007
12. MODERNIZATION: **A# 04-102476** CLOSED WITH DSA CERTIFICATION ON 01/06/2004
13. NEW CLASSROOM BUILDING: **A# 04-110628** CLOSED WITH DSA CERTIFICATION ON 12/22/2014
14. MODULAR CLASSROOM BLDG.: **PC A# 04-109260** CLOSED WITH DSA CERTIFICATION ON 12/22/2014
15. KINDERGARTEN BLDG. G.: **A# 04-110679** CLOSED WITH DSA CERTIFICATION ON 12/30/2014
16. ADMIN. AND LIB. MODERNIZATION: **A# 04-115436** CLOSED WITH DSA CERTIFICATION ON 4/22/2019
17. ACCESSIBLE GATE: **A# 04-115436** CLOSED WITH DSA CERTIFIVATION ON 10/04/2016

PARKING CALCULATION

(E) PARKING LOT (A# 04-110628):

STANDARD STALLS	77
VAN ACCESSIBLE STALLS	1
STD ACCESSIBLE STALLS	3
TOTAL P-LOT STALLS	81
TOTAL STALLS ON SITE	81

6 SITE PLAN
1" = 30'-0"

Not for permitting or construction

PBK
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PBK.com
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8163 Rochestser Avenue, Suite 100
Rancho Cucamonga
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SAN BERNARDINO, CA 92407

DSA Submittal

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KEY PLAN
NORTH: PLAN TRUE

Consultant

Architect
LICENSED ARCHITECT Yong Yoo No. C-31162 REN. 10-31-2025 STATE OF CALIFORNIA

CLIENT
SAN BERNARDINO CITY USD

DATE	PROJECT NUMBER
11/09/2023	220281

REVISIONS

No.	Description	Date
1	DISTRICT COMMENTS	01/10/2024
6	BIDDING ISSUES	02/23/2024

DSA Submittal

SITE ACCESSIBILITY PLAN

G0.02

This document is for plan review only

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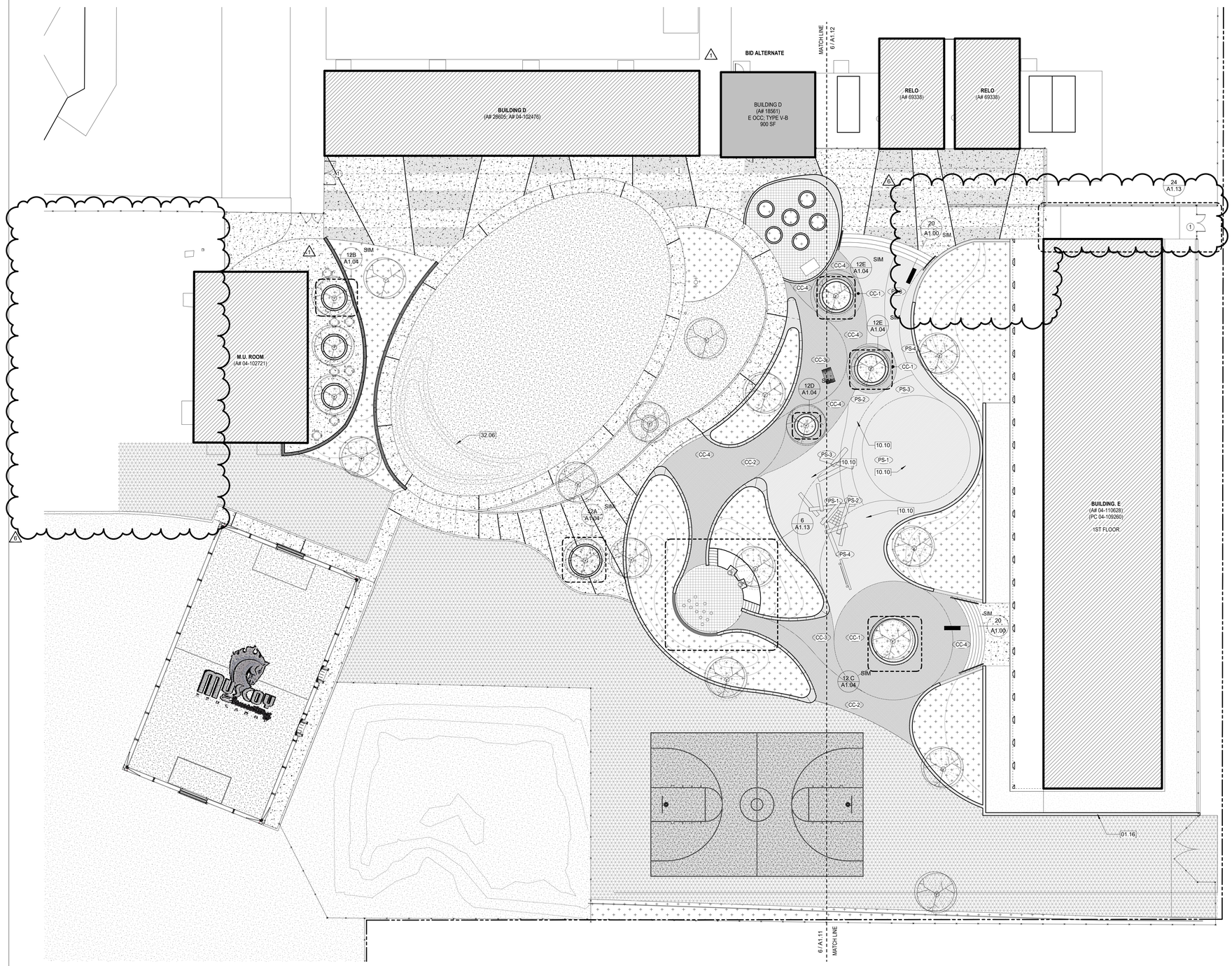
A1.10 - ENLARGED SITE PLAN

0" 1"



NORTH

CONSTRUCTION KEYED NOTES

#	Description
01.16	EXISTING RETAINING WALL TO REMAIN. FACE OF WALL TO BE REPAINTED
10.10	PLAYGROUND EQUIPEMENTS TO BE PROVIDED. REFER TO SPECS.
32.06	SYNTHETIC TURF BURM TO BE PROVIDED - RE: CIVIL

ENLARGED SITE PLAN LEGEND

- PROPERTY LINE
- PVC COATED CHAIN LINK DOUBLE GATE TO BE PROVIDE (2 / A1.01)
- CONCRETE WALL TO BE PROVIDED, U.N.O. (5 / A1.04)
- CONCRETE CURB TO BE PROVIDED, U.N.O., SEE (6 / A1.13) FOR CURB DIMENSIONS
- (E) BUILDING NOT IN SCOPE
- (E) CLASSROOM TO BE REMODELED
- **HATCH INDICATES:** LANDSCAPE WITH IRRIGATION TO BE PROVIDED RE: LANDSCAPE DRAWINGS
- **HATCH INDICATES:** SYNTHETIC TURF TO BE PROVIDED SEE SPEC SECTION & RE: CIVIL DRAWINGS
- **HATCH INDICATES:** (E) LANDSCAPE TO REMAIN; LANDSCAPING TO BE REPLACED AS NECESSARY DUE TO PROPOSED SCOPE OF WORK
- **HATCH INDICATES:** THICKENED ASPHALT CONCRETE PAVING TO BE PROVIDED RE: CIVIL DRAWINGS
- **HATCH INDICATES:** THICKENED ASPHALT CONCRETE PAVING WITH CUSTOM COLOR PAVEMENT COATING TO BE PROVIDED BASIS OF DESIGN: STREETBOND SB150 WITH STREETBOND COLORANTS
- **HATCH INDICATES:** CONCRETE PAVING TO BE PROVIDED RE: CIVIL DRAWINGS
- **HATCH INDICATES:** EXPOSED AGGREGATE CONCRETE PAVING TO BE PROVIDED RE: CIVIL DRAWINGS
- REFER TO ENLARGED SITE PLAN FOR EXPANSION JOINT AND CONTROL JOINT LOCATIONS. (6 / A1.11) (6 / A1.12)
- **HATCH INDICATES:** POURED IN PLACE PLAYGROUND SAFETY SURFACING SEE SPEC SECTION 32 18 16
- **HATCH INDICATES:** INTEGRALLY COLORED CONCRETE FINISH WITH TOP-CAST SURFACE RETARDER SEE SPEC SECTION
- **HATCH INDICATES:** DECOMPOSED GRANITE SURFACING TO BE PROVIDED SEE SPEC SECTION 32 15 40
- **HATCH INDICATES:** (E) TREE TO REMAIN, PROTECT IN PLACE RE: LANDSCAPE DRAWING
- **HATCH INDICATES:** TREE TO BE PROVIDED RE: LANDSCAPE DRAWING

INDICATES FINISH COLOR — FOR SPECIFIC MATERIAL FINISH REFER TO MUSCOY FINISH SCHEDULE (P1)

NOTE:

1. SCOPE OF WORK LIMITED WITHIN THE PROPERTY LINE
2. NON-SLIP FINISH IS REQUIRED ON ALL WALK SURFACES, TYP.

GATE SCHEDULE

GATE #	GATE SIZE WIDTH X HEIGHT	TYPE	HARDWARE SEE 08 71 00	REMARKS
1	(PR) 4'-0" X 8'-0"	DOUBLE LEAF CHAINLINK GATE		PANIC HADWARE

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ARCHITECT PBK Architects, Inc.
PBK.com
RANCHO CUCAMONGA
8163 Rochestser Avenue, Suite 100
Rancho Cucamonga
California 91730
P 909-987-0909

MUSCOY ELEMENTARY SCHOOL

PROJECT ADDRESS:
2119 W BLAKE ST.
SAN BERNARDINO, CA 92407

DSA Submittal

DSA APPL NO.: 04-121983 DSA FILE NO.: 36-55

KEY PLAN — NORTH: PLAN / TRUE

Consultant

Architect

LICENSED ARCHITECT — Yong Yoo — No. C-31162 — REN 10-31-2025 — STATE OF CALIFORNIA

CLIENT
SAN BERNARDINO CITY USD

DATE	PROJECT NUMBER
11/09/2023	220281

REVISIONS

No.	Description	Date
1	DISTRICT COMMENTS	01/18/2024
6	BIDDING ISSUES	02/22/2024

DSA Submittal

ENLARGED SITE PLAN

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A1.10

6 ENLARGED SITE PLAN
1 : 180

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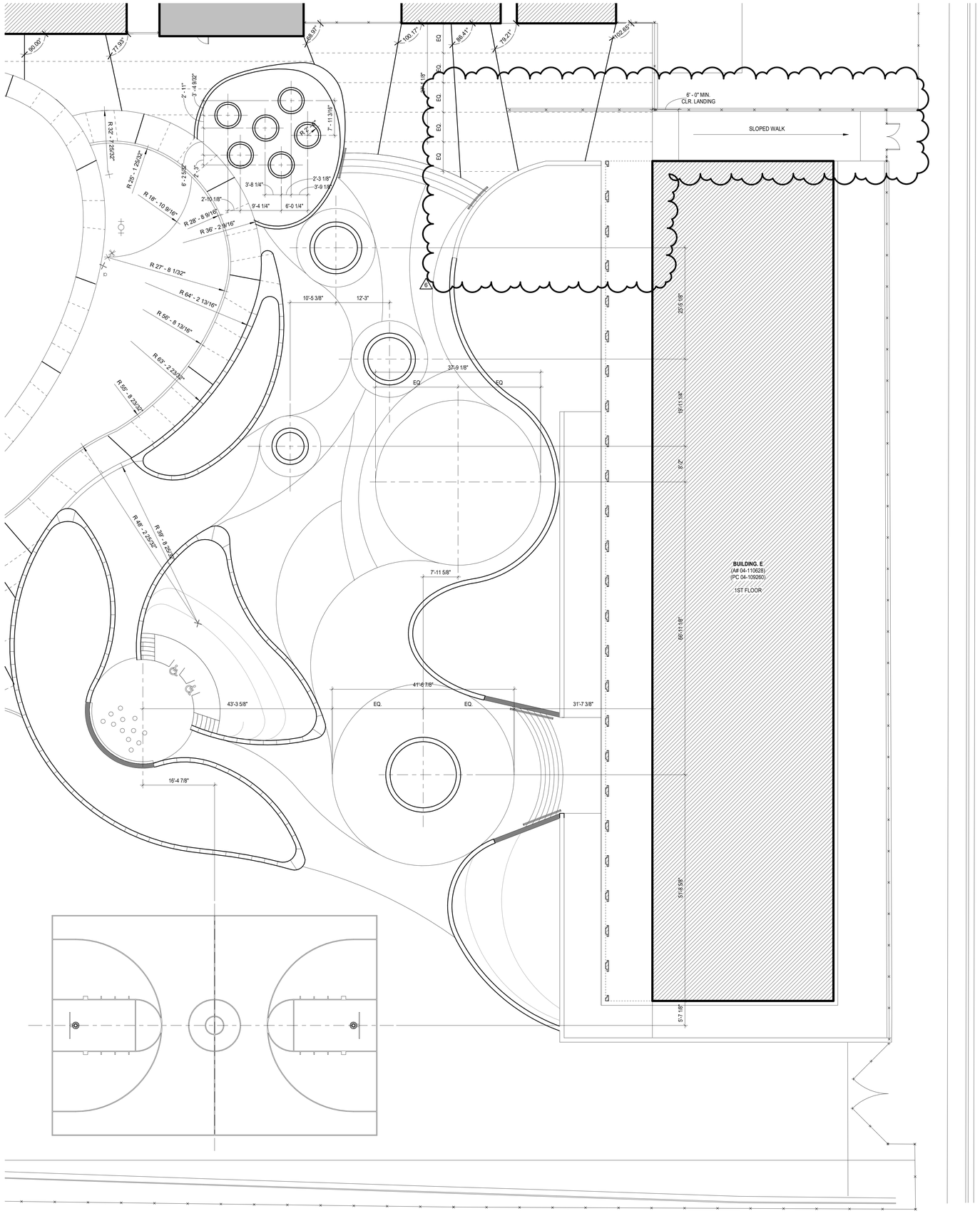

ENLARGED SITE PLAN LEGEND

- CJ: CONTROL JOINT @ 10'-0" MAX., SEE DETAIL 15 / A1.04
- EJ: EXPANSION JOINT @ 20'-0" MAX., SEE DETAIL 10 / A1.04
- (N) CONCRETE WALL TO BE PROVIDED
- (N) CONCRETE CURB TO BE PROVIDED
- (E) BUILDING NOT IN SCOPE

NOTE:

1. FOR EXPANSION JOINTS AT EXISTING CONCRETE SEE DETAIL — 3 / A1.04
2. FOR FLUSH CONCRETE AT ASPHALT PAVING TRANSITION SEE DETAIL — 2 / A1.04
3. FOR CONCRETE EDGE AT LANDSCAPING SEE DETAIL — 21 / A1.04
4. FOR CONCRETE PAVING EDGE AT BLDG, SEE DETAIL — 14 / A1.04
5. FOR CONCRETE PAVING EDGE AT PLAYGROUND, SEE DETAIL — 13 / A1.04
6. FOR CONCRETE CONTROL JOINT- SAWCUT, SEE DETAIL — 16 / A1.04
7. FOR CONCRETE CONTROL JOINT- TOOLED, SEE DETAIL — 15 / A1.04
8. FOR CONCRETE CONTROL JOINT - BEVELED SAWCUT, SEE DETAIL — 9 / A1.04
9. FOR CONCRETE WALL CONTROL JOINT, SEE DETAIL — 8 / A1.04
10. FOR CONCRETE RAMP WALL, SEE DETAIL — 4 / A1.04
11. FOR CONCRETE WALL, SEE DETAIL — 5 / A1.04
12. FOR CONCRETE PLANTER WALL, SEE DETAIL — 6 / A1.04

NORTH

6 ENLARGED SITE PLAN - EAST
1" = 10'-0"

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ARCHITECT
PBK Architects, Inc.
PBK.com
RANCHO CUCAMONGA
8163 Rochester Avenue, Suite 100
Rancho Cucamonga
California 91730
P 909-987-0909

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SAN BERNADINO, CA 92407

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KEY PLAN
NORTH: PLAN TRUE

Consultant

Architect
LICENSED ARCHITECT
Yong You
No. C-31162
REN 10-31-2023
STATE OF CALIFORNIA

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ENLARGED SITE PLAN - EAST

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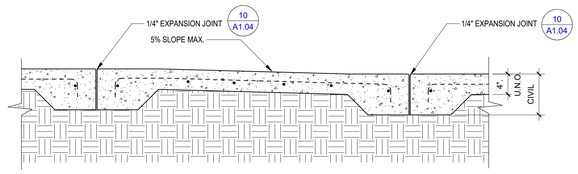
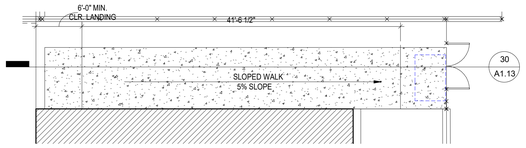
A1.13 - ENLARGED CURB PLAN

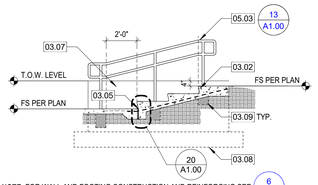
0" 1"



30 SLOPED WALK SECTION
1" = 1'-0"



24 SLOPED WALK PLAN
1/8" = 1'-0"

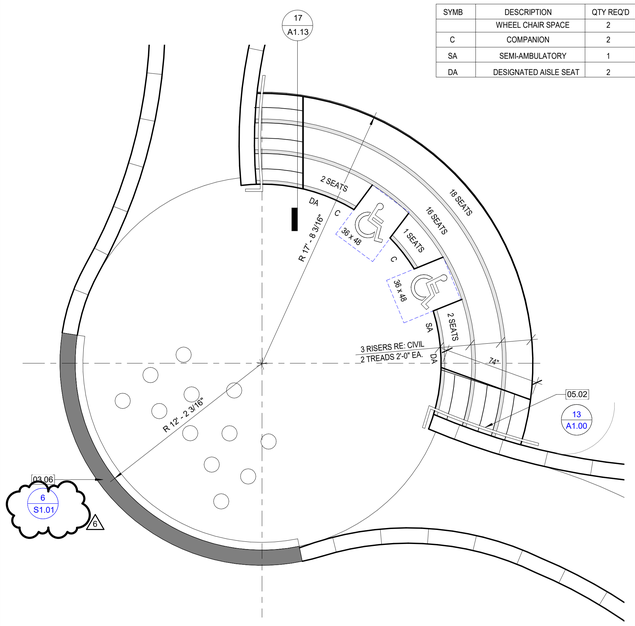


NOTE: FOR WALL AND FOOTING CONSTRUCTION AND REINFORCING SEE 6 S1.01

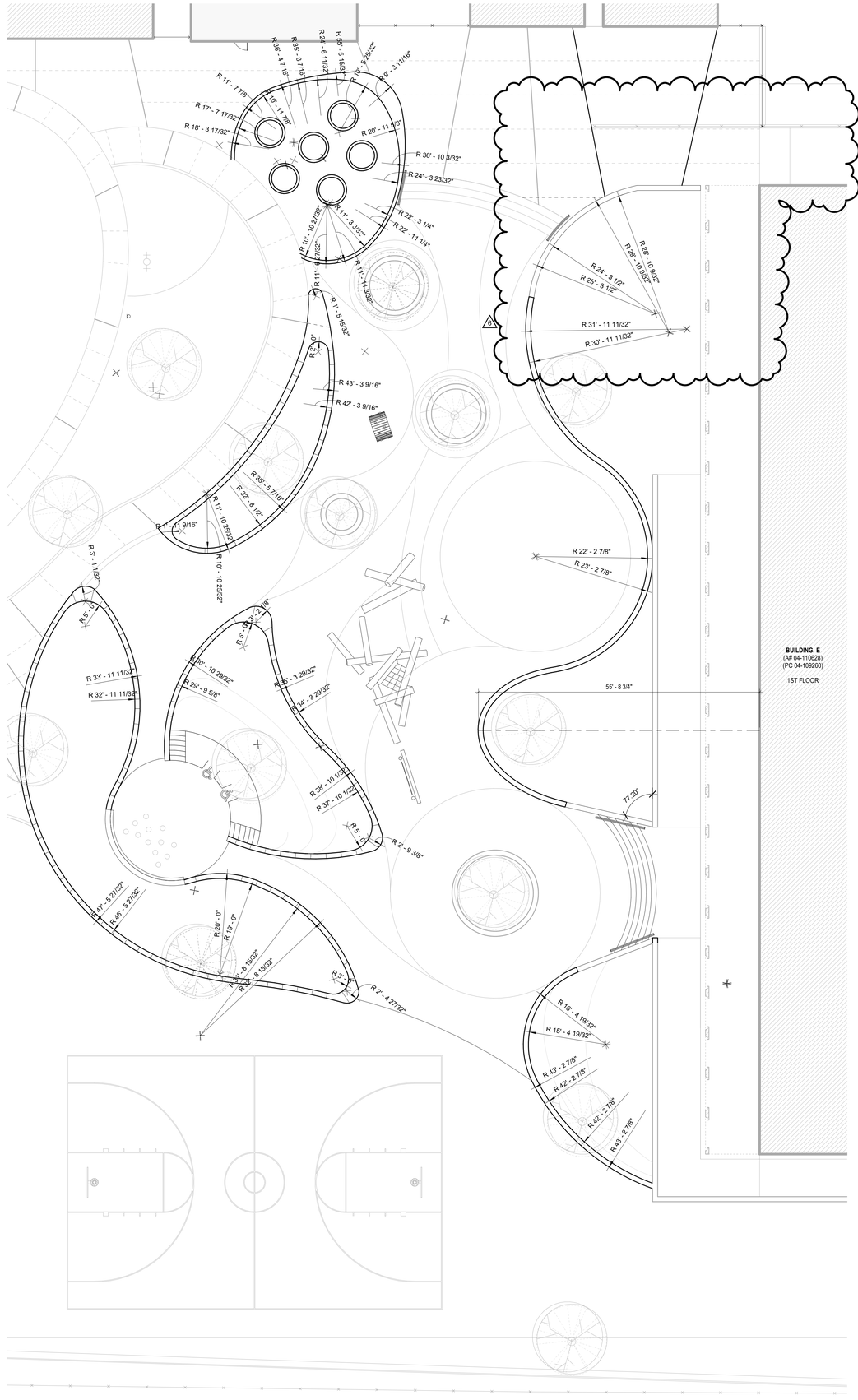
17 SEATING SECTION
1/4" = 1'-0"

WHEEL CHAIR SPACES

SYMB	DESCRIPTION	QTY REQ'D	QTY PROVIDED
	WHEEL CHAIR SPACE	2	2
C	COMPANION	2	2
SA	SEMI-AMBULATORY	1	1
DA	DESIGNATED AISLE SEAT	2	2



6 AMPHITHEATER PLAN
1/4" = 1'-0"



4 ENLARGED SITE PLAN - CURB DIMENSIONS
1" = 10'-0"

CONSTRUCTION KEYED NOTES

#	Description
03.02	NEW 18" THREAD STEPS
03.05	NEW TAPERING STEPS
03.06	NEW EXTERIOR 4'- 0" CONCRETE CHALKBOARD WALL
03.07	CONCRETE SEATING ON GRADE
03.08	EDGE OF CONCRETE SEATING AT LANDSCAPING 1/2" EXPANSION JOINT
03.09	CONCRETE FOOTING FOR SRD STL PIPE POST
05.02	FREESTANDING HANDRAIL AT SEATING
05.03	METAL STUD WALL FRAMING AND GYP. BD. PAINTED FINISH TO BE PROVIDED

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ENLARGED CURB PLAN

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