



Criteria Document

12.21.2021// San Mateo-Foster City School District

# SYNTHETIC TURF PROJECTS AT FIVE CAMPUSES

Audubon ES, Bayside Academy, Brewer Island ES, Fiesta Gardens ES, George Hall ES



HMC Architects



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# Acknowledgments

## San Mateo-Foster City School District

Synthetic Turf Projects at Five Campuses  
San Mateo-Foster City School District  
December 21, 2021

The Criteria within this document is a result of the collective efforts of the leaders and faculty as listed:

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# 01

## Executive Summary



# Project Description

San Mateo-Foster City School District intends to replace certain grass areas with synthetic turf on five school campuses, including Aubodon Elementary school, Bayside Academy, Bay Island Elementary School, Fiesta Gardens Elementary School and George Hall Elementary School, through a Design Build project delivery process.

This Design Build Project consists of demolition of grass areas and tree removal in the present locations of existing areas and installation of synthetic turf in these areas. Additionally, some supplemental shrub planting and irrigation in some of these areas are included. New concrete curbing and/or concrete valley gutters will be installed around the synthetic turf for edge conditions where existing edge conditions do not support the installation of new synthetic turf. New AC pavement will be used to conform the existing AC pavement with the new concrete curbing. Grading and drainage improvements will be conducted to ensure stormwater is directed towards storm drain inlets.

The main goals are:

- To provide a safe and smooth field for ball playing
- To eliminate geese droppings and nuisances
- To minimize mowing and maintenance of grass areas

The existing accessibility is to be verified and upgraded accordingly to comply with the most "current" California Building Code on path of travel from accessible parking stalls to the field areas, student and staff restrooms, drinking fountain along the path of travel, and required number of accessible parking stalls for DSA Access approval. Accessible path of travel is a barrier-free access route without abrupt level changes exceeding 1/2" beveled at 1:2 maximum slope or vertical level changes not exceeding 1/4" maximum and at least 48" in width. Surface is stable, firm and slip resistant. Cross slope shall not be steeper than 1:48 and slope in direction of travel shall not be steeper than 1:20. Accessible path of travel shall be maintained free of overhanging obstructions to 80" minimum, and free of objects protruding more than 4" from the wall, above 27" and less than 80" above the floor or ground. Maximum drop between finished grade and the top of the path of travel shall not exceed 4".

# About the District

The San Mateo-Foster City School District is located at 1170 Chess Dr., Foster City, California. The school district serves San Mateo and Foster City, California.

The school district includes twenty-one schools: three middle schools (Grades 6-8), sixteen elementary schools (K-5) and two schools with all grades (K-8). The schools educate approximately 11,000 students in preschool through eighth grades in twenty-one outstanding schools.

The vision of the school district is to educate, inspire and empower every student in every school every day to live, lead and learn with integrity and joy.

The mission of the school district is to provide rigorous, high quality and equitable education while partnering with students' families and community to support all students to achieve their full academic, social and emotional potential.

The school district believes school facilities and grounds are vital resources which should be used to foster mind and body wellness and development as well as academic performance.



# 02

## Basis of Design



# Civil

## Play Field and Landscape Areas

DB team must maintain orientation and dimensions of existing field and will be a full synthetic turf field with base and drainage. Refer to civil drawings.

- Pattern to mimic freshly mowed lawn. Refer to specs section. DBE team shall offer the district color options to select from.
- DBE team shall confirm with the district what play field striping will be utilized. Site plan graphic for soccer and kick ball is for reference only.
- Concrete edge bands
- Irrigation system as synthetic turf

## Existing Topography

### Audubon Elementary School

- Existing site consists of two (2) grass fields (approximately 62,817 SQFT) bordered by a combination of AC pavement, concrete sidewalk, and concrete curbing. The fields both have irrigation systems with separate controllers. Storm drain inlets are located round the perimeter except for one located in the center of the larger field which is in a low spot.

### Bayside Academy

- Existing site consists of two (2) grass fields (approximately 116,064 SQFT) bordered by AC pavement and concrete sidewalk. Both fields have separate irrigation systems with controllers. The larger of the two

fields has storm drain inlets located on the east and southeast side of the field. The smaller filed does not have any storm drain inlets close by. The large field has a high point in middle of the field and slopes outward.

### Brewer Island Elementary School

- Existing site consists of a large field (approximately 35,486 SQFT) and is bordered by concrete curb and curb & gutter. A fence borders the northwest and southwest edge. The large field is mounded roughly 3.5-feet higher than the surrounding area with steep slopes around the edges. The additional area to receive new synthetic turf is vegetated with a flush concrete curb along the northwest and southwest edge. A fence borders the northeast and southeast edge. Storm drains are located along the perimeters of the two areas.

### Fiesta Gardens Elementary school

- Existing Site has one large field (approximately 21,047 SQFT) and is bordered by a concrete flush curb on all sides except for the northwest side which has a concrete valley gutter. The filed has a crown in the center and slopes out to the edges. Storm drains are located around the perimeter except for the north side. The field is irrigated and the control boxes are all located on the north side of the field.

### George Hall Elementary School

- Existing site has one large field and one small lawn

(approximately 19,604 SQFT combined). The large field is bordered by a concrete flush curb and the small lawn area is bordered by AC pavement, a concrete ramp, and a fence along the entire west edge. The north edge of the small lawn is bordered by an existing building. The large field slopes from left to right with a single storm drain located at the northeast corner. The small lawn area does not have any storm drain inlets located nearby. The area slopes from right to left. The large filed has an irrigation system with all the control boxed located on the north edge of the filed.

## Site Demolition

### Audubon Elementary School

- The existing lawns shall be removed and the irrigation systems shall be cut, capped, and abandoned in place. The AC pavement along the west, south, and southwest side of the large field shall be sawcut and a portion of the AC pavement shall be removed from improvements. The existing storm drain inlet in the middle of the large field shall be removed. The bender board located within the small lawn area shall be removed, but the existing trees shall remain.

### Bayside Academy

- The existing lawns shall be removed and the existing irrigation system for the lawn shall be cut, capped, and abandoned in place. The AC pavement along the south side of the field shall be sawcut and a portion of AC pavement shall be removed for improvements.



**Brewer Island Elementary School**

- The existing lawn and vegetation shall be removed. The existing irrigation system shall be cut, capped, and abandoned in place. The existing curb along the east edge of the field shall be removed. The AC pavement shall be sawcut and a portion shall be removed for improvements. The large portion of soil from the field shall be off hauled and taken to Audubon Elementary School.

**Fiesta Gardens Elementary School**

- The existing lawn shall be removed, and the existing irrigation system shall be cut, capped, and abandoned in place.

**George Hall elementary School**

- The existing large field shall be stripped of all vegetation and the existing irrigation system shall be cut, capped, and abandoned in place. The small lawn area shall be stripped of all vegetation. The existing AC pavement along the southeast edge shall be sawcut and a portion of AC pavement shall be removed to allow the installation of new curbing.

**Grading**

**Audubon Elementary School**

- The large field area shall receive a large portion off haul from Brewer Island Elementary School to establish a crown in the middle of the field. Everything shall be sloped away from the crown that is to be established and water shall be directed towards the storm drain inlets.

**Bayside Academy**

- The existing crown in the field shall be maintained. Everything shall be grades and slopes towards the existing storm drain inlets to ensure positive drainage patterns.

**Brewer Island Elementary School**

- The field shall be cut down and the off haul shall be taken to Audubon Elementary school to building the field up. A new crown shall be established in the middle and everything shall be sloped away ensuring storm water is directed towards the existing inlets around the perimeter.

**Fiesta Gardens Elementary School**

- The existing crown shall be maintained and the existing drainage pattens shall be maintained.

**George Hall Elementary School**

- The existing drainage patten shall remain. Everything shall be sloped from left to right.

**Drainage**

**Audubon Elementary School**

- A new storm drain drop inlet shall be installed at the southeast corner of the large field to collect storm water. The new inlet shall be connected to an existing inlet approximately 50-feet to the south. A new 6” diameter HDPE pipe hall be installed for the connection.

**Bayside Academy**

- A new concrete valley gutter shall be installed along a portion of the southeast side to direct water towards the existing storm drain. No storm drainage improvements will be done on this campus.

**Brewer Island Elementary School**

- No storm drain improvements.

**Fiesta Gardens Elementary School**

- No storm drain improvements.

**George Hall Elementary School**

- No storm drain improvements.

**Sanitary Sewer System**

There are no sanitary sewer improvements for any of the school campuses.

**Domestic Water**

There are no domestic water improvements for any of the school campuses





# Landscape

## Site Design Concept

The new design concept is intended to decrease goose droppings and damage, maintenance, and water needs while providing areas for the students to gather and play. This will be accomplished by replacing large areas of natural grass with synthetic turf. The limits of the synthetic turf will approximately follow the limits of the existing natural grass but there will be some modifications.

## Synthetic Turf Design

The new synthetic turf will be retained using both new as well as existing mowbands and concrete paving edges. It will have game striping integrated into the design although the final layout and quantity will need to be determined in collaboration with the District. The synthetic turf system will be a combination of the following products or their approved equals:

- Synthetic turf:
  - o AstroTurf 'Rootzone 3D3 Blend 52'
  - o FieldTurf 'Classic HD'
  - o Shaw Sports Turf 'Legion'
- Infill:
  - o Brock 'BrockFill'
- Pad:
  - o Brock 'PowerBase YSR'



ANLA ASSOCIATES

## Landscape Design

The new synthetic turf limits will be slightly reduced compared to existing natural grass areas. In many of the existing natural turf areas that won't be converted to synthetic turf because they are not conducive to students playing or gathering. To help address these areas new drought tolerant, low maintenance landscaping is proposed.

## Irrigation Design

The existing irrigation systems of the natural grass areas will be modified to provide irrigation to the new landscape areas and a series of quick couplers around the perimeter of the synthetic turf fields. Existing control wires are also to be re-run to provide the District with the flexibility to re-use them in nearby landscape areas for future improvements. This will help the District avoid having to excavate within the limits of this project if those future improvements require landscape low voltage control wires.



# 03

# Performance Specifications

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32 84 00	Planting Irrigation
32 90 00	Planting
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SECTION 01 56 39

TEMPORARY TREE AND PLANT PROTECTION

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. Furnish all labor, materials, equipment, facilities, transportation and services to complete tree protection and related work as shown on the drawings and/or specified herein.
- B. Description of Work:
  - 1. Protection of existing trees and vegetation to remain.
  - 2. Trimming of existing trees.
  - 3. Maintenance of existing trees and vegetation during construction.
  - 4. Removal of existing trees and other vegetation.
  - 5. Contractor shall retain the services of a certified arborist to perform work and/or make recommendations under conditions specified herein.
- C. Traffic:
  - 1. Do not interfere with or close public ways without permission of the Owner's Representative.
  - 2. Do not interfere with adjacent private properties without permission of the Owner's Representative.
- D. Site Utilities:
  - 1. Advise utility companies of excavation activities before starting excavations.
  - 2. Locate and identify underground utilities passing through work area before starting work.
  - 3. In event unidentified underground utilities are encountered during work, advise utility owner immediately before proceeding. Add any new utility information to project record drawings for actual location.
  - 4. Protect all existing-to-remain utilities.
  - 5. Do not interrupt existing utilities without advance notice to and approval from the Owner.

1.3 ARBORIST REVIEW AND OVER-SIGHT

- A. Arborist Qualifications: Certified Arborist as certified by the International Society of Arboriculture (ISA) and having performed similar services for a minimum of five (5) years.
- B. Certified Arborist Written Recommendations: Contractor shall retain the services of a reputable Arborist certified by the International Society of Arboriculture (ISA) for review and prepare written recommendations for existing to remain shrubs and trees within the project area under the following circumstances. Contractor shall submit the written recommendations to the Owner's Representative for review. Contractor shall implement Arborist recommendations.

- 1. Grading, excavation, trenching or any other similar work is required that may disturb roots of existing to remain trees over six (6) inches in diameter measured three (3) feet above finish grade.
- 2. Pruning is required on branches more than two (2) inches in diameter for existing to remain trees over six (6) inches in diameter measured three (3) feet above finish grade.
- 3. Damage to existing to remain tree(s) has occurred during construction to any part of the tree.
- 4. Construction is required within ten (10) horizontal feet of a tree and/or shrub to remain, with a trunk diameter over six (6) inches in diameter measured three (3) feet above finish grade.
- C. Certified Arborist Over-sight: Certified Arborist shall perform site inspections, provide over-sight and written summary of visit to Owner's Representative prior to demolition and construction work within the dripline of existing to remain trees with a trunk diameter over six (6) inches in diameter measured three (3) feet above finish grade and provide routine maintenance as required to maintain healthy, viable trees throughout the construction process. Certified Arborist shall provide over-site for recommended pruning for branches two (2) inches and larger in size for existing to remain trees.
- D. Contractor shall be liable for the loss in value due to damaged trees and for repair costs resulting as determined by the Client. Due to the irreplaceable nature of many existing trees and vegetation, the liability to the General Contractor shall be set at \$1,500.00 minimum per tree. The Trunk Formula method for Northern California established by the International Society of Arboriculture will be used to compute the actual value. Other vegetation lost due to construction activity and/or neglect shall be replaced by General Contractor in kind with similar size, potted plant stock to match existing prior to construction.

1.4 PROJECT CONDITIONS

- A. The following practices are prohibited within protection zones:
  - 1. Storage of construction materials, debris, or excavated material.
  - 2. Parking vehicles or equipment.
  - 3. Foot traffic.
  - 4. Erection of sheds or structures.
  - 5. Impoundment of water.
  - 6. Excavation or other digging unless otherwise indicated.
  - 7. Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.
- B. Do not direct vehicle or equipment exhaust toward protection zones.
- C. Prohibit heat sources, flames, ignition sources, and smoking within or near protection zones and organic mulch.

1.5 DEFINITIONS

- A. Caliper: Caliper is the measured diameter of the tree trunk. The measurement is taken using a tree caliper, a utensil in the shape of an "F" with an adjustable cross arm to slide and rest up against the trunk to measure the precise distance of the trunk width. On young trees, it is taken six (6)



inches above the soil level. For a mature tree, the caliper is taken at chest height, generally 4-1/2 to 5 feet above the soil level.

- B. Protection Zone: Area surrounding individual trees, groups of trees, shrubs, or other vegetation to be protected during construction and defined by a circle concentric with each tree and/or shrub with a radius equal to the diameter of the drip line unless otherwise indicated.
- C. Vegetation: Trees, shrubs, groundcovers, grass, and other plants.

PART 2 - PRODUCTS

2.1 PROTECTIVE FENCE

- A. Existing vegetation and/or trees to remain on the site shall be protected with a five (5) foot high orange plastic snow fence. Fence shall be mounted on two (2) inch diameter lodge pole posts driven into the ground every six (6) feet to a depth of at least two (2) feet. Fence shall be erected and installed around the perimeter dripline of each shrub, tree or groups of shrubs or trees to remain.
- B. Snow fence fabric: Shall be orange, UV resistant, .3 inch thickness, 60 inches in height, oval mesh extruded thermal plastic polymer, Tenax or equal, fence fabric.
- C. Signage: Each tree fence shall have a prominently displayed 8.5 inch x 11 inch sign stating "Warning – Protection Zone".
- D. During planting and irrigation operations, protective fencing is not required beneath existing to remain trees and shrubs that fall within the newly landscaped and/or irrigation area.

2.2 ORGANIC MULCH

- A. Refer to Specification 32 90 00 "Planting" for organic mulch material to use in non-bio-retention planting areas.
- B. If Specification Section 32 90 00 "Planting" is not issued as part of this project, organic mulch to be free from deleterious materials and suitable as a top dressing of trees and shrubs, consisting of organic bark from Republic Services (contact Jennifer White at (408) 687-1928 or jwhite@RepublicServices.com) Pro-Chip decorative mulch, Republic Services, Newby Island Recyclery, Milpitas, CA (408) 945-2836 or approved equal. Color to be mahogany. Submit sample to Owners Representative's for review and approval.

2.3 TOPSOIL

- A. Import topsoil shall be obtained from a local source and coming from a site with similar soil characteristics as the project site. Topsoil shall be fertile, friable, natural loam surface soil, reasonably free of subsoil, clay lumps, brush, weeds and other litter and free of roots, stumps, stones and rocks and other extraneous or toxic matter harmful to plant growth.
- B. Manufactured topsoil shall be soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.

- C. On-site topsoil shall be naturally occurring, on-site, surface soil, usually occurring in the top four (4) to twelve (12) inches of original, undisturbed surface soil containing organic material, necessary nutrients and minerals to sustain plant growth and be approved to sustain plant life by an approved soil and plant lab.

2.4 NITROGEN STABILIZED ORGANIC AMENDMENT

- A. 0-1/4 inch nitrogen-stabilized organic amendment contributing at least 270 pounds of organic matter per cubic yard. Greenwaste compost is acceptable if recommended by soil analysis lab. Compost shall be obtained from a supplier participating in the Seal of Testing Assurance (STA) program of the U.S. Composting Council.

END OF SECTION



**SECTION 31 10 00**  
**SITE CLEARING & DEMOLITION**

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. General provisions of the Contract.
- B. CALTRANS Standard Specifications, Section 7-1.13

1.02 SUMMARY

- A. This Section includes the following:
  - 1. Protection of existing improvements indicated to remain.
  - 2. Protection of existing improvements adjacent to the job site.
  - 3. Removal of vegetation.
  - 4. Clearing and grubbing.
  - 5. Removal of existing below-grade improvements.

1.03 PROJECT CONDITIONS

- A. Traffic: Conduct site-clearing operations to ensure minimum interference with traffic associated with SMFCSD Campus driveways, parking lots and other adjacent buildings occupied or other used facilities. No closure or obstruction of streets or other occupied or used facilities will be allowed without expressed written permission of District staff, District's representative and other authorities having jurisdiction over the site.
- B. A Survey shall be prepared prior to beginning removals or excavation. Contractor shall compare existing survey information with Contract Documents and notify District's representatives of any discrepancies. If discrepancies do exist, Contractor shall supply location, elevation, size, and conduit material to facilitate conflicts between existing and proposed utilities. Contractor shall hire a utility locator to locate utilities at least two working days prior to beginning removals or excavation.
- C. Protection of Existing Improvements: The Contractor is hereby advised that certain facilities may exist within the limits of work. Such facilities may include but are not limited to, existing water works, sanitary sewerage, storm drainage, natural gas, electric, telephone, fiber optic cable, irrigation lines, cable TV, asphalt and concrete flat work and buildings. The Contractor shall at all times protect those facilities not indicated to be removed, whether or not shown to be protected, and shall remove only those facilities indicated to be removed in accordance with the Contract Documents and the direction of the authorized representative of the district of the facility. Where the existing facilities interfere with the Contractor in the performance of his work under the Contract, the Contractor shall bear full responsibility for the location, protection, and relocation or restoration of such facility, in accordance with the requirements of the

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district of such facility. Contractor shall coordinate field installation of scope of work with field location of utilities identified by Contractor during field survey of utilities. Contractor shall provide elevations of conflicts for existing and new utilities where identified in the field.

- D. The presence of such facilities shown on the Civil Drawings and provided for in the Contract Documents is for the convenience of the Contractor in preparing his proposal and planning his work and is prepared from the best information available to the Engineer at the time of preparation. The District makes no warranty, expressed or implied, as to the adequacy, completeness, and accuracy of such information. The Contractor shall satisfy himself with regard to the existence of such facilities and their impact on his operation. Should the Contractor discover any apparent discrepancy between the Contract Documents and conditions found in the field, he shall immediately bring such discovery to the attention of the Engineer. The bidder shall include in his proposal a sum to cover the cost of all items necessary to perform the work as set forth in the Contract Documents. No allowance of any kind whatsoever will be made to the Contractor because of lack of such examination or knowledge. The submission of a proposal will be considered conclusive evidence that the Contractor has made such an examination.
- E. The existing surface conditions of the project site were provided by San Mateo-Foster City School District and were compiled by CSW/Stuber-Stroeh Engineering Group, Inc.
- F. The Contractor shall protect all public and private property, insofar as it may be endangered by his operations and take every reasonable precaution to avoid damage to such property. The Contractor shall restore and bear the cost of any public or private improvement, facility, or structure within the limits of work, within adjacent street rights-of-way, easements, or work area which is damaged or injured directly or indirectly by or on account of any act, omission, or neglect in the execution of work. This is intended to address those facilities not designated for removal but visibly evident, correctly shown on the plans, marked by the District or by district of said improvement, facility, or structure. Said marking shall include any markings made by USA (Underground Service Alert).
  - 1. In restoring any damaged or injured improvement, facility, or structure, the Contractor shall restore it to a condition substantially equivalent to, or better than, that existing before such damage occurred.

1.04 EXISTING SERVICES

- A. General: Indicated locations are approximate; determine exact location before commencing work, See Section 1.03.
- B. Existing Utility System: The existing utility systems (sanitary, water, storm, gas, electric, telecommunication, and data) shall remain in service to other buildings while the new utility systems are being installed.
- C. Removal of Existing Below Grade Improvements:
  - 1. Existing Sanitary Sewer and Storm drain lines: Any existing pipeline within the footprint of the proposed building shall be removed. Sanitary and Storm drain

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- lines shall be abandoned back to a manhole or junction box. Existing Storm and Sanitary Manholes shall have abandoned pipe plugged within manhole or box.
2. Existing Water service: The existing water services within proposed building footprint shall be removed. Water service shall be abandoned back to closest isolation valve.

PART 2 - EXECUTION

2.01 SITE CLEARING

- A. General: Remove trees, shrubs, grass and other vegetation, improvements, or obstructions, as required to permit installation of new utilities or improvements or as directed by the representative of the District. Remove similar items elsewhere on site or premises specifically indicated. Removal includes digging out and off-site disposal of stumps and roots in accordance with CALTRANS Standard Specifications, Section 7-1.13.
1. The Contractor shall cut minor roots and branches of trees indicated to remain in a clean and careful manner where such roots and branches obstruct installation of new utilities.
2. Clean and careful manner shall be the use of pruning shears, saws, and cutting roots in a manner that does not tear or rip protective outer layer of the root.
3. The earth surface within protective fencing shall not be altered except as acceptable to the District. Any grading or trenching necessary within the dripline shall be done by hand per the discretion of the District.
- B. Clearing and Grubbing: Clear site of trees, shrubs, and other vegetation, except for those indicated.
1. Completely remove deleterious materials, including, but not limited to stumps, roots, and other debris.
2. Fill depressions caused by clearing and grubbing operations with satisfactory soil materials that are in accordance with the soils report. If the soils report does not address filling of depressions, the following requirements shall be used.
- a. Place fill materials in horizontal layers not exceeding 6 inches (150 mm) loose depth, and thoroughly compact each layer to a minimum density of 85% compaction. This compaction effort shall not relieve the Contractor of any other obligation for compaction that may be required under the specifications for earthwork.

2.02 DISPOSAL OF WASTE MATERIALS

- A. Roadway: Contractor shall sweep and wash down all paved areas within the public street rights-of-way at the end of each working day or as otherwise directed by the District's representative.
- B. Burning on District's Property: Burning is not permitted.

- C. Removal from District's Property: Remove waste materials (including, but not necessarily limited to asphalt concrete, trees, other waste compiled from construction) and unsuitable or excess topsoil from District's property and dispose of in accordance with CALTRANS Standard Specification Section 7-1.13.
- D. Permits: Contractor shall obtain all necessary permits and/or approvals and pay all applicable fees including but not limited to, permit fees, license fees and disposal fees associated with the removal, haulage and disposal of waste materials from the District's Property.
- E. Covered Vehicles: All loads of waste materials carried by trucks or other vehicles shall be fully covered by tarpaulins or similar devices as approved by the California State Highway Patrol in such a manner that will ensure that no portion of the load will be discharged during transit to the disposal site.
- F. Maintenance of Adjacent Streets: The Contractor shall maintain the public streets adjacent to the construction site free of debris or materials posing a hazard to the public traveling along
- G. Branches, trimmings and debris remaining upon completion of each operation shall become property of the Contractor and shall be promptly removed from the Site.

END OF SECTION



**SECTION 31 23 00**  
**EXCAVATION AND FILL**

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. General provisions of Contract Agreement form, including Appendices and Exhibits.
- B. Division 1 Specification Sections
- C. 2019 California Building Code, Title 24, Part 2, Sections 1804A, 3304 and appropriate sections for educational facilities apply to this section.
- D. Standard specifications of the state of California, Department of Transportation (CALTRANS).
- E. A copy of the survey is available for review with HMC Architects.
- F. Refer to Landscape Planting Specification Section 32 90 00 for topsoil requirements.

1.02 SUMMARY

- A. This section includes the following:
  - 1. Preparing and grading subgrades for walks, pavements, and landscaping (including fine grading, placement of topsoil and addition of specified soil amendments).
  - 2. Subbase course for walks and pavements.
  - 3. Excavating and backfilling for underground mechanical and electrical utilities and appurtenances.
- B. The following sections contain requirements that relate to this section:
  - 1. Section 31 10 00, Site Clearing and Demolition, for site stripping, grubbing, topsoil removal, and tree protection.
  - 2. Section 32 13 13, Civil Site Concrete, for walkways, concrete encasement, thrust blocks, and similar appurtenances for pipeline, drainage, and utility systems.
  - 3. Section 32 90 00, Landscape Planting, for preparation of soil for planting
- C. Reference Standards:
  - 1. Contractor shall perform work in accordance with applicable requirements of state and local agencies having jurisdiction over the project. Contractor shall perform work in accordance with applicable standards and requirements of utility companies.
  - 2. American Association of State Highway and Transportation Officials (AASHTO): Standards.
  - 3. American National Standards Institute (ANSI): Standards.
  - 4. American Society of Testing Materials (ASTM):
    - a. Materials and testing standards as identified throughout this Section.

- b. ASTM D2487 "Classification of Soils for Engineering Purposes."
- 5. California, Department of Transportation (CALTRANS): Standard Specifications.
- 6. California Occupational Safety and Health Administration (CALOSHA): Construction Safety Orders.
  - a. California State Industrial Accident Commission (CSIAC): Trench Construction Safety Orders.
  - b. U.S. Occupational Safety and Health Administration (OSHA): Standards – 29 CFR, PART 1926 Safety and Health Regulations for Construction, Subpart P – Excavations.

1.03 DEFINITIONS

- A. Excavation consists of the removal of material encountered to subgrade elevations and the reuse or disposal of materials removed.
- B. Subgrade: The uppermost surface of an excavation or the top surface of a fill or backfill immediately below base or subbase, drainage fill, or topsoil materials.
- C. Borrow: Soil material obtained off-site when sufficient approved soil material is not available from excavations.
- D. Subbase Course: The layer placed between the subgrade and base course in a paving system or the layer placed between the subgrade and surface of a pavement or walk.
- E. Base Course: The layer placed between the subbase or subgrade and surface pavement in a paving system.
- F. Drainage Fill: Course of washed granular material supporting slab-on-grade placed to cut off upward capillary flow of pore water.
- G. Unauthorized excavation consists of removing materials beyond indicated subgrade elevations or dimensions without direction by the District's representative. Unauthorized excavation, as well as remedial work directed by the District's representative, shall be at the Contractor's sole risk and expense.
- H. Unsuitable Soil: Poor yielding soil that the District's representative determines as unsatisfactory for footings, slabs, trenches or pavement subgrades.
- I. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below ground surface.
- J. Utilities: include on-site underground pipes, conduits, ducts, and cables, as well as underground services within building lines.
- K. Waste Material: Excess material generated from utility trenches, pavement sections, or other structures associated with the project.



1.04 SUBMITTALS

- A. Wet Weather Construction Plan: Contractor shall submit a plan outlining procedures and methods that shall be implemented during the wet weather construction, plan shall address the following:
  - 1. Open trench protection;
  - 2. Protection of exposed soils (graded or stockpiled);
  - 3. Protection of materials (pipe, conduit, wiring or other pertinent items).
- B. Test Reports: In addition to test reports required under field quality control, submit the following:
  - 1. Laboratory analysis of each soil material proposed for fill and backfill from on-site and borrow sources, including drainage fill;
  - 2. One optimum moisture-maximum density curve for each soil material;
  - 3. Report of actual unconfined compressive strength and/or results of bearing tests of each stratum tested.

1.05 QUALITY ASSURANCE

- A. Codes and Standards: Perform earthwork complying with requirements set forth on the plans, in the soils report, or as required under applicable ordinances or codes of all governmental agencies having jurisdiction over the project.
- B. Testing and Inspection Service: District will employ a qualified independent geotechnical engineering testing agency to classify proposed on-site and borrow soils to verify that soils comply with specified requirements and to perform required field and laboratory testing.
- C. Safety Standards: All excavation should be constructed in accordance with OSHA and CAL-OSHA Safety Standards. Safety in and around utility trench is the responsibility of the underground contractors.
- D. Pre-installation Conference: Conduct conference at Project site.
  - 1. Before commencing earthwork, meet with representatives of the governing authorities, District, District's representative, consultants, Geotechnical Engineer, independent testing agency, and other concerned entities. Review earthwork procedures and responsibilities including testing and inspection procedures and requirements. Notify participants at least 3 working days prior to convening conference. Record discussions and agreements and furnish a copy to each participant.

1.06 PROJECT CONDITIONS

- A. General:
  - 1. Earthwork operations shall be conducted so as to prevent windblown dust and dirt from interfering with the surrounding normal operations. Contractor shall assume liability for all claims of windblown damage and dirt. Since the area of disturbance is less than 1 acre, a Storm Water Pollution Prevention Plan

(SWPPP) has not been prepared for the project, but Best Management Practices (BMP's) shall be employed on-site.

- 2. Bench Marks, monuments, signs and other reference points shall be maintained and protected; if disturbed or destroyed, they shall be replaced by the Contractor as directed by the District at the Contractors expense.
- B. Existing Utilities: Do not interrupt existing utilities serving facilities occupied by the District or others except when permitted in writing by the District's representative and then only after acceptable temporary utility services have been provided.
  - 1. Provide a minimum two working days' notice to the District's representative and receive written notice to proceed before interrupting any utility.
  - 2. Notify Underground Service Alert (USA) at (800) 227-2600 at least two working days prior to beginning removal, grading, excavation, trenching, or other earthwork related activities.
- C. Demolish and completely remove from site existing underground utilities indicated to be removed. Coordinate with utility companies to shutoff services if lines are active. Coordinate with Portola Valley School District maintenance staff to shutoff or switch over services of existing buildings.

PART 2 - PRODUCTS

2.01 SOIL MATERIALS

- A. Backfill and Fill Materials: Satisfactory soil material shall be on-site soil materials with an organic content of less than 3-percent by weight or without visible organ matter and free of deleterious materials or hazardous substances may be used as engineered fill. On-site soil material to be reviewed by District's Geotechnical Engineer for satisfactory conditions prior to incorporation into earthwork.
- B. Subbase and Base Material: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand, conforming with CALTRANS Class 2 aggregate base or ASTM D2940, with at least 95 percent passing a 1-1/2 inch (38 mm) sieve and not more than 8 percent passing a No. 200 (75 micrometer) sieve as approved by the project Geotechnical Engineer.
- C. Engineered Fill: Subbase or base materials approved by Geotechnical Engineer. In general, engineered fill shall be predominantly granular, shall not contain any rocks or lumps larger than 3-inches in greatest dimension, shall not contain more than 15-percent of material larger than 1 ½ inches, shall have a Plastic Index of 15 or less, and shall contain sufficient fines to allow excavation to be made without caving. All import fill shall meet the requirements of engineered fill and shall be approved by the District's Geotechnical Engineer prior to incorporation into the earthwork.
- D. Pipe and Conduit Bedding Material: Bedding material shall be clean, washed, granular material derived from decomposed or crushed rock. Such material shall be free of organic material, mica, clay, silts, oils, and other deleterious materials. Sand bedding



shall have a maximum particle size of 1/4-inch with gradation that allows 90 to 100 percent passing a No. 4 sieve and not more than 10 percent to pass a No. 200 sieve.

- E. Drainage Fill: Washed, poorly graded mixture of crushed stone, or crushed or uncrushed gravel, ASTM D448, coarse aggregate grading size 57, with 100 percent passing a 1-1/2 inch (38 mm) sieve and not more than 5 percent passing a No. 8 (2.36 mm) sieve.
- F. Filtering Material: Poorly graded mixture of natural or crushed gravel or crushed stone and natural sand, with 100 percent passing a 1-1/2 inch (38 mm) sieve and 0 to 5 percent passing a No. 50 (300 micrometer) sieve.
- G. Fill: On-site soil free of organic material, debris, rocks, and clods and approved by the Project Geotechnical Engineer.
- H. Topsoil: Refer to Specification Section 32 90 00 for Landscape Planting requirements. Material excavated from the project site with sufficient organic content to render it unsuitable for engineered fill, but which can be used for landscaping purposes. Material must be free of roots, rocks larger than 1/2 inch, debris, vegetation, and foreign or deleterious material which may be harmful to plant growth. The top 12 inches of landscape areas shall be organic laden topsoil free of any 1/2 inch crushed rock or aggregate base rock material. Stockpile organic laden topsoil in the location indicated on the plans or as directed by the District's representative. Topsoil shall be placed minimum 1 inch below adjacent concrete edge.

END OF SECTION

SECTION 31 25 00

EROSION CONTROL

PART 1 - GENERAL

1.01 SUMMARY

- A. Description: Provide Erosion Control, as shown and specified per Contract Documents.
- B. Related Documents: CALTRANS Standard Specifications, Section 7-1.13 and CALTRANS Construction Site Best Management Practices Manual
- C. Geotechnical Report. None for this project.

1.02 SUBMITTALS

- A. Reference Standards:
  - 1. General: Refer to References, for reference standards, applicable codes and definitions.
  - 2. State of California, Department of Water Resources (CDWR): Storm water pollution prevention requirements and submittal documents.
  - 3. CALTRANS Construction Site Best Management Practices Manual.
  - 4. CALTRANS Storm Water Quality Handbooks.
- B. Closeout: Remove temporary erosion control devices from the site.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Straw: Fresh wheat straw, dried and completely free of foreign matter and debris.
- B. Wire: ASTM B211, galvanized steel, not smaller than 20 gage.
- C. Silt Control Fabric:
  - 1. General: Manufactured by Mirafi Moisture Protection or approved substitute.
- D. Mulch Netting:
  - 1. General: Natural fiber netting capable of withstanding a minimum of one year of exposure to the weather without shrinking or disintegration. Netting shall be free of all herbicides.
  - 2. Anchors:
    - a. "J" Pins: Galvanized wire, 0.12 inch diameter x 10 inches long.
    - b. "U" Staples: Galvanized wire, 0.09 inch diameter x 6 inches long.
- E. Fasteners:
  - 1. Nails: FS FF-105, common wire, galvanized.
  - 2. Wire: 16 or 18 gage steel, galvanized.
  - 3. Rebar: No. 4 bar.



2.02 FABRICATION

- A. Bales: Fabricate of straw to uniform standard size bale and wire tie sufficiently to hold bale shape throughout designated period of construction.

END OF SECTION

SECTION 32 12 16

ASPHALTIC CONCRETE PAVING

PART 1 - GENERAL

1.01 SUMMARY

- A. Description: Provide Asphalt Concrete Paving, as shown and specified per Contract Documents, including but not limited to 1-C2.1, 2-C2.1, 3-C2.1, 4-C2.1, & 5-C2.1

1.02 SUBMITTALS

- A. Closeout:
  - 1. General: Exhibit I – Specification Section, Closeout Procedures.
- B. Certificate of Compliance:
  - 1. General: CALTRANS Standard Specifications (Section 39).

1.03 QUALITY REQUIREMENTS

- A. General: Exhibit I – Specification Section, Quality Assurance.
- B. Reference Standards:
  - 1. General: Exhibit I – Specification Section, References, for reference standards, applicable codes and definitions.
- C. State of California, Department of Transportation (CALTRANS): Standard Specifications.
- D. California Building Code (CBC) Section 1129B.5 for Parking Spaces, and Section 1133B.8.3 and 1133B.8.4 for Tactile warning lines.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Surface Course Aggregate: Mineral aggregates for Type "A" asphalt concrete, per CALTRANS Standard Specifications, Section 39-2.02, Type A, 1/2 inch grading; 1/2 inch maximum, medium grading.

2.02 MIXES

- A. General: Plant mixed per CALTRANS Standard Specifications, Section 39, Type A, 1/2 inch maximum medium grading.
- B. Temperature of Asphalt: 275°F minimum; 325°F maximum, when added to aggregate.

END OF SECTION



SECTION 32 13 14  
CIVIL SITE CONCRETE

PART 1 - GENERAL

1.01 SUMMARY

- A. DESCRIPTION: Provide Non-Architectural Concrete, as shown and specified per Contract Documents. Includes installation of items furnished under other Sections but cast in the concrete.
- B. DEFINITIONS:
  - 1. Architectural Concrete: Concrete which will be permanently exposed to view and which therefore requires special care in selection of the concrete materials, forming, placing and finishing to obtain the desired architectural appearance.
  - 2. Non-Architectural Concrete: Curb and Gutter, Concrete Valley Gutter, & Concrete Sidewalks .

1.02 SUBMITTALS

- A. SHOP DRAWINGS:
  - 1. General: Submit concrete mix designs for review.
  - 2. Aggregate Base:
    - a. Submit aggregate for standard pavement base section
  - 3. Reinforcing: Submit manufacture and installation details, including fastenings, for review.
- B. SAMPLES: Submit concrete finish samples, if requested.
- C. PRODUCT DATA: Submit manufacturer's specifications, data, and installation instructions for review.
- D. CERTIFICATES:
  - 1. General: Submit certification stating that products used to manufacture concrete delivered to the site meets or exceeds the material and testing requirements of these specifications.
  - 2. Reinforcement: Submit mill test and chemical analysis certificates for all reinforcing steel delivered to the site.
- E. PLACEMENT RECORDS: Keep on job site until completion, and open to inspection, record showing time and date of placing concrete in each portion of structure.

1.03 QUALITY ASSURANCE

- A. REFERENCE STANDARDS:
  - 1. American Society of Testing Materials (ASTM): Materials and testing standards as identified throughout this Section.
  - 2. American Concrete Institute (ACI):
    - a. ACI 302.1R: Guide for Floor and Slab Construction.
    - b. ACI 304R: Guide for Measuring, Mixing, Transporting and Placing Concrete.
    - c. ACI 305R: Hot Weather Concreting.

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- d. ACI 306R: Cold Weather Concreting.
    - e. ACI 308: Standard Practice for Curing Concrete.
    - f. ACI 318: Building Code Requirements for Reinforced Concrete.
    - g. ACI 347R: Recommended Practice for Concrete Formwork.
    - h. ACI SP-66: Detailing Manual.
  - 3. American Welding Society (AWS): AWS D1.4 - Structural Welding Code - Reinforcing Steel.
  - 4. Concrete Reinforcing Steel Institute (CRSI): Manual of Standard Practice.
  - 5. National Ready Mixed Concrete Association (NRMCA): Check List for Certification of Ready Mix Concrete Production Facilities.
- B. TESTING: Tests by Testing Laboratory appointed by Owner and under directions of Architect; expense of testing borne by Owner; make tests per Section 1929A of CBC.
- C. ALLOWABLE TOLERANCES:
  - 1. Non-Architectural Concrete:
    - a. Variation in cross-sectional dimensions: -1/8" +1/4".
    - b. Variation in surface tolerance: 1/8" in 10 ft. in any direction as determined by 10 ft. (3.0m) straight edge.

PART 2 - EXECUTION

2.01 MATERIALS

- A. FORMWORK:
  - 1. Forms:
    - a. Lumber: Construction grade Douglas Fir or approved substitute by owner representatives.
    - b. Plywood: PS 1, C Grade Douglas Fir, 5/8 inch minimum; sound undamaged sheets with clean true edges.
    - c. Metal: Gage sufficient to provide equivalent rigidity and strength.
    - d. Fasteners: As required; of sufficient strength and character to maintain formwork in place while placing concrete.
    - e. Corner Formers: Chamfered wood.
  - 2. Form Release Agent: Colorless mineral oil which will not stain the concrete or impair natural bonding characteristics of coating intended for use on concrete.
  - 3. Vapor Barrier:
    - a. General: Moistop, 10 mil thick minimum, manufactured by the Fortifiber Corp.
    - b. Alternate Manufacturers: Comparable products manufactured by 3m Construction Markets, Specified Construction Products Division, or accepted equal.
    - c. Joint Tape: As recommended by manufacturer.
- B. REINFORCEMENT:
  - 1. Reinforcement Bars: ASTM A615, deformed; No. 4 and smaller Grade 40; No. 5 and larger Grade 60, or ASTM A 706 where shown.
  - 2. Reinforcing Supports:
    - a. General: Metal chairs, bolsters, bar supports, or spacers, sized and shaped for strength and support during concrete placement.
    - b. Footings: Bottom bars supported with concrete blocks.
  - 3. Tie Wire: 16 gage annealed type.
  - 4. Dowels: ASTM A615, 40Ksi yield grade, plain steel, uncoated.

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- C. ANCHOR BOLTS: ASTM A307; rolled body bolts with upset threads not permitted.
- D. CONCRETE:

1. Cement: ASTM C150, Type I or II.

2. Aggregates:

a. General: ASTM C33; Fine Aggregate: Felton Quarry or approved substitute

b. Lightweight: ASTM C330; Permanente Limestone or Aromas Granite.

c. Exposed aggregate: Contractor shall submit dark aggregate for exposed concrete apron at existing trash enclosure

3. Water: Clean and free from deleterious amounts of acids, alkalis, scale, or organic materials.

4. Admixtures:

a. Water Reducing Admixture: Use admixture per ASTM C494 to improve placing, reduce water cement ratio, and ultimate shrinkage. Such admixture must receive prior approval of Architect and be included in original design mix.

b. Air Entrainment:

1) General: ASTM C260; Manufactured by Euclid Chemical Co.

2) Alternate Manufacturers: Comparable products manufactured by W.R. Meadows, Inc., or accepted equal.

c. Hardener:

1) General: "Kure-N-Seal" manufactured by the Sonneborn Building Products Division of the ChemRex Inc.; color selected by the Architect.

2) Alternate Manufacturers: Comparable products manufactured by L. M. Schofield Co., or accepted equal.

d. Fly Ash:

1) General: ASTM C-618

2) If pozzolanic additive is used, only 25% of portland cement replacement is allowed.

5. Slip-Resistive Aggregate Finish: Factory-graded, packaged, rustproof, nonglazing, abrasive aggregate of fused aluminum-oxide granules or crushed emery with emery aggregate containing not less than 50 percent aluminum oxide and not less than 25 percent ferric oxide; unaffected by freezing, moisture, and cleaning materials.

6. Membrane Curing Compound: ASTM C309, Type 1D clear (with fugitive dye), guaranteed not to affect bond of subsequent finish materials. Curing compound and areas to receive it must be accepted by Architect before application.

7. Sealer:

a. General: Burke Spartan-Cote WB Cure-Seal-Hardener manufactured by White Cap Industries, Inc.

b. Alternate Manufacturers: Comparable products manufactured by the Sonneborn Building Products division of the ChemRex Inc., or accepted equal.

8. Bonding Agent for Patching:

a. General: Acryl-Set manufactured by Master Builders, Inc.

b. Alternate Manufacturers: Comparable products manufactured by W.R. Meadows, Inc., or accepted equal.

9. Non-shrink Grout:

a. General: "Masterflo 713" manufactured by MBT Protection & Repair/ChemRex

b. Alternate Manufacturers: Comparable products manufactured by W.R. Meadows, Inc., or accepted equal.

10. Color:

a. Ready Mix Integral Color - #920 Black @ 2.0% by weight of cement

E. EXPANSION JOINT MATERIALS: ASTM D 1751, preformed; 1/2 inch thick max., unless otherwise shown.

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CIVIL SITE CONCRETE  
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2.02 MIXES

A. CONCRETE DESIGN:

1. Designed Strength and Class of Concrete:

a. Class "B" Concrete: Curb, Gutter and Thrustblocks

1) 28 Day strength of 3000 psi.

2) 4" maximum slump.

3) 1" maximum aggregate size.

2. Limiting Quantities and Minimum Strength: Design concrete for strength per CBC Section 1905A, Method B. Mixtures shall be reviewed by Laboratory selected by and with costs of reviewing mixes borne the Owner. The limiting quantities of CBC Table 19A-A-7 do not apply.

B. MIXING OF CONCRETE:

1. General: All concrete shall be mixed until there is uniform distribution of material and mass is uniform and homogeneous; mixer must be discharged completely before the mixer is recharged. Conform to requirements of CBC Section 1905A.2.3, Method B.

2. Ready-Mix Concrete:

a. General: Mix and deliver in accordance with the requirements set forth in CBC Section 1905A.8.2. Unless waived by Architect, representative of testing laboratory shall maintain continuous inspection at ready-mix plant to run check sieve analysis of aggregate; check design of mix, check cement being used with test reports, check loading of trucks and certify quantities of materials placed in each truck. Ready-mix plant to deliver to Inspector on work certificates with each truck bearing signature of representatives of testing laboratory, stating quantity of cement, water, fine aggregate, coarse aggregates contained in load, and time mixer was loaded.

b. Batch Plant Inspection Waiver:

1) General: If the batch plant meets the requirement of CBC 1929 A.5 and the following quality control requirements, the Architect may waive the requirement for continuous batch plant inspection.

2) Testing Laboratory: Inspection by representatives of testing laboratory to be made at start of the work to check the first batching and to furnish mix proportions to Licensed Weighmaster.

3) Weighmaster: Licensed Weighmaster to positively identify materials as to quantity and certify to each load by ticket.

4) Certification: Ticket shall be transmitted to Project Inspector by truck driver with load identified thereon. Inspector will not accept load without tickets identifying mix and will keep daily record of pours, identifying each truck, its load and time of receipt and will transmit two copies of record to DSA.

5) Test Cylinders: A minimum of one (1) set of three (3) cylinders shall be taken and tested for each 50 cubic yards of concrete or fraction thereof placed in any one day.

6) Affidavit: At end of project, Weighmaster shall furnish affidavit for DSA on form satisfactory of DSA, certifying that all concrete furnished conforms in every particular to proportions established by mix designs. Any costs involved in this modified procedure will be paid by the Owner and backcharged to Contractor.

3. Admixtures: Verify compatibility of concrete admixtures when multiple admixtures are called for in a specific mix.

4. Job Mixed Concrete:

a. General: Use batch mixer of approved type, with capacity to handle one or more full sack batches, no split sack batches permitted. Operate as recommended by manufacturer, mixing at least one and one half (1-1/2) minutes after all materials are in drum.

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- b. Handling and Mixing of Concrete: Architect may order removal of any equipment which in his opinion is insufficient or in any way unsuitable.
- C. GROUT: Provide mortar containing same proportions of cement and sand as used for concrete, with ultimate compressive strength of 3000 psi.

END OF SECTION

SECTION 32 18 23.29

SYNTHETIC FIELD SPORT SURFACING

PART 1 - GENERAL

- 1.01 SUMMARY
  - A. Section Includes furnishing, delivery, installation and warranty of a complete synthetic turf system.
  - B. Related Sections
    - 1. Concrete Work, refer to section 32 13 13.
- 1.02 REFERENCES
  - A. ASTM TEST METHODS
    - 1. D1335 – Standard Test Method for the Tuft Bind of Pile Yarn Floor Covering.
    - 2. D1577 – Standard Test Method for Linear Density of Textile Fiber.
    - 3. D2859 – Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials.
    - 4. D4491 - Standard Test Methods for Water Permeability of Geotextiles by Permittivity.
    - 5. D5034 - Standard Test Method of Breaking Strength and Elongation of Textile Fabrics (Grab Test).
    - 6. D5848 – Standard Test Method for Mass Per Unit Area of Pile Yarn Floor Covering
    - 7. F1 015 - Standard Test Method for Relative Abrasiveness of Synthetic Turf Playing Surfaces.
    - 8. F1 936 - Standard Test Method for Shock-Absorbing Properties of North American Football Field Playing Systems as Measured in the Field.
    - 9. ASTM F1951-99 Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment.
    - 10. ASTM F 1292 - Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment.
    - 11. US Consumer Product Safety Commission (CPSC) Handbook for Playground Safety.
- 1.03 INSTALLING CONTRACTOR QUALIFICATIONS
  - A. The turf contractor must be experienced in the installation of the specified type of synthetic infilled turf system for at least five (5) years and have at least thirty (30) outdoor installations in California of the specified material and of similar size to this project.



- B. The turf contractor must provide competent workmen skilled in this specific type of synthetic turf installation. The designated Supervisory personnel on the project must be certified as competent in the installation of this material, including sewing seams and proper installation of the infill mixture.
- C. The turf contractor foreman installing the synthetic turf must have installed at least twenty (20) fields in the last three (3) years of the specified material.
- D. The turf manufacturer must have certified crews and may not use outside, independent contractors for the installation.

1.04 MAINTENANCE

- A. Turf installation Contractor shall train maintenance staff and/or contracted maintenance staff in the use of the recommended maintenance equipment and provide written maintenance guidelines to the facility maintenance staff.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. All manufactured items shall be inspected and approved by Contractor upon delivery.
- B. Protect from theft, damage and intrusion of deleterious materials during delivery, handling, storage, and installation.

1.06 ENVIRONMENTAL CONDITIONS

- A. Install synthetic turf surfacing only when ambient air temperature is 35 F or above and the relative humidity is below 35% or as specified by the product manufacturer. Installation will not proceed if rain is imminent.
- B. Install product only when prepared base is suitably free of dirt, dust, and petroleum products, is moisture free and sufficiently secured to prevent unwanted pedestrian and vehicular access.
- C. Maintain all benchmarks, monuments, and other reference points. If disturbed or destroyed, replace as directed.
- D. Adjacent streets, sidewalks, and property shall be kept free of mud, dirt, or similar nuisances resulting from earthwork operations.

1.07 FIELD CONDITIONS

- A. Site Inspection: The inspection shall include a check for planarity. The finished surface shall not vary from a true plane more than 1/4" in 10 feet when measured in any direction. The Contractor shall provide all required tools and materials needed for the planarity check, which may include but not be limited to, a laser level, string line, straight edge and/or other assessment materials. The Contractor shall mark in the field any deviations from grade in excess of those specified above, as well as provide a marked up

plan locating the deviations. The Contractor shall correct any deviations to the satisfaction of the Owner's Representative and Synthetic Turf installer.

- B. The compaction of aggregate base shall be 95% to Standard Proctor and surface tolerances shall not exceed 1/4" over 10 feet.

1.08 WARRANTY

- A. Manufacturer Warranty: The Turf Company shall submit its Manufacturer's Warranty which guarantees the usability and playability of the synthetic turf system for its intended uses for a minimum eight (8) year period commencing with the date of Substantial Completion. The warranty coverage shall not be prorated nor limited to the amount of the usage.
- B. The warranty submitted must have the following characteristics:
  - 1. Provide full coverage for a minimum of eight (8) years from the date of Substantial Completion.
  - 2. Warrant materials and workmanship.
  - 3. Warrant that the materials installed meet or exceed the system specifications.
  - 4. Repair or replace such portions of the installed materials that are no longer serviceable to maintain a serviceable and playable surface.
  - 5. Be from a single source and complete, covering workmanship and all materials.
  - 6. Assure the availability of exact or substantially the same replacement materials for the synthetic turf system installed for the full warranty period.
  - 7. Include general wear and damage caused from UV degradation. The warranty shall specifically exclude vandalism and acts of God that are beyond the control of the turf Manufacturer or Contractor.
  - 8. Shall be limited to repair or replacement of the affected areas at the option of the Contractor, and shall include all necessary materials, labor, transportation costs, etc. to complete said repairs.
  - 9. Shall maintain an ASTM F 355 Gmax of less than 165 for the life of the warranty.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Products of the following manufacturer(s) form the basis of design and quality intended for the Project:
  - 1. Astro Turf – synthetic turf
  - 2. BrockFILL - infill
  - 3. Field Turf – synthetic turf
  - 4. BrockPAD - padding
  - 5. Shaw Sports Turf – synthetic turf

2.02 DESCRIPTION FOR SYNTHETIC TURF OPTIONS

- A. Basis-of-Design Product: Astro Turf Rootzone 3D3 Blend 52
  - 1. Contact Astro Turf Corporation – Astro Turf Rootzone 3D3 Blend 52  
2680 Abutment Road, SE



- Dalton, GA 30721 (706) 277-8873
2.

A synthetic turf system tufting 10,800 denier monofilament fibers made from a singularly extruded combination of stabilized polyethylene and nylon polymers with proper compatibilizers. Fibers shall be tufted into a suitable primary backing and coated with a secondary metered polyurethane adhesive coating. Pile height shall be nominal 2.0". Fibers shall be tufted to a primary backing and a mechanically applied adhesive secondary backing.
3.

The infilled pile surface shall provide good traction in all types of weather with the use of conventional sneaker type shoes, composition molded sole athletic shoes, and screw-in style football cleats.
4.

The pile surface shall be suitable for both temporary and permanent line markings using acrylic paint, as per the turf provider's recommendations.
5.

Adhesives used in bonding the seams shall be resistant to moisture, freeze/thaw, bacteria and fungus attacks, and resistant to ultraviolet radiation. The adhesive shall be made especially for the adhesion of synthetic turf seams and inlaid field markings and graphics.
6.

The seam specific adhesive system shall have been utilized on at least 25 full installations. Provide this information with the bid. It shall consist of a factory-made adhesive bed applied to non-woven fabric seaming tape. The adhesive bed shall be a metered amount suitable for the application. It shall be heat and pressure activated. As special heat application machine and pressure application using weighted rollers is mandatory.
7.

Supply field groomer and sweeper or single maintenance apparatus that performs both basic maintenance functions.
8.

Perimeter edge details required for the system shall be as detailed and recommended by the turf provider, and as approved by the turf provider.
9.

Turf Fabric Surface:

a.

The pile surface shall resemble freshly mown natural grass in appearance, texture and color.

b.

The pile surface shall be nominally uniform in length.

c.

The pile fiber angle shall be 90 degrees +/- 15 degrees, measured from the horizontal after installation of the infill material.

d.

The entire system shall be resistant to weather, insects, rot, mildew and fungus growth and will be non-allergic and non-toxic.

e.

The synthetic turf system shall have a nominal fiber length of 2.0".

f.

Each roll shall be minimum 15' wide.

g.

The entire system shall be constructed for porous standards as specified. Synthetic turf system shall be perforated at 4-6" on center. Systems that are not perforated for maximum drainage shall not be acceptable.

h.

Markings shall be tufted in-place, inlaid or glued. It is recommended that the maximum amount of markings be factory-prefabricated into the turf system prior to shipment to site. At a minimum, football markings (with the exception of hash marks) shall be factory prefabricated.
10.

Product Specifications – Turf:

a.

Face yarns shall be a proven athletic quality, outdoor stabilized monofilament made from a singularly extruded combination of stabilized polyethylene and nylon polymers with proper compatibilizers.

b.

The fabric shall possess the following minimum physical characteristics. ASTM testing shall be provided with the bid and any products not meeting the minimum physical characteristics will be rejected:

Average Pile Yarn Face Weight	ASTM D 5848	52 oz/square yard
Average Total Weight	ASTM D 5848	78.5 oz/square yard
Secondary Backing Weight	ASTM D 5848	20.0 oz/square yard
Primary Backing	ASTM D 5848	7.0 oz/square yard
Average Tuft Length	ASTM D 5823	2.0"
Tufting Gauge	ASTM D 5793	½" maximum
Tuft Bind	ASTM D 1335	> 8 lbs
Yarn Denier (monofilament fiber)	ASTM D 1577	10,800/6
Fiber Thickness (primary/secondary)	ASTM D 3218	330 microns
Surface Flammability	ASTM D 2859	8 of 8 PASS
Permeability	ASTM D 1551	>30
Melt Point	ASTM D 789	248 deg. Fahrenheit
Gmax System (American Football)	ASTM F 355	<125 @ installation <165 thru warranty

- B. Basis-of-Design Product: Field Turf Classic HD
1.

Contact Field Turf – Andrew Rowley, Regional Sales Manager  
www.fieldturf.com (707) 586-2066
2.

Synthetic turf hybrid system consisting of monofilament and slit-film polyethylene fibers: 15,000 denier, low friction, measuring not less than 2 inches high. Monofilament fibers shall have a minimum thickness of 250 microns and slit film fibers shall have a minimum thickness of 135 microns.

a.

The low friction fiber shall be custom blended polyethylene, treated with UV inhibitors.

b.

Fibers shall have been extruded individually through a spinnerette, stretched and twisted.

c.

Low friction fiber shall be specifically designed to virtually eliminate abrasion.
3.

The maximum gauge of the tufted fiber rows shall be ¾ inch.
4.

The turf product shall have an infiltration rate not less than 100" per hour as tested by ASTM F 1551.
5.

Backing: Not less than 2 components consisting of a primary and secondary backing system of woven polypropylene or urethane.

a.

Backing system shall be treated with UV inhibitors.

b.

The backing shall receive polyurethane and acrylic applications during the manufacturing process.

c.

The backing weight of all backing material shall be a minimum of 30 ounces per square yard.
6.

The minimum tuft binding tensile strength shall be 8 pounds without infill, as determined by ASTM D 1335.
7.

The synthetic turf shall be delivered in 15 foot wide rolls and of sufficient length to extend from sideline to sideline. Head seams, between the sidelines, will not be acceptable.
8.

Markings:



- a. The perimeter white and yellow lines can be tufted into the individual sideline rolls.
  - b. Field of play lines for soccer, including soccer penalty kick circle, shall be inlaid and tufted. The lines for soccer including soccer penalty kick circle shall be yellow.
  - c. All field of play lines for lacrosse, including team and official areas, shall be inlaid or tufted. The lines shall be blue.
  - d. Field of play lines for field hockey, including team and official areas, shall be inlaid or tufted. The lines shall be blue.
  - e. Field of play lines for football (except hash marks, which can be painted) shall be inlaid or tufted. The lines for football shall be white.
  - f. For football sideline yardage markers conforming to NCAA, NFHS and/or CIF recommendations shall be inlaid. These shall include markers in 10 yard increments including goal line on both sides of the field and the entire length of the field, as well as player and coacher's boxes.
  - g. Field of play lines for baseball, shall be inlaid or tufted. Lines shall be white.
  - h. Field of play lines for softball, shall be inlaid or tufted. The lines shall be white.
- C. Basis-of-Design Product: Shaw Sports Turf: Legion Hybrid Synthetic Turf System 2.0
- 1. Contact Shaw Sports Turf  
www.shawsturf.com (877) 260-7888
  - 2. Synthetic turf system shall be tufted, polyethylene, grass-like fabric coated with a secondary backing of high-grade polyurethane. The two fibers specified in this grid shall be tufted through the same needle in a grass-like fabric to a finished pile-height also specified in the grid.
  - 3. All components and their installation method shall be designed and manufactured for use on outdoor athletic fields. The materials as hereinafter specified should be able to withstand exposure in all climates, be resistant to insect infestation, rot, fungus, mildew, ultraviolet light and heat degradation, and shall have the basic characteristics of flow-through drainage, allowing free movement of surface runoff through the synthetic turf fabric where such water may flow to the existing base and into the field drainage system.
  - 4. The finished playing surface shall appear as mowed grass and shall resist abrasion and cutting from normal use.
  - 5. The polyethylene pile yarn shall be a proven athletic caliber yarn designed specifically for outdoor use and stabilized to resist the effect of ultraviolet degradation, heat, foot traffic, water, and airborne pollutants.
  - 6. The system shall be tufted at the pile height and gauge listed in specification grid,
  - 7. The Primary Backing must be a multi-layer backing, contain UV stabilizers and must pass 3000 hours of QUV A testing, refer to grid in section 2.2 H.
  - 8. The Secondary Backing of high-grade polyurethane shall be applied to the Primary Backing. Secondary Backing adds resistance to water degradation and strengthens grip on fibers.
  - 9. The entire backing shall be coated with holes perforated throughout the backing at the Synthetic Turf Manufacturer's recommended interval to allow for drainage. Partially coated backings or latex coating materials shall not be acceptable.
  - 10. Product Specifications – Turf:
    - a. Linear Density Mono/Slit (Denier) ASTM D 1577 7,200/5,000

- |    |                          |             |                     |
|----|--------------------------|-------------|---------------------|
| b. | Yarn Thickness Mono/Slit | ASTM D 3218 | 300/100 microns     |
| c. | Pile Weight              | ASTM D 5848 | 35.0 oz/square yard |
| d. | Finished Pile Height     | ASTM D 5823 | 2.0"                |
| e. | Product Weight (total)   | ASTM D 5848 | 63 oz/square yard   |
| f. | Primary Backing Weight   | ASTM D 5848 | 8 oz/square yard    |
| g. | Secondary Coating Weight | ASTM D 5848 | 20 oz/square yard   |
| h. | Fabric Width             | ASTM D 5793 | 15'                 |
| i. | Tuft Gauge               | ASTM D 5793 | 1/2"                |
| j. | Grab Test Strength Avg.  | ASTM D 5034 | >200 lb. -F         |
| k. | Tuft Bind (Avg.)         | ASTM D 1335 | >10 lb. -F          |
| l. | Infilltrometer           | ASTM D 3885 | >25                 |
- D. Markings:
- 1. The perimeter white and yellow lines can be tufted into the individual sideline rolls.
  - 2. Field of play lines for soccer, including soccer penalty kick circle, shall be inlaid and tufted. The lines for soccer including soccer penalty kick circle shall be yellow.
  - 3. All field of play lines for lacrosse, including team and official areas, shall be inlaid or tufted. The lines shall be blue.
  - 4. Field of play lines for field hockey, including team and official areas, shall be inlaid or tufted. The lines shall be blue.
  - 5. Field of play lines for football (except hash marks, which can be painted) shall be inlaid or tufted. The lines for football shall be white.
  - 6. For football sideline yardage markers conforming to NCAA, NFHS and/or CIF recommendations shall be inlaid. These shall include markers in 10 yard increments including goal line on both sides of the field and the entire length of the field, as well as player and coacher's boxes.
  - 7. Field of play lines for baseball, shall be inlaid or tufted. Lines shall be white.
  - 8. Field of play lines for softball, shall be inlaid or tufted. The lines shall be white.
- 2.03 PADDING
- A. Padding shall be Brock USA LLC. PowerBase YSR  
3090 Sterling Circle, Suite 102 (877) 276-2587  
Boulder, Colorado, 80301 www.brockusa.com
- 1. Padding shall be made from expanded polypropylene, each panel molded individually and recyclable.
  - 2. Padding shall contain large channels to transport water to the collector system along the edge. Drainage channels must align at panel intersections.
  - 3. Padding shall be constructed with stairstep interlocking edges.
  - 4. Padding shall consist of piston shaped pads.
  - 5. Padding shall include 4 mm crush ribbing to regulate thermal expansion to 130 degree temperatures.
- 2.04 INFILL
- A. Infill shall be Brock USA LLC. BrockFILL  
3090 Sterling Circle, Suite 102 (877) 276-2587  
Boulder, Colorado, 80301 www.brockusa.com



- B. BrockFILL organic infill for synthetic turf of the following characteristics:
- 1. Infill shall be an engineered wood particle comprised of virgin natural pine wood grown and manufactured in the USA.
  - 2. Infill shall be free of pesticides and heavy metals.
  - 3. Infill shall maintain a vertical drainage rate that exceeds that of the artificial turf when tested alone according to test method ASTM F-1551.
  - 4. Infill shall not materially degrade as an infill defined as a minimum of 80% of the material will fall between sieve screens of .8 mm – 2 mm when tested according to BS EN 933-1:2012.
  - 5. Infill shall be made from a species of tree that is sustainably harvested.
  - 6. Infill shall be domestically sourced – made in the USA only.
  - 7. Infill shall have a minimum of a 10 year warranty.
  - 8. Infill must be hydrophilic and allow absorption of rain or condensation.
  - 9. Infill must have a minimum bulk density of 15 lbs/cu ft.
  - 10. Infill color shall be natural to medium brown.

END OF SECTION

SECTION 32 84 00

PLANTING IRRIGATION

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. Provide complete, automatically controlled, spray sprinkler, turf rotor, bubbler and/or drip underground irrigation system as shown on Drawings.
- B. This Section includes but is not limited to: excavating, backfilling, finish grading, piping, valves, sprinklers, specialties, controls, and wiring for automatic control irrigation system.
- C. Related Sections include the following:
- 1. 01 56 39 Temporary Tree and Plant Protection.
  - 2. 32 90 00 Planting.

1.3 DEFINITIONS

- A. Certified Landscape Irrigation Auditor (CLIA): a person certified to perform landscape irrigation audits by the Irrigation Association Certification Board.
- B. Lateral (Circuit) Piping: Downstream from control valves to sprinklers, rotors and specialties. Piping is under pressure during flow.
- C. Mainline Piping: Downstream from point of connection to water distribution piping to, and including, control valves. Piping is under water-distribution-system pressure.
- D. The following are industry abbreviations for plastic materials:  
ASME: American Society of Mechanical Engineers.  
ASTM: American Society for Testing and Materials.  
AWG-UF: American Wire Gauge - Underground Feeder  
NFPA: National Fire Protection Association.  
PSIG: Pounds per Square Inch Gauge.  
PVC: Polyvinyl Chloride Plastic.  
SDR: Standard Direct Ratio.  
V: Volt

1.4 PERFORMANCE REQUIREMENTS

- A. Location of Sprinklers, Rotors and Specialties: Design location is approximate. Make minor adjustments necessary to avoid plantings and obstructions such as signs and light standards.



Maintain 100 percent, head to head, water coverage of turf and planting areas indicated with uniform coverage and minimum over-spray onto paving and no spray onto buildings or structures.

- B. Minimum Working Pressures: The following are minimum rated pressure requirements for piping, valves, and specialties, unless otherwise indicated:
1. Irrigation Main Piping: 200 psig.
  2. Lateral (Circuit) Piping: 150 psig.
- C. Irrigation Schedule: In accordance with DSA Title 24, Part 1 – Outdoor Water Use Requirements, Contractor shall prepare two (2) – three (3) irrigation schedules, one for plant establishment, one for the established landscape and one for temporarily irrigated areas if applicable. Each schedule shall indicate the number of gallons used and shall target the Estimated Total Water Use (ETWU) and not exceed the Maximum Applied Water Allowance (MAWA) calculated on the Irrigation Plan “California Water Efficient Landscape Worksheet.” Irrigation Schedule shall be submitted at substantial completion. After acceptance of substantial completion, Contractor shall laminate schedule in plastic and place in controller enclosure prior to final completion and end of maintenance. In preparing the Irrigation Schedule, the Contractor shall consider the following:
1. Irrigation interval (days between irrigation).
  2. Irrigation run times.
  3. Number of cycle starts to avoid runoff.
  4. Amount of applied water scheduled to be applied on a monthly basis.
  5. Application rate setting.
  6. Root depth setting.
  7. Plant type setting.
  8. Soil type.
  9. Slope factor setting.
  10. Shade factor setting.
  11. Irrigation uniformity or efficiency setting.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver piping with factory-applied end caps. Maintain end caps through shipping, storage, and handling to prevent pipe-end damage and to prevent entrance of dirt, debris, and moisture.
- B. Store plastic piping protected from direct sunlight. Support to prevent sagging and bending.

1.6 PROJECT CONDITIONS

- A. Interruption of Existing Water Service: Do not interrupt water service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary water service according to requirements indicated:
1. Notify Owner’s Representative no fewer than two days in advance of proposed interruption of water service.
  2. Do not proceed with interruption of water service without Owner’s Representative’s written permission.
- B. Interruption of Existing Irrigation Service: Do not interrupt existing to remain irrigation service. Prior to demolition work and prior to beginning irrigation work, review project site and meet with Owner Representative to review locations and connections of existing to remain irrigation system. Coordinate with General Contractor to ensure existing irrigation remains in place and operable

through the duration of construction. In the event existing irrigation is shut off or damaged during construction, contractor shall provide temporary connections or modifications to continue water service to existing to remain planting material or turf to maintain in a healthy growing condition throughout construction. In the event water service is not available, contractor shall apply water through manual delivery means as necessary. Obtain approval from Owner’s Representation two days in advance of any planned disruptions in water service.

1.7 COORDINATION

- A. Coordinate size and location of concrete bases. Cast anchor-bolt inserts into bases. Concrete, reinforcement, and formwork requirements are specified in Division 3.

1.8 MAINTENANCE

- A. Irrigation maintenance shall coincide with planting maintenance, refer to Specification 32 90 00 “Planting”. In the event planting is not part of this work, maintenance shall begin at written approval from Owner’s Representative of substantial completion, run ninety (90) calendar days and until receipt of Owner’s Representative’s written acceptance of completion of punch list items.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Use new materials of brands shown or drawings, specified herein or approved equal.
- B. Use existing materials if shown on drawings.
- C. Substitution of sprinklers, rotors, drip, valves and controllers will not be allowed due to variation in flows, precipitation rates, friction losses, and sizing and maintaining consistency with client equipment standards.

2.2 PIPES, TUBES, AND FITTINGS

- A. Steel Pipe: ASTM A 53/A 53M, Schedule 40, Type S or E, Grade A or B, galvanized with threaded ends.
1. Steel Pipe Nipples: ASTM A 733, made of ASTM A 53/A 53M or ASTM A 106, Schedule 40, galvanized, seamless steel pipe with threaded ends.
  2. Malleable-Iron Unions: ASME B16.39, Class 150, hexagonal-stock body with ball-and-socket, metal-to-metal, bronze seating surface, and female threaded ends.
  3. Gray-Iron Threaded Fittings: ASME B16.4, Class 125, galvanized, standard pattern.
  4. Cast-Iron Flanges: ASME B16.1, Class 125.
  5. Cast-Iron Flanged Fittings: ASME B16.1, Class 125, galvanized.
- B. Mainline Piping (unless otherwise indicated on Drawings):
1. Class 200 (C900), gasketed, purple reclaimed water PVC pipe, ASTM D-2241, NSF approved (size 6” and larger).
  2. Class 315 purple reclaimed water PVC pipe, ASTM D 1785, NSF approved (size 2-1/2” to 4”)
  3. Schedule 40 purple reclaimed water PVC pipe, ASTM D 2466, NSF approved (size 2” and smaller).



- 4. Fittings to be schedule 80 PVC, unless indicated otherwise on drawings.
  - C. Lateral Line Piping (unless otherwise indicated on Drawings):
    - 1. Schedule 40 purple reclaimed water PVC pipe, ASTM D 2466, NSF approved.
    - 2. Fittings to be schedule 40 PVC, unless indicated otherwise on drawings.
  - D. Sleeves (unless otherwise indicated on Drawings):
    - 1. For irrigation piping, use schedule 40 purple PVC pipe, NSF approved, 3" minimum in size for irrigation piping.
    - 2. For irrigation wiring, use schedule 40 PVC pipe, UL listed, NEMA TC-6, ANSI/UL651, ASTM F512, for outdoor, direct bury applications, PVC, 3" minimum size.
    - 3. Fittings to be schedule 40 PVC, unless indicated otherwise on drawings.
- 2.3 VALVES:
- A. BACKFLOW PREVENTION DEVICE: As indicated on the Drawings.
  - B. QUICK-COUPERS: As indicated on the Drawings.
  - C. VALVE BOXES:
    - 1. In paved areas, use Christy concrete utility box, size as required.
    - 2. In planting areas, use Christy plastic underground enclosure. Boxes shall have locking lid, bolt and washer, size as required, color to be green in turf areas, black in planting areas and purple for recycled water systems.
    - 3. Valve boxes to be rectangular for remote control valves and ball or gate valves and round for quick coupling valves.
    - 4. Valve box lids shall be labeled "IRRIGATION".
  - D. PULL BOXES AND SPLICE BOXES:
    - 1. In paved areas, use Christy concrete utility box, size as required.
    - 2. In planting areas, use Christy plastic underground enclosure. Boxes shall have locking lid, bolt and washer, size as required, color to be green in turf areas, black in planting areas, and purple for recycled water.
    - 3. Valve boxes to be rectangular for remote control valves and ball or gate valves and round for quick coupling valves.
    - 4. Valve box lids shall be labeled "IRRIGATION".
  - E. WIRE MESH AT VALVE BOXES: ½ inch by ½ inch, 16 gauge, galvanized wire mesh hardware cloth.
  - F. VALVE IDENTIFICATION TAGS: Shall be plastic yellow in color for potable water systems and purple in color for recycled water systems with 1 1/8" stamped black letters indicating controller/station number.

- G. SAND BACKFILL: shall consist of natural sand, manufactured sand, existing of native material, or combinations thereof, and shall conform to ASTM c-40 organic impurities, ASTM d-2419 sand equivalent and a pH value between 4.5 and 9.
  - H. VALVE BOX ROCK: shall be ¾" or smaller drain rock or pea gravel unless specified otherwise on Drawings.
  - I. VALVE BOX SUPPORT BRICK: shall be common red brick unless specified otherwise on Drawings.
- 2.4 AUTOMATIC CONTROL SYSTEM:
- A. CONTROLLER: As indicated on Drawings.
  - B. AUTOMATIC CONTROLLER GROUNDING: Contractor shall install grounding recommended by manufacturer for installation method detailed on this project.
  - C. WIRING: All 24 v line to be #14-1 awg-uf. Control wire insulation to be red in color and spare wire to be yellow in color. 24 v common wire to be #12-1 awg-uf, insulation to be white in color and spare common insulation shall be black in color.
  - D. SPLICING MATERIALS: manufacturer's packaged kit consisting of insulating, spring-type connector or crimped joint and epoxy resin moisture seal; suitable for direct burial.
  - E. CONNECTORS: Shall be or 3M "DBY" connectors or equal.
- 2.5 TRACER WIRE/DETECTABLE WARNING TAPE:
- A. Install tracer wire or detectable warning tape as indicated on Drawings.
  - B. Tracer Wire: #8 solid Bare Copper Wire.
  - C. Detectable Warning Tape: Electronically detectable plastic tape with metallic core, Terra Tape D, manufactured by Griffolyn Co., or equal, two (2) inches in width, continuously imprinted "caution buried water line".
- 2.6 CONCRETE THRUST BLOCKING:
- A. Shall be clean, Portland cement concrete, cast in place, five sacks of cement per cubic yard mixture with a 28-day compressive strength of 2,500 psi.
- 2.7 SPRINKLERS, DRIP SYSTEM, BUBBLERS, EMITTERS:
- A. As indicated on Drawings.

**END OF SECTION**



SECTION 32 90 00

PLANTING

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. Trees.
  - 2. Shrubs.
  - 3. Ground cover.
  - 4. Vines.
  - 5. Edgings.
  - 6. Planters.
  - 7. Bio-retention Basin.
- B. Related Sections include the following:
  - 1. Specification Section 01 56 39 "Temporary Tree and Plant Protection".
  - 2. Specification Section 31 05 13 "Earthwork" for excavation, filling and rough grading and for subsurface aggregate drainage and drainage backfill materials.
  - 3. Specification Section 32 84 00 "Planting Irrigation".

1.3 DEFINITIONS

- A. Container-Grown Stock: Healthy, vigorous, well-rooted exterior plants grown in a container with well-established root system reaching sides of container and maintaining a firm ball when removed from container. Container shall be rigid enough to hold ball shape and protect root mass during shipping and be sized according to ANSI Z60.1 for kind, type, and size of exterior plant required.
- B. Finish Grade: Elevation of finished surface of planting soil.
- C. Import Topsoil: Shall be obtained from a local source and coming from a site with similar soil characteristics as the project site. Topsoil shall be fertile, friable, natural loam surface soil, reasonably free of subsoil, clay lumps, brush, weeds and other litter and free of roots, stumps, stones and rocks and other extraneous or toxic matter harmful to plant growth.
- D. Manufactured Topsoil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.

- E. On-site Topsoil: Naturally occurring, on-site, surface soil, usually occurring in the top four (4) to twelve (12) inches of original, undisturbed surface soil containing organic material, micro-organisms, necessary nutrients and minerals to sustain plant growth and be approved to sustain plant life by an approved soil analysis laboratory.
- F. Planting Soil: On-site topsoil, import topsoil or manufactured topsoil.
- G. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill, before placing planting soil.
- H. Plant material: Exterior plants contained within the planting plan legend in categories of Trees, Shrubs, Vines, Perennials, Annuals and/or Ground Covers.
- I. Substantial completion for landscape and irrigation: Work shall be considered substantially complete when irrigation, planting, turf planting and seeding are installed correctly per plans and specifications with only minor adjustments required and approval has been submitted in writing by Owner's Representative.
- J. Final completion for landscape and irrigation: Work shall be considered complete when irrigation, planting, turf planting and seeding are installed correctly per plans and specifications and the maintenance period has been completed per plans and specifications and approval has been submitted in writing by Owner's Representative.

1.4 INSTALLER QUALIFICATIONS

- A. Installer Qualifications:
  - 1. Experience: The landscape installation firm shall have contracted for and successfully completed construction of a minimum of five (5) California public school district construction projects, approved by the Division of the State Architect (DSA), within the past five (5) years of similar size, complexity, budget and scope.
  - 2. Licensure: The landscape installation firm shall hold a current, active C27 "Landscaping Contractor" license classification by the California State License Board that has been consistently active for at least five (5) years and that has not been suspended or revoked.
  - 3. Supervision: The landscape installation firm shall have a qualified and experienced landscape technician on site during landscape installation.

1.5 SOIL ANALYSIS

- A. Soil Analysis Laboratory Qualifications: Testing laboratory shall be Lucchesi Plant and Soil Consulting, LLC., [www.lucchesiconsulting.com](http://www.lucchesiconsulting.com), (408) 337-2575, or approved equal independent laboratory, recognized by the State Department of Agriculture, with the experience and capability to conduct the testing indicated and that specializes in types of tests to be performed.
- B. Soil Analysis: Furnish soil analysis by a qualified soil analysis laboratory stating percentages of organic matter; gradation of sand, silt, and clay content; cation exchange capacity (CEC) or total exchangeable cations (TEC); sodium absorption ratio; deleterious material; pH; soluble salts, boron, mineral and plant-nutrient content of planting soil.
  - 1. Report suitability of planting soil for plant growth. State recommended quantities of nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce a satisfactory planting soil.

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1.6 OBSERVATION

- A. Owner's Representative may observe trees and shrubs either at place of growth or at site before planting for compliance with requirements for genus, species, variety, size, and quality. Owner's Representative retains right to observe trees and shrubs further for size and condition of balls and root systems, insects, injuries, and latent defects and to reject unsatisfactory or defective material at any time during progress of work. Remove rejected trees or shrubs immediately from Project site.
  - 1. Notify Owner's Representative of sources of planting materials 30 days in advance of delivery to site.
  - 2. Prior to Owner's Representative review of plant material, trees shall be neatly spaced approximately 5' apart (minimum) to allow for access in and around each tree and far enough to visually review each tree canopy without obstruction from other tree and/or shrub canopies.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Notify Owner's Representative fourteen (14) days prior to anticipated plant material delivery to schedule review of plant material prior to installation.
- B. Do not prune trees and shrubs before delivery, except as approved by Owner's Representative. Protect bark, branches, and root systems from sun scald, drying, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of exterior plants during delivery. Do not drop exterior plants during delivery.
- C. Handle planting stock by root ball.
- D. Deliver exterior plants after preparations for planting have been completed and install immediately. If planting is delayed more than six hours after delivery, set exterior plants trees in shade, protect from weather and mechanical damage, and keep roots moist.
  - 1. Do not remove container-grown stock from containers before time of planting.
  - 2. Water root systems of exterior plants stored on-site with a fine-mist spray. Water as often as necessary to maintain root systems in a moist condition.

1.8 PROJECT/SITE CONDITIONS

- A. Prior to placing topsoil, Contractor shall collect and submit soil samples representative of on-site topsoil and/or import topsoil proposed for use in all planting and lawn areas to a soil analysis laboratory for analysis and soil amending recommendations. Submit test results analysis and recommendations to Owner's Representative for review and approval prior to beginning work.
- B. Weather Limitations: Proceed with planting only when weather conditions permit.
- C. Coordination with Lawns: Plant trees and shrubs after finish grades are established and before planting lawns, unless otherwise acceptable to Owner's Representative.
  - 1. When planting trees and shrubs after lawns, protect lawn areas and promptly repair damage caused by planting operations.

- D. Contractor shall protect new plantings and/or delay planting in event of forecasted freezing temperatures.

1.9 WARRANTY

- A. Special Warranty: Warrant the following exterior plants, for the warranty period indicated, against defects including death and unsatisfactory growth, except for defects resulting from lack of adequate maintenance, neglect, or abuse by Owner or users, or incidents that are beyond Contractor's control.
  - 1. Warranty Period for Trees, Shrubs, Vines, Lawns and Ground Covers: One year from date of Final Completion.
  - 2. Remove dead exterior plants immediately. Replace immediately unless required to plant in the succeeding planting season.
  - 3. Replace exterior plants that are more than 25 percent dead or in an unhealthy condition at end of warranty period.
  - 4. A limit of one replacement of each exterior plant will be required, except for losses or replacements due to failure to comply with requirements.

1.10 MAINTENANCE

- A. Plant Material and Planting Areas: Maintain for the following maintenance period by pruning, cultivating, watering, weeding, fertilizing, restoring planting basins, tightening and repairing stakes and guy supports, and resetting to proper grades or vertical position, as required to establish healthy, viable plantings. Spray as required to keep trees and shrubs free of insects and disease. Refer to "Maintenance Schedule."
  - 1. Maintenance Period: Ninety (90) days from date of Owners Representative's written approval of Substantial Completion of the planting and irrigation.
  - 2. In the event plant material fails during the maintenance period due to Contractor negligence, the maintenance period shall extend until 90% of the plant material is established as determined by the Owner's Representative.

PART 2 - PRODUCTS

2.1 TREE, SHRUB AND VINE MATERIAL

- A. General: Furnish nursery-grown trees and shrubs complying with ANSI Z60.1, with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock free of disease, insects, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.
- B. Grade: Provide trees and shrubs of sizes and grades complying with ANSI Z60.1 for type of trees and shrubs required. Trees and shrubs of a larger size may be used if acceptable to Owner's Representative, with a proportionate increase in size of roots or balls.
- C. Label at least one tree and one shrub of each variety and caliper with a securely attached, waterproof tag bearing legible designation of botanical and common name.
- D. If formal arrangements or consecutive order of trees or shrubs is shown, select stock for uniform height and spread, and number label to assure symmetry in planting.



- E. Provide plant material as specified on the Drawings including size, genus, species and variety.

2.2 SINGLE-TRUNK AND MULTI-TRUNK TREES

- A. Trees: Single-trunk or multi-trunk trees with straight trunk, well-balanced crown, and intact leader, of height and caliper indicated, complying with ANSI Z60.1 for type of trees required.
  - 1. Branching Height: typical of tree species and container size, single trunk unless specified as multi-trunk on Planting Plan Legend. Select branching height in accordance with planting location. Low branching trees shall not be planted in conflict with pathways, driveways and/or structures.
  - 2. Single-stem trees shall have straight trunk, well-balanced crown, and intact leader, of height and caliper indicated, complying with ANSI Z60.1 for type of trees required.
  - 3. Multi-stem trees shall branch naturally according to species and type, with relationship of caliper, height, and branching according to ANSI Z60.1.

2.3 GROUND COVER PLANTS

- A. Ground Cover: Provide ground cover of species indicated, established and well rooted in pots or similar containers, and complying with ANSI Z60.1.

2.4 PLANTS

- A. Annuals: Provide healthy, disease-free plants of species and variety shown or listed. Provide only plants that are acclimated to outdoor conditions before delivery and that are in bud and bloom.
- B. Perennials: Provide healthy, field-grown plants from a commercial nursery, of species and variety shown or listed, remove dead flowers.

2.5 TOPSOIL

- A. Prior to placing bid, Contractor to coordinate with General Contractor, Demolition and/or Grading Contractors and verify quantity and source of planting soil for all planting areas. Identify Contractor responsible for stockpiling on-site topsoil and/or acquiring import planting soil and installing a minimum of twelve (12) inches of planting soil in all landscape planting areas and any raised planters and rough grading in accordance with these specifications, details, notes, grading and drainage plans.
- B. Coordinate with General Contractor, Demolition and/or Grading Contractors for removal and replacement of lime treated soils and replacement with planting soil prior to planting to depth required to remove lime treatment. In event trees are planted in lime treated soils, trees shall have a minimum six (6) inch layer of planting soil below their rootball to provide a suitable substrate to root into for establishment.
- C. On-site topsoil: Re-use existing topsoil or existing surface soil, top twelve (12) inches excavated and stockpiled on-site. Verify suitability of existing and/or stockpiled surface soil to produce planting soil by submitting a sample to a soil analysis laboratory. Acceptable on-site topsoil shall be ASTM D 5268, pH range of 5.5 to 7.5 (5.8 to 7.8 for predominantly California native plant species), representative of productive soils in the vicinity, a range of 4 to 20 percent organic material content; free of stones one (1) inch or larger in any dimension, roots, plants, sod, clay lumps and other extraneous materials harmful to plant growth. Sodium absorption rate (SAR)

shall not exceed 5.0, conductivity of the saturation extract solution shall not exceed 3.0, and boron concentration in the saturation shall not exceed 1.0 ppm. Fine gravel (2-5 mm) and coarse gravel (5-12 mm) content shall not exceed 30%.

- D. Import Topsoil: Supplement with imported or manufactured topsoil from off-site, local sources, when quantities of on-site topsoil are insufficient. Do not obtain topsoil from bogs or marshes. If soil is obtained from agricultural land, Contractor shall submit proof soil is nematode free. Import topsoil shall meet the following requirements:

- 1. USDA Classification of fraction passing 2.0 mm sieve: sandy loam, sandy clay loam or loam.

Class	Particle size range	maximum, %	minimum, %
Coarse Sand	0.5 – 2.0 mm	15	0
Silt	.002-.05 mm	30	10
Clay	<.002 mm	25	10
<u>Other Classes</u>			
Gravel	2-13 mm	15	0
Rock	½-1 inch	5% by volume with	none >1 inch
Organic		15	4

- 3. Chemistry – Suitability Considerations
  - Salinity: Saturation Extract Conductivity (ECe)  
Less than 3.0 dS/m @ 25 degrees C.
  - Sodium: Sodium Adsorption Ratio (SAR)  
Less than 6 ppm
  - Boron: Saturation Extract Concentration  
Less than 1.00 ppm
  - Reaction: pH of Saturated Paste: 5.5 – 7.5 without high lime content.
- 4. Soil to contain sufficient quantities of available nitrogen, phosphorus, potassium, calcium and magnesium to support normal plant growth. In the event of nutrient inadequacies, provisions shall be made to add required materials prior to planting.
- 5. Soil Analysis: Contractor shall submit to the Owner's representative for approval, certification from an agricultural soils analysis laboratory that the import topsoil provided conforms to the specifications prior to delivery of import or placement on on-site topsoil. Soil analysis shall have been performed on import topsoil source within the previous year.

2.6 BIO-RETENTION BASIN

- A. Refer to civil drawings for construction of bio-retention basin swales.
- B. Line bio-retention basin swale with Lenox Blend soil mixture available from LH Voss Materials, Inc. 2445 Del Vista Monte, Concord, CA 94520, www.lhvoss.com, (800) 660-8677, Rob Hawkins x 108, Butch Voss x 109. Depth shall be a minimum of 18" unless specified otherwise within plans and/or details.

2.7 FERTILIZER AND SOIL AMENDMENTS



- A. Contractor shall collect and submit sample of proposed planting soil, representative of the top eight (8) inches of planting soil, to a locally known soil analysis laboratory, soil analysis laboratory for analysis and amendment recommendations. Sample shall be representative of typical on-site topsoil proposed for use in planting areas.
- B. If import topsoil is proposed, import topsoil sample shall be submitted to a soil analysis laboratory locally known for analysis, amendment recommendations and installation recommendations.
- C. Contractor shall provide soil analysis laboratory, the following information when submitting soil for analysis:
  - 1. Project type (public school, commercial building, etc.).
  - 2. Anticipated maintenance (regular, low, none, etc.).
  - 3. Irrigation water source (potable or recycled).
  - 4. Proposed plant material type such as California native plants, turf, shrub and ground covers.
  - 5. Copy of this specification.
- D. Fertilizers: All fertilizers shall be of an approved brand with a guaranteed chemical analysis as required by USDA regulations and shall be dry and (except for plant tabs) free flowing.
- E. Nitrogen Stabilized Organic Soil Amendment: 0-1/4 inch nitrogen-stabilized organic amendment contributing at least 270 pounds of organic matter per cubic yard. Consider using Composted Greenwaste Organic Soil Amendment, such as Z-Best Organic Compost from Zanker Landscape Materials ([www.zankerlandscapematerials.com](http://www.zankerlandscapematerials.com)) or equal if recommended by soil analysis laboratory. Compost shall be obtained from a supplier participating in the Seal of Testing Assurance (STA) program of the U.S. Composting Council.
  - 1. In order to comply with MWELO 492.6, 3. (C). Soil Preparation, Mulch and Amendments, at a minimum, compost shall be applied at a rate of four (4) cubic yards per 1,000 square feet of permeable area incorporated to a depth of six (6) inches into the soil. Soils with greater than 6% of organic matter in the top six (6) inches are exempt from adding compost.
  - 2. Nitrogen stabilized sawdust shall not be used.
- F. Soil Preparation: The following materials and quantities are given for bidding purposes only and Contractor shall amend soil using products, quantities and methods specified by soil analysis laboratory.
  - 1. Nitrogen stabilized organic amendment.
  - 2. All purposed granular fertilizer (6-20-20).
  - 3. Soil sulfur.
- G. Planting Tablets: 21 gram controlled release fertilizer supplying nitrogen for up to 1 ½ years and 20-10-5 content.
- H. Backfill Mix: Shall be a mixture of on-site or import topsoil, nitrogen stabilized organic amendment and fertilizer. For bidding purposes, backfill mix shall include 2/3 topsoil and 1/3 nitrogen stabilized organic amendment with 6-20-20 granular fertilizer, quantity per manufacturer, according to container or root stock size, mixed thoroughly.

2.8 MULCHES

- A. Due to variation in mulch sizes, Contractor shall remove large bark mulch in excess of approximately ¾" x ½" x 6" in size of 2.5 cubic inches in volume.
- B. Organic Mulch for non-bio-retention planting areas: Free from deleterious materials and suitable as a top dressing of trees and shrubs, consisting of organic bark from Pacific Landscape Supply (209) 593-1199, [www.pacificlandscapesupply.com](http://www.pacificlandscapesupply.com), or approved equal. Submit sample to Owner's Representative for review and approval.
- C. Organic Mulch for Bio-retention basin swales: Free from deleterious materials and suitable as a top dressing of trees and shrubs, consisting of organic shredded cedar bark from Sun Gro Horticulture (800) 222-2551, or approved equal. Submit sample to Owners Representative's for review and approval.

2.9 HERBICIDES

- A. Pre-emergent: Oryzalin, or approved equal.
- B. Selective and non-selective Herbicides: EPA registered and approved, of type recommended by manufacturer for application.
- C. Contact Owner and obtain School District, Local, State and Federal policies and procedures for regulating application of chemical controls. Contractor shall comply with all applicable policies and/or procedures for application, posting and notifications.

2.10 STAKES AND GUYS

- A. Upright and Guy Stakes: Rough-sawn, sound, new hardwood, redwood, or pressure-preservative-treated Douglas Fir or Lodgepole Pine, free of knots, holes, cross grain, and other defects, two (2) inches in diameter by length required, and pointed at one end.
- B. Guy and Tie Wire: ASTM A 641/A 641M, Class 1, galvanized-steel wire, 2-strand, twisted, 0.106 inch in diameter.
- C. Guy Cable: 5-strand, 3/16-inch- diameter, galvanized-steel cable, with zinc-coated turnbuckles, a minimum of 3 inches long, with two 3/8-inch galvanized eyebolts.
- D. Tree Ties: Z-Strap tree ties, or equal, made of one (1) inch wide by ¼" thick black recycled tire rubber with pre-punched nail holes. Contact Sullivan & Mann Lumber Company, Inc. (800) 847-6562 ([www.sullivanandmann.com](http://www.sullivanandmann.com)).
- E. Flags: Standard surveyor's plastic flagging tape, white, 6 inches long.

2.11 LANDSCAPE EDGINGS/HEADERBOARD

- A. Wood Strip Edging, unless indicated otherwise on Drawings, shall be as follows:
  - 1. Species: Construction Heart Redwood, size per detail.
  - 2. Stakes: Construction heart redwood, size per detail, with galvanized nails for anchoring edging.
  - 3. Splice Plate: Same species as edging, 1 by 6 by 24 inches long in nominal size, with galvanized nails for securing in place.



2.12 WATER

- A. Water shall be suitable for irrigation and free from ingredients harmful to planting areas.

2.13 POTTING SOIL

- A. Potting soil shall be Supersoil® or approved equal potting soil, blend of organic materials, natural and traditional fertilizers, formulated for outdoor container plants with no fertilizing required for up to ninety (90) days after planting.

2.14 MISCELLANEOUS PRODUCTS

- A. Tree Trunk Guard: nine (9) inch high by four (4) inch diameter plastic, corrugated tube, Arbor Guard + or equal.
- B. Tree Root Barriers: 18” high by 24” wide, interlocking panels of not less than 0.080” (2.032 mm) thickness, black in color, at least 50% recycled material, injection molded plastic product for linear applications with ultra-violet inhibitors with anti-lift ground lock tabs, vertical root deflecting ribs and double top edge consisting of two parallel, horizontal ribs on the top.
- C. Jute Netting: Biodegradable in two (2) to three (3) years from installation, absorbing water four to five times fabric weight, open area 60% to 65%, available in rolls four (4) feet in width. Use galvanized steel staples as recommended by manufacturer to secure netting in place.

END OF SECTION

SECTION 33 41 00

STORM DRAINAGE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Civil drawings, including but not limited to 1-C2.1, 2-C2.1, 3-C2.1, 4-C2.1, & 5-C2.1
- B. General provisions of Contract Agreement form, including appendices and exhibits.
- C. Section 31 23 00 – “Excavation and Fill”.

1.2 SUMMARY

- A. This section includes the following:
  - 1. Storm drainage.

1.3 DEFINITIONS

- A. Drainage Piping: System of pipe, fittings, and appurtenances for gravity flow of storm water.
  - 1. Storm Drains: The primary drainage conduit system conveying storm water runoff from catch basins to storm water ponds or other points of release.
  - 2. Area Drains: A secondary system of drainage conduits conveying storm water collected from building roof drains and local area drain basins to the primary storm drain system.
- B. Sewerage Piping: System of sewer pipe, fittings, and appurtenances for collection of wastewater and for its conveyance by gravity flow to public sanitary sewage systems.
- C. Bedding: Shall be the material placed to a minimum depth of 4-inches (102-mm) below and 12-inches above all storm and sewer piping and structures.
- D. Backfill: Shall be that material used to fill trenches and excavated areas above the depth of the bedding.
- E. Softscape: Landscape areas planted with vegetation (pervious).
- F. Hardscape: Areas paved or intended for foot travel (impervious).

1.4 SUBMITTALS



- A. General: Submit each item in this Article according to the Conditions of the Contract and Division 1 Specification Sections.
- B. Product data for the following:
  - 1. Drop inlets, area drain boxes and in-line drain boxes.
- C. Shop drawings for precast concrete manholes and other structures. Include frames, covers, and grates.
- D. Shop drawings for cast-in-place concrete manholes and other cast-in-place structures.
  - 1. Shop drawings for area drains, including frames, covers, and grate.
  - 2. Certificate of compliance for utility bedding (sewer, area drains, and storm drains).
  - 3. Certificate of compliance for backfill bedding (sewer, area drains, and storm drains).

1.5 QUALITY ASSURANCE

- A. Product Options: Drawings indicate sizes, profiles, connections, and dimensional requirements of system components and are based on specific manufacturer types indicated. Other manufacturers' products with similar performance characteristics may be considered.
- B. Safety Standards: All excavation should be constructed in accordance with OSHA and CAL-OSHA Safety Standards. Safety in and around utility trench is the responsibility of the underground contractors.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Do not store plastic structures in direct sunlight.
- B. Do not store plastic pipe or fittings in direct sunlight.
- C. Protect pipe, pipe fittings, and seals from dirt and damage.
- D. Handle precast concrete manholes and other structures according to manufacturer's rigging instructions.
- E. Properly support pipe during transport, handling, and storage. Maintain bracing and chocking in place until pipe is ready for installation.

1.7 PROJECT CONDITIONS

- A. Notify Underground Service Alert (USA) at (800) 227-2600 for location and verification of existing utility locations.

- B. Locate existing structures and piping to be closed and abandoned. Verify that storm drain system piping may be installed in compliance with design and no underground conflicts exist that were not shown on the plans.
- C. Existing Utility System: Do not interrupt existing utilities serving facilities occupied by the Owner or others except when permitted under the following conditions and then only after arranging to provide acceptable temporary utility services.
  - 1. Notify Owner not less than 48 hours in advance of proposed utility interruptions.
  - 2. Do not proceed with utility interruptions without receiving Owner's written permission.
- D. Site Information: See Section 31 1000 Site Clearing, Part 1.03 Project Conditions, for description of existing topographic and utility information.

1.8 SEQUENCING AND SCHEDULING

- A. Notify Owner's representatives a minimum of two working days in advance of proposed storm sewer interruptions.
- B. Coordinate with other pipeline and utility work (gas, electric conduits, water, fire suppression, communications conduits, etc.)

PART 2 - PRODUCTS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following for the entire project or approved substitute:
  - 1. Drop Inlets, Trench Drains and Drain Boxes:
    - a. Christy Concrete Products Inc.
    - b. Hanson Concrete Products Inc.
    - c. Santa Rosa Products Inc.
  - 2. Area Drain (Inline and Drain Basins)
    - a. Nyloplast® Advanced Drainage Systems, Inc. (ADS).
    - b. Christy Concrete products
  - 3. Manholes:
    - a. Santa Rosa Products, Inc.
    - b. Hanson Concrete Products, Inc.
  - 4. Slot Drains
    - a. NDS

2.2 PIPES AND FITTINGS



- A. Polyvinyl Chloride (PVC) Sewer Pipe and Fittings: ASTM F 679, T-1 wall thickness, bell and spigot for gasketed joints.
  - 1. Gaskets: ASTM F 477, elastomeric seal.
- B. Polyvinyl Chloride (PVC), Profile, Gravity Sewer Pipe and Fittings: ASTM F 794, open and closed profile, bell and spigot for gasketed joints.
  - 1. Gaskets: ASTM F 477, elastomeric seal to form watertight joints.
- C. Polyvinyl Chloride (PVC), Ribbed Drain Pipe: AASHTO M 304M, bell and spigot, with smooth waterway for bell-gasketed joints.
  - 1. Fittings: AASHTO M 304M or ASTM F 794 for bell-gasketed joints.
  - 2. Gaskets: ASTM F 477, elastomeric seal to form soiltight joints.
- D. Polyvinyl Chloride (PVC), Ribbed Drain Pipe: AASHTO M 304M, bell and spigot, with smooth waterway for bell-gasketed joints.
  - 1. Fittings: AASHTO M 304M or ASTM F 794 for bell-gasketed joints.
  - 2. Gaskets: ASTM F 477, elastomeric seal to form soiltight joints.

2.3 SPECIAL PIPE COUPLINGS AND FITTINGS

- A. Gasket-Type Pipe Couplings: Rubber or elastomeric compression gasket, made to match outside diameter of smaller pipe and inside diameter of bell of adjoining larger pipe, for non-pressure joints.
  - 1. Gaskets for Plastic Pipe: ASTM F477, elastomeric seal.
  - 2. Gaskets for Dissimilar Pipes: Compatible with pipe materials being joined.
  - 3.

2.4 DRAIN BOXES

- A. On-Site Precast drain boxes: All precast drain boxes shown on, but not limited to the civil plans. Inlets shall be precast, reinforced concrete of depth indicated.
  - 1. Christy 22"x22" V64

2.5 AREA DRAINS

- A. Onsite Area Drains: All area drains as shown on, but not limited to the Civil Drawings. shall be in accordance with the following;
  - 1. ADS Form # 1074/94 "ADS Surface Drainage Products".
  - 2. Grate:
    - a. Hardscape Areas:
      - 1) 10" Bronze ADS standard light duty with locking device.

2.6 CONCRETE

- A. General: Cast-in-place concrete according to ACI 318, ACI 350R, and the following:
  - 1. Cement: ASTM C150, Type II.
  - 2. Fine Aggregate: ASTM C33, sand.
  - 3. Coarse Aggregate: ASTM C33, crushed gravel.
  - 4. Water: Potable.
- B. Structures: Portland-cement design mix, 4000 psi (27.6 MPa) minimum, with 0.45 maximum water-cement ratio.
  - 1. Reinforcement Fabric: ASTM A185, steel, welded wire fabric, plain.
  - 2. Reinforcement Bars: ASTM A615, Grade 60 (ASTM A615M, Grade 400), deformed steel.
- C. Structure Channels and Benches: Field formed from concrete. Portland-cement design mix, 4000 psi (27.6 MPa) minimum. with 0.45 maximum water-cement ratio.
  - 1. Include channels and benches in storm manholes.
  - 2. Include channels and benches in sanitary sewerage manholes.
  - 3. Include channels and benches in storm drop inlets.
    - a. Manhole Channels: Concrete invert, formed to same width as connected piping, with height of the vertical sides to 3/4 of the pipe diameter. Form curved channels with smooth, uniform radius and slope. The radius shall be not less than 40 percent of the manhole diameter.
      - 1) Invert Slope: 2.5 percent (1:40) through manhole.
    - b. Manhole Benches: Concrete, sloped to drain into channel; coarse broom finish.
      - 1) Slope: 0.5 inch per foot (1:24).
      - 2) Include channels and benches in storm drainage catch basins.
    - c. Catch Basin Channels: Concrete invert, formed to same width as connected piping, with height of the vertical sides to 3/4 of the pipe diameter. Form curved channels with smooth, uniform radius and slope. The radius shall be not less than 40 percent of the manhole diameter.
      - 1) Invert Slope: match proposed slope through catch basin.
    - d. Catch Basin Benches: Concrete, sloped to drain into channel
      - 1) Slope: 0.5 inch per foot (1:24).

2.7 BEDDING, AND BACKFILL

- A. Sand bedding: Bedding material shall be clean, washed, granular material derived from decomposed or crushed rock. Such material shall be free of organic material, mica, clay, silts, oils and other deleterious materials. Sand bedding shall have a maximum particle size of 1/4 - inch with gradation that allows 90 to 100 percent passing a No. 4 sieve and not more than 10 percent to pass a No. 200 sieve.
- B. Backfill:
  - 1. Pipe Zone Backfill: Backfill with sand conforming to the requirements of 2.07 A., referenced above. Backfill shall be placed 12 inches above the top of pipe and compact in accordance to 95 % Relative Compaction. Compaction shall be monitored by Owner's Geotechnical Engineer.



- 2. Backfill above pipe zone: Sand conforming to the specification above shall be used as backfill. Native material may be used as trench backfill if approved by the Owner's Geotechnical Engineer.
- 3. Sand/Cement Slurry Backfill: Sand/cement slurry backfill shall consist of fluid, workable mixture of aggregate, cement, and water. Aggregate for sand/cement slurry shall be clean, washed fine aggregate conforming with Section of this section. Alternatively, fine aggregate may be clean mortar sand conforming with provisions of ASTM C404.
  - a. Cement shall be Type IP.
  - b. Water shall be potable.

2.8 EXCAVATION FOR SEWER AND DRAINAGE PIPE TRENCHES

- A. Excavate trenches to indicated slopes, lines, depths, and invert elevations. See Section 31 23 00 – "Excavation and Fill."
- B. Excavate trenches to uniform widths to provide a working clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches (300 mm) higher than top of pipe, unless otherwise indicated.
  - 1. Clearance: A minimum of 4 inches (100 mm) and a maximum of 9 inches (230 mm) on each side of pipe or conduit.
- C. Trench Bottoms: Excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduit. Shape subgrade to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits. Remove stones and sharp objects to avoid point loading.
  - 1. For pipes or conduit less than 4 inches (100 mm) in nominal diameter, hand-excavate trench bottoms and support pipe bells and conduit on an undisturbed subgrade.
  - 2. For pipes and conduit 4 inches (100 mm) or larger in nominal diameter, place and compact sand bedding as shown on the plans, shape bedding to provide support to a minimum of 180 degrees of pipe circumference. Fill depressions with tamped sand backfill.
  - 3. Where rock or other unyielding bearing surface is encountered, extend trench excavation a minimum of 6 inches (150 mm) below pipe barrel and bell to receive bedding course.

2.9 UNAUTHORIZED EXCAVATION

- A. Fill unauthorized excavations per Section 3.08 "Unauthorized Excavations" of Section 31 2300 – "Excavation and Fill."

- B. Where indicated widths of utility trenches are exceeded, provide remedial measures in accordance with the recommendations of the pipe manufacturer and such other measures as may be required by the Owner's representative.

2.10 COMPACTION

- A. Place backfill and fill materials in layers not more than 8 inches (200 mm) in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches (100 mm) in loose depth for material compacted by hand-operated tampers.
- B. Place backfill and fill materials evenly on all sides of structures to required elevations. Place backfill and fill uniformly along the full length of each structure.
- C. Percentage of Maximum Dry Density Requirements: Compact soil shall be in compliance with the plans and details.

END OF SECTION



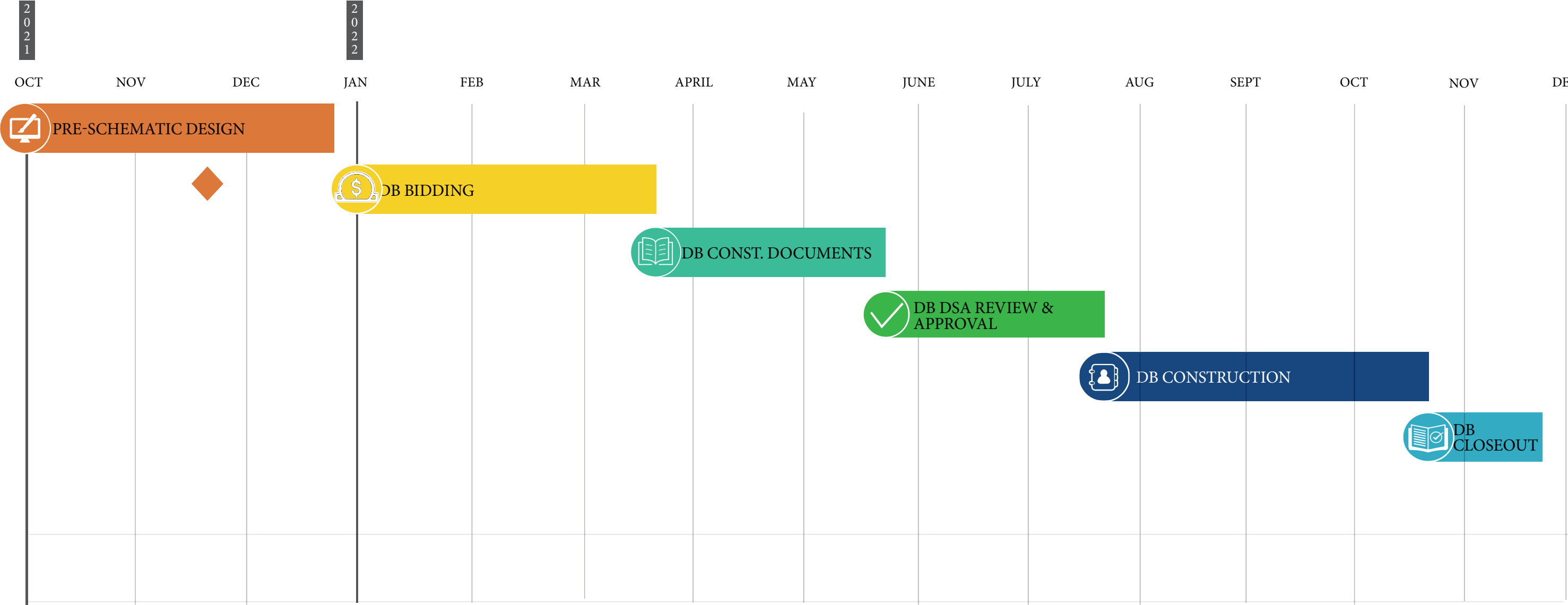
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## Schedule



Preliminary Project Schedule

Pre - Schematic Design:	Oct - Dec. 21
Topographical Survey:	Nov. 21
DB Bidding:	Jan. - Mar. 22
DB Construction Documents:	Mar. - May 22
DB DSA Review and Approval:	May - July 22
DB Construction Admin Support:	July - Oct. 22
DB Closeout:	Oct. - Nov. 22





# 05

## Appendix



DRAWING INDEX

CIVIL DRAWINGS

1-C0.1	EXISTING OVERALL SITE - AUDUBON ES
1-C1.1	EXISTING SITE & DEMOLITION PLAN - AUDUBON ES
1-C2.1	SITE IMPROVEMENT PLAN - AUDUBON ES
1-C3.1	DETAILS - AUDUBON ES
2-C0.1	EXISTING OVERALL SITE - BAYSIDE ACADEMY
2-C1.1	EXISTING SITE & DEMOLITION PLAN - BAYSIDE ACADEMY
2-C2.1	SITE IMPROVEMENT PLAN - BAYSIDE ACADEMY
2-C3.1	DETAILS - BAYSIDE ACADEMY
3-C0.1	EXISTING OVERALL SITE - BREWER ISLAND ES
3-C1.1	EXISTING SITE & DEMOLITION PLAN - BREWER ISLAND ES
3-C2.1	SITE IMPROVEMENT PLAN - BREWER ISLAND ES
3-C3.1	DETAILS - BREWER ISLAND ES
4-C0.1	EXISTING OVERALL SITE - FIESTA GARDENS ES
4-C1.1	EXISTING SITE & DEMOLITION PLAN - FIESTA GARDENS ES
4-C2.1	SITE IMPROVEMENT PLAN - FIESTA GARDENS ES
4-C3.1	DETAILS - FIESTA GARDENS ES
5-C0.1	EXISTING OVERALL SITE - GEORGE HALL ES
5-C1.1	EXISTING SITE & DEMOLITION PLAN - GEORGE HALL ES
5-C2.1	SITE IMPROVEMENT PLAN - GEORGE HALL ES
5-C3.1	DETAILS - GEORGE HALL ES

LANDSCAPE DRAWINGS

L.01	LANDSCAPE PLAN - AUDUBON ES
L.02	LANDSCAPE PLAN - BAYSIDE ACADEMY
L.03	LANDSCAPE PLAN - BREWER ISLAND ES
L.04	LANDSCAPE PLAN - FIESTA GARDENS ES
L.05	LANDSCAPE PLAN - GEORGE HALL ES
L.06	LANDSCAPE DETAILS

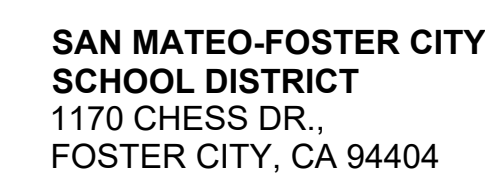
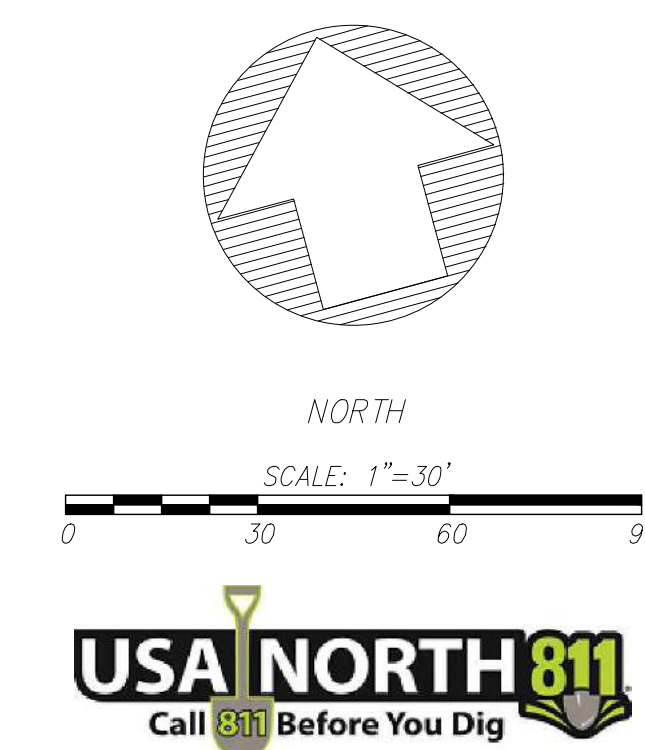
AS-BUILT ACCESSIBILITY REFERENCE DRAWINGS

A0.1	SITE PLAN - AUDUBON ES
G-0.4	SITE ACCESSIBILITY PLAN - BAYSIDE ACADEMY
A1.0	SITE PLAN & CODE INFORMATION - BREWER ISLAND ES
A1.04	ENLARGED SITE PLAN - FIESTA GARDENS ES
A1.2	CAMPUS SITE PLAN - GEORGE HALL ES



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3542-006-000

333 W SAN CARLOS STREET, #750  
SAN JOSE, CA 95110  
408 977 9160 / [www.hmcarchitects.com](http://www.hmcarchitects.com)

NO.	DESCRIPTION	DATE
01	BRIDGING DOCUMENTS	12/21/2021

Consultant



C2G/CIVIL CONSULTANTS GROUP, INC.  
Engineers/Planners  
4444 Scotts Valley Drive / Ste 6  
Scotts Valley, CA 95066  
T (831) 438-4420 F (831) 438-5829

Project No. 1002.03

FACILITY:

**FACILITY NAME**  
**AUDUBON ELEMENTARY SCHOOL**  
**841 GULL AVE**  
**FOSTER CITY, CA 94404**

PROJECT:  
**SYNTHETIC TURF PROJECT**

SHEET NAME:  
**EXISTING OVERALL SITE**

BRIDGING DOCUMENTS

DATE: 12/21/2021

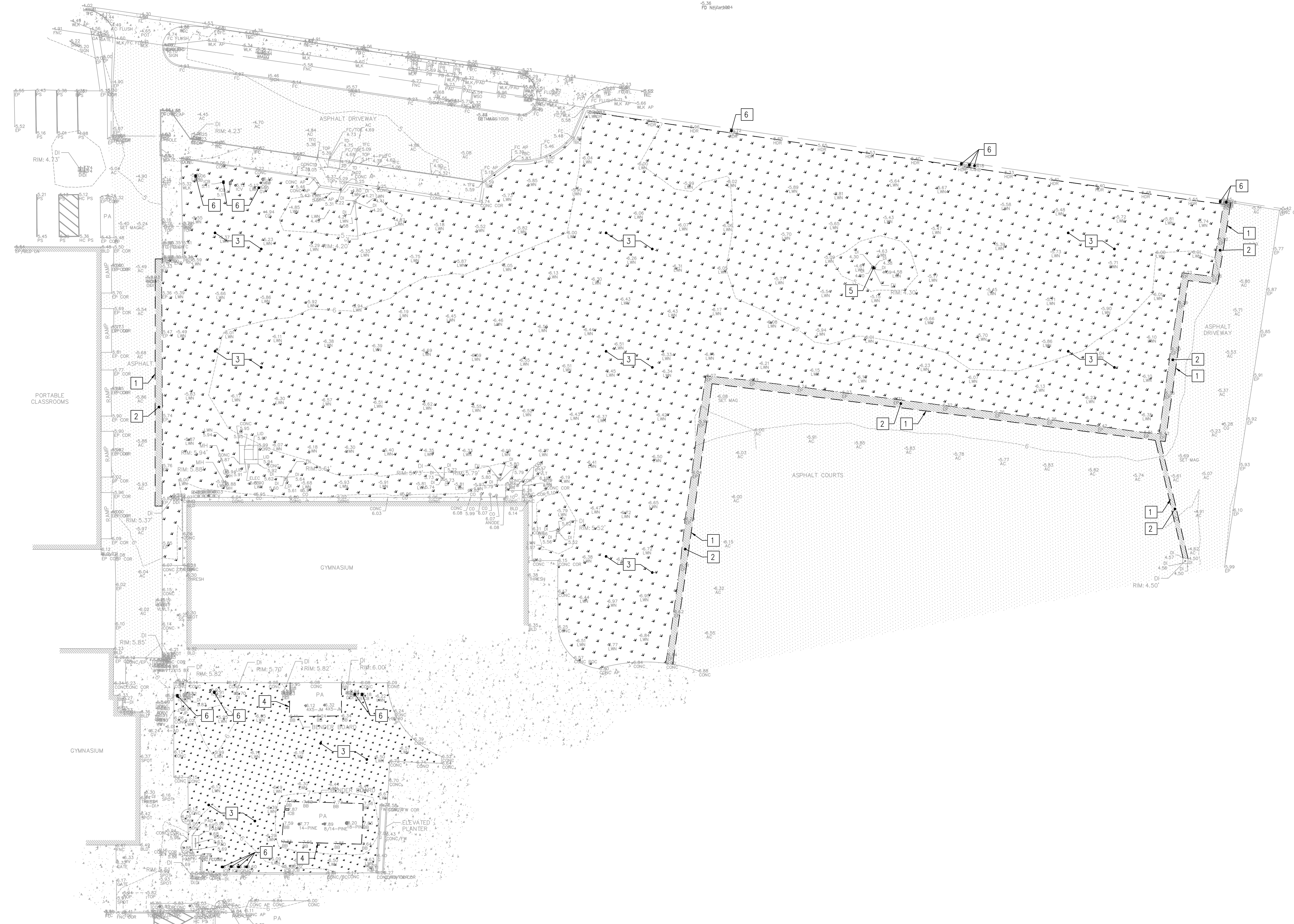
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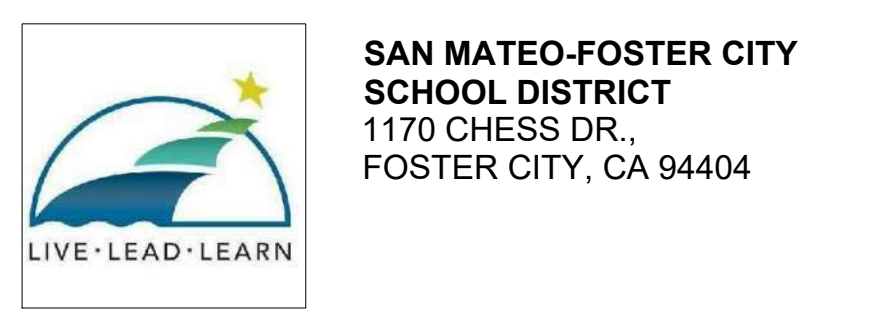
# 1-C0.1



DATE: 12/21/2021  
DRAWN BY: J. L. BROWN  
CHECKED BY: J. L. BROWN  
SCALE: 1"=20'  
SHEET: 1-C1.1  
PROJECT: AUDUBON ELEMENTARY SCHOOL  
FACILITY NAME: AUDUBON ELEMENTARY SCHOOL  
841 GULL AVE  
FOSTER CITY, CA 94404  
PROJECT: SYNTHETIC TURF PROJECT  
EXISTING SITE & DEMOLITION PLAN  
BRIDGING DOCUMENTS  
DATE: 12/21/2021  
CLIENT PROJ NO:  
SHEET:  
1-C1.1



- DEMOLITION NOTES:**
1. SAWCUT EXISTING AC PAVEMENT - 665 LF
  2. REMOVE EXISTING AC PAVEMENT - 1,660 SQFT
  3. REMOVE EXISTING LAWN - 64,490 SQFT
  4. REMOVE EXISTING HEADER BOARD - 152 LF
  5. REMOVE EXISTING STORM DRAIN DROP INLET
  6. REMOVE EXISTING IRRIGATION BOXES AND CONTROL VALVES. EXISTING IRRIGATION PIPES TO BE CUT, CAPPED, AND ABANDONED IN PLACE. CONTRACTOR SHALL VERIFY WHICH IRRIGATION CONTROLLERS SERVE THE FIELDS PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL ENSURE THAT ANY LANDSCAPED AREAS TO REMAIN STILL HAVE WORKING IRRIGATION SYSTEM ONCE THE FIELD SYSTEM IS DISCONNECTED.



**HMC Architects**

3542-006-000

333 W SAN CARLOS STREET, #750  
SAN JOSE, CA 95110  
408 977 9160 / www.hmcarchitects.com

ISSUE		
NO.	DESCRIPTION	DATE
01	BRIDGING DOCUMENTS	12/21/2021

Consultant:



C2C/CIVIL CONSULTANTS GROUP, INC.  
Engineers/Planners  
4444 Scotts Valley Drive / Site 6  
Scotts Valley, CA 95066  
T (831) 438-4420 F (831) 438-5829



Project No. 1002.03

FACILITY NAME  
**AUDUBON ELEMENTARY SCHOOL**  
841 GULL AVE  
FOSTER CITY, CA 94404

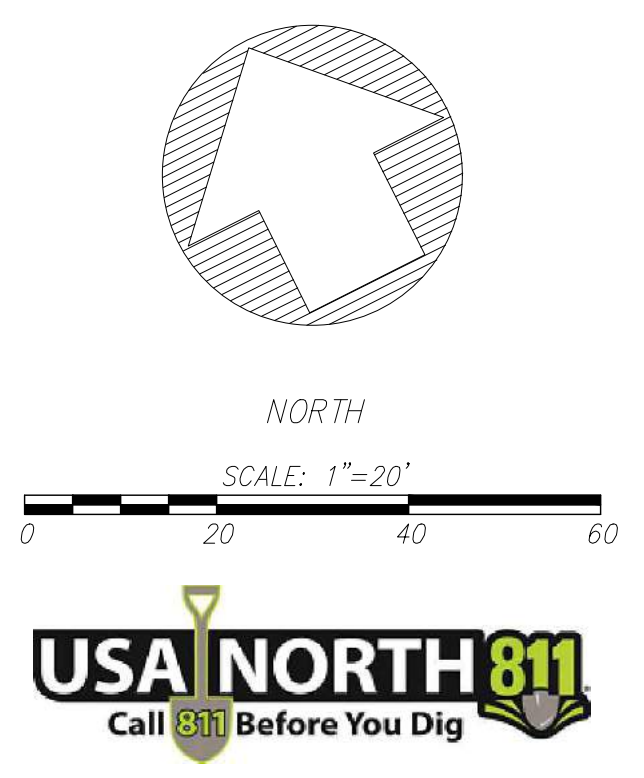
PROJECT:  
**SYNTHETIC TURF PROJECT**

SHEET NAME:  
**EXISTING SITE & DEMOLITION PLAN**

**BRIDGING DOCUMENTS**

DATE: 12/21/2021  
CLIENT PROJ NO:

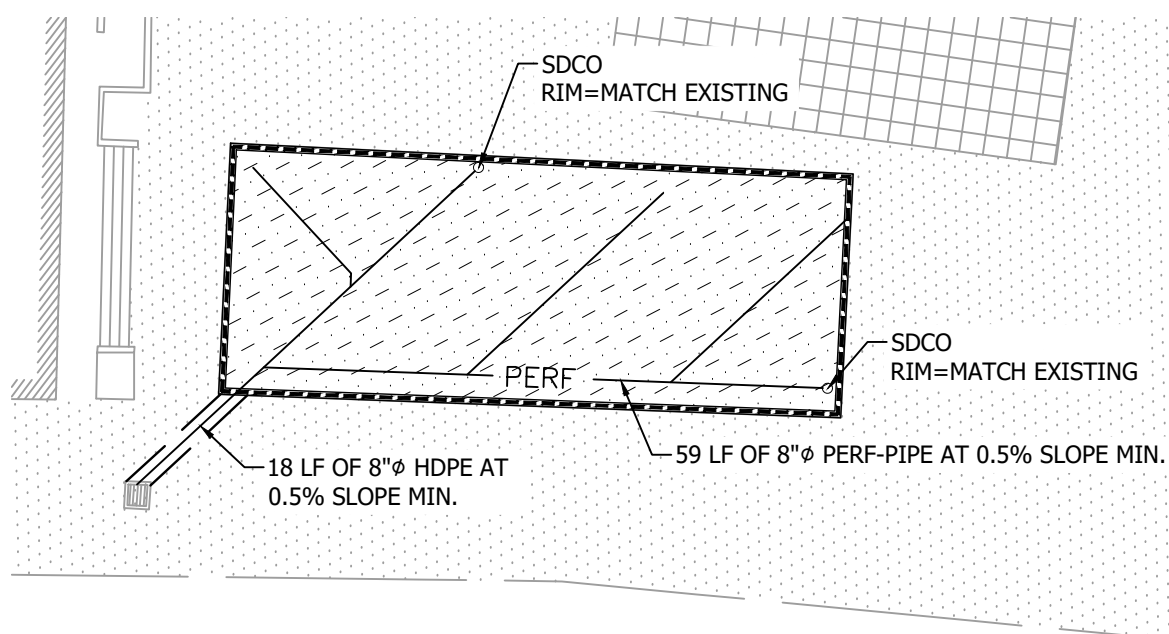
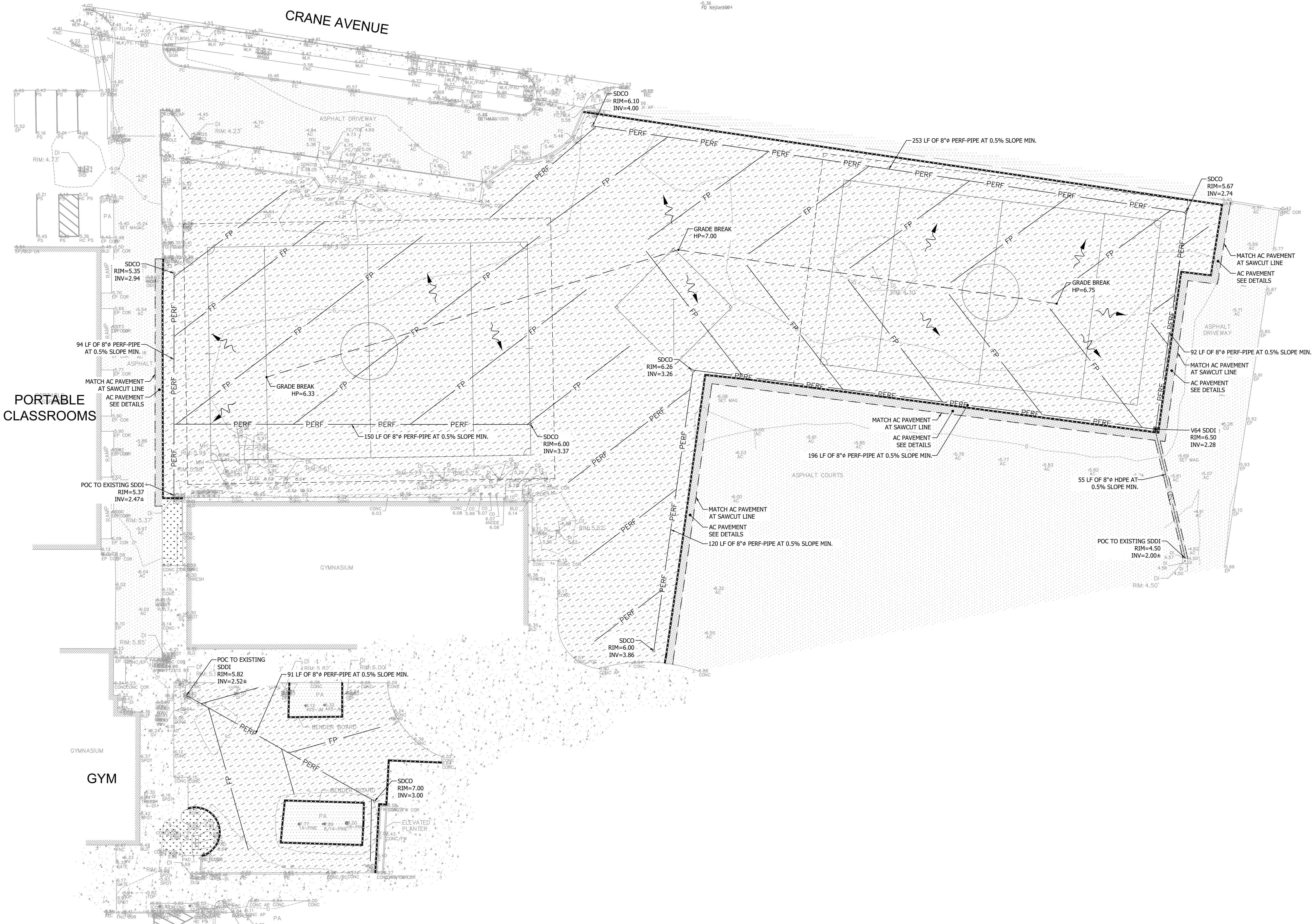
SHEET:



PLEASE RECYCLE



RELINE SHOWN ABOVE 6" SCALE  
DATE: 12/21/2021  
PROJECT: 1002.03  
SHEET: 1-C2.1



**LEGEND**

- SYNTHETIC TURF (SEE LANDSCAPE)
- EXISTING ASPHALT
- EXISTING CONCRETE
- STORM DRAIN DROP INLET
- EXISTING CONTOUR (1' INTERVAL)
- PROPOSED CONTOUR (1' INTERVAL) WITH DAYLIGHT MARKER
- STORM DRAIN PIPE
- PERFORATED PIPE
- RUNOFF FLOW DIRECTION
- DIRECTION OF SAFE OVERFLOW
- FLAT PANEL PERFORATED PIPE
- SAWCUT & NEW AC
- FLUSH CURB (SEE LANDSCAPE)

**GRADING NOTE:**  
OFF HAUL FROM BREWER ELEMENTARY SCHOOL SHALL BE USED TO BUILD-UP A RIDGE FOR THE FIELD AT AUDUBON ELEMENTARY IMPORT APPROXIMATELY 1,500 CU.YD.

**USA NORTH 811**  
Call 811 Before You Dig

**SCALE: 1"=20'**

**NORTH**

**SAN MATEO-FOSTER CITY SCHOOL DISTRICT**  
1170 CHESS DR.,  
FOSTER CITY, CA 94404

**HMC Architects**

3542-006-000

333 W SAN CARLOS STREET, #750  
SAN JOSE, CA 95110  
408 977 9160 / www.hmcarchitects.com

NO.	DESCRIPTION	DATE
01	BRIDGING DOCUMENTS	12/21/2021

Consultant:

**C2C**

C2C/CIVIL CONSULTANTS GROUP, INC.  
Engineers/Planners  
4444 Scotts Valley Drive / Site 6  
Scotts Valley, CA 95066  
T (831) 438-4420 F (831) 438-5829

**PROFESSIONAL ENGINEER**  
No. C 64561  
Exp. 6/30/23  
CIVIL  
STATE OF CALIFORNIA

Project No. 1002.03

**FACILITY NAME**  
**AUDUBON ELEMENTARY SCHOOL**  
**841 GULL AVE**  
**FOSTER CITY, CA 94404**

**PROJECT:**  
**SYNTHETIC TURF PROJECT**

**SHEET NAME:**  
**SITE IMPROVEMENT PLAN**

**BRIDGING DOCUMENTS**

DATE: 12/21/2021  
CLIENT PROJ NO:

SHEET:

**1-C2.1**



SEE PLANS FOR SPECIFIC HARDSCAPE IMPROVEMENTS  
SHALL BE 10% MIN. OUTSIDE OF RIGHT OF WAY  
95% R.C.  
90% R.C.  
6" MIN. 12" MAX. AT TOP OF PIPE  
12" MIN.  
6" MIN. 12" MAX.  
4" MIN.  
UNDISTURBED GROUND  
STRUCTURE BACKFILL  
SAND BACKFILL COMPACTED 95% R.C.  
SEE PLANS FOR SPECIFIC HARDSCAPE IMPROVEMENTS  
MIN. 2" PAVEMENT  
6" MIN.  
26" MIN. DIA. COLLAR  
CHRISTY GS BOX OR APPROVED EQUAL COVER MARKED WITH "SEWER"  
12" MIN.  
6" MIN.  
PEA GRAVEL  
FREE-RESTING CAP OVER OPENING. MATERIAL TO BE SAME AS RISER.  
LONG RADIUS 1/8 BEND  
CLASS "B" CONCRETE  
PLUG  
4" MIN.  
12"  
12"  
1  
STANDARD TRENCH INSTALLATION  
Scale: NTS

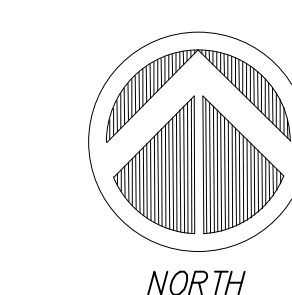
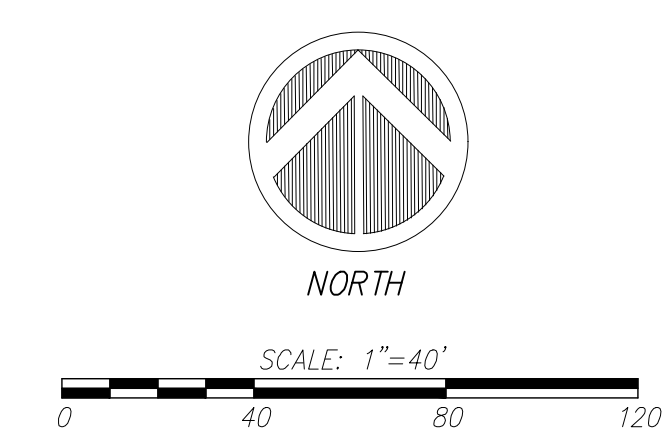
SYNTHETIC TURF SEE LANDSCAPE PLANS  
12" ADS ADVANEDGE PIPE ON SUBGRADE ELEVATION, REFER TO PLANS FOR SPACING  
GEOTEXTILE FILTER FABRIC, REFER TO SPECIFICATIONS  
PROVIDE "NOTCH OUT" ON SUBGRADE. FILTER FABRIC TO BE INSTALLED AT BOTTOM OF NOTCH AT THESE LOCATIONS.  
COMPACTED SUBGRADE. REFER TO SPECIFICATIONS  
18"  
FLAT PANEL DRAIN - SECTION  
5  
FLAT PANEL DRAIN  
Scale: NTS

SYNTHETIC TURF SEE LANDSCAPE PLANS  
12" ADS ADVANEDGE PIPE ON SUBGRADE ELEVATION, REFER TO PLANS FOR SPACING  
GEOTEXTILE FILTER FABRIC, REFER TO SPECIFICATIONS  
N-12 REDUCING TEE, INSERTA-TEE OR REDUCING WYE, REFER TO  
SOLID DRAIN PIPE / PERFORATED DRAIN LINE - REFER TO DRAINAGE PLANS  
SYNTHETIC TURF SEE LANDSCAPE PLANS  
12" ADS ADVANEDGE PIPE ON SUBGRADE ELEVATION, REFER TO PLANS FOR SPACING  
GEOTEXTILE FILTER FABRIC  
FLAT PANEL DRAIN CONNECTION - SECTION  
6  
FLAT PANEL DRAIN CONNECTION  
Scale: NTS

22"  
12"  
16"  
16"  
18-3/8"  
11"  
18-3/8"  
6-1/2"  
9-1/2"  
1-3/4"  
6" or 12"  
DRAIN BOX  
EXTENSION  
THIS CONCRETE DRAIN BOX HAS A CAST-IN GALVANIZED FRAME AND IS SPECIFICALLY ENGINEERED FOR DRAINAGE IN MEDIUM AREAS SUCH AS PARKING LOTS, SCHOOL GROUNDS, WALKWAYS, ETC. ITS DESIGN PERMITS FINAL GRADING MATERIAL TO LOCK IN & FINISH CLEAN KNOCK-OUTS ACCOMMODATE UP TO 8" O.D. PIPE. APPROXIMATE DIMENSIONS SHOWN.  
CHRISTY ORDERING CODE  
V64 Drain Box  
V64-71C Grate  
V64X6 Extension  
V64X12 Extension  
ITEM  
V64 Drain Box  
V64-71C Grate  
V64X6 Extension  
V64X12 Extension  
DESCRIPTION  
V64 Drain Box (18-3/8"x 18-3/8")-12 per pallet  
Square Cast Iron  
6" Reinforced Concrete - 24 per pallet  
12" Reinforced Concrete - 12 per pallet  
7  
V64 CHRISTY BOX 22"x22" STORM DRAIN INLET  
Scale: NTS

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NORTH

SCALE: 1"=40'



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01	BRIDGING DOCUMENTS	12/21/2021

Consultant:



C2G/CIVIL CONSULTANTS GROUP, INC.  
Engineers/Planners  
4444 Scotts Valley Drive / Ste 6  
Scotts Valley, CA 95066  
T (831) 438-4420 F (831) 438-5829



Project No. 1002.03

FACILITY:

**FACILITY NAME**  
**BAYSIDE ACADEMY**  
**2025 KEHOE AVE**  
**SAN MATEO, CA 94403**

PROJECT:  
**SYNTHETIC TURF PROJECT**

SHEET NAME:  
**EXISTING OVERALL SITE**

## BRIDGING DOCUMENTS

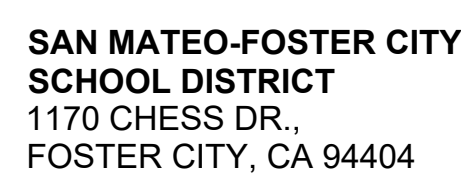
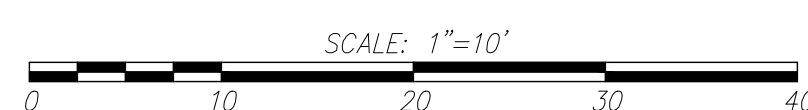
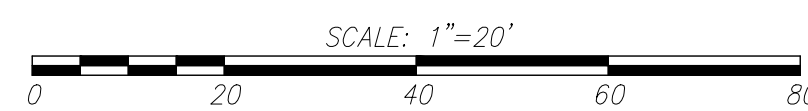
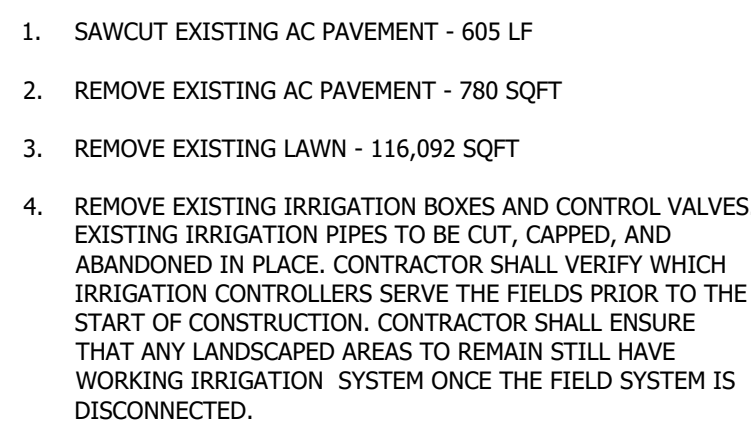
DATE: 12/21/2021

CLIENT PROJ NO:

SHEET:

## 2-C0.1





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Project No. 1002.03

FACILITY:  
FACILITY NAME  
BAYSIDE ACADEMY  
2025 KEHOE AVE  
SAN MATEO, CA 94403  
PROJECT:  
SYNTHETIC TURF PROJECT

SHEET NAME:  
**EXISTING SITE & DEMOLITION PLAN**

## BRIDGING DOCUMENTS

DATE: 12/21/2021

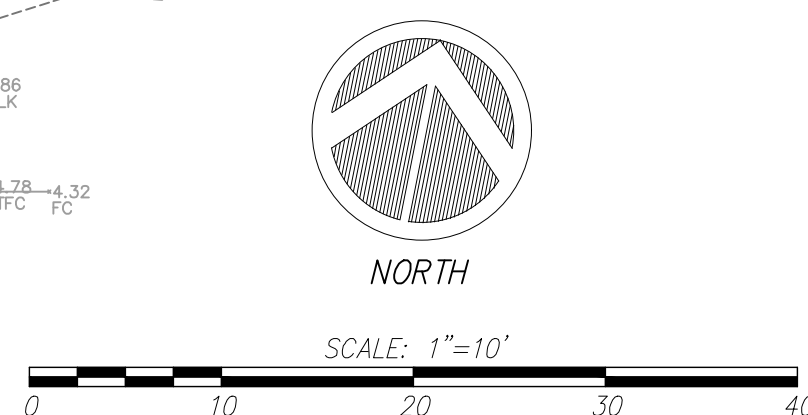
SHEET:

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SHEET:

## 2-C1.1





PLEASE RECYCLE 



SEE PLANS FOR SPECIFIC HARDSCAPE IMPROVEMENTS  
SHALL BE 10% MIN. OUTSIDE OF RIGHT OF WAY  
95% R.C.  
90% R.C.  
6" MIN. 12" MAX. AT TOP OF PIPE  
12" MIN.  
6" MIN. 12" MAX.  
4" MIN.  
UNDISTURBED GROUND  
STRUCTURE BACKFILL  
SAND BACKFILL COMPACTED 95% R.C.  
SEE PLANS FOR SPECIFIC HARDSCAPE IMPROVEMENTS  
MIN. 2" PAVEMENT  
6" MIN.  
26" MIN. DIA. COLLAR  
CHRISTY GS BOX OR APPROVED EQUAL COVER MARKED WITH "SEWER"  
12" MIN.  
6" MIN.  
PEA GRAVEL  
FREE-RESTING CAP OVER OPENING. MATERIAL TO BE SAME AS RISER.  
LONG RADIUS 1/8 BEND  
CLASS "B" CONCRETE  
PLUG  
4" MIN.  
12"  
12"  
1  
STANDARD TRENCH INSTALLATION  
Scale: NTS

SYNTHETIC TURF SEE LANDSCAPE PLANS  
12" ADS ADVANEDGE PIPE ON SUBGRADE ELEVATION, REFER TO PLANS FOR SPACING  
GEOTEXTILE FILTER FABRIC, REFER TO SPECIFICATIONS  
PROVIDE "NOTCH OUT" ON SUBGRADE. FILTER FABRIC TO BE INSTALLED AT BOTTOM OF NOTCH AT THESE LOCATIONS.  
COMPACTED SUBGRADE. REFER TO SPECIFICATIONS  
FLAT PANEL DRAIN - SECTION  
5  
FLAT PANEL DRAIN  
Scale: NTS

SYNTHETIC TURF SEE LANDSCAPE PLANS  
12" ADS ADVANEDGE PIPE ON SUBGRADE ELEVATION, REFER TO PLANS FOR SPACING  
GEOTEXTILE FILTER FABRIC, REFER TO SPECIFICATIONS  
ADS ADVENEDGE PIPE TO BUTT INTO PERFORATED DRAIN LINE  
N-12 REDUCING TEE, INSERTA-TEE OR REDUCING WYE, REFER TO  
SOLID DRAIN PIPE / PERFORATED DRAIN LINE - REFER TO DRAINAGE PLANS  
FLAT PANEL DRAIN CONNECTION - SECTION  
6  
FLAT PANEL DRAIN CONNECTION  
Scale: NTS

22"  
22"  
12"  
16"  
16"  
18-3/8"  
11"  
18-3/8"  
6-1/2"  
9-1/2"  
1-3/4"  
6" or 12"  
DRAIN BOX  
EXTENSION  
THIS CONCRETE DRAIN BOX HAS A CAST-IN GALVANIZED FRAME AND IS SPECIFICALLY ENGINEERED FOR DRAINAGE IN MEDIUM AREAS SUCH AS PARKING LOTS, SCHOOL GROUNDS, WALKWAYS, ETC. ITS DESIGN PERMITS FINAL GRADING MATERIAL TO LOCK IN & FINISH CLEAN KNOCK-OUTS ACCOMMODATE UP TO 8" O.D. PIPE. APPROXIMATE DIMENSIONS SHOWN.  
CHRISTY ORDERING CODE  
V64 Drain Box  
V64-71C Grate  
V64X6 Extension  
V64X12 Extension  
ITEM  
V64 Drain Box  
Grate  
Extension  
Extension  
DESCRIPTION  
V64 Drain Box (18-3/8"x 18-3/8")-12 per pallet  
Square, Cast Iron  
6" Reinforced Concrete - 24 per pallet  
12" Reinforced Concrete - 12 per pallet  
7  
V64 CHRISTY BOX 22"x22" STORM DRAIN INLET  
Scale: NTS

1. FINISH SURFACE OF PAVING.  
2. SCORE JOINT, TOOLED, 1/4" WIDE AND 3/8" DEEP. LOCATE PER PLAN.  
3. CONTROL JOINT, TOOLED, 1/4" WIDE. DEPTH TO EQUAL 1/3 OF SLAB THICKNESS. (INCLUDING WHERE SLABS THICKEN) LOCATE PER PLAN.  
4. 1/2" TOOLED EDGE AT CONCRETE PAVING.  
5. 1/2" THICK EXPANSION JOINT FILLER SHALL BE ASPHALT IMPREGNATED FELT. DEPTH TO MATCH SLAB THICKNESS.  
6. DOWEL 1" SMOOTH REBAR X 12" LONG @ 18" O.C. AND 6" CLEAR FROM EDGE OF SLAB. SLIP ONE END. WHERE ABUTTING EXISTING CONCRETE, DRILL AND EPOXY DOWEL INTO EXISTING CONCRETE AND SLIP ONE END.  
7. CONCRETE PAVING.  
NOTES  
A. CONTROL JOINTS SHALL OCCUR WHERE SHOWN ON PLAN.  
B. EXPANSION JOINTS SHALL BE LOCATED WHERE CONCRETE PAVING MEETS THE BACK OF CURBS, FACE OF BUILDING OR SITE WALLS, AND WHERE SHOWN ON PLAN.  
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EXPANSION JOINT: SECTION  
SCORE JOINT: SECTION  
CONTROL JOINT: SECTION  
11  
JOINTS AT CONCRETE PAVING  
Scale: NTS

FLUSH EXISTING AC PAVEMENT SURFACE  
(N) PAVEMENT SECTION  
(N) AC  
(N) AB  
(E) AC  
(E) AB  
MILL 1"  
SAWCUT LINE  
TACK COAT EXISTING PAVEMENT  
AC PAVEMENT TIE-IN  
1.0' MIN.  
JOINT SEALANT FLUSH WITH TOP OF CONCRETE  
12" LONG #4 REBAR AT 18" O.C. LUBRICATE END IN NEW PAVING. EPOXY END IN EXISTING PAVING (6" FROM EDGE).  
(N) CONCRETE  
3/8" FELT EXPANSION JOINT MATERIAL  
(E) CONCRETE  
6"  
4"  
4"  
36"  
CONCRETE TIE-IN  
12  
AC PAVEMENT & CONCRETE TIE-IN DETAIL  
Scale: NTS



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Consultant:



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Project No. 1002.03

FACILITY:  
FACILITY NAME  
BAYSIDE ACADEMY  
2025 KEHOE AVE  
SAN MATEO, CA 94403  
PROJECT:  
SYNTHETIC TURF PROJECT

SHEET NAME:  
DETAILS

BRIDGING DOCUMENTS

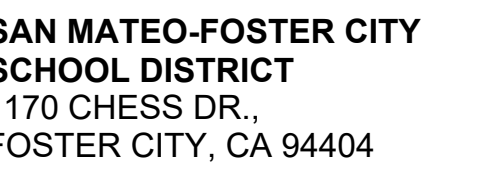
DATE: 12/21/2021

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2-C3.1





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01	BRIDGING DOCUMENTS	12/21/2021

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01	BRIDGING DOCUMENTS	12/21/2021



Project No. 1002.03

## BRIDGING DOCUMENTS

DATE: 12/21/2021	CLIENT PROJ NO:
SHEET:	

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### 3-C0.1

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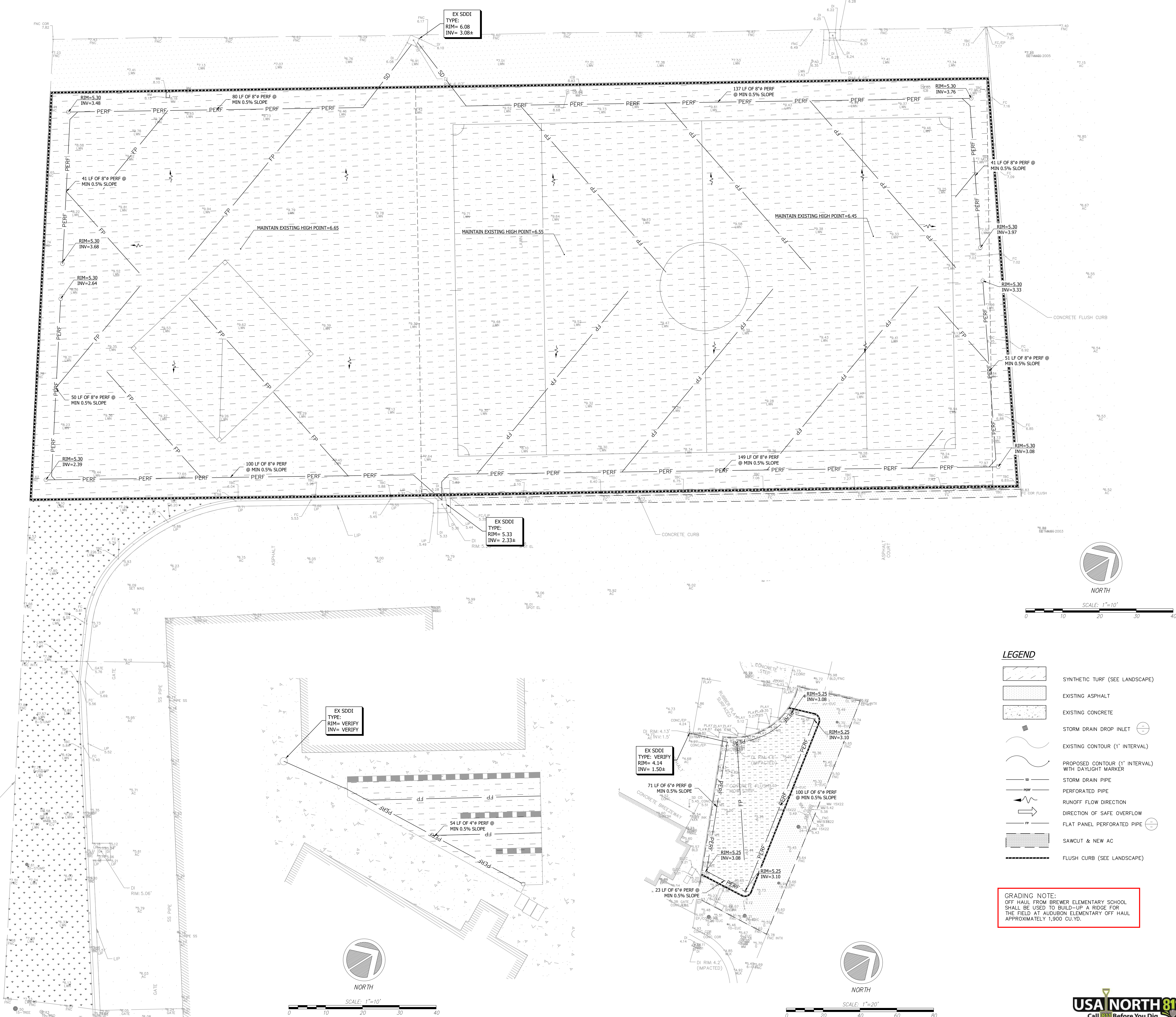






SEE SHEET 3-C2.1 FOR NINA LANE  
DATE: 12/21/2021  
SHEET: 3-C2.1  
SCALE: 1"=10'

NINA LANE



- LEGEND**
- SYNTHETIC TURF (SEE LANDSCAPE)
  - EXISTING ASPHALT
  - EXISTING CONCRETE
  - STORM DRAIN DROP INLET
  - EXISTING CONTOUR (1' INTERVAL)
  - PROPOSED CONTOUR (1' INTERVAL) WITH DAYLIGHT MARKER
  - STORM DRAIN PIPE
  - PERFORATED PIPE
  - RUNOFF FLOW DIRECTION
  - DIRECTION OF SAFE OVERFLOW
  - FLAT PANEL PERFORATED PIPE
  - SAWCUT & NEW AC
  - FLUSH CURB (SEE LANDSCAPE)

**GRADING NOTE:**  
OFF HAUL FROM BREWER ELEMENTARY SCHOOL SHALL BE USED TO BUILD-UP A RIDGE FOR THE FIELD AT AUDUBON ELEMENTARY OFF HAUL APPROXIMATELY 1,900 CU.YD.



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Project No. 1002.03

**FACILITY:**  
**FACILITY NAME**  
BREWER ISLAND ELEMENTARY SCHOOL  
1151 POLYNESIA DR.  
FOSTER CITY, CA 94404

**PROJECT:**  
SYNTHETIC TURF PROJECT

**SHEET NAME:**  
SITE IMPROVEMENT PLAN

**BRIDGING DOCUMENTS**

DATE: 12/21/2021

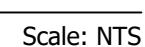
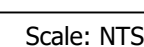
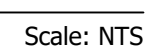
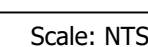
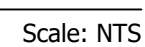
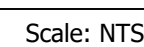
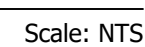
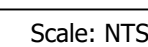
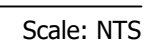
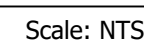
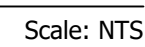
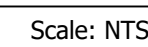
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SHEET:

3-C2.1

PLEASE RECYCLE

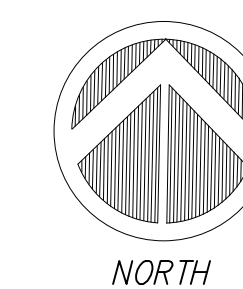




SHEET:

### 3-C3.1





SCALE: 1"=30'

A horizontal scale bar with alternating black and white segments. It is marked with the numbers 0, 30, 60, and 90, representing feet. The total length of the bar is 90 feet.

PLEASE RECYCLE 



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## ISSUE

NO.	DESCRIPTION	DATE
01	BRIDGING DOCUMENTS	12/21/2021

Consultant:



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Engineers/Planners  
4444 Scotts Valley Drive / Ste 6  
Scotts Valley, CA 95066  
T (831) 438-4420 F (831) 438-5829



Project No. 1002.03

FACILITY:

**FACILITY NAME**  
**FIESTA GARDENS ELEMENTARY SCHOOL**  
**1001 BERMUDA DR.**  
**SAN MATEO, CA 94403**

PROJECT:  
**SYNTHETIC TURF PROJECT**

SHEET NAME:  
**EXISTING OVERALL SITE**

BRIDGING DOCUMENTS

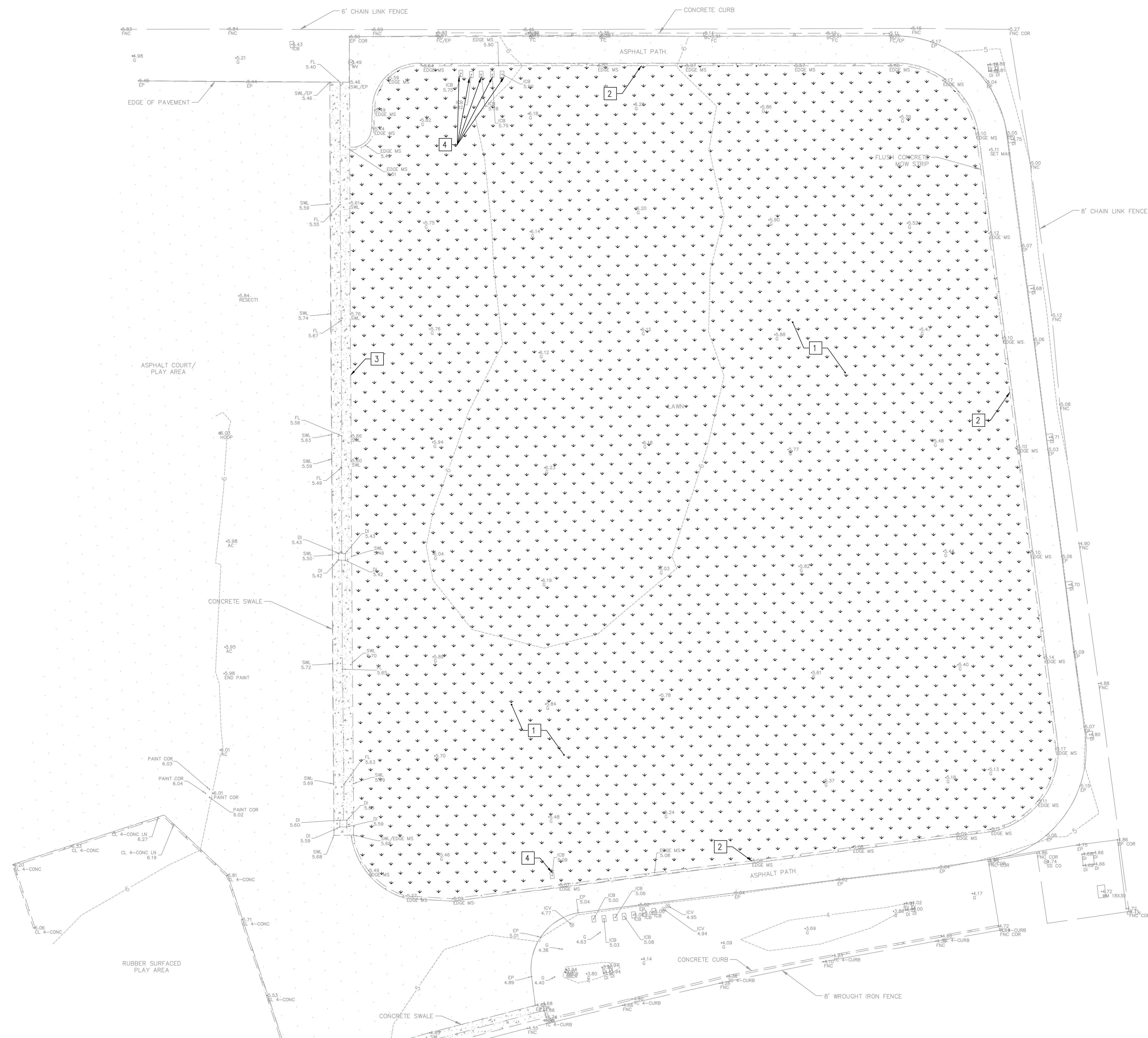
DATE: 12/21/2021

CLIENT PROJ NO:

SHEET:

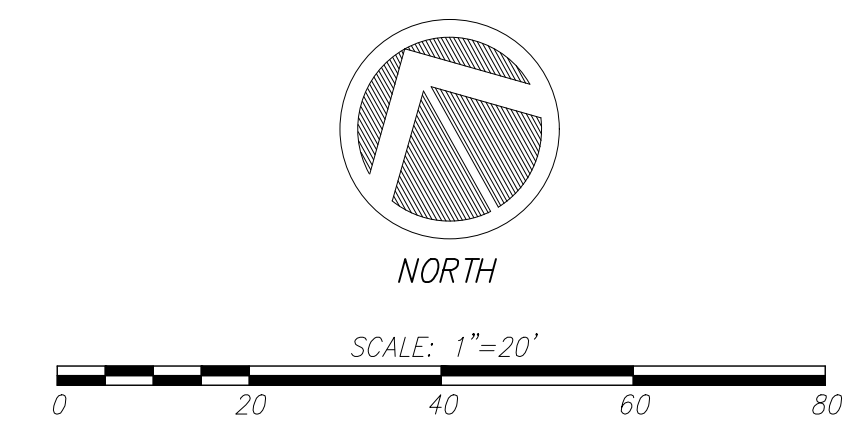
## 4-C0.1





☐ DEMOLITION NOTES:

1. EXISTING LAWN TO BE REMOVED - 21,047 SF
2. EXISTING CURB TO REMAIN
3. EXISTING CONCRETE SWALE TO REMAIN
4. REMOVE EXISTING IRRIGATION BOXES AND CONTROL VALVES. EXISTING IRRIGATION PIPES TO BE CUT, CAPPED, AND ABANDONED IN PLACE. CONTRACTOR SHALL VERIFY WHICH IRRIGATION CONTROLLERS SERVE THE FIELDS PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL ENSURE THAT ANY LANDSCAPED AREAS TO REMAIN STILL HAVE WORKING IRRIGATION SYSTEM ONCE THE FIELD SYSTEM IS DISCONNECTED.



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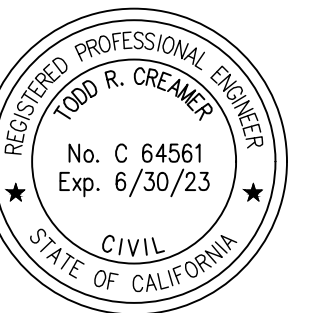
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PROJECT:  
**SYNTHETIC TURF PROJECT**

SHEET NAME:  
**EXISTING SITE & DEMOLITION PLAN**

## BRIDGING DOCUMENTS

DATE: 12/21/2021

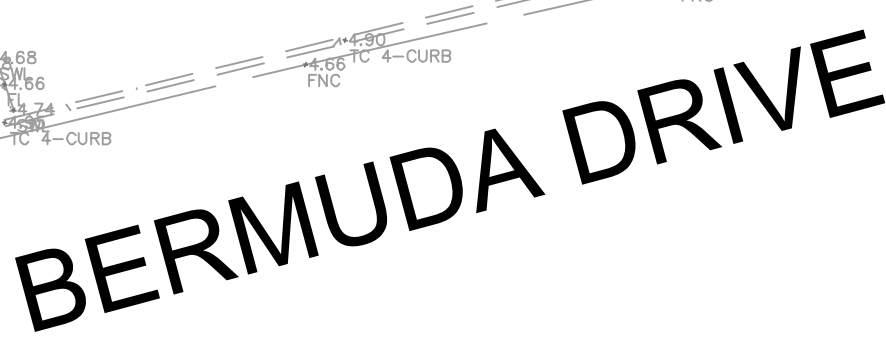
SHEET:

CLIENT PROJ NO:



## 4-C1.1





SYNTHETIC TURF (SEE LANDSCAPE)

EXISTING ASPHALT

EXISTING CONCRETE

STORM DRAIN DROP INLET

EXISTING CONTOUR (1' INTERVAL)

PROPOSED CONTOUR (1' INTERVAL) WITH DAYLIGHT MARKER

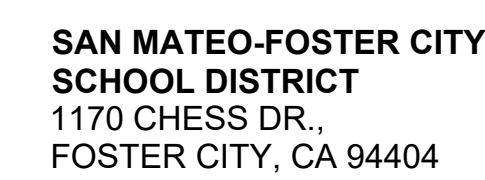
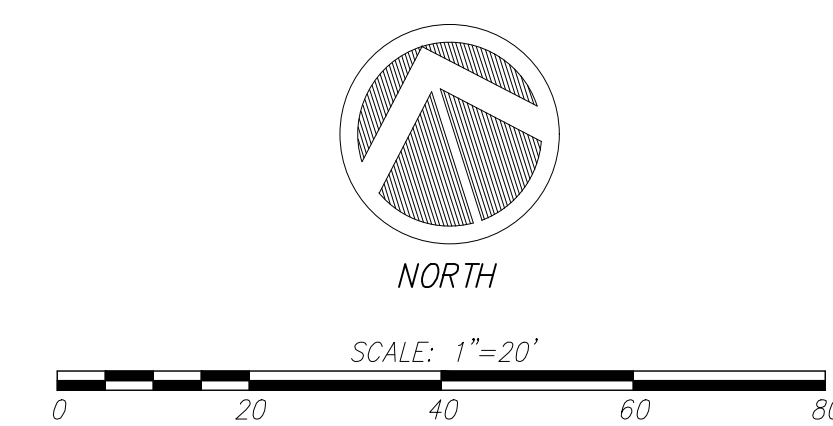
STORM DRAIN PIPE

PERFORATED PIPE

RUNOFF FLOW DIRECTION

DIRECTION OF SAFE OVERFLOW

FLAT PANEL PERFORATED PIPE



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**PROJECT:**  
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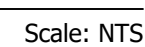
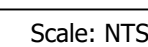
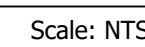
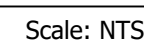
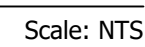
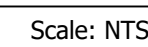
SHEET NAME:  
**SITE IMPROVEMENT PLAN**

## BRIDGING DOCUMENTS

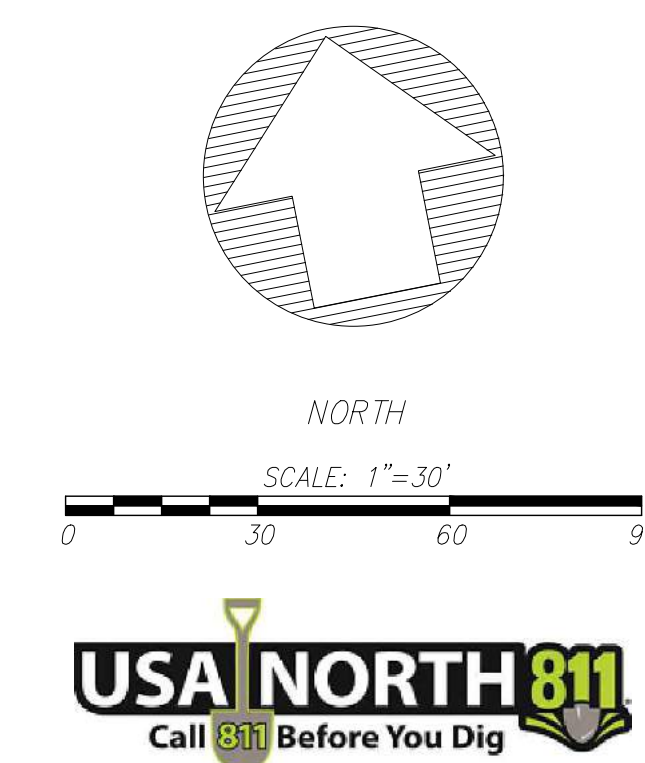
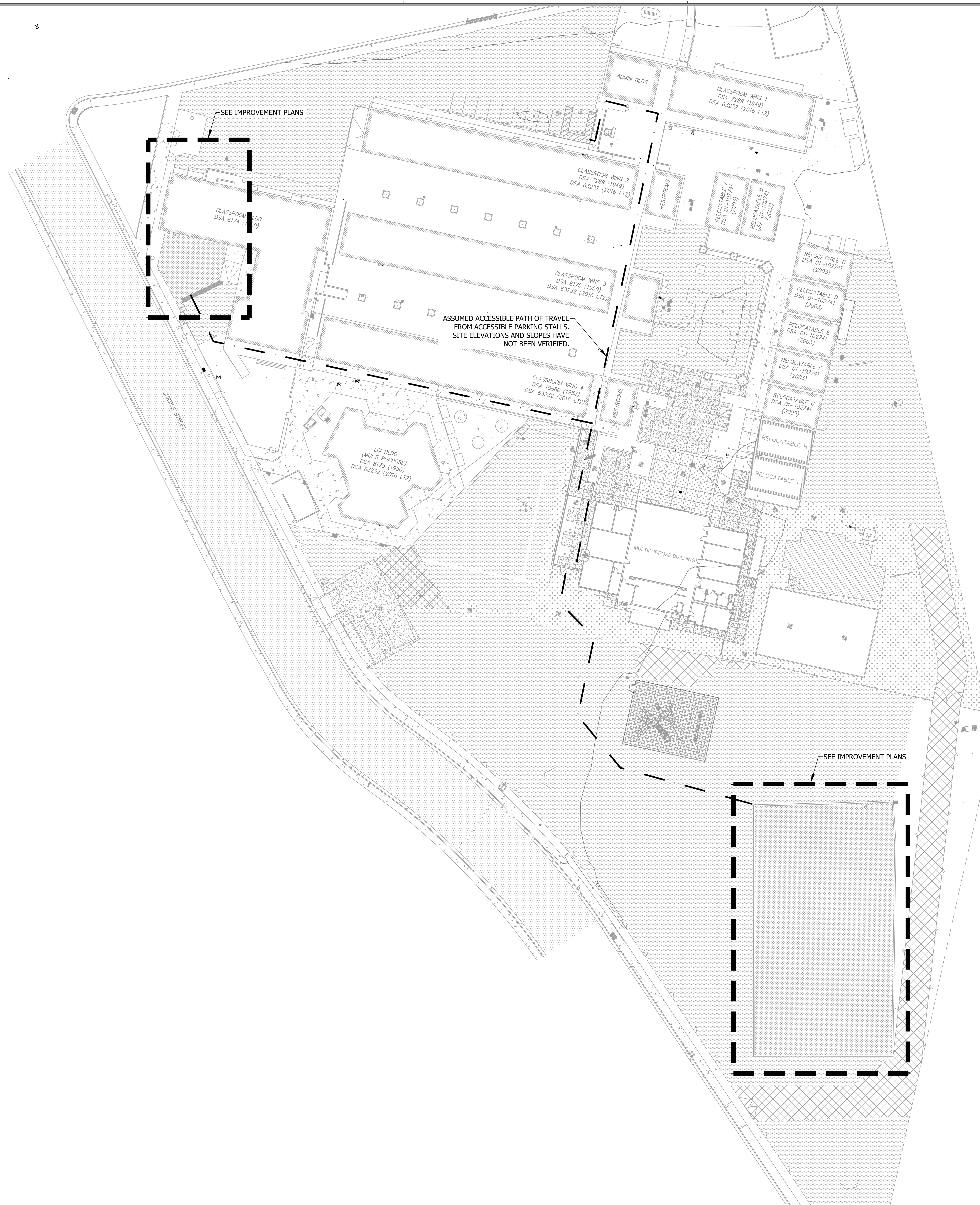
DATE: 12/21/2021	CLIENT PROJ NO:
SHEET:	

## 4-C2.1









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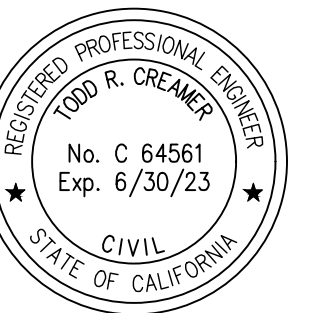
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4444 Scotts Valley Drive / Ste 6  
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Project No. 1002.03

FACILITY:

**FACILITY NAME**  
**GEORGE HALL ELEMENTARY SCHOOL**  
**130 SAN MIGUEL WAY**  
**SAN MATEO, CA 94403**

PROJECT:  
**SYNTHETIC TURF PROJECT**

SHEET NAME:  
**EXISTING OVERALL SITE**

## BRIDGING DOCUMENTS

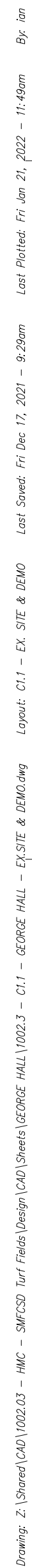
DATE: 12/21/2021

SHEET:

CLIENT PROJ NO:

## 5-C0.1





1. SAWCUT EXISTING AC PAVEMENT - 705 LF
2. SAWCUT EXISTING CONCRETE - 62 LF
3. REMOVE EXISTING AC PAVEMENT - 168 SQFT
4. REMOVE EXISTING CONCRETE - 166 SQFT
5. REMOVE EXISTING LAWN - 19,504 SQFT
6. REMOVE EXISTING TREE - 2 TOTAL
7. EXISTING FLUSH CURB TO REMAIN
8. REMOVE EXISTING IRRIGATION BOXES AND CONTROL VALVES. EXISTING IRRIGATION PIPES TO BE CUT, CAPPED, AND ABANDONED IN PLACE. CONTRACTOR SHALL VERIFY WHICH IRRIGATION CONTROLS SERVE THE FIELDS PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL ENSURE THAT ALL LANDSCAPED AREAS TO REMAIN STILL HAVE WORKING IRRIGATION SYSTEM ONCE THE FIELD SYSTEM IS DISCONNECTED.



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Project No. 1002.03

FACILITY:

**FACILITY NAME**  
**GEORGE HALL ELEMENTARY SCHOOL**  
**130 SAN MIGUEL WAY**  
**SAN MATEO, CA 94403**

PROJECT:  
**SYNTHETIC TURF PROJECT**

SHEET NAME:  
**EXISTING SITE & DEMOLITION PLAN**

## BRIDGING DOCUMENTS

DATE: 12/21/2021

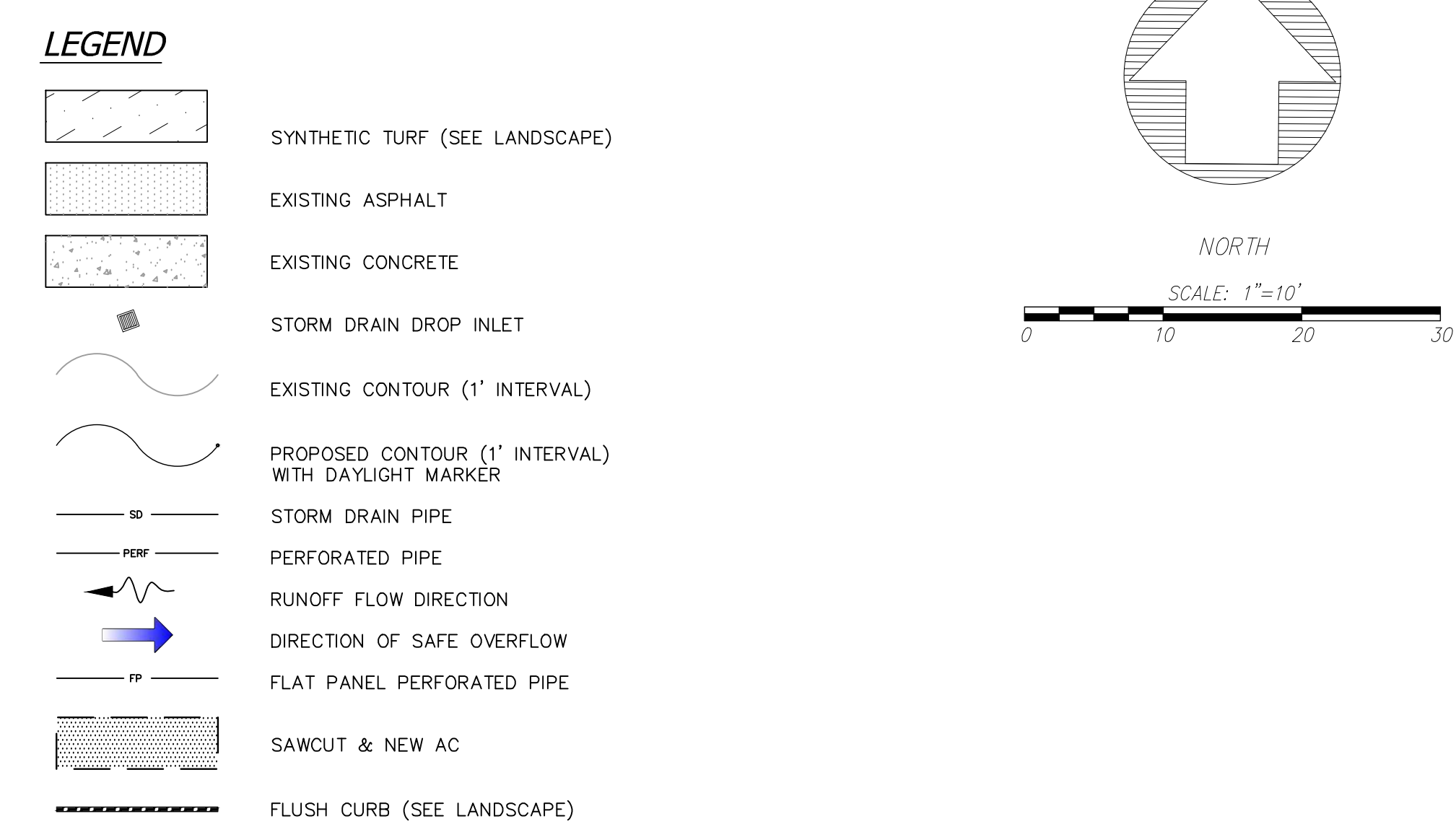
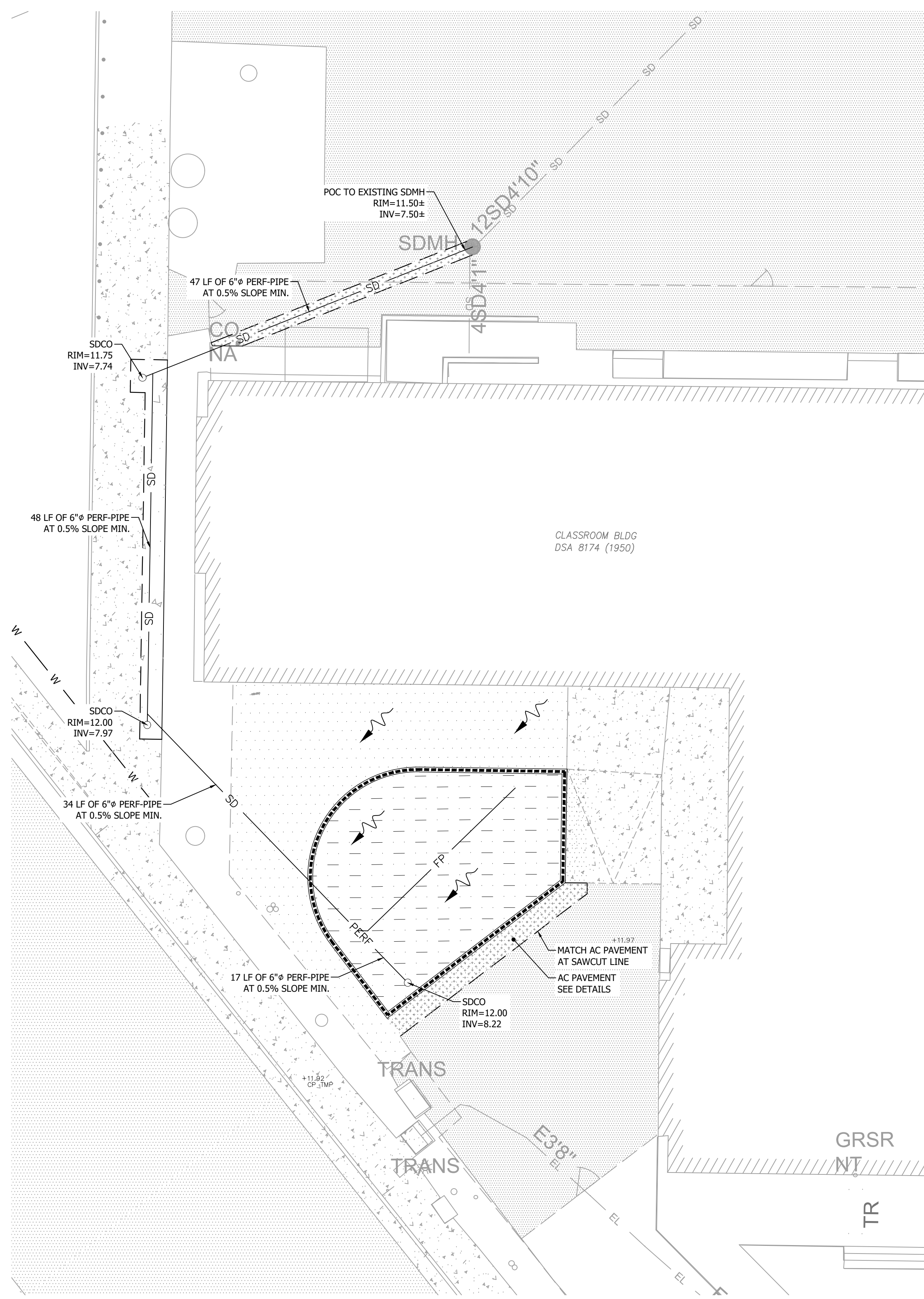
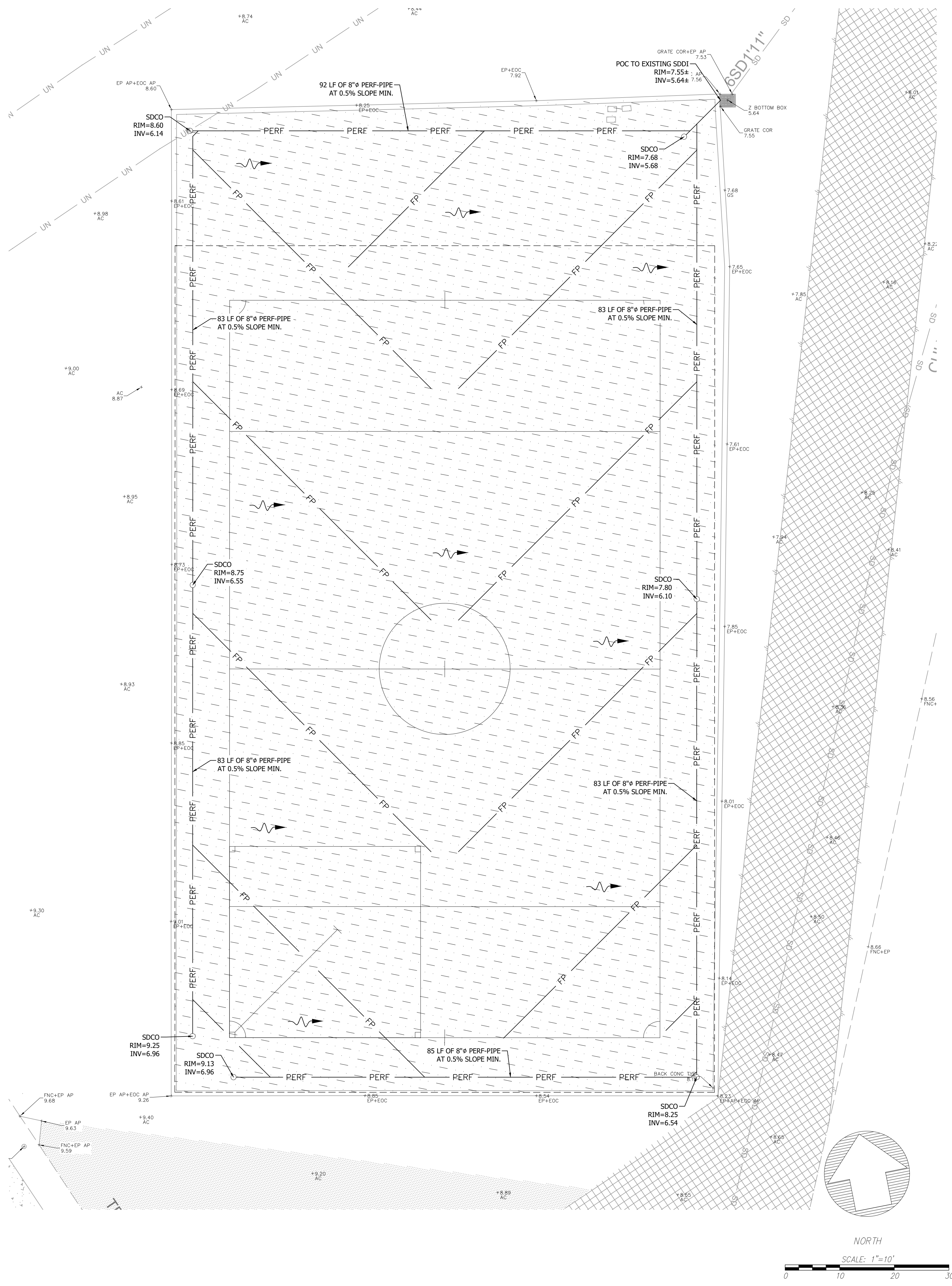
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CLIENT PROJ. NO:

## 5-C1.1



DATE: 12/21/2021  
DRAWN BY: J. L. SHAW  
CHECKED BY: J. L. SHAW  
DATE: 12/21/2021  
PROJECT: 1002.03  
SHEET: 5-C2.1  
SCALE: 1"=10'



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Consultant:

**C2C**

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4444 Scotts Valley Drive / Site 6  
Scotts Valley, CA 95066  
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Project No. 1002.03

FACILITY:  
**GEORGE HALL ELEMENTARY SCHOOL**  
130 SAN MIGUEL WAY  
SAN MATEO, CA 94403

PROJECT:  
**SYNTHETIC TURF PROJECT**

SHEET NAME:  
**SITE IMPROVEMENT PLAN**

**BRIDGING DOCUMENTS**

DATE: 12/21/2021  
CLIENT PROJ NO:

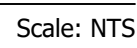
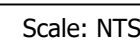
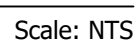
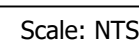
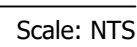
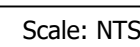
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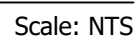
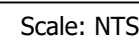
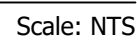
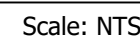
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PLEASE RECYCLE



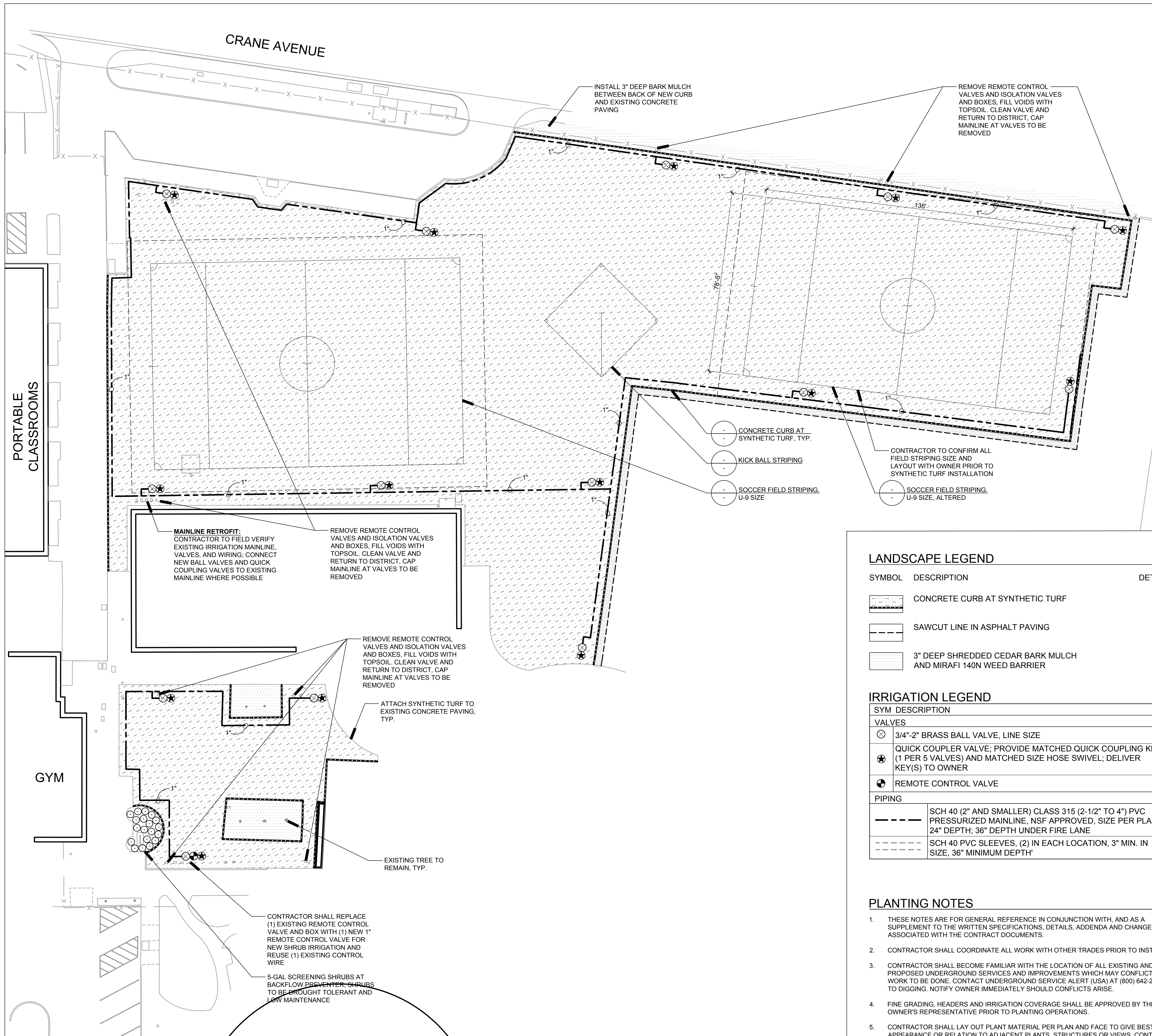


Scale: NTS


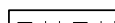
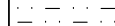







THE LINE SHOWN ABOVE IS  
NOT THE PROPOSED PAVING  
OR THE EXISTING PAVING



#### LANDSCAPE LEGEND

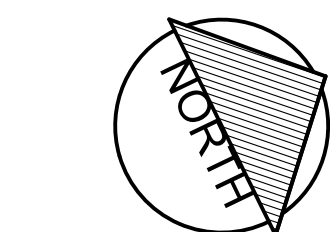
SYMBOL	DESCRIPTION	DETAIL
	CONCRETE CURB AT SYNTHETIC TURF	
	SAWCUT LINE IN ASPHALT PAVING	
	3" DEEP SHREDDED CEDAR BARK MULCH AND MIRAFI 140N WEED BARRIER	

#### IRRIGATION LEGEND

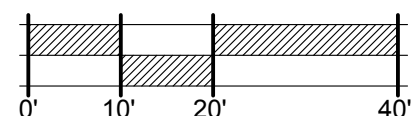
SYM DESCRIPTION	
VALVES	
	3/4\"-2\" BRASS BALL VALVE, LINE SIZE
	QUICK COUPLER VALVE; PROVIDE MATCHED QUICK COUPLING KEY (1 PER 5 VALVES) AND MATCHED SIZE HOSE SWIVEL; DELIVER KEY(S) TO OWNER
	REMOTE CONTROL VALVE
PIPING	
	SCH 40 (2\" AND SMALLER) CLASS 315 (2-1/2\" TO 4\") PVC PRESSURIZED MAINLINE, NSF APPROVED, SIZE PER PLAN, 24\" DEPTH; 36\" DEPTH UNDER FIRE LANE
	SCH 40 PVC SLEEVES, (2) IN EACH LOCATION, 3\" MIN. IN SIZE, 36\" MINIMUM DEPTH

#### PLANTING NOTES

- THESE NOTES ARE FOR GENERAL REFERENCE IN CONJUNCTION WITH, AND AS A SUPPLEMENT TO THE WRITTEN SPECIFICATIONS, DETAILS, ADDENDA AND CHANGE ORDERS ASSOCIATED WITH THE CONTRACT DOCUMENTS.
- CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER TRADES PRIOR TO INSTALLATION.
- CONTRACTOR SHALL BECOME FAMILIAR WITH THE LOCATION OF ALL EXISTING AND PROPOSED UNDERGROUND SERVICES AND IMPROVEMENTS WHICH MAY CONFLICT WITH WORK TO BE DONE. CONTACT UNDERGROUND SERVICE ALERT (USA) AT (800) 642-2444 PRIOR TO DIGGING. NOTIFY OWNER IMMEDIATELY SHOULD CONFLICTS ARISE.
- FINE GRADING, HEADERS AND IRRIGATION COVERAGE SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO PLANTING OPERATIONS.
- CONTRACTOR SHALL LAY OUT PLANT MATERIAL PER PLAN AND FACE TO GIVE BEST APPEARANCE OR RELATION TO ADJACENT PLANTS, STRUCTURES OR VIEWS. CONTRACTOR TO OBTAIN APPROVAL FROM OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
- PLANT MATERIAL SHALL NOT BE INSTALLED IN AN AREA WHICH WILL CAUSE HARM TO ADJACENT STRUCTURES OR OBSTRUCT IRRIGATION SPRAY PATTERN. NOTIFY THE OWNER'S REPRESENTATIVE SHOULD CONFLICTS ARISE.
- PLANT LOCATIONS ARE DIAGRAMMATIC AND MAY BE ADJUSTED IN THE FIELD AT THE OWNER'S REPRESENTATIVE REQUEST PRIOR TO INSTALLATION. OBTAIN APPROVAL OF PLANT LAYOUT FROM THE OWNER'S REPRESENTATIVE PRIOR TO PLANTING.
- UNLESS OTHERWISE NOTED, FINISH GRADE OF SHRUB AND GROUND COVER AREAS SHALL BE 2\" BELOW ADJACENT PAVING. TAPER 3\" DEPTH BARK MULCH TOP DRESSING TO 1/2\" BELOW ADJACENT PAVING (1-1/2\" DEPTH) WITHIN 2\" OF PAVING. FINISH GRADE OF SEEDED TURF AREAS SHALL BE 1/2\" BELOW ADJACENT PAVING. FINISH GRADE OF SODDED TURF AREAS SHALL BE 1\" BELOW ADJACENT PAVING.
- PLANTING AREAS SHALL RECEIVE A 3\" MIN. DEPTH BARK MULCH TOP DRESSING, UNLESS OTHERWISE NOTED. IN NON-BIORETENTION AREAS BARK MULCH SHALL BE REPUBLIC SERVICES PRO-CHIP MULCH, IN BIORETENTION AREAS BARK MULCH SHALL BE PACIFIC LANDSCAPE SUPPLY SHREDDED CEDAR BARK MULCH.
- NEWLY PLANTED MATERIAL SHALL BE THOROUGHLY SOAKED WITH WATER WITHIN 3 HOURS OF PLANTING.
- EXISTING TREES, SHRUBS AND GROUND COVERS TO REMAIN SHALL BE PROTECTED. ANY DAMAGE CAUSED BY CONTRACTOR'S WORK OR NEGLIGENCE SHALL BE REPLACED OR REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
- THIRTY DAYS AFTER PLANTING, CONTRACTOR SHALL RE-STAKE AND STRAIGHTEN TREES AS NECESSARY.
- CONTRACTOR TO COLLECT AND SUBMIT SOIL SAMPLE TO LUCCHESI CONSULTING FOR SOIL AMENDING AND PREPARATION RECOMMENDATION PER SPECIFICATIONS.
- CONTRACTOR SHALL COORDINATE ROUGH GRADING AND FINE GRADING TO ENSURE EXISTING SUITABLE TOPSOIL IS REMOVED, STOCKPILED AND REINSTALLED INTO PROPOSED LANDSCAPE AREAS PER LANDSCAPE SPECIFICATION SECTION 32 90 00. IN THE EVENT THERE IS NOT ENOUGH EXISTING TOPSOIL, OR NO PLACE TO STOCKPILE TOPSOIL, CONTRACTOR SHALL IMPORT AND INSTALL TOPSOIL PER LANDSCAPE SPECIFICATION SECTION 32 90 00.
- THE CONTRACTOR SHALL BE RESPONSIBLE UNDER THIS CONTRACT FOR REPAIRING OR REPLACING, AT THEIR OWN EXPENSE, SURFACE AND SUBSURFACE SITE FEATURES TO REMAIN, INCLUDING BUT NOT LIMITED TO STRUCTURES, FENCES, WALLS, PAVING SURFACES, PLANT MATERIAL AND/OR TREES DAMAGED OR DESTROYED, BOTH ON THIS PROPERTY OR THOSE PROPERTIES ADJACENT TO THIS SITE. THE DAMAGED ITEM(S) WILL BE RESTORED TO THEIR ORIGINAL CONDITION OR REPLACED TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.
- ALL NON-BIORETENTION SHRUB AREAS SHALL RECEIVE WEED BARRIER FABRIC UNDER MULCH, MIRIFI 140N BY TENCATE.
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SCALE: 1\" = 20'-0\"



PLEASE RECYCLE



SAN MATEO-FOSTER CITY  
SCHOOL DISTRICT  
1170 CHESS DR.  
FOSTER CITY, CA 94404

HMC Architects

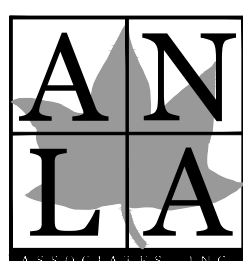
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333 W SAN CARLOS STREET, #750  
SAN JOSE, CA 95110  
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#### ISSUE

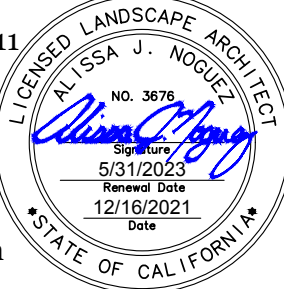
NO.	DESCRIPTION	DATE
01	BRIDGING DOCUMENTS	12/21/2021

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Consultant's Project No. ANLA 2140

FACILITY:

FACILITY NAME  
AUDUBON ELEMENTARY SCHOOL  
841 GULL AVE  
FOSTER CITY, CA 94404

PROJECT:

SYNTHETIC TURF PROJECT

SHEET NAME:

LANDSCAPE PLAN

#### BRIDGING DOCUMENTS

DATE: 12/21/2021

CLIENT PROJ NO:

SHEET:

L.01



THE LINE SHOWN ABOVE IS  
AN APPROXIMATE LOCATION  
OF THE EXISTING MAINLINE

**SPLICE BOX:**  
RUN EXISTING WIRES FROM EXISTING  
REMOTE CONTROL VALVES TO NEW  
SPLICE BOX ALONG NEW MAINLINE

CONTRACTOR TO CONFIRM ALL  
FIELD STRIPING SIZE AND  
LAYOUT WITH OWNER PRIOR TO  
SYNTHETIC TURF INSTALLATION

EXISTING FENCE TO REMAIN, TYP.  
EXISTING TREE TO REMAIN, TYP.

**MAINLINE RETROFIT:**  
CONNECT NEW MAINLINE TO EXISTING MAINLINE.  
LOCATION APPROXIMATE. CONTRACTOR TO FIELD VERIFY  
EXISTING IRRIGATION MAINLINE, VALVES, AND WIRING;  
CONNECT NEW BALL VALVES AND QUICK COUPLING  
VALVES TO EXISTING MAINLINE WHERE POSSIBLE

GYMNASIUM

OFFICE

KEHOE AVE.

EXISTING TREE TO  
REMAIN, TYP.

REMOVE REMOTE CONTROL  
VALVES AND ISOLATION VALVE  
AND BOXES, FILL VOIDS WITH  
TOPSOIL, CLEAN VALVE AND  
RETURN TO DISTRICT  
ATTACH SYNTHETIC TURF TO  
EXISTING CONCRETE PAVING,  
TYP.

REMOVE FIELD STRIPING,  
9 SIZE, TYP. (4) TOTAL  
ANY STRIPING COLOR  
30M U-12 SIZE SOCCER  
ELD

CONCRETE CURB AT  
SYNTHETIC TURF, TYP.

**MAINLINE RETROFIT:**  
CONNECT NEW MAINLINE TO EXISTING  
MAINLINE, LOCATION APPROXIMATE.  
CONTRACTOR TO FIELD VERIFY EXISTING  
IRRIGATION MAINLINE, VALVES, AND WIRING;  
CONNECT NEW BALL VALVES AND QUICK  
COUPLING VALVES TO EXISTING MAINLINE  
WHERE POSSIBLE

KICK BALL STRIPING  
VARY STRIPING COLOR  
FROM U-9 SIZE SOCCER  
FIELD

#### LANDSCAPE LEGEND

SYMBOL	DESCRIPTION	DETAIL
	CONCRETE CURB AT SYNTHETIC TURF	-
	ASPHALT PAVING	SEE CIVIL DRAWINGS
	SAWCUT IN ASPHALT PAVING	SEE CIVIL DRAWINGS

#### IRRIGATION LEGEND

SYM	DESCRIPTION
<b>VALVES</b>	
	3/4"-2" BRASS BALL VALVE, LINE SIZE
	QUICK COUPLER VALVE; PROVIDE MATCHED QUICK COUPLING KEY (1 PER 5 VALVES) AND MATCHED SIZE HOSE SWIVEL; DELIVER KEY(S) TO OWNER
	REMOTE CONTROL VALVE
	SPLICE BOX, PLASTIC IN LANDSCAPE AREAS, CONCRETE IN PAVED AREAS
<b>PIPING</b>	
	SCH 40 (2" AND SMALLER) CLASS 315 (2-1/2" TO 4") PVC PRESSURIZED MAINLINE, NSF APPROVED, SIZE PER PLAN, 24" DEPTH; 36" DEPTH UNDER FIRE LANE
	EXISTING MAINLINE TO REMAIN, LOCATION APPROXIMATE

#### LATERAL PIPE SIZE CHART, SCH 40 PVC

GALLONS PER MINUTE	PIPE SIZE
0 - 7.00 GPM	3/4"
8.00 - 12.00 GPM	1"
13.00 - 22.00 GPM	1-1/4"
23.00 - 30.00 GPM	1-1/2"
31.00 - 50.00 GPM	2"
51.00 - 70.00 GPM	2-1/2"
71.00 - 110.00 GPM	3"

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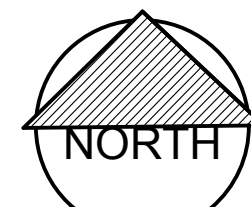
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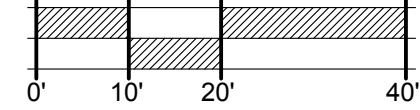
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- REFER TO SPECIFICATIONS AND CONSTRUCTION DETAILS ON SHEETS L.06.



SCALE: 1" = 20'-0"



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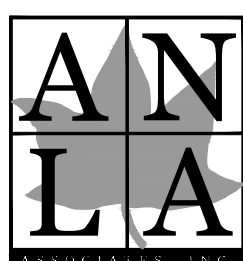
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Consultant's Project No. ANLA 2140

FACILITY:

**FACILITY NAME**  
**BAYSIDE ACADEMY**  
**2025 KEHOE AVE**  
**SAN MATEO, CA 94403**

PROJECT:

**SYNTHETIC TURF PROJECT**

SHEET NAME:

**LANDSCAPE PLAN**

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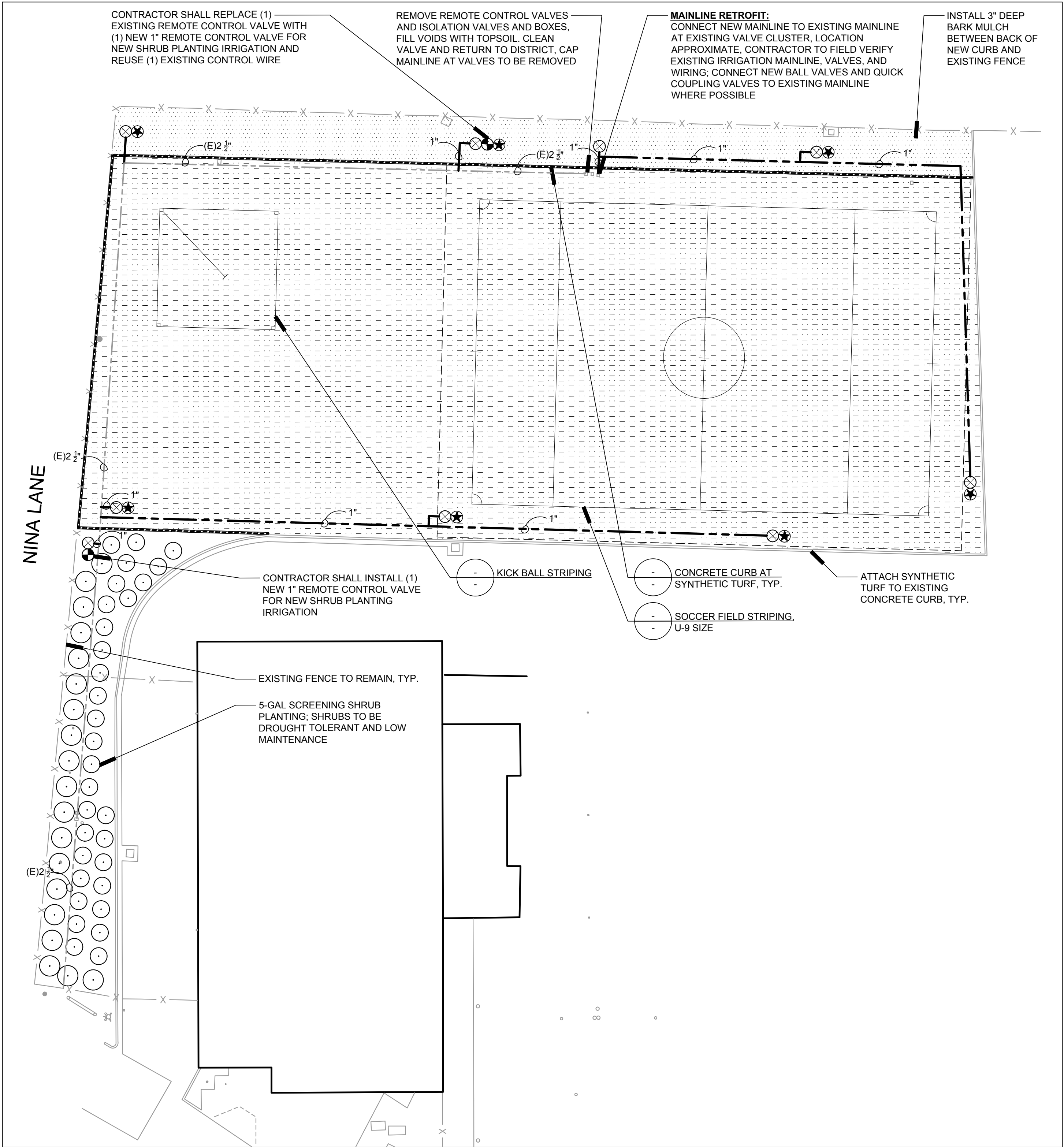
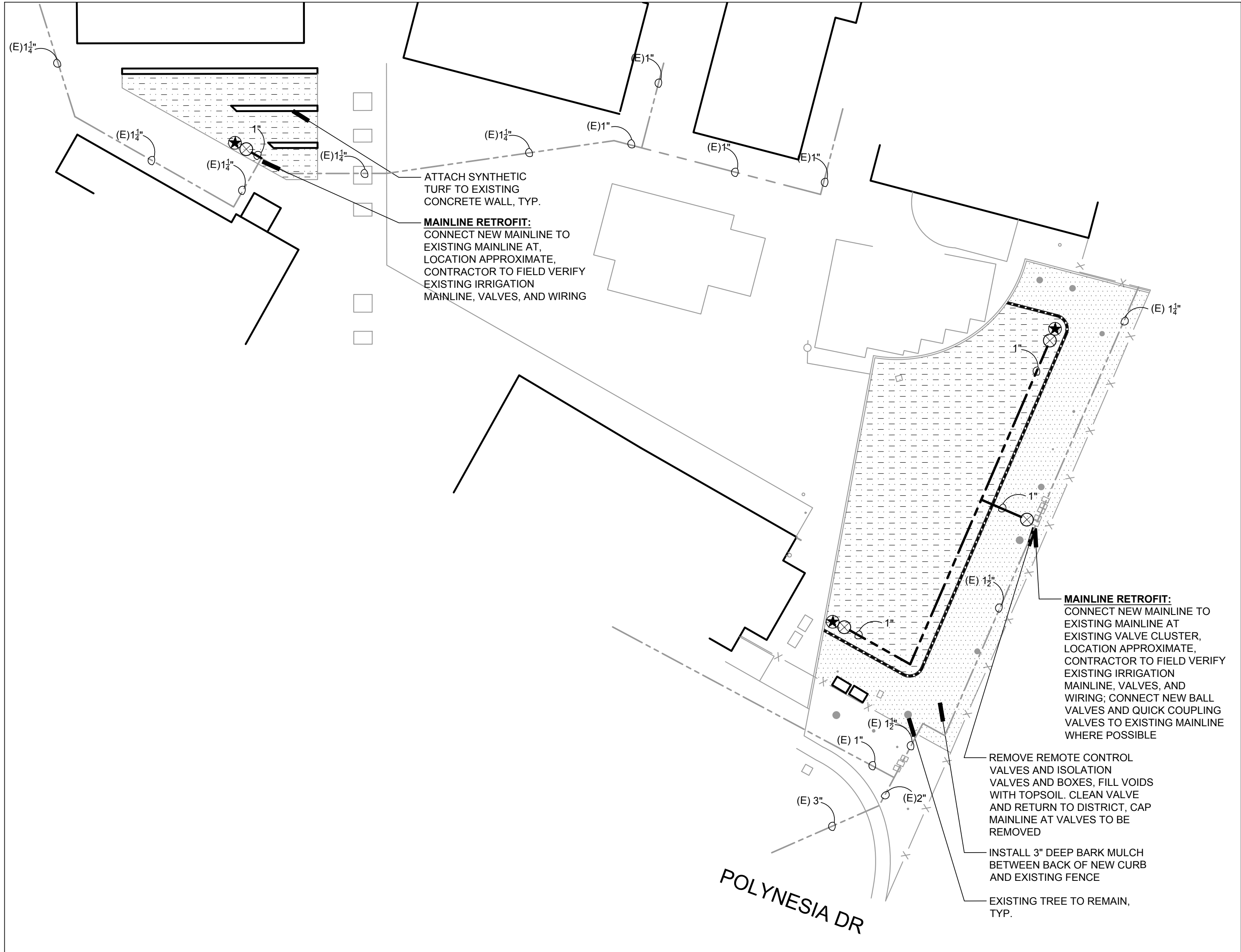
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THE LINE SHOWN ABOVE IS  
NOT A PROPERTY LINE



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MATERIALS & DETAIL REFERENCE LEGEND

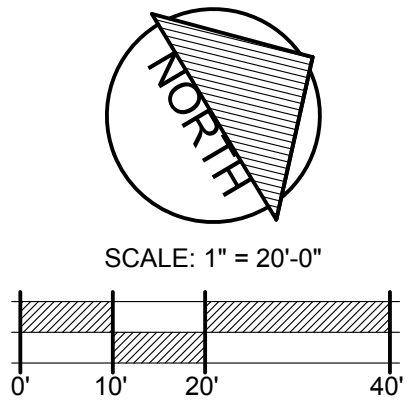
SYMBOL	DESCRIPTION	DETAIL
	CONCRETE CURB AT SYNTHETIC TURF	-
	3" DEEP SHREDDED CEDAR BARK MULCH AND MIRAFI 140N WEED BARRIER	

IRRIGATION LEGEND

SYM DESCRIPTION	
VALVES	
	3/4"-2" BRASS BALL VALVE, LINE SIZE
	QUICK COUPLER VALVE; PROVIDE MATCHED QUICK COUPLING KEY (1 PER 5 VALVES) AND MATCHED SIZE HOSE SWIVEL; DELIVER KEY(S) TO OWNER
	REMOTE CONTROL VALVE
	SPLICE BOX, PLASTIC IN LANDSCAPE AREAS, CONCRETE IN PAVED AREAS
PIPING	
	SCH 40 (2" AND SMALLER) CLASS 315 (2-1/2" TO 4") PVC PRESSURIZED MAINLINE, NSF APPROVED, SIZE PER PLAN, 24" DEPTH; 36" DEPTH UNDER FIRE LANE
	EXISTING MAINLINE, TO REMAIN, LOCATION APPROXIMATE

LATERAL PIPE SIZE CHART, SCH 40 PVC

GALLONS PER MINUTE	PIPE SIZE
0 - 7.00 GPM	3/4"
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13.00 - 22.00 GPM	1-1/4"
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51.00 - 70.00 GPM	2-1/2"
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SCHOOL DISTRICT  
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FOSTER CITY, CA 94404

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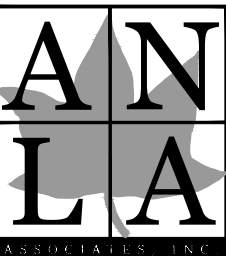
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333 W SAN CARLOS STREET, #750  
SAN JOSE, CA 95110  
408 977 9160 / www.hmcarchitects.com

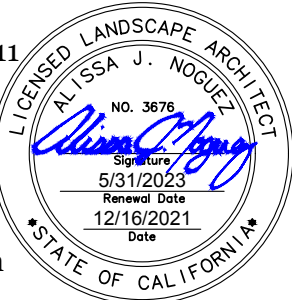
ISSUE

NO.	DESCRIPTION	DATE
01	BRIDGING DOCUMENTS	12/21/2021

Consultant:



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Consultant's Project No. ANLA 2140

FACILITY:

**FACILITY NAME**  
**BREWER ISLAND ELEMENTARY SCHOOL**  
**1151 POLYNESIA DR.**  
**FOSTER CITY, CA 94404**

PROJECT:  
**SYNTHETIC TURF PROJECT**

SHEET NAME:  
**LANDSCAPE PLAN**

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DATE: 12/21/2021

CLIENT PROJ NO:

SHEET:

L.03



### IRRIGATION NOTES

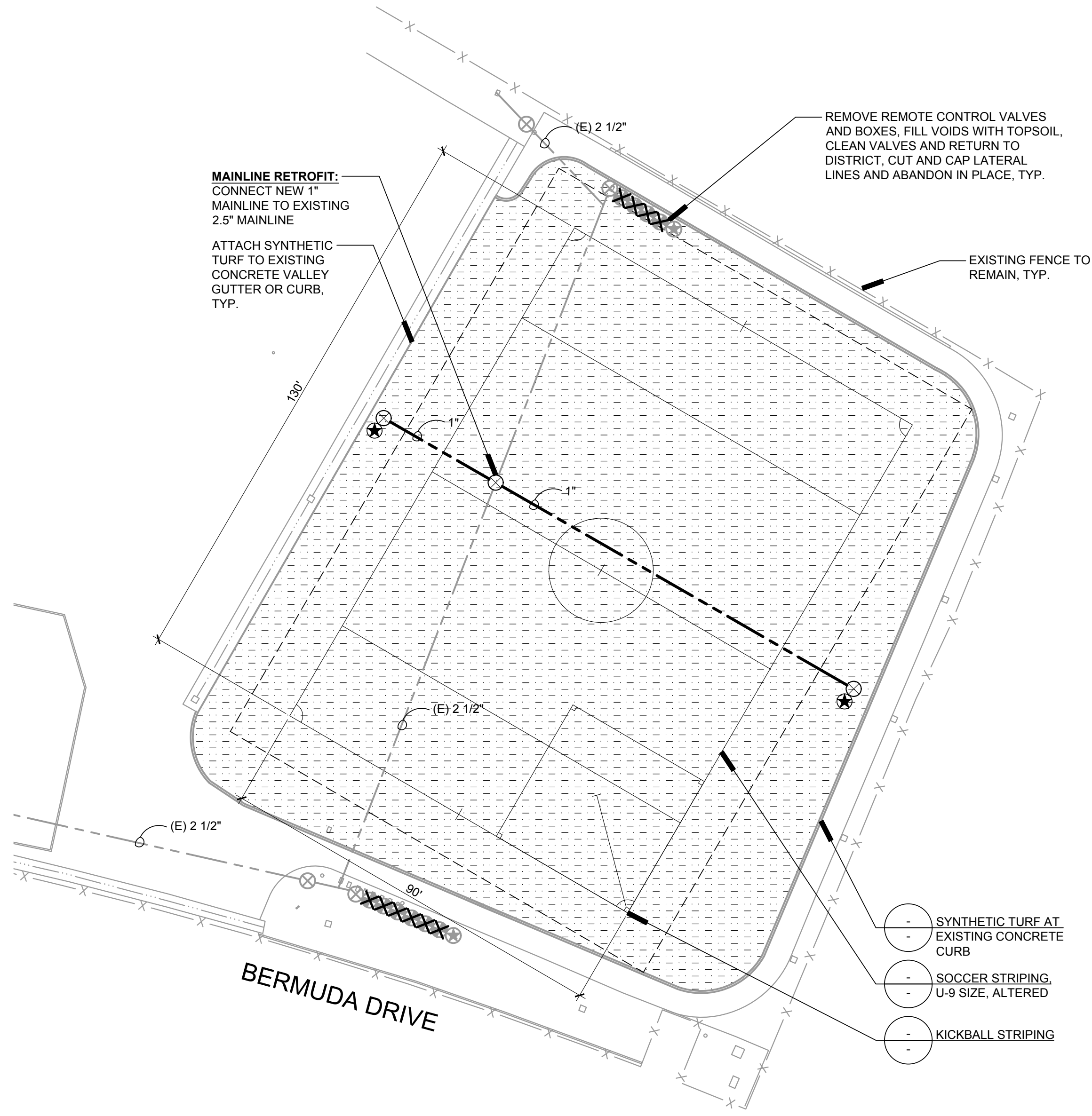
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- THE IRRIGATION SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH LOCAL CODES AND REGULATIONS. CONTRACTOR TO CONFORM TO THE REQUIREMENTS OF NFPA 24, SECTION 8.1, MINIMUM 'DEPTH-OF-COVER' (36 INCHES) FOR PIPE TO INCLUDE FIRE LANE ROUTES OF ACCESS.
- THIS SYSTEM IS DESIGNED TO OPERATE AT      PSI AND      GPM FROM THE POINT OF CONNECTION. CONTRACTOR SHALL VERIFY PRESSURE AND FLOW PRIOR TO BEGINNING OF WORK. CONTACT OWNER'S REPRESENTATIVE IMMEDIATELY SHOULD CONFLICTS ARISE.
- THE IRRIGATION SYSTEM DESIGN IS DIAGRAMMATIC. WHERE PIPING, VALVES, ETC. ARE SHOWN OUTSIDE OF PLANTING AREAS, THE INTENT IS FOR PIPING, VALVES, ETC. TO BE INSTALLED WITHIN PLANTING AREAS UNLESS OTHERWISE NOTED AND DETAILED.
- CONTRACTOR SHALL COORDINATE IRRIGATION INSTALLATION WITH OTHER TRADES. CONTRACTOR TO COORDINATE AND VERIFY ALL SLEEVING, PIPING, ELECTRICAL SUPPLY, POINT OF CONNECTION, ETC.
- CONTRACTOR IS RESPONSIBLE FOR COMPLETE AND UNIFORM COVERAGE OF PLANTING AND TURF AREAS. CONTRACTOR TO THROTTLE THE FLOW CONTROL AT EACH VALVE TO OBTAIN OPTIMUM OPERATING PRESSURE FOR EACH CIRCUIT. ADJUST SPRAY HEADS AND NOZZLES FOR OPTIMUM COVERAGE WHILE PREVENTING OVERSPRAY ONTO WALKWAYS AND STRUCTURES. ADDITIONALLY, CONTRACTOR SHALL ADJUST ALL VALVES, NOZZLES, AND HEADS FOR OPTIMUM COVERAGE, AVOIDING MISTING, OVERSPRAY, OR UNDERSPRAY.
- LATERAL LINES TO BE SIZED PER PIPE SIZING CHART.
- CONTRACTOR TO MAINTAIN AS-BUILT DRAWING SET TO BE AVAILABLE ON SITE AT ALL TIMES AND AT TIME OF SUBSTANTIAL COMPLETION REVIEW. CONTRACTOR SHALL PREPARE REDUCED, COLOR-CODED PLANS, LAMINATE, AND PLACE (1) IN CONTROLLER ENCLOSURE AND DELIVER (1) TO OWNER'S REPRESENTATIVE AFTER APPROVAL OF RECORD DRAWING SUBMITTAL AND PRIOR TO FINAL COMPLETION.
- CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN TRENCHING AROUND EXISTING TREES AND SHRUBS. CONTRACTOR SHALL HAND TRENCH WHEN TRENCHING ACROSS ROOTS 2" AND LARGER TO PRESERVE ROOT SYSTEM. ROOTS SMALLER THAN 2" MAY BE TRIMMED. DO NOT TEAR ANY ROOTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE UNDER THIS CONTRACT FOR REPAIRING OR REPLACING, AT THEIR OWN EXPENSE, SURFACE AND SUBSURFACE SITE FEATURES TO REMAIN, INCLUDING BUT NOT LIMITED TO ANY STRUCTURES, FENCES, WALLS, PAVING SURFACES, PLANT MATERIAL AND/OR TREES DAMAGED OR DESTROYED, BOTH ON THIS PROPERTY OR THOSE PROPERTIES ADJACENT TO THIS SITE. THE DAMAGED ITEM(S) WILL BE RESTORED TO THEIR ORIGINAL CONDITION OR REPLACED TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.

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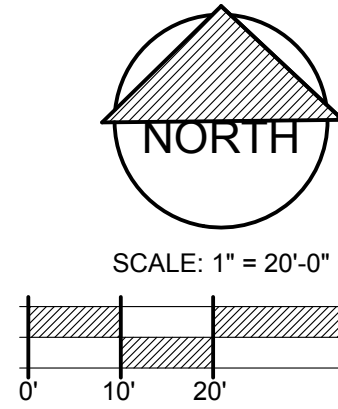
SYMBOL	DESCRIPTION	DETAIL
	CONCRETE CURB AT SYNTHETIC TURF	-

### IRRIGATION LEGEND

SYM DESCRIPTION	
VALVES	
	EXISTING ISOLATION VALVE TO REMAIN
	EXISTING QUICK COUPLING VALVE TO REMAIN
	NEW ISOLATION VALVE
	NEW QUICK COUPLING VALVE
	REMOTE CONTROL VALVE TO BE REMOVED
PIPING	
	EXISTING MAINLINE TO REMAIN, LOCATION APPROXIMATE
	SCH 40 (2" AND SMALLER) CLASS 315 (2-1/2" TO 4") PVC PRESSURIZED MAINLINE, NSF APPROVED, SIZE PER PLAN, 24" DEPTH; 36" DEPTH UNDER FIRE LANE

### LATERAL PIPE SIZE CHART, SCH 40 PVC

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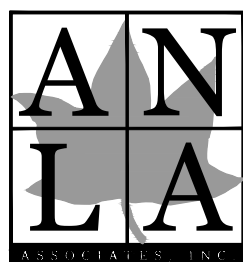
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### ISSUE

NO.	DESCRIPTION	DATE
01	BRIDGING DOCUMENTS	12/21/2021

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Consultant's Project No.

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**FACILITY NAME**  
**FIESTA GARDENS ELEMENTARY SCHOOL**  
**1001 BERMUDA DR.**  
**SAN MATEO, CA 94403**

PROJECT:

**SYNTHETIC TURF PROJECT**

SHEET NAME:

**LANDSCAPE PLAN**

### BRIDGING DOCUMENTS

DATE: 12/21/2021

CLIENT PROJ NO:

SHEET:

L.04



THE LINE SHOWN ABOVE IS  
AN APPROXIMATE LOCATION  
OF THE EXISTING MAINLINE

SAWCUT ASPHALT  
PAVING, SEE CIVIL  
DRAWINGS FOR DEMO  
AND PAVING, TYP.

INSTALL 3" DEEP  
BARK MULCH

MAINLINE RETROFIT:  
CONNECT NEW MAINLINE TO  
EXISTING MAINLINE AT EXISTING  
VALVE CLUSTER. LOCATION  
APPROXIMATE. CONTRACTOR TO  
FIELD VERIFY EXISTING  
IRRIGATION MAINLINE, VALVES,  
AND WIRING; CONNECT NEW BALL  
VALVES AND QUICK COUPLING  
VALVE TO EXISTING MAINLINE  
WHERE POSSIBLE

CP1

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## LANDSCAPE LEGEND

SYMBOL	DESCRIPTION	DETAIL
	CONCRETE CURB AT SYNTHETIC TURF	
	SAWCUT LINE IN ASPHALT PAVING	SEE CIVIL DRAWINGS
	ASPHALT PAVING	SEE CIVIL DRAWINGS

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SYM	DESCRIPTION
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## IRRIGATION NOTES

- THESE NOTES ARE FOR GENERAL REFERENCE IN CONJUNCTION WITH AND AS A SUPPLEMENT TO THE WRITTEN SPECIFICATIONS, DETAILS, ADDENDA AND CHANGE ORDERS ASSOCIATED WITH THE CONTRACT DOCUMENTS.
- CONTRACTOR SHALL BECOME FAMILIAR WITH THE LOCATION OF EXISTING AND PROPOSED UNDERGROUND SERVICES. CONTACT UNDERGROUND SERVICE ALERT (USA) AT (800) 642-2444 PRIOR TO BEGINNING WORK. CONTACT OWNER'S REPRESENTATIVE SHOULD ANY CONFLICTS ARISE.
- THE IRRIGATION SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH LOCAL CODES AND REGULATIONS. CONTRACTOR TO CONFORM TO THE REQUIREMENTS OF NFPA 24, SECTION 8.1, MINIMUM "DEPTH-OF-COVER" (36 INCHES) FOR PIPE TO INCLUDE FIRE LANE ROUTES OF ACCESS.
- THIS SYSTEM IS DESIGNED TO OPERATE AT \_\_\_ PSI AND \_\_\_ GPM FROM THE POINT OF CONNECTION. CONTRACTOR SHALL VERIFY PRESSURE AND FLOW PRIOR TO BEGINNING OF WORK. CONTACT OWNER'S REPRESENTATIVE IMMEDIATELY SHOULD CONFLICTS ARISE.
- THE IRRIGATION SYSTEM DESIGN IS DIAGRAMMATIC. WHERE PIPING, VALVES, ETC. ARE SHOWN OUTSIDE OF PLANTING AREAS, THE INTENT IS FOR PIPING, VALVES, ETC. TO BE INSTALLED WITHIN PLANTING AREAS UNLESS OTHERWISE NOTED AND DETAILED.
- CONTRACTOR SHALL COORDINATE IRRIGATION INSTALLATION WITH OTHER TRADES. CONTRACTOR TO COORDINATE AND VERIFY ALL SLEEVING, PIPING, ELECTRICAL SUPPLY, POINT OF CONNECTION, ETC.
- CONTRACTOR IS RESPONSIBLE FOR COMPLETE AND UNIFORM COVERAGE OF PLANTING AND TURF AREAS. CONTRACTOR TO THROTTLE THE FLOW CONTROL AT EACH VALVE TO OBTAIN OPTIMUM OPERATING PRESSURE FOR EACH CIRCUIT. ADJUST SPRAY HEADS AND NOZZLES FOR OPTIMUM COVERAGE WHILE PREVENTING OVERSPRAY ONTO WALKWAYS AND STRUCTURES. ADDITIONALLY, CONTRACTOR SHALL ADJUST ALL VALVES, NOZZLES, AND HEADS FOR OPTIMUM COVERAGE, AVOIDING MISTING, OVERSPRAY, OR UNDERSPRAY.
- LATERAL LINES TO BE SIZED PER PIPE SIZING CHART.
- CONTRACTOR TO MAINTAIN AS-BUILT DRAWING SET TO BE AVAILABLE ON SITE AT ALL TIMES AND AT TIME OF SUBSTANTIAL COMPLETION REVIEW. CONTRACTOR SHALL PREPARE REDUCED, COLOR-CODED PLANS, LAMINATE, AND PLACE (1) IN CONTROLLER ENCLOSURE AND DELIVER (1) TO OWNER'S REPRESENTATIVE AFTER APPROVAL OF RECORD DRAWING SUBMITTAL AND PRIOR TO FINAL COMPLETION.
- CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN TRENCHING AROUND EXISTING TREES AND SHRUBS. CONTRACTOR SHALL HAND TRENCH WHEN TRENCHING ACROSS ROOTS 2" AND LARGER TO PRESERVE ROOT SYSTEM. ROOTS SMALLER THAN 2" MAY BE TRIMMED. DO NOT TEAR ANY ROOTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE UNDER THIS CONTRACT FOR REPAIRING OR REPLACING, AT THEIR OWN EXPENSE, SURFACE AND SUBSURFACE SITE FEATURES TO REMAIN, INCLUDING BUT NOT LIMITED TO ANY STRUCTURES, FENCES, WALLS, PAVING SURFACES, PLANT MATERIAL AND/OR TREES DAMAGED OR DESTROYED, BOTH ON THIS PROPERTY OR THOSE PROPERTIES ADJACENT TO THIS SITE. THE DAMAGED ITEM(S) WILL BE RESTORED TO THEIR ORIGINAL CONDITION OR REPLACED TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.

ATTACH SYNTHETIC  
TURF TO EXISTING  
CONCRETE CURB, TYP

SYNTHETIC TURF AT  
EXISTING CONCRETE  
CURB

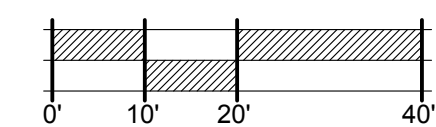
KICKBALL STRIPING

MAINLINE RETROFIT:  
CONNECT NEW MAINLINE TO EXISTING MAINLINE  
AT EXISTING VALVE CLUSTER. LOCATION  
APPROXIMATE. CONTRACTOR TO FIELD VERIFY  
EXISTING IRRIGATION MAINLINE, VALVES, AND  
WIRING; CONNECT NEW BALL VALVES AND QUICK  
COUPLING VALVES TO EXISTING MAINLINE  
WHERE POSSIBLE

REMOVE REMOTE CONTROL  
VALVES AND ISOLATION VALVES  
AND BOXES. FILL VOIDS WITH  
TOPSOIL. CLEAN VALVE AND  
RETURN TO DISTRICT. CAP  
MAINLINE AT VALVES TO BE  
REMOVED



SCALE: 1" = 20'-0"



PLEASE RECYCLE



SAN MATEO-FOSTER CITY  
SCHOOL DISTRICT  
1170 CHESS DR.  
FOSTER CITY, CA 94404

HMC Architects

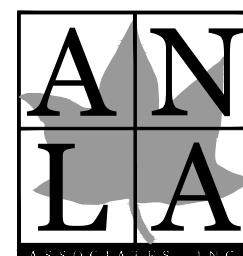
3542-006-000

333 W SAN CARLOS STREET, #750  
SAN JOSE, CA 95110  
408 977 9160 / www.hmcarchitects.com

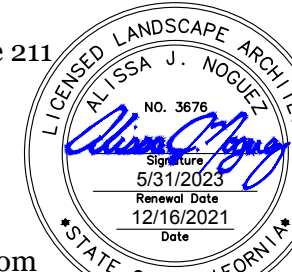
## ISSUE

NO.	DESCRIPTION	DATE
01	BRIDGING DOCUMENTS	12/21/2021

Consultant:



1213 Lincoln Ave, Suite 211  
San Jose, CA 95125  
T. 408.292.2196  
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Consultant's Project No. ANLA 2140

FACILITY:

**FACILITY NAME**  
GEORGE HALL ELEMENTARY SCHOOL  
130 SAN MIGUEL WAY  
SAN MATEO, CA 94403

PROJECT:

SYNTHETIC TURF PROJECT

SHEET NAME:

LANDSCAPE PLAN

## BRIDGING DOCUMENTS

DATE: 12/21/2021

CLIENT PROJ NO:

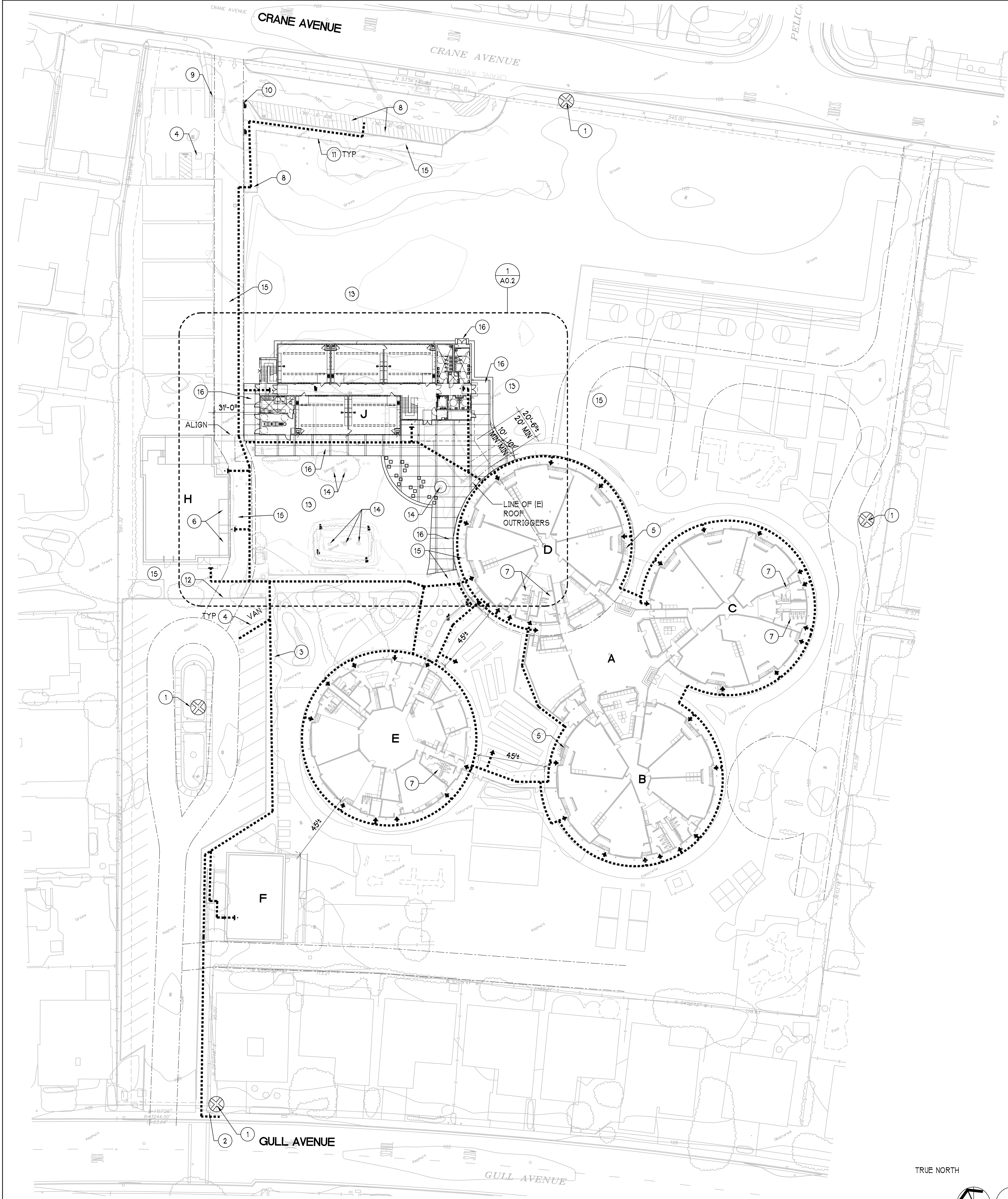
SHEET:

L.05









**SITE PLAN**  
SCALE : 1" = 30'-0"

SCALE : 1" = 30'-0"

## SHEET NOTES

1. [E] FIRE HYDRANT
2. [E] TOW-AWAY SIGN, DSA #01-101835
3. [E] ACCESSIBLE CURB CUT AND RAMP, DSA #01-107961
4. [E] ACCESSIBLE PARKING, STRIPING, AND SIGNAGE, DSA #01-105663 [MOST RECENT]
5. [E] ACCESSIBLE DRINKING FOUNTAIN, DSA #01-101835
6. [E] ACCESSIBLE TOILET, DSA #68828
7. [E] ACCESSIBLE TOILET, DSA #01-101835
8. [E] CURB RAMP AND DROP OFF AREA, DSA #01-105663
9. [E] FIRE DEPT. KNOX BOX
10. [E] CHAIN LINK VEHICLE GATE
11. [E] CHAIN LINK FENCE
12. [E] VEHICLE CURB CUT
13. [E] LAWN, PROTECT AND REPLACE DAMAGED LAWN IN-KIND [INCL. SUBSTRATE AND IRRIGATION AS APPLICABLE]
14. [E] TREE, PROTECT
15. [E] PAVING
16. CONCRETE PAVING, S.C.D. AND S.L.D.
17. A.C. PAVING, S.C.D.

## BUILDING CODE DATA

**[#] BLDG. A**  
 DSA APP. #28871, #01-101835  
 USE. LIBRARY  
 OCCUPANCY GROUP: E  
 CONSTRUCTION TYPE: V-B, UNSPRINKLERED  
 BASE ALLOWABLE AREA: 9,500 SF  
 ACTUAL AREA: 6,957 SF  
 REMARKS: 2-1R. AREA SEPARATION WALL

**[#] BLDG. B**  
 DSA APP. #28871, #01-101835  
 USE. CLASSROOM  
 OCCUPANCY GROUP: E  
 CONSTRUCTION TYPE: V-B, UNSPRINKLERED  
 BASE ALLOWABLE AREA: 9,500 SF  
 ACTUAL AREA: 9,291 SF

**[#] BLDG. C**  
 DSA APP. #28871, #01-101835  
 USE. CLASSROOM  
 OCCUPANCY GROUP: E  
 CONSTRUCTION TYPE: V-B, UNSPRINKLERED  
 BASE ALLOWABLE AREA: 9,500 SF  
 ACTUAL AREA: 9,107 SF

**[#] BLDG. D**  
 DSA APP. #28871, #01-101835  
 USE. CLASSROOM  
 OCCUPANCY GROUP: E  
 CONSTRUCTION TYPE: V-B, UNSPRINKLERED  
 BASE ALLOWABLE AREA: 9,500 SF  
 ACTUAL AREA: 9,260 SF

**[#] BLDG. E**  
 DSA APP. #28871, #01-101835  
 USE. CLASSROOM/ADMIN  
 OCCUPANCY GROUP: E  
 CONSTRUCTION TYPE: V-A, UNSPRINKLERED  
 BASE ALLOWABLE AREA: 18,500 SF  
 ACTUAL AREA: 9,960 SF

**[#] BLDG. F**  
 DSA APP. #01-101808  
 USE. CLASSROOM  
 OCCUPANCY GROUP: E  
 CONSTRUCTION TYPE: V-B, UNSPRINKLERED  
 BASE ALLOWABLE AREA: 9,500 SF  
 ACTUAL AREA: 2,400 SF

**[#] BLDG. G1-G2**  
 (PREVIOUSLY REMOVED FROM SITE)

**[#] BLDG. H**  
 DSA APP. #68828  
 USE. MULTI-PURPOSE  
 OCCUPANCY GROUP: A-7  
 CONSTRUCTION TYPE: V-A, UNSPRINKLERED  
 BASE ALLOWABLE AREA: 18,500 SF  
 ACTUAL AREA: 4,776 SF

**[#] BLDG. I1-12-13**  
 DSA APP. #01-105364, #01-107961  
 USE. CLASSROOM  
 OCCUPANCY GROUP: E  
 CONSTRUCTION TYPE: V-B, UNSPRINKLERED  
 BASE ALLOWABLE AREA: 9,500 SF  
 ACTUAL AREA: 2,400 SF

**[#] BLDG. R1-R2-R3-R4-R5**  
 DSA APP. #01-105653  
 USE. CLASSROOM  
 OCCUPANCY GROUP: E  
 CONSTRUCTION TYPE: V-B, UNSPRINKLERED  
 BASE ALLOWABLE AREA: 9,500 SF  
 ACTUAL AREA: 4,800 SF

**NEW BLDG. J**  
 DSA APP. <THIS APPLICATION>  
 USE. CLASSROOM  
 OCCUPANCY GROUP: E  
 CONSTRUCTION TYPE: V-B, SPRINKLERED  
 STORIES: 2  
 BASE ALLOWABLE AREA: 9,500 SF  
 ACTUAL ALLOWABLE AREA: 18,000 SF, 2 STORY  
 ACTUAL AREA: 14,351 SF, 2 STORY

## LOCAL FIRE AUTHORITY REVIEW

LOCAL FIRE AUTHORITY TO INITIAL THE ITEMS AS APPLICABLE TO THIS PROJECT AND SIGN BELOW:

### ACCESS ROADS AND FIRE HYDRANTS

\_\_\_\_ ACCESS ROADS AND GATES ENTRANCES ARE IN ACCORDANCE WITH TITLE 19, CALIFORNIA CODE OF REGULATIONS DIV. 1, CHAP. 1, SUB-CHAP. 1, ARTICLE 3.05 (ACCESS ROADS) AND ARTICLE 3.16 (GATE ENTRANCES) TO SCHOOL SITES.

\_\_\_\_ FIRE FLOW, FIRE HYDRANT LOCATIONS

\_\_\_\_ WILDLAND URBAN INTERFACE AREA.

## AUTOMATIC FIRE SPRINKLER SYSTEMS

\_\_\_\_\_ THE LOCATION(S) OF THE PROPOSED POST INDICATOR VALVE (PIV) AND FIRE DEPARTMENT CONNECTION (FDC) MEETS THE REQUIREMENTS OF THIS JURISDICTION AT THIS TIME.

\_\_\_\_ THE LOCATION(S) OF THE DETECTOR CHECK VALVE ASSEMBLY (DCVA) MEETS THE REQUIREMENTS OF THIS JURISDICTION AT THIS TIME.

\_\_\_\_ THE FIRE PUMP ASSEMBLY/BACKFLOW PREVENTER MEETS THE REQUIREMENTS OF THIS JURISDICTION AT THIS TIME.

LOCAL FIRE AUTHORITY: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY/STATE/ZIP: \_\_\_\_\_  
PHONE NUMBER: \_\_\_\_\_ DATE: \_\_\_\_\_

APPROVAL ISSUED BY: \_\_\_\_\_

RANK/TITLE: \_\_\_\_\_

COMMENTS: \_\_\_\_\_

A SIGNATURE ABOVE SIGNIFIES THAT THE LOCAL FIRE AUTHORITY HAS REVIEWED THE PROPOSED LOCATIONS AND WAS CONSULTED REGARDING THE PLACEMENT/DESIGN OF THE PV(S), FDC(S), DCVA(S), FIRE PUMPS(S), AND HYDRANTS. THE CURRENT CONFIGURATION SHOWN, AS OF THIS DATE, MEETS WITH THE CURRENT STANDARDS.

## LEGEND

..... (E) 2-HOUR AREA SEPARATION

(E) FIRE HYDRANT

\_\_\_\_\_ PROPERTY LINE

ACCESSIBLE PATH OF TRAVEL AS INDICATED ON PLAN IS A BARRIER-FREE ACCESS ROUTE WITHOUT ANY ABRUPT LEVEL CHANGES EXCEEDING 1/2" IF BEVELED AT 1:2 MAX SLOPE, OR VERTICAL LEVEL CHANGES NOT EXCEEDING 1/4" MAX, AND AT LEAST 48" IN WIDTH. SURFACE IS STABLE, FIRM, AND SLIP RESISTANT. CROSS SLOPE DOES NOT EXCEED 2XXX AND SLOPE IN THE DIRECTION OF TRAVEL IS LESS THAN 5XXX, UNLESS OTHERWISE INDICATED. ACCESS PATH OF TRAVEL SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS TO 80" MINIMUM, AND PROTRUDING OBJECTS GREATER THAN 4" PROJECTION FROM WALL AND ABOVE 27" LESS THAN 80". G.C. TO VERIFY THAT THERE ARE NO BARRIERS IN THE PATH OF TRAVEL.

ACCESSIBLE PATH OF TRAVEL CONTAINS 'PASSING SPACES' A MINIMUM OF 60' X 60', LOCATED NOT GREATER THAN 600' APART. SEGMENTS OF ACCESSIBLE PATH OF TRAVEL HAVING CONTINUOUS GRADIENTS HAVE LEVEL AREAS, A MINIMUM OF 60' LONG, NOT GREATER THAN 400' APART. [CBC 1133B].

(E) FIRE LANE

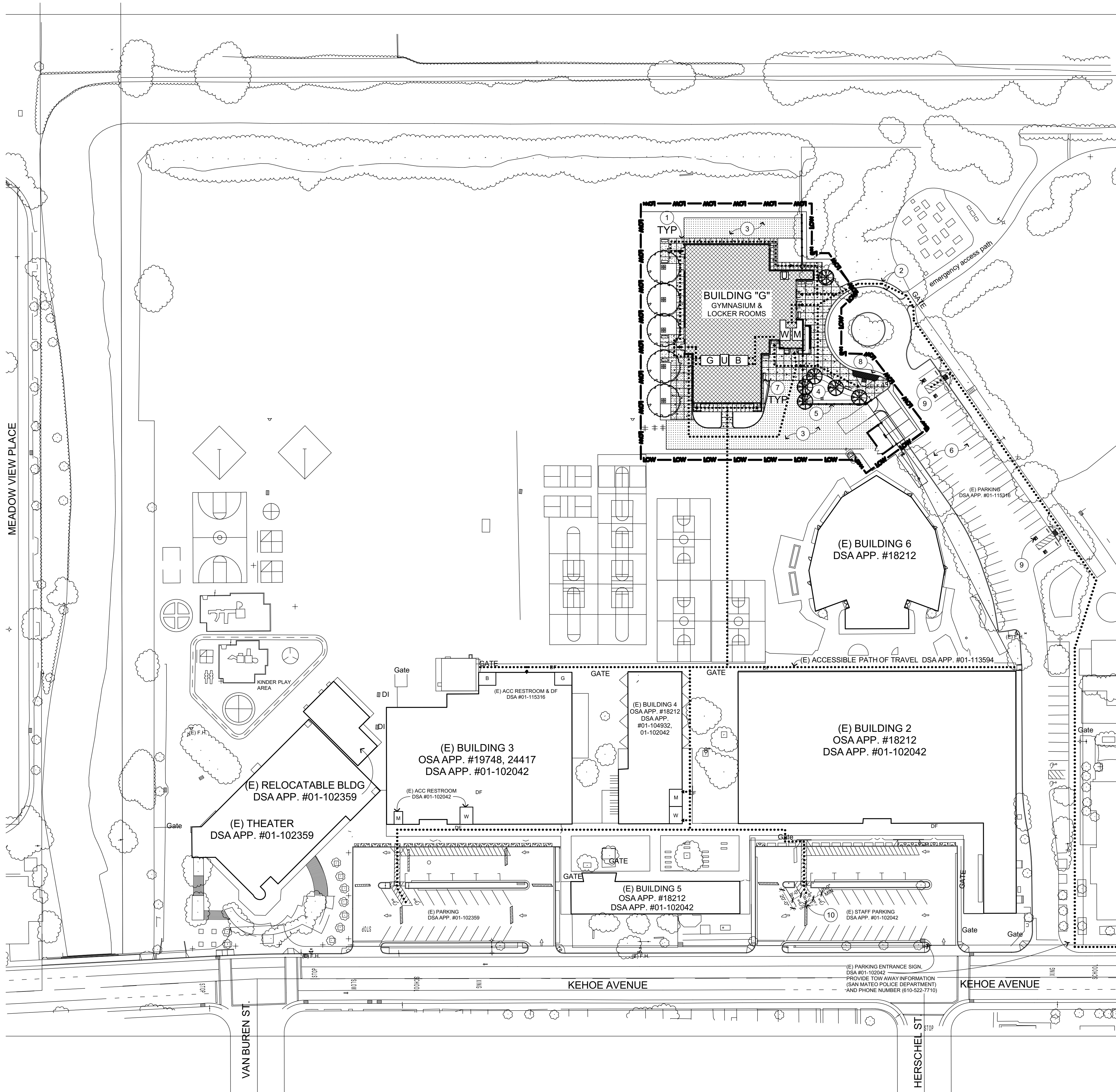
TRUE NORTH

PLAN NORTH

A horizontal number line is shown with tick marks at 0, 15, 30, and 60. The word "FEET" is written at the right end of the line. The segment between 15 and 30 is shaded gray.



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SITE ACCESSIBILITY PLAN

1" = 50'

SITE KEYNOTES

NOT ALL KEYNOTES MAY APPLY TO THIS SHEET

- 1 NEW CONCRETE FLATWORK, S.C.D. & S.L.D. FOR DIMENSIONS
- 2 EXISTING CONCRETE CURBS
- 3 NEW ASPHALT PAVING, S.C.D. & S.L.D.
- 4 S.L.D. FOR (N) PLANTING, S.C.D. FOR (N) CURBS
- 5 NEW FENCE, S.L.D.
- 6 EXISTING PARKING
- 7 BENCH, S.L.D.
- 8 S.C.D. FOR NEW ACCESSIBLE PULOVER AREA
- 9 (N) ACCESSIBLE PARKING INCLUDING VAN SPACE SEE SITE PLAN GENERAL NOTES 11 AND S.C.D.
- 10 (E) ACCESSIBLE PARKING
- 11 ROOF LINE OR CANOPY ABOVE
- 12 PROPOSED CONSTRUCTION FENCE

SITE PLAN GENERAL NOTES

1. SEE SHEET A-1.1 FOR ACCESSIBILITY INFORMATION
2. REFER TO CIVIL ENGINEERING DWGS FOR SIDEWALK GRADES
3. REFER TO CIVIL ENGINEERING DRAWINGS FOR SITE FEATURES NOT OTHERWISE INDICATED.
4. CONCRETE SHALL SLOPE 2% MIN (1/4" PER FOOT) AWAY FROM THE BUILDING WHERE THIS DOES NOT OTHERWISE CONFLICT WITH ACCESSIBILITY CODE REQUIREMENTS.

DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT:  
THE P.O.T. IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS 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 P.O.T. WAS EXAMINED AND ANY ELEMENT, COMPONENTS OR PORTIONS OF THE P.O.T. THAT WERE DETERMINED TO BE NONCOMPLIANT

- A) HAVE BEEN IDENTIFIED AND
- B) THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WITHIN THE SCOPE OF THIS PROJECT'S WORK THROUGH DETAILS, DRAWINGS AND SPECIFICATIONS INCORPORATED INTO THESE CONSTRUCTION DOCUMENTS.

ANY NONCOMPLIANT ELEMENT, COMPONENT, OR PORTION OF THE P.O.T. THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED ON VALUATION THRESHOLD LIMITATIONS OR A FINDING OF UNREASONABLE HARSHNESS ARE SO INDICATED IN THESE CONSTRUCTION DOCUMENTS.

DURING CONSTRUCTION IF P.O.T. 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.

5. .... INDICATES BARRIER FREE PATH OF TRAVEL  
THE BARRIER FREE PATH OF TRAVEL INDICATED HAS BEEN PROVIDED IN ACCORDANCE WITH IR 11B-10 AND SHALL COMPLY WITH THE FOLLOWING:
  - 1:20 MAXIMUM SLOPE WITHOUT A RAMP.
  - 1:50 MAXIMUM CROSS SLOPE
  - NO ABRUPT VERTICAL CHANGES EXCEEDING 1/4" CHANGES BETWEEN 1/4" TO 1/2" VERTICAL CAN BE AT 1:2 MAX SLOPE. CHANGES LESS THAN 1/4" CAN BE VERTICAL
  - 48" MIN. CLEAR IN WIDTH (60" MIN PASSING SPACE)
  - NON-SLIP SURFACE -HEAVY BROOM FINISH AT EXTERIOR CONCRETE PAVING WHERE SLOPED -6%, MEDIUM BROOM FINISH AT SLOPED -4%
  - MAINTAIN FREE OF OVERHANGING OBSTRUCTIONS TO 80" MIN.
  - PROTRUDING OBJECTS NOT GREATER THAN 4" SHALL BE MOUNTED BETWEEN 27" AND 80" A.F.F.
  - WHERE A DRAIN INLET IS IN THE PATH OF TRAVEL, THE GRATE SHALL BE ORIENTED SO THAT MAX. OPENING IS 1/2" & LONG DIM IS PERPENDICULAR TO THE PREDOMINANT DIRECTION OF PEDESTRIAN TRAVEL
  - CONTRACTOR TO VERIFY NO BELOW-GRADE PULL BOXES OCCUR WITHIN THE AREA OF TRUNCATED DOMES.

6. PARKING & PEDESTRIAN SITE SIGNAGE SHALL COMPLY WITH CBC SECTIONS 11B-502.6, 11B-502.8, AND 11B-703.7.2.1
7. BUILDING SIGNAGE SHALL COMPLY WITH CBC 11B-703
8. PEDESTRIAN GATES SHALL COMPLY WITH CBC 11B-603
9. FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION WILL BE ENFORCED IAW WITH 2016 CBC AND CFC CHAPTER 33.
10. EMERGENCY VEHICLE ACCESS ROADS AND ON-SITE FIRE HYDRANTS SHALL BE IN SERVICE AND OPERABLE PRIOR TO LOADING THE SITE WITH COMBUSTIBLE MATERIALS.
11. FOR ACCESSIBLE PARKING SIGNAGE PROVIDE TOW AWAY INFORMATION (SAN MATEO POLICE DEPARTMENT) AND PHONE NUMBER (610-522-7710)

SITE PLAN LEGEND

- NEW PAVEMENT, S.L.D.
- NEW SIDEWALK, S.L.D.

PARKING ANALYSIS

	TOTAL SPACES PROVIDED	ACC SPACES REQUIRED*	ACC SPACES PROVIDED
(E) PARKING DSA # 01-102359	25	-	2 (1 VAN)
(E) PARKING DSA # 01-102042	27	2 (1 VAN)	2 (1 VAN)
(E) PARKING DSA # 01-115316	55	3 (1VAN)	6 (1VAN)

\*CBC SECTION 11B-208, TABLE 11B-208.2  
25-50 PARKING SPACES: 2 ACCESSIBLE SPACES REQUIRED  
51-75 PARKING SPACES: 3 ACCESSIBLE SPACES REQUIRED  
PER 11B-208.2.4.01.1 VAN ACC SPACE REQUIRED PER 6 ACC SPACES

SITE ACCESS LEGEND

- NEW BUILDING
- (E) BUILDING TO REMAIN
- LIMIT OF WORK
- FIRE ACCESS
- PROPERTY LINE
- ACCESSIBLE PATH OF TRAVEL
- ACCESSIBLE ENTRY / EXTERIOR DOOR AT PATH OF TRAVEL
- (E) ACCESSIBLE DRINKING FOUNTAIN, U.O.N.
- (E) FIRE HYDRANT (U.O.N.), S.C.D. AT (N) HYDRANTS

- ALL TOILET ROOMS NOTED ARE ACCESSIBLE PER CBC. REFER TO INDIVIDUAL BUILDING PLANS FOR DETAILED INFORMATION.
- UNISEX TOILET
  - BOYS' STUDENT TOILET
  - GIRLS' STUDENT TOILET
  - MENS TOILET
  - WOMENS TOILET



QUATTROCCHI KWOK  
ARCHITECTS

636 FIFTH ST.  
SANTA ROSA, CA 95404  
(707) 576-0829  
(707) 576-0295 FAX



SIGNED: OCTOBER 3, 2018

BAYSIDE  
ACADEMY

NEW  
GYMNASIUM

2025 Kehoe Avenue  
San Mateo, CA 94403

SAN MATEO FOSTER  
CITY SCHOOL  
DISTRICT

APPROVED  
DIV. OF THE STATE ARCHITECT  
APP. 01-117464 INC.  
REVIEWED FOR  
SS ☒ FLS ☒ ACS ☒  
DATE: 11/06/2018

ARCH PROJECT NO: 1629.00  
DRAWN BY: FG  
DRAWING SCALE: 1" = 50'  
PTN: 69039-91

CD

OCTOBER 3, 2018

SHEET TITLE

SITE  
ACCESSIBILITY  
PLAN

SHEET NUMBER

G-0.4



## SHEET NOTES- ACCESS

- 1 (E) ACCESSIBLE PATH OF TRAVEL (P.O.T.), TYP. P.O.T. AS INDICATED ON PLAN IS A BARRIER FREE W/O ANY ABRUPT LEVEL CHANGES EXCEEDING 1/4" MAX. AND AT LEAST 48" WIDE. SURFACE IS SLIP RESISTANT, STABLE, FIRM, AND SMOOTH. CROSS SLOPE DOES NOT EXCEED 2% AND SLOPE IN THE DIRECTION OF TRAVEL IS LESS THAN 5% UNLESS OTHERWISE INDICATED. P.O.T. SHALL MAINTAIN FREE OF OVERHANGING OBSTRUCTIONS TO MIN. 80" (1103B.2) AND PROTRUDING OBJECTS GREATER THAN 4" PROJECTION FROM WALL BETWEEN 27" AND 80" HEIGHT. (1103B.8.6) SEE NOTES FOR LOCATIONS OF CURB RAMPS (P.O.T. EXCEEDS 1:20, BUT NEVER EXCEEDS 1:12)
- 2 (E) ACCESSIBLE PARKING STALL DSA APP # 61184
- 3 (E) VAN ACCESSIBLE PARKING STALL DSA APP # 61184
- 4 (E) 5' X 20' ACCESSIBLE PASSENGER DROP-OFF AND LOADING ZONE PER SECTION 1131B - DSA APP # 61184
- 5 (E) 12" HIGH LETTERING: 'NO PARKING' DSA APP # 01-107961
- 6 (E) ACCESSIBLE SYMBOL DSA APP # 61184
- 7 (E) TOW AWAY SIGN AT PARKING LOT ENTRY, PER 1129B.5. SIGN DOES NOT CONTAIN WORD 'HANDICAPPED'. NOTE: 1-WAY VEHICLE CIRCULATION IN PARKING LOT.
- 8 (E) ACCESSIBLE RAMP AND CURB CUT. DSA APP # 61184
- 9 (E) DRINKING FOUNTAIN
- 10 (E) ACCESSIBLE HIGH LOW DRINKING FOUNTAIN - DSA APP # 01-107961
- 11 (E) ACCESSIBLE TOILET - DSA APP # 64465
- 12 (E) ACCESSIBLE TOILET - DSA APP # 61184
- 13 (E) PLAY EQUIPMENT
- 14 (E) RAMP TO (E) RELOCATABLE CLASSROOMS (MEETS 1998 CBC SECTION 1133B.5)
- 15 (E) GATE WITH PANIC DEVICE
- 16 (E) ACCESSIBLE TOILET - DSA APP # 69017. FOR PLAN OF (E) TOILETS, SEE 16 / A1.2

## SHEET NOTES- FIRE/LIFE SAFETY

- 20 (E) EDGE OF BUILDING, TYP.
- 21 ASSUMED PROPERTY LINE, TYP.
- 22 DISTANCE TO ASSUMED PROPERTY LINE / IMAGINARY LINE BETWEEN BUILDINGS, TYP.
- 23 (E) EDGE OF ROOF ABOVE, TYP.
- 24 (E) SCHOOL PROPERTY LINE, TYP.
- 25 (E) P.I.V.
- 26 DISTANCE TO (E) PROPERTY LINE
- 27 (E) FIRE LANE
- 28 (E) FIRE HYDRANT
- 29 (E) 12'-0" CHAIN LINK GATE

## SHEET NOTES- CONSTRUCTION

- 40 REMOVE AND RELOCATE (E) RELOCATABLE CLASSROOM. PROVIDE PROPER DISCONNECTION AND TERMINATION OF ALL UTILITIES INCLUDING ELECTRICAL, FIRE ALARM, DATA, COMMUNICATION, PLUMBING, SANITARY SEWER, AND MECHANICAL. (E) RELOCATABLE CLASSROOM DSA APPLICATION NUMBER 01-110070. SERIAL NUMBERS II FOR EACH RELO = 9-08-DH-08121.3 AND 9-08-DH-08121.4. REMOVE FOUR (E) BOLLARDS ADJACENT TO (E) MECHANICAL EQUIPMENT. PATCH AND REPAIR (E) AC PAVING WHERE BOLLARDS AND RELOCATABLE CLASSROOM REMOVED
- 41 REMOVE AND SALVAGE (E) ACCESSIBLE RAMP SYSTEM. LEAVE ON SITE FOR DISTRICT PICK-UP.
- 42 (E) RELOCATABLE CLASSROOM IN NEW LOCATION. PROVIDE UTILITY CONNECTIONS. SERIAL NUMBERS II FOR EACH RELO = 9-08-DH-08121.3 AND 9-08-DH-08121.4
- 43 PC RELOCATABLE CLASSROOM - DOUENIK
- 44 PC RELOCATABLE CLASSROOM - ENVIROPLEX
- 45 REMOVE (E) AC PAVING OVERLAY AT RAMP LANDING. EXTENTS INDICATED BY AREA WITHIN DASHED LINE. PATCH AND REPAIR (E) AC PAVING BENEATH.
- 46 PROVIDE CONCRETE PLATFORM. S.C.D.
- 47 RELOCATE (E) GUARDRAIL TO END OF CONCRETE PLATFORM. SEE CIVIL DRAWINGS
- 48 PROVIDE 4'-0" TALL 14'-0" LONG SECTION OF CHAIN LINK FENCE. FIELD VERIFY LENGTH OF FENCE.
- 49 REMOVE APPROXIMATELY 200'-0" OF 4'-0" TALL CHAIN LINK FENCE INCLUDING POSTS.
- 50 PROVIDE FENCE POST FOR END OF PORTION OF (E) CHAIN LINK FENCE TO REMAIN. (E) FENCE HEIGHT = 4'-0".
- 51 PROVIDE 20'-0" +/- LONG CHAIN LINK FENCE INCLUDING POSTS & 3'-0" GATE. FIELD VERIFY LENGTH OF FENCE. HEIGHT TO BE 4'-0" AT PLAY AREA, 8'-0" ELSEWHERE.
- 52 RELOCATE (E) 29'-6" SECTION OF CHAIN LINK FENCE INCLUDING FENCE POSTS AND GATES
- 53 RELOCATED CHAIN LINK FENCE PORTION
- 54 GE SUPRASAFE 1 RAPID ENTRY KEY BOX FOR FOSTER CITY F.D. DEPARTMENT SYSTEM CODE T 6535, ON GALV. METAL POLE SET IN 12" DIA. CONC. PIER FOOTING.
- 55 AT (E) ACCESSIBLE PARKING STALL SIGN ADD "MINIMUM \$250 FINE" BELOW INTERNATIONAL SYMBOL OF ACCESSIBILITY, PER CBC 1129.B.3, CBC 1129.B.4, AND CBC 1129.B.8, TYP.
- 56 PAINT DROP-OFF AND LOADING ZONE BORDER BLUE, TYP.
- 57 WOOD CLOSURE PANEL, TYP. PER DETAIL 26 / A1.2, TYP.
- 58 ALIGN
- 59 PROVIDE 20'-0" +/- LONG 8'-0" TALL CHAIN LINK FENCE INCLUDING POSTS AND 3'-0" GATE
- 60 PROVIDE 14'-0" +/- LONG 8'-0" TALL CHAIN LINK FENCE INCLUDING POSTS
- 61 PROVIDE 40'-0" LINEAR FEET OF SLOTTED GRATE AT (E) TOILET BLDG. SEE DTL. 22 / A1.2, TYP.
- 62 ACCESSIBLE RAMP, TYP. S.C.D. SEE ALSO 24, 25, AND 29 ON A1.2, TYP.
- 63 STEPS, TYP. S.C.D. SEE ALSO 20 & 28 / A1.2, TYP.
- 64 PROVIDE 28'-0" LINEAR FEET OF SLOTTED GRATE AT SIDE OF BLDG. SEE DTL. 22 / A1.2, TYP.

## SHEET NOTES- CONSTRUCTION

- 49 REMOVE APPROXIMATELY 200'-0" OF 4'-0" TALL CHAIN LINK FENCE INCLUDING POSTS.
- 50 PROVIDE FENCE POST FOR END OF PORTION OF (E) CHAIN LINK FENCE TO REMAIN. (E) FENCE HEIGHT = 4'-0".
- 51 PROVIDE 20'-0" +/- LONG CHAIN LINK FENCE INCLUDING POSTS & 3'-0" GATE. FIELD VERIFY LENGTH OF FENCE. HEIGHT TO BE 4'-0" AT PLAY AREA, 8'-0" ELSEWHERE.
- 52 RELOCATE (E) 29'-6" SECTION OF CHAIN LINK FENCE INCLUDING FENCE POSTS AND GATES
- 53 RELOCATED CHAIN LINK FENCE PORTION
- 54 GE SUPRASAFE 1 RAPID ENTRY KEY BOX FOR FOSTER CITY F.D. DEPARTMENT SYSTEM CODE T 6535, ON GALV. METAL POLE SET IN 12" DIA. CONC. PIER FOOTING.
- 55 AT (E) ACCESSIBLE PARKING STALL SIGN ADD "MINIMUM \$250 FINE" BELOW INTERNATIONAL SYMBOL OF ACCESSIBILITY, PER CBC 1129.B.3, CBC 1129.B.4, AND CBC 1129.B.8, TYP.
- 56 PAINT DROP-OFF AND LOADING ZONE BORDER BLUE, TYP.
- 57 WOOD CLOSURE PANEL, TYP. PER DETAIL 26 / A1.2, TYP.
- 58 ALIGN
- 59 PROVIDE 20'-0" +/- LONG 8'-0" TALL CHAIN LINK FENCE INCLUDING POSTS AND 3'-0" GATE
- 60 PROVIDE 14'-0" +/- LONG 8'-0" TALL CHAIN LINK FENCE INCLUDING POSTS
- 61 PROVIDE 40'-0" LINEAR FEET OF SLOTTED GRATE AT (E) TOILET BLDG. SEE DTL. 22 / A1.2, TYP.
- 62 ACCESSIBLE RAMP, TYP. S.C.D. SEE ALSO 24, 25, AND 29 ON A1.2, TYP.
- 63 STEPS, TYP. S.C.D. SEE ALSO 20 & 28 / A1.2, TYP.
- 64 PROVIDE 28'-0" LINEAR FEET OF SLOTTED GRATE AT SIDE OF BLDG. SEE DTL. 22 / A1.2, TYP.

## FOUR 24X40 RELO. CLASSROOMS

THIS DSA APPLICATION  
OCCUPANCY = E  
TYPE = V B  
ACTUAL AREA = 6240 SF  
ALLOWABLE AREA = 9500 SF  
SEE TABLE FOR EXITING

## (E) RELOCATABLE CLASSROOM

PRIOR DSA APPL. NO. 01-109456  
OCCUPANCY = E  
TYPE = V B  
ACTUAL AREA = 960 SF  
AREA OF C1-C7, R5, & TOILETS = 80960 + 576 SF = 8256 SF  
ALLOWABLE AREA = 9500 SF  
SEE TABLE FOR EXITING

## (E) RELOCATABLE CLASSROOMS

PRIOR DSA APPL. NO. 69017  
OCCUPANCY = E  
TYPE = V B  
ACTUAL AREA = 4 @ 960 SF = 3840 SF  
AREA OF C1-C7, R5, & TOILETS = 80960 + 576 SF = 8256 SF  
ALLOWABLE AREA = 9500 SF  
SEE TABLE FOR EXITING

## (E) RELOCATABLE CLASSROOM

PRIOR DSA APPL. NO. 01-107961  
OCCUPANCY = E  
TYPE = V B  
ACTUAL AREA = 960 SF  
AREA OF C1-C7, R5, & TOILETS = 80960 + 576 SF = 8256 SF  
ALLOWABLE AREA = 9500 SF  
SEE TABLE FOR EXITING

## (E) CLASSROOM BUILDING H

PRIOR DSA APPL. NO. 61184  
OCCUPANCY = E  
TYPE = V B  
ACTUAL AREA = 3430 SF  
ALLOWABLE AREA = 9500 SF  
SEE TABLE FOR EXITING

## (E) CLASSROOM BUILDING J

PRIOR DSA APPL. NO. 61184  
OCCUPANCY = E  
TYPE = V B  
ACTUAL AREA = 4250 SF  
ALLOWABLE AREA = 9500 SF  
SEE TABLE FOR EXITING

## (E) CLASSROOM BUILDING G

PRIOR DSA APPL. NO. 61184  
OCCUPANCY = E, S-1  
TYPE = V B  
ACTUAL AREA = 4335 SF  
ALLOWABLE AREA = 9500 SF  
SEE TABLE FOR EXITING

## LEGEND

- ACCESSIBLE PATH OF TRAVEL
- PROPERTY LINE
- (E) BUILDING
- RELOCATE (E) RELOCATABLE BUILDING WITHIN (E) SCHOOL SITE. SEE CONSTR. NOTES 40 & 42
- RELOCATED (E) RELOCATABLE BUILDING FROM WITHIN SCHOOL SITE. SEE CONSTR. NOTES 40 & 42
- RELOCATED BUILDING FROM STOCKPILE
- 2 HR AREA SEP. WALL
- 1 HR OCCUPANCY SEP. WALL
- FIRE LANE
- (E) CONC. PLATFORM & (E) CONC. SCORE PATTERN
- PROVIDE CONC. PLATFORM AND CONC. SCORE PATTERN
- REMOVE OR RELOCATE ITEM (GUARDRAIL)

## GENERAL NOTES

A. PARKING SPACE REQUIREMENTS (PER TABLE 11B-6 SECTION 1129B)

TOTAL PARKING STALLS PROVIDED: 48

REQUIRED ACCESSIBLE PARKING STALLS: 2 STALLS TOTAL WITH ONE BEING VAN ACCESSIBLE WITH 5'X20' DROP OFF AND LOADING ZONE

PROVIDED ACCESSIBLE PARKING STALLS: 2 STALLS TOTAL WITH ONE BEING VAN ACCESSIBLE WITH 5'X20' DROP OFF AND LOADING ZONE

B. PROVIDE SLOTTED GRATE AT FRONT (SIDE WITH DOOR) OF EACH RELOCATABLE BUILDING (R1 - R5) BETWEEN RELOCATABLE BUILDING AND CONCRETE PLATFORM. SEE DETAIL 22 / A1.2, TYP.

C. PROVIDE 4" GALV. MTL. SCHEDULE 40 PIPE AT RELOCATABLE CLASSROOM R5 TO COLLECT RAINWATER FROM DOWNSPOUTS AT FRONT AND DELIVER IT TO AREA BEHIND RELOCATABLE CLASSROOM. APPROXIMATE LENGTH OF PIPE = 65'-0" V.I.F. LOCATE PIPE BENEATH GRATE AT FRONT OF RELOCATABLE. CONNECT PIPE TO DOWNSPOUTS AT FRONT OF RELOCATABLE. WRAP PIPE AROUND CORNER OF RELOCATABLE BETWEEN R5 AND (E) RELO. C4. SLOPE TO DRAIN ANCHOR PIPE TO SIDE OF RELOCATABLE WITH STRAP. AT METAL FLOOR BEAM, ANCHOR STRAP TO RELO. WITH TWO S5T #2 SELF TAPPING TEC SCREWS. AT WOOD WALLS ANCHOR STRAP TO RELO WITH TWO 1/4" DIA. GALV. MTL. WOOD SCREWS WITH MIN. 1" EMBEDD. PROVIDE SPLASH BLOCK AT TERMINUS OF PIPE.

BUILDING CODE DATA FOR ADDITIONS OR RENOVATED SPACES OR BUILDING

TALL BUILDINGS ARE ONE STORY

ALLOWABLE AREAS

(E) MULTIPURPOSE BUILDING D

TYPE OF CONSTRUCTION: V-A (SPRINKLERED)

OCCUPANCY TYPES: MIXED OCCUPANCY

CALCULATIONS PER CBC 803.3

A-3	S-2
9815 SF + 837.5 SF ≤ 1	17500 SF + 21000 SF
0.853	0.04 = 0.89

0.89 ≤ 1

OCCUPANCY SEPARATIONS: ONLY BETWEEN A3/S-2 WHERE 1-HR IS REQUIRED

EXISTING GROSS AREA: 10650 SF

AREA INCREASES: 11500 SF

EXIT REQUIREMENTS

ROOM NAME	AREA	USE/OCC. LOAD FACTOR	PEOPLE REQ'D	EXITS
(E) BUILDING A ADMIN				
STAFF LOUNGE	410 SF	LOW ASSEMBLY / 15	= 28	1
WORK ROOM	246 SF	LOW ASSEMBLY / 15	= 16	1
PRINCIPAL	275 SF	OFFICE / 100	= 2.8	1
LOBBY	460 SF	HIGH ASSEMBLY / 7	= 66	2
(E) BUILDING B LIBRARY				
LIBRARY	1692 SF	READING ROOM / 50	= 34	1
WORK ROOM	221 SF	OFFICE / 100	= 2.2	1
COMP LAB	263 SF	CLASSROOM / 20	= 13	1
READING ROOM	121 SF	READING ROOM / 50	= 2.4	1
(E) BUILDING C KINDERGARTEN				
KINDERGARTEN	1032 SF	CLASSROOM / 20	= 52	2
KINDERGARTEN	1016 SF	CLASSROOM / 20	= 51	2
(E) MULTIPURPOSE BUILDING D				
MULTIUSE	7632 SF	LOW ASSEMBLY / 15	= 509	3
STAGE	940 SF	STAGE / 15	= 63	2
KITCHEN	240 SF	COMM. KITCH. / 200	= 1.2	1
(E) CLASSROOM BUILDING E				
CLASSROOM	931 SF	CLASSROOM / 20	= 47	1
CLASSROOM	931 SF	CLASSROOM / 20	= 47	1
CLASSROOM	1030 SF	CLASSROOM / 20	= 52	2
CLASSROOM	1030 SF	CLASSROOM / 20	= 52	2
(E) CLASSROOM BUILDING F				
CLASSROOM	931 SF	CLASSROOM / 20	= 47	1
CLASSROOM	931 SF	CLASSROOM / 20	= 47	1
CLASSROOM	1030 SF	CLASSROOM / 20	= 52	2
CLASSROOM	1030 SF	CLASSROOM / 20	= 52	2
(E) CLASSROOM BUILDING G				
TYP. CLASSROOM	931 SF	CLASSROOM / 20	= 47	1
(E) CLASSROOM BUILDING H				
TYP. CLASSROOM	931 SF	CLASSROOM / 20	= 47	1
RESOURCE	630 SF	OFFICE / 100	= 6.3	1
(E) CLASSROOM BUILDING J				
TYP. CLASSROOM	931 SF	CLASSROOM / 20	= 47	1
(E) FIELD AND RELO CLASSROOMS				
TYP. CLASSROOM	9			

APPROVED

DIV. OF THE STATE ARCHITECT

AC: \_\_\_\_\_ F/L: \_\_\_\_\_ SS: \_\_\_\_\_

APPL. NO. 01-10514 DATE 07/10/06

File No. 41-26

BREWER ISLAND ELEMENTARY SCHOOL RELOCATABLE CLASSROOMS AND SITEWORK

FOSTER CITY, CALIFORNIA

JOB NO. 80184

DRAWN JE

CHECKED JF

JOB CAPTAIN

DATE 04/15/09 DSA O.T.C.

ADDENDUM 1 06/11/09

DRAWING TITLE

SITE PLAN & CODE INFORMATION

SCALE 1"=30'-0"

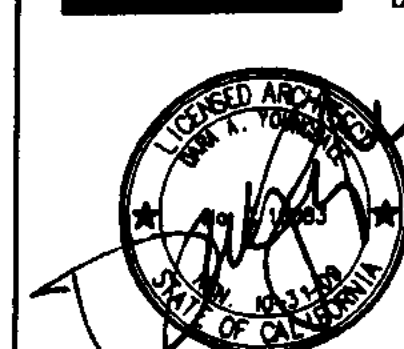
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HKIT ARCHITECTS

538 NINTH STREET SUITE 240 • OAKLAND, CA 94607

T 510 625 9800 • F 510 625 9801 • WWW.HKIT.COM



## SITE PLAN AND CODE INFORMATION

SCALE: 1" = 30'-0"

UNLAWFUL TO REPRODUCE OR TRANSMIT IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM.



PLUMBING FIXTURE COUNT

ELEMENTARY STUDENT (GRADES 1-5) REQUIREMENTS - 410 TOTAL STUDENTS									
WATER CLOSETS			URINALS			LAVATORIES			
GENDER	REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQUIRED	REQUIRED	REQUIRED	PROVIDED	
BOYS	130	7	8	175	3	4	130	8	
GIRLS	125	9	11	-	-	-	135	6	9
D.F.	1150	3	3	-	-	-	-	-	-
KINDERGARTEN REQUIREMENTS - 88 TOTAL STUDENTS									
WATER CLOSETS			URINALS			LAVATORIES			
GENDER	REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQUIRED	REQUIRED	REQUIRED	PROVIDED	
BOYS	21-50-2	2	4	-	-	-	28-50-2	2	2
GIRLS	21-50-2	2	3	-	-	-	28-50-2	2	2
D.F.	1150	1	1	-	-	-	-	-	-
STAFF REQUIREMENTS - 32 FEMALE, 7 MALE									
WATER CLOSETS			URINALS			LAVATORIES			
GENDER	REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQUIRED	REQUIRED	REQUIRED	PROVIDED	
MEH	18-50-2	2	3	150	1	1	140	1	3
WOMEN	18-50-2	2	3	-	-	-	140	1	3
PRESCHOOL REQUIREMENTS - 61 TOTAL STUDENTS									
WATER CLOSETS			URINALS			LAVATORIES			
GENDER	REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQUIRED	REQUIRED	REQUIRED	PROVIDED	
BOYS	21-50-2	2	3	-	-	-	28-50-2	2	3
GIRLS	21-50-2	2	3	-	-	-	28-50-2	2	3
D.F.	1150	1	1	-	-	-	-	-	-

REFERENCES: CFC 2007 TABLE 4-1, FOOTNOTE 10, CDE SFPD ADVISORY 99-02

ENLARGED SITE PLAN SHEET NOTES:

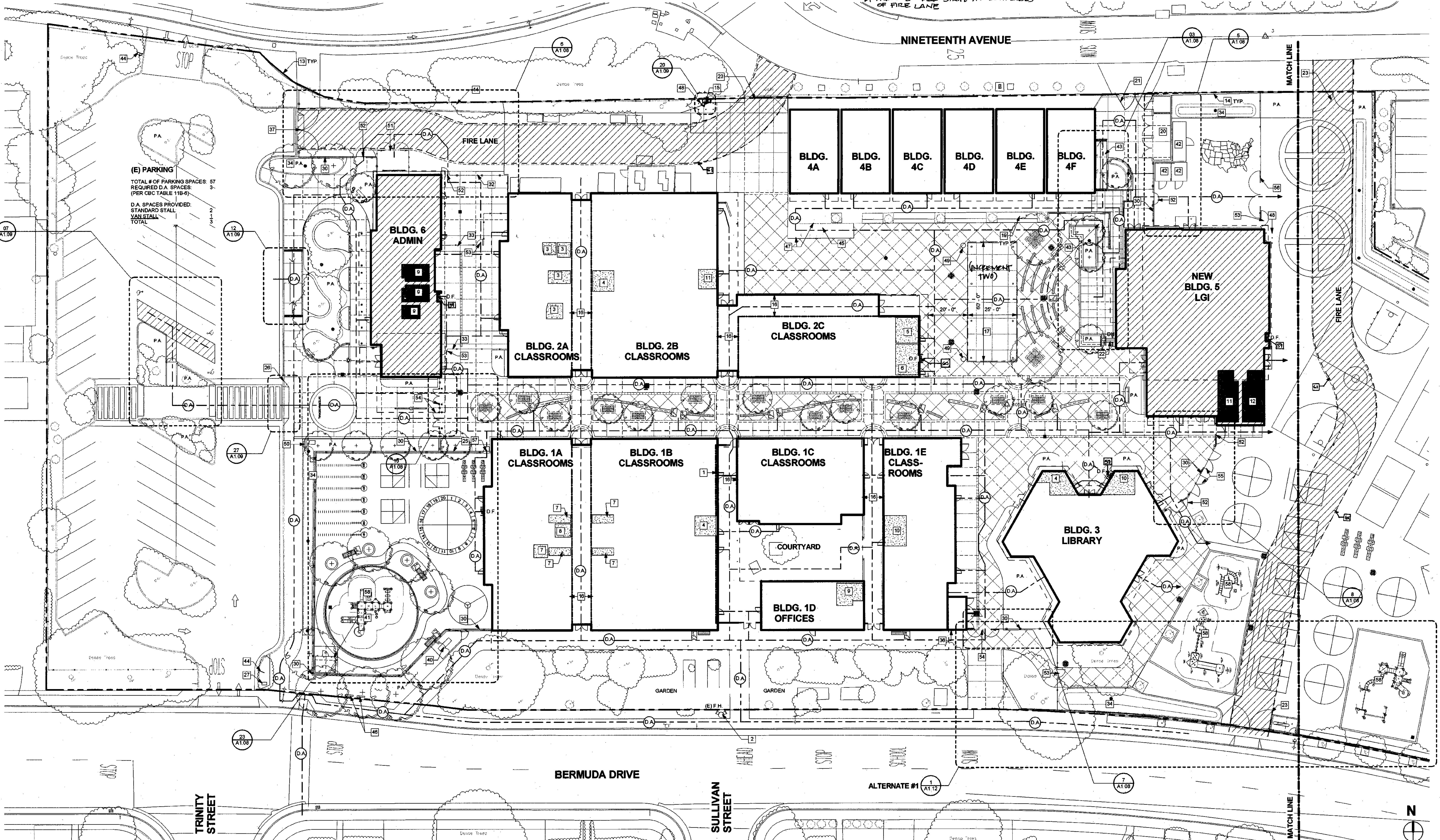
- A CONTRACTOR TO VERIFY THAT ALL BARRIERS IN THE PATH OF TRAVEL HAVE BEEN REMOVED OR WILL BE REMOVED UNDER THIS PROJECT, AND PATH OF TRAVEL COMPLIES WITH CBC 11358.
- B ACCESSIBLE PATH OF TRAVEL AS INDICATED ON PLANS IS A BARRIER FREE ACCESS WITHOUT ANY ABRUPT LEVEL CHANGES EXCEEDING 1/2" REVELED AT 112 MAXIMUM SLOPE, OR VERTICAL LEVEL CHANGES NOT EXCEEDING 1/4" MAX AND AT LEAST 48" WIDE. SURFACE IS SLIP RESISTANT, STABLE, FIRM AND SMOOTH. CROSS SLOPE NOT TO EXCEED 2% AND SLOPE IN DIRECTION OF TRAVEL IS LESS THAN 5%, UNLESS OTHERWISE NOTED.
- C CONTRACTOR SHALL PROVIDE TEMPORARY CONSTRUCTION FENCE PER DETAIL XXV11.0X.
- D CONTRACTOR SHALL MAINTAIN ACCESSIBLE ROUTE FROM PARKING TO ALL ACCESSIBLE FACILITIES ON CAMPUS DURING CONSTRUCTION.
- E REFER TO CIVIL, LANDSCAPE, AND ELECTRICAL DRAWINGS FOR EXTENT OF CIVIL, LANDSCAPE, AND ELECTRICAL WORK.
- F CONTRACTOR SHALL PAINT A 180 DEGREE SEMICIRCULAR STRIPE ON THE PAVEMENT OUTSIDE OF ALL EXTERIOR DOORS. STRIPE SHALL BE 4" WIDE AND MATCH THE LOCATION AND DIRECTION OF DOOR SWING. COLOR TBD.

ENLARGED SITE PLAN NOTES:

- 1 2-HR SEPARATION WALL
- 2 (E) FIRE HYDRANT TO REMAIN
- 3 PRESCHOOL RESTROOM, SEE FLOOR PLANS FOR SCOPE OF WORK
- 4 (E) ACCESSIBLE BOYS RESTROOM DSA# 63013 TO BE MODERNIZED, REFER TO FLOOR PLANS FOR SCOPE OF WORK
- 5 (E) NON-ACCESSIBLE GIRLS RESTROOM TO BE MODERNIZED AND MADE D.A. COMPLIANT, SEE PLANS FOR SCOPE OF WORK, FIXTURES AND ACCESSORIES PLACED AT ADULT DIMENSIONS
- 6 (E) NON-ACCESSIBLE BOYS RESTROOM TO BE MODERNIZED AND MADE D.A. COMPLIANT, SEE PLANS FOR SCOPE OF WORK, FIXTURES AND ACCESSORIES PLACED AT ADULT DIMENSIONS
- 7 STUDENT RESTROOM, REFER TO ENLARGED FLOOR PLANS ON A3.08
- 8 (E) ACCESSIBLE STAFF RESTROOM DSA# 63013 TO REMAIN, REFER TO FLOOR PLANS FOR SCOPE OF WORK
- 9 STAFF RESTROOM, REFER TO ENLARGED FLOOR PLANS ON A3.08
- 10 (E) ACCESSIBLE GIRLS RESTROOM DSA# 63013 TO BE MODERNIZED, REFER TO FLOOR PLANS FOR SCOPE OF WORK
- 11 GIRLS RESTROOM, REFER TO ENLARGED FLOOR PLANS ON A3.08
- 12 BOYS RESTROOM, REFER TO ENLARGED FLOOR PLANS ON A3.08
- 13 ASSUMED PROPERTY LINE
- 14 8'-0" HIGH CHAIN LINK FENCING, SEE LANDSCAPE DRAWINGS
- 15 FIRE HYDRANT
- 16 (E) 1-HR FIRE RATED CORRIDOR
- 17 NEW LUNCH STRUCTURE, INCREMENT 2
- 18 D.A. RAMP, SEE LANDSCAPE DETAILS ON SHEET L3.2
- 19 (E) STAIRS
- 20 TRASH ENCLOSURE
- 21 (E) 20'-0" WIDE CHAIN LINK GATE
- 22 CONC. STAIRS, SEE LANDSCAPE DETAILS ON SHEET L3.2
- 23 20'-0" WIDE CHAIN LINK GATE W/ KNOX LOCK
- 24 D.A. PARKING SPACE AND STRIPING
- 25 4'-0" HIGH ORNAMENTAL FENCE, SEE SHEET A1.11
- 26 (E) D.A. RAMP DSA# 745231
- 27 (E) SCHOOL SIGN TO REMAIN
- 28 REFER TO LANDSCAPE & CIVIL DRAWINGS FOR SCOPE OF WORK
- 29 PAVING, REFER TO CIVIL DRAWINGS
- 30 8'-0" HIGH ORNAMENTAL FENCE, SEE SHEET A1.11
- 31 8'-0" HIGH VINYL COATED CHAIN LINK FENCE, SEE LANDSCAPE DRAWINGS
- 32 8'-0" ORNAMENTAL FENCE WITH PERFORATED METAL PRIVACY PANEL, SEE DETAIL 22/A1.11 FOR FENCE AND GATE DETAILS
- 33 4'-0" HIGH VINYL COATED CHAIN LINK FENCE, SEE LANDSCAPE DRAWINGS
- 34 BIO RETENTION AREA, SEE CIVIL DRAWINGS
- 35 (E) WOOD RAILING TO REMOVED, TYP.
- 36 KNOX BOX MOUNTED @ 5'0" A.F.
- 37 20'-0" WIDE CHAIN LINK GATE
- 38 (E) CHAIN LINK FENCE AND GATES TO REMAIN
- 39 MECH. UNIT, SEE MECH. DRAWINGS & SCHEDULE
- 40 (E) GAS METER TO REMAIN
- 41 (E) STORAGE SHED
- 42 RELOCATED (E) CARGO STORAGE CONTAINER, NOT FOR STUDENT USE
- 43 RAMP, SEE LANDSCAPE DETAILS ON SHEET L3.2
- 44 ENTRY WARNING SIGN PER DETAIL L0A1.09
- 45 (E) D.A. RAMP DSA# 69522
- 46 TEMPORARY CONSTRUCTION & ARCHITECT SIGNS, SEE DETAIL 2/A1.09
- 47 PAINT ALL (E) HANDRAILS & GUARDRAILS
- 48 BOLLARD, SEE LANDSCAPE DRAWINGS
- 49 LEISURE CRAFT 6002-SML OR SIMILAR, SURFACE MOUNTED PER MANUFACTURER'S RECOMMENDATIONS
- 50 SCHOOL MARQUEE SIGN, SEE DETAIL 2/A1.09
- 51 8'-0" WIDE CHAIN LINK GATE
- 52 5'-0" WIDE TUBE STEEL GATE, SEE DETAIL 22/A1.11
- 53 4'-0" WIDE CHAIN LINK GATE
- 54 7'-0" WIDE TUBE STEEL GATE, SEE DETAIL 22/A1.11
- 55 10'-0" WIDE TUBE STEEL GATE, SEE DETAIL 22/A1.11
- 56 12'-0" WIDE CHAIN LINK GATE
- 57 3'-0" WIDE TUBE STEEL GATE, SEE DETAIL 8/A1.11
- 58 PLAY STRUCTURE, SEE LANDSCAPE DRAWINGS
- 59 ELEMENTARY HEIGHT DRINKING FOUNTAIN
- 60 ADULT HEIGHT DRINKING FOUNTAIN
- 61 PROVIDE 2' RED STRIPE AT BOTH SIDES OF FIRE LANE

GRAPHIC KEY

- EXISTING BUILDING, REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND STRUCTURAL DRAWINGS FOR ADDITIONAL SCOPE
- NEW CONSTRUCTION
- EXISTING TOILET ROOMS TO BE MODERNIZED, REFER TO ENLARGED PLANS ON SHEET A3.07 FOR SCOPE OF WORK
- NEW TOILET ROOMS, REFER TO ENLARGED PLANS ON SHEET A3.08 FOR SCOPE OF WORK
- ASSUMED PROPERTY LINE
- D.A. PATH OF TRAVEL AS INDICATED ON PLAN IS A COMMON BARRIER FREE ACCESS ROUTE AT LEAST 48" WIDE AND ANY ABRUPT LEVEL CHANGES EXCEEDING 1/2" REVELED AT 12 MAX. SLOPE OR VERTICAL LEVEL CHANGES NOT EXCEEDING 1/4" MAX. SURFACE IS SLIP RESISTANT, STABLE, FIRM AND SMOOTH. PASSING SPACES AT LEAST 6'0" X 8'0" ARE LOCATED NOT MORE THAN 20' APART. CONTINUOUS GRASSES HAVE 60% LEVEL AREAS NOT MORE THAN 40' APART. CROSS SLOPE NOT TO EXCEED 2% AND SLOPE IN THE DIRECTION OF TRAVEL IS LESS THAN 5% UNLESS OTHERWISE INDICATED AS A RAMP. P.O.T. IS CLEAR OF OVERHANGING OBSTRUCTIONS PER CODE 11358.8.6
- NEW FIRE HYDRANT
- EXISTING FIRE HYDRANT
- FIRE DEPARTMENT ACCESS
- DESIGNATED ACCESSIBLE SEATING AREA
- CHAIN LINK FENCE (SEE LANDSCAPE DRAWINGS)
- TUBE STEEL FENCE

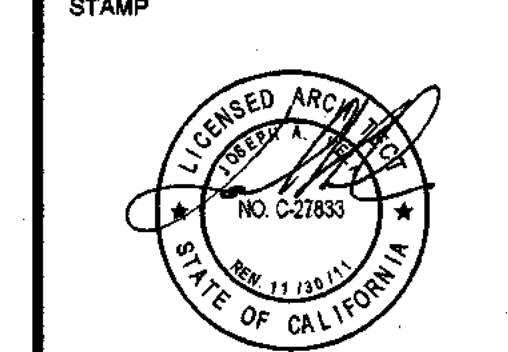


1 ENLARGED SITE PLAN  
SCALE: 1" = 20'-0"



PROJECT  
FIESTA GARDENS INTERNATIONAL SCHOOL MODERNIZATION INCREMENT 1  
SAN MATEO - FOSTER CITY SCHOOL DISTRICT

CONSULTANT



STATE INCREMENT 1  
DSA FILE NUMBER 41-26  
IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
APPL # 01-111616  
AC # 01-111616-SS  
DATE APR 15 2011

REVISIONS  
No. Date

MILESTONES  
SD 2/12/10  
DD 4/16/10  
50% CD 6/11/10  
90% CD 08/24/10  
DSA SUB 10/04/10  
DSA APPROVAL

SHEET

ENLARGED SITE PLAN

DATE 04/13/11  
JOB # 29029  
SHEET #

A1.04



# FIRE & LIFE SAFETY SITE CONDITIONS SUBMITTAL

Division of the State Architect (DSA) documents referenced within this publication are available on the DSA Forms or DSA Publications webpages.

To facilitate the Division of the State Architect's (DSA) fire and life safety plan review of project site conditions, DSA requires the design professional to provide the following information at time of project submittal for projects consisting of construction of a new campus, construction of new building(s), additions to existing buildings, and for site alternate design means for fire department emergency vehicle access, and fire suppression water supply.

Information associated with compliance items 1 through 3 below is to be provided for all project types indicated above. Information associated with items 4 through 7 is to be completed when an alternate means is utilized. Acknowledgment by the school district and signature from the Local Fire Authority (LFA) is only required when an alternate design means is being requested.

The Project Information and Fire & Life Safety Information sections are to be completed for all projects and imaged onto the fire access site plan. When an alternate design/means is proposed, all sections on pages 1 and 2 are to be completed and imaged on the fire access site plan.

For additional information refer to the instructions at the end of this form and DSA Policy PL 09-01: Fire Flow for Buildings.

**PROJECT INFORMATION**

School District/Owner: **SAN MATEO - FOSTER CITY UNIFIED SCHOOL DISTRICT**

Project Name/School: **GEORGE HALL ELEMENTARY SCHOOL**

Project Address: **130 SAN MIGUEL WAY, SAN MATEO, CA 94403**

**FIRE & LIFE SAFETY INFORMATION**

1. Has a fire hydrant flow test been performed within the past 12 months? (If yes, provide a copy of the test data.) Yes ☒ No ☐

2. Was the fire hydrant water flow test performed as part of this LFA review? Yes ☐ No ☒

3. Is the project located within a designated fire hazard severity zone (FHSZ) as established by Cal-Fire? (If yes, indicate FHSZ classification below.) Yes ☐ No ☒

Refer to the following website for FHSZ locations: <http://maps.fire.ca.gov/FHSZ/>

Moderate ☐ High ☐ Very High ☐

Wildland Interface Area (WIFA) (If any designations are checked, project design must meet the requirements of CBC Chapter 7A.) WIFA ☐

DGS DSA 810 (revised 12/29/20) DIVISION OF THE STATE ARCHITECT DEPARTMENT OF GENERAL SERVICES STATE OF CALIFORNIA Page 1 of 4

## DSA 810 FIRE & LIFE SAFETY SITE CONDITIONS SUBMITTAL

CONDITION MEANS AND METHODS RESOLUTION	ALTERNATE ACCEPTED
Yes	No
4. Emergency vehicle access roadways do not meet CFC requirements.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
4a. <b>Acceptable Alternate:</b> Emergency vehicle and personnel access as proposed by the project architect is acceptable for providing fire suppression and protection of life and property.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
5. <b>Fire Hydrants:</b> Number and spacing does not meet CFC requirements.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
5a. <b>Acceptable Alternate:</b> Number of fire hydrants and spacing as proposed by the project architect is acceptable for fire suppression and protection of life and property.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
6. <b>Fire Hydrants:</b> Water flow and pressure are less than CFC minimum.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
6a. <b>Acceptable Alternate:</b> The available flow and pressure is acceptable for providing fire suppression and protection of life and property.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
7. Location of fire department connection(s) serving fire sprinkler systems or standpipe systems does not meet CFC requirements.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
7a. <b>Acceptable Alternate:</b> The location of fire department connection serving the fire sprinkler system and/or standpipe system is acceptable for providing fire suppression and protection of life and property.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

### School District Acceptance of Acceptable Design Alternates

By signing this form, the school district acknowledges and accepts the proposed design as an alternative to California Building Code (CBC) and California Fire Code (CFC) minimum requirements, as indicated by one or more of the conditions indicated at items 4a, 5a, 6a or 7a, for providing fire and life safety protection of life and property.

Accepted by: \_\_\_\_\_ Title: \_\_\_\_\_  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_

### LOCAL FIRE AUTHORITY (LFA) INFORMATION

LFA Agency Name: \_\_\_\_\_  
LFA Review Official: \_\_\_\_\_ Title: \_\_\_\_\_ Work Phone: \_\_\_\_\_  
Work Email: \_\_\_\_\_  
LFA Reviewer's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

### Section BB105 Fire-Flow Requirements for Buildings

#### BB105.1

The minimum fire flow and flow duration for school buildings shall be as specified in Table BB105.1.

**Exception:** A reduction in required fire flow of up to 75 percent is allowed when the building is provided with an approved automatic sprinkler system. When a reduction in fire flow is used, fire flow shall not be less than 1500 GPM.

TABLE BB105.1

FIRE AREA (square feet)					FIRE-FLOW (gallons per minute) <sup>b</sup>	FLOW DURATION (hours)
Type IIA and IIB <sup>a</sup>	Type IIA and IIB <sup>a</sup>	Type IIA and IIB <sup>a</sup>	Type IIA and IIB <sup>a</sup>	Type IIA and IIB <sup>a</sup>		
0-22,701	0-12,701	0-8,200	0-5,900	0-3,600	1,500	1
22,701-30,200	12,701-17,000	8,201-10,900	5,901-7,900	4,801-4,800	1,750	
30,201-38,700	17,001-21,800	10,901-12,900	7,901-9,800	6,201-6,200	2,000	
38,701-48,300	21,801-24,200	12,901-17,400	9,801-12,600	6,201-7,700	2,250	2
48,301-59,000	24,201-33,200	17,401-21,300	12,601-15,400	7,701-9,400	2,500	
59,001-70,900	33,201-39,700	21,301-25,500	15,401-18,400	9,401-11,300	2,750	
70,901-83,700	39,701-47,100	25,501-30,100	18,401-21,800	11,301-13,400	3,000	3
83,701-97,700	47,101-54,900	30,101-35,200	21,801-25,900	13,401-15,600	3,250	
97,701-112,700	54,901-63,400	35,201-40,600	25,901-29,300	15,601-18,000	3,500	
112,701-128,700	63,401-72,400	40,601-46,400	29,301-33,500	18,001-20,600	3,750	

128,701-145,900	72,401-82,100	46,401-52,500	33,501-37,900	20,601-23,300	4,000
145,901-164,200	82,101-92,400	52,501-58,100	37,901-42,700	23,301-26,300	4,250
164,201-183,400	92,401-103,100	58,101-66,000	42,701-47,700	26,301-29,300	4,500
183,401-203,700	103,101-114,600	66,001-73,300	47,701-53,000	29,301-32,600	4,750
203,701-225,200	114,601-126,700	73,301-81,100	53,001-58,600	32,601-36,000	5,000
225,201-247,700	126,701-139,400	81,101-89,200	58,601-65,400	36,001-39,600	5,250
247,701-271,200	139,401-152,600	89,201-97,700	65,401-70,600	39,601-43,400	5,500
271,201-295,900	152,601-166,500	97,701-106,500	70,601-77,000	43,401-47,400	5,750
295,901-329,900	166,501-181,500	106,501-115,800	77,001-83,700	47,401-51,500	6,000
329,901-359,900	181,501-197,500	115,801-125,500	83,701-90,600	51,501-55,700	6,250
359,901-389,900	197,501-214,500	125,501-135,500	90,601-97,900	55,701-60,200	6,500
389,901-419,900	214,501-232,500	135,501-145,800	97,901-106,800	60,201-64,800	6,750
419,901-449,900	232,501-251,500	145,801-156,700	106,801-113,200	64,801-69,600	7,000
449,901-479,900	251,501-271,500	156,701-167,900	113,201-121,300	69,601-74,600	7,250
479,901-509,900	271,501-292,500	167,901-179,400	121,301-129,600	74,601-79,800	7,500
509,901-539,900	292,501-314,500	179,401-191,400	129,601-138,300	79,801-85,100	7,750
539,901-569,900	314,501-337,500	191,401-204,900	138,301-148,100	85,101-91,100	8,000

For SI: 1 square foot = 0.0929 m<sup>2</sup>, 1 gallon per minute = 3.785 L/min, 1 pound per square inch = 6.895 kPa.

- a. Types of construction are based on the California Building Code.  
b. Measured at 20 psi.

The average spacing between fire hydrants shall not exceed that listed in Table CC105.1.

**Exception:** A deficiency of up to 10 percent shall not be allowed when existing hydrants provide all, or a portion, of the required fire hydrant service.

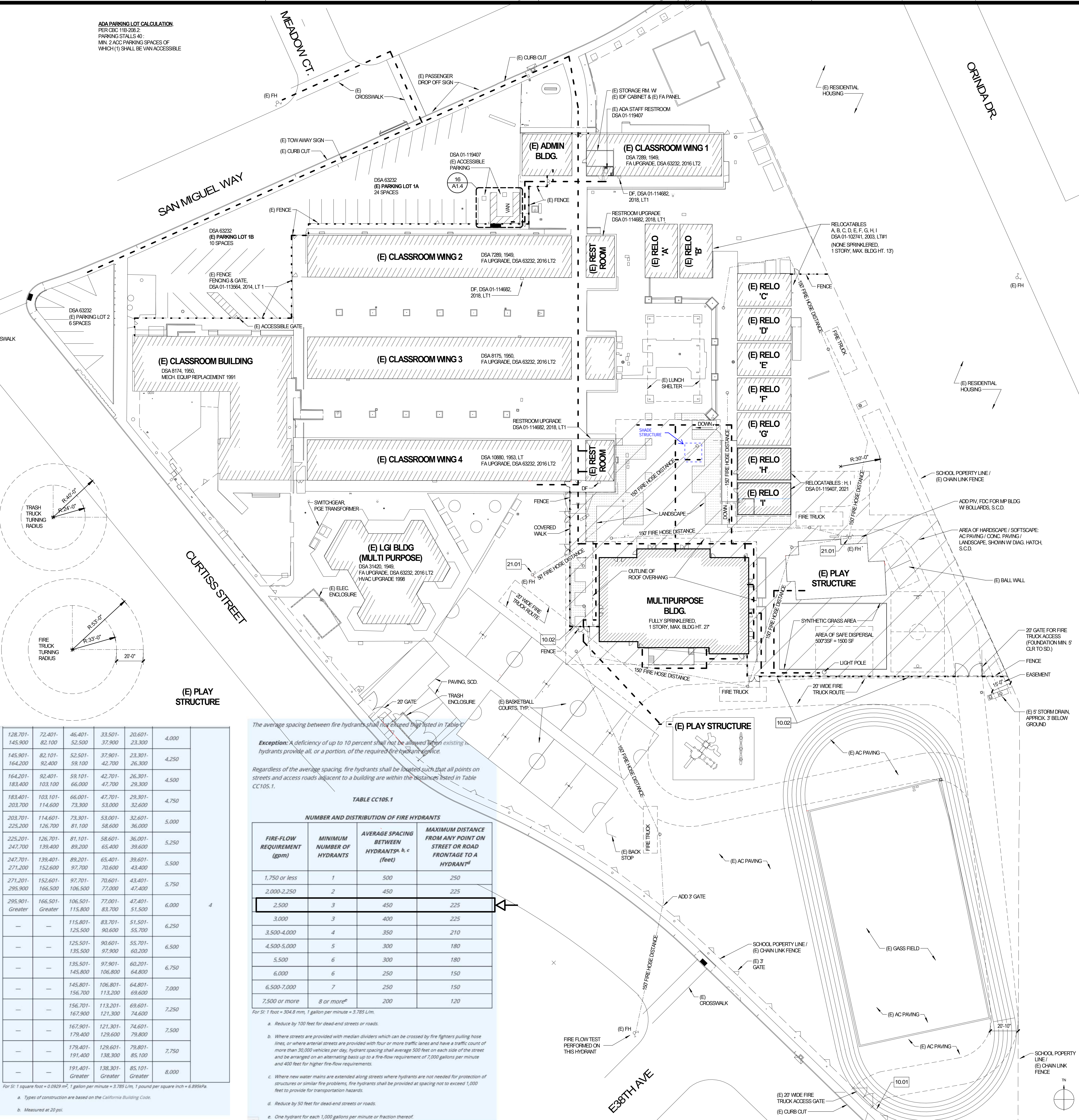
Regardless of the average spacing, fire hydrants shall be located such that all points on streets and access roads adjacent to a building are within the distances listed in Table CC105.1.

TABLE CC105.1

NUMBER AND DISTRIBUTION OF FIRE HYDRANTS			
FIRE-FLOW REQUIREMENT (gpm)	MINIMUM NUMBER OF HYDRANTS	AVERAGE SPACING BETWEEN HYDRANTS <sup>a</sup> , ft ± (feet)	MAXIMUM DISTANCE FROM ANY POINT ON STREET OR ROAD FRONTAGE TO A HYDRANT <sup>d</sup>
1,750 or less	1	500	250
2,000-2,250	2	450	225
2,500	3	450	225
3,000	3	400	225
3,500-4,000	4	350	210
4,500-5,000	5	300	180
5,500	6	300	180
6,000	6	250	150
6,500-7,000	7	250	150
7,500 or more	8 or more <sup>e</sup>	200	120

For SI: 1 foot = 304.8 mm, 1 gallon per minute = 3.785 L/min.

- a. Reduce by 100 feet for dead-end streets or roads.  
b. Where streets are provided with median dividers which can be crossed by fire fighters pulling hose lines, or where arterial streets are provided with four or more traffic lanes and have a traffic count of more than 30,000 vehicles per day, hydrant spacing shall average 500 feet on each side of the street and be arranged on an alternating basis up to a fire-flow requirement of 7,000 gallons per minute and 400 feet for higher fire-flow requirements.  
c. Where new water mains are extended along streets where hydrants are not needed for protection of structures or similar fire problems, fire hydrants shall be provided at spacing not to exceed 1,000 feet to provide for transportation hazards.  
d. Reduce by 50 feet for dead-end streets or roads.  
e. One hydrant for each 1,000 gallons per minute or fraction thereof.



AGENCY APPROVAL:  
DSA # 01-119574  
FILE # 41-26

IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
APP: 01-119574 INC:  
REVIEWED FOR:  
SS ☒ FLS ☒ ACS ☒  
DATE: 10/18/2021



SAN MATEO FOSTER CITY  
SCHOOL DISTRICT  
1170 CHESS DR.,  
FOSTER CITY, CA 94404

HMC Architects

3542004-100

333 W. SAN CARLOS STREET, #750  
SAN JOSE, CA 95110  
408.977.9160 / www.hmcarchitects.com

ISSUE  
DESCRIPTION DATE

### KEYNOTES

- NO. NOTE - DETAIL
- 10.01 KNOX BOX, MOUNTED TO FENCE.
- 10.02 SIGNAGE MOUNTED TO FENCE, STATING "KEEP FIRE ACCESS LANE CLEAR AT ALL TIMES"
- 21.01 FIRE HYDRANT, WITH BOLLARDS, SCD. (PART OF THE RELOCATION PROJECT)

### PATH OF TRAVEL - P.O.T. (DSA PR 15-01)

THE P.O.T. IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS MEETS THE REQUIREMENTS OF THE CURRENT APPLICABLE CALIFORNIA BUILDING CODE (CBC) ACCESSIBILITY PROVISIONS FOR PATH OF TRAVEL REQUIREMENTS FOR ALTERATIONS, ADDITIONS & STRUCTURAL REPAIRS AS PART OF THE DESIGN OF THIS PROJECT. THE P.O.T. WAS EXAMINED & ANY ELEMENTS, COMPONENTS OR PORTIONS OF THE P.O.T. THAT WERE DETERMINED TO BE NON-COMPLIANT WITH THE CBC HAVE BEEN IDENTIFIED & THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WITH THE SCOPE OF THIS PROJECT'S DOCUMENTS. ANY NON-COMPLIANT ELEMENTS, COMPONENTS OR PORTIONS OF THE P.O.T. THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED ON VALUATION THRESHOLD LIMITATIONS OR FINDINGS OF UNREASONABLE HARSHNESS ARE INDICATED IN THESE CONSTRUCTION DOCUMENTS.

DURING CONSTRUCTION, IF P.O.T. ITEMS WITHIN THE SCOPE OF THE PROJECTS REPRESENTED AS CBC COMPLIANT ARE FOUND TO BE NON-COMPLYING BEYOND REASONABLE CONSTRUCTION TOLERANCES, THE ITEMS SHALL BE BROUGHT INTO COMPLIANCE WITH THE CBC AS PART OF THIS PROJECT BY MEANS OF A CONSTRUCTION CHANGE DOCUMENT.

### PATH OF TRAVEL - TECHNICAL REQUIREMENTS FOR ACCESSIBLE ROUTE

ACCESSIBLE PATH OF TRAVEL AS INDICATED ON PLAN IS A BARRIER-FREE ACCESS ROUTE WITHOUT ABRUPT LEVEL CHANGES EXCEEDING 1/2" BEVELED AT 1:2 MAX. SLOPE OR VERTICAL LEVEL CHANGES NOT EXCEEDING 1/4" MAXIMUM AND AT LEAST 48" IN WIDTH. SURFACE IS STABLE, FIRM AND SLIP RESISTANT. CROSS SLOPE SHALL NOT BE STEEPER THAN 1:48 AND SLOPE IN DIRECTION OF TRAVEL SHALL NOT BE STEEPER THAN 1:20. ACCESSIBLE PATH OF TRAVEL SHALL BE MAINTAINED FREE OF OBSTRUCTING OBSTRUCTIONS TO 30" MINIMUM AND FREE OF OBJECTS PROTRUDING MORE THAN 4" FROM THE WALL, ABOVE 27" AND LESS THAN 8" ABOVE THE FLOOR. MAXIMUM DROP BETWEEN FINISHED GRADES AND THE TOP OF THE P.O.T. SHALL NOT EXCEED 4". ARCHITECT SHALL VERIFY THAT THERE ARE NO BARRIERS IN THE PATH OF TRAVEL.

### GENERAL NOTES

- SEE OTHER DISCIPLINE DWGS FOR ADDITIONAL SCOPE.
- SEE ENLARGED SITE PLAN FOR ADDITIONAL SCOPE INFORMATION.
- CONTRACTOR IS RESPONSIBLE FOR REPAIR/REPLACEMENT OF ALL HARDSCAPE/PLANTING OUTSIDE OF LIMIT OF WORK LINE FOR CONNECTION OF UNDERGROUND UTILITIES.

### LEGEND

- BUILDING
- AREA OF RE-SURFACING, HARDSCAPE OR SOFTSCAPE. SEE CIVIL & LANDSCAPE DWGS.
- FIRE TRUCK ACCESS, 20' WIDE
- P.O.T.
- FENCE (CHAINLINK OR ORNAMENTAL) / (E) FENCE
- FI (E) FH FIRE HYDRANT, SEE CIVIL DWGS. / (E) FIRE HYDRANT

FACILITY:  
GEORGE HALL ELEMENTARY SCHOOL  
130 SAN MIGUEL WAY, SAN MATEO, CA 94403

PROJECT:  
MULTIPURPOSE BUILDING AND SITE WORK

SHEET NAME:  
CAMPUS SITE PLAN  
ADA ACCESS, FIRE DEPARTMENT ACCESS

DSA SUBMITTAL

DATE: 06.14.2021

PROJ NO.: 3542-004

SHEET:

CAMPUS SITE PLAN 01

1" = 30'-0"

PLEASE RECYCLE

A1.2