



HACIENDA LA PUENTE UNIFIED SCHOOL DISTRICT  
PURCHASING DEPARTMENT

15959 E. GALE AVENUE • CITY OF INDUSTRY, CA 91716-0002  
(626) 933-3930 • (626) 933-3939

*Joel Duarte*  
*Director Purchasing and Warehouse*

September 15, 2023

**HACIENDA LA PUENTE UNIFIED SCHOOL DISTRICT**  
**BID NUMBER 2023-24.02**  
**KWIS ELEMENTARY SCHOOL BASEBALL FIELD IMPROVEMENTS**

**ADDENDUM NO. 2**

This Addendum Number Two (#2) hereby makes changes to Bid #2023-24.02. Bidders shall acknowledge receipt of this Addendum in space provided on the Bid Form. Failure to acknowledge any addenda issued may subject Bidders to disqualification.

- Included in this Addendum No. 2 is the Geotechnical Study Report from Converse Consultants.
- This Addendum No. 2 makes changes to the project plans, all changes are attached hereto and made apart hereof.

Sincerely,

Joel Duarte  
Director of Purchasing and Warehouse  
Hacienda La Puente Unified School District

*Vision Statement:*

**T**he Hacienda La Puente Unified School District is a community committed to developing lifelong learners who value themselves and the diversity of all people; apply decision-making skills leading to responsible actions; and use creativity, critical thinking, and problem solving in meeting the challenges of a changing society.

Date: September 14, 2023

**ADDENDUM NO. 2**

To Project Bidding Documents for:

**KWIS ELEMENTARY SCHOOL  
BASEBALL FIELDS IMPROVEMENTS  
HACIENDA LA PUENTE UNIFIED SCHOOL DISTRICT**

tBP Project. No. 21054.01

**tBP/ARCHITECTURE**  
4611 Teller Avenue  
Newport Beach, CA 92660  
(949) 673-0300

TO: PROSPECTIVE BIDDERS

This Addendum forms a part of the Contract Documents and modifies the original Bidding Drawing and Specifications dated July 5, 2023. Acknowledge receipt of this Addendum in space provided on the Bid Form. Failure to acknowledge may subject Bidder to disqualification.

**CHANGES SPECIFICATIONS**

1. SPECIFICATION SECITON 00 01 00 TABLE OF CONTENTS  
Replace specification section 00 01 00 Table of Contents in its entirety issued with this addendum.
2. SPECIFICATION SECITON 00 60 00 PROJECT FORMS  
Replace specification section 00 60 00 Project Forms in its entirety issued with this addendum.
3. SPECIFICATION SECITON 01 57 13 STORM WATER POLLUTION  
Replace specification section 10 75 00 Storm Water Pollution in its entirety issued with this addendum.
4. SPECIFICATION SECITON 10 75 00 FLAG POLES  
Replace specification section 10 75 00 Flagpoles in its entirety issued with this addendum.
5. SPECIFICATION SECITON 11 68 24 EXTERIOR ATHLETIC EQUIPMENT  
Replace specification section 11 68 24 Exterior Athletic Equipment in its entirety issued with this addendum.
6. SPECIFICATION SECTION 11 68 43 OUTDOOR BASEBALL SCOREBOARD  
Replaced specification section 11 68 43 Outdoor Baseball Scoreboard in its entirety issued with this addendum.

7. SPECIFICATION SECTION 32 31 19 DECORATIVE METAL FENCING & GATES  
Replace specification section 32 31 19 Decorative Metal Fencing & Gates in its entirety issued with this addendum.

## **CHANGES TO DRAWINGS**

8. SHEET C-1.0 SITE IMPROVEMENT PLAN TITLE SHEET  
Replaced sheet C-1.0 Site Improvement Plan Title Sheet in its entirety issued with this addendum. Changes include:
  - a. Updated General Information.
  - b. Revised General Notes No. 1, 11, and 14.
  - c. Revised Agency Notes No. 27 and 28.
  - d. Added Fill Notes No. 38C.
  - e. Added note – Earthquake Notice to Contractor.
  - f. Updated the Sheet Index.
9. SHEET C-1.1 GRADING & DRAINAGE PLAN  
Replaced sheet C-1.1 Grading & Drainage Plan in its entirety issued with this addendum. Changes include:
  - a. Revised Construction Notes No. 6
  - b. Added Construction Note No. 19.
  - c. Added Section A-A.
  - d. Added Utilities – Separate Permits Required Note.
10. SHEET C-1.2 GRADING & DRAINAGE DETAILS  
Replaced sheet C-1.2 Grading & Drainage Details in its entirety issued with this addendum. Changes Include:
  - a. Revised Drywell Manhole Detail
  - b. Revised Biofiltration Basin Detail
11. SHEET C-1.3 GRADING & DRAINAGE DETAILS  
Replaced sheet C-1.3 Grading & Drainage Details in its entirety issued with this addendum.
  - a. Added Detail No. 2 – Warning Track.
  - b. Added Detail No. 4 – Amended Natural Turf Section.
  - c. Added Detail No. 13 – Pedestal Drinking Fountain.
  - d. Added Detail No. 16 – Infield Soil Section.
  - e. Added Detail No. 19 – 24” Square Catch Basin
12. SHEET C-1.4 EROSION & SEDIMENT CONTROL PLAN  
Added sheet C-1.4 Erosion & Sediment Control Plan in its entirety issued with this addendum.
13. SHEET C-1.5 EROSION & SEDIMENT CONTROL DETAILS  
Added sheet C-1.5 Erosion & Sediment Control Details in its entirety issued with this addendum.

14. SHEET C-1.6 OVER-EXCAVATION PLAN  
Added sheet C-1.6 Over-excavation Plan in its entirety issued with this addendum.
15. SHEET C-1.7 OVERALL SITE PLAN  
Added sheet C-1.7 Overall Site Plan in its entirety issued with this addendum.
16. AS-2 OVERALL CAMPUS DEMO SITE PLAN  
Replaced sheet as-2 Overall Campus Demo Site Plan in its entirety issued with this addendum. Changes include:
  - a. Revised Keynote No. 9 to read – Existing storage container to be relocated to the District Maintenance Yard.
17. SHEET AS-4 ENLARGED ENTRY SITE PLAN  
Scope of work for Sheet AS-4 Enlarged Entry Site Plan shall be a bid alternate.
18. SHEET 2.01 ENTRY DETAILS  
Replaced sheet 2.01 Entry Details in its entirety issued with this addendum. Changes include:
  - a. Noted bid alternate details.
19. SHEET 2.02 ENTRY DETAILS  
Replaced sheet 2.02 Entry Details in its entirety issued with this addendum. Changes include:
  - a. Noted bid alternate details.
20. SHEET 2.03 GATE SCHEDULE  
Replaced sheet 2.01 Entry Details in its entirety issued with this addendum. Changes include:
  - a. Noted bid alternate details.
21. SHEET F-1.1 ATHLETIC FIELDS LAYOUT PLAN  
Replaced sheet F-1.1 Athletic Fields Layout Plan in its entirety issued with this addendum. Changes include:
  - a. Omitted Mulch from the Layout Legend.
22. SHEET F-1.4 IRRIGATION PLAN NOTES  
Replaced sheet F-1.4 Irrigation Plan Notes in its entirety issued with this addendum. Changes include:
  - a. Revised Irrigation Notes No. 6 – All lateral irrigation piping will 1 ¼” unless otherwise noted on plan.
23. SHEET F-1.5 ATHLETIC FIELDS FENCING PLAN  
Replaced sheet F-1.5 Athletic Fields Fencing Plan in its entirety issued with this addendum. Changes include:
  - a. Gate Type Key (all chainlik) Note No.1 is not used.
24. SHEET F-2.7 LITTLE LEAGUE DETAILS  
Replaced sheet F-2.7 Little League Details in its entirety issued with this

addendum. Changes include:

- a. Revised Details No. 4 and No. 5 to read 5" concrete pad light broom finish.

## **ATTACHMENTS**

### **1. Specifications 8 1/2" x 11": (6 Total)**

#### **SPECIFICATIONS**

00 01 00	TABLE OF CONTENTS
00 60 00	PROJECT FORMS
10 75 00	FLAGPOLES
11 68 24	EXTERIOR ATHLETIC EQUIPMENT
11 68 43	OUTDOOR BASEBALL SCOREBOARD
32 31 19	DECORATIVE METAL FENCES AND GATES

### **2. Full Size Documents 30" x 42" Drawings: (16 Total)**

#### **ARCHITECTURAL**

C-1.0	SITE IMPROVEMENT PLAN TITLE SHEET
C-1.1	GRADING & DRAINAGE PLAN
C-1.2	GRADING & DRAINAGE DETAILS
C-1.3	GRADING & DRAINAGE DETAILS
C-1.4	EROSION & SEDIMENT CONTROL PLAN
C-1.5	EROSION & SEDIMENT CONTROL DETAILS
C-1.6	OVER-EXCAVATION PLAN
C-1.7	OVERALL SITE PLAN
AS-2	OVERALL CAMPUS DEMO PLAN
AS-4	ENLARGED DEMO SITE PLAN
2.01	ENTRY DETAILS
2.02	ENTRY DETAILS
2.03	GATE SCHEUDLE
F-1.1	ATHLETIC FIELDS LAYOUT
F-1.4	ATHLETIC FIELDS IRRIGATION PLAN
F-2.7	LITTLE LEAGUE DETAILS

### **3. Geotechnical Report 8 1/2" x 11": (74 Pages)**

Hung Cheng  
tBP/Architecture

**SECTION 00 01 10  
TABLE OF CONTENTS**

**PROCUREMENT AND CONTRACTING REQUIREMENTS**

**DIVISION 00 -- PROCUREMENT AND CONTRACTING REQUIREMENTS**

- 00 01 01 - Project Title Page
- 00 01 07 - Seals Page
- 00 01 10 - Table of Contents
- 00 40 25 - Request for Information
- 00 43 25 - Substitution Request Form - During Procurement
- 00 60 00 - Project Forms (New Section)**
- 00 63 25 - Substitution Request Form - During Construction

**Addendum 2**

**SPECIFICATIONS**

**DIVISION 01 -- GENERAL REQUIREMENTS**

- 01 10 00 - Summary
- 01 20 00 - Price and Payment Procedures
- 01 25 00 - Substitution Procedures
- 01 30 00 - Administrative Requirements
  - 01 30 00.01 - Request for Interpretation
- 01 35 50 - Requests for Electronic Files
- 01 35 53 - Security Procedures
- 01 40 00 - Quality Requirements
- 01 41 00 - Regulatory Requirements
- 01 42 19 - Reference Standards
- 01 45 33 - Code-Required Special Inspections
- 01 50 00 - Temporary Facilities and Controls
- ~~01 57 13 - Temporary Erosion and Sediment Control (Deleted)~~
- 01 57 13 - Storm Water Pollution Prevention (Replaced section)**
- 01 58 13 - Temporary Project Signage
- 01 60 00 - Product Requirements
- 01 61 16 - Volatile Organic Compound (VOC) Content Restrictions
  - 01 61 16.01 - Accessory Material VOC Content Certification Form
- 01 70 00 - Execution and Closeout Requirements
- 01 71 23 - Field Engineering
- 01 74 19 - Construction Waste Management and Disposal

**Addendum 2**

**Addendum 2**

Hacienda La Puente Unified School District <b>Kwis ES Baseball Field Improvements</b> tBP/Architecture Project No. 21054.01	<b>Addendum 2</b>	Table of Contents 00 01 10 - 1
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01 78 00 - Closeout Submittals

**DIVISION 02 -- EXISTING CONDITIONS**

02 41 00 - Demolition

**DIVISION 03 -- CONCRETE**

03 10 00 - Concrete Forming and Accessories

03 20 00 - Concrete Reinforcing

03 30 00 - Cast-in-Place Concrete

**DIVISION 05 -- METALS**

05 50 00 - Metal Fabrications

05 52 13 - Pipe and Tube Railings

**DIVISION 06 -- WOOD, PLASTICS, AND COMPOSITES**

06 10 53 - Miscellaneous Rough Carpentry

**DIVISION 07 -- THERMAL AND MOISTURE PROTECTION**

07 92 00 - Joint Sealants

**DIVISION 08 -- OPENINGS**

08 06 71 - Door Hardware Schedule

08 31 00 - Access Doors and Panels

08 43 13 - Aluminum-Framed Storefronts

08 71 00 - Door Hardware

08 80 00 - Glazing

**DIVISION 09 -- FINISHES**

09 21 16 - Gypsum Board Assemblies

09 30 00 - Tiling

09 91 13 - Exterior Painting

09 91 23 - Interior Painting

**DIVISION 10 -- SPECIALTIES**

10 14 23 - Panel Signage

10 21 13.19 - Plastic Toilet Compartments

10 28 00 - Toilet Accessories

10 75 00 - Flagpoles

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**DIVISION 11 -- EQUIPMENT**

11 68 24 - Exterior Athletic Equipment

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11 68 43.15 - Outdoor Baseball Scoreboard (**Replaced Section**)

**Addendum 2**

Hacienda La Puente Unified School District <b>Kwis ES Baseball Field Improvements</b> tBP/Architecture Project No. 21054.01	<b>Addendum 2</b>	Table of Contents 00 01 10 - 2
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**DIVISION 22 -- PLUMBING**

22 47 13.13 - Sitework Drinking Fountain and Bottle Filler

**DIVISION 26 -- ELECTRICAL**

- 26 05 19 - Low-Voltage Electrical Power Conductors and Cables
- 26 05 26 - Grounding and Bonding for Electrical Systems
- 26 05 29 - Hangers and Supports for Electrical Systems
- 26 05 33.13 - Conduit for Electrical Systems
- 26 05 33.16 - Boxes for Electrical Systems
- 26 05 33.23 - Surface Raceways for Electrical Systems
- 26 05 48 - Vibration and Seismic Controls for Electrical Systems
- 26 05 53 - Identification for Electrical Systems
- 26 05 73 - Power System Studies
- 26 05 83 - Wiring Connections
- 26 09 23 - Lighting Control Devices
- 26 24 16 - Panelboards
- 26 27 26 - Wiring Devices
- 26 28 13 - Fuses
- 26 28 16.13 - Enclosed Circuit Breakers
- 26 28 16.16 - Enclosed Switches
- 26 43 00 - Surge Protective Devices
- 26 56 00 - Exterior Lighting

**DIVISION 31 -- EARTHWORK**

- 31 10 00 - Site Clearing and Demolition
- 31 22 16.23 - Field Subgrade Establishment

**DIVISION 32 -- EXTERIOR IMPROVEMENTS**

- 32 13 13 - Sitework Concrete
- 32 18 23.10 - Field Imported Sands
- 32 18 23.20 - Soil Preparation
- 32 31 13 - Chain Link Fences and Gates
- 32 31 19 - Decorative Metal Fences and Gates
- 32 84 00 - Landscape Irrigation
- 32 92 19 - Restoration Seeding
- 32 92 23 - Field Sod
- 32 93 00 - Landscaping

**Addendum 2**

**END OF SECTION**

Hacienda La Puente Unified School District <b>Kwis ES Baseball Field Improvements</b> tBP/Architecture Project No. 21054.01	<b>Addendum 2</b>	Table of Contents 00 01 10 - 3
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**SECTION 00 60 00  
PROJECT FORMS**

**KWIS ES BASEBALL FIELD IMPROVEMENTS**

**1.01 00 60 00.01 - CONTRACTOR GUIDE TO GRADING IN LOS ANGELES COUNTY (3-16-17)**

**1.02 00 60 00.02 - PRE-GRADING MEETING CHECKLIST - CONTRACTOR COPY**

**1.03 00 60 00.03 - BCM J103.7 - GRADING PERMIT SECURITY (4-29-08)**

**1.04 00 60 00.04 - GRADING PERMIT SECURITY (2017)**

**1.05 00 60 00.05 - DPW - BSD - PERMIT**

**END OF SECTION**

Hacienda La Puente Unified School District <b>Kwis ES Baseball Field Improvements</b> tBP/Architecture Project No. 21054.01	Addendum 2	Project Forms 00 60 00 - 1
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LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS  
BUILDING AND SAFETY DIVISION  
**CONTRACTOR'S GUIDE TO GRADING  
IN LOS ANGELES COUNTY**

***The approved grading plans must be onsite at all times.***

***Inspection Request Policy:*** Call the local Building and Safety District Office at least 24 hours in advance to request an inspection. See "REQUIRED GRADING INSPECTIONS" on the following page. Include job address, type of inspection, requested date of inspection, contact name and telephone number.

Inspectors are available for phone calls and counter appointments between 8 and 9 am each day. You may call or come into the office at that time with general questions or to determine an approximate inspection time.

***Expiration of Permit:*** Grading permits shall expire if work is not started within 180 days of permit issuance. Additionally, permits shall expire if the work is suspended or abandoned for a period of 180 days. *In order to prevent expiration of the grading permit, an inspection must take place at a minimum of once every 180 days (6 months).*

***Working Hours:*** 6:30 am to 8 pm Monday through Saturday. Primary enforcement will be by the Sheriff. Please note that other agencies may require more restrictive working hours.

***Right of Entry:*** The inspector shall have access to the site for the purpose of inspecting the work (J103.7.7). Anyone who interferes with the right of entry may be considered guilty of a misdemeanor.

### **RESPONSIBILITIES OF CONSULTANTS**

***Permittee:*** The permittee must supervise the construction to ensure the work is being performed according to the approved plans. He/she must notify the consultants when a professional inspection is required. See "REQUIRED GRADING INSPECTIONS" on the following page. The permittee also acts as the coordinator between the consultants, the contractor and the local Building and Safety office (including the inspector and the plan checker). He/she must notify the inspector of any changes to the plan and coordinate the approval of those changes with the consultants. **In the event there is a change of Contractor of Record, Field Engineer, Design Engineer, Soils Engineer, Engineering Geologist, or Bonding Agency, the permittee shall notify the Building and Safety District Office and submit updated and completed Employment of Consultant forms.**

Each consulting engineer shall provide professional inspection within such engineer's area of technical specialty. The specific inspections required are outlined below.

***Field Engineer:*** Routine field inspections and reports certifying the grading work is in compliance with the approved grading plans and all applicable ordinances and requirements. See *In-Grading Inspections* on the following page for specific instructions. If revised plans are required during the course of the work, they must be prepared by the design engineer.

***Soils Engineer:*** Observation during grading and testing for required compaction. Specifically, the soils engineer must be present during preparation of the natural ground and placement and compaction of the fill to verify that such work is being performed in accordance with the approved plans. Revised recommendations during construction must be submitted to the permittee, the civil engineer, and the inspector or plan checker as needed.

***Engineering Geologist:*** Inspection of the bedrock excavation to determine if conditions encountered are in conformance with the approved report. Revised recommendations during construction must be submitted to the soils engineer.

## REQUIRED GRADING INSPECTIONS

**Initial:** When the site has been cleared of vegetation and unapproved fill and it has been scarified, benched or otherwise prepared for fill. *No fill shall have been placed prior to this inspection.* Measures (sandbags, slope protection, etc.) must be in place during the rainy season to prevent erosion on brushed areas.

**Subdrains:** Where required for fill slopes, subdrain inspection is required when the subdrain and outlet have been constructed and surveyed for line and grade, *prior to placement of backfill.*

**Drainage Devices:** For devices with reinforced concrete (swales, terrace drains, etc.), a rebar inspection is required prior to placement of concrete. Other drainage devices will be inspected for installation and function at Rough Grade inspection.

### **In-Grading Inspections:**

- **Field Engineer:** Per LACBC Section J105.11, unless otherwise directed by the Building Official, the Field Engineer must prepare and submit routine inspection reports with the Building Official as follows:
  1. Bi-weekly during all times when grading of 400 cubic yards or more per week is occurring on the site;
  2. Monthly, at all other times; and
  3. At any time when requested in writing by the Building Official.

These reports will certify to the Building Official that the Field Engineer has inspected the grading site and related activities and has found them in compliance with the approved grading plans and specifications, the building code, all grading permit conditions, and all other applicable ordinances and requirements. The reports must conform to the standard "Report of Grading Activities" form, which is included in this package or may be obtained by visiting <http://dpw.lacounty.gov/bsd/dg/default.aspx>. Failure to submit the required reports may result in a Stop-Work Notice to be issued by the Building Official.

- **Soils Engineer:** Per LACBC Section J105, the soils engineer or field technician shall provide professional inspection including observation during grading and testing for required compaction. The technician must provide inspections during the preparation of the natural ground and the placement and compaction of the fill and verify the work is being done in accordance with the approved plans. Per Section J107.8, a representative shall be onsite for the *entire* fill placement and compaction for all fill slopes 30' high/deep and over, or for slopes with grades steeper than 2:1. Per Section J107.9, the soil must be tested to determine the density and verify compliance of the soil properties with the design requirements, including soil type and shear strength. In-progress reports (typically monthly reports) must be submitted for review. Failure to submit the required reports may result in a Stop-Work Notice to be issued by the Building Official.

Submit in-progress reports:

- Directly to your inspector for review.
- To Geotechnical & Materials Engineering Division and the District Office for review.

Upload electronically to <https://dpw.lacounty.gov/apps/esubmissions/gme/default.aspx>

**Revisions:** The inspector must be notified of all plan revisions. Contact the inspector through his/her voicemail or the Inspection Request Line to inform him/her of the proposed revision. When a substantial design change is proposed, the inspector may request the grading plan checker to review and approve the revision. It is the responsibility of the Permittee to process the revision with the plan checker. Additional plan check fees may be incurred for this review time.

Two weeks prior to the final grading inspection, and "As-Built" plan must be submitted to the inspector. The As-Built must incorporate all minor field changes (approved by the inspector in the field) and major plan revisions (approved by the plan checker). Failure to obtain approvals for plan revisions and failure to submit As-Built plan may result in delays in obtaining grading approval, Certificate of Occupancy, and release of grading bond.

**Rough:** When approximate final elevations have been established. All drainage devices necessary for the protection of the building site from flooding must be installed and functional. The building pad must drain properly, and berms must be installed at the top of all fill slopes. In addition, the Engineered Grading Consultant Statement and Contractor Statement for rough grading must be submitted. *Original documents are required. Copies and faxes will not be accepted.* Several other agency approvals may be required prior to rough grade approval, including: Geotechnical & Materials Engineering Division approval, Land Development Division (Construction Section) approval of street and storm drain improvements, and Land Development Division approval of Landscape & Irrigation plans.

**Final:** When grading has been completed, all drainage devices necessary to drain the building pad are installed, slope planting is established and irrigation systems are installed. If applicable, all treatment devices must be installed and stenciled with "No Dumping – Drains to Ocean stencil for NPDES/LID compliance. The Engineered Grading Consultant Statement and Contractor Statement for final grading must be submitted. *Original documents are required. Copies and faxes will not be accepted.* If required, all encroachment and connection permits must have final sign off from Land Development Division (Construction Section). The Certificate of Occupancy for the structure will not be issued and the grading bond (if required) will not be released until Final Grading is approved.

### **OTHER CONSIDERATIONS DURING GRADING**

**Erosion And Sediment Control:** During the rainy season of October 15 to April 15, measures must be taken to ensure a clean construction site. Best Management Practices (BMPs) must be in place in accordance with the approved Erosion and Sediment Control plan. Failure to comply will result in a "Stop Work Notice". The *Developer/Contractor Self-Inspection Form* must be onsite at all times. BMPs must be inspected routinely and before and after major storms events, and repaired as needed. BMPs must be installed to protect adjacent property, road right-of-ways, storm drains, and water courses from sediment transport. The Erosion and Control Plan must be updated as needed during construction to reflect current site conditions.

In addition, if the site disturbers 1 acre or greater or as determined by the Building Official, a State Storm Water Pollution Prevention Plan is required. Year-round measures for waste management must be in place at all times at the site. This includes proper waste management, stabilized construction entrance, materials pollution control, and other non-stormwater measures such as dewatering.

**Elevation Certificates:** If required, the elevation certificate must be completed by a Licensed Land Surveyor, Civil Engineer, or Architect authorized by law to certify elevation information.

In general, for slab-on-grade construction in which the top of slab elevation must be above the base flood elevation, the elevation certificate must be submitted and approved by the plan checker prior to framing. This may vary depending on the building diagram. Contact the surveyor of record or the plan checker for more site-specific instructions.

**Hazards:** The inspector may issue a written "Stop Work Order" at any stage of construction if he/she determines that the approved grading is likely to endanger any public or private property. The inspector will allow the work to continue once he/she feels adequate safety precautions or corrective measures have been taken.



### PRE-GRADING MEETING CHECKLIST

This checklist is to be completed by the plan checker upon grading plan approval to identify all special and unusual conditions associated with the project, including flood hazards, geotechnical concerns, and agency approvals and conditions. Review this checklist along with the grading plans and grading folder prior to the pre-grading meeting.

Bring the approved grading plans to the pre-grading meeting and review this document and the plans during the meeting. Provide a copy of the "Contractor's Guide to Grading in Los Angeles County", along with copies of the "Engineered Grading Consultant Statement" and "Engineered Grading Contractor Statement" forms to the Permittee. All present shall sign in on the Attendance form. The Permittee shall sign the statement at the end of this form. Collect business cards if necessary.

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

GR: \_\_\_\_\_ DATE: \_\_\_\_\_

INSPECTOR: \_\_\_\_\_

#### Grading Permit - Policy and Procedures

- Approved grading plans must be onsite at all times.
- Refer to *Contractor's Guide to Grading* and discuss the following:
  - Working Hours
  - Right of Entry
  - Expiration of grading permit
  - Inspection Request Policy
  - Responsibilities of consultants, including: Field Engineer, Soils Engineer, and Geologist (if applicable)

**Please submit Rough Grade/Final Compaction Soils report to Grading Inspector.**

- Start Date: \_\_\_\_\_
- Milestone grading dates: \_\_\_\_\_
- Estimated Rough Grade date: \_\_\_\_\_
- Estimated Final Grading date: \_\_\_\_\_

Discuss anticipated staging/phasing of grading operations

- Abandoned jobsites:**
  - Where the inspector determines a hazard exists, the permit will be expired and the bond may be used by the County to remedy the site.
  - Where the inspector determines no hazard exists, the bond will be held (but not used) and the permit may be expired.

- Change/termination of consultants* requires updated Documents A & B, as well as a letter from the new consultant indicating that he/she accepts all responsibility for the project as the engineer of record.

#### Called/Required Grading Inspections:

- Refer to **Contractor's Guide for Grading** for descriptions of each inspection:
  - Initial (brushing, bottom of excavations/keys)
  - Subdrains
  - Drainage Devices
  - In-grading inspections by Field Engineer (Report of Grading Activities)
  - In-grading inspections by soils engineer
  - Revisions for changes from approved grading plans
  - Rough grade
  - Final grade

## Drainage devices, storm drains and lot drainage

Privately maintained drainage devices are inspected by the Grading Inspector or the Field Engineer, either as a separate inspection, during rough grade inspection, or during final grade inspection (dependant upon the device).

- Publicly maintained storm drains, connections to a Los Angeles County Flood Control District (LACFCD) drain, and work within LACFCD easements are inspected by a Land Development Division Construction Section Inspector.
- Building pads shall have a minimum slope of 2% for rough grade approval. For final grade, 5% slope away from the structure and 1% slope around the structure are required.
- All drainage devices and graded swales will be flow tested prior to approval.

## Geology and Soils

- Copies of the approved soils and geology reports must be onsite at all times.
- Submit in-grading reports to:
  - Geotechnical and Materials Engineering Division and District Office
  - Directly to Grading inspector
- Review the plans to discuss scheduling and construction of the following, as applicable:
  - Landslide removal/remediation
  - Alluvial/over excavation removals
  - Benching
- Specialized fills and retaining structures, including buttress fills, stabilization fills, shear keys, and geogrid walls require continuous inspection by the soils engineer.
- Locations of all oversized material in fill or stockpiled on site must match the location shown on the plans.
- Utility trenches: *Materials from trench excavations may not be dumped over slopes.* Utility trenches must be properly compacted; compaction reports must be available upon request.

## Import/Export, Brush/Tree, and Rock Removal

- Demolition permits must be obtained prior to start of construction.
- The borrow/receiving site of all exported fill must have an appropriate grading permit to receive such fill.
  - The export site must match the location shown on the plans and the Recycling and Reuse Plan from Environmental Programs Division.
  - Dump tickets must be made available upon request.
  - If the Recycling and Reuse plan calls for a balanced site and export is needed based on field conditions, a revised Recycling and Reuse plan will be required.
- Brush removal: material must be disposed of properly and *may not be mixed in with proposed fill material.* Onsite disposal areas must be clearly shown on the plan and approved by the inspector. If the material will be disposed of offsite, dump tickets must be made available upon request.

## NPDES Compliance

- The *EROSION CONTROL SEASON* (rainy season) is October 15-April 15 of each year.
  - During this time, the approved Erosion and Sediment Control Plans must be onsite at all times.
  - Measures must be in place by October 15.
- A "Stop Work Notice" will be issued if measures are not in place.
- BMPs must be designed to protect adjacent property, road rights-of-way, storm drains, and drainage courses from sediment transport.
- For unpaved roads, sandbags for check dams may be stockpiled onsite, but must be in place within 48 hours of storm events with a 50% chance of predicted precipitation.
  - Developer/Contractor Self-Inspection Form* must be onsite at all times. BMPs must be inspected routinely and before and after major storm events, and repaired as needed.
  - The plans must reflect the *actual site conditions* as of October 1 of each year, and be updated as site conditions change.
  - Significant changes of site condition warrant revised Erosion and Sediment Control plan submittal.

- If the site disturbs an area 1 acre or greater, the State SWPPP must be onsite at all times, and measures must be in place year-round, including:
  - Proper waste management (liquid, solid, hazardous, septic waste and contaminated soil)
  - Stabilized construction entrance.
  - Vehicle/Equipment cleaning, fueling, and maintenance.
  - Temporary clear water diversion for natural streams (may require Fish & Wildlife approval).
  - Dewatering of non-stormwater flows.
- A Stormwater Mitigation Plan is required: Low Impact Development Measures (LID). All treatment devices must be installed and "No Dumping – Drains to Ocean" stencil must be on all drain inlets prior to final grading inspection.

### Request Survey Stakes for the following:

- Property lines:
  - Temporary staking at ROUGH
  - Permanent marking at FINAL
- Restricted Use Areas and Building Restriction Areas
- Road Right-of-Way
- Easements
- Pad elevations:
  - ROUGH - Blue top located at center of pad
  - FINAL
- Drainage: slopes, high points, flow lines, top of grates

### Planting and Irrigation

- If Planting and Irrigation plans (Section J110 – Slope Planting) are required:
  - Review approved plans.
  - Planting and irrigation systems must be installed as soon as practical after rough grading.
  - Sprinkler heads will be tested to ensure adequate slope coverage.
  - Final grading will not be approved and the grading bond will not be released until the slope planting is well established.*
- If Landscape Plans are required: (see approved plans, notes will indicate if Landscape Permit is required)
  - The plans must be submitted to Land Development Division and approved prior to Rough Grade approval.  
For final grading approval a registered Landscape Architect must inspect and submit a completed Water-Efficient Landscaping Certification.
  - Final grading will not be approved and the grading bond will not be released until the planting is well established.*

### Special Conditions

- Retaining walls are required for this project. Building permit(s) must be obtained prior to construction of any retaining wall. Temporary excavations must comply with soils engineer's recommendations and Cal/OSHA requirements.
- An Elevation Certificate is required:
  - All construction at or below elevation \_\_\_\_\_ is subject to flooding and must be flood-proofed. This includes all structures and mechanical equipment.
  - The Elevation Certificate must be approved by the plan checker prior to framing.
- Offsite work:* Offsite covenants exist for this site. All work shown on adjacent offsite property must match the approved plans and recorded offsite covenants in the grading file. Revisions to work offsite must be reviewed by the grading plan checker.
- Private/utility easements:* This project has work proposed within private/utility/access easements. All work shown within easements must match the approved plans. Changes in these areas may not comply with the intended use of the easement and must be reviewed by the grading plan checker.
- This project includes removal of hazardous material and/or contaminated soil.
  - Review the *Health and Safety Plan* for this project. All construction work must conform to the included Health and Safety Plan. The requirements of the plan are intended to protect the health and safety of

construction workers and the general public.

- Hazardous material must be exported to a proper waste disposal site. Dump tickets must be provided upon request to verify quantity and location of exported material. *Capping of oil wells:* Inspections are performed by the State Division of Oil and Gas. Upon completion, the State will issue a letter of approval to the oil company and permittee. This approval must be submitted to the inspector prior to rough grade approval.
  
- CUP/Plot Plan/Tract Map/Parcel Map:
  - Invite Regional Planning representative to pre-grading meeting.**
  - Review Exhibit "A" and CUP conditions, Tract/Parcel Map and conditions, or Plot Plan.
  - Grading-related conditions: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  
- Oak Tree Permit:
  - Invite LA Co. Fire Dept. Forestry Div. representative to pre-grading meeting.**
  - Review plans and discuss proposed encroachments and removals.
  - Protected trees must be identified and fenced around the protected zone (5' outside canopy)
  - Encroachments/removals not covered under the Oak Tree Permit will require revised approval from Regional Planning.
  - Special conditions: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  
- This project is located in a contract city:
  - Conditions of city approval: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  
- This project is located in the Coastal Zone:
  - Invite Coastal Commission representative to pre-grading meeting.**
  - Conditions: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  
- Fish and Wildlife approval:
  - Invite Department of Fish and Wildlife representative to pre-grading meeting.**
  - Time Restrictions: \_\_\_\_\_
  - Special conditions: \_\_\_\_\_  
\_\_\_\_\_
  
- Army Corps of Engineers approval:
  - Invite Army Corps of Engineers representative to pre-grading meeting.**
  - Time Restrictions \_\_\_\_\_
  - Special Conditions: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  
- Los Angeles County Fire Department:
  - Invite Fire Department representative to pre-grading meeting.**
  - The access driveway/road must comply with the Fire Dept approved access plan. Changes in slope, width, turning radius, or turnaround will require a revised approval from the Fire Dept.
  - This site is located in a Very High Fire Hazard Severity Zone (VHFHSZ). A permit from the Fire Department is required for grading work in a VHFHSZ. The permit outlines the required precautions necessary during construction (such as spark arresters on grading equipment).
  
- Land Development Division approval:
  - Invite Land Development Division representative to pre-grading meeting.**

Allows for: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

CALTRANS approval:  
 **Invite CALTRANS representative to pre-grading meeting.**  
 Special Conditions: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- Certifications Required (Original Documents Required):**
- Engineered Grading Consultants Forms(Rough and Final Grading)
  - GMED Rough Grade Approval (Rough)
  - Green Building Landscaping Certification (Final)
  - Contractors Certification (Rough & Final)
  - Water Efficient Landscape Worksheet (Rough)
  - Water Efficient Landscape Worksheet (Final)

**Special Construction Problems/Considerations**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**”QUESTIONS AND ANSWERS”**

As the Contractor/Permittee of record, I have attended the Pre-Grading Meeting and I have received a copy of the “Contractor’s Guide to Grading in Los Angeles County”. I understand the approved plans must be kept on the job site at all times and all work performed shall at the site shall comply with all County codes, ordinances, and the procedures provided in the “Contractor’s Guide”.

\_\_\_\_\_  
Permittee signature

\_\_\_\_\_  
Date



**LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS  
BUILDING AND SAFETY DIVISION**

## PRE-GRADING MEETING ATTENDANCE LOG

	<b>Name (Please Print)</b>	<b>E-mail Address</b>	<b>Phone Number</b>
Grading Inspector			
Grading Plan Checker			
Drainage Plan Checker			
Owner/Developer			
Grading Superintendent			
Grading Contractor			
Field Engineer			
24-Hour Contact			
Soils Engineer			
Engineering Geologist			
Field Technician			
Land Development Inspector			
City Representative			
Utility Representative			
Adjacent Property Owner			
Easement Representative			
Forestry			
Fish & Wildlife			
Fire Department			
Other			



LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS  
BUILDING AND SAFETY DIVISION  
**CONTRACTOR'S GUIDE TO GRADING  
IN LOS ANGELES COUNTY**

***The approved grading plans must be onsite at all times.***

***Inspection Request Policy:*** Call the local Building and Safety District Office at least 24 hours in advance to request an inspection. See "REQUIRED GRADING INSPECTIONS" on the following page. Include job address, type of inspection, requested date of inspection, contact name and telephone number.

Inspectors are available for phone calls and counter appointments between 8 and 9 am each day. You may call or come into the office at that time with general questions or to determine an approximate inspection time.

***Expiration of Permit:*** Grading permits shall expire if work is not started within 180 days of permit issuance. Additionally, permits shall expire if the work is suspended or abandoned for a period of 180 days. *In order to prevent expiration of the grading permit, an inspection must take place at a minimum of once every 180 days (6 months).*

***Working Hours:*** 6:30 am to 8 pm Monday through Saturday. Primary enforcement will be by the Sheriff. Please note that other agencies may require more restrictive working hours.

***Right of Entry:*** The inspector shall have access to the site for the purpose of inspecting the work (J103.7.7). Anyone who interferes with the right of entry may be considered guilty of a misdemeanor.

### **RESPONSIBILITIES OF CONSULTANTS**

***Permittee:*** The permittee must supervise the construction to ensure the work is being performed according to the approved plans. He/she must notify the consultants when a professional inspection is required. See "REQUIRED GRADING INSPECTIONS" on the following page. The permittee also acts as the coordinator between the consultants, the contractor and the local Building and Safety office (including the inspector and the plan checker). He/she must notify the inspector of any changes to the plan and coordinate the approval of those changes with the consultants. **In the event there is a change of Contractor of Record, Field Engineer, Design Engineer, Soils Engineer, Engineering Geologist, or Bonding Agency, the permittee shall notify the Building and Safety District Office and submit updated and completed Employment of Consultant forms.**

Each consulting engineer shall provide professional inspection within such engineer's area of technical specialty. The specific inspections required are outlined below.

***Field Engineer:*** Routine field inspections and reports certifying the grading work is in compliance with the approved grading plans and all applicable ordinances and requirements. See *In-Grading Inspections* on the following page for specific instructions. If revised plans are required during the course of the work, they must be prepared by the design engineer.

***Soils Engineer:*** Observation during grading and testing for required compaction. Specifically, the soils engineer must be present during preparation of the natural ground and placement and compaction of the fill to verify that such work is being performed in accordance with the approved plans. Revised recommendations during construction must be submitted to the permittee, the civil engineer, and the inspector or plan checker as needed.

***Engineering Geologist:*** Inspection of the bedrock excavation to determine if conditions encountered are in conformance with the approved report. Revised recommendations during construction must be submitted to the soils engineer.

## REQUIRED GRADING INSPECTIONS

**Initial:** When the site has been cleared of vegetation and unapproved fill and it has been scarified, benched or otherwise prepared for fill. *No fill shall have been placed prior to this inspection.* Measures (sandbags, slope protection, etc.) must be in place during the rainy season to prevent erosion on brushed areas.

**Subdrains:** Where required for fill slopes, subdrain inspection is required when the subdrain and outlet have been constructed and surveyed for line and grade, *prior to placement of backfill.*

**Drainage Devices:** For devices with reinforced concrete (swales, terrace drains, etc.), a rebar inspection is required prior to placement of concrete. Other drainage devices will be inspected for installation and function at Rough Grade inspection.

### **In-Grading Inspections:**

- **Field Engineer:** Per LACBC Section J105.11, unless otherwise directed by the Building Official, the Field Engineer must prepare and submit routine inspection reports with the Building Official as follows:
  1. Bi-weekly during all times when grading of 400 cubic yards or more per week is occurring on the site;
  2. Monthly, at all other times; and
  3. At any time when requested in writing by the Building Official.

These reports will certify to the Building Official that the Field Engineer has inspected the grading site and related activities and has found them in compliance with the approved grading plans and specifications, the building code, all grading permit conditions, and all other applicable ordinances and requirements. The reports must conform to the standard "Report of Grading Activities" form, which is included in this package or may be obtained by visiting <http://dpw.lacounty.gov/bsd/dg/default.aspx>. Failure to submit the required reports may result in a Stop-Work Notice to be issued by the Building Official.

- **Soils Engineer:** Per LACBC Section J105, the soils engineer or field technician shall provide professional inspection including observation during grading and testing for required compaction. The technician must provide inspections during the preparation of the natural ground and the placement and compaction of the fill and verify the work is being done in accordance with the approved plans. Per Section J107.8, a representative shall be onsite for the *entire* fill placement and compaction for all fill slopes 30' high/deep and over, or for slopes with grades steeper than 2:1. Per Section J107.9, the soil must be tested to determine the density and verify compliance of the soil properties with the design requirements, including soil type and shear strength. In-progress reports (typically monthly reports) must be submitted for review. Failure to submit the required reports may result in a Stop-Work Notice to be issued by the Building Official.

Submit in-progress reports:

- Directly to your inspector for review.
- To Geotechnical & Materials Engineering Division and the District Office for review.  
Upload electronically to <https://dpw.lacounty.gov/apps/esubmissions/gme/default.aspx>

**Revisions:** The inspector must be notified of all plan revisions. Contact the inspector through his/her voicemail or the Inspection Request Line to inform him/her of the proposed revision. When a substantial design change is proposed, the inspector may request the grading plan checker to review and approve the revision. It is the responsibility of the Permittee to process the revision with the plan checker. Additional plan check fees may be incurred for this review time.

Two weeks prior to the final grading inspection, and "As-Built" plan must be submitted to the inspector. The As-Built must incorporate all minor field changes (approved by the inspector in the field) and major plan revisions (approved by the plan checker). Failure to obtain approvals for plan revisions and failure to submit As-Built plan may result in delays in obtaining grading approval, Certificate of Occupancy, and release of grading bond.

**Rough:** When approximate final elevations have been established. All drainage devices necessary for the protection of the building site from flooding must be installed and functional. The building pad must drain properly, and berms must be installed at the top of all fill slopes. In addition, the Engineered Grading Consultant Statement and Contractor Statement for rough grading must be submitted. *Original documents are required. Copies and faxes will not be accepted.* Several other agency approvals may be required prior to rough grade approval, including: Geotechnical & Materials Engineering Division approval, Land Development Division (Construction Section) approval of street and storm drain improvements, and Land Development Division approval of Landscape & Irrigation plans.

**Final:** When grading has been completed, all drainage devices necessary to drain the building pad are installed, slope planting is established and irrigation systems are installed. If applicable, all treatment devices must be installed and stenciled with “No Dumping – Drains to Ocean stencil for NPDES/LID compliance. The Engineered Grading Consultant Statement and Contractor Statement for final grading must be submitted. *Original documents are required. Copies and faxes will not be accepted.* If required, all encroachment and connection permits must have final sign off from Land Development Division (Construction Section). The Certificate of Occupancy for the structure will not be issued and the grading bond (if required) will not be released until Final Grading is approved.

### **OTHER CONSIDERATIONS DURING GRADING**

**Erosion And Sediment Control:** During the rainy season of October 15 to April 15, measures must be taken to ensure a clean construction site. Best Management Practices (BMPs) must be in place in accordance with the approved Erosion and Sediment Control plan. Failure to comply will result in a “Stop Work Notice”. The *Developer/Contractor Self-Inspection Form* must be onsite at all times. BMPs must be inspected routinely and before and after major storms events, and repaired as needed. BMPs must be installed to protect adjacent property, road right-of-ways, storm drains, and water courses from sediment transport. The Erosion and Control Plan must be updated as needed during construction to reflect current site conditions.

In addition, if the site disturbers 1 acre or greater or as determined by the Building Official, a State Storm Water Pollution Prevention Plan is required. Year-round measures for waste management must be in place at all times at the site. This includes proper waste management, stabilized construction entrance, materials pollution control, and other non-stormwater measures such as dewatering.

**Elevation Certificates:** If required, the elevation certificate must be completed by a Licensed Land Surveyor, Civil Engineer, or Architect authorized by law to certify elevation information.

In general, for slab-on-grade construction in which the top of slab elevation must be above the base flood elevation, the elevation certificate must be submitted and approved by the plan checker prior to framing. This may vary depending on the building diagram. Contact the surveyor of record or the plan checker for more site-specific instructions.

**Hazards:** The inspector may issue a written “Stop Work Order” at any stage of construction if he/she determines that the approved grading is likely to endanger any public or private property. The inspector will allow the work to continue once he/she feels adequate safety precautions or corrective measures have been taken.





**COUNTY OF LOS ANGELES  
DEPARTMENT OF PUBLIC WORKS  
BUILDING AND SAFETY / LAND DEVELOPMENT DIVISION**

# ENGINEERED GRADING CONSULTANT CERTIFICATION

(Submit to the local office of Building and Safety prior to Rough Inspection)

Job Address / Tract: \_\_\_\_\_ City: \_\_\_\_\_ Permit No.: \_\_\_\_\_

Owner: \_\_\_\_\_ Contractor: \_\_\_\_\_

**II. ROUGH GRADING - COMPLETION OF WORK**

**BY FIELD ENGINEER**

Based upon field observations, rough grading of the lot(s) listed below has been completed in conformance with Section J105 of the Los Angeles County Building Code. The work includes, but is not limited to, the following: grading to approximate final elevations; staking of property lines; location and gradient of cut and fill slopes; construction of required drainage devices. Building pads are free from flood hazard in conformance with Section 110 of the Los Angeles County Building Code.

Latest approved plan revision dated: \_\_\_\_\_

Lot No.(s): \_\_\_\_\_

Other Areas: \_\_\_\_\_

Remarks: \_\_\_\_\_

\_\_\_\_\_

Engineer: \_\_\_\_\_ Reg. No.: \_\_\_\_\_ Date: \_\_\_\_\_  
(Signature)

**BY SOILS ENGINEER**

Based upon tests and observations, the earth fills placed on the following lots were installed upon properly prepared base material and compacted in compliance with requirements of Section J105 of the Los Angeles County Building Code. Fill slope surfaces have been compacted and buttress fills or similar stabilization measures have been installed in accordance with my recommendations as approved by the Building Official. Sub-drains have been provided where required, and locations of said sub-drains are shown on as-built plans and/or rough grade reports dated \_\_\_\_\_.

See report dated \_\_\_\_\_ for compaction test data and procedure, recommended allowable soil bearing values, and other special recommendations.

Lot No.(s): \_\_\_\_\_

EXPANSIVE SOILS (YES) (NO) LOT No.(s): \_\_\_\_\_

BUTTRESS FILLS (YES) (NO) LOT No.(s): \_\_\_\_\_

REINFORCED EARTH WALLS (YES) (NO) LOT No.(s): \_\_\_\_\_

RESTRICTED USE AREAS (YES) (NO) LOT No.(s): \_\_\_\_\_

Remarks: \_\_\_\_\_

\_\_\_\_\_

Engineer: \_\_\_\_\_ Reg. No.: \_\_\_\_\_ Date: \_\_\_\_\_  
(Signature)

**SUBMIT AT  
ROUGH GRADE**





COUNTY OF LOS ANGELES  
DEPARTMENT OF PUBLIC WORKS  
BUILDING AND SAFETY / LAND DEVELOPMENT DIVISION  
**WATER-EFFICIENT LANDSCAPE  
WORKSHEET**

**ACKNOWLEDGEMENT by the LOCAL WATER PURVEYOR**  
(Submit to the local office of Building and Safety prior to Building Permit)

Job Address / Tract: \_\_\_\_\_ City: \_\_\_\_\_ Permit No. \_\_\_\_\_

Owner: \_\_\_\_\_ Telephone Number: \_\_\_\_\_

Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code \_\_\_\_\_

Work Description: \_\_\_\_\_

Latest approved plan revision dated: \_\_\_\_\_ Total landscaped area: \_\_\_\_\_

Lot No.(s): \_\_\_\_\_

Other Areas: \_\_\_\_\_

**WATER PURVEYOR ACKNOWLEDGEMENT**

This is to certify that the Water Efficient Landscape Worksheet has been received by this agency, as required by The California Code of Regulations Title 23, Division 2, Chapter 2.7, the Model Water Efficient Landscape Ordinance Section 492.1.

\_\_\_\_\_  
Name of Water Purveyor Company

\_\_\_\_\_  
Name Title Signature Date

Remarks: \_\_\_\_\_

Comments/Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_





COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
BUILDING AND SAFETY / LAND DEVELOPMENT DIVISION

ENGINEERED / REGULAR GRADING
CONTRACTOR CERTIFICATION

(Submit to the local office of Building and Safety prior to Rough and Final Inspection)

Grading Permit No.: \_\_\_\_\_ Date Issued: \_\_\_\_\_ Dist. No.: \_\_\_\_\_

Address or Location of Property: \_\_\_\_\_

Tract No. or Parcel Map No. \_\_\_\_\_ Lot No(s). \_\_\_\_\_

Owner's Name: \_\_\_\_\_
(Print)

The grading of the site listed above, or work as set forth below, was performed in accordance with the approved plans and the requirements of all applicable codes, unless otherwise noted.

List all work performed by the undersigned contractor.

Four horizontal lines for listing work performed.

If the above-cited work does not comply with the approved plans and code, list below wherein the work does not comply.

Four horizontal lines for listing non-compliance.

Grading Contractor: \_\_\_\_\_ License No.: \_\_\_\_\_
(Print)

Signature

Date

SUBMIT AT
ROUGH GRADE

SUBMIT AT
FINAL GRADE





COUNTY OF LOS ANGELES  
DEPARTMENT OF PUBLIC WORKS  
*BUILDING AND SAFETY / LAND DEVELOPMENT DIVISION*  
**GREEN BUILDING LANDSCAPING  
CERTIFICATION**

(Submit to the local office of Building and Safety prior to Final Inspection)

Job Address / Tract: \_\_\_\_\_

City: \_\_\_\_\_ Permit No.: \_\_\_\_\_

Owner: \_\_\_\_\_ Contractor: \_\_\_\_\_

GREEN BUILDING LANDSCAPING – COMPLETION OF WORK

- BY HOMEOWNER, DEVELOPER, OR CONTRACTOR (For all Development with installed landscape of 500 sq. ft. or greater or rehabilitated landscape 2,500 sq. ft. or greater.)

The landscaping has been installed in conformance with the approved plans and meets the requirements of Section 4.304 or 5.304 of the Los Angeles County Green Building Standards Code.

Remarks: \_\_\_\_\_

Home Owner/Builder  
or Contractor: \_\_\_\_\_ Date: \_\_\_\_\_  
(Signature)





**COUNTY OF LOS ANGELES**  
**DEPARTMENT OF PUBLIC WORKS**  
*BUILDING AND SAFETY / LAND DEVELOPMENT DIVISION*  
**ENGINEERED GRADING**  
**CONSULTANT CERTIFICATION**  
 (Submit to the local office of Building and Safety prior to Final Inspection)

Job Address / Tract: \_\_\_\_\_ City: \_\_\_\_\_ Permit No.: \_\_\_\_\_

Owner: \_\_\_\_\_ Contractor: \_\_\_\_\_

**III. FINAL GRADING - COMPLETION OF WORK**

**BY FIELD ENGINEER**

Based upon field observation, earthwork subsequent to Rough Grade inspection has been completed within the area of my responsibility as defined in Section J105 of the Los Angeles County Building Code in conformance with the final approved grading plan. This includes, but is not limited to, the establishment of line, grade, surface drainage, and all drainage devices necessary to drain the building pad.

Latest approved plan revision dated: \_\_\_\_\_

Lot No.(s): \_\_\_\_\_

Other Areas: \_\_\_\_\_

Remarks: \_\_\_\_\_

\_\_\_\_\_

Engineer: \_\_\_\_\_ Reg. No.: \_\_\_\_\_ Date: \_\_\_\_\_  
 (Signature)

**BY SOILS ENGINEER**

Based upon field observations and testing, the earthwork performed subsequent to Rough Grade inspection has been completed in accordance with Section J105 of the Los Angeles County Building Code and the recommendations of the approved soils reports on file with the Building Official.

See final compaction reports dated \_\_\_\_\_ for areas requiring specific compaction and completed after Rough Grade approval.

Lot No.(s): \_\_\_\_\_

Remarks: \_\_\_\_\_

\_\_\_\_\_

Engineer: \_\_\_\_\_ Reg. No.: \_\_\_\_\_ Date: \_\_\_\_\_  
 (Signature)

**PLANTING AND IRRIGATION STATEMENT**

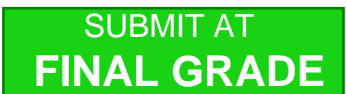
**BY LANDSCAPE ARCHITECT OR FIELD ENGINEER**

The slope planting has been established to prevent erosion and the irrigation system(s) has been installed in conformance with the approved plans and applicable provisions and meets the requirements of section J110 of the Los Angeles County Building Code.

**Lot No.(s):** \_\_\_\_\_

Remarks: \_\_\_\_\_

Landscape Architect  
 or Field Engineer: \_\_\_\_\_ Reg. No.: \_\_\_\_\_ Date: \_\_\_\_\_  
 (Signature)







**COUNTY OF LOS ANGELES  
DEPARTMENT OF PUBLIC WORKS  
BUILDING AND SAFETY / LAND DEVELOPMENT DIVISION  
WATER-EFFICIENT LANDSCAPING CERTIFICATION**

(Submit to the local office of Building and Safety prior to Final Inspection)

Job Address / Tract: \_\_\_\_\_ City: \_\_\_\_\_ Permit No. \_\_\_\_\_

Owner: \_\_\_\_\_ Telephone Number: \_\_\_\_\_

Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code \_\_\_\_\_

Work Description: \_\_\_\_\_

Latest approved plan revision dated: \_\_\_\_\_ Total landscaped area: \_\_\_\_\_

Lot No.(s): \_\_\_\_\_

Other Areas: \_\_\_\_\_

**FINAL INSPECTION - COMPLETION OF WORK**

BY LANDSCAPE ARCHITECT, LANDSCAPE OR IRRIGATION DESIGNER

Based upon field observation and testing of the irrigation system, the landscaping has been completed as defined by the Water Efficient Landscape Ordinance, CHAPTER 2.7, DIVISION 2 OF TITLE 23 WATERS, in the CALIFORNIA CODE OF REGULATIONS and in conformance with the final approved landscaping plan. The following REQUIRED documents are attached:

- Soil Management report per Section 492.5
- Irrigation scheduling per Section 492.10
- Landscape and Irrigation Maintenance schedule per Section 492.11
- Landscape Irrigation Audit Report per Section 492.12

Company Name: \_\_\_\_\_ Telephone Number: \_\_\_\_\_

Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code \_\_\_\_\_

Name: \_\_\_\_\_ Title: \_\_\_\_\_

\_\_\_\_\_  
(Signature) License No.: \_\_\_\_\_ Date: \_\_\_\_\_

Remarks: \_\_\_\_\_

Inspectors Comments/Notes: \_\_\_\_\_

**WATER PURVEYOR ACKNOWLEDGEMENT**

This is to certify that the Water Efficient Landscaping Certificate has been received by this agency, as required by The California Code of Regulations Title 23, Division 2, Chapter 2.7, the Model Water Efficient Landscape Ordinance section 492.9.

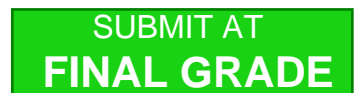
\_\_\_\_\_  
Name of Water Purveyor Company

\_\_\_\_\_  
Name Title Signature Date

**PROPERTY OWNER ACKNOWLEDGEMENT**

"I/we certify that I/we have received copies of all the documents within the Landscape Documentation Package and the Certificate of Completion and that it is our responsibility to maintain the project in accordance with the Irrigation and Maintenance Schedule.

\_\_\_\_\_  
Property Owner Signature Date







COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS - BUILDING & SAFETY DIVISION

REPORT OF GRADING ACTIVITIES

Period Covered by this report: From: \_\_\_\_\_ To: \_\_\_\_\_

Date: \_\_\_\_\_ Grading Permit Number: GR \_\_\_\_\_

Project Name: \_\_\_\_\_

Project Address/Location: \_\_\_\_\_

Field Engineer: \_\_\_\_\_ Phone Number: \_\_\_\_\_

1. Is the work in compliance with the approved grading plans and County permit requirements? [ ] Yes [ ] No
If no, please explain all nonconformities and proposals for corrective measures. Attach separate sheet if necessary: \_\_\_\_\_

2. Are appropriate BMPs in place? (Including any slope not worked on within the last 15 days) [ ] Yes [ ] No
If no, please describe all deficiencies and mitigation measures. Attach separate sheet if necessary: \_\_\_\_\_

3. Did you observe any discharge of silt/sediment in storm water leaving the site or entering a water body? [ ] Yes [ ] No
If yes, please explain circumstances and corrective measures. Attach separate sheet if necessary: \_\_\_\_\_

4. Is the site's Local Storm Water Pollution Prevention Plan current? [ ] Yes [ ] No
If no, please explain deficiencies. Attach separate sheet if necessary: \_\_\_\_\_

5. Did you observe any problems or have knowledge of any complaints about the site? [ ] Yes [ ] No
If yes, please explain. Attach separate sheet if necessary: \_\_\_\_\_

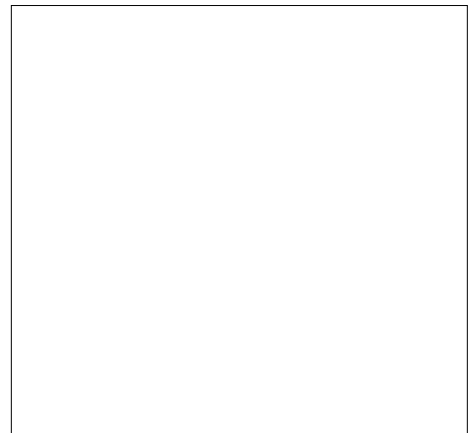
6. Describe the quantity of earthwork that has occurred and is remaining:
This Reporting Period: Cut \_\_\_\_\_ C.Y. Fill \_\_\_\_\_ C.Y.
Earthwork Remaining: Cut \_\_\_\_\_ C.Y. Fill \_\_\_\_\_ C.Y.

- [ ] "I certify the information indicated above is accurate and the work is in conformance with the approved grading plans."
[ ] "The work is not in conformance with the approved grading plans as indicated above. The permittee has been notified and given a copy of this report."

Print Name: \_\_\_\_\_
Field Engineer

Sign Name: \_\_\_\_\_

Please upload this completed form, stamped and signed, at the following website:
http://dpw.lacounty.gov/bsd/dg/default.aspx or fax to (818) 880-6279. Also, provide a copy to the contractor and permittee for their records.



Stamp of Field Engineer

## **Report of Grading Activities Requirements & Procedure**

Unless otherwise directed by the Building Official, the Field Engineer for all engineered grading projects shall prepare routine inspection reports as required under Section J105.11 of the County of Los Angeles Building Code. These reports, known as "Report of Grading Activities", shall be submitted to the Building Official as follows:

1. Bi-weekly during all times when grading of 400 cubic yards or more per week is occurring on the site;
2. Monthly, at all other times; and
3. at any time when requested in writing by the Building Official.

Such "Report of Grading Activities" shall certify to the Building Official that the Field Engineer has inspected the grading site and related activities and has found them in compliance with the approved grading plans and specifications, the building code, all grading permit conditions, and all other applicable ordinances and requirements. This form is available at the following website <http://dpw.lacounty.gov/bsd/publications/> under the *Drainage and Grading* folder *Permit and Inspection Documents* tab, "Report of Grading Activities". The completed form may be scanned and uploaded at the website <http://dpw.lacounty.gov/bsd/dg/default.aspx>. Failure to provide required inspection reports will result in a "Stop Work Order."



**BCM J103.7  
4/29/2008**

**GRADING PERMIT SECURITY**

A grading permit security is required per Section J103.7 of the 2008 County of Los Angeles Building Code (LACBC) for all grading permits in which the earthwork volume exceeds 1,000 cubic yards, or as deemed necessary by the building official where unusual conditions or special hazards exist.

The grading permit security (bond) amount is based on the number of cubic yards of material being graded in either excavation or fill, which ever is greater, plus the cost of all drainage devices or other protective devices, or work necessary to eliminate geotechnical hazards. The grading volume of material is determined to be the larger of the cut or fill volumes plus any necessary over excavation or removal and recompaction volumes.

**AMOUNT OF SECURITY**

The portion of the security valuation based on the volume of material in either excavation or fill shall be calculated as 50% of the estimated cost of grading work for the first 100,000 cubic yards plus 25% of the estimated cost of grading work for that portion in excess of 100,000 cubic yards. A valuation of \$3.60 per cubic yard shall be used to estimate the cost of grading work. Therefore, the security amount to be collected in accordance with Section J103.7.1 of the 2008 LACBC shall be:

- \$1.80/cy ..... For 100,000 cubic yards of material or less
- \$0.90/cy ..... For material in excess of 100,000 cubic yards

The cost of all drainage devices necessary to eliminate flood hazards per Section 110.1 of the 2008 LACBC and all protective devices or work necessary to eliminate any geotechnical hazards per Section 110.2 of the 2008 LACBC must be included in the security amount. Drainage devices which are covered by a performance bond (improvements required to be completed under the Subdivision Map Act) and area drainage devices solely intended to convey nuisance flows do not need to be included. The cost of the devices or work shall be estimated by the designing Civil Engineer and verified by the Regional Drainage and Grading Engineer (RDGE).

The RDGE is responsible for calculating the total security amount and notifying the applicant during the grading plan review process. The amount of the required security shall be indicated on the grading plan approval sheet.

## ACCEPTING SECURITIES

A security can be posted in one of the following forms per Section J103.7 of 2008 LACBC:

1. A bond (BND) furnished by a corporate surety authorized to do business in the State.
2. A cash security (CA), which includes cashier's checks, certified checks, postal or bank money orders, and actual cash.
3. An instrument of credit from a financial institution, including letters of credit (LC), certificates of deposit (CD), and passbook savings accounts (PB).

### Surety Bonds

1. The "Grading Permit Security" form shall be used and is acceptable for work located in the unincorporated area or in a contract city. Bonds shall not be accepted unless prepared on this form. A reduced size copy is included in Attachment A; original forms shall be available at each district office and are available on the Department's website: <http://www.dpw.lacounty.gov> (Go to Forms, search "grading").
2. Careful comparison shall be made between the bond and permit application to verify that the legal description and job address (including locality or city if in a contract city) are the same on both documents and that **the principal named on the bond is the owner as shown on the application**. Bond must be in owner's name
3. Both the principal and surety's signatures on the bond must be notarized and must have the acknowledgment slips attached to the bond.
4. The bond amount, number, and name of surety shall be entered in the spaces provided on the permit application. The plan check and permit numbers shall be entered where requested at the bottom of the bond.
5. The bond shall be filed in the grading folder and a copy shall be placed in the job jacket.
6. The permit technician shall enter the bond into DAPTS in the "SECURITY" screen of the permit application. At a minimum: the principal and surety name and address, the bond number and amount, and the filed and received dates shall be entered into DAPTS. (See Attachment G)

### Cash Deposits

1. The cash deposit shall be taken in as "TRUST DEPOSIT FOR GRADING" in the FEES screen in DAPTS. The fee receipt printed from DAPTS shall be copied and given to the owner. (See Attachment H)
2. A copy of the fee receipt shall be placed in the grading folder, along with a copy of the check or money order (if applicable).
3. A note showing the amount of cash deposit and the owner's name and address where the deposit is to be returned upon completion of the work shall be placed on the permit application.
4. A copy of the fee receipt shall be forwarded to Fiscal Division along with the daily report. The "cash" is deposited in the normal manner with the daily receipts.

### Instrument of Credit

1. An instrument of credit from a financial institution in an amount equal to or greater than the grading bond required may be accepted. The District Office Manager or Assistant Office Manager prior to approval must review all instruments of credit.
2. Careful comparison should be made between the instrument of credit and the permit application to verify that the legal description and job address are the same on both documents and that the **principal shown on the instrument of credit is the owner as shown on the application**. Note that the name of the financial institution and owner shall not be the same.
3. Since grading projects may take several years for completion, a statement limiting the time on the instrument of credit should not be accepted unless accompanied by a further statement that it will be automatically extended if the work is not completed at that time.
4. The name and address of the principal and financial institution, the certificate number and the security amount shall be clearly noted on the permit application and in DAPTS under the TEXT screen.
5. The original instrument of credit shall be forwarded to Fiscal Division with a transmittal memo (see Attachment C). Copies of the instrument of credit are to be filed in the grading folder and job jacket.

6. The grading permit shall not be issued until an approval from Fiscal Division is received. Upon receiving approval, the approval date and Fiscal Division representative shall be noted in DAPTS under the TEXT screen (See Attachment I). Copies of the written approval (if applicable) shall be placed in the grading folder and job jacket.

## **RELEASING SECURITIES**

### **Surety Bonds**

1. When the work has been satisfactorily completed and the grading permit has been finalized, the "Completion Notice and Bond Release" form shall be completed (see Attachment D). One copy shall be placed in the job jacket; one copy shall be placed in the grading folder, one copy mailed or given to the owner, and the original mailed to the surety company.
2. Enter Bond has been exonerated in DAPTS. Enter amount and date (See Attachment G)

### **Cash Deposits**

Release of cash deposits shall be treated as a refund. Therefore, when the work has been satisfactorily completed and the grading permit has been finalized, the attached "Cash Bond Refund" form shall be completed and forwarded to Administrative Services Division (see Attachment E). Administrative Services Division will review the form for completeness and route it to Fiscal Division, Revenue Management Section for refund. Refund should be entered in DAPTS (See Attachment H).

It should be noted that only the Office Managers and other personnel who have authorize signature forms on file with Fiscal Division can sign this form.

### **Instrument of Credit**

When the work has been satisfactorily completed and the grading permit has been finalized, a memo authorizing the release of the instrument of credit shall be forwarded to Fiscal Division (see Attachment I).

## **REDUCING SECURITIES**

Grading projects in which a security is required may be eligible for a reduction in the security when rough grading has been completed. For all grading projects, completion of rough grade shall include all grading operations, installation of drainage devices, rough grade approval from Geotechnical and Materials Engineering Division (where required), and submittal of "Engineered Grading Consultant Statement" (where required). Once rough grade has been completed, the project is eligible for a one-time, 50% reduction in the security at the discretion of the District Office Manager. The Field Engineer shall submit a reduction request letter to the District Office Manager.

### **Surety Bonds**

The "Partial Completion Notice and Bond Reduction" form shall be completed (see Attachment H). A copy shall be placed in the grading folder, job jacket, and mailed/given to owner. The original shall be mailed to the surety company.

### **Cash Deposits**

This procedure differs only slightly from releasing the deposit. On the "Cash Bond Refund" form (see Attachment D), the refund amount shall be altered to reflect the 50% reduction of the bond. In addition, the "Reason for Refund" shall be altered to read:

"Rough grading has been completed to the satisfaction of the Building and Safety Division. Therefore, this is the release of 50% of the cash deposit per Section J103.7.1 of the Building Code."

A copy of the reduction letter shall be placed in the grading folder and job jacket.

### **Instrument of Credit**

This procedure is identical to releasing the security, with the exception of the bond amount, which should be altered to reflect the 50% reduction.

RECOMMENDED BY:

\_\_\_\_\_  
MITCH MILLER  
Senior Civil Engineer

APPROVED BY:

\_\_\_\_\_  
RAJESH PATEL  
Superintendent of Building

AS:VC P:\bspub\RESEARCH\BCM's\BCM J103 7 Grading Security.doc

Attach.

Supercedes BCM A3311, 05/26/05, AM 30.16, 05/20/91 and BCM 70.10 08/15/80

## Attachments

<u>ITEM</u>	<u>ATTACHMENT</u>	<u>PAGE</u>
Grading Bond Form	A	A-1
Request for Acceptance of Letter of Credit, Certificate of Deposit, or Passbook – Transmittal to Fiscal	B	B-1
Completion Notice & Bond Release	C	C-1
Cash Bond Refund	D	D-1
Request to Fiscal for Release of Letter of Credit, Certificate of Deposit or Passbook	E	E-1
Partial Completion and Bond Reduction Notice	F	F-1
Entering Grading Bonds Into DAPTS	G	G-1 thru G-10
Entering Cash Deposits as Grading Security into DAPTS	H	H-1 thru H-5
Entering Other Financial Securities of Instruments into DAPTS	I	I-1 thru I-8

### REDUCED COPY FOR REFERENCE ONLY



LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS  
**BUILDING AND SAFETY DIVISION**  
**LAND DEVELOPMENT DIVISION**  
**GRADING PERMIT SECURITY**

KNOW ALL MEN BY THESE PRESENTS SECURITY NUMBER \_\_\_\_\_

That we \_\_\_\_\_

\_\_\_\_\_ of \_\_\_\_\_ California, as \_\_\_\_\_

principal, and \_\_\_\_\_ a corporation, as surety and held and firmly bound unto the County of LOS ANGELES, a body public and corporate of the State of

California, in the sum of \_\_\_\_\_ \$ \_\_\_\_\_ Lawful money of the United States, for the payment of which well and truly to be made we hereby bind ourselves, jointly and severally, firmly by these presents.

Signed, sealed and dated this \_\_\_\_\_ day of \_\_\_\_\_

WHEREAS, an application by the above-named principal, has been made to the DEPARTMENT OF PUBLIC WORKS, COUNTY OF LOS ANGELES, Division of Building and Safety/Land Development for the issuance, is said principal, of a permit to perform excavation or fill work or both within the County of Los Angeles more specifically described in the application for a Grading permit, upon a location owned by

said principal known as lot \_\_\_\_\_, block \_\_\_\_\_, tract \_\_\_\_\_, locality \_\_\_\_\_ or as street address of \_\_\_\_\_ in accordance with the provisions of Appendix J of the Los Angeles County Building Code, and

WHEREAS, Los Angeles County Building Code, Appendix J, requires as a condition precedent to the issuance of said permit that the principal shall furnish a security in the sum above named to the County of Los Angeles, conditioned as hereinafter set forth:

NOW, THEREFORE,

- (1) If the principal shall well and truly comply with all the applicable requirements of Los Angeles County Building Code, Appendix J, and
- (2) If all of the work required to be done complies with all of the terms and conditions of the Permit for excavation or fill or both to the satisfaction of the Building Official then this obligation shall be void, otherwise it shall remain in full force and effect.

It is understood that the liability of the principal and surety upon this security shall be in effect from the date hereof and remain in effect until the completion of the work in compliance with all terms and conditions of said Grading Permit and until final approval thereof by the Building Official.

It is further understood that the County of Los Angeles, or the surety, or both, or any authorized representative of either, shall have the right to enter the above described property for the purpose of inspecting the work, and should the principal default in the performance of any of the terms and conditions of the Grading Permit, the said County, or surety, or both, or agent of either, shall have the right of access to the property and may complete the work necessary for compliance with requirements of said Building Code, Appendix J.

Where the work requiring this bond is located within an incorporated city and the County of Los Angeles is the enforcement agency, the obligation of this security shall include the incorporated city where the work is to be performed.

In such case the words "Department of Public Works, County of Los Angeles, /Land Development Division" and "Building Official" shall mean such Department and Official respectively while acting, respectively, as the appropriate department and official of such city. The words "Los Angeles county Building Code" mean the building code of other ordinance having provisions the same as, or substantiating similar to Appendix J of said Los Angeles County Building Code.

IN WITNESS WHEREOF the principal and surety caused this security to be executed the day and year first above written.

\_\_\_\_\_  
\_\_\_\_\_  
Principal \_\_\_\_\_  
\_\_\_\_\_  
Surety \_\_\_\_\_  
\_\_\_\_\_  
(Seal)  
(Seal)

(This security must be acknowledged both as to principal and surety before a Notary Public.) Local Mailing Address of Surety:

FOR DEPARTMENT USE ONLY			
Plan Check	Permit No.	Date Work Completed	Date Security Released



**COUNTY OF LOS ANGELES  
DEPARTMENT OF PUBLIC WORKS  
BUILDING AND SAFETY DIVISION**

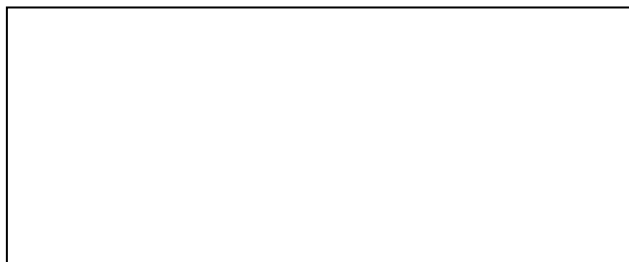
**REQUEST FOR ACCEPTANCE OF LETTER OF CREDIT,  
CERTIFICATE OF DEPOSIT OR PASSBOOK SAVINGS ACCOUNT**

To: Fiscal Division  
Revenue Management Section

Date of Request: \_\_\_\_\_

Attached is the original copy of the letter of credit, certificate of deposit, or passbook number \_\_\_\_\_ from \_\_\_\_\_ for the amount of \$ \_\_\_\_\_, fulfilling the requirement of Title 26, County of Los Angeles Building Code, Appendix Chapter J, Section J103.7 for grading on property described as \_\_\_\_\_, Permit Number \_\_\_\_\_.

Please hold this letter of credit, certificate of deposit, or passbook until the Building and Safety Division notified you that it may be released.



District Office Stamp

\_\_\_\_\_  
District Office Manager



**COUNTY OF LOS ANGELES  
DEPARTMENT OF PUBLIC WORKS  
BUILDING AND SAFETY DIVISION**

**COMPLETION NOTICE AND BOND RELEASE**

This is to advise that each and all of the terms and conditions of Permit Number \_\_\_\_\_ issued to \_\_\_\_\_ for grading on property described as \_\_\_\_\_ has been completed to the satisfaction of the Building and Safety Division in accordance with Title 26, County of Los Angeles Building Code, Appendix Chapter J, Section J103.7.4.

Therefore, the Principal and Surety of the Bond posted in connection with the above permit in the amount of \$ \_\_\_\_\_ are hereby released and the Bond terminated on this date, \_\_\_\_\_.

DEAN D. EFSTATHIOU, Acting Director of Public Works

Bond No. \_\_\_\_\_

By \_\_\_\_\_  
District Office Manager



**COUNTY OF LOS ANGELES  
DEPARTMENT OF PUBLIC WORKS  
BUILDING AND SAFETY DIVISION**

**CASH BOND REFUND**

To: Fiscal Division  
Revenue Management Section

DIVISION REQUEST FOR REFUND

Date of Request \_\_\_\_\_

Please refund \$ \_\_\_\_\_

To \_\_\_\_\_

Address \_\_\_\_\_

Collected For \_\_\_\_\_

Date of Receipt \_\_\_\_\_, Permit Number \_\_\_\_\_,

Or Departmental Receipt Number \_\_\_\_\_

Reason for Refund: The work has been completed to the satisfaction of the Building and Safety Division. Therefore, this is the release of cash deposit per Title 26, County of Los Angeles Building Code, Appendix Chapter J, Section J103.7.4.

\_\_\_\_\_  
Division

\_\_\_\_\_  
District Office Manager

Date Received by Fiscal  
Division \_\_\_\_\_

Received  
By \_\_\_\_\_

RE# \_\_\_\_\_MSW \_\_\_\_\_

This request form to be used only for receipts not related to specific billable jobs.



**COUNTY OF LOS ANGELES  
DEPARTMENT OF PUBLIC WORKS  
BUILDING AND SAFETY DIVISION**

**REQUEST FOR RELEASE OF LETTER OF CREDIT,  
CERTIFICATE OF DEPOSIT OR PASSBOOK**

To: Fiscal Division  
Revenue Management Section

Date of Request: \_\_\_\_\_

All of the terms and conditions of Permit Number \_\_\_\_\_ issued to \_\_\_\_\_ for the grading on the property described as \_\_\_\_\_ has been completed to the satisfaction of the Building and Safety Division in accordance with the requirements of Title 26, County of Los Angeles Building Code, Appendix Chapter J, Section J103.7.4. Therefore, the letter of credit, certificate of deposit or passbook number \_\_\_\_\_ in the amount of \$ \_\_\_\_\_ is terminated this date and can now be released. Please release this security to:

Depositor \_\_\_\_\_  
Other \_\_\_\_\_  
Mailing Address \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

If you have any questions regarding this request, please contact \_\_\_\_\_ at telephone number \_\_\_\_\_.



\_\_\_\_\_  
District Office Manager

District Office Stamp



**COUNTY OF LOS ANGELES  
DEPARTMENT OF PUBLIC WORKS  
BUILDING AND SAFETY DIVISION**

**PARTIAL COMPLETION NOTICE AND BOND REDUCTION**

This is to advise that each and all of the terms and conditions of Permit Number \_\_\_\_\_ issued to \_\_\_\_\_ for the grading on property described as \_\_\_\_\_ have been partially completed to the satisfaction of the Building and Safety Division in accordance with Title 26, County of Los Angeles Building Code, Appendix Chapter J, Section J103.7.4.

Therefore, the Principal and Surety of the bond posted in connection with the above permit in the amount of \$ \_\_\_\_\_ are hereby reduced \_\_\_\_\_ % to \$ \_\_\_\_\_ on this date, \_\_\_\_\_.

DEAN D. EFSTATHIOU, Acting Director of Public Works

Bond No. \_\_\_\_\_ By \_\_\_\_\_  
District Office Manager

# Entering Grading Bond Information into DAPTS

1. Blank out these field with the delete key

ITERIA ENTRY 02/11/08 09:30:29

ORGANIZATION - LOCATION

APPLICATION NBR: GR 0108070002 FROM INIT. DATE: THROUGH:

ADDRESS: NBR: STREET: CITY: ZIP CODE: EXISTING ADDRESS: THOMAS GUIDE MAP PAGE: GRID:

LEGAL: TYPE: ID: ASSR INFO NO: OWNER NAME: TENANT NAME:

FEE RECEIPT NBR:

PROPERTY CREATE:

DPC670 NEXT TRANSACTION: PF1=HELP

2. Enter Grading permit number here

3. Press the enter or Ctrl key

4. Review the permit that appears to make certain it is the correct one. Enter an "X" in the security field then hit enter

APPL NBR: GR 0108070002 APPISSUD NORMAL HOLD: RELATED APPL: GR 9911220001

TENANT: ADDRESS: 1603 PALM CANYON MALI

LEGAL: BS 991122X LOC: 0910 AIN: MLT: CROSS-ST: SERRA ROAD

LOCALITY: MALIBU

INITIATE PLAN APPR ISSUE DT FINALED FINALED BY EXPIRE DT

08 07 01 02 03 02

READY FOR PERMIT: OWNER/BUILDER: CODE:

OWNER: MHAB TRUST ADDRESS: P.O. BOX 2485 CA 90265 PHONE:

APPLICANT: MHAB TRUST ADDRESS: P.O. BOX 2485 MALIBU, CA 90265 PHONE: 3104563230

CONTRACTOR: PHONE:

ARCH/ENGR: LAND DESIGN CONSULTANTS, INC. PHONE: 6265787000

WORK DESC: GRADING FOR FOUR PARCELS OF PM 23897

FEES: REPL: MOVE: TEXT: Y CORRESP: CLR: TSK TRACK: SECURITY: X

ISSUE STATUS: DEFAULT PRINTER: OR PRINTER ID: DISP: REPORT:

DPC260 NEXT TRANSACTION: PF8=DETAIL PF1=HELP

5. Add the date the bond is received and hit the enter key

```
-----  
END OF DATA                                     PAGE 1  
PROJ/APPL/IMPRV NBR: GR 0108070002 AGREEMENT NBR: 1 HOLD: _  
RECEIVED DATE: 01 08 08 FILED DATE: _ _ _ _  
EXPIRATION DT: _ _ _ _ 60-DAY LETTER DT: _ _ _ _ 60-DAY RETURN DT: _ _ _ _  
20-DAY LETTER DT: _ _ _ _ 20-DAY RETURN DT: _ _ _ _  
EXTENSION DT: _ _ _ _ EXTEN. LETTER DT: _ _ _ _ AGREEMENT TEXT: _
```

6. Now place an X in the add new security field and hit enter.

```
D A P T S                AGREEMENTS UPDATE                02/11/08  
BSUPD                    09:52:28  
PRESS PF14 TO REQUEST DELETION OF AGREEMENT  
END OF DATA                                     PAGE 1  
PROJ/APPL/IMPRV NBR: GR 0108070002 AGREEMENT NBR: 1 HOLD: _  
RECEIVED DATE: 01 08 08 FILED DATE: _ _ _ _  
EXPIRATION DT: _ _ _ _ 60-DAY LETTER DT: _ _ _ _ 60-DAY RETURN DT: _ _ _ _  
20-DAY LETTER DT: _ _ _ _ 20-DAY RETURN DT: _ _ _ _  
EXTENSION DT: _ _ _ _ EXTEN. LETTER DT: _ _ _ _ AGREEMENT TEXT: _  
LAST NAME FIRST MI  
SELECT PRINCIPAL: _  
OR SUBDIVIDER: _  
ADD NEW SECURITY: X  
RELATED SECURITIES  
F/ TY/INSTRUMENT/NUMBER ORIGINAL $ RETAIN $ FORFEIT $ RETURN $  
SEL L STATUS RCV DATE RDU DATE FRF DATE EXN DATE  
  
DPC472 NEXT TRANSACTION: _____ PF1=HELP
```

8 Enter the type of work being bonded

9 Enter the type of security being used (not cash)

10 Enter the unique number of the security

7 Enter an "A" for add

11 Enter the amount of the bond

12 Enter the date it was received

```

BOND/SECURITY UPDATE                                02/11/08
                                                    10:06:41
*****
END OF DATA                                         PAGE 1
PROJ/APPL/IMPRV NBR: GR0108070002 AGREEMENT NBR: 1   HOLD: _
TYPE/INSTRUMENT/NUMBER: gr bnd 40404000404000_     ADD'L TEXT: _
ACTION: A      F/L INDICATOR: _      STATUS (ACT/EXP/CITY): _
ORIGINAL      DATE      DATE      AMOUNT      FORFEIT      DATE      AMOUNT      EXONERATE
AMOUNT      REC'D      REDUCED      RETAINED      AMOUNT      FORFEIT      RETURNED      DATE
100,000      02 05 08
ADD PARTICIPANT: _ TYPE: _      LAST NAME: _
FIRST: _      MI: _
PARTICIPANT
SEL  TYPE  LAST NAME      FIRST      MI
DPC478                                NEXT TRANSACTION: _      PF1=HELP
  
```

This screen and the next, list the valid work type codes. These are the types of work that can be bonded. We are only interested in Grading for this example but other types of work can be bonded.

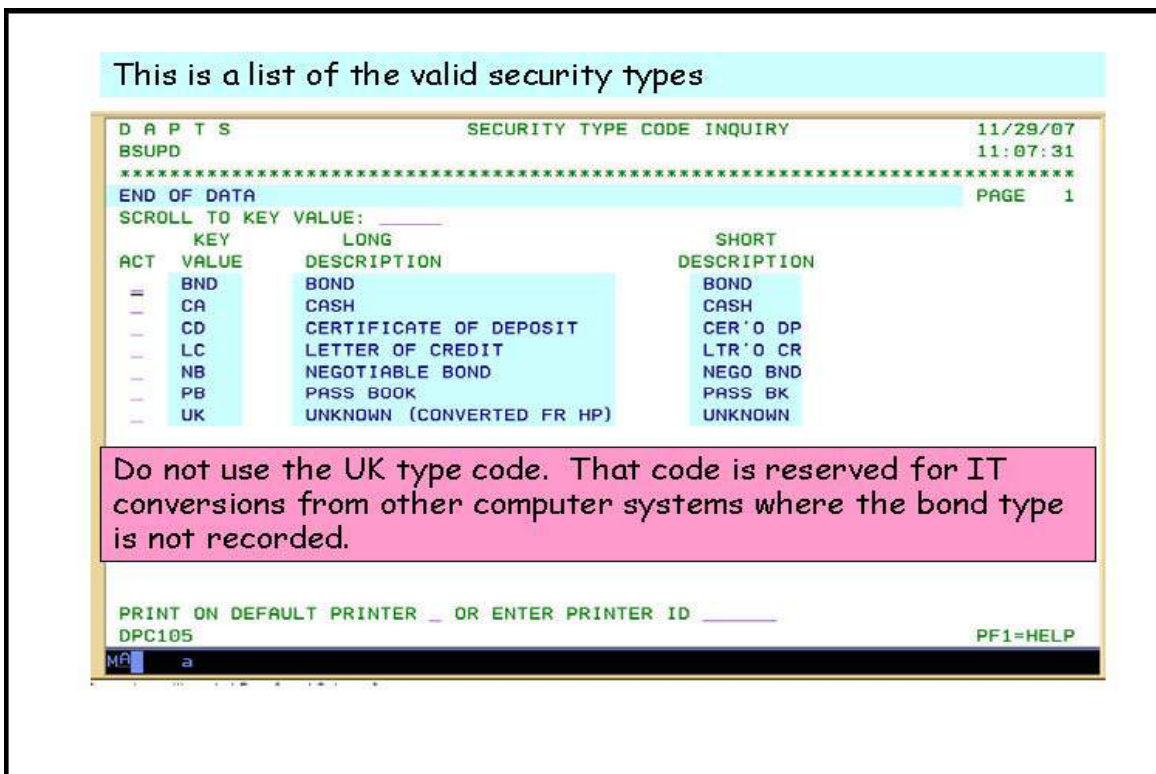
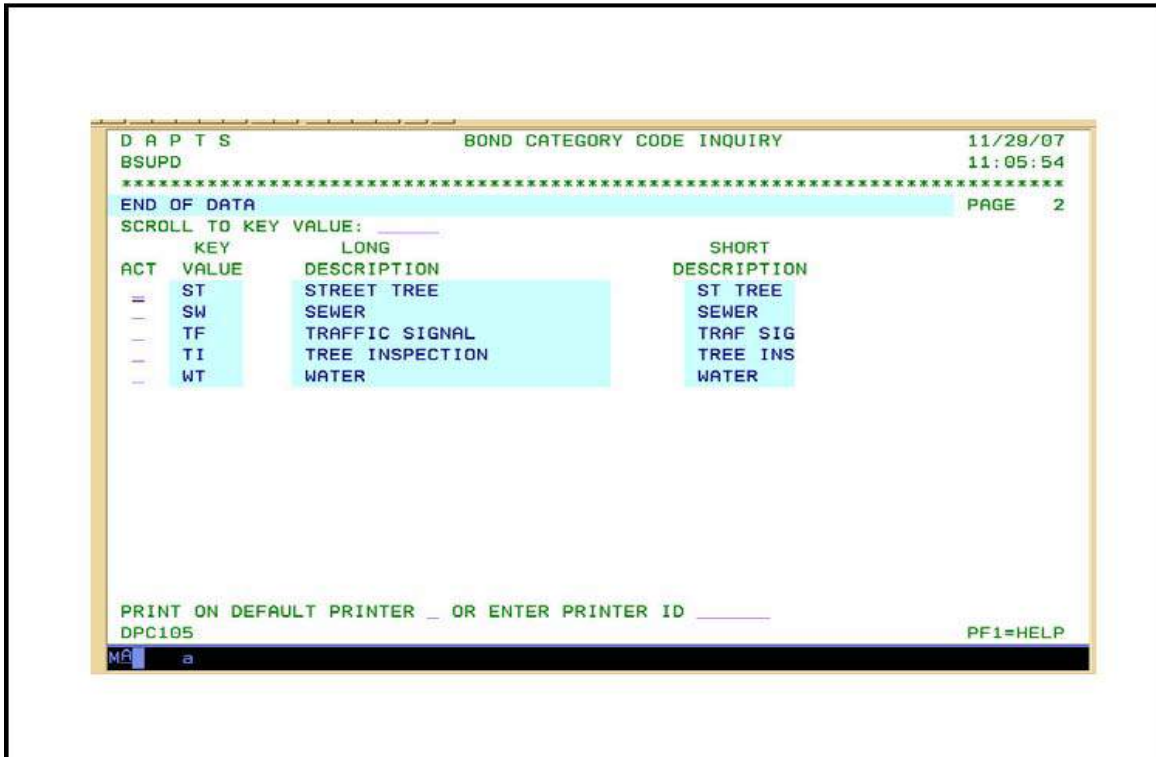
MORE DATA PENDING PAGE 1

SCROLL TO KEY VALUE: \_

ACT	KEY	LONG DESCRIPTION	SHORT DESCRIPTION
-	DR	DRAINAGE	DRAINAGE
-	FW	FENCE/WALL	FENCE/WL
-	GE	GEOLOGY	GEOLOGY
-	GI	GENERAL INSPECTION	GEN INS
-	GR	GRADING	GRADING
-	ML	MISCELLANEOUS	MISC.
-	MN	MONUMENT	MONUMENT
-	PK	PARK	PARK
-	PV	PAVING	PAVING
-	RD	ROAD	ROAD
-	RI	ROAD INSPECTION	ROAD INS
-	SI	SPECIAL INSPECTION	SPEC INS
-	SL	STREET LIGHT	ST LIGHT
-	SP	STRIPING	STRIPING

PRINT ON DEFAULT PRINTER \_ OR ENTER PRINTER ID \_

DPC105 PF1=HELP



This is a list of the valid participant types. The two we are most interested in are the PR Principal and the SU Surety

13 Put an X in the add participant field.

14 Enter PR for principal in the type field

```

D A P T S          BOND/SECURITY UPDATE          02/11/08
BSUPD              11:01:41
INVALID ACTION
END OF DATA
PAGE 1
PROJ/APPL/INPRV NBR: GR 0108070002 AGREEMENT NBR: 1   HOLD: _
TYPE/INSTRUMENT NUMBER: GR BND 40404000404000        ADD'L TEXT: _
ACTION: _      F/L INDICATOR: _      STATUS (ACT/EXP/CITY): ACT
ORIGINAL DATE DATE AMOUNT FORFEIT DATE AMOUNT EXONERATE
AMOUNT REC'D REDUCED RETAINED AMOUNT FORFEIT RETURNED DATE
100000 02 05 08
ADD PARTICIPANT: X TYPE: PR LAST NAME: PROPERTYOWNER
PARTICIPANT FIRST: MI: _
SEL TYPE LAST NAME FIRST MI
    
```

15 Enter the name of the property owner in the last name field. If it is a proper name enter it last name first then first name in the first name field. If it is the name of the business enter the business name in the last name field. Then hit the enter key.

16. The system will attempt to look up the property owner in the "participant" database. If the name exists in the database the system will show a line for a new entry and a line for every entry that matches the lookup. So if the entry were Bill Jones the system will show all the different Bill Jones which could be a large number. Look through the list and make certain that you select the correct entry. If the correct one does not exist select the first line. In this example we will select the 2<sup>nd</sup> entry. Put an X in the indicated field.

```

D A P T S          PARTICIPANT UPDATE          02/11/08
BSUPD              11:03:41
VERIFY OR UPDATE PARTICIPANT DATA, PRESS PF6 TO CONFIRM
END OF DATA
ACTION            LAST/BUSINESS NAME          FIRST          MI          HOLD:
C                 PROPERTYOWNER              PETER
ADDR LINE 1:     4545 PICKLED PEPPER PLACE
ADDR LINE 2:
CITY/ST/ZIP:     PERRIS, CA 90909          PHONE/EXT:
CONTACT:

ACTION  LICENSE NBR          WORKHENS COMP NBR  EXPIRE DT
      WK COMP CARRIER

VIEW EXISTING RELATIONSHIPS:
ASSOCIATE GR 0108070002 WITH PARTICIPANT TYPE: PR
DPC695          NEXT TRANSACTION:          PF1=HELP
    
```

17. By selecting the second entry the system will show us the detail screen for that entry. If this is correct press PF6. If not press PF3 to return to the list. If we selected the first entry this screen will display only the name of the participant. We will need to put a C in the action field and enter the data for that participant.

When complete the PF6 key will confirm and a PF3 key will return you to the bond screen. Note the line at the bottom that tells you that this action will associate the permit with the participant.

```

PARTICIPANT
SEL  TYPE  LAST NAME
-   PR   PROPERTYOWNER
FIRST: _____ MI
FIRST PETER MI
    
```

18. Now that we are back on the Bond screen lets add the Surety Company to the bond. Again put an X in the add participant field

19 Now enter SU for Surety in the Type field

20 Then enter the name of the bonding company in the last name field and hit enter.

LAST CHANCE BONDING

21 Since this is the first bond posted by Last Chance Bonding there is only one participant to choose from. Select this participant and hit enter.

22 The first time this bonding company is used you will be require to enter it's basic information. The information line at the bottom shows that the association will be made when PF6 is pressed.

```
D A P T S          PARTICIPANT UPDATE          02/11/08
BSUPD              11:08:41
ENTER PARTICIPANT DATA, PRESS PF6 TO CONFIRM
END OF DATA      PAGE 1
ACTION            LAST/BUSINESS NAME          FIRST    MI
A                 LAST CHANCE BONDING
ADDR LINE 1:
ADDR LINE 2:
CITY/ST/ZIP:      PHONE/EXT
CONTACT:
ACTION            LICENSE NBR                WORKMENS COMP NBR  EXPIRE DT
W COMP CARRIER
ASSOCIATE GR 0108070002 WITH PARTICIPANT TYPE: SU
DPC645            NEXT TRANSACTION:
PF1=HELP
```

After adding the bonding companies details and hitting PF6 to save the data and PF3 to return to the previous screen, you can see the association on the bond screen.

```
D A P T S          BOND/SECURITY UPDATE          02/11/08
BSUPD                                     11:07:30
*****
END OF DATA                               PAGE 1
PROJ/APPL/IMPRV NBR: GR 0108070002 AGREEMENT NBR: 1      HOLD: _
TYPE/INSTRUMENT/NUMBER: GR BND 40404000404000          ADD'L TEXT: _
ACTION: _ F/L INDICATOR: _ STATUS (ACT/EXP/CITY): ACT
ORIGINAL DATE DATE AMOUNT FORFEIT DATE AMOUNT EXONERATE
AMOUNT REC'D REDUCED RETAINED AMOUNT FORFEIT RETURNED DATE
100000 02 05 08
ADD PARTICIPANT: X TYPE: _ LAST NAME: _
PARTICIPANT
SEL TYPE LAST NAME FIRST MI
- PR PROPERTYOWNER PETER
- SU LAST CHANCE BONDING
DPC478 NEXT TRANSACTION: PF1=HELP
```

This is what the completed bond screen should look like, showing the bond type, number, amount, date received and the two participants.

```
D A P T S          BOND/SECURITY UPDATE          02/11/08
BSUPD                                     11:07:30
*****
END OF DATA                               PAGE 1
PROJ/APPL/IMPRV NBR: GR 0108070002 AGREEMENT NBR: 1      HOLD: _
TYPE/INSTRUMENT/NUMBER: GR BND 40404000404000          ADD'L TEXT: _
ACTION: _ F/L INDICATOR: _ STATUS (ACT/EXP/CITY): ACT
ORIGINAL DATE DATE AMOUNT FORFEIT DATE AMOUNT EXONERATE
AMOUNT REC'D REDUCED RETAINED AMOUNT FORFEIT RETURNED DATE
100000 02 05 08
ADD PARTICIPANT: X TYPE: _ LAST NAME: _
PARTICIPANT
SEL TYPE LAST NAME FIRST MI
- PR PROPERTYOWNER PETER
- SU LAST CHANCE BONDING
DPC478 NEXT TRANSACTION: PF1=HELP
```

Additional text can be added by putting an X in the Add'l text field and hitting enter

To release the Bond, find the permit and put an X in the security field, then hit enter.

```

D A P T S          B+S APPLICATION HEADER UPDATE          02/11/08
BSUPD                                15:19:30
*****
APPL NBR: GR 0108070002 APPISSUD NORMAL  HOLD: _  RELATED APPL: GR 9911220001
TENANT:
ADDRESS: 1603 PALM CANYON MALI
LEGAL: BS 991122X                                LOC: 0910  PLAN:          MLT: _
LOCALITY: MALIBU                                CROSS-ST: SERRA ROAD
INITIATE  PLAN APPR  ISSUE DT  FINALED  FINALED BY  EXPIRE DT
08 07 01
READY FOR PERMIT: _  OWNER/BUILDER: _  CODE: _
OWNER: MHAB TRUST
ADDRESS: P.O. BOX 2485  CA 90265  PHONE:
APPLICANT: MHAB TRUST
ADDRESS: P.O. BOX 2485  MALIBU, CA 90265  PHONE: 3104503230
CONTRACTOR:
PHONE:
ARCH/ENGR: LAND DESIGN CONSULTANTS, INC.
PHONE: 6265787000
WORK DESC: GRADING FOR FOUR PARCELS OF PM 23897
FEES: _ REPL: _ MOVE: _ TEXT: Y CORRESP: _ CLR: _ TSK TRACK: _ SECURITY: X
ISSUE STATUS: _ DEFAULT PRINTER: _ OR PRINTER ID: _ DISP: _ REPORT: _
DPC260  NEXT TRANSACTION: _ PFB=DETAIL  PF1=HELP
  
```

```

D A P T S          BOND/SECURITY UPDATE          02/11/08
BSUPD                                15:22:34
*****
END OF DATA                                PAGE 1
PROJ/APPL/IMPRV NBR: GR 0108070002 AGREEMENT NBR: 1  HOLD: _
TYPE/INSTRUMENT/NUMBER: GR BND 40404000404000  ADD'L TEXT: _
ACTION: _  F/L INDICATOR: _  STATUS (ACT/EXP/CITY): ACT
ORIGINAL  DATE  DATE  AMOUNT  FORFEIT  DATE  AMOUNT  EXONERATE
AMOUNT  REC'D  REDUCED  RETAINED  AMOUNT  FORFEIT  RETURNED  DATE
100000  02 05 08
ADD PARTICIPANT: _ TYPE: _  LAST NAME:
FIRST: _  MI: _
PARTICIPANT
SEL  TYPE  LAST NAME  FIRST  MI
_  PR  PROPERTYOWNER  PETER
_  SU  LAST CHANCE BONDING
  
```

Find the Amount Returned field and the Exonerate date.

Enter a "c" in the Action field, the amount of the bond being returned, and the date that amount was returned to the principal.

```
D A P T S          BOND/SECURITY UPDATE          02/11/08
BSUPD                               15:23:33
MINIMUM REQUIRED DATA NOT ENTERED
END OF DATA                               PAGE 1
PROJ/APPL/IMPRV NBR: GR 0108070002 AGREEMENT NBR: 1   HOLD: _
TYPE/INSTRUMENT/NUMBER: GR BND 40404000404000        ADD'L TEXT: _
ACTION: c      F/L INDICATOR: _      STATUS(ACT/EXP/CITY): ACT
ORIGINAL DATE DATE AMOUNT FORFEIT DATE AMOUNT EXONERATE
AMOUNT REC'D REDUCED RETAINED AMOUNT FORFEIT RETURNED DATE
100000 02 05 08 _ _ _ _ _ _ _ _ _ _ 100000 02 07 08
ADD PARTICIPANT: _ TYPE: _ LAST NAME: _
FIRST: _ MI: _
PARTICIPANT
SEL TYPE LAST NAME FIRST MI
_ PR PROPERTYOWNER PETER
_ SU LAST CHANCE BONDING
DPC476 NEXT TRANSACTION: PF1=HELP
```

When you return to the primary bond screen you can see that the bond was returned, the amount and the date.

```
D A P T S          AGREEMENTS UPDATE          02/11/08
BSUPD                               15:24:48
*****
END OF DATA                               PAGE 1
PROJ/APPL/IMPRV NBR: GR 0108070002 AGREEMENT NBR: 1   HOLD: _
RECEIVED DATE: 01 08 08 FILED DATE: _
EXPIRATION DT: _ 60-DAY LETTER DT: _ 60-DAY RETURN DT: _
20-DAY LETTER DT: _ 20-DAY RETURN DT: _
EXTENSION DT: _ EXTEN. LETTER DT: _ AGREEMENT TEXT: _
LAST NAME FIRST MI
SELECT PRINCIPAL: _ PROPERTYOWNER PETER
OR SUBDIVIDER: _
ADD NEW SECURITY: _
RELATED SECURITIES
F/ TY/INSTRUMENT/NUMBER ORIGINAL $ RETAIN $ FORFEIT $ RETURN $
SEL L STATUS RCV DATE RDU DATE FRF DATE EXN DATE
_ GR BND 40404000404000 100000
ACT 02 05 08 100000
02 07 08
DPC472 NEXT TRANSACTION: PF1=HELP
```

## Entering Cash Deposits as Grading Security

Find the corresponding grading permit

```
D A P T S      B+S APPLICATION HEADER UPDATE      11/29/07
BSINIT      14:52:48
UPDATE SUCCESSFUL

APPL NBR: GR 0711290005 INITIATE NORMAL  HOLD:  _  RELATED APPL:  _
TENANT:
ADDRESS: 45207 MAYS ST LACO 935352476
LEGAL: ST 48534 24  LOC: 9900 AIN: 3154020024 MLT:  _
LOCALITY: LANCASTER  CROSS-ST: 35TH ST EAST
INITIATE  PLAN APPR  ISSUE DT  FINALED  FINALED BY  EXPIRE DT
11 29 07
READY FOR PERMIT:  _  OWNER/BUILDER:  _  CODE:  _
OWNER: LOLLIS GRADY H; SANDRA A
ADDRESS:  _  PHONE:  _
APPLICANT:  _
ADDRESS:  _  PHONE:  _
CONTRACTOR:  _
PHONE:  _
ARCH/ENGR:  _
PHONE:  _
WORK DESC:  _
FEES:  _ REPL:  _ MOVE:  _ TEXT:  _ CORRESP:  _ CLR:  _ TSK TRACK:  _ SECURITY:  _
ISSUE STATUS:  _ DEFAULT PRINTER:  _ OR PRINTER ID:  _ DISP:  _ REPORT:  _
DPC260      NEXT TRANSACTION:  _  PF8=DETAIL  PF1=HELP
```

Put an X in the Fees field and hit enter

```
D A P T S      B+S APPLICATION HEADER UPDATE      11/29/07
BSINIT      14:52:48
UPDATE SUCCESSFUL

APPL NBR: GR 0711290005 INITIATE NORMAL  HOLD:  _  RELATED APPL:  _
TENANT:
ADDRESS: 45207 MAYS ST LACO 935352476
LEGAL: ST 48534 24  LOC: 9900 AIN: 3154020024 MLT:  _
LOCALITY: LANCASTER  CROSS-ST: 35TH ST EAST
INITIATE  PLAN APPR  ISSUE DT  FINALED  FINALED BY  EXPIRE DT
11 29 07
READY FOR PERMIT:  _  OWNER/BUILDER:  _  CODE:  _
OWNER: LOLLIS GRADY H; SANDRA A
ADDRESS:  _  PHONE:  _
APPLICANT:  _
ADDRESS:  _  PHONE:  _
CONTRACTOR:  _
PHONE:  _
ARCH/ENGR:  _
PHONE:  _
WORK DESC:  _
FEES: x REPL:  _ MOVE:  _ TEXT:  _ CORRESP:  _ CLR:  _ TSK TRACK:  _ SECURITY:  _
ISSUE STATUS:  _ DEFAULT PRINTER:  _ OR PRINTER ID:  _ DISP:  _ REPORT:  _
DPC260      NEXT TRANSACTION:  _  PF8=DETAIL  PF1=HELP
```

Put an X in the 2H fee item "Trust Deposit for Grading" and enter the amount of the cash being provided and hit PF6 to confirm

PRESS PF6 TO CONFIRM CHANGES AND PROCEED TO FEE CONFIRMATION  
 MORE DATA PENDING PAGE 1  
 PROJ/APPL/IMPRV NBR: GR 0711290005 INITIATE NORMAL  
 DESC/NAME: \_\_\_\_\_ ORG LOC: BS 9900  
 APPLICANT: \_\_\_\_\_ VIEW PAYMENT HISTORY: \_

SEL	ITEM	FEE PARAMETER	CALCULATION FACTOR	UNIT OF MEASURE	PAID AMOUNT
-	EH	45-DAY NOTICE			
-	JL	GEOTECH PLAN REVIEW	0.00	CU YDS	
-	JN	GEOTECH REPORT REVIEW	0.00	CU YDS	
-	JP	GEOTECH REVIEW ADDENDA REPORTS		HOURS	
-	02	SITE INSPECTION			
-	08	PLAN CHECK - B&S		CU YDS	
-	1I	EROSION CONTROL...AMOUNT		\$	
-	1K	ADDITIONAL PLAN CHECK-BS ENTS		DOLLARS	
-	1M	PC EXTENSION FEE ENTER 25%		DOLLARS	
-	2G	GRADING PERMIT		CU YDS	
-	2B	PERMIT EXTENSION FEE (25%)		DOLLARS	
-	2G	PERMIT ISSUANCE FEE		DOLLARS	
X	2I	TRUST DEPOSIT FOR GRADING ENTS	132246.21	DOLLARS	

DPC400 NEXT TRANSACTION: \_\_\_\_\_ PF1=HELP

D A P T S FEE CONFIRMATION 11/29/07  
 BSINIT 15:14:32  
 REVIEW CALCULATIONS - PRESS PF6 TO CONFIRM  
 PREVIOUS TRANSACTION SUCCESSFULLY COMPLETED PAGE 1  
 PROJ/APPL/IMPRV NBR: GR 0711290005 INITIATE NORMAL ORG/LOC: BS 9900  
 DESC/NAME: \_\_\_\_\_ APPLICANT: \_\_\_\_\_

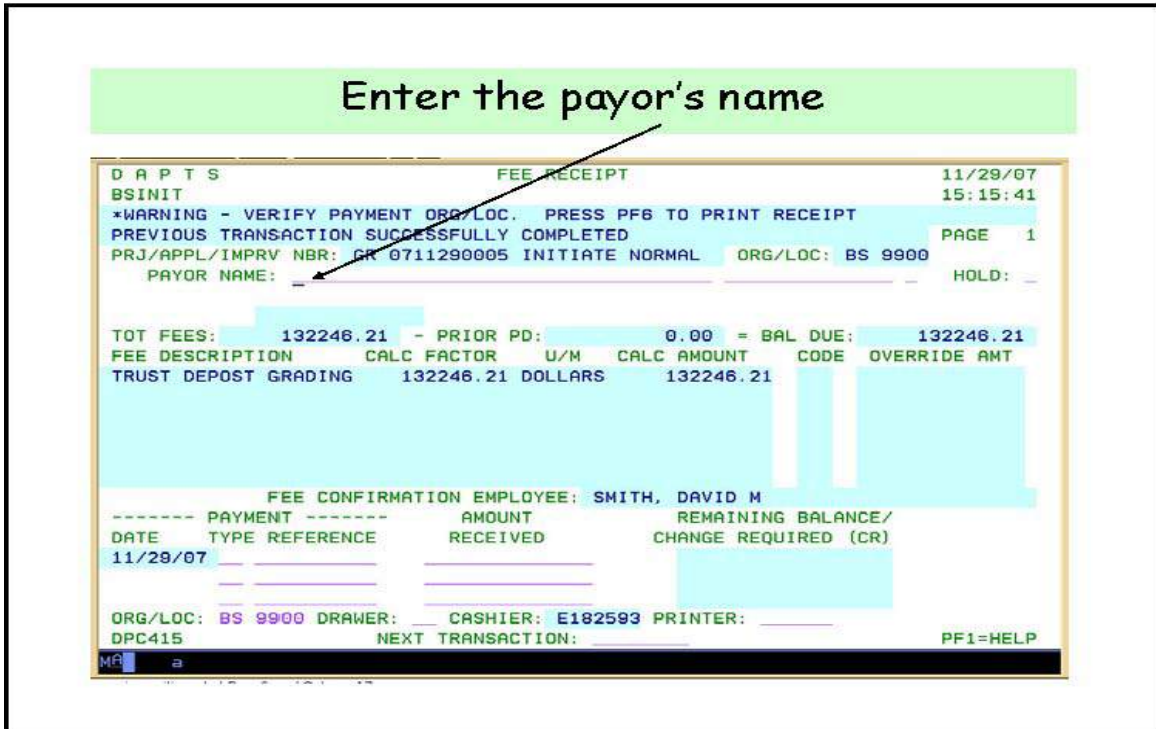
TOT FEES: 132246.21 - PRIOR PD: 0.00 = BAL DUE: 132246.21

JOB NUMBER	FEE ITEM TEXT	CALCULATION FACTOR	UNIT MEAS.	CALCULATED AMOUNT	* CALCULATION * * OVERRIDE * CODE NEW AMOUNT
	TRUST DEPOST GRADI	132246.21	DOLLARS	132246.21	

PAYMENT PROCESSING: X

PRINT REQUIRED FEES ON DEFAULT PRINTER \_ OR ENTER PRINTER ID: \_\_\_\_\_  
 DPC405 NEXT TRANSACTION: \_\_\_\_\_ PF1=HELP

Put an X in the payment processing field and hit PF6 to confirm



TOT FEES: 132246.21 - PRIOR PD: 0.00 = BAL DUE: 132246.21  
 FEE DESCRIPTION CALC FACTOR U/M CALC AMOUNT CODE OVERRIDE AMT  
 TRUST DEPOST GRADING 132246.21 DOLLARS 132246.21

When you enter the payor's name and hit enter the system will take you to the participant screen and ask you to pick the payor from the matching entries in the database. If none of the entries are the correct match select the first entry. This will take you to the detail screen where you can enter the details on the payor.

```

7654 GOLDEN DOLLAR LANE  NEW YORK, NY, 10987  6063030303
- MONEYBAGS  MALCON
  
```

On this screen we see the possible selections. The one we want is the second entry so we have put an X in the SEL field and hit enter

This brings up the details screen so that we can confirm this to be the correct payor. Since this is the right Malcom Moneybags we will hit PF6 to confirm.

Now enter the payment type of CA for cash a reference number if appropriate (check number) and the amount received. Then enter the org/loc, cash drawer that will receive this payment and if necessary the id of the printer that will print the receipt

DATE	TYPE	REFERENCE	AMOUNT RECEIVED	REMAINING BALANCE/ CHANGE REQUIRED (CR)
12/03/07	ca		132246.21	

ORG/LOC: BS 9900 DRAWER: 99 CASHIER: E182593 PRINTER: bsd1  
DPC415 NEXT TRANSACTION: PF1=HELP

In the red box below you can see the fee and the paid amount

SEL	FEE ITEM	FEE PARAMETER	CALCULATION FACTOR	UNIT OF MEASURE	PAID AMOUNT
-	EH	45-DAY NOTICE			
-	JL	GEOTECH PLAN REVIEW	0.00	CU YDS	
-	JN	GEOTECH REPORT REVIEW	0.00	CU YDS	
-	JP	GEOTECH REVIEW ADDENDA REPORTS		HOURS	
-	02	SITE INSPECTION			
-	08	PLAN CHECK - B&S		CU YDS	
-	1I	EROSION CONTROL...AMOUNT		\$	
-	1K	ADDITIONAL PLAN CHECK-BS ENTS		DOLLARS	
-	1M	PC EXTENSION FEE ENTER 25%		DOLLARS	
-	2A	GRADING PERMIT		CU YDS	
-	2B	PERMIT EXTENSION FEE (25%)		DOLLARS	
-	2G	PERMIT ISSUANCE FEE			
P	2I	TRUST DEPOSIT FOR GRADING ENTS	132246.21	DOLLARS	132246.21

DPC400 NEXT TRANSACTION: PF1=HELP

To refund the cash from trust, go to the fee payment reversal screen and enter the receipt number and hit the enter key

The screenshot shows a terminal window titled 'PAYMENT REVERSAL' with the following fields and data:

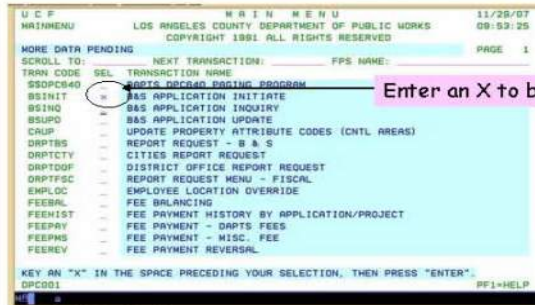
- DEPT: FEEREV, DATE: 04/28/08, TIME: 08:32:44
- PROJ/APPL/IMPRV NBR: GR 0801020002, APP/SSUD: NORMAL, ORG/LOC: BS 0400
- NAME: (blank)
- APPLICANT: MATRIZ OIL CORP
- PAYOR NAME: BOB THE BUILDER
- ADDRESS: (blank)
- HOLD: (checkbox)
- PHONE: (blank)
- PAYMENT HISTORY: (checkbox)
- RECEIPT NBR: **BS99000022726** (highlighted in green), DATE: 04/28/08, TM: 08:28
- AMT PD: 100000.00
- PAYMENT DETAIL table:

TYPE	REFERENCE	AMOUNT	RESUBMIT CHECK	LAST RESUB	NBR RESUB.
CASH		100000.00			
- RVSL REASON CODE: (checkbox), EMPLOYEE ID: (checkbox), RE-ESTABLISH: (checkbox), DRAWER: 99
- DPC430, NEXT TRANSACTION: (checkbox), PF1=HELP
- Footer: 12/015

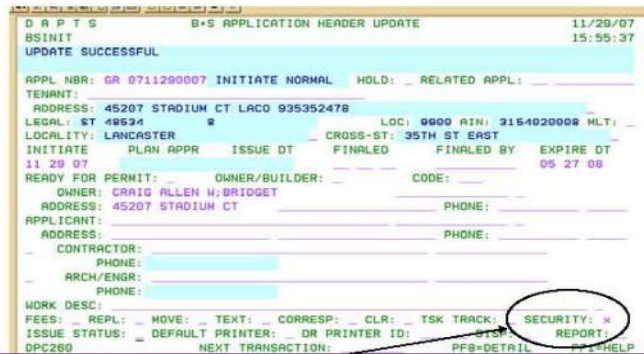
An arrow points from the text above to the receipt number 'BS99000022726'.

### Other Financial Instruments or Securities

Enter DAPTS and look up the grading permit for which the customer is providing a financial security other than a bond or cash



Enter an X to begin the application



We have jumped ahead here to the application header. This screen shows the location and property owners. To add the security put an "X" on the security line.

At this point please note: Do not enter any letter of credit, or passbook or any other financial instrument other than a standard grading bond unless you have FIRST received approval of the instrument from fiscal division

```
D A P T S                AGREEMENTS UPDATE                11/29/07
BSINIT                  15:58:43
NO RECORD FOUND
ENTER AGREEMENT INFORMATION TO ADD NEW AGREEMENT
PROJ/APPL/IMPRV NBR: GR 0711290007 AGREEMENT NBR: 1   HOLD: _   PAGE 1
RECEIVED DATE: 11 27 07   FILED DATE: _ _ _ _
EXPIRATION DT: _ _ _ _ 60-DAY LETTER DT: _ _ _ _ 60-DAY RETURN DT:
EXTENSION DT: _ _ _ _ 20-   EXTEN. LETTER DT: _ _ _ _ 20-DAY RETURN DT:
                                  LAST NAME                FIRST                MI
SELECT PRINCIPAL:
OR SUBDIVIDER:
ADD NEW SECURITY:
RELATED SECURITIES
F/ TY/INSTRUMENT/NUMBER ORIGINAL $ RETAIN $ FORFEIT $ RETURN $
SEL L STATUS            RCV DATE      RDU DATE      FRF DATE      EXN DATE
DPC472                NEXT TRANSACTION:                PF1=HELP
```

Enter received date and hit enter

```
D A P T S                AGREEMENTS UPDATE                11/29/07
BSINIT                  16:03:39
PRESS PF14 TO REQUEST DELETION OF AGREEMENT
END OF DATA
PROJ/APPL/IMPRV NBR: GR 0711290007 AGREEMENT NBR: 1   HOLD: _   PAGE 1
RECEIVED DATE: 11 27 07   FILED DATE: _ _ _ _
EXPIRATION DT: _ _ _ _ 60-DAY LETTER DT: _ _ _ _ 60-DAY RETURN DT: _ _ _ _
EXTENSION DT: _ _ _ _ 20-DAY LETTER DT: _ _ _ _ 20-DAY RETURN DT: _ _ _ _
                                  EXTEN. LETTER DT: _ _ _ _ AGREEMENT TEXT: _ _
                                  LAST NAME                FIRST                MI
SELECT PRINCIPAL:
OR SUBDIVIDER:
ADD NEW SECURITY: X
RELATED SECURITIES
F/ TY/INSTRUMENT/NUMBER ORIGINAL $ RETAIN $ FORFEIT $ RETURN $
SEL L STATUS            RCV DATE      RDU DATE      FRF DATE      EXN DATE
DPC472                NEXT TRANSACTION:                PF1=HELP
```

Put an X in the add new security box and hit enter.

```

D A P T S          BOND/SECURITY UPDATE          11/29/07
BSINIT          16:08:32
-----
END OF DATA          PAGE 1
PROJ/APPL/IMPRV NBR: GR 0711290007 AGREEMENT NBR: 1          HOLD:
TYPE/INSTRUMENT/NUMBER: gr lc_ 2345678          ADD'L TEXT:
ACTION: A          F/L INDICATOR:          STATUS (ACT/EXP/CITY):
ORIGINAL DATE DATE AMOUNT FORFEIT DATE AMOUNT EXONERATE
AMOUNT REC'D REDUCED RETAINED AMOUNT FORFEIT RETURNED DATE
ADD PARTICIPANT: TYPE: LAST NAME:
PARTICIPANT FIRST: MI:
SEL TYPE LAST NAME FIRST MI
    
```

Enter "GR" for the type, and "LC" for letter of credit or "CD" for certificate of deposit, "NB" for negotiable bond or "PB" for pass book. Do not use the "UK" unknown as this was for conversion from the old system. Next enter the serial, or account number of the instrument. Notice the system has entered an "A" in the Action field and a "1" in the NBR field. There can be multiple instruments on a particular permit.

This is a list of the valid security types

```

D A P T S          SECURITY TYPE CODE INQUIRY          11/29/07
BSUPD          11:07:31
-----
END OF DATA          PAGE 1
SCROLL TO KEY VALUE:
KEY LONG SHORT
ACT VALUE DESCRIPTION DESCRIPTION
- BND BOND BOND
- CA CASH CASH
- CD CERTIFICATE OF DEPOSIT CER'O DP
- LC LETTER OF CREDIT LTR'O CR
- NB NEGOTIABLE BOND NEGO BND
- PB PASS BOOK PASS BK
- UK UNKNOWN (CONVERTED FR HP) UNKNOWN
    
```

PRINT ON DEFAULT PRINTER OR ENTER PRINTER ID PF1=HELP

Do not use the UK type code. That code is reserved for IT conversions from other computer systems where the bond type is not recorded.

```
D R A P T S          BOND/SECURITY UPDATE          11/29/07
BSINIT              18:08:12
*****
END OF DATA                      PAGE 1
PROJ/APPL/IMPRV NBR: GR 0711290007 AGREEMENT NBR: 1      HOLD: _
TYPE/INSTRUMENT/NUMBER: gr lc_ 2345678                    ADD'L TEXT: _
ACTION: A          F/L INDICATOR: _          STATUS (ACT/EXP/CITY): _
ORIGINAL  DATE  DATE  AMOUNT  FORFEIT  DATE  AMOUNT  EXONERATE
AMOUNT  REC'D  REDUCED  RETAINED  AMOUNT  FORFEIT  RETURNED  DATE
234567  11 27 07
ADD PARTICIPANT: _ TYPE: _          LAST NAME: _
                                      FIRST: _          MI: _

PARTICIPANT
SEL  TYPE  LAST NAME          FIRST          MI

```

Enter the amount of the security and the date the security was received. Hit the enter key to complete the update. Then put an x in the add participant field.

```
DPC476          NEXT TRANSACTION:          PF1=HELP

```

```
D R A P T S          BOND/SECURITY UPDATE          11/29/07
BSINIT              18:08:39
UPDATE SUCCESSFUL
END OF DATA                      PAGE 1
PROJ/APPL/IMPRV NBR: GR 0711290007 AGREEMENT NBR: 1      HOLD: _
TYPE/INSTRUMENT/NUMBER: GR LC 2345678                    ADD'L TEXT: _
ACTION: _          F/L INDICATOR: _          STATUS (ACT/EXP/CITY): _
ORIGINAL  DATE  DATE  AMOUNT  FORFEIT  DATE  AMOUNT  EXONERATE
AMOUNT  REC'D  REDUCED  RETAINED  AMOUNT  FORFEIT  RETURNED  DATE
234567  11 27 07
ADD PARTICIPANT: x TYPE: pr LAST NAME: drainage_
                                      FIRST: dan_          MI: d

PARTICIPANT
SEL  TYPE  LAST NAME          FIRST          MI

```

Enter they participant type in this case principal and the last name, first name and middle initial. Hit enter

```
DPC476          NEXT TRANSACTION:          PF1=HELP

```

```
D A P T S          PARTICIPANT CANDIDATE LIST          11/29/07
BSINIT          16:09:56
*****
END OF DATA          PAGE 1
SCROLL TO LAST NAME: _____

SEL  LAST NAME          FIRST NAME          MI  LICENSE
( S/X ) -  DRAINAGE          DAN          D    *
          *  DRAINAGE          DAN          D
          86 SIPHON ST          SUMP, CA 90909
```

If the participant is already in the system the records for them will appear on this screen. Put an x in the "SEL" field adjacent to the correct selection and hit enter.

```
DPC640          NEXT TRANSACTION: _____          PF1=HELP
```

Screen is a combination of Data 7A and 7B screens. 4/3

```
D A P T S          PARTICIPANT UPDATE          11/29/07
BSINIT          16:13:17
VERIFY OR UPDATE PARTICIPANT DATA, PRESS PF6 TO CONFIRM
END OF DATA          PAGE 1
ACTION          LAST/BUSINESS NAME          FIRST          MI  HOLD:
C              DRAINAGE          DAN          D
ADDR LINE 1:    86 SIPHON ST
ADDR LINE 2:
CITY/ST/ZIP:   SUMP, CA 90909          PHONE/EXT:
CONTACT:

ACTION  LICENSE NBR          WORKMENS COMP NBR  EXPIRE DT
          WK COMP CARRIER
```

This screen will appear allowing you to complete the entry for a new name or to review the current info on the selected entry. Changes and corrections can be made here. Press f6 to confirm and f3 to return to the previous screen

```
VIEW EXISTING RELATIONSHIPS:
ASSOCIATE GR 0711290007 WITH PARTICIPANT TYPE: PR
DPC645          NEXT TRANSACTION: _____          PF1=HELP
```

Screen is a combination of Data 7A and 7B screens. 4/3

```
D A P T S          BOND/SECURITY UPDATE          11/29/07
BSINIT          16:14:00
*****
END OF DATA          PAGE 1
PROJ/APPL/IMPRV NBR: GR 0711290007 AGREEMENT NBR: 1
TYPE/INSTRUMENT/NUMBER: GR LC 2345678
ACTION:          F/L INDICATOR:          STATUS (ACT/EXP/CITY): ACT
ORIGINAL DATE DATE AMOUNT FORFEIT DATE AMOUNT EXPIRE
AMOUNT REC'D REDUCED RETAINED AMOUNT FORFEIT RETURNED DATE
234567 11 27 07
ADD PARTICIPANT:  TYPE:          LAST NAME:          FIRST:          MI:
PARTICIPANT
SEL TYPE LAST NAME          FIRST          MI
PR DRAINAGE          DAN          D
You can now see the principal has been added to the bond. Put an X
in the Add'l Text: field and hit enter.
DPC476          NEXT TRANSACTION:          PF1=HELP
MR a
```

```
D A P T S          GENERAL TEXT UPDATE          12/03/07
BSUPD          14:35:28
*****
END OF DATA          PAGE 1
ENTITY
TYPE DESCRIPTION          ENTITY ID
AGD AGREEMENT DETAIL          GR 07112900031GRBNDUMMY3333
TEXT TYPE:          DESCRIPTION:
ACTION GENERAL TEXT
FISCAL APPROVAL DATE:
FISCAL DIVISION REPRESENTATIVE:
Enter the date that fiscal division approved the instrument and
the name of the person in fiscal that provided the approval
DPC660          NEXT TRANSACTION:          PF1=HELP
MR a
```

```

D A P T S                AGREEMENTS UPDATE                11/29/07
BSINIT                    16:14:37
*****
END OF DATA                PAGE 1
PROJ/APPL/IMPRV NBR: GR 0711290007 AGREEMENT NBR: 1    HOLD: _
RECEIVED DATE: 11 27 07    FILED DATE: _ _ _

EXPIRATION DT: _ _ _ 60-DAY LETTER DT: _ _ _ 60-DAY RETURN DT: _ _ _
                20-DAY LETTER DT: _ _ _ 20-DAY RETURN DT: _ _ _
EXTENSION DT: _ _ _ EXTEN. LETTER DT: _ _ _ AGREEMENT TEXT: _ _ _

SELECT PRINCIPAL: LAST NAME FIRST MI
                  DRAINAGE DAN D
OR SUBDIVIDER: _ _ _
ADD NEW SECURITY: _ _ _

RELATED SECURITIES
SEL F/ TY/INSTRUMENT/NUMBER ORIGINAL $ RETAIN $ FORFEIT $ RETURN $
L STATUS RCV DATE RDU DATE FRF DATE EXN DATE
- GR LC 2345678 234567
ACT 11 27 07
  
```

When you hit the F3 on the last screen and hit the F3 again it brought you to this screen and you can see the bond information at the bottom of the agreements update screen. Hit F3 to back to the application header screen.

In the example below we have added a second participant. The Bank that issued the letter of credit is added using the same steps we used to add the principal. The participant type is FN for financial institution.

```

D A P T S                BOND/SECURITY UPDATE                04/28/09
BSUPD                    08:10:19
*****
END OF DATA                PAGE 1
PROJ/APPL/IMPRV NBR: GR 0801020001 AGREEMENT NBR: 1    HOLD: _
TYPE/INSTRUMENT/NUMBER: GR LC 081010    ADD'L TEXT: _
ACTION: _ F/L INDICATOR: _ STATUS(ACT/EXP/CITY): ACT
ORIGINAL DATE DATE AMOUNT FORFEIT DATE AMOUNT EXONERATE
AMOUNT REC'D REDUCED RETAINED AMOUNT FORFEIT RETURNED DATE
100000 01 04 09
ADD PARTICIPANT: TYPE: LAST NAME FIRST MI
PARTICIPANT
SEL TYPE LAST NAME FIRST MI
FN BALDNEY BANK OF BRADLEY BERRY B
PR BONDING
DPC478 NEXT TRANSACTION: PF1=HELP 07/010
  
```

When it comes time to release the letter of credit or other instrument enter the amount returned in the "amount returned" field and the date the instrument was returned in the "exonerate/date" field. Press enter or ctrl.

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D R A P T S          BOND/SECURITY UPDATE          04/28/08
BSUPD              08:18:45
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END OF DATA          PAGE 1
PROJ/APPL/IMPRV NBR: GR 0801020001 AGREEMENT NBR: 1      HOLD:
TYPE/INSTRUMENT/NUMBER: GR LC 101010                    ADD TEXT:
ACTION:  F/L INDICATOR:  STATUS (ACT/EXP/CITY): ACT
ORIGINAL DATE DATE AMOUNT FORFEIT DATE AMOUNT EXONERATE
AMOUNT REC'D REDUCED RETAINED AMOUNT FORFEIT RETURNED DATE
100000 01 04 08 100000 02 10 08
ADD PARTICIPANT: TYPE: LAST NAME:
PARTICIPANT
SEL TYPE LAST NAME FIRST NI
FN BALONEY BANK OF BRAWLEY BERRY B
PR BONDING
```

Make certain that all Division and Department policies are followed regarding the handling and transmittal of financial instruments. These instruments are to be delivered to Fiscal Division for safe keeping. Make certain that delivery receipts are signed and filed to show a complete and accurate chain-of-custody.



LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS  
BUILDING AND SAFETY DIVISION  
LAND DEVELOPMENT DIVISION

GRADING PERMIT SECURITY

KNOW ALL MEN BY THESE PRESENTS

SECURITY NUMBER \_\_\_\_\_

That we \_\_\_\_\_

of \_\_\_\_\_ California, as \_\_\_\_\_

principal, and \_\_\_\_\_  
a corporation, as surety and held and firmly bound unto the County of LOS ANGELES, a body public and corporate of the State of

California, in the sum of \_\_\_\_\_ \$ \_\_\_\_\_  
Lawful money of the United States, for the payment of which well and truly to be made we hereby bind ourselves, jointly and severally,  
firmly by these presents.

Signed, sealed and dated this \_\_\_\_\_ day of \_\_\_\_\_

WHEREAS, an application by the above-named principal, has been made to the DEPARTMENT OF PUBLIC WORKS,  
COUNTY OF LOS ANGELES, Division of Building and Safety/Land Development for the issuance, is said principal, of a permit to  
perform excavation or fill work or both within the County of Los Angeles more specifically described in the application for a Grading  
permit, upon a location owned by

said principal known as lot \_\_\_\_\_, block \_\_\_\_\_, tract \_\_\_\_\_, locality \_\_\_\_\_ or as street address of \_\_\_\_\_  
in accordance with the provisions of Appendix J  
of the Los Angeles County Building Code, and

WHEREAS, Los Angeles County Building Code, Appendix J, requires as a condition precedent to the issuance of said permit  
that the principal shall furnish a security in the sum above named to the County of Los Angeles, conditioned as hereinafter set forth:

NOW, THEREFORE,

- (1) If the principal shall well and truly comply with all the applicable requirements of Los Angeles County Building Code,  
Appendix J, and
- (2) If all of the work required to be done complies with all of the terms and conditions of the Permit for excavation or fill or  
both to the satisfaction of the Building Official then this obligation shall be void; otherwise it shall remain in full force  
and effect.

It is understood that the liability of the principal and surety upon this security shall be in effect from the date hereof and remain in effect  
until the completion of the work in compliance with all terms and conditions of said Grading Permit and until final approval thereof by the  
Building Official.

It is further understood that the County of Los Angeles, or the surety, or both, or any authorized representative of either, shall have the  
right to enter the above described property for the purpose of inspecting the work, and should the principal default in the performance of  
any of the terms and conditions of the Grading Permit, the said County, or surety, or both, or agent of either, shall have the right of  
access to the property and may complete the work necessary for compliance with requirements of said Building Code, Appendix J.

Where the work requiring this bond is located within an incorporated city and the County of Los Angeles is the enforcement agency, the  
obligation of this security shall include the incorporated city where the work is to be performed.

In such case the words "Department of Public Works, County of Los Angeles, /Land Development Division" and "Building Official" shall  
mean such Department and Official respectively while acting, respectively, as the appropriate department and official of such city. The  
words "Los Angeles county Building Code" mean the building code of other ordinance having provisions the same as, or substantiating  
similar to Appendix J of said Los Angeles County Building Code.

IN WITNESS WHEREOF the principal and surety caused this security to be executed the day and year first above written.

(Seal)

(Seal)

Principal \_\_\_\_\_

Surety \_\_\_\_\_

(This security must be acknowledged both as to principal and surety before a Notary Public.) Local Mailing Address of Surety:

FOR DEPARTMENT USE ONLY			
Plan Check	Permit No.	Date Work Completed	Date Security Released

**OWNER BUILDER DECLARATION**

I hereby affirm under penalty of perjury that I am exempt from the Contractors' State License Law for the reason(s) indicated below by the checkmark(s) I have placed next to the applicable item(s) (Section 7031.5, Business and Professions Code): Any city or county that requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for the permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractors' State License Law (Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code) or that he or she is exempt from licensure and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars (\$500.):

I, as owner of the property, or my employees with wages as their sole compensation, will do  all of or  portions of the work, and the structure is not intended or offered for sale (Section 7044, Business and Professions Code: The Contractors' State License Law does not apply to an owner of property who, through employees' or personal effort, builds or improves the property, provided that the improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the Owner-Builder will have the burden of proving that it was not built or improved for the purpose of sale.)

I, as owner of the property, am exclusively contracting with licensed Contractors to construct the project (Section 7044, Business and Professions Code: The Contractors' State License Law does not apply to an owner of property who builds or improves thereon, and who contracts for the projects with a licensed Contractor pursuant to the Contractors' State License Law).

I am exempt from licensure under the Contractors' State License Law for the following reason:

By my checking here I acknowledge that, except for my personal residence in which I must have resided for at least one year prior' to completion of the improvements covered by this permit, I cannot legally sell a structure that I have built as an owner-builder if it has not been constructed in its entirety by licensed contractors. I understand that a copy of the applicable law, Section 7044 of the Business and Professions Code, is available upon request when this application is submitted or at the following Web site: <http://www.leoinfo.castovicalaw.html>.

Date: \_\_\_\_\_ Signature of Property Owner or Authorized Agent \_\_\_\_\_

**LICENSED CONTRACTOR'S DECLARATION**

By checking here, I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.

License Class: \_\_\_\_\_ License No. \_\_\_\_\_ Date \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_ Contractor Signature: \_\_\_\_\_

**LOBBYIST ORDINANCE CERTIFICATION**

**Complete this section for permits in Unincorporated Los Angeles County only**

This is to certify that I, as permit applicant, am familiar with the requirements of Los Angeles County Code Chapter 2.160 et seq., (relating to the Los Angeles County Lobbyist Ordinance) and that all persons acting on behalf of myself complied and will continue to comply therewith through the application process.

Applicant (Print Name) \_\_\_\_\_ Applicant Signature \_\_\_\_\_

Company Name \_\_\_\_\_ Date \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

**WORKERS COMPENSATION DECLARATION**

WARNING: FAILURE TO SECURE WORKERS' COMPENSATION COVERAGE IS UNLAWFUL, AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS (\$100,000), IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST, AND ATTORNEY'S FEES.

I hereby affirm under penalty of perjury one of the following declarations:  
I have and will maintain a certificate of consent to self-insure for workers' compensation, issued by the Director of Industrial Relations as provided for by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued.

I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are: Carrier \_\_\_\_\_

Policy Number \_\_\_\_\_ Expiration Date \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_ Name of Agent \_\_\_\_\_ Phone Number \_\_\_\_\_

I certify that, in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California, and agree that, if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions

Signature of Applicant \_\_\_\_\_ Date \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

**HAZARDOUS MATERIAL DECLARATION**

Will the applicant or future building occupant handle a hazardous material or a mixture containing a hazardous material equal to or greater than the amount specified on the hazardous materials information guide? Yes  No

Will the intended use of the building by the applicant or future building occupant require a permit for construction or modification from the South Coast Air Quality Management District (SCAQMD)? See permitting checklist for guidelines. Yes  No

I have read the hazardous materials information guide and the SCAQMD permitting checklist, I understand my requirements under the Los Angeles County Code Title 2, Chapter 220 Sections 220.100 through 220.140 concerning hazardous material reporting and for obtaining a permit from the SCAQMD

**ASBESTOS NOTIFICATION**

Notification letter sent to AQMD and/or EPA  I declare that notification of asbestos removal is not applicable to addressed project.

**DECLARATION REGARDING CONSTRUCTION LENDING AGENCY**

I hereby affirm under penalty of perjury that there is a Construction lending agency for the performance of the work for which this permit is issued (Section 3097, Civil Code).

Lender's Name \_\_\_\_\_

Lender's Address \_\_\_\_\_

By my signature below, I certify to each of the following:  
I am the property owner or authorized to act on the property owner's behalf.  
I have read this application and the information I have provided is correct.  
I agree to comply with all applicable city and county ordinances and state laws relating to building construction.  
I authorize representatives of this county to enter the above-identified property for inspection purposes  
I am performing work in at least two trades that exceed the \$500.00 minimum to qualify as unrelated specialty trades or crafts. (Applies to Class B Contractor)

Signature of Property Owner or Authorized Agent \_\_\_\_\_ Date \_\_\_\_\_

**SECTION 01 57 13**  
**STORM WATER POLLUTION PREVENTION**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Preparation, implementation and monitoring of Storm Water Pollution Prevention Plan (SWPPP) for the purpose of preventing the discharges of pollutants from the construction site into the receiving waters. This includes elimination of non-storm water pollution discharges such as improper dumping, spills or leakage from storage tanks or transfer areas.
- B. Compliance with all local, state and federal regulations governing storm water discharges associated with construction activities such as, but not limited to clearing, excavating, grading, demolition and other land disturbances.
- C. Payment of application and annual fees required by the State Water Resources Control Board (SWRCB) for the duration of the construction of the Project.
- D. Submittal of all Permit Registration Documents (PRDs) through the SWRCB SMARTS online system.
- E. Certification that the construction project has met all of the conditions of the General Construction Storm Water Permit (GCSWP).

**1.02 REFERENCES**

- A. National Pollutant Discharge Elimination System (NPDES) General Permit No CAS000002.
- B. State Water Resources Control Board (SWRCB) Water Quality Order 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-006-DWQ.
- C. California Stormwater Quality Association, Stormwater Best Management Practice Handbook, Construction, latest edition.

**1.03 RELATED DOCUMENTS**

- A. Project Contract, including General, Special and Supplementary Conditions and other General Requirements.

**1.04 ACRONYMS AND DEFINITIONS**

BMP	Best Management Practice.
CAN	Corrective Action Notice.
CASQA	California Stormwater Quality Association.

COI	Change of Information.
DWQ	Division of Water Quality.
CGP	NPDES General Permit for Storm Water Discharges Associated with Construction Activities.
ELAP	Environmental Laboratory Accreditation Program.
LRP	Legally Responsible Person (OWNER).
NOI	Notice of Intent.
NOT	Notice of Termination.
NPDES	National Pollutant Discharge Elimination System.
OEHS	LAUSD Office of Environmental Health and Safety.
PRDs	Permit Registration Documents, including NOI, Risk Assessment, Site Map, SWPPP, Annual Fee, Signed Certification Statements.
REAP	Rain Event Action Plan.
RISK LEVEL	As defined by CGP.
QSD	Qualified SWPPP Developer.
QSP	Qualified SWPPP Practitioner.
QRE	Qualifying Rain Event, is an event that produces 0.5 inches of precipitation with a 48 hour or more period between rain events.
SMARTS	Storm Water Multiple Application and Report Tracking System (smarts.waterboard.ca.gov).
SWPPP	Storm Water Pollution Prevention Plan.
SWRCB	State Water Resources Control Board.
WPCD	Water Pollution Control Drawings.
WDID	Waste Discharge Identification Number.

#### 1.05 SUBMITTALS

- A. The Owner's QSD shall submit the Notice of Intent and all Permit Registration Documents and the Notice of Intent fee required by SWRCB.

- B. The Owner's QSD shall prepare and submit the Storm Water Pollution Prevention Plan for this project to the State Water Resources Control Board (SWRCB) via SMARTS.
- C. The Owner's QSD shall prepare the SWPPP, including the WPCD, Risk Level Determination, and Post Construction Water Balance Calculation.
- D. Contractor shall submit qualifications and experience of their QSP for Owner's review and acceptance.
- E. Contractor shall submit electronic copies of weekly and quarterly inspections, annual reports, compliance certifications, and test results.
- F. Contractor shall submit the annual report. The General Permit requires all projects that are enrolled for more than one continuous three-month period to submit information and annually certify that their site is in compliance with these requirements. All dischargers must prepare and electronically submit an annual report no later than September 1 of each year using the Storm water Multi-Application Reporting and Tracking System (SMARTS). The Annual Report must include a summary and evaluation of all sampling and analysis results, original laboratory reports, chain of custody forms, a summary of all corrective actions taken during the compliance year, and identification of any compliance activities or corrective actions that were not implemented.
- G. Within 90 days of when construction is complete or ownership has been transferred, the Contractor shall electronically file a Notice of Termination (NOT), a final site map, and photos through the State Water Boards SMARTS system. Filing a NOT certifies that all General Permit requirements have been met.

## **PART 2 - PRODUCTS**

### **2.01 MATERIALS**

- A. Storm Water Pollution Prevention Plan: The Contractor shall provide the quality, grade and type of materials as specified in Stormwater Best Management Practice Handbook, Construction, latest edition, and State Water Resources Control Board (SWRCB) Water Quality Order 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-006-DWQ.
- B. Provide and have available on-site during construction activities a non-stormwater sampling kit suitable for obtaining storm water and non-stormwater quality grab samples. Kit shall include containers and preservatives appropriate for the pollutants known or expected to be in the stormwater. Required sampling equipment shall be adequate to capture and transport samples to a local ELAP State certified water testing lab.
- C. Provide a rain gauge on site to record readings during site inspections.

## **PART 3 - EXECUTION**

### **3.01 SWPPP IMPLEMENTATION**

- A. The Contractor shall hire a Qualified SWPPP Practitioner (QSP), as defined by the Construction General Permit, to implement the Storm Water Pollution Prevention Plan to be consistent with the requirements of SWRCB Water Quality Order 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-006-DWQ, and as follows:
- 1) Install perimeter controls and sediment control BMPs prior to starting construction work at the site.
  - 2) Install effective erosion control BMPs at the jobsite.
  - 3) Protect exposed dirt, such as stockpiles, landscaping areas, and hillsides.
  - 4) Properly manage non-storm water discharges such as ground water, broken utility lines and fire hydrant testing per CGP requirements.
  - 5) Contain on-site storm water at the jobsite. Do not drain on-site water directly into the storm drains.
  - 6) QSP to train personnel for the proper implementation of the SWPPP.
  - 7) Revise the SWPPP to suit changing site conditions and also when properly installed systems are ineffective.
  - 8) Adjust BMP's locations and layouts in accordance to construction progress to assure compliance to regulations.
  - 9) Conduct inspections of pollution prevention controls and provide Site Monitoring Report to OAR immediately if pollutants are discharged into the site runoffs. CONTRACTOR shall sample and remediate contaminated water.
  - 10) QSP to develop and implement Rain Event Action Plans (REAPs).
  - 11) QSP to perform and oversee all monitoring consistent with the identified Risk Level for the site.
  - 12) Notification and Report: If pollution occurs in the work area for any reason or when the Contractor becomes aware of any violation of this Section, correct the problem and immediately notify the Inspector. In addition, submit a written report to the Project Civil Engineer within seven (7) calendar days describing the incident and the corrective actions taken. If either the Inspector or Engineer is first to observe pollution or a violation, the Contractor shall also explain in the written report why the Work was inadequately monitored.
  - 13) Revise SWPPP to suit changing site conditions and also when properly installed systems are ineffective.
  - 14) Upon Substantial Completion: Maintain and leave post-construction storm water pollution prevention controls in place and remove those that are not needed as determined by the QSD and OAR.

15) QSP shall submit the annual report. All dischargers must prepare and electronically submit an annual report no later than September 1 of each year using the Storm water Multi-Application Reporting and Tracking System (SMARTS). The Annual Report must include a summary and evaluation of all sampling and analysis results, original laboratory reports, chain of custody forms, a summary of all corrective actions taken during the compliance year, and identification of any compliance activities or corrective actions that were not implemented.

### **3.02 MONITORING**

- A. The Contractor shall conduct examination of storm water pollution prevention controls according to the monitoring requirements identified for the projects risk level as defined by the Construction General Permit.
- B. The Contractor shall prepare and maintain, at the jobsite, a log of each inspection using Site Monitoring Report forms.
- C. The Contractor shall distribute copies of the Owner provided Storm Water Pollution Prevention Plan to their superintendent and subcontractors. At least one (1) copy of the SWPPP shall be available on site at all times.

### **3.03 SWPPP LIABILITIES AND PENALTIES**

- A. Review of the inspection logs by the Owner shall not relieve the Contractor from liabilities arising from non-compliance with storm water pollution regulations.
- B. Payment of Penalties for non-compliance by the Contractor shall be the sole responsibility of the Contractor and will not be reimbursed by the Owner.
- C. Compliance with the Clean Water Act and the State Water Resources Control Board (SWRCB) Water Quality Order 2009-0009-DWQ pertaining to construction activities is the sole responsibility of the Contractor. For any fine(s) levied against the Contractor due to non-compliance by the Contractor, the Owner will have the option to either require payment by Contractor of, or deduct from any payments due the Contractor, the total amount of the fine(s) levied on the Contractor and associated costs.

### **3.04 SWPPP CLOSEOUT**

- A. Verify the following prior to Substantial Completion of SWPPP:
  - 1) Elements of the SWPPP have been completed.
  - 2) Final stabilization of site, as defined by the GCP, has been demonstrated.
  - 3) There is no potential for construction related storm water pollutants to be discharged into site runoff.
  - 4) Construction related equipment and temporary BMPs have been removed from site.

- 5) Rubbish, debris, and waste materials have been removed and legally disposed of off the Project site.
- 6) Post-Construction BMP Maintenance Plan has been established.

END OF SECTION

**SECTION 10 75 00  
FLAGPOLES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Aluminum Flagpoles.

**1.02 RELATED REQUIREMENTS**

- A. Section 03 30 00 - Cast-in-Place Concrete: Concrete base and foundation construction.
- B. Section 01 10 00 - Summary: District furnished products; flags.
- ~~C. Section 31 23 16 - Excavation: Foundation earthwork.~~

**1.03 REFERENCE STANDARDS**

- A. 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines.
- B. AASHTO M 36 - Standard Specification for Corrugated Steel Pipe, Metallic-Coated, for Sewers and Drains.
- C. ADA Standards - 2010 ADA Standards for Accessible Design.
- D. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- E. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
- F. ASTM B221M - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric).
- G. CBC Ch. 11B - California Building Code-Chapter 11B.
- H. NAAMM FP 1001 - Guide Specifications for Design Loads of Metal Flagpoles.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on pole, accessories, and configurations for each type of flagpole required. Include data for fittings and accessories.
- C. Shop Drawings: Indicate detailed dimensions, base details, anchor requirements, and imposed loads.
- D. Calculations: Submit engineering calculations and design for flagpole foundation assembly and pole per loads of CBC Chapter 16A.
  - 1. Design criteria as appropriate to the locale of the Project: NAAMM FP 1001 .
  - 2. Furnish calculations and drawings in a form acceptable to Architect.
  - 3. Calculations and foundation design shall be prepared and signed by a civil or structural engineer currently registered to practice in the State of California.

Hacienda La Puente Unified School District <b>Kwis ES Baseball Field Improvements</b> tBP/Architecture Project No. 21054.01	<b>Addendum 2</b>	Flagpoles 10 75 00 - 1
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- E. Certificate: Submit professional structural engineer's certification that design complies with requirements of the contract documents.
- F. Manufacturer's Instructions: Submit for each product specified in this section. Include instructions for examination, preparation, and protection of adjacent work.
- G. Maintenance Data: Provide lubrication and periodic maintenance requirement schedules and cleaning.

**1.05 QUALITY ASSURANCE**

- A. Manufacturer's Qualifications: Firm regularly engaged in manufacture of products specified in this section, and whose products have been in satisfactory use under similar service conditions for not less than 5 years.
- B. Installer's Qualifications: Firm regularly engaged, for the preceding five years, in the installation of flagpoles of equivalent type and physical characteristics to those required. If requested by Architect submit verifiable list of not less than five projects of equivalent type successfully completed within the preceding two years.

**1.06 DELIVERY, STORAGE, AND HANDLING**

- A. Spiral wrap flagpole with protective covering and pack in protective shipping tubes or containers.
- B. Protect flagpole and accessories from damage or moisture.

**PART 2 PRODUCTS**

**2.01 MANUFACTURERS**

- A. Flagpoles:
  - 1. Baartol Company, Inc., a division of Eder Flag Mfg. Co. Inc.; Architectural Series, Model EC("height"): [www.ederflag.com](http://www.ederflag.com)
  - 2. Concord Industries, Inc: [www.concordindustries.com](http://www.concordindustries.com).
  - 3. Flagpole Warehouse Division of The Flag Company, Inc.: [www.flagpolewarehouse.com](http://www.flagpolewarehouse.com).
  - 4. Morgan Francis Flagpoles & Accessories: [www.morgan-francis.com](http://www.morgan-francis.com).
  - 5. Pole-Tech Co., Inc: [www.poletech.com](http://www.poletech.com).
  - 6. Substitutions: See Section 01 60 00 - Product Requirements.

**2.02 FLAGPOLES**

- A. Flagpoles: Designed in accordance with NAAMM FP 1001
  - 1. Material: Aluminum.
  - 2. Design: Cone tapered.
  - 3. Mounting: Ground mounted type.
  - 4. Outside Butt Diameter: 6 inches.
  - 5. Outside Tip Diameter: 3.5 inches.
  - 6. Nominal Wall Thickness: 0.188 inches.

Hacienda La Puente Unified School District <b>Kwis ES Baseball Field Improvements</b> tBP/Architecture Project No. 21054.01	<b>Addendum 2</b>	Flagpoles 10 75 00 - 2
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- 7. Nominal Height: ~~35 ft~~ **As indicated on Drawings**; measured from nominal ground elevation.
- 8. Halyard: Internal type, electric operation.
- B. Performance Requirements:
  - 1. Wind Pressure Loading on Flagpole with Flag: Resistant without permanent deformation to 110 miles/hr wind speed, in accordance with NAAMM FP 1001; the factor of safety used is 2.5.
- C. Pole Construction: Construct pole and ship to site in one piece if possible. If more than one piece is necessary, provide snug- fitting, precision joints with self-aligning, internal splicing sleeve arrangement for weather-tight hairline field joints.

**2.03 POLE MATERIALS**

- A. Aluminum: ASTM B221 (ASTM B 221M) , 6063 alloy , T6 temper.

**2.04 ACCESSORIES**

- A. Finial Ball: Aluminum, 6 inch diameter, Gold anodized.
- B. Truck Assembly: Cast aluminum; revolving, stainless steel ball bearings, non-fouling.
- C. Cleats: 9 inch size, aluminum with galvanized steel fastenings, one per halyard.
  - 1. Locate top of cleats maximum 47 inches above finish walking surface.
  - 2. Comply with CBC 11B-308 and 36 CFR 1191.
- D. Cleat Box: Aluminum, with built-in hinge and hasp assembly, attached to pole with tamper proof screws inside box.
- E. Halyard: 5/16 inch diameter nylon, braided, white.
  - 1. Provide 2 continuous halyards for each flagpole
  - 2. Halyard Flag Snaps: Provide 2 swivel snaps per halyard, chromium-plated bronze.
- F. Connecting Sleeve For Multiple Section Poles: Same material as pole, precision fit for field assembly of pole, concealed fasteners.
- G. Primer: Zinc chromate type.

**2.05 MOUNTING COMPONENTS**

- A. Foundation Tube Sleeve: AASHTO M 36, corrugated 16 gage, 0.0598 inch steel, galvanized, depth of 38-1/2 inches as indicated.
  - 1. Steel centering wedges: Minimum 1/8 inch thick wedges, welded to sleeve plate inside foundation sleeve for the purpose of centering pole.
- B. Pole Base Attachment: Flush; steel base with base cover.
  - 1. Foundation support plate: Square steel plate welded to electrical grounding spike at base of concrete foundation.
    - a. Minimum edge dimension of square plate: 6-inches.
    - b. Minimum thickness: 3/16 inch.
  - 2. Provide manufacturer's standard flash collar, finished to match flagpole.
- C. Lightning Ground Cable: Copper No. 6 AWG, soft drawn.

Hacienda La Puente Unified School District <b>Kwis ES Baseball Field Improvements</b> tBP/Architecture Project No. 21054.01	<b>Addendum 2</b>	Flagpoles 10 75 00 - 3
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**2.06 FINISHING**

- A. Metal Surfaces in Contact With Concrete: Asphaltic paint.
- B. Concealed Steel Surfaces: Galvanized to ASTM A123/A123M requirements.
- C. Aluminum: Mill finish.
- D. Finial: Gold anodized finish.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Verify that concrete foundation is ready to receive work and dimensions are as indicated on shop drawings.
- B. Verify an adjacent 30 x 48 inch clear firm, stable and level surface area for cleat access. CBC Ch. 11B and ADA Standards.

**3.02 PREPARATION**

- A. Coat metal sleeve surfaces below grade and surfaces in contact with dissimilar materials with asphaltic paint.

**3.03 INSTALLATION**

- A. Install flagpole , base assembly, and fittings in accordance with manufacturer's instructions.
- B. Electrically ground flagpole installation.
- C. Install foundation plate and centering wedges for flagpoles base set in concrete base and fasten.

**3.04 TOLERANCES**

- A. Maximum Variation From Plumb: 1 inch.

**3.05 ADJUSTING**

- A. Adjust operating devices so that halyard and flag function smoothly.

**END OF SECTION**

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**SECTION 11 68 24**  
**EXTERIOR ATHLETIC EQUIPMENT**

**PART 1 - GENERAL**

**1.01 SUMMARY**

- A. Section Includes:
  - 1. Furnish and install one (1) set of anchors and plugs for each little league field
  - 2. Furnish and install one (1) pitcher's plate and home plate for each little league field.
  - 3. Furnish and install one (1) set of bases for each little league baseball field. Bases to be breakaway.
  - 4. Furnish and install fence cap at wing fencing of each little league field.
  - 5. Furnish and install player benches at each dugout (total of 4).
  - 6. Furnish and install backstop padding at each little league backstop assemblies.
- B. Related Sections:
  - 1. 32 13 13 Sitework Concrete

**1.02 SUBMITTALS**

- A. Submit under provisions of Section 01 33 00.
- B. Submit for approval: Manufacturer's product information, installation instructions and maintenance recommendations for all components.

**PART 2 - MATERIALS**

**2.01 BASE ANCHORS AND PLUGS**

- A. All bases shall conform to the size and dimension requirements of Little League Baseball and have anchor attachments. Posts shall be male, and ground anchor sleeves shall be female.
- B. Manufacturer's Reference: Plates and bases shall be Sportsfield Specialties, Champro or approved equal. All bases shall be Kwik-Release. Bases and plates are available through Sportsfield Specialties or Champro (Champrosports.com).

<u>Description</u>	<u>Sportsfield Specialties</u>	<u>Champro</u>
1 <sup>st</sup> , 2 <sup>nd</sup> and 3 <sup>rd</sup> Base	SHIBL	B072S
Softball Double Base	SHIBD	B073
Home Plate	SHSRHP	B035W
Pitcher's Plate	SHSPR-4SY	B043-B044
Base Plugs	SHBBP-64	
Female Ground Anchor	SHBBP-44	

**2.02 FENCE CAP**

- A. Integrally pigmented deep yellow corrugated, perforated, polyethylene tubing, nominally 3" – 4" diameter, split lengthwise to accommodate installation.

- B. Similarly, colored vinyl, polyester, or nylon ratchet-type (“zip”) ties of sufficient length to secure the cap material to the fence structure.
- C. Product standard to be Beacon Athletics Economy Fence Cap #125-515-259

**2.03 PLAYER BENCHES**

- A. Furnish and install bench sections each totaling 30’ minimum in length and 12” width and 18” finished height constructed from permanent anodized aluminum. Minimum aluminum wall thickness 0.075”
- B. Player Benches in varsity dugouts to be players bench with shelf.
- C. Player’s benches shall have 2” O.D. posts in 8” diameter x 24” deep concrete footings, positioned with top of seat 18” above grade for permanent installation. Benches shall include backrests as shown in the details.
- D. Manufacturer’s Reference: Outdoor Aluminum, (800) 225-4249 model ~~PBS~~ **PCTGH-15**; LA Steelcraft ~~PBA-30RS~~ **LA-BPA-15P** (626) 798-7401, or approved equal.

**2.04 BACKSTOP PAD**

- A. Backstop pad shall be constructed with 18 oz. vinyl covering and 2” urethane foam filler. Color to be dark green or black.
- B. Pad shall be custom sized constructed to completely cover stop boards, from the top of the concrete surface to the top of the upper stop board. Manufacturer’s reference: Stackhouse Athletic, (800) 363-1840; AllSports US, Inc.; (888) 230-0494.

**2.05 PORTABLE PITCHERS MOUND**

- A. BASE: PPLLBIT - PORTA-PITCH SEASONAL LITTLE LEAGUE MOUND WITH BROWN SYNTHETIC TURF AS MANUFACTURED AND SUPPLIED BY:

Sportsfield Specialties, Inc.  
P.O. Box 231  
41155 State Highway 10  
Delhi, NY 13753  
p. 888-975-3343  
[www.sportsfieldspecialties.com](http://www.sportsfieldspecialties.com)

- B. COMPONENTS:

- 1. Porta-Pitch Little League Mound:
  - a. Welded Construction, Fabricated of Aluminum Plate, Structural Members and 1/8” (0.125”) Thick Aluminum Panel Factory Covered with a 6mm Rubber Shock Absorption Impact Pad and Brown Colored Synthetic Turf with Thatch Layer Securely Attached with NORDOT® Urethane Adhesive #34G
  - b. Little League Size 10’ Outside Diameter with a Domed Height of 6” Above Finish Grade and Sloped 1” Vertical Per 12” Horizontal
  - c. Four (4) Tapered Pitching Mound Sections Designed to Rest on the Athletic Surface, No Ground Anchors Required

- d. Center Section Includes Synthetic Infill Turf with Black SBR Rubber, Flexible Gasket Seal Perimeter, One (1) Youth Size 4"W x 18"L Four (4) Sided Removable and Replaceable Pitching Rubber

### **PART 3- EXECUTION**

#### **3.01 BASES**

- A. Install base anchors and plates in accordance with the manufacturer's instructions and as shown in the details. Carefully locate bases and plates within 1/2" of dimensions shown on the plans.

#### **3.02 BENCH**

- A. Install dugout benches in concrete footings in accordance with the manufacturer's instructions and as shown in the details. Benches shall be set plumb and aligned with the dugout fencing.

#### **3.03 BACKSTOP PAD**

- A. Backstop pad shall be custom sized to meet the exact size of the stop board area.
- B. Securely fasten to recycled plastic stop board stop in accordance with manufacturer's recommendations.

#### **3.04 FENCE CAP**

- A. Fasten Fence Cap to Chain Link Fence evenly and securely using approved "zip" ties 24" on center and no more than 12" from any end.
- B. Overlap "joints" on sections of fence cap tubing 12" and provide a zip tie at each joint location.

#### **3.05 PORTABLE PITCHERS MOUND**

- A. Assemble mound per manufacturers written instructions.
- B. Provide training to District and Little League staff regarding correct assembly and disassembly procedures.

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**SECTION 11 68 43.15  
OUTDOOR BASEBALL SCOREBOARD**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Single-sided LED Baseball scoreboard.
- B. Scoring console.

**1.02 REFERENCE STANDARDS**

- A. 47 CFR 15 - Radio Frequency Devices.
- B. UL 1433 - UL Standard for Safety Control Centers for Changing Message Type Electric Signs.
- C. UL 48 - Standard for Electric Signs.

**1.03 ADMINISTRATIVE REQUIREMENTS**

- A. Coordination: Coordinate the installation of scoreboard with size, location and installation of service utilities.
- B. Preinstallation Meeting: Conduct a preinstallation meeting one week prior to the start of the work of this section; require attendance by all affected installers.
- C. Sequencing: Ensure that utility connections are achieved in an orderly and expeditious manner.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's product literature, component dimensions, describe components within assembly, anchorage and fasteners, the scoreboards and accessories proposed for installation.
- C. Shop Drawings: Indicate plan views, elevations, sections, panel dimensions, details, and attachments to other work.
  - 1. Show typical details of assembly, erection and anchorage.
  - 2. Include wiring diagrams for power, control, and signal systems.
  - 3. Show complete layout and location of equipment, including required clearances and coordination with adjacent construction.
- D. Certificate: Certify that products of this section meet or exceed specified requirements.
- E. Manufacturer's Instructions: Indicate installation and operating instructions.
- F. Operation Data: Operating instructions.
- G. Maintenance Data: Maintenance manuals.
- H. Warranty Documentation: Submit manufacturer warranty and ensure that forms have been completed in District's name and registered with manufacturer.

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**1.05 QUALITY ASSURANCE**

- A. For outdoor use.
- B. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of documented experience.
  - 1. Single Source Responsibility: Provide products by the same manufacturer.
- C. Installer Qualifications: Company specializing in performing work of the type specified and with minimum three years of documented experience.
- D. Copies of Documents at Project Site: Maintain at the project site a copy of each referenced document that prescribes execution requirements.

**1.06 PROJECT CONDITIONS**

- A. Field measurements: Verify position and elevation of structure and its layout for scoreboard equipment. Verify dimensions by field measurements.
- B. Verify mounting structure is capable of supporting the scoreboard's weight and windload in addition to the auxiliary equipment.
- C. Installation may proceed within acceptable weather conditions.

**1.07 DELIVERY, STORAGE, AND HANDLING**

- A. Product delivered on site.
- B. Scoreboard and equipment to be housed in a clean, dry environment.

**1.08 WARRANTY**

- A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.
- B. Correct defective Work within a one year period after Date of Substantial Completion.
- C. Provide five year manufacturer warranty for no cost parts exchange including standard shipping on electronics parts and wireless radios due to manufacturing defects.
- D. Provide toll-free service coordination.
- E. Provide technical phone support during Daktronics business hours.
- F. Warranty/Service Plan:
  - 1. Provide 5 years of parts coverage, to include wireless radios.
  - 2. Provide toll-free service coordination.
  - 3. Provide technical phone support during manufacturer's business hours.

**PART 2 - PRODUCTS**

**2.01 MANUFACTURER**

- A. Basis of Design: Daktronics, Inc., 201 Daktronics Drive, P.O. Box 5128, Brookings, South Dakota 57006-5128: [www.daktronics.com](http://www.daktronics.com).
  - 1. Local Representative: Lori Hensley.
- B. Other Acceptable Manufacturers:
  - 1. Fair Play Co.: [www.fair-play.com](http://www.fair-play.com).

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2. Nevco Scoreboard Company: [www.nevco.com](http://www.nevco.com).
3. Substitutions: See Section 01 60 00 - Product Requirements.

## 2.02 SCOREBOARD

- A. Basis of Design: Daktronics, Inc.; Model BA-2525: [www.daktronics.com](http://www.daktronics.com).
  1. Daktronics BA-2525 single-sided baseball scoreboard displays:
    - a. HOME and GUEST team scores for up to 9 innings.
    - b. Total RUNS and HITS to 99 and ERR (errors) to nine for each team.
    - c. AT BAT to 99.
    - d. BALL to three, STRIKE to two, OUT to two.
    - e. H/E (hit or error) with field position number for the error.
- B. General information:
  1. Dimensions: 3'-0" high, 6'-0" wide, 8 inches (203 mm) deep.
  2. Weight: 60 lb (27 kg) – options may increase weight.
  3. Power Requirement: 55 W (red/amber digits), 110 W (white digits) – options may increase wattage.
  4. ETL listed: UL 48.
  5. CEC, California Electric Code compliant.
  6. FCC compliant, 47 CFR 15.
  7. Color: As selected by Architect from manufacturer's custom line.
- C. Construction:
  1. Alcoa aluminum alloy 5052 construction.
  2. Scoreboard back, face and perimeter: 0.063 inch thick.
- D. Digits & Indicators:
  1. LED Color: All digits Amber LED.
  2. BALL, STRIKE, and OUT Indicators: 2 inches diameter.
  3. HOME, GUEST and INNING digits: 15 inches high.
  4. Seven bar segments per digit.
  5. PanaView® LED digit technology.
  6. All digits and indicators sealed front and back with weather-tight silicone gel.
- E. Captions:
  1. Vinyl applied directly to scoreboard face.
  2. HOME and GUEST captions: 6 inches high.
  3. BALL, STRIKE, OUT, and INNING captions: 5 inches high.
  4. Color: Standard white.

## 2.03 SCORING CONSOLE

- A. Basis of Design: Daktronics, Inc.; All Sport® 1600 controller: [www.daktronics.com](http://www.daktronics.com).

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- B. Capable of scoring multiple sports through the use of keyboard inserts.
- C. Controls multiple scoreboards and displays, including other All Sport 1600 controlled displays currently owned by customer.
- D. Recall after Power Outage: Clock, score, and period.
- E. Runs Time of Day and Segment Timer modes.
- F. Console includes:
  - 1. Aluminum enclosure to house electronics.
  - 2. Keyboard: Sealed membrane water-resistant.
  - 3. Display: 32 Character LCD to verify entries and recall information.
  - 4. Power cord to plug into a standard grounded 120v AC outlet.
    - a. Maximum Power Requirement: 3 watts.
  - 5. Wired System: Provide control cable to connect to the control receptacle junction box.
  - 6. Soft-Sided carrying case.
- G. Accessories:
  - 1. 2.4 GHz spread spectrum radio system with frequency hopping technology and 64 non-interfering channels; system includes a transmitter installed inside the console and a receiver installed inside the scoreboard(s).

**PART 3 - EXECUTION**

**3.01 EXAMINATION**

- A. Field measurements: Verify position and elevation of structure and its layout for scoreboard equipment. Verify dimensions by field measurements.
- B. Verify that mounting structure is ready to receive scoreboard.
  - 1. Verify mounting structure is capable of supporting the scoreboard's weight and windload in addition to the auxiliary equipment.
- C. Verify that placement of conduit and junction boxes are as specified and indicated in plans and shop drawings.
- D. Verify concrete has cured adequately according to specifications.
- E. Do not install scoreboard equipment until mounting structure is secure and concrete has cured.

**3.02 INSTALLATION**

- A. Install in accordance with manufacturer's instructions.
- B. Route all power and control cables to scoreboards and displays in conduit.
  - 1. See Electrical Drawings for power to the scoreboards/displays as well as raceways.
  - 2. Scoreboard control wiring including conduit will be the responsibility of the installing Contractor assigned the scoreboard equipment.
- C. Install scoreboards and exterior displays to beams in location detailed and in accordance with manufacturer's instructions.

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D. Verify unit is plumb and level.

**3.03 INSTALLATION - CONTROL CENTER**

- A. Provide boxes, cover plates and jacks in locations as indicated on Drawings.
- B. Test connect control unit to all jacks and check for proper operation of control unit, scoreboard and all features.
- C. Leave control unit in carrying case and other loose accessories with Construction Manager.
- D. Verify earth ground does not exceed 15 ohms.

**END OF SECTION**

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**SECTION 32 31 19  
DECORATIVE METAL FENCES AND GATES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Decorative steel fences.
- ~~B. Automatic gate operators.~~
- ~~C.~~ **B.** Excavation for post bases; concrete foundation for posts and center drop for gates.

**1.02 RELATED REQUIREMENTS**

- A. Section 05 50 00 - Metal Fabrications: Custom fabricated metal components.
- B. Section 31 23 16 - Excavation: Excavation for footings.

**1.03 REFERENCE STANDARDS**

- A. ADA Standards - 2010 ADA Standards for Accessible Design.
- B. ASTM A276/A276M - Standard Specification for Stainless Steel Bars and Shapes.
- C. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
- D. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- E. ASTM B117 - Standard Practice for Operating Salt Spray (Fog) Apparatus.
- F. ASTM D523 - Standard Test Method for Specular Gloss.
- G. ASTM D714 - Standard Test Method for Evaluating Degree of Blistering of Paints.
- H. ASTM D822/D822M - Standard Practice for Filtered Open-Flame Carbon-Arc Exposures of Paint and Related Coatings.
- I. ASTM D1654 - Standard Test Method for Evaluation of Painted or Coated Specimens Subjected to Corrosive Environments.
- J. ASTM D2244 - Standard Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates.
- K. ASTM D2794 - Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).
- L. ASTM D3359 - Standard Test Methods for Rating Adhesion by Tape Test.
- ~~M. ASTM F2200 - Standard Specification for Automated Vehicular Gate Construction.~~
- ~~N.~~ **M.** ASTM F2408 - Standard Specification for Ornamental Fences Employing Galvanized Steel Tubular Pickets.
- ~~O. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).~~
- ~~P. NFPA 70 - National Electrical Code.~~

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~~Q. UL 50 - Enclosures for Electrical Equipment, Non-Environmental Considerations.~~

~~R. UL 50E - Enclosures for Electrical Equipment, Environmental Considerations.~~

~~S.N. AWS D1.1/D1.1M - Structural Welding Code - Steel.~~

~~T.O. SSPC-Paint 20 - Zinc-Rich Coating Primers (Type I, "Inorganic," and Type II, "Organic").~~

~~U. UL 325 - Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems.~~

#### **1.04 ADMINISTRATIVE REQUIREMENTS**

- A. Preinstallation Meeting: Conduct a preinstallation meeting one week prior to start of work of this section; require attendance by affected installers.

#### **1.05 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Submit manufacturer's data sheets on each product to be used, including:
  - 1. Preparation instructions and recommendations.
  - 2. Storage and handling requirements and recommendations.
  - 3. Installation methods.
- C. Shop Drawings:
  - 1. Indicate plan layout, spacing of components, post foundation dimensions, hardware anchorage, gates, and schedule of components.
- D. Installer's Qualification Statement.
- E. Project Record Documents: Accurately record actual locations of property perimeter posts relative to property lines.
- F. Field Inspection Records: Provide installation inspection records that include post settings, framework, fittings and accessories, gates, and workmanship.
- G. Manufacturer's Warranty.
- H. Maintenance Materials: Furnish the following for District's use in maintenance of project:
  - 1. See Section 01 60 00 - Product Requirements, for additional provisions.

#### **1.06 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum five years documented experience.
- B. Installer Qualifications: Experienced with type of construction involved and materials and techniques specified and approved by fence manufacturer.
- C. Fabricator's Qualifications: Fabricator of light structural steel framing members and other miscellaneous metal fabrications of structural character shall have a minimum 5 years experience fabricating similar fences and gates and shall be approved by the Building Official in accordance with applicable Code provisions.

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- D. Welder's Qualifications: Welding shall be performed by certified welders qualified in accordance with procedures specified in applicable referenced AWS standard, using materials, procedures and equipment of the type required for the Work. Certify that each welder has satisfactorily passed AWS qualification tests for welding processes involved and, if pertinent, has undergone re-certification.
- E. Coordination: Provide templates and sleeves for incorporation of embedded items into the work specified elsewhere herein or in other Sections.
- F. Field-Verified Dimensions: Prior to fabrication, field verify dimensions and details of construction. Immediately report variances in writing to Architect.

**1.07 DELIVERY, STORAGE AND HANDLING**

- A. Store materials in a manner to ensure proper ventilation and drainage. Protect against damage, weather, vandalism and theft.

**1.08 WARRANTY**

- A. Correct defective Work within a five year period after Date of Substantial Completion.
- B. Provide ten year warranty for finish.

**PART 2 PRODUCTS**

**2.01 REGULATORY REQUIREMENTS:**

- A. Provide fences and gates meeting life safety and accessibility requirements of California Building Code (CBC) Title 24, Part 2, Chapters 10 and 11B; and ADA Standards, per latest amendments.
  - 1. Gates that are part of the accessible route shall meet all the requirements of an accessible door in compliance with CBC Section 11B-404 and 11B-206.5.
  - 2. Gate Hardware: Meet the requirements of CBC 11B-206.5 and 11B-404.2.9.
    - a. Latch: Latch, including padlock eye as integral part of latch, mounted 40 inches above finish grade. Comply with California Fire Code.
    - b. Hardware shall comply with local Fire Authority, California Building Code (CBC) Title 24, Section 1010.2, and California Fire Code (CFC) Section 503.5.2.
    - c. The lever of lever actuated latches or locks for an accessible gate shall be curved with a return to within 1/2 inch of the (face of) gate to prevent catching on the clothing or persons. California Referenced Standards Code T-24 Part 12, Section 12-10-202, Item (F).
    - d. Hand activated opening hardware, handles, pulls, latches, locks, and other operating devices for and accessible gate shall have a shape that is easy to grasp with one hand and does not require tight grasping, tight pinching, or twisting of the wrist to operate. CBC Section 11B-404.2.7 and 11B-309.4.

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3. Swing doors and gate surfaces within 10 inches of the finish floor or ground shall have a smooth surface on the push side extending the full width of the door or gate. Parts creating horizontal or vertical joints in these surfaces shall be within 1/16 inch of the same plane as the other and be free of sharp or abrasive edges. Cavities created by added kick plates shall be capped. CBC Section 11B-404.2.10
4. The bottom of the gate shall be within 3 inches of the finish surface of the path of travel. The maximum effort to operate a gate shall not exceed 5 lbf. CBC Section 11B-404.2.9.

## 2.02 MANUFACTURERS

### A. Decorative Metal Fences and Gates:

1. Ametco Manufacturing Corporation: [www.ametco.com](http://www.ametco.com).
2. Ameristar Perimeter Security, USA: [www.ameristarfence.com](http://www.ameristarfence.com).
3. Grating Pacific, Inc.: [www.gratingpacific.com](http://www.gratingpacific.com).
4. Substitutions: See Section 01 60 00 - Product Requirements.

### ~~B. Automatic Gate Operators:~~

- ~~1. DKS DoorKing: [www.doorking.com](http://www.doorking.com).~~
- ~~2. HySecurity: [www.hysecurity.com](http://www.hysecurity.com).~~
- ~~3. Lift Master: [www.liftmaster.com](http://www.liftmaster.com).~~
- ~~4. Substitutions: See Section 01 60 00 - Product Requirements.~~

## 2.03 FENCES

- A. Fences: Complete shop-fabricated system of posts and panels, accessories, fittings, and fasteners; finished with specified coating, and having the following performance characteristics:
  1. Capable of resisting vertical load, horizontal load and infill performance requirements for fence categories defined in ASTM F2408.
- B. Electro-Deposition Coating: Multistage pretreatment/wash with zinc phosphate, followed by epoxy primer and acrylic topcoat.
  1. Total Coating Thickness: 2 mils, minimum.
  2. Color: As selected by Architect from manufacturer's standard range.
  3. Coating Performance: Comply with general requirements of ASTM F2408.
    - a. Adhesion: ASTM D3359 (Method B); Class 3B with 90 percent or more of coating remaining in tested area.
    - b. Corrosion Resistance: ASTM B117, ASTM D714 and ASTM D1654; 1/8 inch coating loss or medium No.8 blisters after 1,500 hours.
    - c. Impact Resistance: ASTM D2794; 60 inch pounds.
    - d. Weathering Resistance: ASTM D523, ASTM D822/D822M and ASTM D2244; less than 60 percent loss of gloss.
- C. Steel: ASTM A653/A653M; tensile strength 45,000 psi, minimum.
  1. Hot-dip galvanized; ASTM A653/A653M, G60.

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- 2. 62 percent recycled steel, minimum.
- D. Fasteners: ASTM A276/A276M, Type 302 stainless steel; finished to match fence components.
  - 1. Tamper-proof security bolts.
  - 2. Self-drilling hex-head screws.

**2.04 WELDED STEEL FENCE**

- A. Fence Panels: Fusion welded; 8 feet high by 10 feet long.
- B. Posts: Steel tube.
  - 1. Size: As indicated on Drawings.
  - 2. Post Cap: Flush plate, watertight.
- C. Hinged Gates:
  - 1. Steel Gate: Fabricated steel gate, ASTM A500/A500M, Grade B., Size as indicated on Drawings. See Section 05 50 00 - Metal Fabrications.
  - 2. Construction: Match adjacent fence
    - a. Provide cable kits for additional trussing for all gates leaves over 6 ft..
    - b. Infill Panel:
      - 1) Perforated Panels: ASTM A653/A653M G90 Galvanized steel panel, staggered perforated pattern. Paint to match fence.
    - c. Gate Kick Plate: Provide on push side, full width to minimum 10 inches high above finish surface, 0.1382 inch thick, galvanized ASTM A653/A653M welded to gate frame.

**2.05 SPECIALITY HARDWARE**

- A. Pedestrian Gate Hardware: Provide non-lift-off type and 180 degree opening hinges, latches, and other hardware required. See Drawings for all gate hardware details.
  - 1. See Section 08 71 00 - Door Hardware for specific items.
  - 2. Hardware to comply with local Fire Authority, California Building Code (CBC) Title 24 section 1013; and California Fire Code (CFC) section 503.5.2.
    - a. Handles, pulls, latches, locks, and other operable parts on accessible doors shall comply with CBC Section 11B-309.4 and shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist.
  - 3. Double and Single Leaf Gates: Provide with mechanisms for padlocking gates in open position. Not on an accessible route or path.
  - 4. Double Gates Not in Path of Travel or Egress: Provide gate stops set in concrete to engage center drop rod or plunger bar. Include locking device and padlock eyes as integral part of latch, permitting both gate leaves to be locked with single padlock.
  - 5. Gates across an exit to a public way or to a safe dispersal area shall have panic hardware. No padlocks or cane bolts shall be allowed.
- B. Gate Hardware, Not on on Path of Travel: <>
  - 1. Hinges:

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- a. Size and type as determined by manufacturer.
- b. Provide 2 hinges for each leaf up to 6 feet high and 1 additional hinge for each additional 24 inches in height or fraction thereof.
- 2. Latch: 3/4 inch diameter slide bolt to accommodate padlock.
- 3. For double gates provide padlockable, 5/8 inch diameter center cane bolt assembly and strike.
- C. Hinges: Finished to match fence components.
  - 1. Closing: Self.
  - 2. Mechanism: Hydraulic.
  - 3. Material: Steel.
  - 4. Mounting: External.
  - 5. Brackets: Round.
  - 6. Bearings: Plain.
  - 7. Products:
    - a. Loconix; Mammoth: [www.loconix.com](http://www.loconix.com).
    - b. Substitutions: See Section 01 60 00 - Product Requirements.

**2.06 ~~AUTOMATIC GATE OPERATORS~~**

- A. ~~Sliding Gates: Prewired, pedestal mounted gate operator for horizontal sliding gates, per ASTM F2200 and UL 325.~~
  - 1. ~~Class: Class II.~~
  - 2. ~~Operating type: Roller chain.~~
  - 3. ~~Control Functions: Open, Pause, Close.~~
  - 4. ~~Maximum Open/Close Time: 10 seconds.~~
  - 5. ~~Access: Card, Keypad, and Remote.~~
  - 6. ~~Maximum gate weight: 1,500 pounds (560 kilograms).~~
  - 7. ~~Horsepower Rating: Suitable for connected load.~~
  - 8. ~~Entrapment Protection Devices: Provide sensing devices and safety mechanisms complying with UL 325.~~
    - a. ~~Primary Device: Provide electric sensing edge, wireless sensing, NEMA 1 photo eye sensors, or NEMA 4X photo eye sensors as required with momentary contact control device.~~
    - b. ~~Secondary Device: Provide electric sensing edge with wireless edge kit or non-monitored safety edge as an option along with continuous constant control device.~~
  - 9. ~~Enclosures: Comply with NEMA 250, and list and label as complying with UL 50 and UL 50E.~~
    - a. ~~Environment Type per NEMA 250: Unless otherwise indicated, as specified for the following installation locations:~~

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- ~~1) Outdoor Locations, direct splashing: Type 4.~~
- ~~b. Finish for Painted Steel Enclosures: Manufacturer's standard, factory applied grey unless otherwise indicated.~~

**2.072.06 FABRICATION**

- A. Metal Fences, Gates and Components: Fabricated of galvanized steel construction, all welded with welds ground smooth. Provide steel anchors for securing into adjoining construction. Weld anchors to frames not more than 12 inches from both top and bottom and space anchors not more than 24 inches apart.

**2.082.07 ACCESSORIES**

- ~~A. Keypad Mounting Supports: Where not factory installed, provide mounting supports for keypad installation.~~

- ~~1. Products:~~

- ~~a. StrongPoles, LLC; Architectural Keypad Pedestal: [www.strongpoles.com/#sle](http://www.strongpoles.com/#sle).~~
- ~~b. Substitutions: See Section 01 60 00 - Product Requirements.~~

- ~~B.A. Concrete: Ready-mixed, complying with ASTM C 94/C 94M; normal Portland cement; 2,500 psi strength at 28 days, 3 inch slump; 3/4 inch nominal size aggregate.~~

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- C. Field Inspection of Fabricated Products: Prior to installation, inspect products for damage and verify markings and dimensions against reviewed submittals.
- D. Coordination: Coordinate fence and gate Work with Work specified in other Sections so that related Work shall be accurately and properly joined. Furnish templates for exact location of items to be embedded in concrete or masonry.

**3.02 PREPARATION**

- A. Clean surfaces thoroughly prior to installation.
- B. Obtain Architect's review prior to site cutting or making adjustments not indicated on Drawings and reviewed shop drawings.
- C. Clean and strip site primed steel items to bare metal where site welding is necessary.
- D. Make provision for erection loads with temporary bracing. Keep work in alignment.
- E. Provide items required to be cast into concrete with setting templates. Coordinate placement with adjacent Work.
- F. Clean and prime field welds. Touch up galvanized steel with cold repair compound.

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### 3.03 INSTALLATION

- A. Installation, General: Install items plumb and level, accurately fitted, free from distortion or defects.
- B. Install in accordance with fabricator's instructions.
- C. Set fence posts in accordance with the approved spacing.
- D. Perform field welding in accordance with AWS D1.1/D1.1M. All welds ground smooth.
- E. When cutting rails immediately seal the exposed surfaces by:
  - 1. Removing metal shavings from cut area.
  - 2. Apply zinc-rich primer or galvanizing patch compound to thoroughly cover cut edge and drilled hole; allow to dry.
  - 3. Apply two coats of custom finish spray paint matching fence color.
- F. Space gate posts according to the manufacturers' drawings, dependent on standard out-to-out gate leaf dimensions and gate hardware selected.
  - 1. Base type and quantity of gate hinges on the application, weight, height, and number of gate cycles.
  - 2. Identify the necessary hardware required for the application on the manufacturer's gate drawings.
  - 3. Provide gate hardware as specified for the gate and install per manufacturer's recommendations
- G. Excavate post holes in accordance with Section 31 23 16.
- ~~H. Install operator in accordance with manufacturer's instructions and in accordance with NFPA 70.~~
- ~~H.~~ Install posts in concrete by means of pipe sleeve inserts set and anchored in concrete. Fill annular space between pipe posts and sleeve inserts with grouting compound.
- ~~I.~~ Set line posts in concrete footing.
  - 1. Diameter: 12 inch minimum to maintain 3 inch concrete cover. Unless otherwise indicated or detailed on Drawings.
  - 2. Provide 36 inches minimum embedment of posts up to 8'-0".
  - 3. Provide 6 inches minimum concrete beneath post bottom.
- ~~K.~~J. Provide concrete center drop to footing depth and drop rod retainers at inactive leaf, at center of double gate openings.

### 3.04 TOLERANCES

- A. Maximum Variation From Plumb: 1/4 inch.
- B. Maximum Offset From Indicated Position: 1 inch.
- C. Minimum Distance from Property Line: 6 inches.

### 3.05 FIELD QUALITY CONTROL

- A. See Section 01 40 00 - Quality Requirements, for additional requirements.

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- B. Layout: Verify that fence installation markings are accurate to design, paying attention to gate locations, underground utilities, and property lines.
- C. Post Settings: Randomly inspect three locations against design for:
  - 1. Hole diameter.
  - 2. Hole depth.
  - 3. Hole spacing.
- D. Fence Height: Randomly measure fence height at three locations or at areas that appear out of compliance with design.
- E. Gates: Inspect for level, plumb, and alignment.
- F. Workmanship: Verify neat installation free of defects.

**3.06 CLEANING**

- A. Leave immediate work area neat at end of work day.
- B. Clean jobsite of excess materials; scatter excess material from post hole excavations uniformly away from posts. Remove excess material if required.
- C. Clean fence with mild household detergent and clean water rinse well.
- D. Touch up scratched surfaces using visually materials recommended by manufacturer. Match touchup paint color to fence finish.
  - 1. Galvanized Touch-Up: Touch up surfaces immediately after installation, including field welding. Prepare surface and apply cold repair compound in compliance with the product manufacturer's instructions and recommendations.
    - a. Material: SSPC-Paint 20, Type I - Inorganic, complying with VOC limitations of authorities having jurisdiction. Provide finish coat to match galvanized finish.
- E. See Section 01 74 19 - Construction Waste Management and Disposal, for additional requirements.

**3.07 CLOSEOUT ACTIVITIES**

- A. Demonstrate proper operation of equipment to District's designated representative.
- B. Demonstration: Demonstrate operation of system to District's personnel.
  - 1. Use operation and maintenance data as reference during demonstration.
  - 2. Briefly describe function, operation, and maintenance of each component.

**3.08 PROTECTION**

- A. Protect installed products until completion of project.
- B. Touch-up, repair, or replace damaged products before Date of Substantial Completion.

**END OF SECTION**

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GENERAL INFORMATION			
GRADING PERMIT APPLICATION NO. GR	GRAD23072100314		
EARTHWORK VOLUMES	CUT	7742 (CY)	FILL 22 (CY)
	OVER EXCAVATION / ALLUVIAL REMOVAL & COMPACTION	482 (CY)	
	EXPORT	6507 (CY)	EXPORT LOCATION: PUENTE HILLS LANDFILL
TOTAL DISTURBED AREA	3.69	(ACRES)*	
TOTAL PROPOSED LANDSCAPE AREA	135,018	SQUARE FEET*	
TOTAL TURF AREA	86.2	% (PERCENT OF TOTAL PROPOSED LANDSCAPING)*	
TOTAL DROUGHT TOLERANT LANDSCAPING AREA		% (PERCENT OF TOTAL PROPOSED LANDSCAPING)*	
PRE-DEVELOPMENT IMPERVIOUS AREA	0.14	(ACRES)*	
POST-DEVELOPMENT IMPERVIOUS AREA	0.59	(ACRES)*	
WASTE DISCHARGE IDENTIFICATION NUMBER (WID) #			
CONSTRUCTION & DEMOLITION DEBRIS RECYCLING AND REUSE PLAN (RRP ID)			
POST-CONSTRUCTION BMP FEATURE(S) GPS COORDINATES X	50007.588 E	Y	76478.698 N

PROPERTY INFORMATION			
PROPERTY ADDRESS	1925 KWIS AVENUE, HACIENDA HEIGHTS, CA 91745	(IF EXIST)*	
TRACT / PARCEL MAP NO.	NOT APPLICABLE	LOT/PARCEL NO.	NOT APPLICABLE
PROPERTY OWNER	HACIENDA LA PUENTE SCHOOL DISTRICT		
ASSESSORS ID NUMBER(S)	8215-012-901		
ZONING, REGIONAL PLANNING, AND OTHER AGENCY INFORMATION			
PROPERTY ZONING	RA		
INTENDED LAND USE	PUBLIC ELEMENTARY SCHOOL		
(FOR PROPOSED GRADED AREAS - I.E., SINGLE FAMILY RESIDENCE)			
CERTIFICATE OF COMPLIANCE: CC NO.	NOT APPLICABLE		
PLOT PLAN NUMBER: PP NO.	NOT APPLICABLE	EXPIRATION DATE:	
CONDITIONAL USE PERMIT: CUP NO.	NOT APPLICABLE	EXPIRATION DATE:	
OAK TREE PERMIT NUMBER: OTP NO.	NOT APPLICABLE	EXPIRATION DATE:	
COMMUNITY STANDARDS DISTRICT:	NOT APPLICABLE		
CALIFORNIA COASTAL COMMISSION AREA:	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	APPROVED VOLUME:	(CY)
COASTAL DEVELOPMENT PERMIT CDP	NOT APPLICABLE	EXPIRATION DATE:	
FISH & GAME, ARMY CORP OF ENGINEERS, REGIONAL WATER CONTROL BOARD, AQMD & OTHER AGENCY PERMITS SHOULD BE ADDED AS APPLICABLE. (PERMIT NUMBER, N/A, EXPIRATION DATE, N/A)			
NOTE:	ITEMS MARKED * ARE REQUIRED ON ALL GRADING PLAN.		

**GENERAL NOTES**

- ALL GRADING AND CONSTRUCTION SHALL CONFORM TO THE 2023 COUNTY OF LOS ANGELES BUILDING CODES AND THE STATE MODEL WATER EFFICIENCY LANDSCAPE ORDINANCE UNLESS SPECIFICALLY NOTED ON THESE PLANS.
- ANY MODIFICATIONS OR CHANGES TO APPROVED GRADING PLANS MUST BE APPROVED BY THE BUILDING OFFICIAL.
- NO GRADING SHALL BE STARTED WITHOUT FIRST NOTIFYING THE BUILDING OFFICIAL. A PRE-GRADING MEETING AT THE SITE IS REQUIRED BEFORE THE START OF THE GRADING WITH THE FOLLOWING PERSONS PRESENT: OWNER, GRADING CONTRACTOR, DESIGN CIVIL ENGINEER, SOILS ENGINEER, GEOLOGIST, COUNTY GRADING INSPECTOR(S) OR THEIR REPRESENTATIVES, AND WHEN REQUIRED THE ARCHEOLOGIST OR OTHER JURISDICTIONAL AGENCIES. PERMITTEE OR HIS AGENT ARE RESPONSIBLE FOR ARRANGING PRE-GRADE MEETINGS AND MUST NOTIFY THE BUILDING OFFICIAL AT LEAST TWO BUSINESS DAYS PRIOR TO PROPOSED PRE-GRADE MEETING.
- APPROVAL OF THESE PLANS REFLECT SOLELY THE REVIEW OF PLANS IN ACCORDANCE WITH THE COUNTY OF LOS ANGELES BUILDING CODES AND DOES NOT REFLECT ANY POSITION BY THE COUNTY OF LOS ANGELES OR THE DEPARTMENT OF PUBLIC WORKS REGARDING THE STATUS OF ANY TITLE ISSUES RELATING TO THE LAND ON WHICH THE IMPROVEMENTS MAY BE CONSTRUCTED. ANY DISPUTES RELATING TO TITLE ARE SOLELY A PRIVATE MATTER NOT INVOLVING THE COUNTY OF LOS ANGELES OR THE DEPARTMENT OF PUBLIC WORKS.
- ALL GRADING AND CONSTRUCTION ACTIVITIES SHALL COMPLY WITH COUNTY OF LOS ANGELES CODE, TITLE 12, SECTION 12.12.03 THAT CONTROLS AND RESTRICTS NOISE FROM THE USE OF CONSTRUCTION AND GRADING EQUIPMENT FROM THE HOURS OF 8:00 PM TO 6:30 AM AND ON SUNDAYS AND HOLIDAYS. (MORE RESTRICTIVE CONSTRUCTION ACTIVITY TIMES MAY APPLY, AS REQUIRED BY THE DEPARTMENT OF REGIONAL PLANNING AND SHOULD BE SHOWN ON THE GRADING PLANS WHEN APPLICABLE.)
- CALIFORNIA PUBLIC RESOURCES CODE (SECTION 5097.98) AND HEALTH AND SAFETY CODE (SECTION 7050.5) ADDRESS THE DISCOVERY AND DISPOSITION OF HUMAN REMAINS. IN THE EVENT OF DISCOVERY OR RECOGNITION OF ANY HUMAN REMAINS IN ANY LOCATION OTHER THAN A DEDICATED CEMETERY, THE LAW REQUIRES THAT GRADING IMMEDIATELY STOPS AND NO FURTHER EXCAVATION OR DISTURBANCE OF THE SITE OR ANY NEARBY AREA WHERE HUMAN REMAINS MAY BE LOCATED, OCCUR UNTIL THE FOLLOWING HAS BEEN MEASURES HAVE BEEN TAKEN.
  - THE COUNTY CORONER HAS BEEN INFORMED AND HAS DETERMINED THAT NO INVESTIGATION OF THE CAUSE OF DEATH IS REQUIRED, AND
  - IF THE REMAINS ARE OF NATIVE AMERICAN ORIGIN, THE DESCENDANTS FROM THE DECEASED NATIVE AMERICANS HAVE MADE A RECOMMENDATION FOR THE MEANS OF TREATING OR DISPOSING, WITH APPROPRIATE DIGNITY, OF THE HUMAN REMAINS AND ANY ACCOMPANIED GRAVE GOODS.
- THE LOCATION AND PROTECTION OF ALL UTILITIES IS THE RESPONSIBILITY OF THE PERMITTEE.
- ALL EXPORT OF MATERIAL FROM THE SITE MUST GO TO A PERMITTED SITE APPROVED BY THE BUILDING OFFICIAL OR A LEGAL DUMP SITE. RECEIPTS FOR ACCEPTANCE OF EXCESS MATERIAL BY A DUMP SITE ARE REQUIRED AND MUST BE PROVIDED TO THE BUILDING OFFICIAL UPON REQUEST.
- A COPY OF THE GRADING PERMIT AND APPROVED GRADING PLANS MUST BE IN THE POSSESSION OF A RESPONSIBLE PERSON AND AVAILABLE AT THE SITE AT ALL TIMES.
- SITE BOUNDARIES, EASEMENTS, DRAINAGE DEVICES, RESTRICTED USE AREAS SHALL BE LOCATED PER CONSTRUCTION STAKING BY FIELD ENGINEER OR LICENSED SURVEYOR. PRIOR TO GRADING, AS REQUESTED BY THE BUILDING OFFICIAL. ALL PROPERTY LINES, EASEMENTS, AND RESTRICTED USE AREAS SHALL BE STAKED.

- NO GRADING OR CONSTRUCTION SHALL OCCUR WITHIN THE PROTECTED ZONE OF ANY OAK TREE AS REQUIRED PER PLANNING APPROVAL.
- THE STANDARD RETAINING WALL DETAILS SHOWN ON THE GRADING PLANS ARE FOR REFERENCE ONLY. STANDARD RETAINING WALLS ARE NOT CHECKED, PERMITTED, OR INSPECTED PER THE GRADING PERMIT. A SEPARATE RETAINING WALL PERMIT IS REQUIRED FOR ALL STANDARD RETAINING WALLS.
 

NOTE: THIS NOTE ONLY APPLIES TO STANDARD RETAINING WALLS. GEOTECH FABRIC AND SEGMENTAL RETAINING WALLS DO NOT REQUIRE A SEPARATE RETAINING WALL PERMIT. DETAILS AND CONSTRUCTION NOTES FOR ALL GEOGRID WALLS MUST BE ON THE GRADING PLAN.
- A PREVENTIVE PROGRAM TO PROTECT THE SLOPES FROM POTENTIAL DAMAGE FROM BURROWING RODENTS IS REQUIRED PER SECTION J101.8 OF THE COUNTY OF LOS ANGELES BUILDING CODE. OWNER IS TO INSPECT SLOPES PERIODICALLY FOR EVIDENCE OF BURROWING RODENTS AND A FIRST EVIDENCE OF THEIR EXISTENCE SHALL BE REPORTED TO THE BUILDING OFFICIAL.
- WHERE A GRADING PERMIT IS ISSUED AND THE BUILDING OFFICIAL DETERMINES THAT THE GRADING WILL NOT BE COMPLETED PRIOR TO NOVEMBER 1, THE OWNER OF THE SITE ON WHICH THE GRADING IS PERFORMED SHALL, ON OR BEFORE OCTOBER 1, FILE OR CAUSE TO BE FILED WITH THE BUILDING OFFICIAL AN ASP PER SECTION J108.4 OF THE COUNTY OF LOS ANGELES BUILDING CODE.
- TRANSFER OF RESPONSIBILITY: IF THE FIELD ENGINEER, THE SOILS ENGINEER, OR THE ENGINEERING GEOLOGIST OF RECORD IS CHANGED DURING GRADING, THE WORK SHALL BE STOPPED UNTIL THE REPLACEMENT HAS ACCEPTED THEIR RESPONSIBILITY WITHIN THE AREA OF TECHNICAL COMPETENCE FOR APPROVAL UPON COMPLETION OF THE WORK. IT SHALL BE THE DUTY OF THE PERMITTEE TO NOTIFY THE BUILDING OFFICIAL IN WRITING OF SUCH CHANGE PRIOR TO THE RECOMMENCEMENT OF SUCH GRADING.

- INSPECTION NOTES**
- THE PERMITTEE OR HIS AGENT SHALL NOTIFY THE BUILDING OFFICIAL AT LEAST ONE WORKING DAY IN ADVANCE OF INSPECTED INSPECTIONS AT FOLLOWING STAGES OF THE WORK: (SECTION J105.7 OF THE BUILDING CODE.)
    - PRE-GRADE - BEFORE THE START OF ANY EARTH DISTURBING ACTIVITY OR CONSTRUCTION.
    - INITIAL - WHEN THE SITE HAS BEEN CLEARED OF VEGETATION AND UNAPPROVED AREAS HAVE BEEN SCARIFIED, BENCHED OR OTHERWISE PREPARED FOR FILL. FILL SHALL NOT BE PLACED PRIOR TO THIS INSPECTION. NOTE: PRIOR TO ANY CONSTRUCTION ACTIVITIES, INCLUDING GRADING, ALL STORM WATER POLLUTION PREVENTION MEASURES INCLUDING EROSION CONTROL DEVICES WHICH CONTAIN SEDIMENTS MUST BE INSTALLED.
    - ROUGH - WHEN APPROXIMATE FINAL ELEVATIONS HAVE BEEN ESTABLISHED, DRAINAGE TERRACES, SWALES AND BERMS INSTALLED AT THE TOP OF THE SLOPE, AND THE REQUIREMENTS REQUIRED IN THIS SECTION HAVE BEEN RECEIVED.
    - FINAL - WHEN GRADING HAS BEEN COMPLETED, ALL DRAINAGE DEVICES INSTALLED, SLOPE PLANTING ESTABLISHED, IRRIGATION SYSTEMS INSTALLED AND THE AS-BUILT PLANS, REQUIRED STATEMENTS, AND REPORTS HAVE BEEN SUBMITTED AND APPROVED.
  - IN ADDITION TO THE INSPECTION REQUIRED BY THE BUILDING OFFICIAL FOR GRADING, REPORTS AND STATEMENTS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL IN ACCORDANCE WITH SECTION J105 OF THE COUNTY OF LOS ANGELES BUILDING CODE.
  - UNLESS OTHERWISE DIRECTED BY THE BUILDING OFFICIAL, THE FIELD ENGINEER FOR ALL ENGINEERING GRADING PROJECTS SHALL PREPARE ROUTINE INSPECTION REPORTS AS REQUIRED UNDER SECTION J105.11 OF THE COUNTY OF LOS ANGELES BUILDING CODE. THESE REPORTS, KNOWN AS "REPORTS OF GRADING ACTIVITIES", SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AS FOLLOWS:
    - BIWEEKLY DURING ALL TIMES WHEN GRADING OF 400 CUBIC YARDS OR MORE PER WEEK IS OCCURRING ON THE SITE;
    - MONTHLY, AT ALL OTHER TIMES; AND
    - AT ANY TIME WHEN REQUESTED IN WRITING BY THE BUILDING OFFICIAL.

SUCH "REPORT OF GRADING ACTIVITIES" SHALL CERTIFY TO THE BUILDING OFFICIAL THAT THE FIELD ENGINEER HAS INSPECTED THE GRADING SITE AND RELATED ACTIVITIES AND HAS FOUND THEM IN COMPLIANCE WITH THE APPROVED GRADING PLANS AND SPECIFICATIONS, THE BUILDING CODE, ALL GRADING PERMIT CONDITIONS, AND ALL OTHER APPLICABLE ORDINANCES AND REQUIREMENTS. THIS FORM IS AVAILABLE AT THE FOLLOWING WEBSITE: [HTTP://WWW.AVAQMD.COM](http://WWW.AVAQMD.COM). "REPORT OF GRADING ACTIVITIES" MAY BE SCANNED AND UPLOADED AT THE WEBSITE OR FAXED TO (310) 539-5482. FAILURE TO PROVIDE REQUIRED INSPECTION REPORTS WILL RESULT IN A "STOP WORK ORDER."
  - ALL GRADDED SITES MUST HAVE DRAINAGE SWALES, BERMS, AND OTHER DRAINAGE DEVICES INSTALLED PRIOR TO ROUGH GRADING APPROVAL PER SECTION J105.7 OF THE COUNTY OF LOS ANGELES BUILDING CODE.
  - THE GRADING CONTRACTOR SHALL SUBMIT THE STATEMENT TO THE GRADING INSPECTOR AS REQUIRED BY SECTION J105.12 OF THE COUNTY OF LOS ANGELES BUILDING CODE AT THE COMPLETION OF ROUGH GRADING.
  - FINAL GRADING MUST BE APPROVED BEFORE OCCUPANCY OF BUILDINGS WILL BE ALLOWED PER SECTION J105 OF THE COUNTY OF LOS ANGELES BUILDING CODE.
  - A PROPERTY LINE SURVEY, PREPARED BY A CA LICENSED LAND SURVEYOR OR A CIVIL ENGINEER WITH A LICENSE NUMBER BELOW C33966, MAY BE REQUIRED BY THE BUILDING OFFICIAL BASED UPON SITE CONDITIONS IN ACCORDANCE WITH LACBC SECTION 108.1.

- DRAINAGE NOTES**
- ROOF DRAINAGE MUST BE DIVERTED FROM GRADED SLOPES.
  - PROVISIONS SHALL BE MADE FOR CONTRIBUTORY DRAINAGE AT ALL TIMES.
  - ALL CONSTRUCTION AND GRADING WITHIN A STORM DRAIN EASEMENT ARE TO BE DONE PER PRIVATE DRAIN PD NO. NIA OR MISCELLANEOUS TRANSFER DRAIN MTD NO. NIA
  - ALL STORM DRAIN WORK IS TO BE DONE UNDER CONTINUOUS INSPECTION BY THE FIELD ENGINEER. STATUS REPORTS REQUIRED UNDER NOTE 18 AND SECTION J105.11 OF THE COUNTY OF LOS ANGELES BUILDING CODE SHALL INCLUDE INSPECTION INFORMATION AND REPORTS ON THE STORM DRAIN INSTALLATION.

- AGREEMENT NOTES**
- AN ENCROACHMENT PERMIT FROM COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS (CALTRANS) (CITY OF LOS ANGELES) IS REQUIRED FOR ALL WORK WITHIN OR AFFECTING ROAD RIGHT OF WAY. ALL WORK WITHIN ROAD RIGHT OF WAY SHALL CONFORM TO COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS (CALTRANS) (CITY OF LOS ANGELES) ENCROACHMENT PERMIT.
  - A FLOOD CONSTRUCTION PERMIT IS REQUIRED FROM THE COUNTY OF LOS ANGELES FLOOD CONTROL DISTRICT FOR ALL WORK WITHIN THE COUNTY OF LOS ANGELES FLOOD CONTROL DISTRICT RIGHT OF WAY. ALL WORK SHALL CONFORM TO CONDITIONS SET BY THE PERMIT.
  - PERMISSION TO OPERATE IN VERY HIGH FIRE HAZARD SEVERITY ZONE MUST BE OBTAINED FROM THE FIRE PREVENTION BUREAU OR THE LOCAL FIRE STATION PRIOR TO COMMENCING WORK.
  - ALL WORK WITHIN THE STREAMBED AND AREAS OUTLINED ON GRADING PLANS SHALL CONFORM TO:
    - ARMY CORP 404 PERMIT NUMBER: N/A
    - CALIFORNIA FISH & GAME PERMIT NO. N/A
  - ALL CONSTRUCTION/DEMOLITION, GRADING, AND STORAGE OF BULK MATERIALS MUST COMPLY WITH THE LOCAL AQMD RULE 403 FOR FUGITIVE DUST. INFORMATION ON RULE 403 IS AVAILABLE AT AQMD'S WEBSITE [HTTP://WWW.AVAQMD.COM](http://WWW.AVAQMD.COM).

- GENERAL GEOTECHNICAL NOTES**
- ALL WORK MUST BE IN COMPLIANCE WITH THE RECOMMENDATIONS INCLUDED IN THE GEOTECHNICAL CONSULTANT'S REPORTS AND THE APPROVED GRADING PLANS AND SPECIFICATIONS.
  - GRADING OPERATIONS MUST BE CONDUCTED UNDER PERIODIC INSPECTIONS BY THE GEOTECHNICAL CONSULTANTS WITH MONTHLY INSPECTION REPORTS TO BE SUBMITTED TO THE GEOLOGY AND SOILS SECTION, (800 S. FREMONT AVE. ALHAMBRA CA 91803 - 3RD FLOOR)
  - THE SOIL ENGINEER SHALL PROVIDE SUFFICIENT INSPECTIONS DURING THE PREPARATION OF THE NATURAL GROUND AND THE PLACEMENT AND COMPACTION OF THE FILL TO BE SATISFIED THAT THE WORK IS BEING PERFORMED IN ACCORDANCE WITH THE PLAN AND APPLICABLE CODE REQUIREMENTS.
  - ROUGH GRADING MUST BE APPROVED BY A FINAL ENGINEERING GEOLOGY AND SOILS ENGINEERING REPORT. AN AS-BUILT GEOLOGIC MAP MUST BE INCLUDED IN THE FINAL GEOLOGY REPORT. PROVIDE A FINAL REPORT STATEMENT THAT VERIFIES WORK WAS DONE IN ACCORDANCE WITH REPORT RECOMMENDATIONS AND CODE PROVISIONS (SECTION J105.12 OF THE COUNTY OF LOS ANGELES BUILDING CODE). THE FINAL REPORT(S) MUST BE SUBMITTED TO THE GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION FOR REVIEW AND APPROVAL.
  - FOUNDATION, WALL AND POOL, EXCAVATIONS MUST BE INSPECTED AND APPROVED BY THE CONSULTING GEOLOGIST AND SOIL ENGINEER, PRIOR TO THE PLACING OF STEEL OR CONCRETE.
  - BUILDING PADS LOCATED IN CUT/FILL TRANSITION AREAS SHALL BE OVER-EXCAVATED A MINIMUM OF THREE (3) FEET BELOW THE PROPOSED BOTTOM OF FOOTING.

- FILL NOTES**
- ALL FILL SHALL BE COMPACTED TO THE FOLLOWING MINIMUM RELATIVE COMPACTION CRITERIA:
    - 90 PERCENT OF MAXIMUM DRY DENSITY WITHIN 40 FEET BELOW FINISH GRADE
    - 90 PERCENT OF MAXIMUM DRY DENSITY DEEPER THAN 40 FEET BELOW FINISH GRADE, UNLESS A LOWER RELATIVE COMPACTION (NOT LESS THAN 90 PERCENT OF MAXIMUM DRY DENSITY) IS JUSTIFIED BY THE GEOTECHNICAL ENGINEER.

THE RELATIVE COMPACTION SHALL BE DETERMINED BY A.S.T.M. SOIL COMPACTION TEST D1557-01 WHERE APPLICABLE. WHERE NOT APPLICABLE, A TEST ACCEPTABLE TO THE BUILDING OFFICIAL SHALL BE USED. (SECTION J107.5 OF THE COUNTY OF LOS ANGELES BUILDING CODE)
  - 90 PERCENT OF MAXIMUM DRY DENSITY IS REQUIRED FOR ALL THE LINES UNLESS OTHERWISE APPROVED BY THE FIELD ENGINEER. FIELD TESTING SHALL BE DETERMINED BY A TEST ACCEPTABLE TO THE BUILDING OFFICIAL. (SECTION J107.5 OF THE COUNTY OF LOS ANGELES BUILDING CODE) HOWEVER, NOT LESS THAN 10% OF THE REQUIRED DENSITY TEST UNIFORMLY DISTRIBUTED, AND SHALL BE OBTAINED BY THE SAND CONE METHOD.
  - SUFFICIENT TESTS OF THE FILL SOILS SHALL BE MADE TO DETERMINE THE RELATIVE COMPACTION OF THE FILL IN ACCORDANCE WITH THE FOLLOWING MINIMUM GUIDELINES:
    - ONE TEST FOR EACH TWO-FOOT VERTICAL LIFT.
    - ONE TEST FOR EACH 1,000 CUBIC YARDS OF MATERIAL PLACED.
    - ONE TEST AT THE LOCATION OF THE FINAL FILL SLOPE FOR EACH BUILDING SITE (LOT) IN EACH FOUR-FOOT VERTICAL LIFT OR PORTION THEREOF.
    - ONE TEST IN THE VICINITY OF EACH BUILDING PAD FOR EACH FOUR-FOOT VERTICAL LIFT OR PORTION THEREOF.
  - SUFFICIENT TESTS OF FILL SOILS SHALL BE MADE TO VERIFY THAT THE SOIL PROPERTIES COMPLY WITH THE DESIGN REQUIREMENTS, AS DETERMINED BY THE SOIL ENGINEER INCLUDING SOIL TYPES, SHEAR STRENGTHS PARAMETERS AND CORRESPONDING UNIT WEIGHTS IN ACCORDANCE WITH THE FOLLOWING GUIDELINES:
    - PRIOR AND SUBSEQUENT TO PLACEMENT OF THE FILL, SHEAR TESTS SHALL BE TAKEN ON EACH TYPE OF SOIL OR SOIL MIXTURE TO BE USED FOR ALL FILL SLOPES STEEPER THAN THREE (3) HORIZONTAL TO ONE VERTICAL.
    - SHEAR TEST RESULTS FOR THE PROPOSED FILL MATERIAL MUST EXCEED THE DESIGN VALUES USED IN THE GEOTECHNICAL REPORT TO DETERMINE SOIL STABILITY REQUIREMENTS. OTHERWISE, THE SLOPE MUST BE REEVALUATED USING THE ACTUAL SHEAR TEST VALUE OF THE FILL MATERIAL THAT IS IN PLACE.
    - FILL SOILS SHALL BE FREE OF DELETERIOUS MATERIALS.
  - FILL SHALL NOT BE PLACED UNTIL STRIPPING OF VEGETATION, REMOVAL OF UNSUITABLE SOILS, AND INSTALLATION OF SUBDRAIN (IF ANY) HAVE BEEN INSPECTED AND APPROVED BY THE SOIL ENGINEER. THE BUILDING OFFICIAL MAY REQUIRE A STANDARD TEST METHOD FOR MOISTURE, ASH, ORGANIC MATTER, PEAT OR OTHER ORGANIC SOILS ASTM D-2914-07 ON ANY SUSPECT MATERIAL. DETRIMENTAL AMOUNTS OF ORGANIC MATERIAL SHALL NOT BE PERMITTED IN FILLS. SOIL CONTAINING SMALL AMOUNTS OF ROOTS MAY BE ALLOWED PROVIDED THAT THE ROOTS ARE IN A QUANTITY AND DISTRIBUTED IN A MANNER THAT WILL NOT BE DETRIMENTAL TO THE FUTURE USE OF THE SITE AND THE SOILS ENGINEER APPROVES THE USE OF SUCH MATERIAL.
  - ROCK OR SIMILAR MATERIAL GREATER THAN 12 INCHES IN DIAMETER SHALL NOT BE PLACED IN THE FILL UNLESS RECOMMENDATIONS FOR SUCH PLACEMENT HAVE BEEN SUBMITTED BY THE SOIL ENGINEER AND APPROVED IN ADVANCE BY THE BUILDING OFFICIAL. LOCATION, EXTENT, AND ELEVATION OF ROCK DISPOSAL AREAS MUST BE SHOWN ON AN "AS BUILT" GRADING PLAN.
  - CONTINUOUS INSPECTION BY THE SOIL ENGINEER, OR A RESPONSIBLE REPRESENTATIVE, SHALL BE PROVIDED DURING ALL FILL PLACEMENT AND COMPACTION OPERATIONS WHERE FILLS HAVE A DEPTH GREATER THAN 30 FEET OR SLOPE SURFACE STEEPER THAN 2:1. (SECTION J107.8 OF THE COUNTY OF LOS ANGELES BUILDING CODE)
  - CONTINUOUS INSPECTION BY THE SOIL ENGINEER, OR A RESPONSIBLE REPRESENTATIVE, SHALL BE PROVIDED DURING ALL SUBDRAIN INSTALLATION. (SECTION J107.2 OF THE COUNTY OF LOS ANGELES BUILDING CODE)
  - ALL SUBDRAIN OUTLETS ARE TO BE SURVEYED FOR LINE AND ELEVATION. SUBDRAIN INFORMATION MUST BE SHOWN ON AN "AS BUILT" GRADING PLAN.
  - FILL SLOPES IN EXCESS OF 2:1 STEEPNESS RATIO ARE TO BE CONSTRUCTED BY THE PLACEMENT OF SOIL AT SUFFICIENT DISTANCE BEYOND THE SLOPE TO ALLOW COMPACTING EQUIPMENT TO BE OPERATED AT THE OUTER LIMITS OF THE FINAL SLOPE SURFACE. THE EXCESS FILL IS TO BE REMOVED PRIOR TO COMPLETION OF ROUGH GRADING. OTHER CONSTRUCTION PROCEDURES MAY BE USED WHEN IT IS DEMONSTRATED TO THE SATISFACTION OF THE BUILDING OFFICIAL THAT THE ANGLE OF SLOPE, CONSTRUCTION METHOD AND OTHER FACTORS WILL HAVE EQUIVALENT EFFECT. (SECTION J107.5 OF THE COUNTY OF LOS ANGELES BUILDING CODE.)

- PLANTING AND IRRIGATION NOTES**
- PLANTING AND IRRIGATION ON GRADED SLOPES MUST COMPLY WITH THE FOLLOWING MINIMUM GUIDELINES:
    - THE SURFACE OF ALL CUT SLOPES MORE THAN 3 FEET IN HEIGHT AND FILL SLOPES MORE THAN 3 FEET IN HEIGHT SHALL BE PROTECTED AGAINST EROSION BY PLANTING WITH GRASS OR GROUNDCOVER PLANTS. SLOPES EXCEEDING 15 FEET IN VERTICAL HEIGHT SHALL ALSO BE PLANTED WITH SHRUBS, SPACED AT NOT TO EXCEED 10 FEET ON CENTERS, OR TREES, SPACED AT NOT TO EXCEED 20 FEET ON CENTERS, OR A COMBINATION OF SHRUBS AND TREES AT EQUIVALENT SPACING, IN ADDITION TO THE GRASS OR GROUNDCOVER PLANTS. THE PLANTS SELECTED AND PLANTING METHODS USED SHALL BE SUITABLE FOR THE SOIL AND CLIMATIC CONDITIONS OF THE SITE. PLANT MATERIAL SHALL BE SELECTED WHICH WILL PRODUCE A COVERAGE OF PERMANENT PLANTING EFFECTIVELY CONTROLLING EROSION. CONSIDERATION SHALL BE GIVEN TO DEEP-ROOTED PLANTING MATERIAL, LIMITED WATERING, MAINTENANCE, HIGH ROOT TO SHOOT RATIO, WIND SUSCEPTIBILITY AND FIRE-RETARDANT CHARACTERISTICS. ALL PLANT MATERIALS MUST BE APPROVED BY THE BUILDING OFFICIAL. (SECTION J103.3 OF THE COUNTY OF LOS ANGELES BUILDING CODE)
  - PLANTING MAY BE MODIFIED FOR THE SITE IF SPECIFIC RECOMMENDATIONS ARE PROVIDED BY BOTH THE SOILS ENGINEER AND A LANDSCAPE ARCHITECT. SPECIFIC RECOMMENDATIONS MUST CONSIDER SOILS AND CLIMATIC CONDITIONS, IRRIGATION REQUIREMENTS, PLANTING METHODS, FIRE RETARDANT CHARACTERISTICS, WATER EFFICIENCY, MAINTENANCE NEEDS, AND OTHER REGULATORY REQUIREMENTS. SLOPES MUST INCLUDE A FINDING THAT THE ALTERNATIVE PLANTING WILL PROVIDE A PERMANENT AND EFFECTIVE METHOD OF EROSION CONTROL. MODIFICATIONS TO PLANTING MUST BE APPROVED BY THE BUILDING OFFICIAL PRIOR TO INSTALLATION.

- BEST MANAGEMENT PRACTICE NOTES**
- EVERY EFFORT SHOULD BE MADE TO ELIMINATE THE DISCHARGE OF NON-STORMWATER FROM THE PROJECT SITE AT ALL TIMES.
  - ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON-SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEET FLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSES OR FILL.
  - STOCKPILES OF EARTH AND OTHER CONSTRUCTION RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER.
  - FUELS, OILS, SOLVENTS, AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTINGS AND ARE NOT TO CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM.
  - EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON-SITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.
  - TRASH AND CONSTRUCTION RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND.
  - SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DEPOSITIONS MUST BE SWEEP UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
  - ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION MUST BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER.

**EARTHWORK NOTICE TO CONTRACTOR.** THE CONTRACTOR IS SOLELY RESPONSIBLE FOR VERIFYING THE EARTHWORK QUANTITIES NECESSARY TO COMPLETE THE PROJECT. EARTHWORK QUANTITIES SHOWN ON THIS GRADING ARE FOR CHECK PURPOSES ONLY. THE OWNER WILL NOT ACCEPT CHANGE ORDERS, RELATED TO EARTHWORK VOLUME DISCREPANCIES, FROM THOSE DETERMINED BY THE CONTRACTOR AND THOSE SHOWN ON THIS SHEET.

I CERTIFY THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ENSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED, BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, TO THE BEST OF MY KNOWLEDGE AND BELIEF. THE INFORMATION SUBMITTED IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT SUBMITTING FALSE AND/OR INACCURATE INFORMATION, FAILING TO UPDATE THE ESCP TO REFLECT CURRENT CONDITIONS, OR FAILING TO PROPERLY AND/OR ADEQUATELY IMPLEMENT THE ESCP MAY RESULT IN REVOCATION OF GRADING AND/OR OTHER PERMITS OR OTHER SANCTIONS PROVIDED BY LAW.

PRINT NAME: \_\_\_\_\_ (OWNER OR AUTHORIZED AGENT OF THE OWNER)  
 SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_  
 (OWNER OR AUTHORIZED AGENT OF THE OWNER)

THE FOLLOWING BMPs AS OUTLINED IN, BUT NOT LIMITED TO, THE LATEST EDITION OF THE CASQA CONSTRUCTION BMP ONLINE HANDBOOK OR CALTRANS STORMWATER QUALITY HANDBOOKS (CONSTRUCTION SITE BMP MANUAL), MAY APPLY DURING THE CONSTRUCTION OF THIS PROJECT (ADDITIONAL MEASURES MAY BE REQUIRED IF DEEMED APPROPRIATE BY THE PROJECT ENGINEER OR THE BUILDING OFFICIAL)

- EROSION CONTROL**
- EC1 - SCHEDULING
  - EC2 - PRESERVATION OF EXISTING VEGETATION
  - EC3 - HYDRAULIC MULCH
  - EC4 - HYDROSEEDING
  - EC5 - SOIL BINDERS
  - EC6 - STRAW MULCH
  - EC7 - GEOTEXTILES & MATS
  - EC8 - WOOD MULCHING
  - EC9 - EARTH DIKES AND DRAINAGE SWALES
  - EC10 - VELOCITY DISSIPATION DEVICES
  - EC11 - SLOPE DRAINS
  - EC12 - STREAMBANK STABILIZATION
  - EC13 - RESERVED
  - EC14 - COMPOST BLANKETS
  - EC15 - SOIL PREPARATION/CHENING
  - EC16 - NON-VEGETATED STABILIZATION
- TEMPORARY SEDIMENT CONTROL**
- SE1 - SILT FENCE
  - SE2 - SEDIMENT BASIN
  - SE3 - SEDIMENT TRAP
  - SE4 - CHECK DAM
  - SE5 - FIBER ROLLS
  - SE6 - GRAVEL BAG BERM
  - SE7 - STREET SWEEPING AND VACUUMING
  - SE8 - SANDBAG BARRIER
  - SE9 - STRAW BALE BARRIER
  - SE10 - STORM DRAIN INLET PROTECTION
  - SE11 - ACTIVE TREATMENT SYSTEMS
  - SE12 - TEMPORARY SILT DIKE
  - SE13 - COMPOST SOCKS & BERMS
  - SE14 - BIOPILER BAGS
- WIND EROSION CONTROL**
- WE1 - WIND EROSION CONTROL

- EQUIPMENT TRACKING CONTROL**
- TC1 - STABILIZED CONSTRUCTION ENTRANCE EXIT
  - TC2 - STABILIZED CONSTRUCTION ROADWAY
  - TC3 - ENTRANCE/OUTLET TIRE WASH
- NON-STORMWATER MANAGEMENT**
- NS1 - WATER CONSERVATION PRACTICES
  - NS2 - DEWATERING OPERATIONS
  - NS3 - PAVING AND GRINDING OPERATIONS
  - NS4 - TEMPORARY STREAM CROSSING
  - NS5 - CLEAR WATER DIVERSION
  - NS6 - ILLICIT CONNECTION/DISCHARGE
  - NS7 - POTABLE WATER/IRRIGATION
  - NS8 - VEHICLE AND EQUIPMENT CLEANING
  - NS9 - VEHICLE AND EQUIPMENT FUELING
  - NS10 - VEHICLE AND EQUIPMENT MAINTENANCE
  - NS11 - PILE DRIVING OPERATIONS
  - NS12 - CONCRETE CURING
  - NS13 - CONCRETE FINISHING
  - NS14 - MATERIAL AND EQUIPMENT USE
  - NS15 - DEMOLITION ADJACENT TO WATER
  - NS16 - TEMPORARY BATCH PLANTS
- WASTE MANAGEMENT & MATERIAL POLLUTION CONTROL**
- WM1 - MATERIAL DELIVERY AND STORAGE
  - WM2 - MATERIAL USE
  - WM3 - STOCKPILE MANAGEMENT
  - WM4 - SPILL PREVENTION AND CONTROL
  - WM5 - SOLID WASTE MANAGEMENT
  - WM6 - HAZARDOUS WASTE MANAGEMENT
  - WM7 - CONTAMINATION SOIL MANAGEMENT
  - WM8 - CONCRETE WASTE MANAGEMENT
  - WM9 - SANITARY/SPECIFIC WASTE MANAGEMENT
  - WM10 - LIQUID WASTE MANAGEMENT

**UTILITIES - SEPARATE PERMITS REQUIRED**

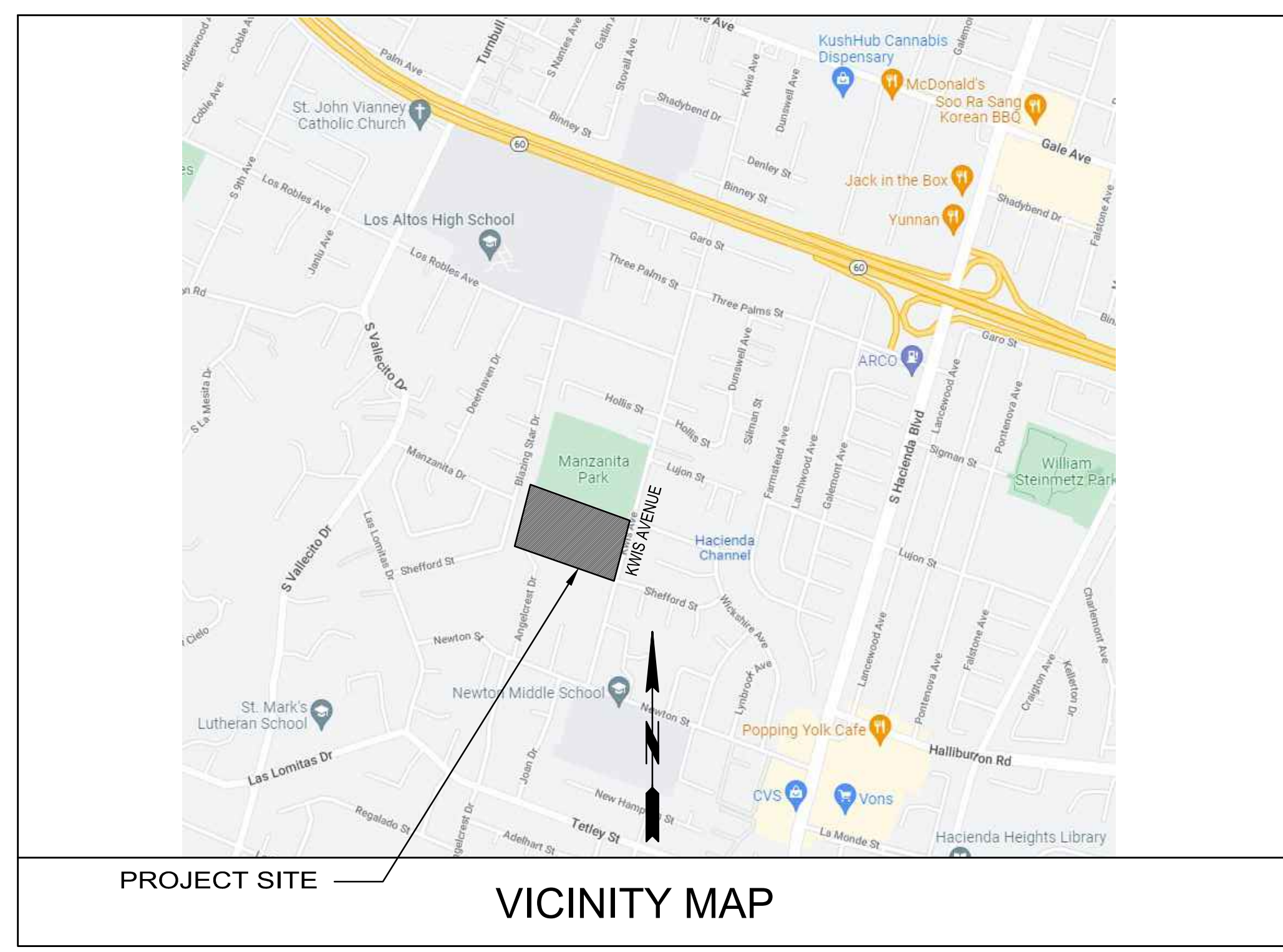
UTILITIES, SUCH AS WATER, ELECTRICAL, PLUMBING, MECHANICAL, AND SEWER SHOWN ON GRADING PLANS ARE PROVIDED FOR REFERENCE ONLY AND MAY REQUIRE SEPARATE PERMIT.

**PRIVATE ENGINEERS NOTICE TO CONTRACTORS:**

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS IS REQUIRED BY A SEARCH OF AVAILABLE RECORDS TO THE BEST OF OUR KNOWLEDGE. THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THIS MAP. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT OF RECORD OR NOT SHOWN ON THIS DRAWING. PRIOR TO EXCAVATION THE CONTRACTOR SHALL CALL TOLL FREE 1-800-422-4133 TO VERIFY THE UNDERGROUND LOCATION OF GAS AND TELEPHONE LINES. THE CONTRACTOR SHALL ALSO CALL MR. RAY CLUMMINGS OF GENERAL TELEPHONE COMPANY AT 1-805-948-4871 SO THAT THEY CAN MARK THE LOCATION OF UNDERGROUND TELEPHONE LINES.

*Alan W. Dillie* 9/20/2022  
 PROJECT ENGINEER RCE NO. 34971 DATE

*Alan W. Dillie* 9/20/2022  
 CIVIL ENGINEER/LAND SURVEYOR RCE NO. 34971 DATE



**ENGINEERING'S/SURVEYOR'S STATEMENT REGARDING THE PRESENCE OF MONUMENTS WITHIN PROJECT LIMITS**

I HEREBY ATTEST THAT I HAVE LOCATED AND REFERENCED ON THESE PLANS THE MONUMENTS EXISTING PRIOR TO CONSTRUCTION TO ENSURE PEDESTALATION OF THEIR LOCATION IN ACCORDANCE WITH SECTION 8771 OF THE BUSINESS AND PROFESSIONS CODE. I FURTHER ATTEST THAT I HAVE PERFORMED A RECORD SEARCH AND FIELD INSPECTION TO IDENTIFY EXISTING MONUMENTS; SHALL SET SUFFICIENT CONTROLLING, WITHNESS, AND PERMANENT MONUMENTS; AND SHALL FILE THE REQUIREITE CORNER RECORD OR RECORD OF SURVEY OF THE REFERENCES WITH THE COUNTY SURVEYOR.

ENGINEER/SURVEYOR SEAL & SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

**FLOOD ZONE**

FLOOD ZONE INFORMATION IS PER AVAILABLE FEDERAL EMERGENCY MANAGEMENT (FEMA) MAPS AS OF THE OBSERVABLE EVIDENCE DATE HEREON. FEMA MAKES NO REPRESENTATION AS TO THE ACCURACY OF THIS INFORMATION.

FEMA MAP NO.: 06037C1875F  
 COMMUNITY NAME NO.: UNINCORPORATED AREA OF LOS ANGELES COUNTY / 0685043  
 MAP DATE: 02/06/2008  
 FLOOD ZONE: X  
 DESCRIPTION: AREAS OF MODERATE OR MINIMAL HAZARD FROM THE PRINCIPAL SOURCE OF FLOOD IN THIS AREA. PROPERTY SHOWN ON THIS SURVEY IS NOT LOCATED IN A SPECIAL FLOOD HAZARDOUS AREA PER SAID FEMA MAP.

**BASIS OF BEARINGS**

NORTH 14° 59' 35" EAST ALONG THE CENTERLINE OF KWIS AVENUE AS SHOWN ON TRACT NO. 22725, MB 02483-65.

**BENCH MARK INFORMATION**

**COUNTY BENCH MARK**

B.M. G 5218 ELEV. 421.510

\*LACO BM TAG IN N CB 1FT W/O BCR @ NW COR NEWTON ST & KWIS AVE\*

WHITTIER QUAD ADJUSTED 2005

SHEET INDEX	
SHEET	DESIGNATION
C-1.0	SITE IMPROVEMENT PLAN TITLE SHEET
C-1.1	GRADING & DRAINAGE PLAN
C-1.2	GRADING & DRAINAGE DETAILS
C-1.3	GRADING & DRAINAGE DETAILS
C-1.4	EROSION & SEDIMENT CONTROL PLAN
C-1.5	EROSION & SEDIMENT CONTROL DETAILS
C-1.6	OVER-EXCAVATION PLAN
C-1.7	OVERALL SITE PLAN

**SCOPE OF WORK:**

REMOVE AND DISPOSE OF EXISTING BACKSTOP FENCING AND CONCRETE DUGOUTS.  
 CONSTRUCT TWO NEW NATURAL TURF BASEBALL FIELDS. CONSTRUCT NEW ASPHALT ROAD FOR FIRE LANE ACCESS ALONG THE NORTH. CONSTRUCT NEW CONCRETE WALKWAYS BETWEEN BASEBALL FIELDS FOR BLEACHERS AND DUGOUTS AND FOR PEDESTRIAN ACCESS TO EXISTING CAMPUS. CONSTRUCT NEW BIOFILTRATION BASIN AND DRY WELL MANHOLE FOR STORMWATER TREATMENT.

**GEOTECHNICAL FIRM** **CONVERSE CONSULTANTS**  
 717 South Myrtle Avenue  
 Marina, CA 91016 Tel: 626-850-1260

**GEOTECHNICAL ENGINEER** LICENSE NO. EXP. DATE

**LOW IMPACT DEVELOPMENT - PRIORITY PROJECT:**

DATE OF MAINTENANCE AGREEMENT:  
 PROPOSED IMPERVIOUS AREA: 30,492 S.F.  
 DESIGN STORM: 85th PERCENTILE  
 SWDDV = 3,682 CF PERCENT TO BE RETAINED ON-SITE: 100%  
 LID SOLUTION: BIOFILTRATION BASIN

I HAVE COMPLIED WITH THE CRITERIA OF MWLEO AND APPLIED THE REQUIREMENTS ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THE GRADING DESIGN PLAN.

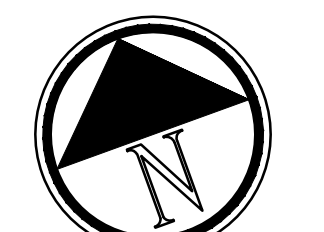
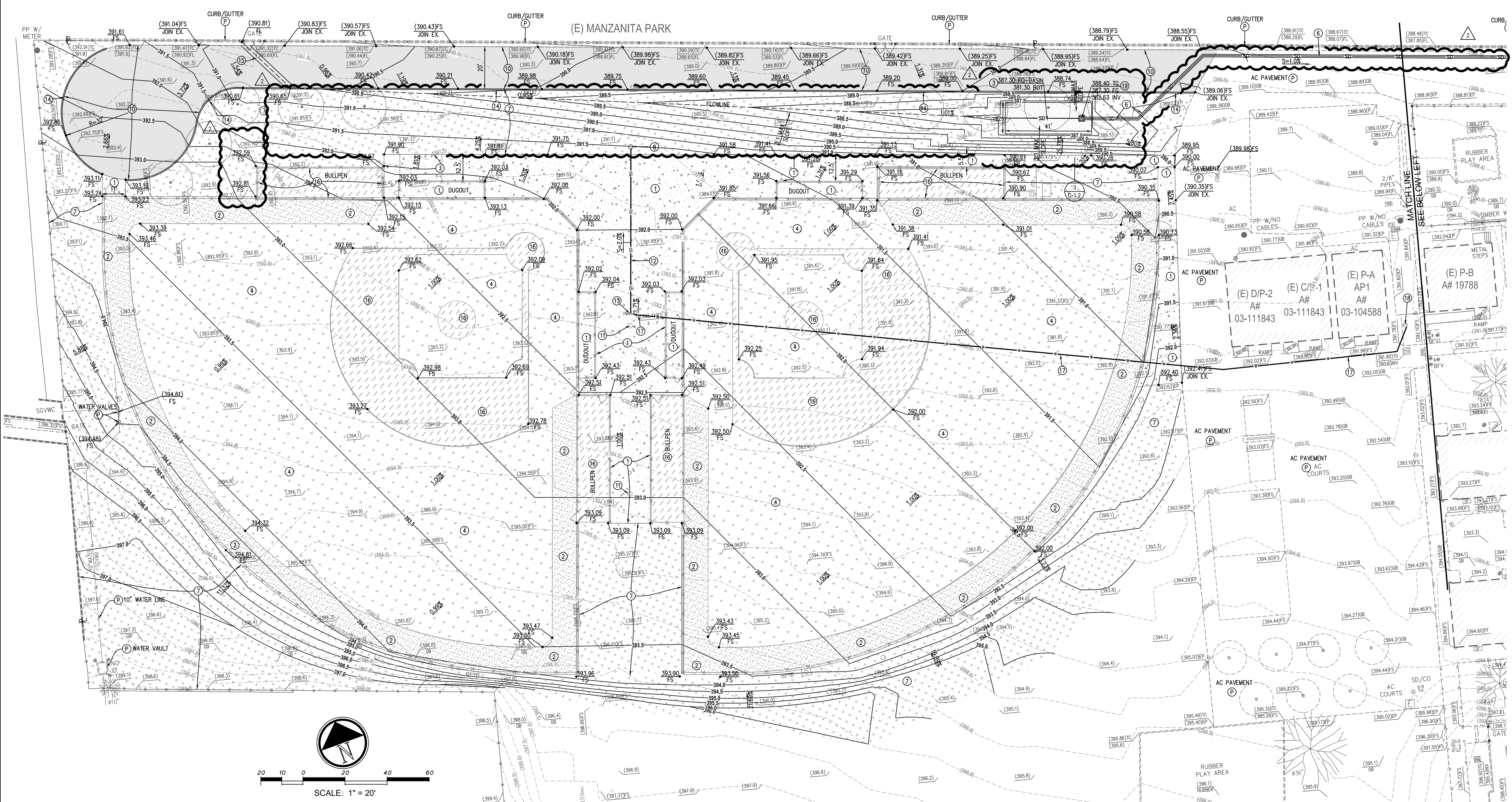
NAME AND SIGNED: \_\_\_\_\_  
 TITLE: \_\_\_\_\_

owner  
 file name:  
 drawn by: checked by:  
 date: 09/22/2022  
 Rev. date: description:  
 9/11/2023 ADDENDUM

**LEGEND**

(S)	SEWER MANHOLE	— (412.5) —	(E) CONTOUR ELEVATION
(D)	STORM DRAIN MANHOLE	413.45	PROPOSED ELEVATION
(T)	TELEPHONE MANHOLE	R	PROPERTY LINE
(F)	FIRE HYDRANT	C	CENTERLINE
(C)	SEWER CLEANOUT	(V)	IRRIGATION VALVE
(W)	WATER VALVE	T	TRASH ENCLOSURE
(G)	GAS VALVE	G	GRATE
(M)	WATER METER	S	SLOPE
(M)	GAS METER	(C)	CURVE DATA
(V)	WATER VAULT	CF	CURB FACE
(V)	GAS VAULT	INV	INVERT
(V)	TELEPHONE VAULT		
(V)	ELECTRIC VAULT		
(V)	ELECTRIC PULLBOX		
(V)	GUY WIRE		
(*)	LIGHT		
— SD —	SD	— W —	W
— S —	S	— G —	G
— E —	E	— C —	C
— SD —	SD		

Plot Date: 9/11/2023 10:25:09 AM Last Save By: colin.tsuai S:\Jobs\2757 - TBP Architects\2757mm - Kwis Elementary School\Civil\Kwis ES - C-1.1 Grading & Drainage Plan.dwg



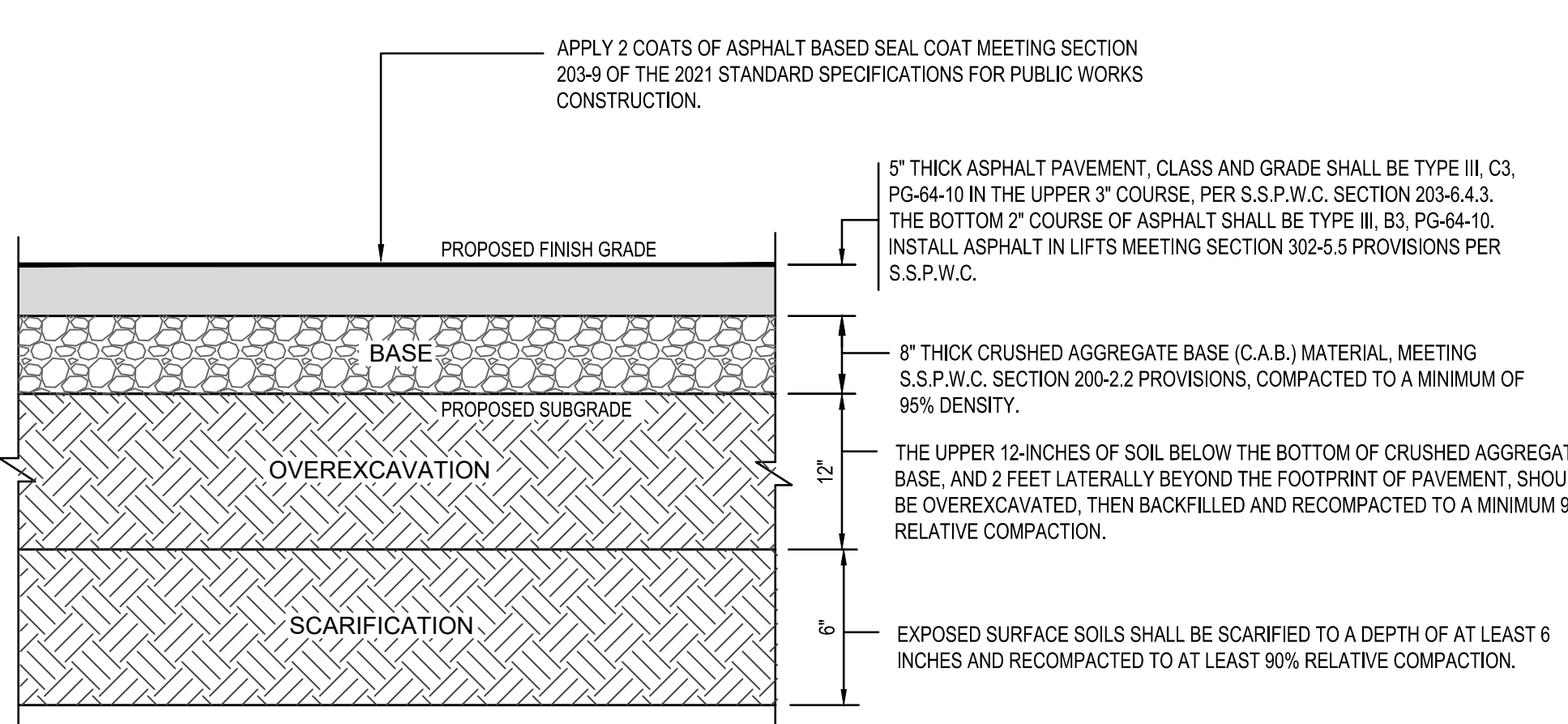
SCALE: 1" = 20'

NOTE: THE DESIGN INTENT OF THIS DRYWELL MANHOLE IS THAT WHEN IT FILLS UP WITH WATER, THE WATER WILL BURP/SPILL OUT OF THE GRATED MANHOLE INLET, AND SHEET FLOW INTO THE EXISTING CATCH BASIN TO ITS RIGHT. THE WATER WILL NOT DRAIN OVER THE PUBLIC SIDEWALK.

- CONSTRUCTION NOTES**
- PROTECT EXISTING IMPROVEMENT IN PLACE.
  - CONSTRUCT CONCRETE PAVEMENT & JOINTS PER DETAILS ON C-1.3.
  - CONSTRUCT STABILIZED DECOMPOSED GRANITE WARNING TRACK PER DETAIL 21C-1.3.
  - CONSTRUCT BIOFILTRATION BASIN PER DETAIL 31C-1.2.
  - CONSTRUCT NATURAL TURF PER DETAIL 41C-1.3.
  - CONSTRUCT DRYWELL MANHOLE PER DETAIL 51C-1.2.
  - CONSTRUCT 15" H.D.P.E. STORM DRAIN PIPE PER APPLICABLE UTILITY TRENCHING DETAILS ON C-1.2.
  - INSTALL RESTORATION SEEDING.
  - CONSTRUCT DRYWELL TO SERVE DRINKING FOUNTAIN PER DETAIL 81C-1.2.
  - CONSTRUCT NEW WATER SHUT OFF VALVE AT DRINKING FOUNTAIN PER DETAIL 91C-1.2.
  - CONSTRUCT ASPHALT PAVEMENT PER DETAIL 10 HEREON.
  - FUTURE FIELD LIGHTING. SEE ELECTRICAL DRAWINGS FOR INFRASTRUCTURE.
  - CONSTRUCT 2" SCH. 40 P.V.C. PIPE & FITTINGS PER APPLICABLE UTILITY TRENCHING DETAILS ON C-1.2.
  - CONSTRUCT DRINKING FOUNTAIN PER DETAIL 131C-1.3.
  - CONSTRUCT 12" HIGH CONCRETE CURB PER DETAIL 141C-1.2.
  - CONSTRUCT 12" INFIELD SOIL PER DETAIL 151C-1.2.
  - CONSTRUCT 12" SCH. 80 P.V.C. PIPE & FITTINGS PER APPLICABLE UTILITY TRENCHING DETAILS ON C-1.2.
  - CONNECT NEW WATER TO EXISTING IN THIS GENERAL AREA.
  - CONSTRUCT 24" SQUARE CATCH BASIN WITH PARKWAY RATED, ADA GALVANIZED GRATE PER DETAIL 19 ON C-1.3.

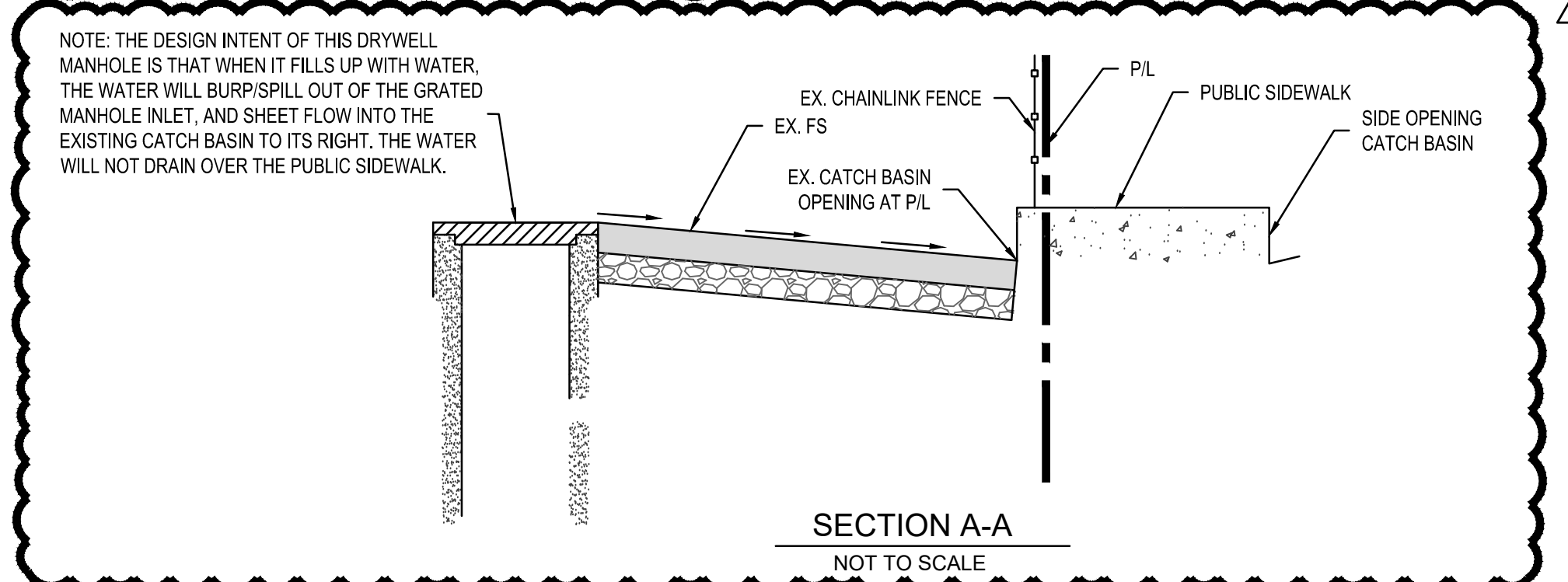
**HATCH LEGEND:**

[Hatch Pattern]	= PROPOSED CONCRETE PAVING
[Hatch Pattern]	= PROPOSED ASPHALT PAVING
[Hatch Pattern]	= PROPOSED NATURAL TURF AREA
[Hatch Pattern]	= PROPOSED DECOMPOSED GRANITE
[Hatch Pattern]	= PROPOSED INFIELD SOIL
[Hatch Pattern]	= PROPOSED RESTORATION SEEDING
[Hatch Pattern]	= PROPOSED BIOFILTRATION BASIN
[Hatch Pattern]	= EXISTING BUILDING TO REMAIN

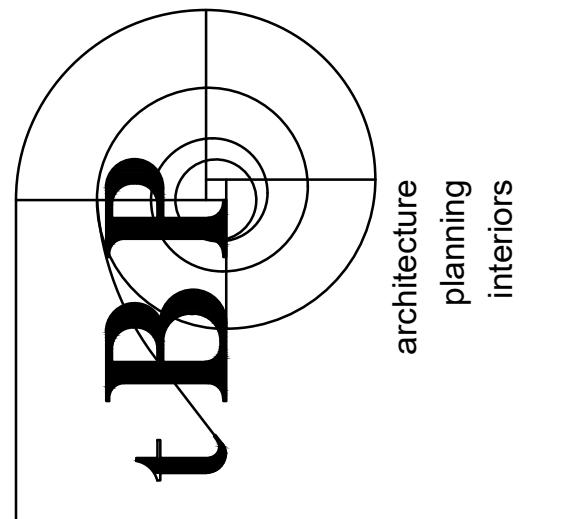


**FLOOD TEST NOTE:**  
BEFORE ACCEPTANCE, ALL ASPHALT SHALL BE WATER TESTED TO ENSURE PROPER DRAINAGE AS DIRECTED BY THE INSPECTOR. THE CONTRACTOR SHALL PROVIDE WATER FOR THIS PURPOSE. THE FLOODING SHALL BE DONE BY WATER TANK TRUCK. DEPRESSIONS WHERE THE WATER POUNDS TO A DEPTH OF MORE THAN 1/8-INCH SHALL BE FILLED OR THE SLOPE CORRECTED TO PROVIDE PROPER DRAINAGE. THE EDGES OF THE FILL SHALL BE FEATHERED AND SMOOTHED SO THAT THE JOINT BETWEEN THE FILL AND THE ORIGINAL SURFACE IS INVISIBLE. NO STANDING WATER SHALL REMAIN AFTER 60 MINUTES ON A 70 DEGREE F (OR WARMER) DAY.

**UTILITIES - SEPARATE PERMITS REQUIRED**  
UTILITIES, SUCH AS WATER, ELECTRICAL, PLUMBING, MECHANICAL, AND SEWER SHOWN ON GRADING PLANS ARE PROVIDED FOR REFERENCE ONLY AND MAY REQUIRE SEPARATE PERMIT.



A# 03 - 122560  
DIVISION OF THE STATE ARCHITECT  
355 S. GRAND AVE., SUITE 2100  
LOS ANGELES, CA 90071  
PH: 213.897.3095 FAX: 213.897.3150/0726  
agency



TBP/Architecture  
4611 Teller Avenue  
Newport Beach, CA 92660  
PH: 949.673.0300  
architect

**FPL and Associates, Inc.**  
Traffic • Transportation • Civil  
30 Corporate Park, Suite 401  
Irvine, CA 92606  
Phone: 949-252-1688



consultant

**KWIS ELEMENTARY SCHOOL  
BASEBALL FIELD IMPROVEMENTS**  
HACIENDA LA PUENTE UNIFIED SCHOOL DISTRICT  
1925 KWIS AVENUE  
HACIENDA HEIGHTS, CALIFORNIA 91745

owner  
tBP project number : 2164.01  
file name:  
drawn by: checked by:  
date: 09/12/2022  
Rev. date: description:  
9/11/2023 ADDENDUM

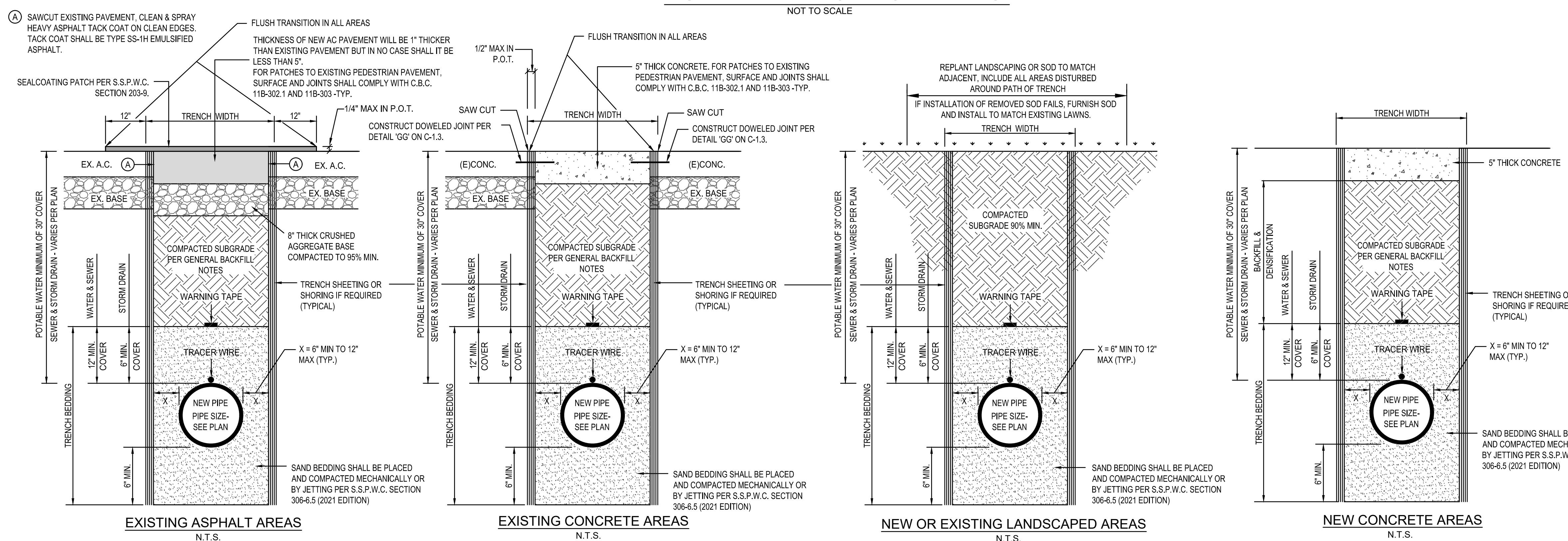
drawing title: **GRADING & DRAINAGE PLAN**

drawing no.: **C-1.1**

drawing of

# UTILITY TRENCHING DETAILS

NOT TO SCALE



## TRENCH EXCAVATION, BEDDING, & BACKFILL NOTES:

EXCAVATION NOTE: THE 2019 CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH REGULATIONS (CAL/OSHA) WILL REQUIRE A PERMIT FOR THE CONSTRUCTION OF TRENCHES OR EXCAVATIONS WHICH ARE FIVE (5) FEET OR DEEPER AND INTO WHICH A PERSON IS REQUIRED TO DESCEND. FOR PERMIT PURPOSES, "DESCEND" MEANS TO ENTER ANY PART OF THE TRENCH OR EXCAVATION ONCE THE EXCAVATION HAS ATTAINED A DEPTH OF 5 FEET OR MORE. FOR REGULATIONS RELATING TO PERMITS FOR EXCAVATIONS AND TRENCHES, REFER TO THE CALIFORNIA CODE OF REGULATIONS TITLE 8, CHAPTER 3.2, ARTICLE 2, SECTION 341 OF THE CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH REGULATIONS (CAL/OSHA).

THE CONTRACTOR SHALL SUBMIT A DETAIL SHOWING THE DESIGN OR SHORING, BRACING SLOPING OR OTHER PROVISIONS TO BE MADE FOR WORKER PROTECTION FROM THE HAZARDS OF CAVING DURING THE EXCAVATION. THE PLAN SUBMITTED SHALL BE SIGNED BY A REGISTERED CIVIL OR STRUCTURAL ENGINEER CERTIFIED THAT THE PLAN COMPLIES WITH ALL OSHA CONSTRUCTION SAFETY ORDERS.

BEDDING MATERIAL SHALL BE COARSE SAND WITH SAND EQUIVALENT OF 35 OR GREATER. NO ANGULAR STONES OR PEA GRAVELS WILL BE ALLOWED IN PIPE BEDDING.

COMPACTION METHODS: ALL BEDDING & BACKFILL COMPACTION SHALL BE BY HAND-OPERATED, PLATE-TYPE, VIBRATORY, OR OTHER SUITABLE HAND-TAMPERS IN AREAS NOT ACCESSIBLE TO LARGER ROLLERS OR COMPACTORS. EXTREME CARE SHALL BE TAKEN TO AVOID DAMAGE TO CONDUITS, PIPES, AND ANY APPURTENANCES. BACKFILL DENATURATION BY INUNDATION OR JETTING SHALL NOT BE PERMITTED WITHOUT PRIOR WRITTEN APPROVAL FROM CIVIL ENGINEER. SAND BEDDING SHALL BE PLACED AND COMPACTED MEETING S.S.P.W.C. SECTION 306-6.5 PLACEMENT AND COMPACTION, 2021 EDITION.

SHEETING: WHEN EXCAVATION DEPTHS OR SOIL CONDITIONS REQUIRE SHORING OR USE OF A TRENCH BOX, THE BOTTOM OF THE SHORING OR TRENCH BOX SHOULD BE PLACED NO LOWER THAN THE TOP OF THE PIPE. THIS PREVENTS DISRUPTION OF THE BACKFILL ENVELOPE WHEN REMOVING THE SHORING OR TRENCH BOX. IF THIS PRACTICE CANNOT BE FOLLOWED, CONSIDERATION SHOULD BE GIVEN TO LEAVING THE SHORING IN PLACE.

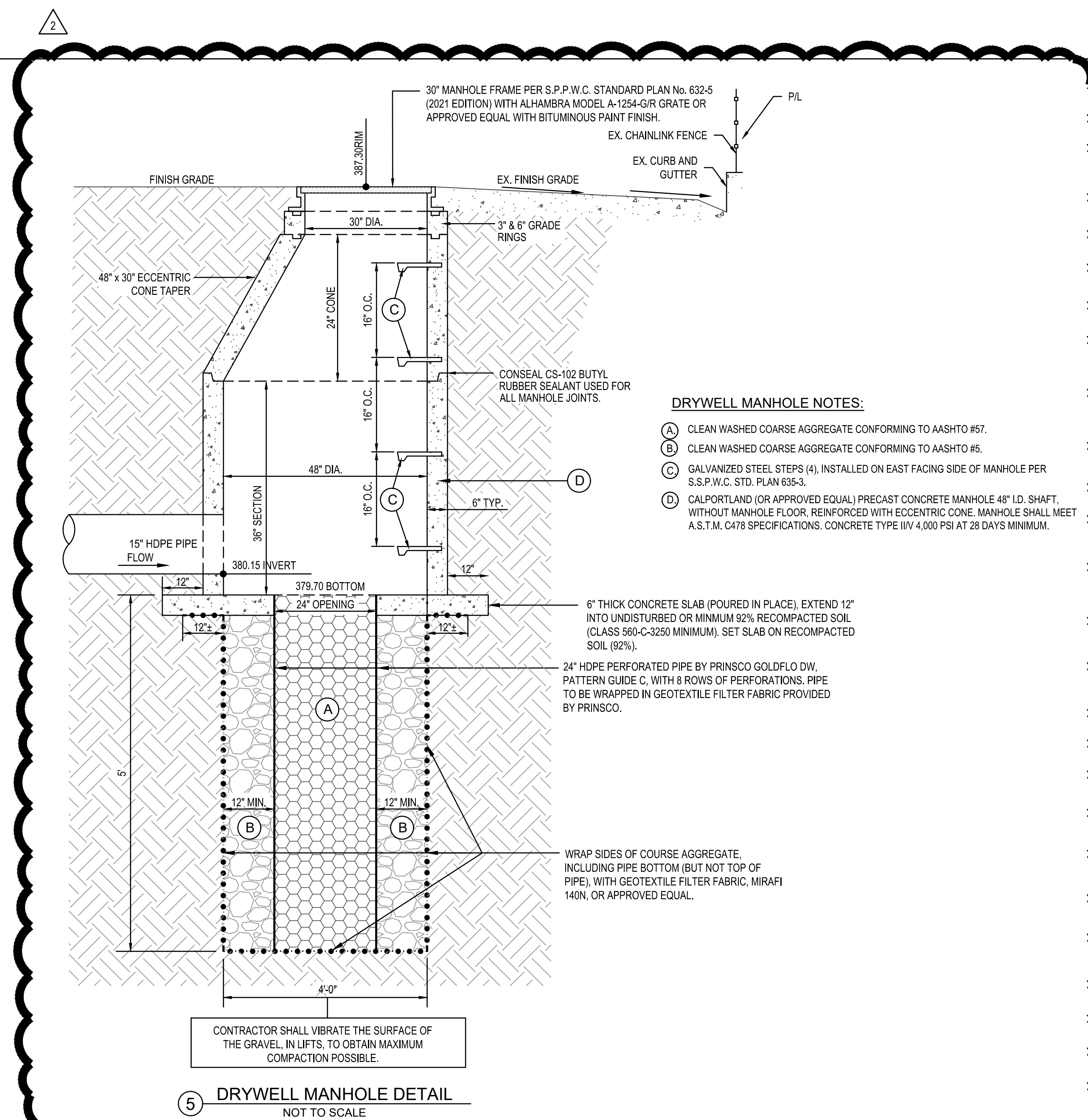
**GENERAL BACKFILL NOTES:**  
EXCAVATED TRENCH MATERIAL TO BE INSTALLED FOR BACKFILLING SHALL BE CLEAN, FREE OF LARGE CLODS AND STONES LARGER THAN 3-INCHES IN ANY DIMENSION. INSTALL BACKFILL MATERIALS IN LAYERS NOT TO EXCEED 8 TO 10-INCHES IN THICKNESS. IN PAVED AREAS, THE SUBGRADE BELOW NEW PAVEMENT SHOULD BE COMPACTED TO A MINIMUM 95% RELATIVE COMPACTION IN THE UPPER 12-INCHES. IN UNPAVED/LANDSCAPE AREAS, THE SUBGRADE SHOULD BE COMPACTED TO A MINIMUM 90% RELATIVE COMPACTION PER ASTM D1557. IN LIEU OF USING NATIVE MATERIAL IN PAVED AREAS, THE USE OF A SLURRY BACKFILL MAY BE SUBSTITUTED. SAND SLURRY SHALL CONSIST OF 2 SACK PORTLAND CEMENT (CLASS 200-E-200) PER CUBIC YARD OF SAND SLURRY MIX. THE CONTRACTOR IS RESPONSIBLE FOR DISPOSAL OF ANY EXCESS BACKFILL MATERIAL FROM THE SITE.

**WARNING TAPE NOTES (POTABLE WATER):**  
A METALLIC LINED TAPE FOR UNDERGROUND PIPES, MARKED "CAUTION BURIED WATER LINE BELOW", IN POLYETHYLENE FILM COLOR BLUE. INSTALLED ABOVE PIPE, MINIMUM 2" WIDE.

**WARNING TAPE NOTES (GAS):**  
A METALLIC LINED TAPE FOR UNDERGROUND PIPES, MARKED "CAUTION GAS LINE BELOW", IN POLYETHYLENE FILM COLOR YELLOW. INSTALLED ABOVE PIPE, MINIMUM 2" WIDE.

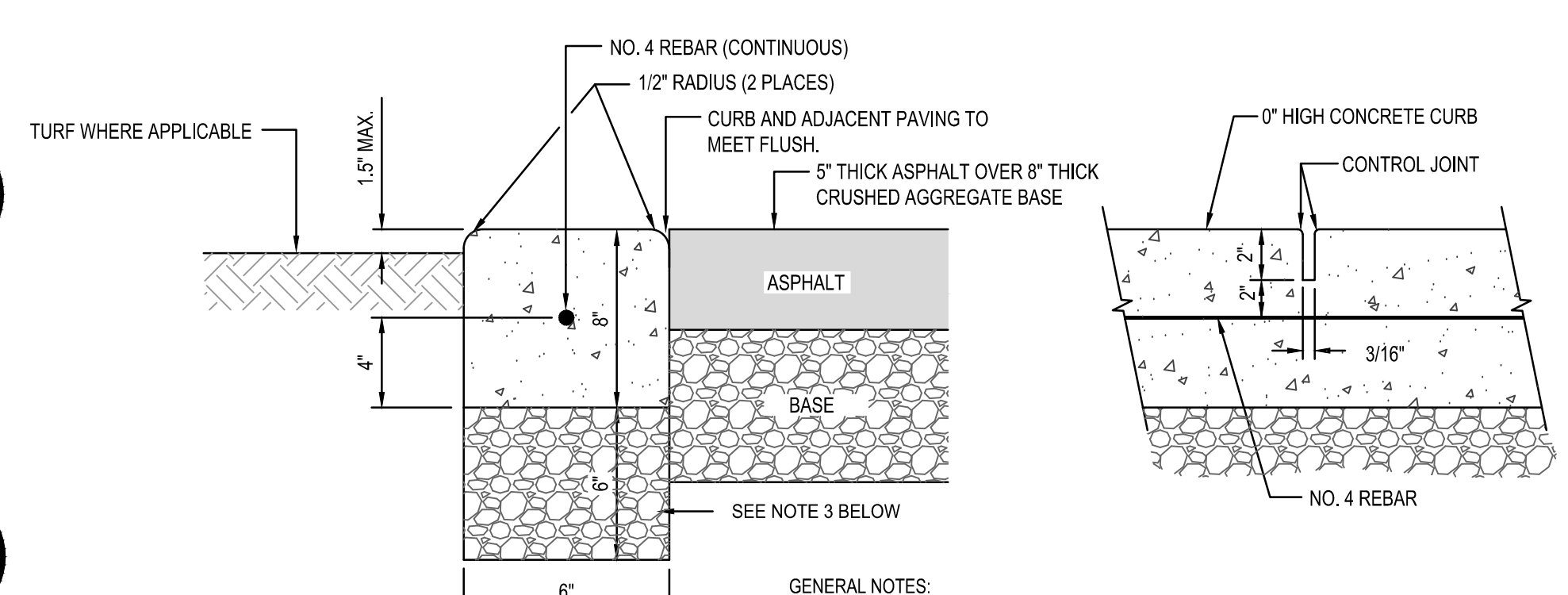
**WARNING TAPE NOTES (STORM DRAIN):**  
A METALLIC LINED TAPE FOR UNDERGROUND PIPES, MARKED "CAUTION STORM DRAIN LINE BELOW", IN POLYETHYLENE FILM COLOR GREEN. INSTALLED ABOVE PIPE, 6" WIDE.

**WARNING TAPE NOTES (SANITARY SEWER):**  
A METALLIC LINED TAPE FOR UNDERGROUND PIPES, MARKED "CAUTION BURIED SEWER LINE BELOW", IN POLYETHYLENE FILM COLOR GREEN. INSTALLED ABOVE PIPE, 6" WIDE.



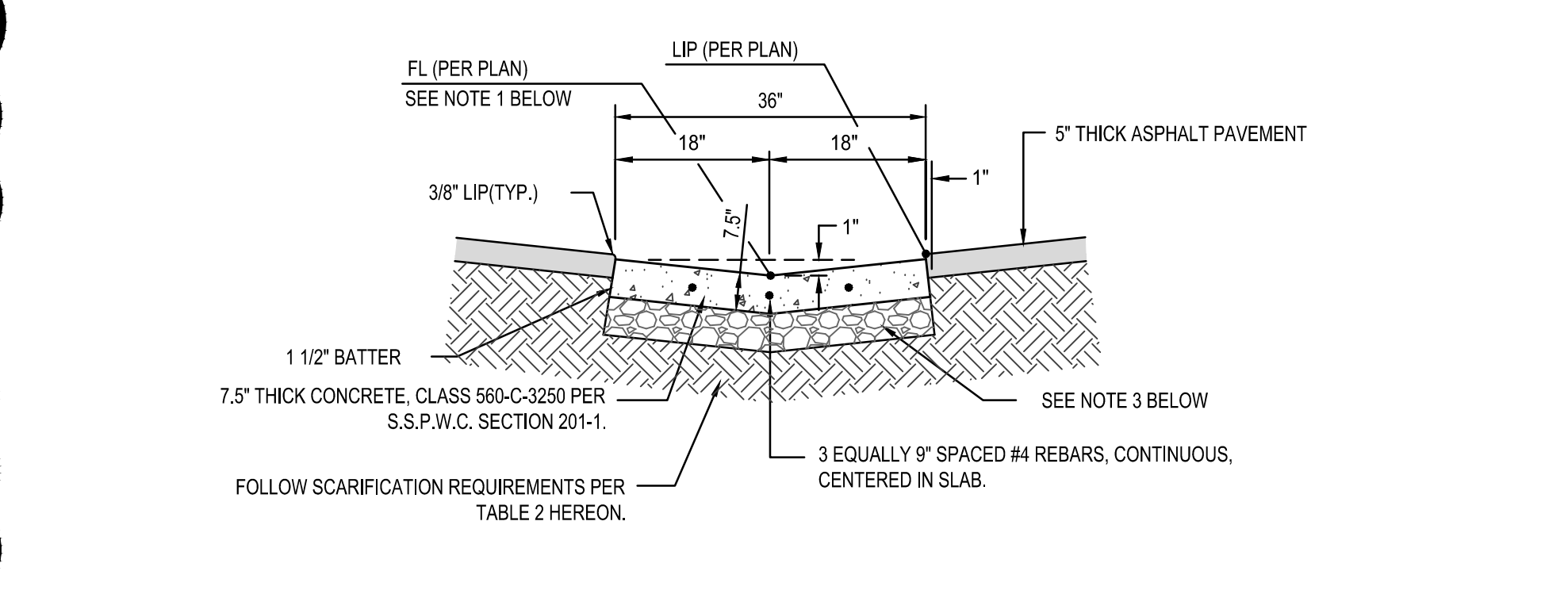
### DRYWELL MANHOLE NOTES:

- (A) CLEAN WASHED COARSE AGGREGATE CONFORMING TO AASHTO #57.
- (B) CLEAN WASHED COARSE AGGREGATE CONFORMING TO AASHTO #5.
- (C) GALVANIZED STEEL STEPS (4), INSTALLED ON EAST FACING SIDE OF MANHOLE PER S.S.P.W.C. STD. PLAN 635-3.
- (D) CALCULATED (OR APPROVED EQUAL) PRECAST CONCRETE MANHOLE 48" I.D. SHAFT WITHOUT MANHOLE FLOOR, REINFORCED WITH ECCENTRIC CONE. MANHOLE SHALL MEET A.S.T.M. C478 SPECIFICATIONS. CONCRETE TYPE IV 4,000 PSI AT 28 DAYS MINIMUM.



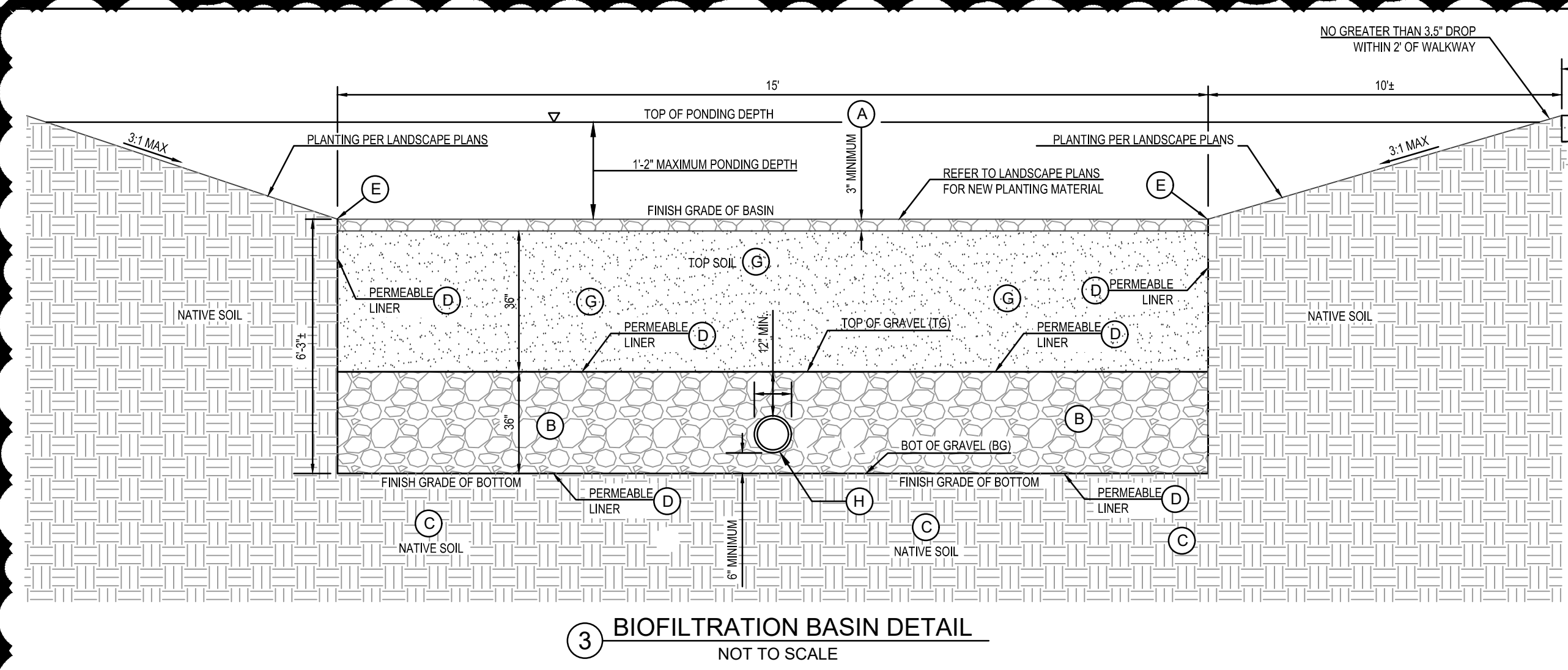
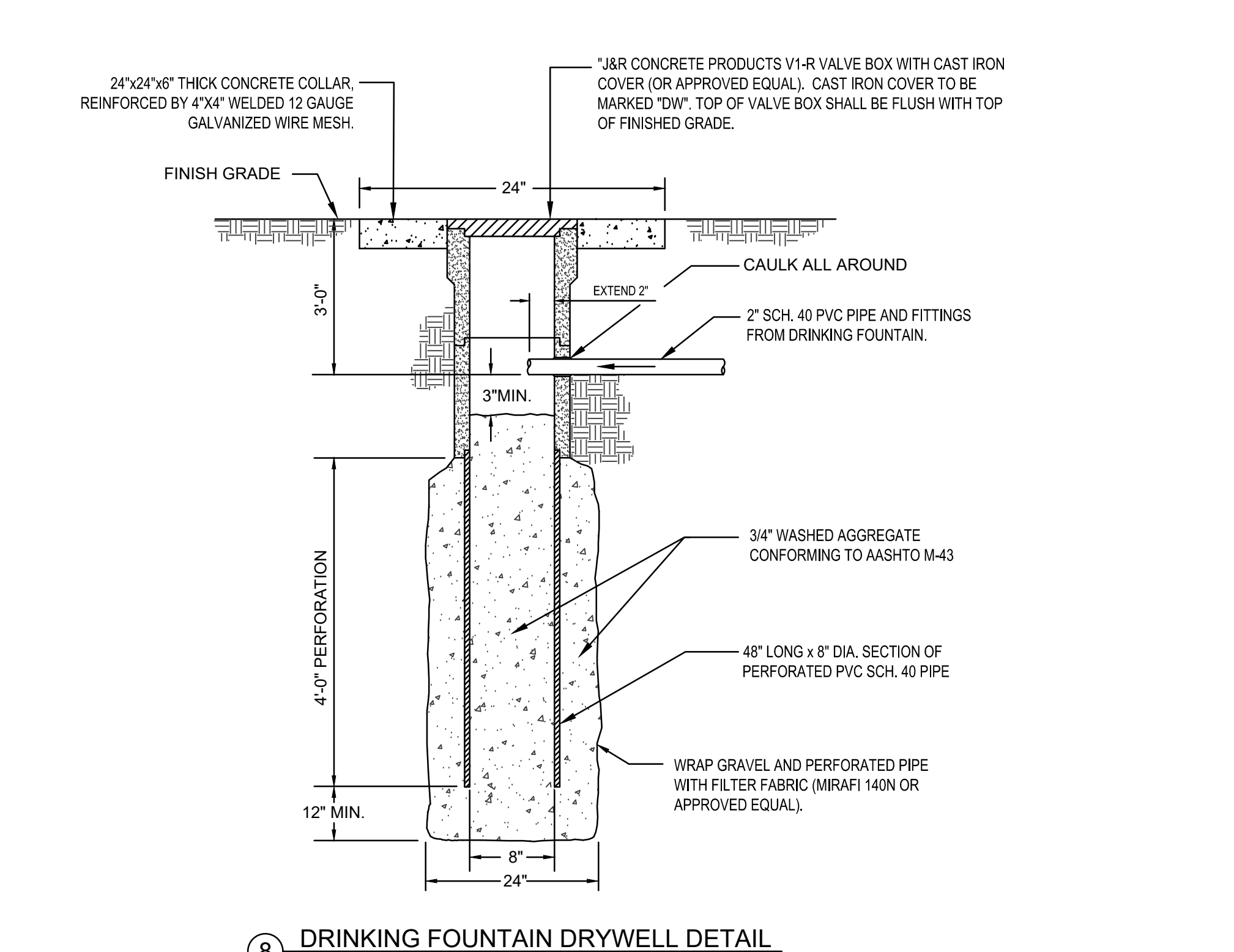
### GENERAL NOTES:

1. ALL EXPOSED EDGES SHALL HAVE A 1/2" RADIUS.
2. CONTROL JOINTS SHALL BE PLACED IN CURBING AT REGULAR INTERVALS OF 10'. EXPANSION JOINTS AT 30' INTERVALS AND AT DRIVE APPROACHES, B.C.S., E.C.S., CROSS GUTTERS AND CATCH BASIN TRANSITIONS.
3. A 6" THICK LAYER OF CRUSHED AGG BASE SHALL BE PLACED UNDER ALL CURB. MINIMUM COMPACTION OF 95% IS REQUIRED.
4. CONCRETE SHALL BE CLASS 3000-C-3200, PER S.S.P.W.C. SECTION 201-1.



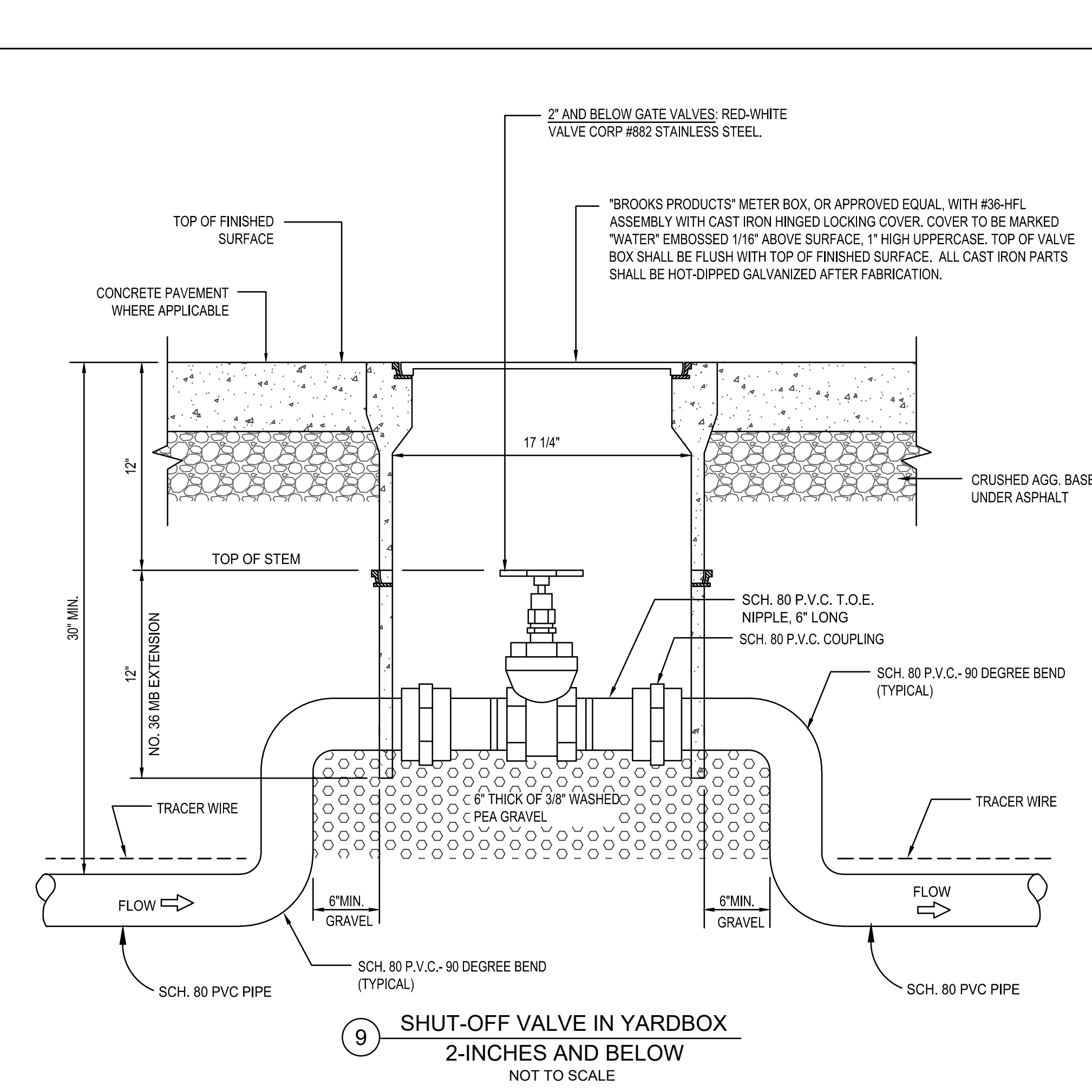
### CONCRETE SWALE NOTES:

1. CONCRETE SWALE SHALL HAVE A 4" WIDE FLOWLINE SMOOTH STEEL TROWEL FINISH.
2. CONSTRUCT CONTROL JOINTS IN SWALE AT REGULAR INTERVALS OF 10'. CONSTRUCT EXPANSION JOINTS AT 40' INTERVALS, PLUS ALL B.C.S. & E.C.S. SEE JOINT DETAILS ON C-1.3.
3. 4" THICK CRUSHED AGGREGATE BASE (C.A.B.) MATERIAL, MEETING S.S.P.W.C. SECTION 200-2.2 PROVISIONS, COMPACTED TO A MINIMUM OF 95% DENSITY.

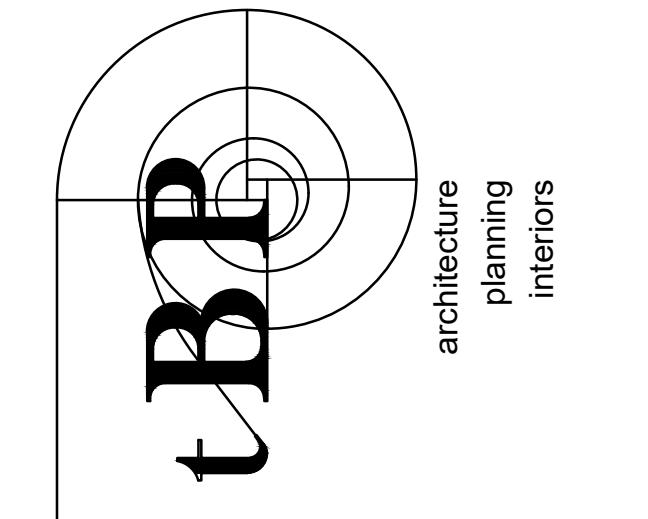


### BIOFILTRATION BASIN NOTES:

- A. CLEAN WASHED COARSE AGGREGATE CONFORMING TO AASHTO #57.
- B. CLEAN WASHED COARSE AGGREGATE CONFORMING TO AASHTO #5.
- C. SCARIFY (SOIL LOOSENING) TOP 18-INCHES OF NATIVE SOIL (SUBGRADE), RECOMPACT TO 85%.
- D. NON-WOVEN GEOTEXTILE FILTER FABRIC INSTALLED AROUND ALL SIDES OF BASIN WITH 12" OVERLAP OF FABRIC SEAMS. ACCEPTABLE FABRICS INCLUDE TERRA TEX SD, MIRAFI 140N, AMOCO 4547, AND GEOTEX 451.
- E. PERMALOC CLEANLINE ALUMINUM LANDSCAPE EDGING 3/16" THICK BY 5.5" DEEP WITH 18" STAKES AROUND ENTIRE PERIMETER OF BIOFILTRATION BASIN. 3 STAKES INCLUDED WITH EACH 6' SECTION AND 5 STAKES WITH 16' SECTIONS.
- G. 24-INCHES OF IMPORTED TOPSOIL MIX: 80% SANDY LOAM, 20% ORGANIC AMENDMENT MIX BY EARTHWORKS SOIL AMENDMENTS, INC. OR APPROVED EQUAL.
- H. 8" HDPE PERFORATED PIPE BY PRINSCO GOLDFLO DW, PATTERN GUIDE C, WITH 8 ROWS OF PERFORATIONS. PIPE TO BE WRAPPED IN GEOTEXTILE FILTER FABRIC PROVIDED BY PRINSCO. NUMBER OF 8" HDPE PIPES SHOWN ON GRADING PLAN.



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**KWIS ELEMENTARY SCHOOL  
BASEBALL FIELD IMPROVEMENTS**  
HACIENDA LA PUENTE UNIFIED SCHOOL DISTRICT  
1925 KWIS AVENUE  
HACIENDA HEIGHTS, CALIFORNIA 91745

owner

tBP project number : 21854.01

file name:

drawn by: checked by:

date: 09/22/2022

Rev. date: description:

9/11/2023 ADDENDUM

drawing title:

**GRADING &  
DRAINAGE DETAILS**

drawing no.:

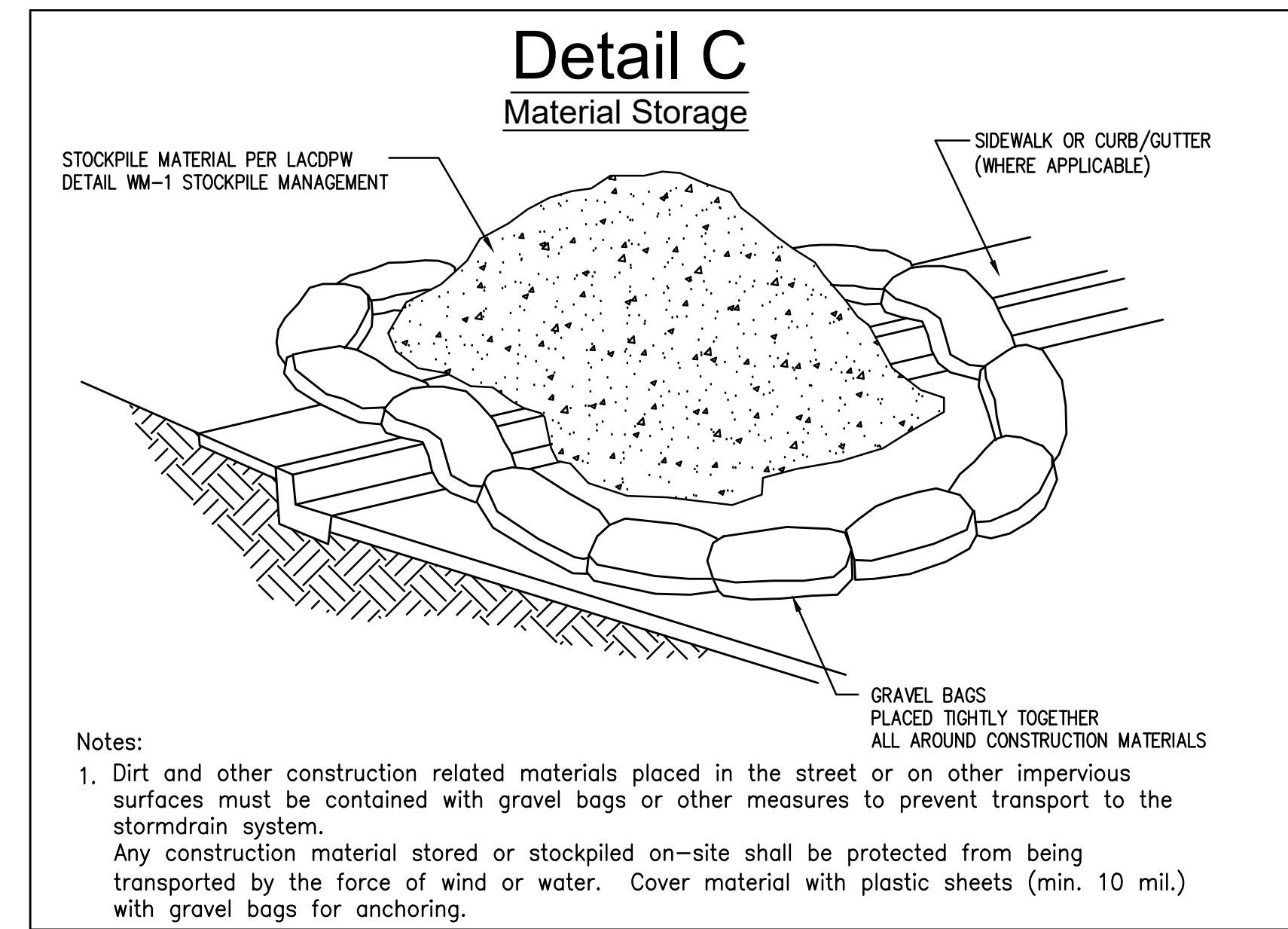
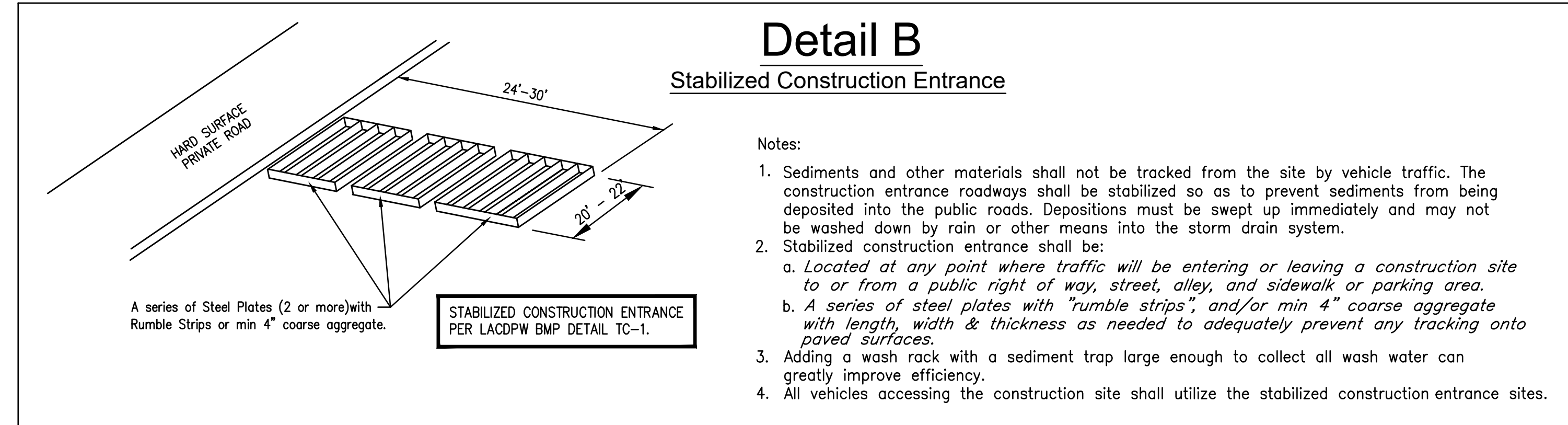
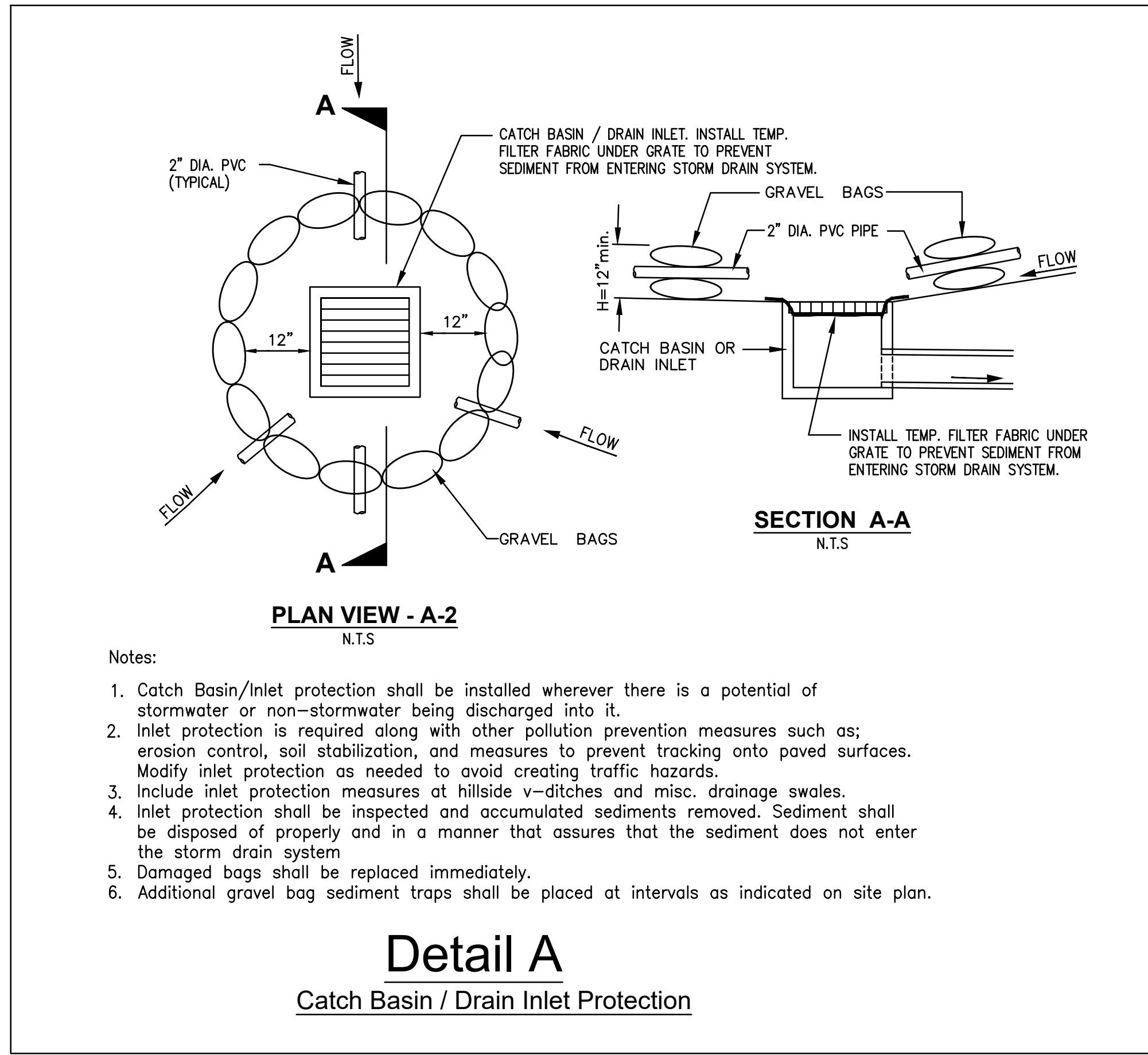
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**EROSION AND SEDIMENT CONTROL PLAN (ESCP) GENERAL NOTES:**

- IN CASE OF EMERGENCY, CALL \_\_\_\_\_ AT \_\_\_\_\_.
- TOTAL DISTURBED AREA 3.7 ACRES WIDTH \_\_\_\_\_.
- RISK LEVEL 2 3 (CIRCLE ONE AS DETERMINED BY STATE GENERAL PERMIT FOR SITES GREATER THAN 1 ACRE)
- A STANDBY CREW FOR EMERGENCY WORK SHALL BE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON (NOVEMBER 1 TO APRIL 15). NECESSARY MATERIALS SHALL BE AVAILABLE ON-SITE AND STOCKPILED AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF EMERGENCY DEVICES WHEN RAIN IS IMMINENT.
- EROSION CONTROL SHOWN ON THIS PLAN MAY BE REMOVED WHEN APPROVED BY THE BUILDING OFFICIAL IF THE GRADING OPERATION HAS PROCEEDED TO THE POINT WHERE THEY ARE NO LONGER REQUIRED.
- GRADED AREAS ADJACENT TO HILL SLOPES LOCATED AT THE SITE PERIMETER MUST DRAIN AWAY FROM THE TOP OF SLOPE AT THE CONCLUSION OF EACH WORKING DAY. ALL LOOSE SOILS AND DEBRIS THAT MAY CREATE A POTENTIAL HAZARD TO OFF-SITE PROPERTY SHALL BE STABILIZED OR REMOVED FROM THE SITE ON A DAILY BASIS.
- ALL SILT AND DEBRIS SHALL BE REMOVED FROM ALL DEVICES WITHIN 24 HOURS AFTER EACH RAINSTORM AND MUST BE DISPOSED OF PROPERLY.
- A GUARD SHALL BE POSTED ON THE SITE WHENEVER THE DEPTH OF WATER IN ANY DEVICE EXCEEDS TWO FEET. THE DEVICE SHALL BE DRAINED OR PUMPED DRY WITHIN 24 HOURS AFTER EACH RAINSTORM. PUMPING AND DRAINING OF ALL BASINS AND OTHER POLLUTANT ON SITE.
- THE PLACEMENT OF ADDITIONAL DEVICE TO REDUCED EROSION DAMAGE AND CONTAIN POLLUTANTS WITHIN THE SITE IS LEFT TO THE DISCRETION OF THE FIELD ENGINEER. ADDITIONAL DEVICES AS NEEDED SHALL BE INSTALLED TO RETAIN SEDIMENTS AND OTHER POLLUTANTS ON SITE.
- DESILTING BASIN MAY NOT BE REMOVED OR MADE INOPERABLE BETWEEN NOVEMBER 1 AND APRIL 15 OF THE FOLLOWING YEAR WITHOUT THE APPROVAL OF THE BUILDING OFFICIAL.
- STORM WATER POLLUTION AND EROSION CONTROL DEVICES ARE TO BE MODIFIED, AS NEEDED, AS THE PROJECT PROGRESSES. THE DESIGN AND PLACEMENT OF THESE DEVICES IS THE RESPONSIBILITY OF THE FIELD ENGINEER. PLANS REPRESENTING CHANGES MUST BE SUBMITTED FOR APPROVAL IF REQUIRED BY THE BUILDING OFFICE.
- EVERY EFFORT SHOULD BE MADE TO ELIMINATE THE DISCHARGE OF NON-STORMWATER FROM THE PROJECT SITE AT ALL TIMES.
- ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON-SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEET FLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSES OR WIND.
- STOCKPILES OF EARTH AND OTHER CONSTRUCTION RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER.
- FUELS, OILS, SOLVENTS, AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM.
- EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON-SITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.
- DEVELOPERS/CONTRACTORS ARE RESPONSIBLE TO INSPECT ALL EROSION CONTROL DEVICES AND BMPs ARE INSTALLED AND FUNCTIONING PROPERLY IF THERE IS A 30% OR GREATER PROBABILITY OF PREDICTED PRECIPITATION, AND AFTER ACTUAL PRECIPITATION. A CONSTRUCTION SITE INSPECTION CHECKLIST AND INSPECTION LOGS SHALL BE MAINTAINED AT THE PROJECT SITE AT ALL TIMES AND AVAILABLE FOR REVIEW BY THE BUILDING OFFICE (COPIES OF THE SELF-INSPECTION CHECK LIST AND INSPECTION LOGS ARE AVAILABLE UPON REQUEST).
- TRASH AND CONSTRUCTION RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND.
- SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DEPOSITIONS MUST BE SWEEPED UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
- ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION MUST BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER.
- AS THE ENGINEER/OSD OF RECORD, I HAVE SELECTED APPROPRIATE BMPs TO EFFECTIVELY MINIMIZE THE NEGATIVE IMPACTS OF THIS PROJECT'S CONSTRUCTION ACTIVITIES ON STORM WATER QUALITY. THE PROJECT OWNER AND CONTRACTOR ARE AWARE THAT THE SELECTED BMPs MUST BE INSTALLED, MONITORED, AND MAINTAINED TO ENSURE THEIR EFFECTIVENESS.

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_  
CIVIL ENGINEER / OSD SIGNATURE

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_  
OWNER OR AUTHORIZED REPRESENTATIVE (PERMITTEE)

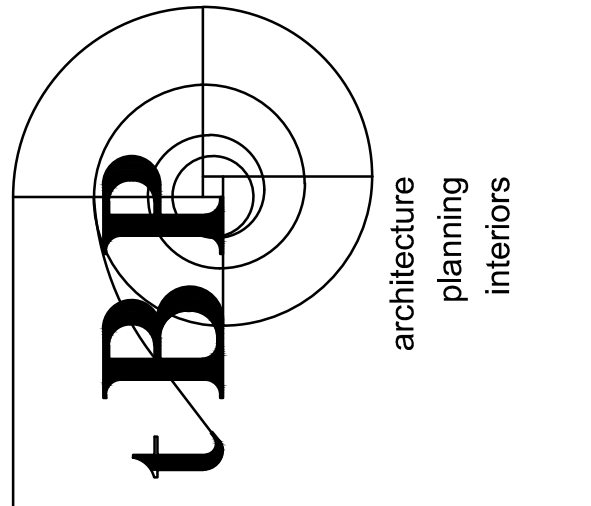
21. AS THE PROJECT OWNER OR AUTHORIZED AGENT OF THE OWNER, I CERTIFY THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH THE SYSTEM DESIGNED TO ENSURE THAT A QUALIFIED PERSONNEL, PROPERTY GATHER AND EVALUATE THE INFORMATION SUBMITTED, BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE INFORMATION SUBMITTED IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT SUBMITTING A FALSE AND/OR INACCURATE INFORMATION, FAILING TO UPDATE THE ESCP TO REFLECT CURRENT CONDITIONS, OR FAILING TO PROPERLY AND/OR ADEQUATELY IMPLEMENT THE ESCP MAY RESULT IN REVOCATION OF GRADING AND/OR OTHER PERMITS OR OTHER SANCTIONS PROVIDED BY LAW.

22. DEVELOPERS/CONTRACTORS ARE RESPONSIBLE TO INSPECT ALL EROSION CONTROL DEVICES AND BMPs ARE INSTALLED AND FUNCTIONING PROPERLY AS REQUIRED BY THE STATE CONSTRUCTION GENERAL PERMIT. A CONSTRUCTION SITE INSPECTION CHECKLIST AND INSPECTION LOG SHALL BE MAINTAINED AT THE PROJECT SITE AT ALL TIMES AND AVAILABLE FOR REVIEW BY THE BUILDING OFFICIAL.

23. THE FOLLOWING BMPs AS OUTLINED IN, BUT NOT LIMITED TO, THE LATEST EDITION OF THE CALIFORNIA BMP HANDBOOK (CONSTRUCTION) OR CALTRANS STORMWATER QUALITY HANDBOOK (CONSTRUCTION SITE BMP MANUAL) MAY APPLY DURING THE CONSTRUCTION OF THIS PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED IF DEEMED APPROPRIATE BY THE PROJECT ENGINEER OR THE BUILDING OFFICIAL.

EROSION CONTROL	EQUIPMENT TRACKING CONTROL	NON-STORMWATER MANAGEMENT
EC1 - SCHEDULING	TC1 - STABILIZED CONSTRUCTION ENTRANCE EXIT	NS1 - WATER CONSERVATION PRACTICES
EC2 - PRESERVATION OF EXISTING VEGETATION	TC2 - STABILIZED CONSTRUCTION ROADWAY	NS2 - SEDIMENTING OPERATIONS
EC3 - HYDRAULIC MULCH	TC3 - ENTRANCE/OUTLET TIRE WASH	NS3 - PAVING AND GRINDING OPERATIONS
EC4 - HYDROSEEDING		NS4 - TEMPORARY STREAM CROSSING
EC5 - SOIL BINDERS		NS5 - CLEAN WATER DIVERSION
EC6 - STRAW MULCH		NS6 - LIGHT CONNECTION/DISCHARGE
EC7 - GEOTEXTILES & MATS		NS7 - PORTABLE WATERBARRIERS
EC8 - WOOD MULCHING		NS8 - VEHICLE AND EQUIPMENT CLEANING
EC9 - SWAY DICES AND DRAINAGE SWALES		NS9 - VEHICLE AND EQUIPMENT WASHING
EC10 - VELOCITY DISSIPATION DEVICES		NS10 - VEHICLE AND EQUIPMENT MAINTENANCE
EC11 - SLOPE DRAINS		NS11 - FUEL DRIVING OPERATIONS
EC12 - STREAMBANK STABILIZATION		NS12 - CONCRETE FINISHING
EC13 - RESERVOIR		NS13 - CONCRETE FINISHING
EC14 - COMPOST BLANKETS		NS14 - MATERIAL AND EQUIPMENT USE
EC15 - SOIL PREPARATION/ROUGHENING		NS15 - DEMOLITION ADJACENT TO WATER
EC16 - NON-VEGETATED STABILIZATION		NS16 - TEMPORARY BATCH PLANTS
<b>TEMPORARY SEDIMENT CONTROL</b>	<b>WASTE MANAGEMENT &amp; MATERIAL POLLUTION CONTROL</b>	
SE1 - SILT FENCE	WM1 - MATERIAL DELIVERY AND STORAGE	
SE2 - SEDIMENT BASIN	WM2 - MATERIAL USE	
SE3 - SEDIMENT TRAP	WM3 - STOCKPILE MANAGEMENT	
SE4 - CHECK DAM	WM4 - SPILL PREVENTION AND CONTROL	
SE5 - PAPER ROLLS	WM5 - SOLID WASTE MANAGEMENT	
SE6 - GRAVEL BAG BERM	WM6 - HAZARDOUS WASTE MANAGEMENT	
SE7 - STREET SWEEPING AND VACUUMING	WM7 - CONTAMINATION SOIL MANAGEMENT	
SE8 - STRAW BALE BARRIER	WM8 - CONCRETE WASTE MANAGEMENT	
SE9 - STORM DRAIN INLET PROTECTION	WM9 - HAZARDOUS WASTE MANAGEMENT	
SE10 - ACTIVE TREATMENT SYSTEMS	WM10 - LIQUID WASTE MANAGEMENT	
SE11 - TEMPORARY SALT DMS	<b>WIND EROSION CONTROL</b>	
SE12 - COMPOST SOCKS & BERMS	WE1 - WIND EROSION CONTROL	
SE13 - COMPOST SOCKS & BERMS		
SE14 - BIOFILTER BAGS		

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**KWIS ELEMENTARY SCHOOL  
BASEBALL FIELD IMPROVEMENTS**  
HACIENDA LA PUENTE UNIFIED SCHOOL DISTRICT  
1925 KWIS AVENUE  
HACIENDA HEIGHTS, CALIFORNIA 91745  
owner

tBP project number : 2164.01

file name:

drawn by: checked by:

date: 09/22/2022

Rev: date: description:

9/11/2023 ADDENDUM

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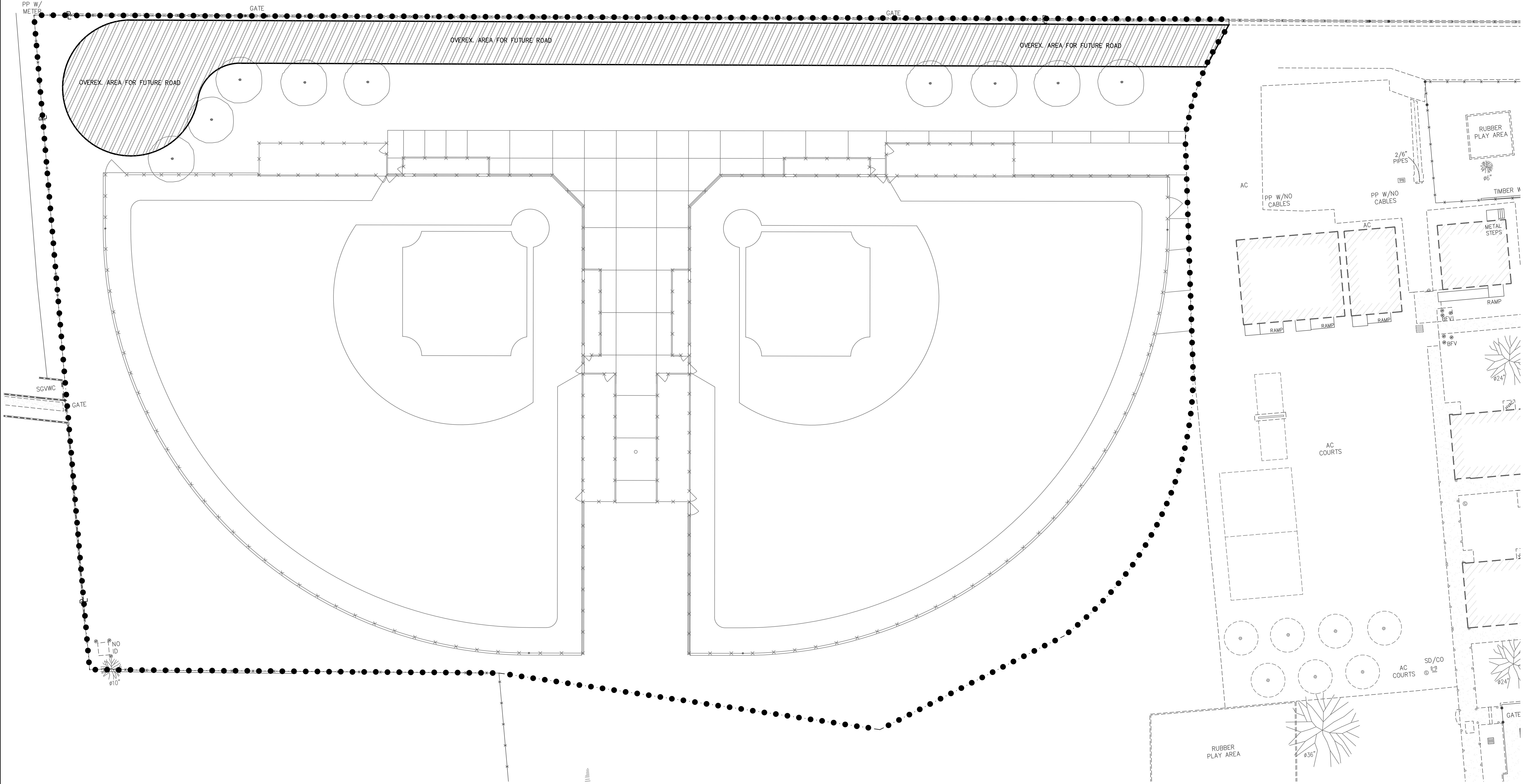
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**EROSION & SEDIMENT CONTROL  
DETAILS**

drawing no.:

C-1.5

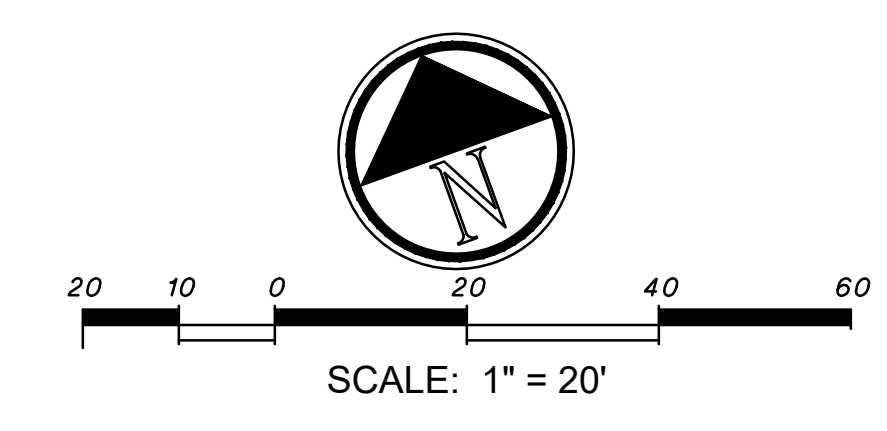
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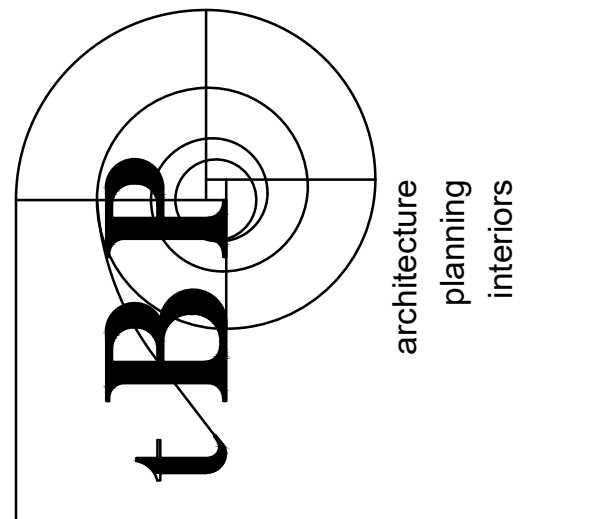


**HATCH LEGEND:**

	= EXISTING BUILDING
	= OVER-EXCAVATION FOR ASPHALT ROAD EXISTING SOIL SHALL BE OVER-EXCAVATED TO A MINIMUM VERTICAL DEPTH OF 12 INCHES BELOW PROPOSED FINISHED SUBGRADE. BACKFILL AND RE-COMPACT SOIL TO MINIMUM 90% DENSITY PER ASTM D-1557. ON-SITE SOILS, LESS DEBRIS OR ORGANIC MATTER, CAN BE USED AS BACKFILL. COBBLES LARGER THAN 4 INCHES SHALL NOT BE USED AS BACKFILL. SCABIFY 6 INCHES DEPTH OF EXPOSED SOILS AND COMPACTED TO A MINIMUM 90% DENSITY PER ASTM D-1557.
	= LIMITS OF GRADING



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consultant

**KWIS ELEMENTARY SCHOOL  
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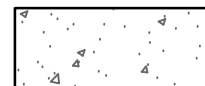
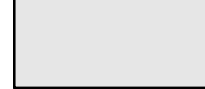

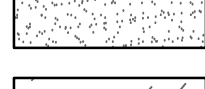
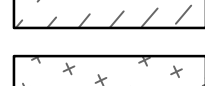
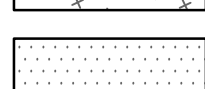



TBP project number :	21654.01
file name:	
drawn by:	checked by:
date:	09/22/2022
Rev. date:	description:
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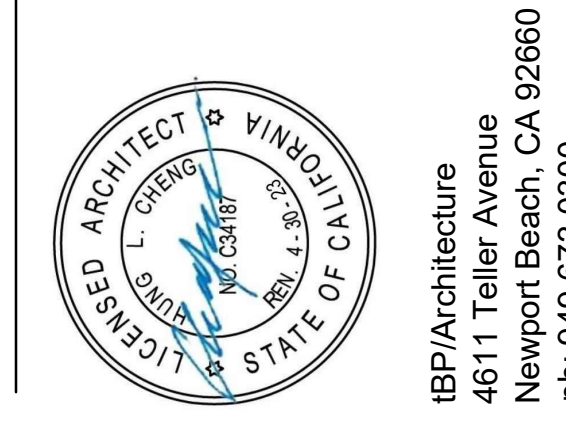
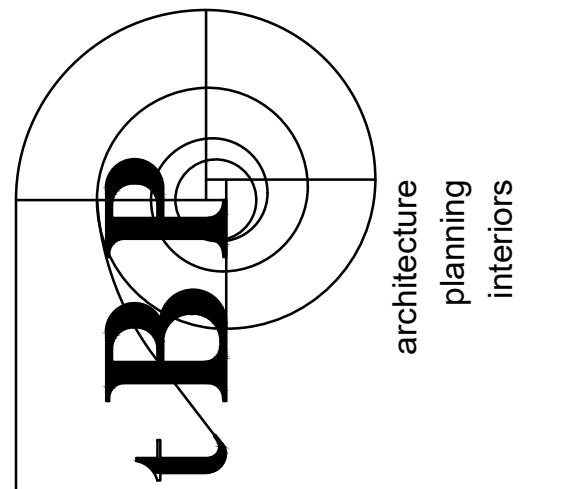
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**OVER-EXCAVATION PLAN**  
 drawing no.:  
**C-1.6**  
 drawing of

Plot Date: 9/11/2023 10:16:23 AM Login: Colin Tsui S:\jobs\2757 - TBP Architects\2757mm - Kwis Elementary School\Civil\LA County\Kwis ES - C-1.7 - Overall Site Plan.dwg Last Save By: colin.tsui



- HATCH LEGEND:**
-  = PROPOSED CONCRETE PAVING
  -  = PROPOSED ASPHALT PAVING
  -  = PROPOSED NATURAL TURF AREA
  -  = PROPOSED DECOMPOSED GRANITE
  -  = PROPOSED INFIELD SOIL
  -  = PROPOSED RESTORATION SEEDING
  -  = PROPOSED BIOFILTRATION BASIN
  -  = EXISTING BUILDING TO REMAIN
  -  = LIMITS OF GRADING

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**KWIS ELEMENTARY SCHOOL  
 BASEBALL FIELD IMPROVEMENTS**  
 HACIENDA LA PUENTE UNIFIED SCHOOL DISTRICT  
 1925 KWIS AVENUE  
 HACIENDA HEIGHTS, CALIFORNIA 91745

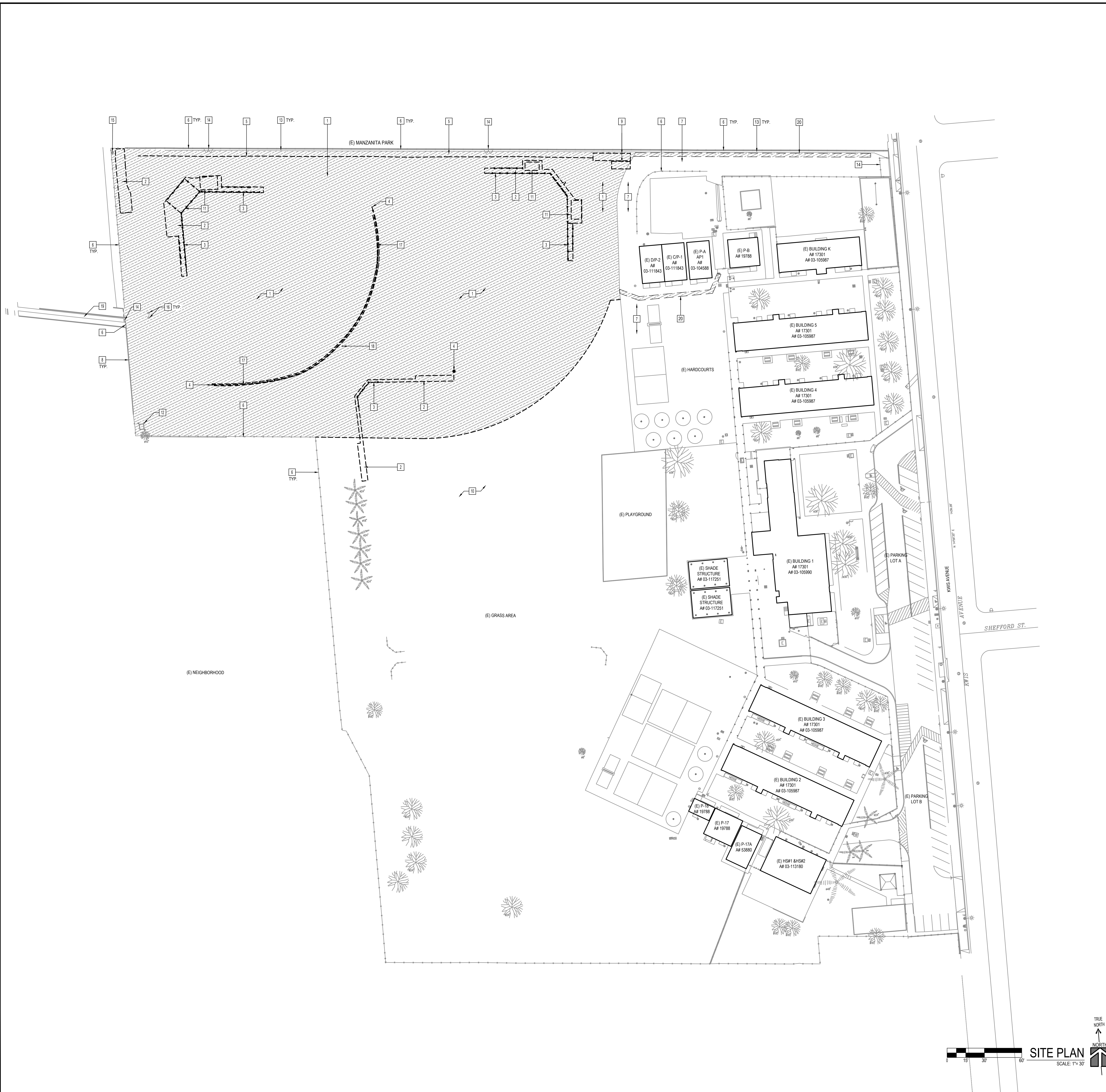
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tBP project number :	21854.01
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date:	09/22/2022
Rev. date:	description:
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**OVERALL SITE PLAN**

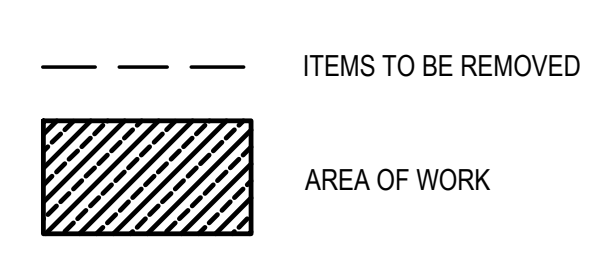
drawing no.:  
**C-1.7**  
 drawing of



**DEMOLITION KEYNOTES**

- 1 REMOVE (E) GRASS FIELD. SEE CIVIL DWGS. FOR MORE INFO.
- 2 DEMOLISH (E) CONCRETE PAD
- 3 DEMOLISH (E) CHAIN LINK BACKSTOP AND FOOTING
- 4 REMOVE (E) POLE AND FOOTING
- 5 REMOVE (E) AC PAVING
- 6 (E) CHAIN LINK FENCE TO REMAIN
- 7 (E) AC PAVING TO REMAIN
- 8 (E) CMU WALL TO REMAIN
- 9 RELOCATE (E) STORAGE CONTAINER TO THE DISTRICT MAINTENANCE YARD
- 10 (E) PLAYFIELDS TO REMAIN - PROTECT IN PLACE
- 11 REMOVE (E) BLEACHERS
- 12 (E) WATER VAULT TO REMAIN
- 13 (E) CURB AND GUTTER TO REMAIN
- 14 (E) CHAINLINK GATE TO REMAIN
- 15 (E) POWER POLE TO REMAIN PROTECT IN PLACE
- 16 (E) WATER VALVES TO REMAIN
- 17 REMOVE (E) CHAINLINK FENCING AND CONCRETE FOOTINGS
- 18 REMOVE (E) SIGN POLE - RETURN SIGNAGE TO DISTRICT
- 19 (E) CONCRETE WALKWAY TO REMAIN
- 20 TRENCH THROUGH (E) AC PAVING - SEE CIVIL DRAWINGS

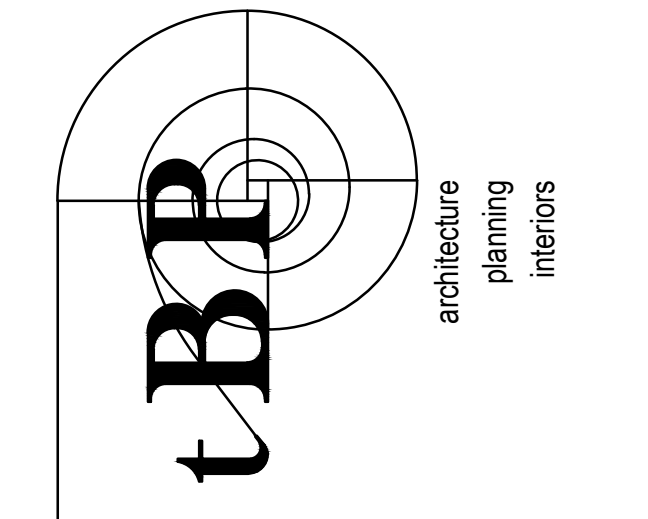
**LEGEND**



**GENERAL NOTES**

1. LOCATIONS OF ALL UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING TO AVOID INTERCEPTING EXISTING PIPING OR CONDUITS. THE ARCHITECT IS NOT RESPONSIBLE FOR THE LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES WHETHER OR NOT SHOWN OR DETAILED AND INSTALLED BY OTHER CONTRACTS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER SHOULD SUCH UNIDENTIFIED CONDITIONS BE DISCOVERED. THESE DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
2. WHERE DEMOLITION OR REMOVAL WORK OCCURS, TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ELEMENTS TO REMAIN. FINISHED WORK DAMAGED BY OPERATIONS UNDER DEMOLITION CONTRACT SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF OWNER AND ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
3. DISPOSITION OF MATERIALS: PROMPTLY REMOVE FROM THE SITE ALL MATERIALS RESULTING FROM DEMOLITION WHICH ARE NOT TO BE REUSED.
4. COORDINATE REMOVAL OF ALL ELECTRICAL FIXTURES, CONDUIT, AND JUNCTION BOXES WITH ELECTRICAL CONTRACTOR.
5. REFER TO CIVIL AND UTILITY PLANS FOR ADDITIONAL DEMOLITION WORK AND COORDINATION FOR TERMINATION POINTS OF UTILITIES.
6. ALL DEMOLITION SHALL COMPLY WITH CH. 34 OF THE CBC AND ARTICLE 87 CFC.
7. WHERE AN EXISTING REQUIRED FIRE PROTECTION SYSTEM WILL BE TEMPORARILY OUT OF SERVICE DUE TO CONSTRUCTION ACTIVITIES, COMPLY WITH CFC SECTIONS 1408 AND 901.
8. REFER TO ELECTRICAL AND PLUMBING PLANS FOR ADDITIONAL DEMOLITION.
9. DURING THE OVER-EXCAVATION PROCESS THE CONTRACTOR MAY ENCOUNTER COBBLE EXCESS OF 6". CONTRACTOR WILL BE RESPONSIBLE FOR REMOVAL AND DISPOSAL OF ANY AND ALL SOIL, ORGANICS, AND COBBLE MATERIAL.
10. REMOVE ALL CONDUITS ON TOP OF EXISTING CMU WALL.
11. REFER TO SHEET T-2 FOR ADDITIONAL GENERAL NOTES, ABBREVIATIONS AND DRAFTING SYMBOLS
12. SEE ALSO SHEETS F-0.2A AND F-0.2B FOR ADDITIONAL DEMOLITION SCOPE
13. NO DEMOLITION SHALL BEGIN UNTIL PLANS INCLUDING DEMOLITION WORK HAS BEEN APPROVED BY DSA

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 architect

consultant

**KWIS ELEMENTARY SCHOOL  
 BASEBALL FIELD IMPROVEMENTS**

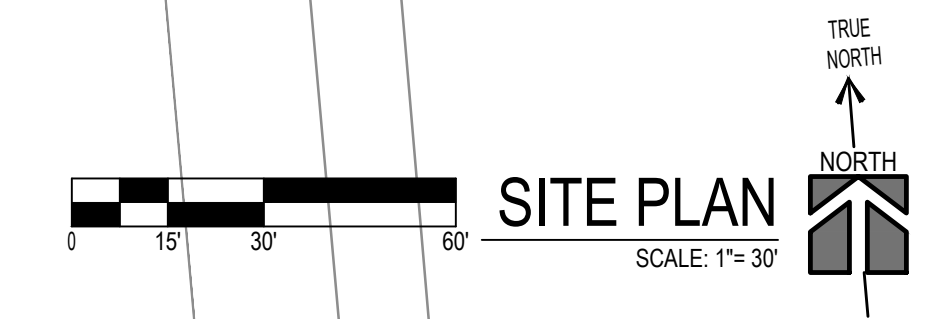
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 1925 KWIS AVENUE  
 HACIENDA HEIGHTS, CALIFORNIA 91745  
 owner

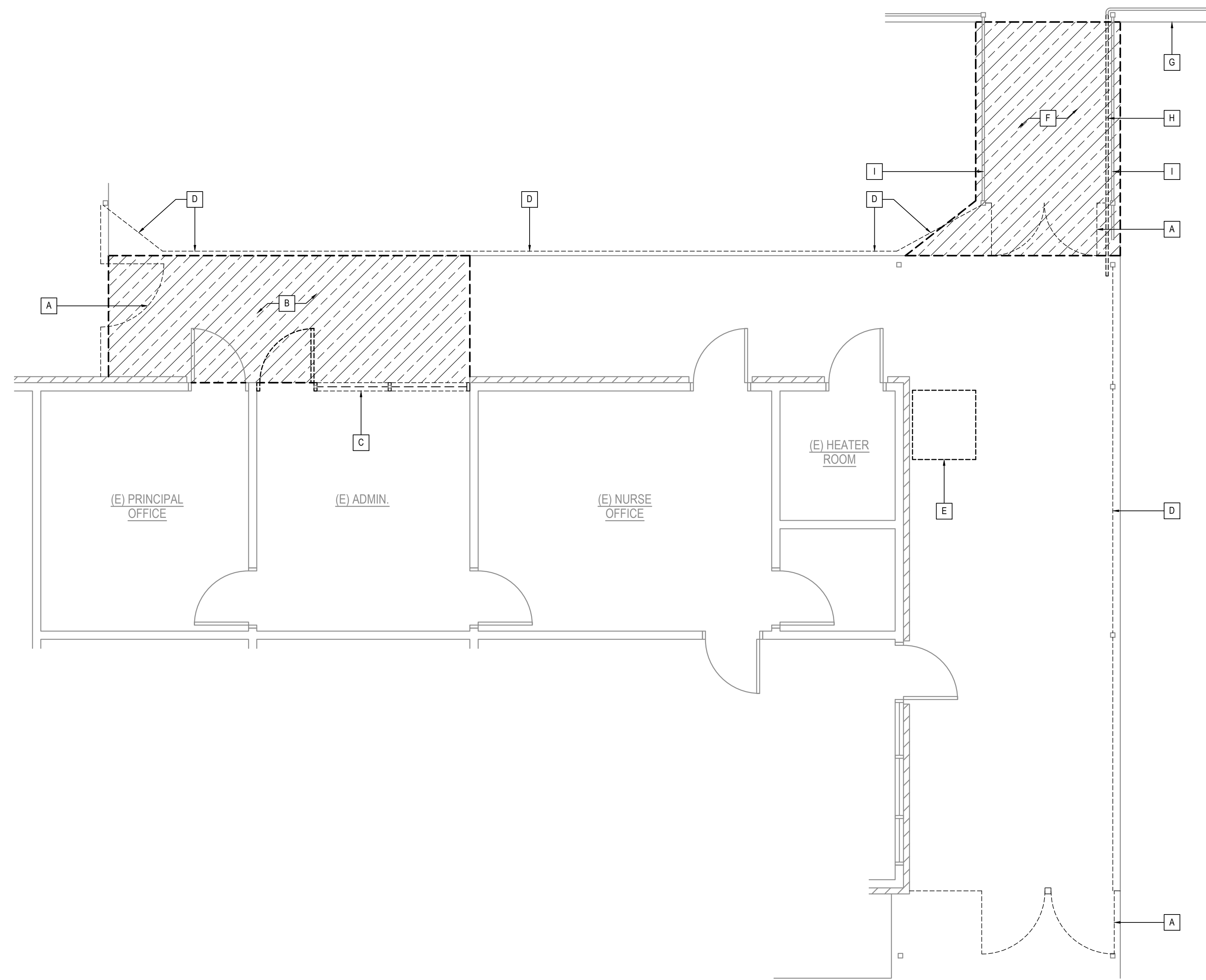
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file name:	0AS-1_Overall Campus Site Plan.dwg
drawn by:	JG
checked by:	
date:	09/22/2022
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 DEMO SITE PLAN**

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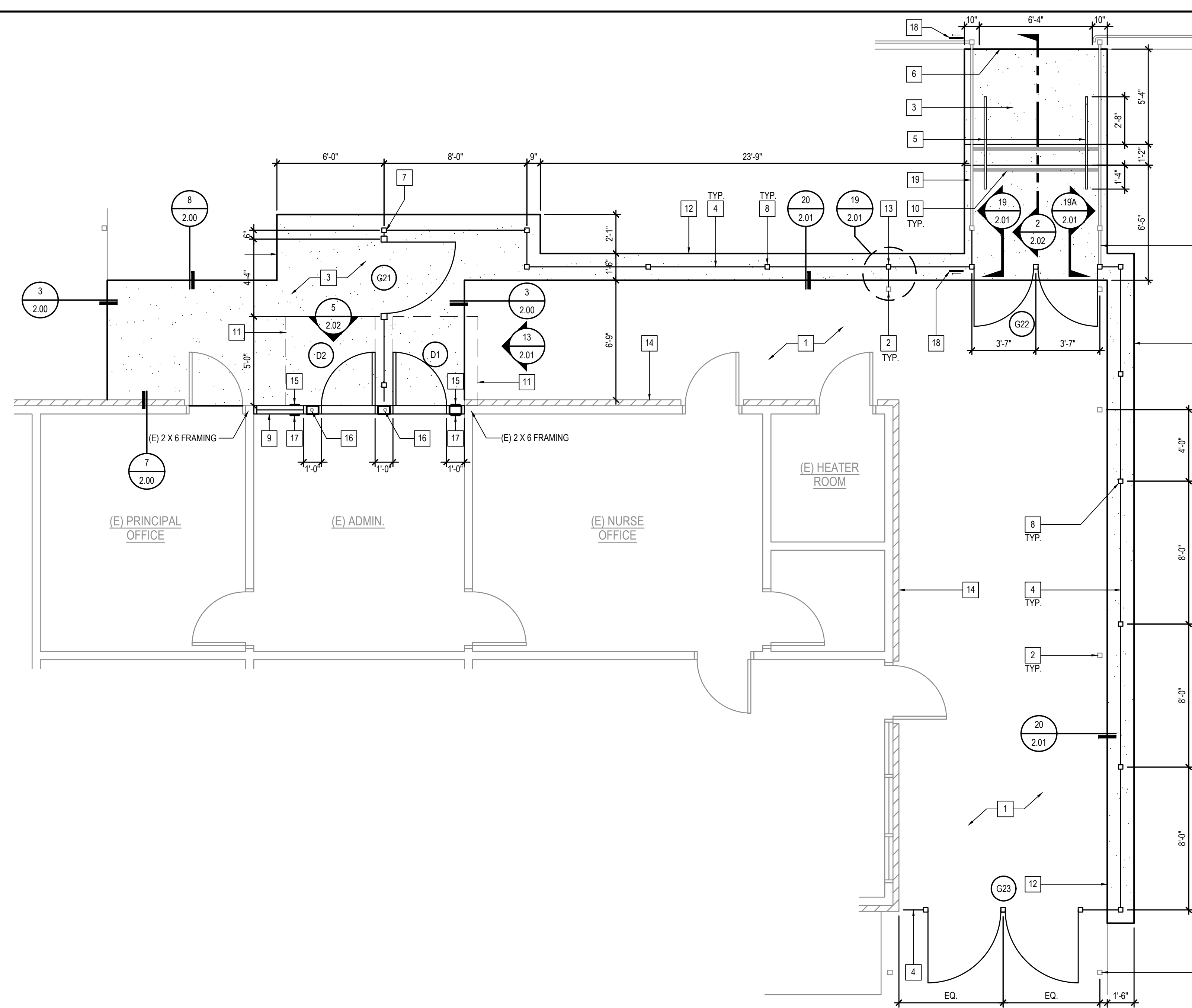




ENLARGED ENTRY DEMOLITION SITE PLAN 1  
SCALE: 1/4" = 1'-0"

DEMOLITION KEYNOTES

- A REMOVE (E) CHAIN LINK GATES, POST AND FOOTINGS
- B REMOVE (E) CONCRETE PAVING
- C REMOVE AND REPLACE (E) DOOR/WINDOW SYSTEM - (E) STEEL PIPE SUPPORTS TO REMAIN
- D REMOVE (E) CHAIN LINK FENCE, POST AND FOOTINGS
- E (E) VENDING MACHINE TO BE RELOCATED PER DISTRICT'S DIRECTION
- F REMOVE (E) CONCRETE RAMP
- G (E) CONCRETE RAMP TO REMAIN
- H REMOVE PORTION OF (E) HANDRAIL BACK TO (E) POST
- I (E) RAILING BETWEEN WALKWAY POSTS TO REMAIN - PROTECT IN PLACE



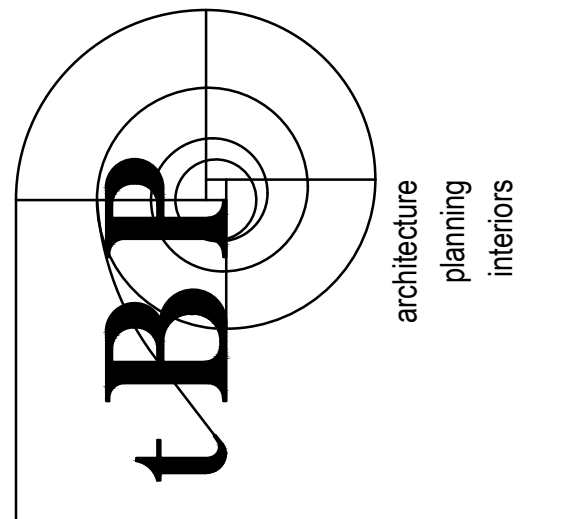
ENLARGED ENTRY REMODEL SITE PLAN 2  
SCALE: 1/4" = 1'-0"

REMODEL KEYNOTES

- 1 (E) CONCRETE PAVING TO REMAIN
- 2 (E) 3" SQ. STEEL WALKWAY COLUMN TO REMAIN ((E) 3" SQ x 2" THK x (+/-) 10'-0" (H))
- 3 CONCRETE PAVING - SEE DETAIL 2.00
- 4 ORNAMENTAL METAL FENCING - SEE DETAIL 2.01
- 5 1 1/2" O.D. HANDRAIL - SEE DETAIL 2.01
- 6 FLUSH TRANSITION
- 7 DOUBLE STEEL FENCE POST - SEE DETAIL 2.01
- 8 STEEL FENCE POST WITH CONCRETE FOOTING - SEE DETAIL 2.01
- 9 ALUMINUM STOREFRONT SYSTEM WITH (2) 3'-0" WIDE DOORS - PROVIDE 1/8" ALUMINUM BRAKE METAL ON INTERIOR AND EXTERIOR SIDES AT (E) PIPE COLUMNS
- 10 GROOVED NOSING, TYP. - SEE DETAIL 2.02
- 11 5'-0" LEVEL LANDING AT DOOR OR GATE (2% MAX. SLOPE IN ANY DIRECTION)
- 12 CONCRETE PAVING AT FENCE POSTS - SEE DETAIL 2.01 MATCH SLOPE OF ADJACENT WALKWAY, JOIN FLUSH
- 13 FENCE POST WITH 6" X 6" X 1/2" GALV. BASE PLATE
- 14 (E) BRICK VENEER WALL TO REMAIN
- 15 ROOM SIGNAGE - SEE DETAIL 2.03
- 16 (E) 2" DIA. STEEL POST SUPPORT TO REMAIN
- 17 EXIT SIGNAGE - SEE DETAIL 2.03
- 18 DIRECTIONAL ACCESSIBLE ROUTE SIGN - SEE DETAIL 2.03
- 19 (E) RAILING TO REMAIN

NOTE:  
SCOPE OF WORK ON THIS SHEET IS A BID ALTERNATE

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consultant

**KWIS ELEMENTARY SCHOOL  
BASEBALL FIELD IMPROVEMENTS**  
HACIENDA LA PUENTE UNIFIED SCHOOL DISTRICT  
1925 KWIS AVENUE  
HACIENDA HEIGHTS, CALIFORNIA 91745  
owner

tBP project number: 21054.01

file name:

drawn by: checked by:

date: 09/22/2022

Rev: date: description:

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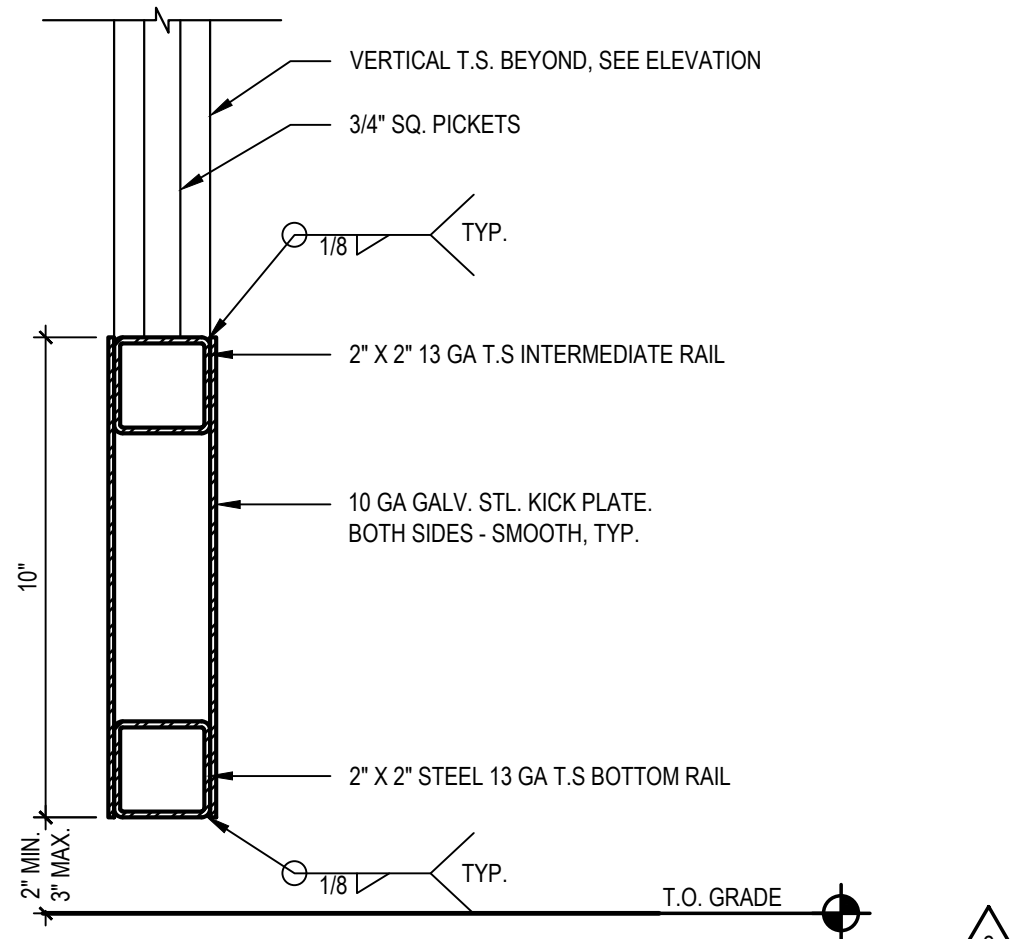
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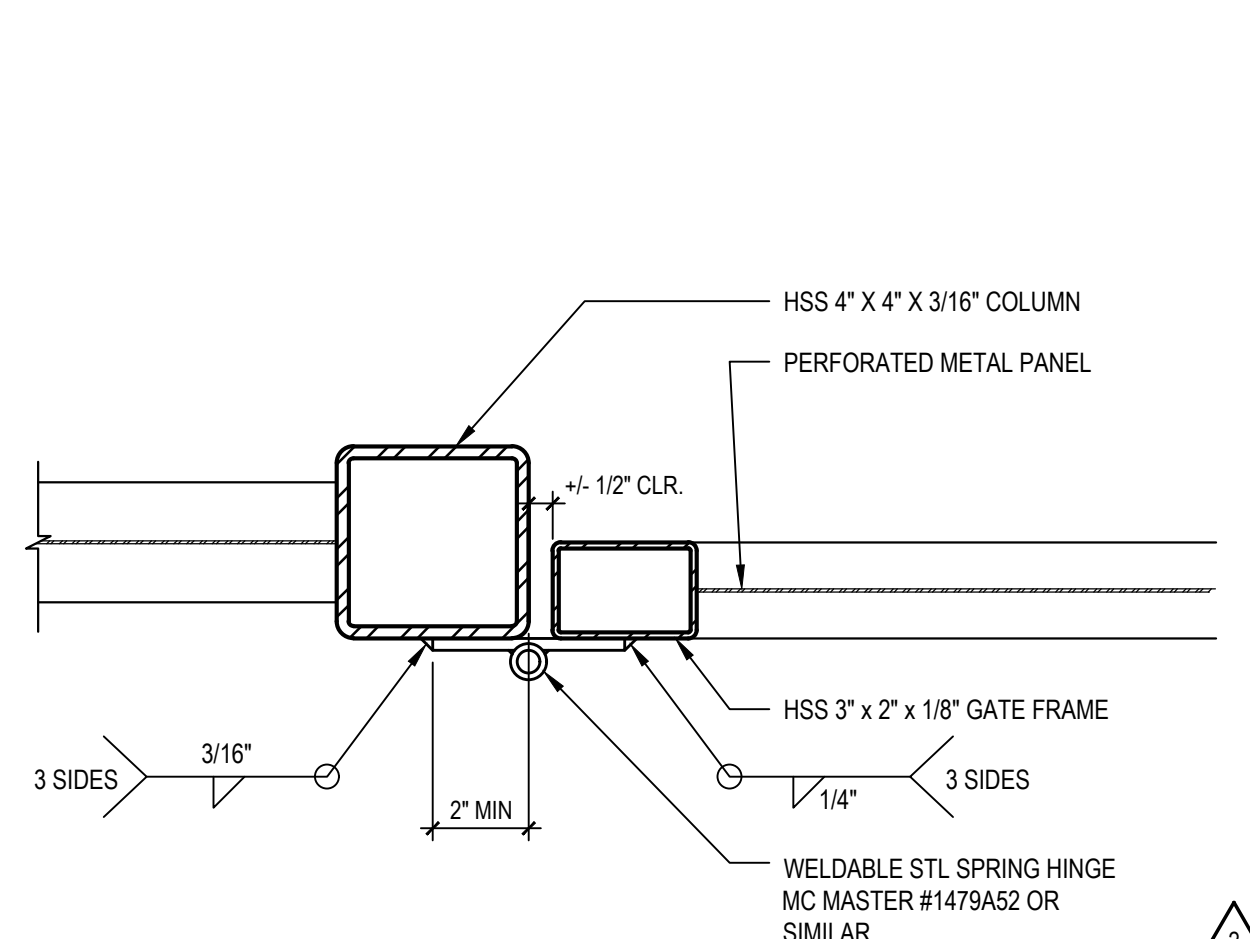
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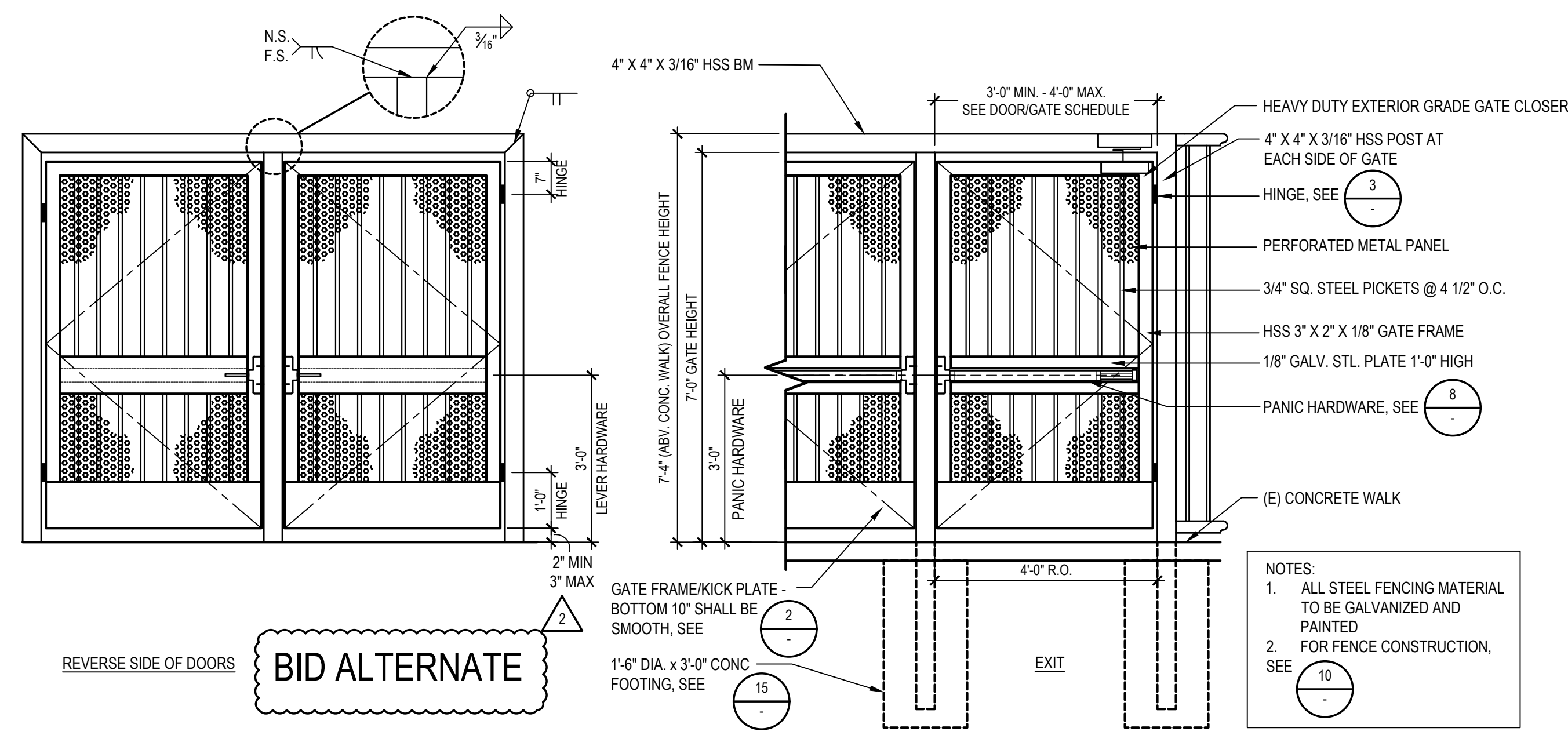
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KICK PLATE AT ORNAMENTAL GATE SCALE: 3/4" = 1'-0" 2



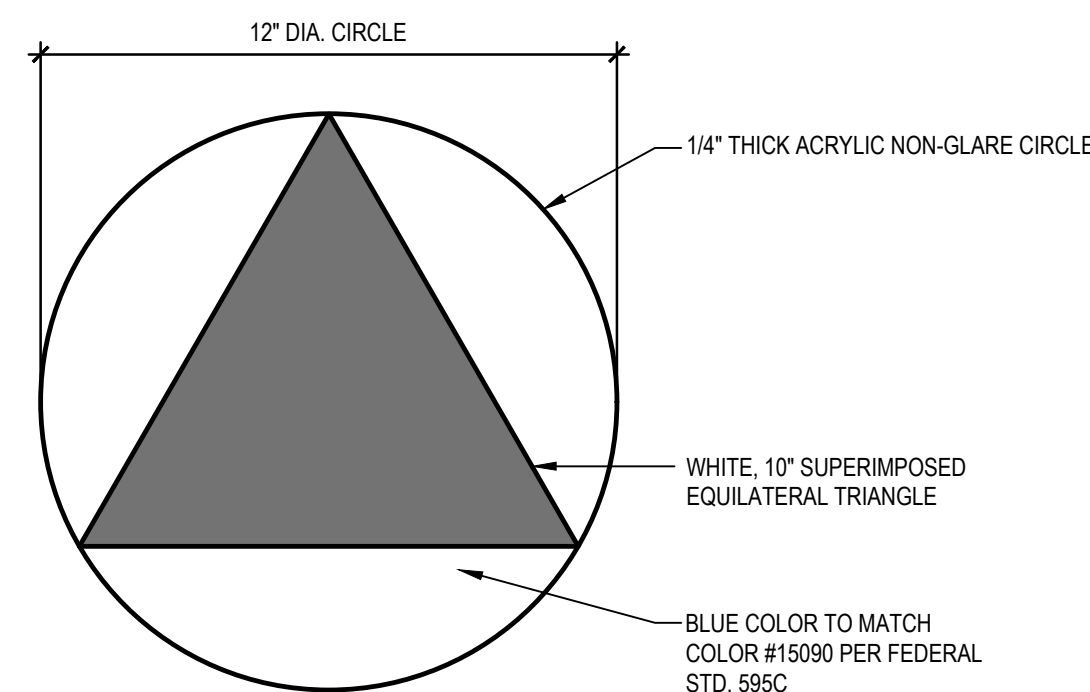
**BID ALTERNATE**

HINGE DETAIL @ DECORATIVE GATE SCALE: 3/4" = 1'-0" 3



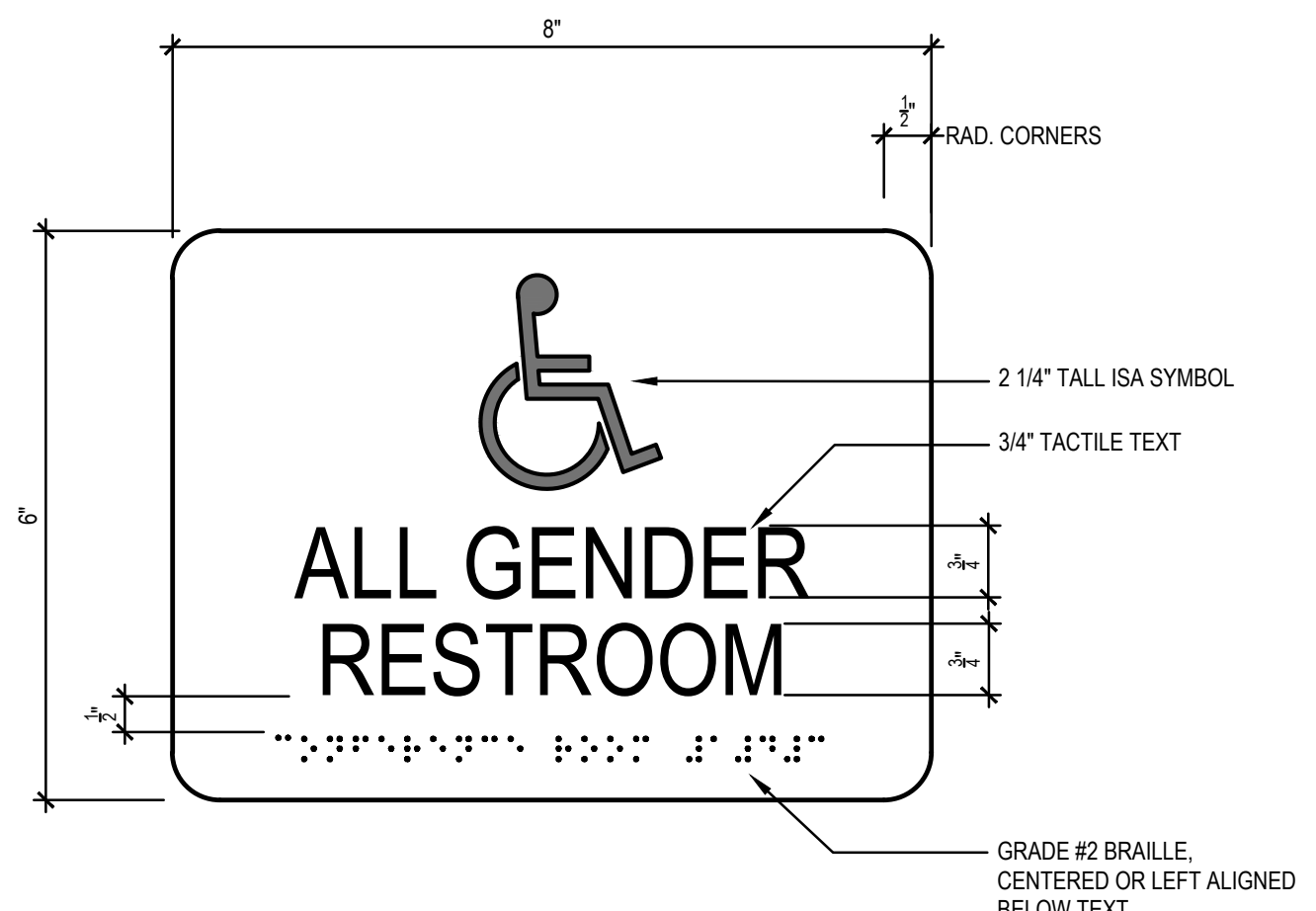
**BID ALTERNATE**

ACCESSIBLE ORNAMENTAL DOUBLE GATE SCALE: 1/2" = 1'-0" 5

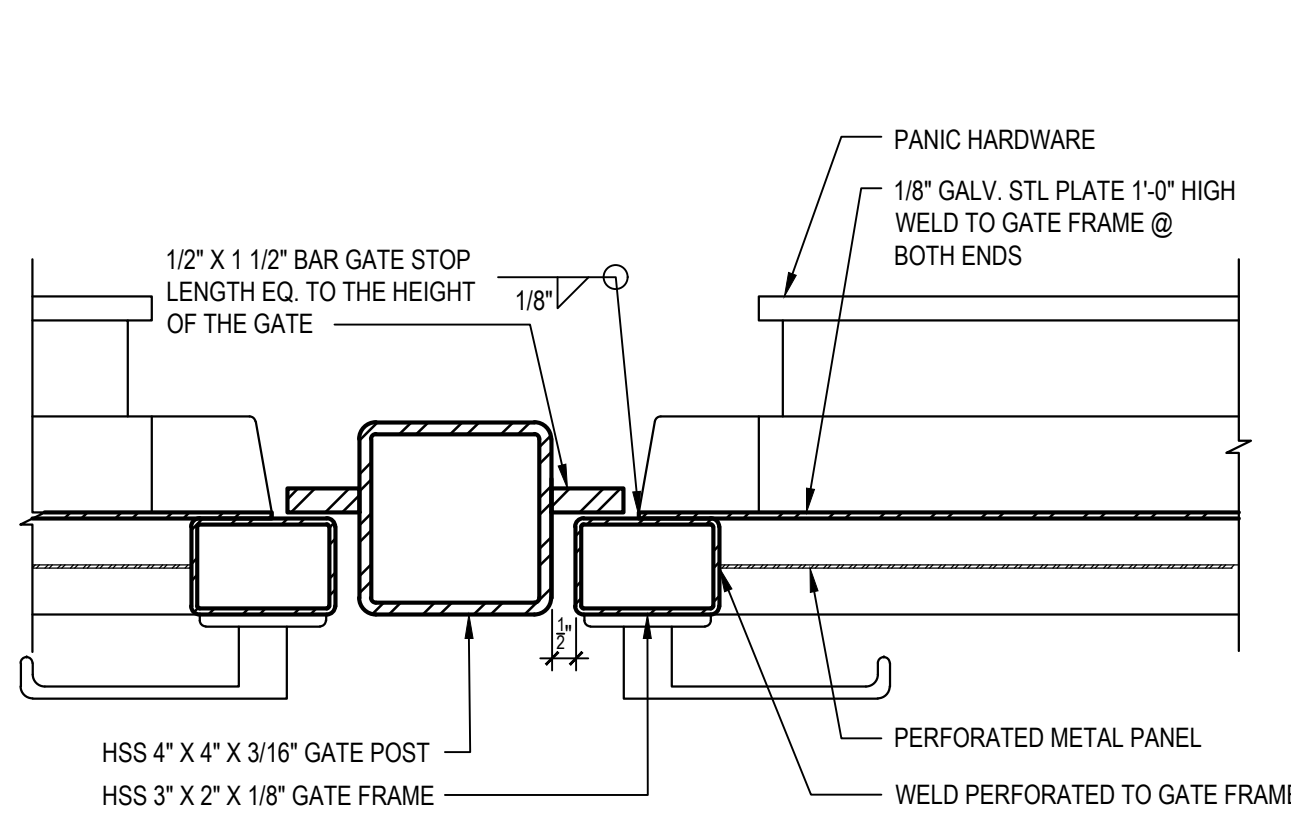


NOTES:  
- SIGN COLOR SHALL BE MIN. 70% CONTRAST TO DOOR COLOR  
- EDGES OF SIGNS TO BE ROUNDED, CHAMFERED OR BEADED

DOOR MOUNTED ALL GENDER RESTROOM SIGN SCALE: 3/4" = 1'-0" 6

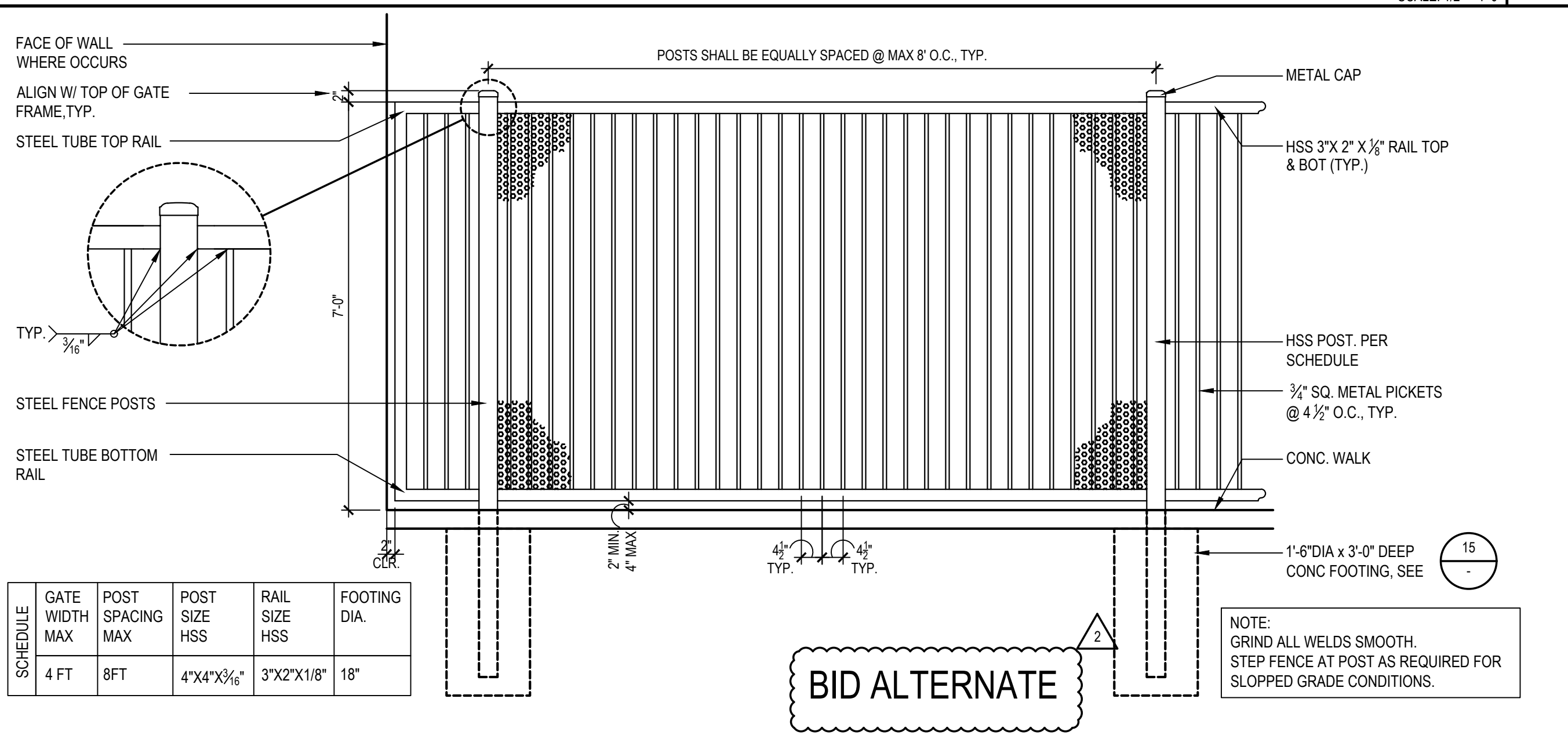


WALL MOUNTED ALL GENDER RESTROOM SIGN SCALE: HALF 7



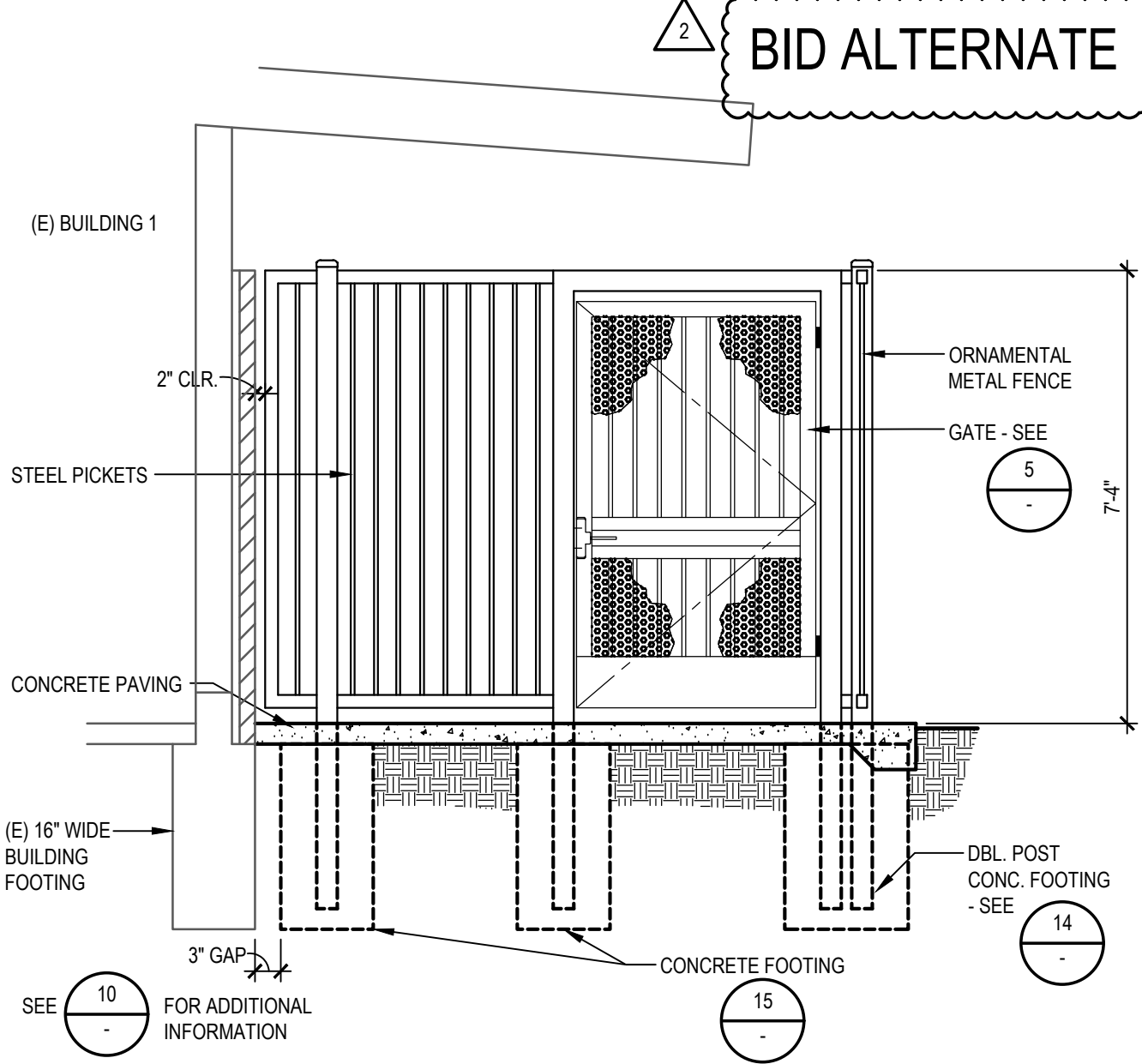
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PANIC HARDWARE AT ORNAMENTAL GATE SCALE: 3/4" = 1'-0" 8



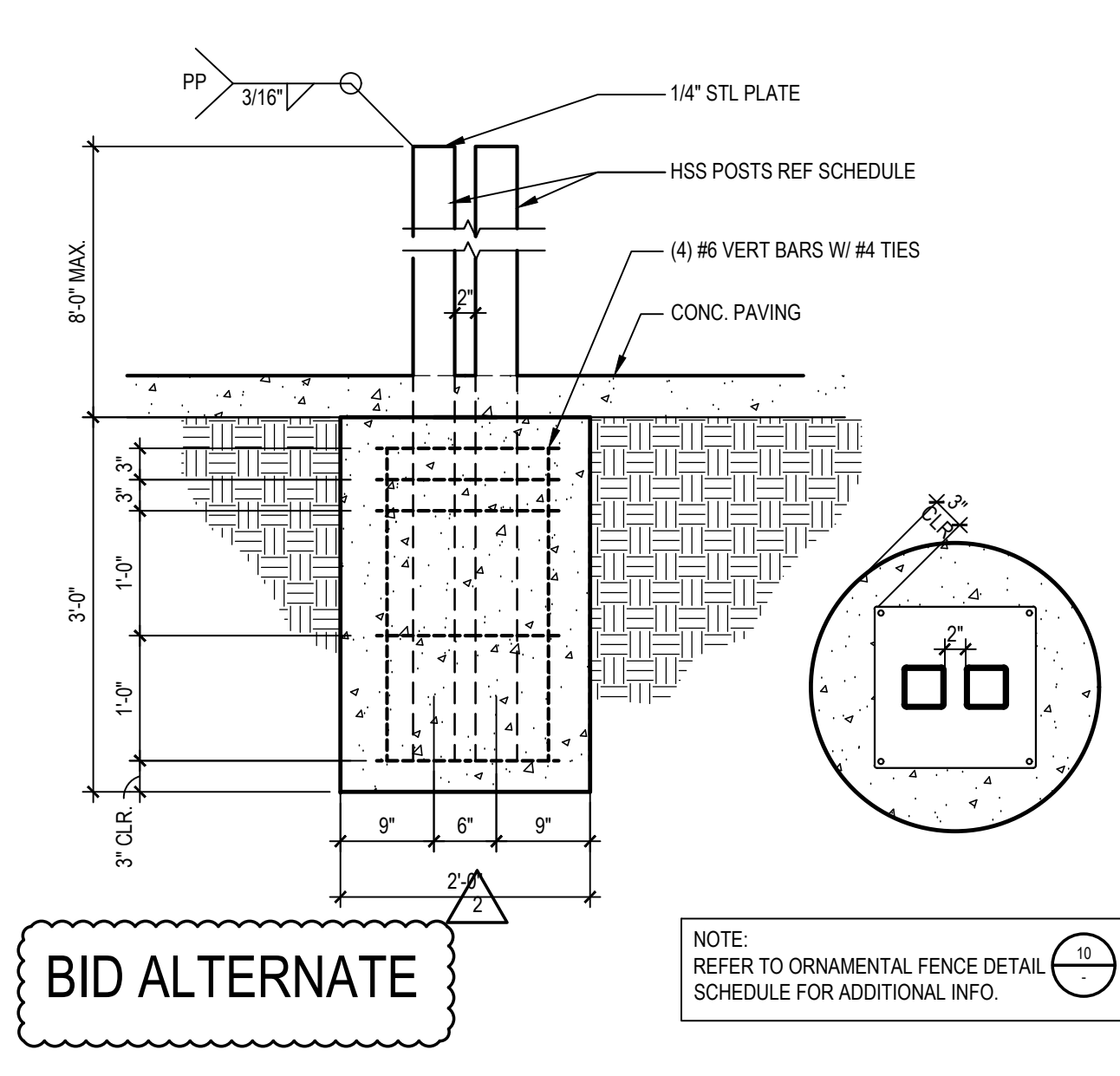
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ORNAMENTAL FENCE ELEVATION SCALE: 1/2" = 1'-0" 10



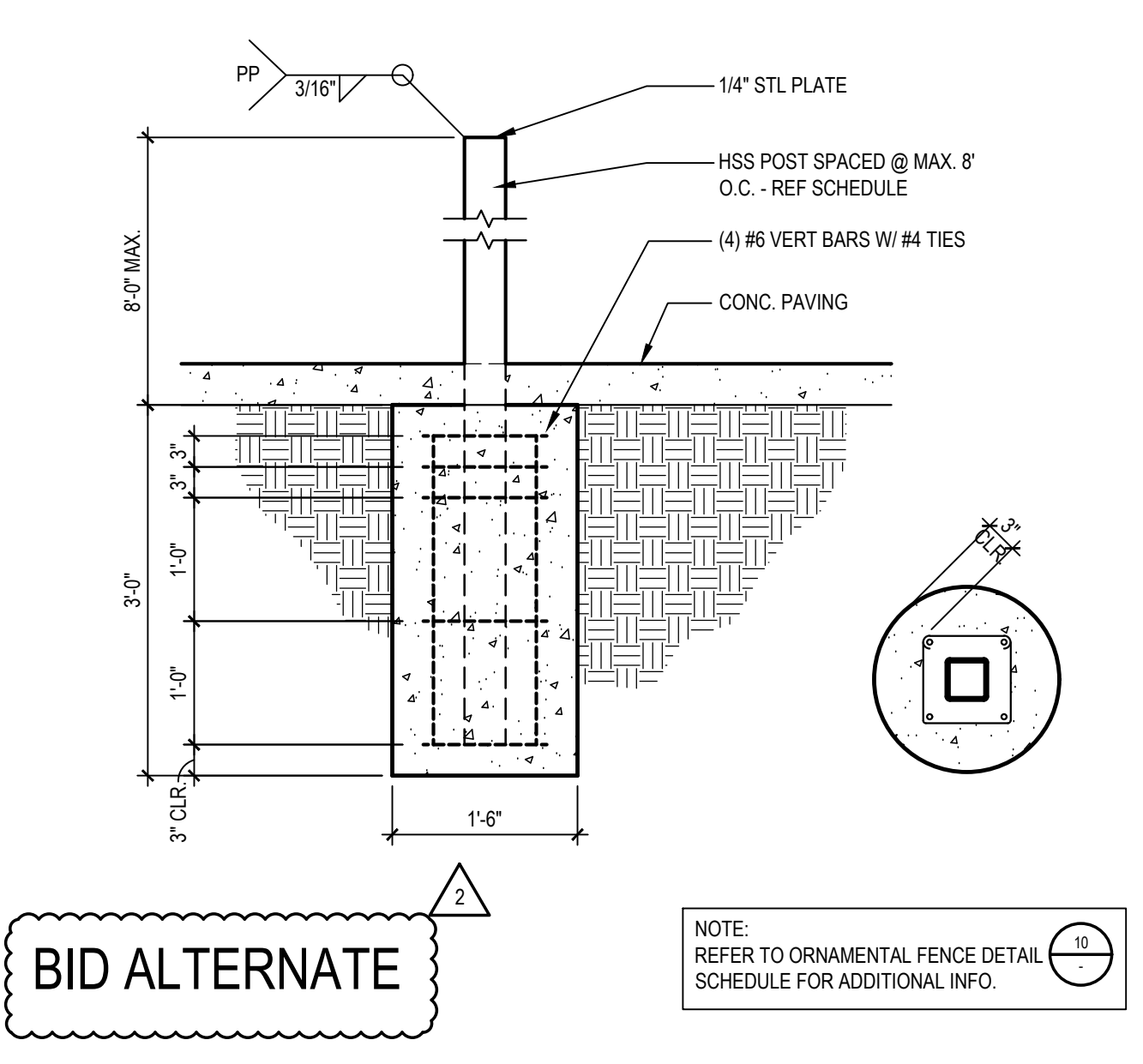
**BID ALTERNATE**

FENCE AT OFFICE ELEVATION SCALE: 3/8" = 1'-0" 13



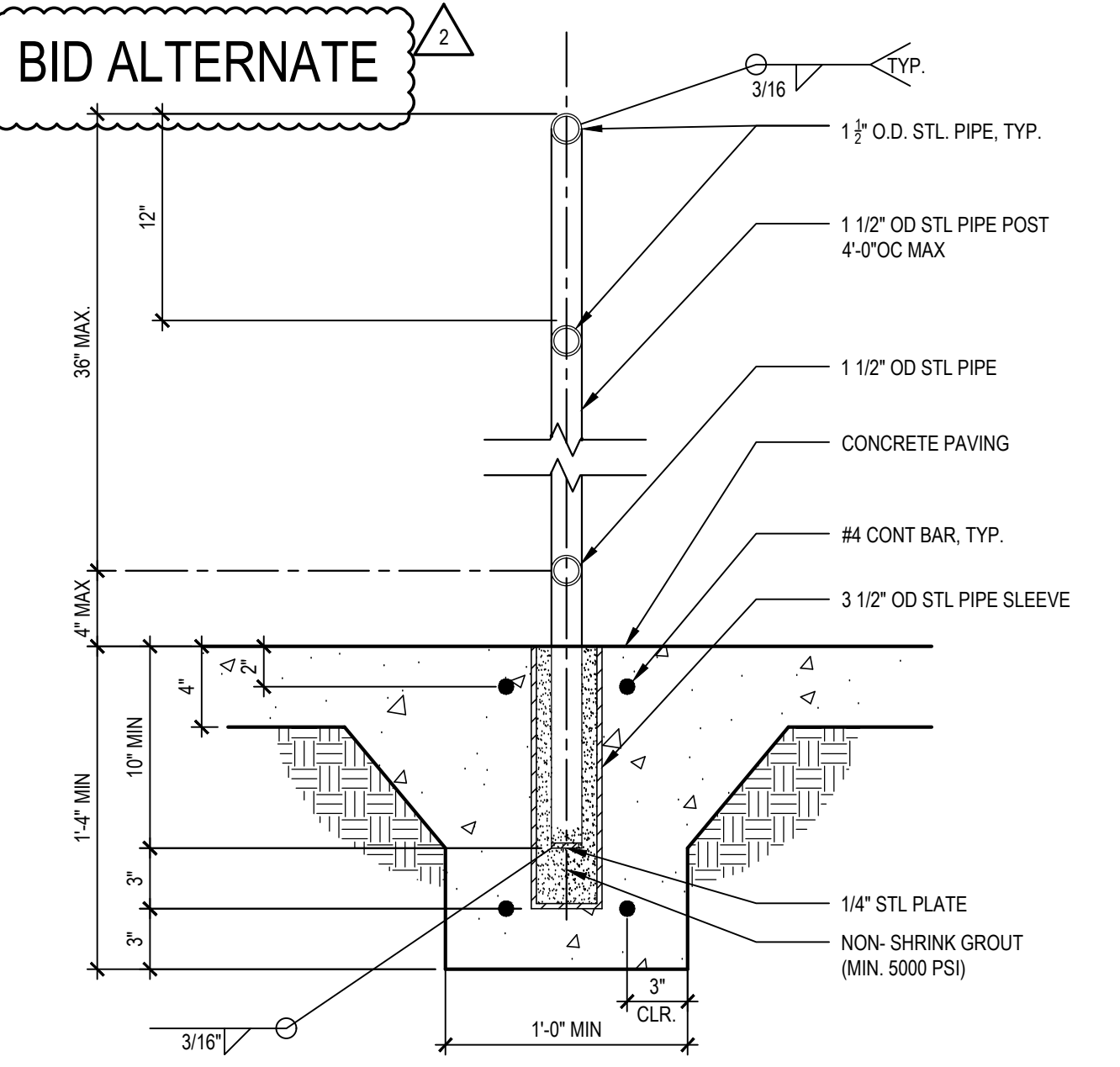
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ORNAMENTAL FENCE POST FOOTING SCALE: 3/4" = 1'-0" 14

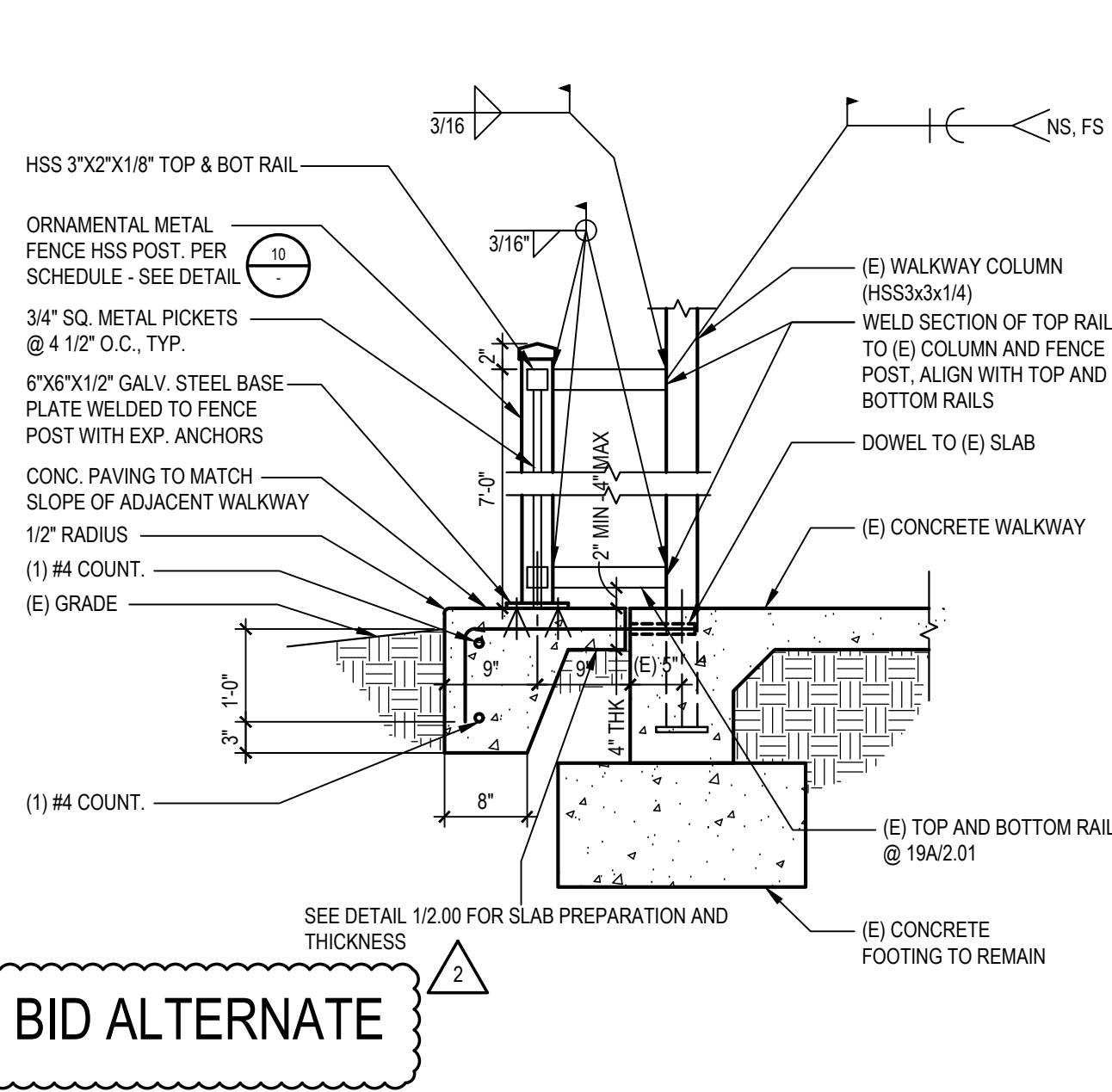


**BID ALTERNATE**

ORNAMENTAL FENCE POST FOOTING SCALE: 3/4" = 1'-0" 15

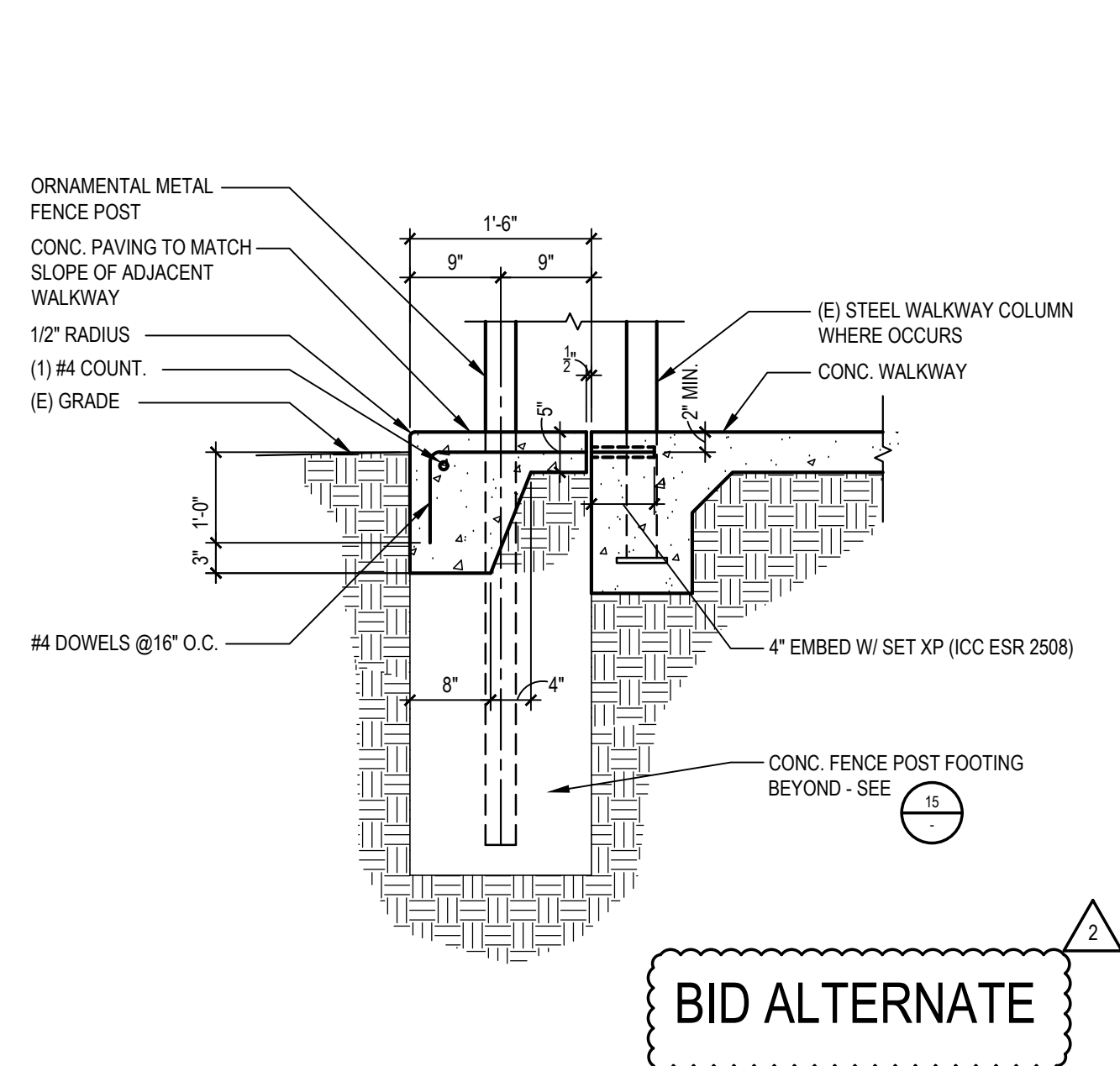


RAILING POST FOOTING SCALE: 1-1/2" = 1'-0" 18



**BID ALTERNATE**

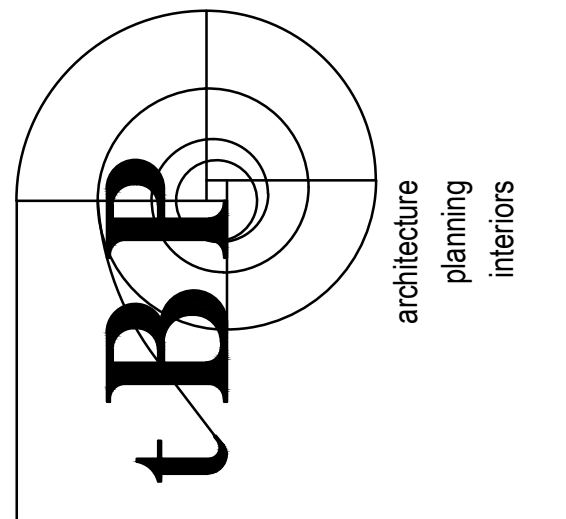
FENCE POST AT (E) WALKWAY COLUMN SCALE: 3/4" = 1'-0" 19/19A



**BID ALTERNATE**

CONCRETE PAVING AT DECORATIVE FENCE SCALE: 3/4" = 1'-0" 20

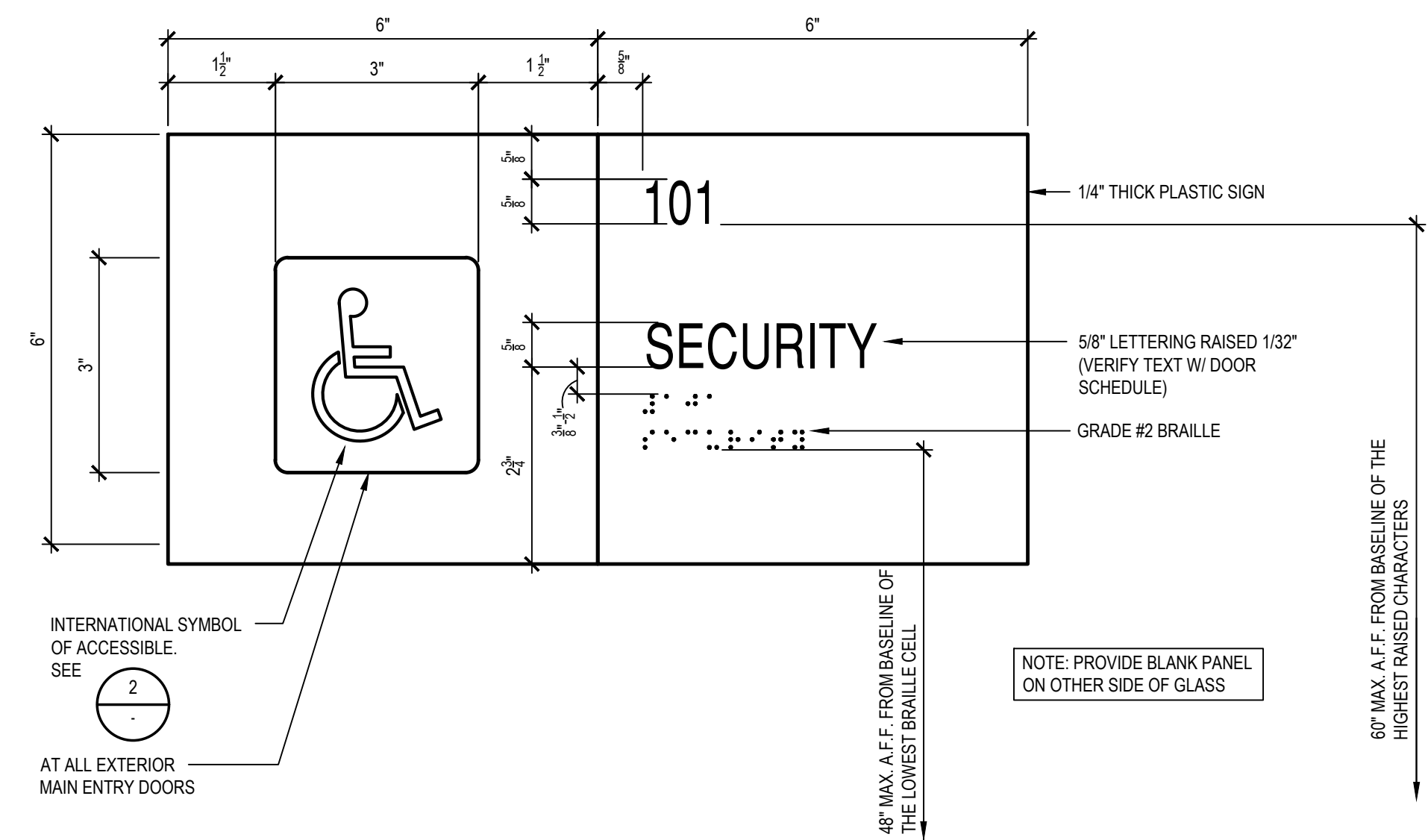
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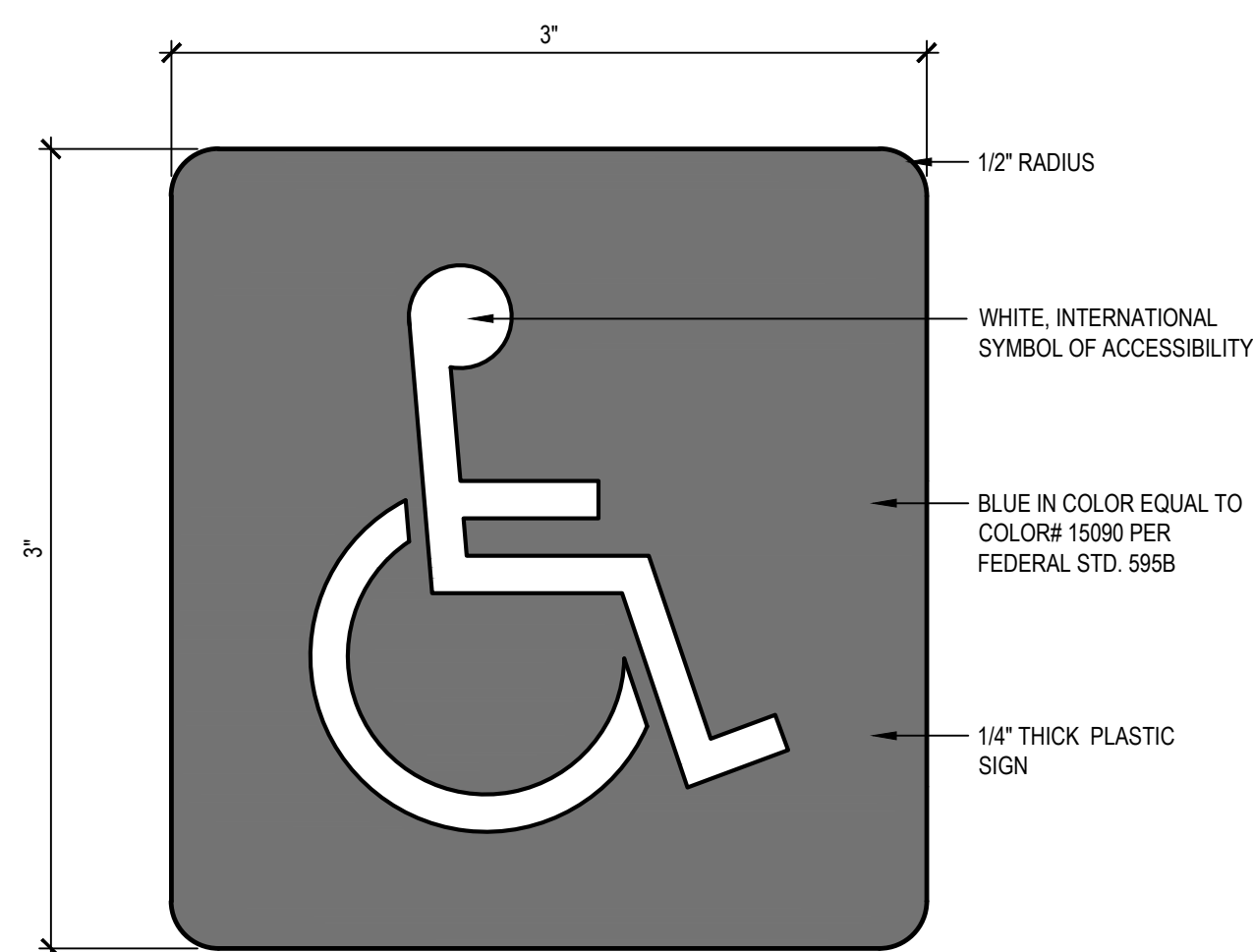
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owner  
tBP project number : 21054.01  
file name: D6-200.dwg  
drawn by: JG checked by:  
date: 09/22/2022  
Rev: date: description:  
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drawing title:  
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drawing no.:  
**2.01**  
drawing of

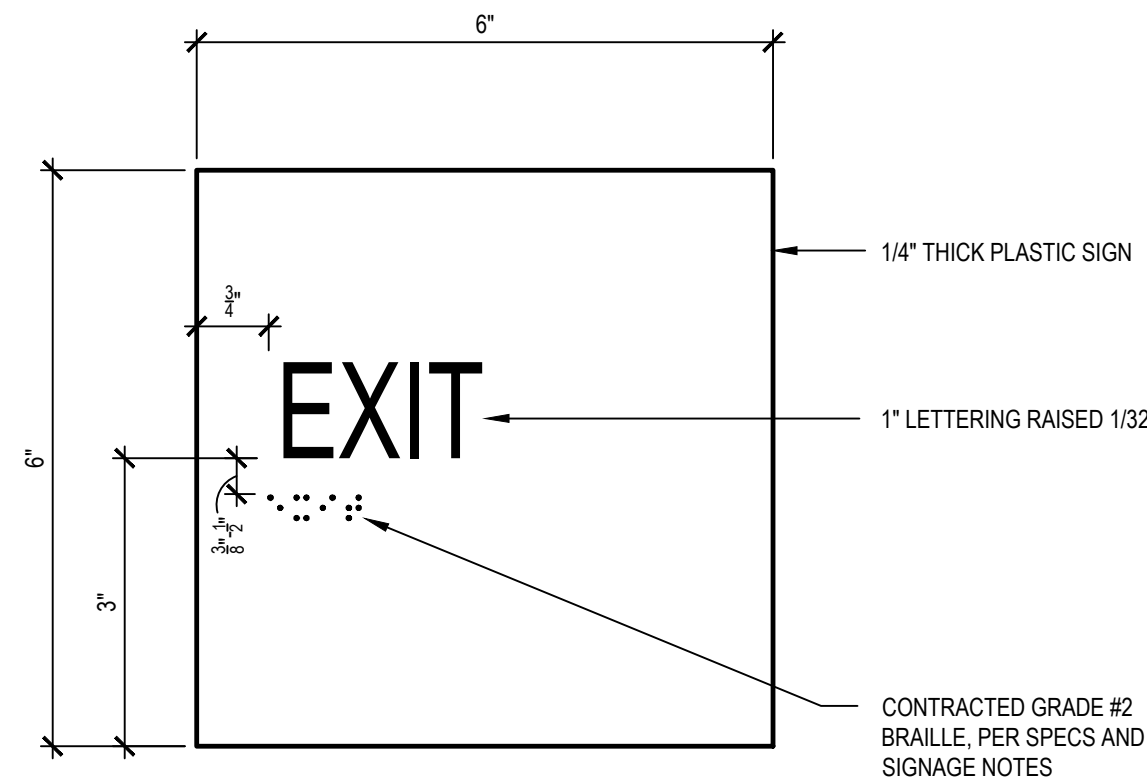




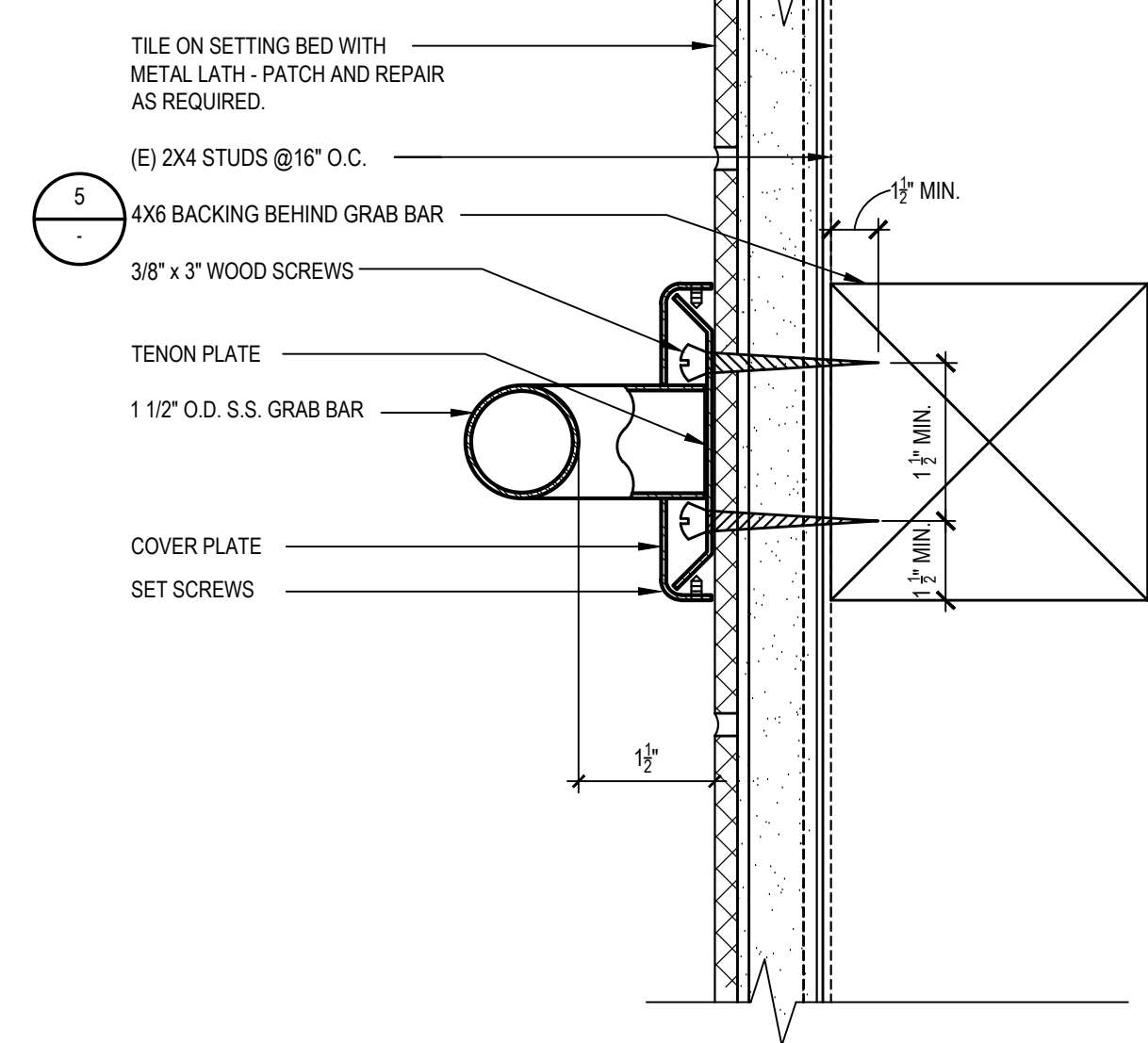
TACTILE EXIT SIGNAGE (ON INTERIOR SIDE) SCALE: HALF 1



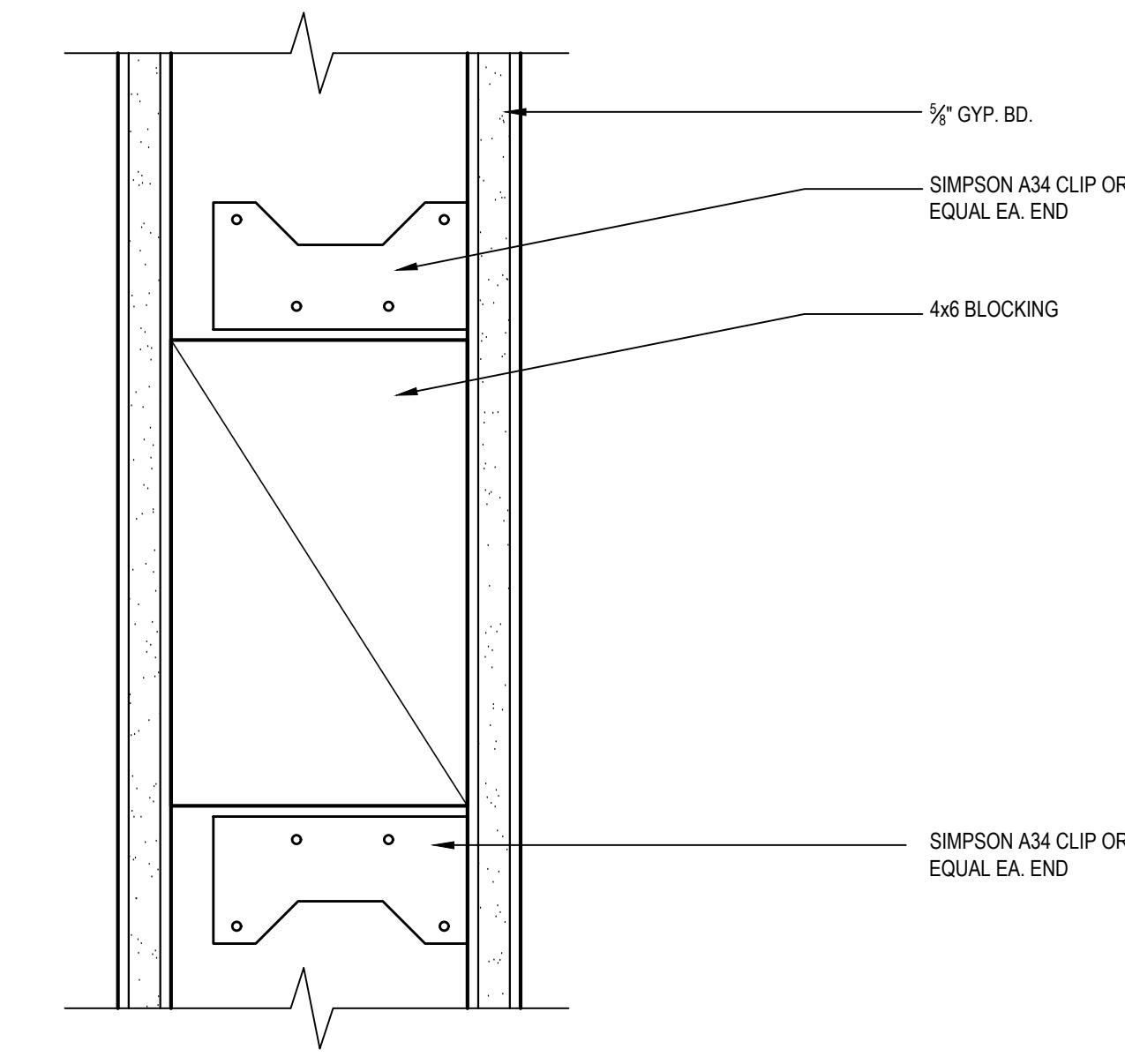
INTERNATIONAL SYMBOL OF ACCESSIBILITY SCALE: HALF 2



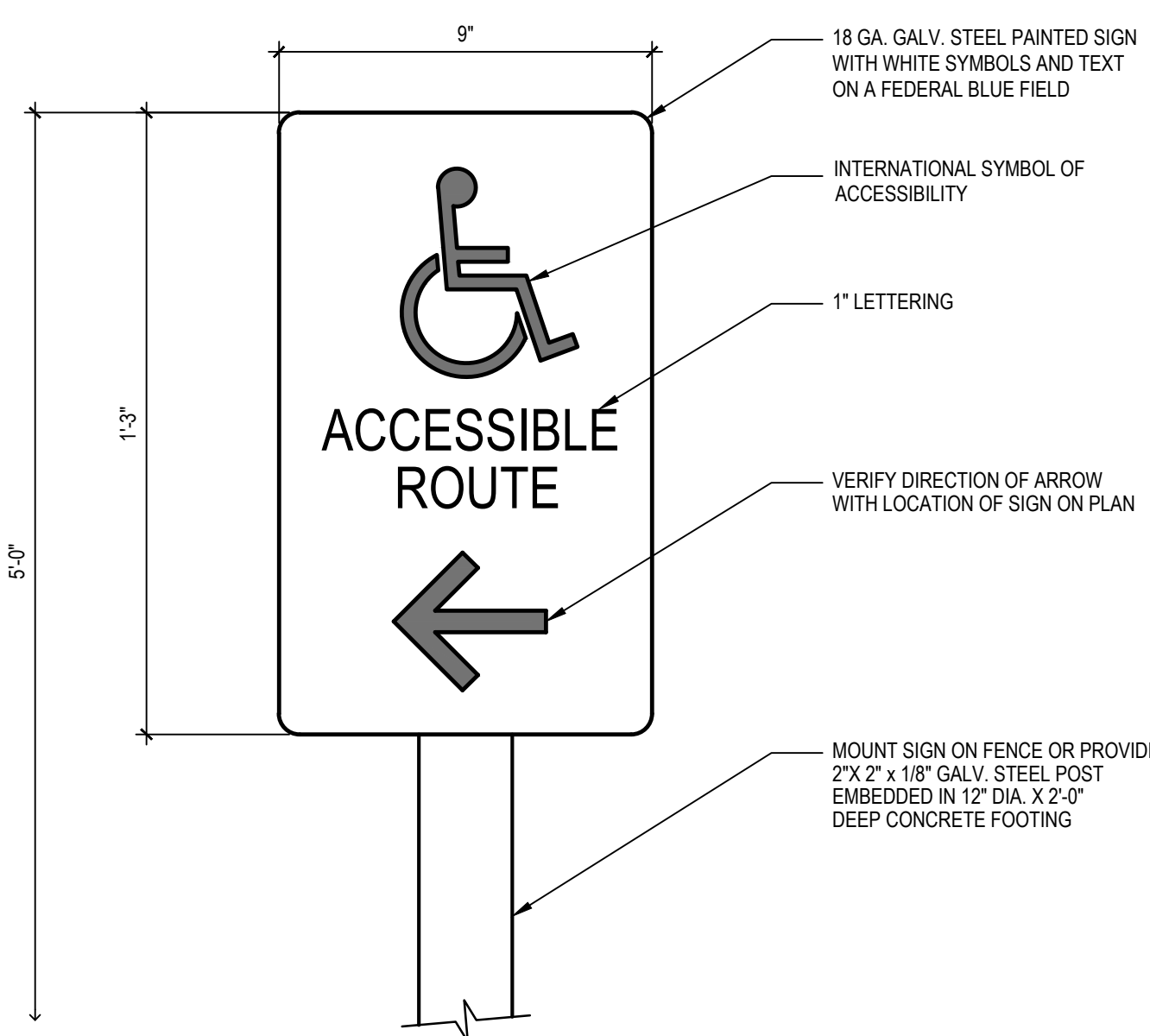
TACTILE EXIT SIGNAGE SCALE: HALF 3



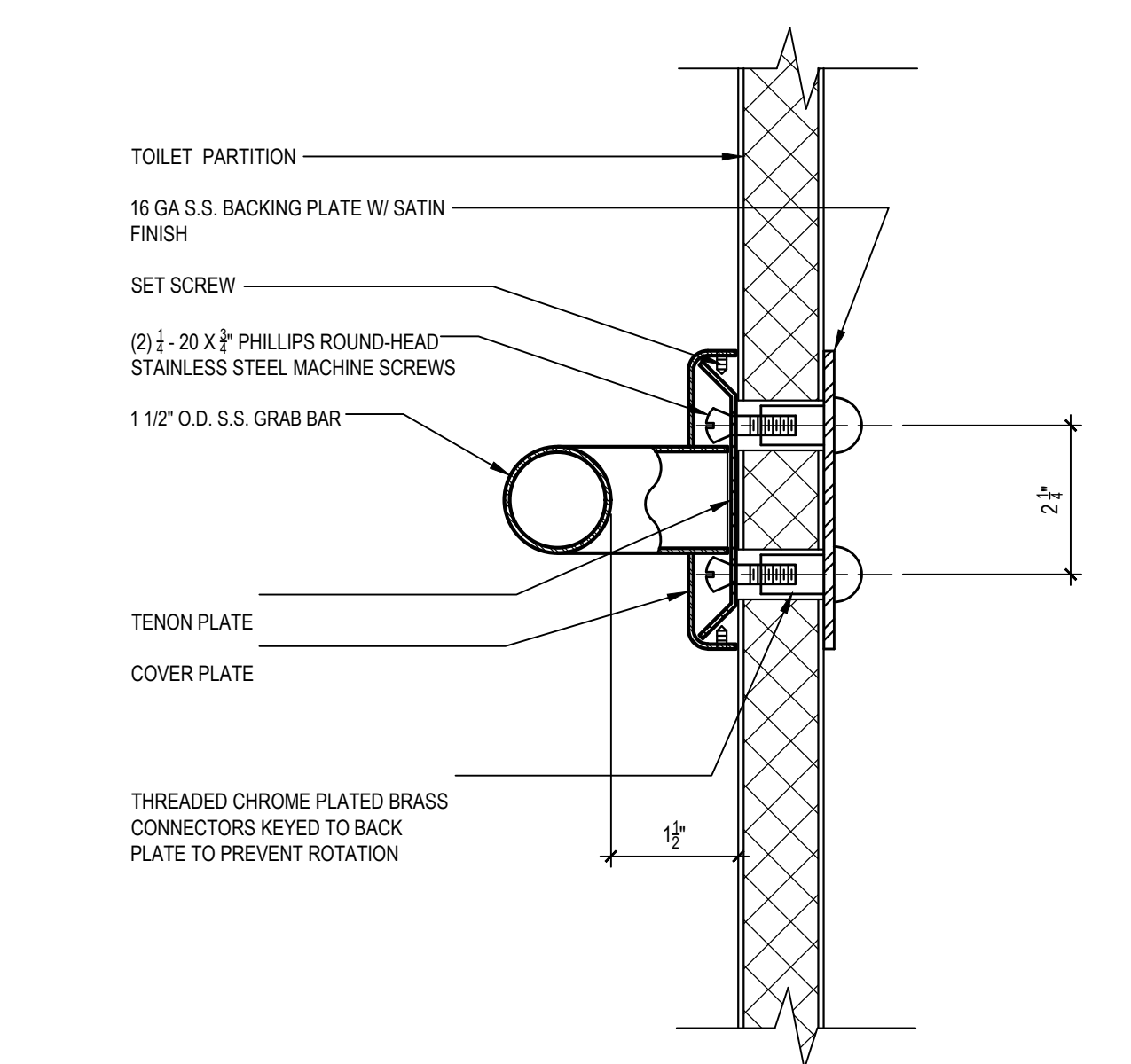
GRAB BAR - WALL MOUNTED SCALE: HALF 4



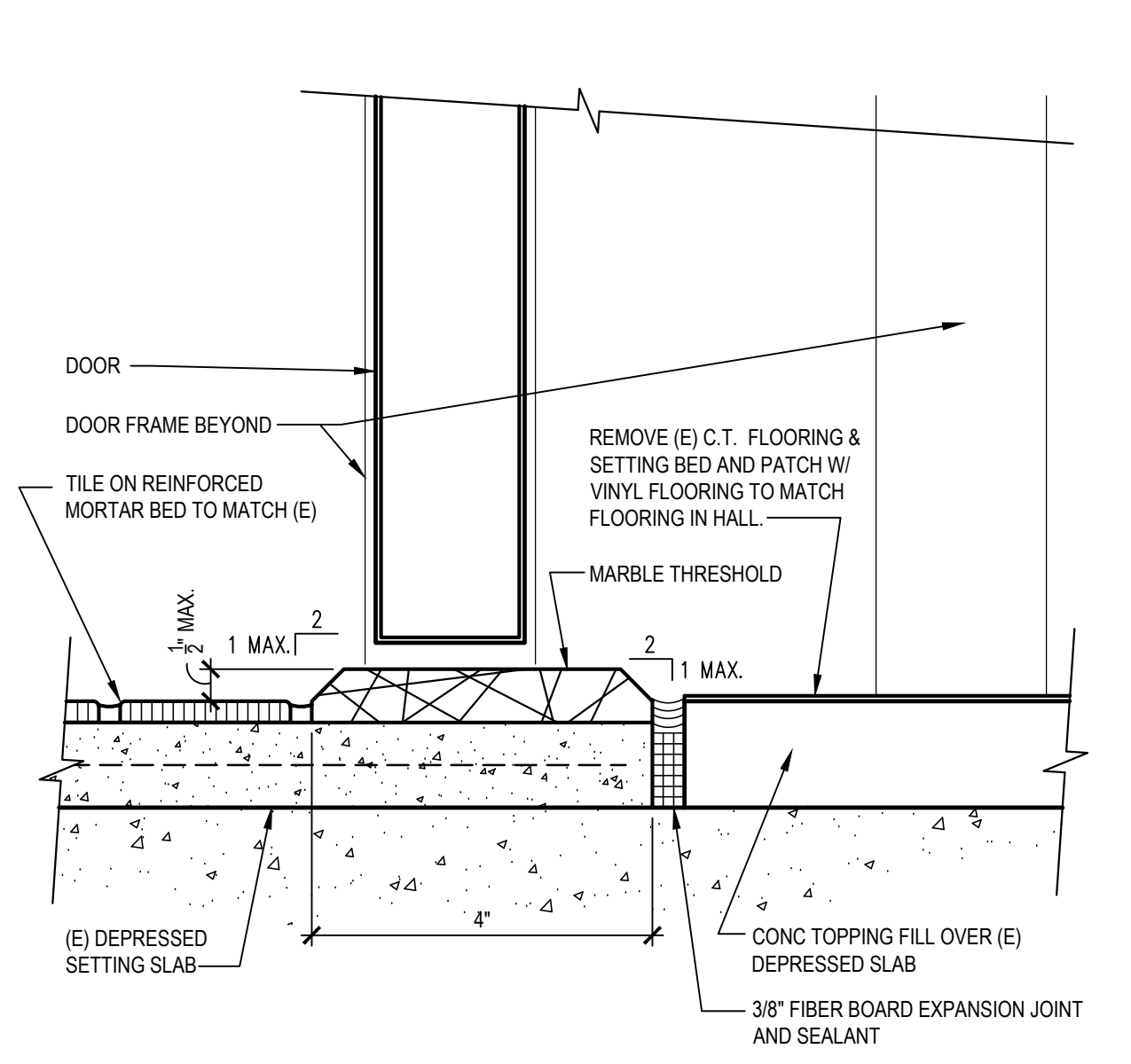
WALL BACKING DETAIL SCALE: HALF 5



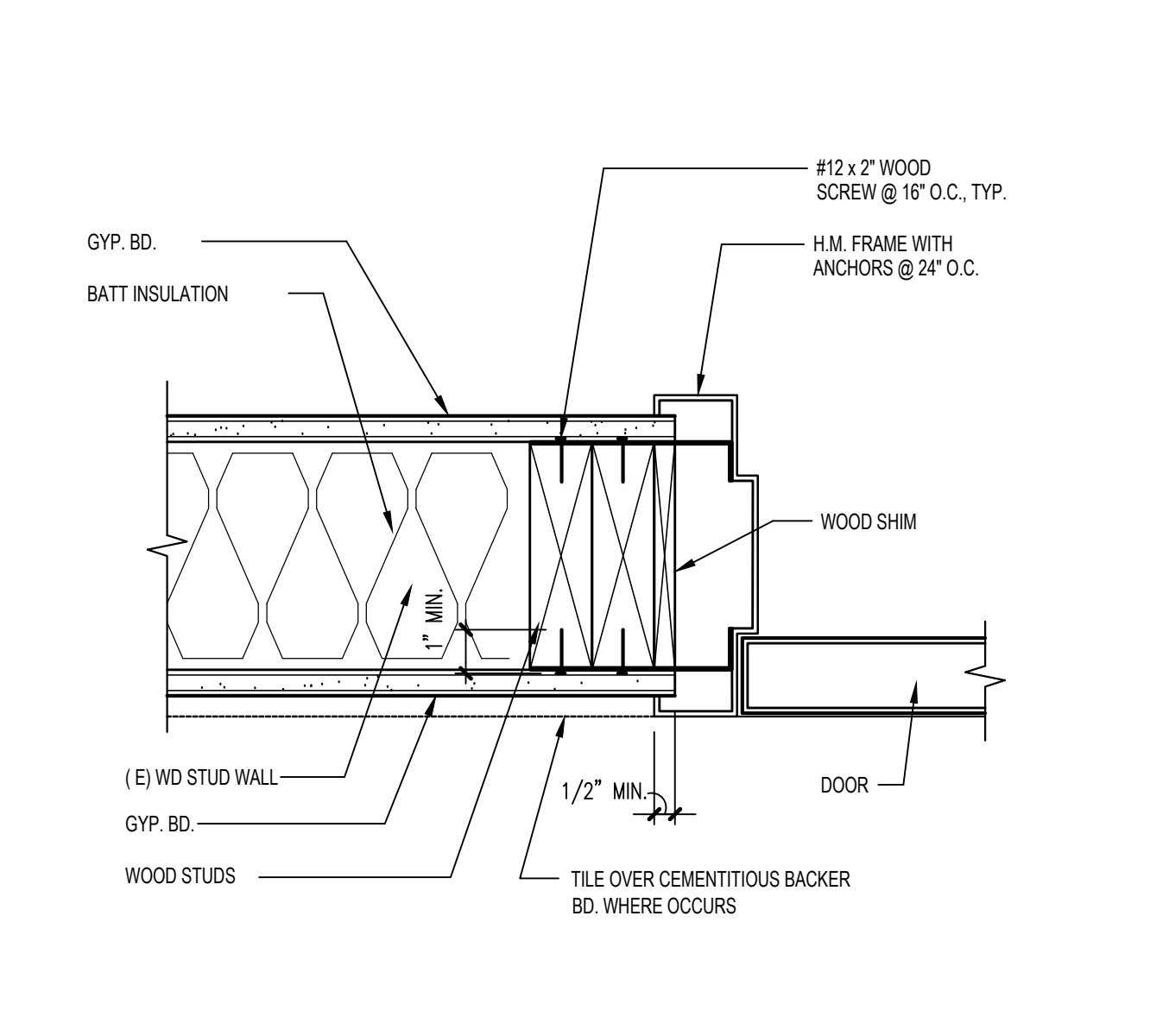
ACCESSIBLE ROUTE SIGN SCALE: 3/4" = 1'-0" 6



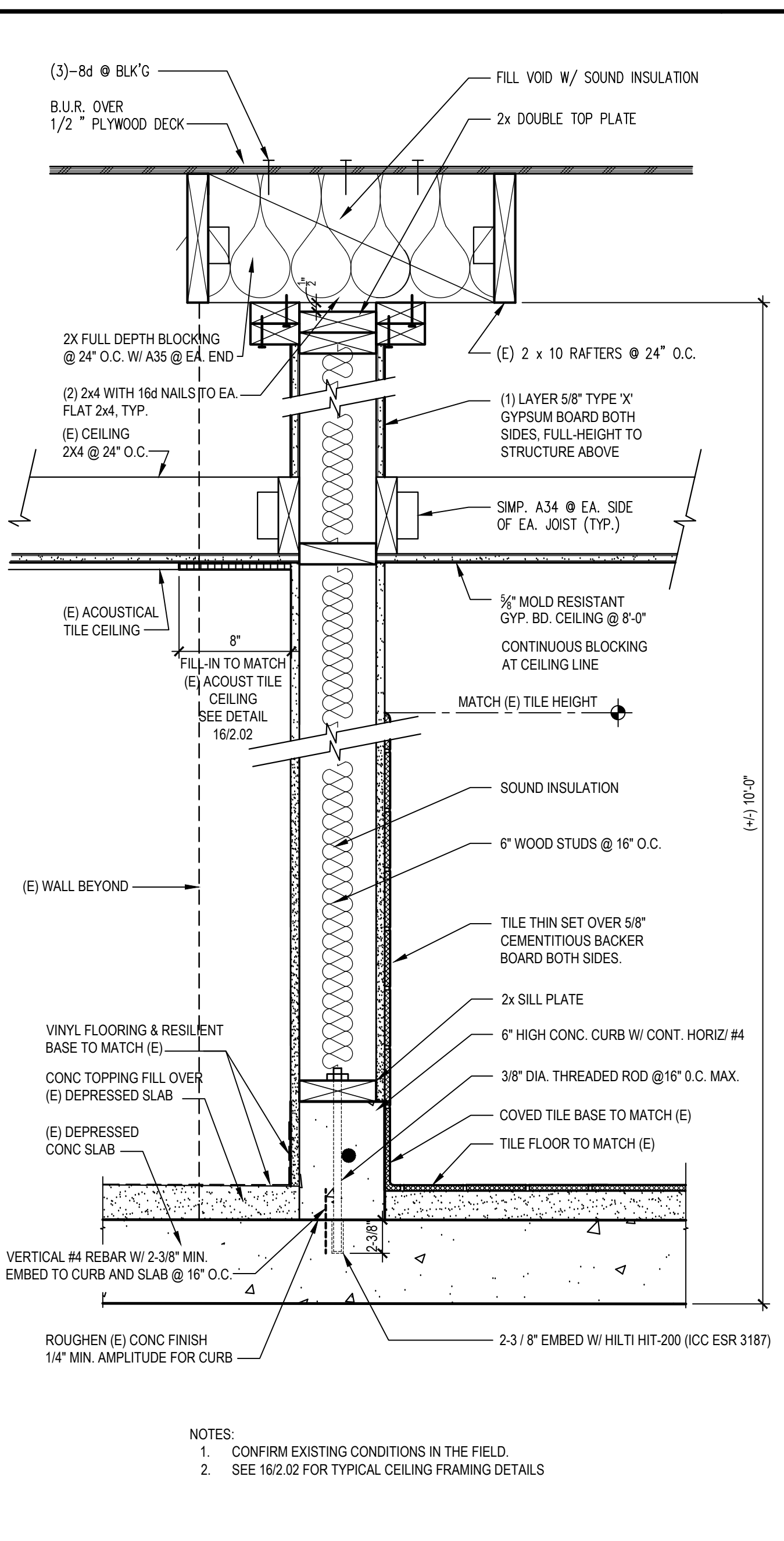
GRAB BAR - PARTITION MOUNTED SCALE: HALF 7



THRESHOLD AT TILE FLOOR SCALE: HALF 8



INTERIOR JAMB (HEAD SIM.) SCALE: 3/4" = 1'-0" 9



TOILET ROOM PARTITION (NON-RATED & NON-BEARING) SCALE: 1/2" = 1'-0" 10

GATE SCHEDULE

GATE NO.	DIMENSION		GATE			FRAME			DETAILS					DOOR ASSEMBLY RATING	HW. SET	REMARKS	SIGNAGE	
	WIDTH	HEIGHT	TYPE	MAT.	FINISH	COLOR	MAT.	FINISH	COLOR	HEAD	TRANSOM	JAMB	JAMB				THRESHOLD	TEXT
G1	10'-0"	6'-0"	-	CL	-	-	CL	-	-	-	-	-	-	-	-	SEE DETAIL 3F-2.4	-	-
G2	10'-0"	6'-0"	-	CL	-	-	CL	-	-	-	-	-	-	-	-	SEE DETAIL 3F-2.4	-	-
G3	4'-0"	6'-0"	-	CL	-	-	CL	-	-	-	-	-	-	-	-	SEE DETAIL 3F-2.4	-	-
G4	4'-0"	6'-0"	-	CL	-	-	CL	-	-	-	-	-	-	-	-	SEE DETAIL 7F-2.4, ACCESSIBLE HW	-	-
G5	4'-0"	6'-0"	-	CL	-	-	CL	-	-	-	-	-	-	-	-	SEE DETAIL 3F-2.4	-	-
G6	4'-0"	6'-0"	-	CL	-	-	CL	-	-	-	-	-	-	-	-	SEE DETAIL 3F-2.4	-	-
G7	4'-0"	6'-0"	-	CL	-	-	CL	-	-	-	-	-	-	-	-	SEE DETAIL 3F-2.4	-	-
G8	4'-0"	6'-0"	-	CL	-	-	CL	-	-	-	-	-	-	-	-	SEE DETAIL 3F-2.4	-	-
G9	4'-0"	6'-0"	-	CL	-	-	CL	-	-	-	-	-	-	-	-	SEE DETAIL 3F-2.4	-	-
G10	4'-0"	6'-0"	-	CL	-	-	CL	-	-	-	-	-	-	-	-	SEE DETAIL 3F-2.4	-	-
G11	4'-0"	6'-0"	-	CL	-	-	CL	-	-	-	-	-	-	-	-	SEE DETAIL 7F-2.4, ACCESSIBLE HW	-	-
G12	4'-0"	6'-0"	-	CL	-	-	CL	-	-	-	-	-	-	-	-	SEE DETAIL 3F-2.4	-	-
G13	4'-0"	6'-0"	-	CL	-	-	CL	-	-	-	-	-	-	-	-	SEE DETAIL 7F-2.4, ACCESSIBLE HW	-	-
G14	4'-0"	6'-0"	-	CL	-	-	CL	-	-	-	-	-	-	-	-	SEE DETAIL 7F-2.4, ACCESSIBLE HW	-	-
G15	4'-0"	6'-0"	-	CL	-	-	CL	-	-	-	-	-	-	-	-	SEE DETAIL 3F-2.4	-	-
G16	4'-0"	6'-0"	-	CL	-	-	CL	-	-	-	-	-	-	-	-	SEE DETAIL 3F-2.4	-	-
G17	4'-0"	6'-0"	-	CL	-	-	CL	-	-	-	-	-	-	-	-	SEE DETAIL 3F-2.4	-	-
G18	4'-0"	6'-0"	-	CL	-	-	CL	-	-	-	-	-	-	-	-	SEE DETAIL 3F-2.4	-	-
G19	4'-0"	6'-0"	-	CL	-	-	CL	-	-	-	-	-	-	-	-	SEE DETAIL 3F-2.4	-	-
G20	4'-0"	6'-0"	-	CL	-	-	CL	-	-	-	-	-	-	-	-	SEE DETAIL 3F-2.4	-	-
G21	4'-0"	7'-0"	B	OM	P	-	OM	P	-	-	-	-	-	02	BID ALTERNATE	-	-	
G22	(2) 3'-6"	7'-0"	B	OM	P	-	OM	P	-	-	-	-	-	02	BID ALTERNATE	-	-	
G23	(2) 4'-0"	7'-0"	B	OM	P	-	OM	P	-	-	-	-	-	02	SEE DETAIL 5/2.01, ACCESSIBLE HW	-	-	

DOOR SCHEDULE

DOOR NO.	DIMENSION		DOOR			FRAME			DETAILS					DOOR ASSEMBLY RATING	HW. SET	REMARKS	SIGNAGE						
	WIDTH	HEIGHT	TYPE	MAT.	FINISH	COLOR	MAT.	FINISH	COLOR	HEAD	TRANSOM	JAMB	JAMB				THRESHOLD	TEXT	DETAIL				
D1	3'-0"	7'-0"	A	AL	FF	-	AL	FF	-	8	2.02	-	4	2.02	15	2.02	9	2.02	-	01	BID ALTERNATE	ROOM & EXIT	1 & 3
D2	3'-0"	7'-0"	A	AL	FF	-	AL	FF	-	8	2.02	-	15	2.02	20	2.02	9	2.02	-	01	BID ALTERNATE	ROOM & EXIT	1 & 3
D3	(E) 3'-0"	(E) 7'-0"	C	WD	PAINT	MATCH (E)	(E) HM	PAINT	MATCH (E)	9	2.03	-	9	2.03	9	2.03	8	2.03	-	(E)	RELOCATED DOOR, HWR, & FRAME	RELOCATED (E) SIGNS	-

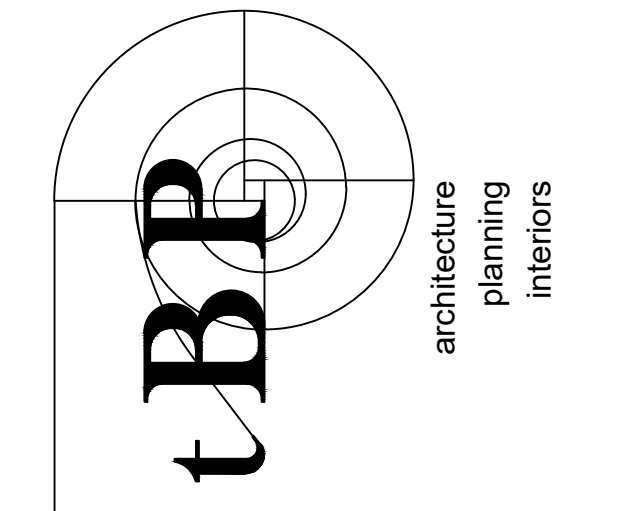
NOTES

- DOORS SHALL BE 1-3/4" THICK, UNLESS NOTED OTHERWISE.
- GLASS IN ALL FIRE RATED DOORS SHALL BE U.L. LISTED, FIRE PROTECTION RATED GLAZING, INSTALLED IN STEEL FRAMES, TESTED AS A COMPONENT OF THE DOOR ASSEMBLY.
- GLASS IN NON-RATED EXTERIOR DOORS SHALL BE TINTED TEMPERED GLASS.
- EXTERIOR DOOR REQUIREMENTS
  - ALL EXTERIOR DOORS SHALL CONFORM WITH THE REQUIREMENTS OF THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE.
  - EXIT DOOR SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
  - HAND ACTIVATED DOOR OPENING HARDWARE SHALL BE CENTERED BETWEEN 34" AND 44" ABOVE FINISH FLOOR. PANIC HARDWARE SHALL BE 34" TO 44" ABOVE FINISH FLOOR.
  - DEAD BOLTS ARE NOT PERMITTED UNLESS OPERABLE WITH A SINGLE EFFORT LEVER TYPE HARDWARE.
  - ALL ROOMS SERVING AN OCCUPANCY LOAD OF 50 OR GREATER AND DOORS LOCATED ON THE DISCHARGE OF EXIT CORRIDORS ARE REQUIRED TO BE PROVIDED WITH PANIC HARDWARE (CBC 1010.1.10).
  - DOOR CLOSER AND GATE CLOSURE SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO A POSITION OF 12 DEGREES FROM LATCH IS 55 MIN. (CBC 11B-404.2.8.1)

DOOR SCHEDULE LEGEND

- AL ALUMINUM
- GL GLASS
- PH PANIC HARDWARE
- SC SOLID CORE WOOD
- SS STAIN GRADE
- OM ORNAMENTAL METAL
- FF FACTORY FINISH
- P FIELD PAINTED
- T TEMPERED GLASS
- PG PAINT GRADE
- SS STAINLESS STEEL
- VIN VINYL PANEL
- WS WOOD STAINED

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KWIS ELEMENTARY SCHOOL  
BASEBALL FIELD IMPROVEMENTS  
HACIENDA LA PUENTE UNIFIED SCHOOL DISTRICT  
1925 KWIS AVENUE  
HACIENDA HEIGHTS, CALIFORNIA 91745

owner

tBP project number : 21054.00

file name: 04-801.dwg

drawn by: JG checked by:

date: 04/05/2021

Rev: date: description:

09-14-23 BULLETIN NO. 2

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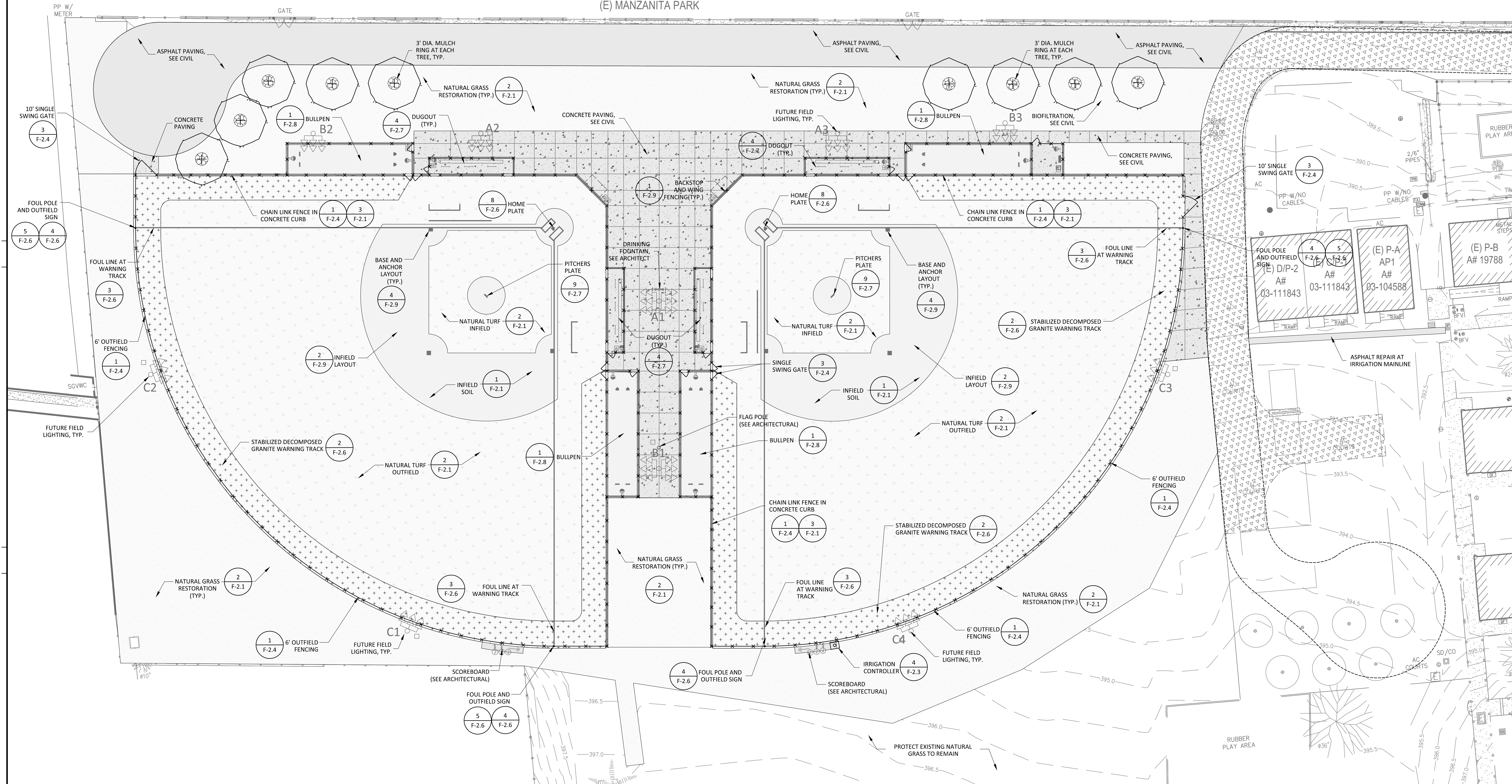
GATE SCHEDULE

drawing no.:

2.03

drawing of

(E) MANZANITA PARK



LAYOUT NOTES

1. FURNISH AND INSTALL CONCRETE EDGE ANCHOR AROUND THE ENTIRE PERIMETER OF THE SYNTHETIC TURF SURFACES IN BATTING CAGE AREAS.
2. EXISTING NATURAL TURF FIELD TO BE RESTORED. REMOVE EXISTING SOD AND ROOT ZONE SOIL TO 3" BELOW EXISTING SURFACE GRADE. SCARIFY SURFACE SOIL TO 8" DEPTH AND REGRADE SURFACE AREA PER GRADING PLAN. PROVIDE MINIMUM 4 SOIL TEST RESULTS AND MODIFY/AMEND EXISTING SOIL PER RECOMMENDATIONS. INSTALL NEW IRRIGATION SYSTEM PER IRRIGATION PLAN. FURNISH AND INSTALL ORGANIC AMENDMENT AND NEW NATURAL TURF SOD.
3. WARNING TRACK SURFACING SHALL EXTEND 12" OUTSIDE THE OUTFIELD FENCE PER DETAILS
4. ALL NEW NATURAL TURF SURFACES SHALL RECEIVE 8" DEPTH IMPORTED SOIL AMENDMENTS. (REFER TO SPECIFICATIONS AND DETAILS).
5. RESTORE AND HYDROSEED ALL DISTURBED NON-FIELD SURFACE PERIMETER AREAS.
6. SEE LANDSCAPE PLANTING PLANS FOR TREE AND SHRUB PLANTING LOCATIONS AND SPECIES MIX
7. SEE CIVIL DRAWINGS FOR GRADING, STORM DRAINAGE AND OTHER GENERAL UTILITIES
8. SEE ELECTRICAL SHEETS FOR SCOREBOARD, IRRIGATION CONTROLLER, AND OTHER MISCELLANEOUS POWER SUPPLIES.
9. CONCRETE OR ASPHALT PAVING TO MEET AND MATCH FLUSH WITH EXISTING PAVED SURFACES.
10. COORDINATE LOCATION OF FENCE POSTS TO AVOID EXISTING OR PROPOSED UTILITIES.
11. SEE FENCING LAYOUT PLAN FOR EXTENT AND HEIGHTS OF VARIOUS FENCES. SEE DETAILS FOR CURBS AND FENCES.
12. SEE LAYOUT CONTROL PLANS ON SHEET F-1.6. DIGITAL DATA PROVIDED TO THE CONTRACTOR AFTER BID AWARD UPON REQUEST.
13. COORDINATE QUICK COUPLING VALVES AND AUTOMATIC CONTROL VALVES TO BE INSTALLED DIRECTLY ADJACENT TO CONCRETE EDGE.

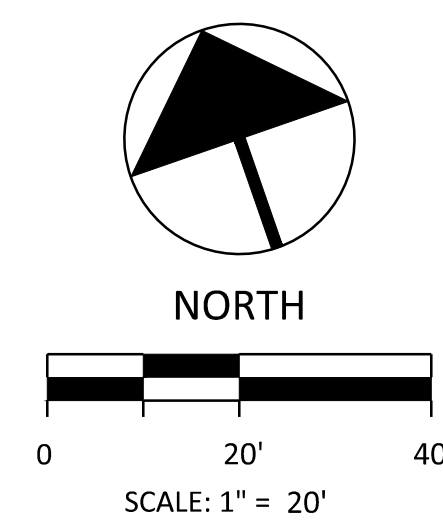
- NOTE LEGEND**
- 1. (INDICATES GENERAL CONSTRUCTION NOTE)
  - 3. (INDICATES SPECIFIC CONSTRUCTION KEYNOTE)

LAYOUT LEGEND

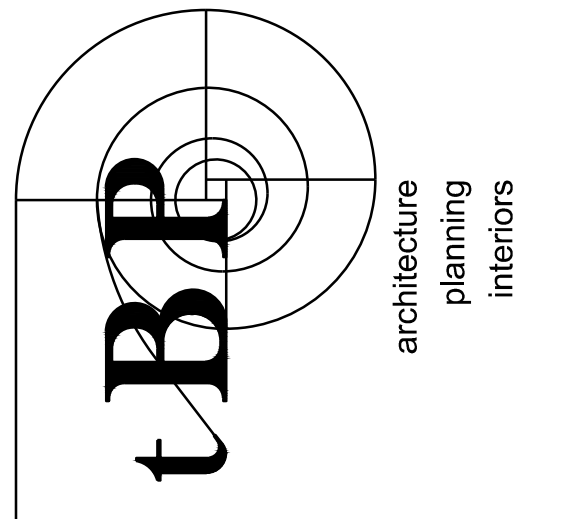
- TOPSOIL BASED NATURAL TURF
- STABILIZED DECOMPOSED GRANITE
- ASPHALT PAVING
- CONCRETE PAVING
- INFIELD MIX
- RESTORATION SEEDING
- MULCH
- CHAINLINK FENCE AND CONCRETE CURB
- CHAINLINK FENCE
- CONCRETE CURBING

PLANT LEGEND

BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY	SPECIFICATIONS
OPLOSTEMON CONFERTA	BRISBANE BOX	24" BOX	19	MATCHED SPECIMEN, SYMMETRICAL



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**KWIS ELEMENTARY SCHOOL  
BASEBALL FIELD IMPROVEMENTS**  
HACIENDA LA PUENTE UNIFIED SCHOOL DISTRICT  
1925 S. KWIS AVENUE  
HACIENDA HEIGHTS, CALIFORNIA 91745

iBP project number : 20922.19.01  
file name:  
drawn by: CPW checked by: RSH  
date: 11-15-22  
Rev. date: description:  
9/15/23 REVISIONS

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drawing title:  
**ATHLETIC FIELDS  
LAYOUT PLAN**

drawing no.:  
**F-1.1**  
drawing of

## IRRIGATION NOTES

### NOTE LEGEND

1. (INDICATES GENERAL CONSTRUCTION NOTE)  
 2. (INDICATES SPECIFIC CONSTRUCTION KEYNOTE)

- COORDINATE QUICK COUPLING VALVE LOCATIONS TO CORRESPOND TO THE CONCRETE EDGE ANCHOR AT THE SYNTHETIC TURF FIELD.
- THE CONTRACTOR SHALL LOCATE EXISTING ELECTRICAL AND COMMUNICATION CONDUCTORS IN THE FIELD AND VERIFY TO DEPTH WITH THE PROJECT LANDSCAPE ARCHITECT PRIOR TO TRENCHING FOR THE DRAINAGE AND WATER SYSTEMS.
- COORDINATE IRRIGATION PIPING TO AVOID UNDERGROUND UTILITIES.
- COORDINATE IRRIGATION PIPING AND FENCE POSTS TO AVOID CONFLICT.
- SPRINKLER HEADS IN SHRUB AND TURF AREAS TO BE LOCATED 3 INCHES MAXIMUM AND 1 INCH MINIMUM FROM THE CONCRETE CURBING & CONCRETE SIDEWALKS.
- ALL LATERAL IRRIGATION PIPING WILL BE 1-1/4" UNLESS OTHERWISE NOTED ON PLAN.
- ALL IRRIGATION MAINLINES, LATERAL LINES, ELECTRICAL AND VALVE CONTROL WIRES CROSSING UNDER SIDEWALKS, AND ASPHALT DRIVEWAYS SHALL BE SLEEVED. SLEEVES SHALL BE PLACED UNDER ALL DRIVEWAYS, PAVED AREAS, WALKS AISLES, ETC WHERE IRRIGATION LATERAL, MAINLINE AND CONTROL WIRES CROSS. SLEEVES SHALL BE PVC SCH 40. BURY MINIMUM 24" DEEP. MINIMUM DISTANCE PAST EDGE OF PAVED SURFACE SHALL BE 24". WATER AND WIRE SHALL NOT BE PLACED IN THE SAME SLEEVE. SLEEVES SHALL BE TWICE THE DIAMETER OF THE PIPE BEING SLEEVED. WIRE SLEEVES TO BE 2". SLEEVES ARE REQUIRED, WHETHER OR NOT INDICATED IN PLAN.
- RUN IRRIGATION VALVE CONTROLLER WIRE FROM IRRIGATION CONTROLLER CABINET TO EACH INDIVIDUAL IRRIGATION CONTROL VALVE. RUN TWO EXTRA CONTROL WIRES FROM CONTROLLER TO VALVES FOR FUTURE REPAIR.
- IRRIGATION MAINLINE, REMOTE CONTROL VALVES, AND QUICK COUPLING VALVES SHOWN IN ROADWAY FOR CLARITY ONLY. INSTALL MAINLINE DOWN THE CENTER OF LANDSCAPE ISLAND AND LANDSCAPE PLANTING AREAS.
- ALL IRRIGATION REMOTE CONTROL VALVES SHALL BE 2" UNLESS OTHERWISE NOTED.
- THE APPROVED BACKFLOW DEVICE INSTALLED SHALL BE TESTED BY AN APPROVED BACKFLOW ASSEMBLY TESTER PRIOR TO ALLOWING SERVICE.
- POP UP RISER HEIGHT IN SHRUB/ PLANTED AREAS TO BE 12".
- IRRIGATION SYSTEM LAYOUT: DUE TO THE SCALE OF THE DRAWINGS, THE CONTRACTOR SHALL BE AWARE THAT MINOR ADJUSTMENTS TO THE IRRIGATION SYSTEM MAY BE NECESSARY TO PROVIDE PROPER COVERAGE. THESE ADJUSTMENTS COULD INCLUDE NOZZLE CHANGES AND/OR ADDITION OR DELETION OF INDIVIDUAL HEADS TO COMPENSATE FOR CHANGES MADE ON THE SITE. THE CONTRACTOR SHALL LOCATE ALL VALVES, LATERAL LINE AND MAINLINE IN PLANTING AREAS. FURTHERMORE THE IRRIGATION DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, ETC. SHOWN WITHIN PAVED AREAS IS FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN PLANTING AREAS WHEREVER POSSIBLE. THE CONTRACTOR SHALL LOCATE ALL VALVES IN SHRUB, GROUNDCOVER OR TURF AREAS.
- THE IRRIGATION SYSTEM DESIGN IS BASED ON A MINIMUM OPERATING PRESSURE OF 60 PSI AND MAXIMUM FLOW DEMAND OF 80 GPM. THE CONTRACTOR SHALL VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION.
- COORDINATE LOCATION OF CONDUCTORS AND CONDUIT FROM OUTSIDE BUILDING ENVELOPE INTO THE IRRIGATION CONTROLLER WITH ELECTRICAL CONTRACTOR.
- INSTALL AIR RELIEF VALVES AT THE HIGH POINT OF EACH SECTION OF DRIP LINE, PER MANUFACTURER'S RECOMMENDATIONS.
- INSTALL FLUSH VALVES ON THE EXHAUST HEADER OF EACH DRIPLINE SECTION, PER MANUFACTURER'S RECOMMENDATIONS.

CONTRACTOR TO PROTECT AND PRESERVE IN PLACE ALL EXISTING SURVEY MONUMENTS. ANY MONUMENT DISTURBED SHALL BE RESET BY A LICENSED LAND SURVEYOR AND THE APPROPRIATE CORNER RECORD MUST BE FILED WITH THE COUNTY OF LOS ANGELES.

## WATER AUDIT AND MAINTENANCE NOTES

THE CONTRACTOR WILL CONDUCT AN IRRIGATION AUDIT USING A CERTIFIED IRRIGATION AUDITOR, AFTER THE FINAL FIELD OBSERVATION HAS BEEN COMPLETED AND ALL IRRIGATION COMPONENTS ARE INSTALLED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AND THE IRRIGATION SYSTEM IS ACCEPTED BY THE PROJECT ARCHITECT FOR MAINTENANCE.

THE IRRIGATION AUDIT WILL BE CONDUCTED IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:

- PLACE FLAGS AT EACH HEAD IN THE ZONE.
- MEASURE SPACING AND MARK MID-POINTS BETWEEN HEADS.
- PLACE WATER MEASURING RECEPTACLES.
- TAKE READINGS OF WATER LEVEL IN RECEPTACLES AND RECORD RESULTS
- MEASURE HEAD PRESSURE IN EACH ZONE AND RECORD RESULTS.
- AFTER COMPLETING ZONE ADVANCE TO NEXT ZONE AND REPEAT PROCEDURE.
- SUBMIT THE RESULTS OF THE AUDIT TO THE PROJECT ARCHITECT.

THE IRRIGATION MAINTENANCE SCHEDULE TASKS LISTED BELOW ARE INTENDED AS MINIMUM STANDARDS AND MORE FREQUENT ATTENTION MAY BE REQUIRED DEPENDING ON THE PARTICULAR SITE CONDITIONS.

MAINTENANCE TASK	FREQUENCY
1. CONTROLLER CABINET - OPEN CABINET AND CLEAN OUT DEBRIS AND REPLACE BATTERY AS NECESSARY. CHECK WIRING AND REPAIR AS NEEDED AND CHECK CLOCK AND RESET, IF NECESSARY.	QUARTERLY
2. IRRIGATION SCHEDULE - ADJUST SCHEDULE FOR SEASONAL VARIATIONS AND OTHER CONDITIONS WHICH MAY AFFECT THE AMOUNT OF WATER NEEDED TO MAINTAIN PLANT HEALTH ADJUST AS NECESSARY.	MONTHLY
3. POC - VISUALLY INSPECT COMPONENTS FOR LEAKS, PRESSURE SETTINGS, SETTLEMENT OR OTHER DAMAGE AFFECTING THE OPERATION OF A COMPONENT. REPAIR AS NEEDED.	QUARTERLY
4. REMOTE CONTROL VALVES, ISOLATION VALVES AND QUICK COUPLERS VALVES - VISUALLY INSPECT FOR LEAKS, SETTLEMENT, WIRE CONNECTIONS AND PRESSURE SETTINGS. REPAIR OR ADJUST AS NEEDED.	QUARTERLY
5. MAINLINE AND LATERALS - VISUALLY INSPECT FOR LEAKS OR SETTLEMENT OF TRENCH.	QUARTERLY
6. SPRINKLERS - VISUALLY CHECK FOR ANY BROKEN MISSED OR WEEKLY CLOGGED HEADS. HEADS WITH INCORRECT ARC, INADEQUATE COVERAGE OR OVERSPRAY AND LOW HEAD DRAINAGE. REPAIR AS NEEDED.	MONTHLY
7. FILTERS AND STRAINERS - VISUALLY CHECK FOR LEAKS, BROKEN FITTINGS. CLEAN AND FLUSH SCREENS.	MONTHLY

AUDIT SHALL BE IN ACCORDANCE WITH THE LATEST STATE OF CALIFORNIA LANDSCAPE WATER MANAGEMENT PROGRAM AS DESCRIBED IN THE LATEST LANDSCAPE IRRIGATION AUDITOR HANDBOOK. THE LANDSCAPE IRRIGATION AUDITS TO BE CONDUCTED BY A QUALIFIED INDIVIDUAL AND THE AUDIT SCHEDULE SHALL BE CONDUCTED AT LEAST ONCE EVERY FIVE YEARS IN ACCORDANCE WITH THE REQUIREMENTS OF TITLE 20, DIVISION 1 OF THE LOS ANGELES COUNTY CODE.

## PRESSURE LOSS CALCULATIONS

Zone 6		44.4 gpm		
Static Pressure at POC		50	psi	
Pump		30.00	psi	
<b>Pressure Losses</b>				
Backflow Prevention Device	2"	-10.00	psi	
Master Valve	2"	-0.53	psi	
3" Class 315 mainline	708 lf	-2.05	psi	
Automatic Valve	2"	-1.70	psi	
<b>Lateral Lines</b>				
2"	102lf @ 44.4 gpm	-1.46	psi	
2"	3lf @ 33.3 gpm	-0.03	psi	
1.25"	41lf @ 22.2 gpm	-1.12	psi	
1.25"	41lf @ 11.1 gpm	-0.31	psi	
<b>Pressure Available at Last Head</b>				
Minimum Operating Pressure of Zone				
		60.00	psi	

Zone 22		50.2 gpm		
Static Pressure at POC		50	psi	
Pump		30	psi	
<b>Pressure Losses</b>				
Backflow Prevention Device	2"	-10.00	psi	
Master Valve	2"	-0.53	psi	
3" Class 315 mainline	653 lf	-0.55	psi	
Automatic Valve	2"	-1.70	psi	
<b>Lateral Lines</b>				
1.5"	24lf @ 30 gpm	-0.55	psi	
1.25"	82lf @ 10 gpm	-0.52	psi	
<b>Pressure Available at Last Head</b>				
Minimum Operating Pressure of Zone				
		30.00	psi	

## ZONE CHART

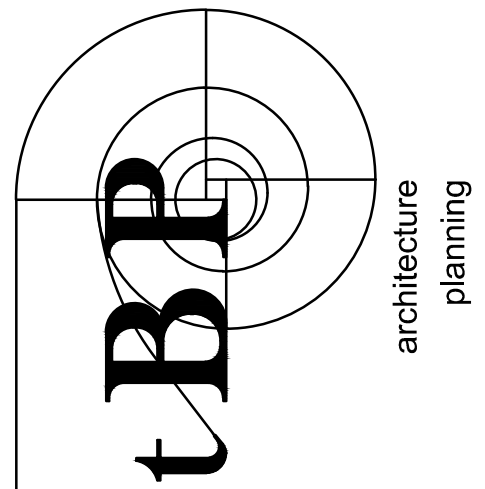
Zone	Valve Size	Irrigation Type	GPM	Hydrozone
1	1.5"	Rotors	22	Warm Season Turf
2	1.5"	Rotors	33.1	Warm Season Turf
3	2"	Rotors	44.4	Warm Season Turf
4	2"	Rotors	44.4	Warm Season Turf
5	1.5"	Rotors	33.3	Warm Season Turf
6	2"	Rotors	44.4	Warm Season Turf
7	1.5"	Rotors	33.3	Warm Season Turf
8	1.5"	Rotors	33.3	Warm Season Turf
9	2"	Rotors	44.4	Warm Season Turf
10	1.5"	Rotors	22	Warm Season Turf
11	1.5"	Rotors	33.1	Warm Season Turf
12	2"	Rotors	44.4	Warm Season Turf
13	2"	Rotors	44.4	Warm Season Turf
14	1.5"	Rotors	33.3	Warm Season Turf
15	2"	Rotors	44.4	Warm Season Turf
16	1.5"	Rotors	33.3	Warm Season Turf
17	1.5"	Rotors	33.3	Warm Season Turf
18	2"	Rotors	44.4	Warm Season Turf
19	1.5"	Rotors	15.1	Warm Season Turf
20	1.5"	Rotors	34	Warm Season Turf
21	1.5"	Rotors	34	Warm Season Turf
22	1.5"	Rotors	30.1	Warm Season Turf
23	1.5"	Rotors	28.5	Warm Season Turf
24	1.5"	Rotors	35.3	Warm Season Turf
25	1.5"	Rotors	22.5	Warm Season Turf
26	1.5"	Rotors	33.3	Warm Season Turf
27	1.5"	Rotors	19	Warm Season Turf
28	1.5"	Rotors	22.2	Warm Season Turf

## IRRIGATION SCHEDULE

IRRIGATION SCHEDULE (ESTABLISHMENT)												
Valve Number	Valve Size	Flow (GPM)	Irrigation Efficiency (IE)	Irrigation Type	Area (SF)	Plant Type	Precipitation Rate (in/hr)	Plant Factor (PF)	Runtime (Max.)	Number of Cycles	Frequency per week	Total Monthly Gallons
1	1.5"	22	0.75	Rotors	2965	Lawn	0.71	0.6	31.275	1	5	13761
2	1.5"	33.1	0.75	Rotors	3778	Lawn	0.84	0.6	26.4	1	5	17476.8
3	2"	44.4	0.75	Rotors	4064	Lawn	1.05	0.6	4.8	1	5	4262.4
4	2"	44.4	0.75	Rotors	6158	Lawn	0.69	0.6	9.6	1	5	8524.8
5	1.5"	33.3	0.75	Rotors	8700	Lawn	0.37	0.6	19.2	1	5	12787.2
6	2"	44.4	0.75	Rotors	8115	Lawn	0.53	0.6	9.6	1	5	8524.8
7	1.5"	33.3	0.75	Rotors	8700	Lawn	0.37	0.6	19.2	1	5	12787.2
8	1.5"	33.3	0.75	Rotors	5067	Lawn	0.63	0.6	9.6	1	5	6393.6
9	2"	44.4	0.75	Rotors	6158	Lawn	0.69	0.6	9.6	1	5	8524.8
10	1.5"	22	0.75	Rotors	2965	Lawn	0.71	0.6	31.275	1	5	13761
11	1.5"	33.1	0.75	Rotors	3778	Lawn	0.84	0.6	26.4	1	5	17476.8
12	2"	44.4	0.75	Rotors	4064	Lawn	1.05	0.6	4.8	1	5	4262.4
13	2"	44.4	0.75	Rotors	6158	Lawn	0.69	0.6	9.6	1	5	8524.8
14	1.5"	33.3	0.75	Rotors	8700	Lawn	0.37	0.6	19.2	1	5	12787.2
15	2"	44.4	0.75	Rotors	8115	Lawn	0.53	0.6	9.6	1	5	8524.8
16	1.5"	33.3	0.75	Rotors	8700	Lawn	0.37	0.6	19.2	1	5	12787.2
17	1.5"	33.3	0.75	Rotors	5067	Lawn	0.63	0.6	9.6	1	5	6393.6
18	2"	44.4	0.75	Rotors	6158	Lawn	0.69	0.6	9.6	1	5	8524.8
19	1.5"	15.1	0.75	Rotors	859	Lawn	1.69	0.6	13.2	1	5	3986.4
20	1.5"	34	0.75	Rotors	13915	Lawn	0.24	0.6	47.4	1	5	32232
21	1.5"	34	0.75	Rotors	13915	Lawn	0.24	0.6	47.4	1	5	32232
22	2"	30.1	0.75	Rotors	1881	Lawn	1.54	0.6	14.475	1	5	8713.95
23	1.5"	28.5	0.75	Rotors	6864	Lawn	0.40	0.6	52.125	1	5	29711.25
24	1.5"	35.3	0.75	Rotors	7810	Lawn	0.44	0.6	52.125	1	5	36800.25
25	1.5"	22.5	0.75	Rotors	6418	Lawn	0.34	0.6	52.125	1	5	23456.25
26	1.5"	33.3	0.75	Rotors	6526	Lawn	0.49	0.6	45.45	1	5	30269.7
27	1.5"	19	1.75	Rotors	1351	Lawn	1.35	0.6	16.5	1	5	6270
28	1.5"	22.2	2.75	Rotors	4659	Lawn	0.46	0.6	48.6	1	5	21578.4

IRRIGATION SCHEDULE (PEAK SUMMER SCHEDULE)												
Valve Number	Valve Size	Flow (GPM)	Irrigation Efficiency (IE)	Irrigation Type	Area (SF)	Plant Type	Precipitation Rate (in/hr)	Plant Factor (PF)	Runtime (Max.)	Number of Cycles	Frequency per week	Total Monthly Gallons
1	1.5"	22	0.75	Rotors	2965	Lawn	0.71	0.6	26.1	1	4	9174
2	1.5"	33.1	0.75	Rotors	3778	Lawn	0.84	0.6	22.0	1	4	11651.2
3	2"	44.4	0.75	Rotors	4064	Lawn	1.05	0.6	5.3	1	3	2841.6
4	2"	44.4	0.75	Rotors	6158	Lawn	0.69	0.6	10.7	1	3	5683.2
5	1.5"	33.3	0.75	Rotors	8700	Lawn	0.37	0.6	21.3	1	3	8524.8
6	2"	44.4	0.75	Rotors	8115	Lawn	0.53	0.6	10.7	1	3	5683.2
7	1.5"	33.3	0.75	Rotors	8700	Lawn	0.37	0.6	21.3	1	3	8524.8
8	1.5"	33.3	0.75	Rotors	5067	Lawn	0.63	0.6	10.7	1	3	4262.4
9	2"	44.4	0.75	Rotors	6158	Lawn	0.69	0.6	10.7	1	3	5683.2
10	1.5"	22	0.75	Rotors	2965	Lawn	0.71	0.6	26.1	1	4	9174
11	1.5"	33.1	0.75	Rotors	3778	Lawn	0.84	0.6	22.0	1	4	11651.2
12	2"	44.4	0.75	Rotors	4064	Lawn	1.05	0.6	5.3	1	3	2841.6
13	2"	44.4	0.75	Rotors	6158	Lawn	0.69	0.6	10.7	1	3	5683.2
14	1.5"	33.3	0.75	Rotors	8700	Lawn	0.37	0.6	21.3	1	3	8524.8
15	2"	44.4	0.75	Rotors	8115	Lawn	0.53	0.6	10.7	1	3	5683.2
16	1.5"	33.3	0.75	Rotors	8700	Lawn	0.37	0.6	21.3	1	3	8524.8
17	1.5"	33.3	0.75	Rotors	5067	Lawn	0.63	0.6	10.7	1	3	4262.4
18	2"	44.4	0.75	Rotors	6158	Lawn	0.69	0.6	10.7	1	3	5683.2
19	1.5"	15.1	0.75	Rotors	859	Lawn	1.69	0.6	14.7	1	3	2657.6
20	1.5"	34	0.75	Rotors	13915	Lawn	0.24	0.6	39.5	1	4	21488
21	1.5"	34	0.75	Rotors	13915	Lawn	0.24	0.6	39.5	1	4	21488
22	2"	30.1	0.75	Rotors	1881	Lawn	1.54	0.6	12.1	1	4	5809.3
23	1.5"	28.5	0.75	Rotors	6864	Lawn	0.40	0.6	43.4	1	4	19807.5
24	1.5"	35.3	0.75	Rotors	7810	Lawn	0.44	0.6	43.4	1	4	24533.5
25	1.5"	22.5	0.75	Rotors	6418	Lawn	0.34	0.6	43.4	1	4	15637.5
26	1.5"	33.3	0.75	Rotors	6526	Lawn	0.49	0.6	37.9	1	4	20179.8
27	1.5"	19	1.75	Rotors	1351	Lawn	1.35	0.6	18.3	1	3	4180
28	1.5"	22.2	2.75	Rotors	4659	Lawn	0.46	0.6	40.5	1	4	14385.6

4# 03 - 122560  
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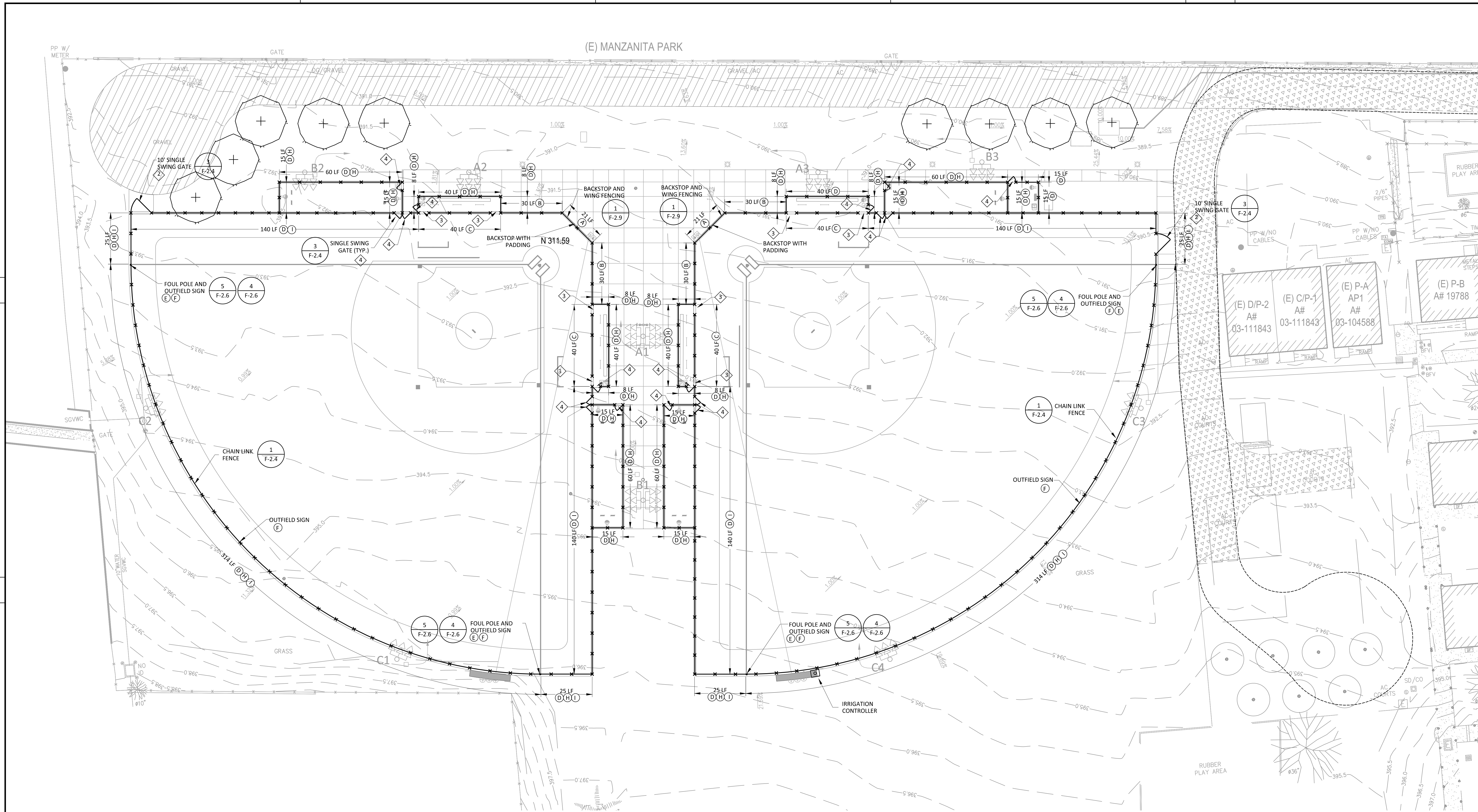
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KWIS ELEMENTARY SCHOOL  
 BASEBALL FIELD IMPROVEMENTS  
 HACIENDA LA PUENTE UNIFIED SCHOOL DISTRICT  
 1925 S. KWIS AVENUE  
 HACIENDA HEIGHTS, CALIFORNIA 91745

IBP project number : 20922.19.01  
 file name:  
 drawn by: REF checked by: RSH  
 date: 11-15-22  
 Rev. date: description:  
 9/15/23 REVISIONS

drawing title:  
**IRRIGATION PLAN NOTES**  
 drawing no.:  
**F-1.4A**  
 drawing of





**FENCE TYPE KEY**

- (A) 30' HEIGHT CHAIN LINK FENCE; 2" MESH X6 GAUGE BELOW 10', X9 GAUGE ABOVE 10', TOP AND 5' INTERMEDIATE RAILS. INSTALL 2x10 STOPBOARDS 1" CLEAR FROM FINISH GRADE.
- (B) 30' HEIGHT CHAIN LINK FENCE; 2" MESH X6 GAUGE BELOW 10', X9 GAUGE ABOVE 10', TOP, BOTTOM, AND 5' INTERMEDIATE RAILS
- (C) 30' OVERALL; 10' HEIGHT CHAIN LINK FENCE; 2" MESH X9 GAUGE, TOP, MIDDLE, BOTTOM RAIL, 20' X2" SQ. NYLON NETTING ABOVE
- (D) 6' HEIGHT CHAIN LINK FENCE; 2" MESH X9 GAUGE, TOP, BOTTOM RAIL AND TENSION WIRE
- (E) FOUL POLE
- (F) OUTFIELD SIGN
- (G) BATTING CAGE TUNNEL (FUTURE)
- (H) WINDSCREEN; 12" ABOVE BOTTOM OF FENCE TO TOP OF FABRIC (5' AT 6' FENCE, 9' AT 10' FENCE)
- (I) FENCE CAP

**GATE TYPE KEY (ALL CHAINLINK)**

- (1) NOT USED
- (2) 10' SINGLE SWING
- (3) 5' OPENING (NO LEAF)
- (4) 4' SINGLE SWING GATE
- (5) 10' DOUBLE SWING GATE (2 x 5')
- (6) 5' SINGLE ROLLING GATE
- (7) 8' SINGLE SWING GATE

**FENCING NOTES**

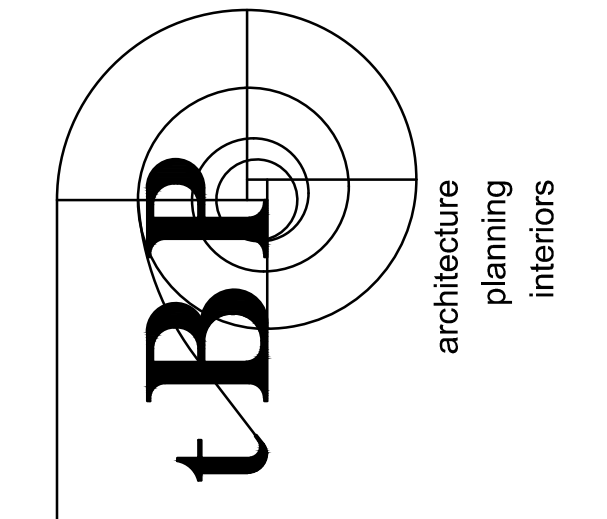
1. END FENCE. MEET AND MATCH EXISTING FENCE TO PROVIDE SECURE ENCLOSURE
2. FENCE ADJACENT TO PROPERTY LINE TO BE LOCATED 12" INSIDE PROPERTY LINE
3. GATE LOCATIONS ARE SHOWN APPROXIMATE.
4. GATES TO BE CENTERED AT PERPENDICULAR PATHWAYS WHEN OCCURS.
5. SEE DETAIL 7/F-2.4 FOR ACCESSIBLE GATES. SEE DETAIL 3/F-2.4 FOR ALL OTHER SINGLE SWING GATES.
6. INSTALL LOCK BACK POST ON ALL SWING GATES.

**NOTE LEGEND**  
(INDICATES GENERAL CONSTRUCTION NOTE)  
(INDICATES SPECIFIC CONSTRUCTION KEYNOTE)

**FENCING LEGEND**

- CHAIN LINK FENCE AND CONCRETE CURB
- CHAIN LINK FENCE
- CONCRETE CURBING
- CATCH BASIN INLET (C.B.I.) TYPE 1
- EXISTING FENCE TO REMAIN
- FENCE TYPE AND LIMIT
- GATE TYPE

Agency  
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owner  
 Kwis Elementary School  
 Baseball Field Improvements  
 Hacienda La Puente Unified School District  
 1925 S. Kwis Avenue  
 Hacienda Heights, California 91745

tBP project number : 20922.19.01

file name:

drawn by: REF checked by: RSH

date: 11-15-22

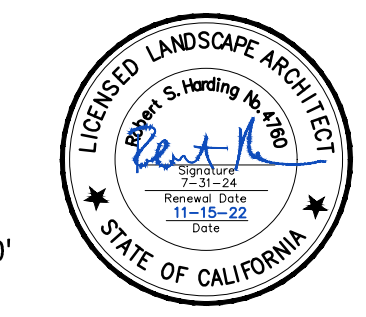
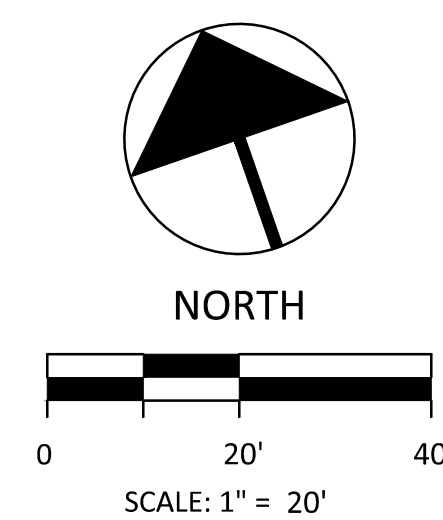
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**F-1.5**  
 drawing of







# Converse Consultants

Geotechnical Engineering  
Environmental & Groundwater Science  
Inspection & Testing Services

## GEOTECHNICAL STUDY REPORT

**KWIS ELEMENTARY SCHOOL ATHLETIC FIELDS**  
1925 KWIS AVENUE  
HACIENDA HEIGHTS, CALIFORNIA

*CONVERSE PROJECT No. 20-31-120-01*

*Prepared For:*  
**HACIENDA LA PUENTE UNIFIED SCHOOL DISTRICT**  
Mr. Duane Lowes  
Facilities Manager  
15959 East Gale Avenue  
City of Industry, California 91745

*Presented By:*  
**CONVERSE CONSULTANTS**  
717 South Myrtle Avenue  
Monrovia, California 91016  
626-930-1200

April 29, 2020



# Converse Consultants

Geotechnical Engineering, Environmental & Groundwater Science, Inspection & Testing Services

April 29, 2020

Mr. Duane Lowes  
Facilities Manager  
Hacienda La Puente Unified School District  
15959 East Gale Avenue  
City of Industry, California 91745

Subject: **GEOTECHNICAL STUDY REPORT**  
**Kwis Elementary School Athletic Fields**  
Kwis Elementary School  
1925 Kwis Avenue, Hacienda Heights, California 91745  
Converse Project No. 20-31-120-01

Dear Mr. Lowes,

Converse Consultants (Converse) is pleased to present this Geotechnical Study Report for the Kwis Elementary School Athletic Fields Project located at the existing Kwis Elementary School in Hacienda Heights, Los Angeles County, California. Our services were performed in accordance with our proposal dated January 30, 2020.

The purpose of the study was to generate a report for design purposes, consistent with the 2019 edition of California Building Code (CBC), Title 24, Chapter 16; Earthquake Design, Chapter 18A, Foundation and Retaining Wall; Appendix Chapter 33, Excavation and Grading; Part 1' section 4-317 (e) and CGS Note 48-Checklist for the review of Geologic/Seismic Reports for California Public Schools, Hospitals and Essential Services Buildings for new and existing (retrofit/modernization) buildings. The findings of the work are presented in the Geotechnical Hazards Report and provide an assessment of the potential for earthquake or other geological hazard damage pursuant to Education Code 17212 and 17212.5 and the California Code of Regulations, Title 5, Sections 14010(f), 14010(g) and 14010(i). In addition, we referred to the latest "School Site Selection and Approval Guide, Appendix H" published by California Department of Education, for factors to be included in the Geohazard Report.

Based on our field exploration, laboratory testing, geologic evaluation and geotechnical analysis, the site is suitable from a geotechnical standpoint for the proposed project, provided our conclusions and recommendations are implemented during design and construction.

We appreciate this opportunity to be of continued service to Hacienda La Puente Unified School District. If you should have any questions regarding this report, please contact us at (626) 930-1200.

## CONVERSE CONSULTANTS

Siva K. Sivathasan, PhD, PE, GE, DGE, QSD, F. ASCE  
Senior Vice President / Principal Engineer

## PROFESSIONAL CERTIFICATION

This report for the Kwis Elementary School Athletic Fields Project located at the existing Kwis Elementary School in Hacienda Heights, Los Angeles County, California, has been prepared by the staff of Converse under the professional supervision of the individuals whose seals and signatures appear hereon.

The findings, recommendations, specifications or professional opinions contained in this report were prepared in accordance with generally accepted professional engineering and engineering geologic principles and practice in this area of Southern California. There is no warranty, either expressed or implied.

In the event that changes to the property occur, or additional, relevant information about the property is brought to our attention, the conclusions contained in this report may not be valid unless these changes and additional relevant information are reviewed, and the recommendations of this report are modified or verified in writing.

---

Babak Abbasi, PhD, EIT  
Senior Staff Engineer

---

Mark B. Schluter, PG, CEG, CHG  
Senior Engineering Geologist



---

Siva K. Sivathasan, PhD, PE, GE, DGE, QSD, F.ASCE  
Senior Vice President/Principal Engineer



## EXECUTIVE SUMMARY

The following is a summary of our geotechnical investigation, conclusions and recommendations as presented in the body of this report. Please refer to the appropriate sections of the report for complete conclusions and recommendations. In the event of a conflict between this summary and the report, or an omission in the summary, the report shall prevail.

- The proposed project site is located at the existing Kwis Elementary School in Hacienda Heights, Los Angeles County, California. The subject site's surface elevations range from approximately 377 feet to 382 feet relative to mean-sea-level (MSL), with a surface gradient sloping towards the northeast.
- The proposed project entails construction of new athletic fields. New construction consists of a concession stand, restrooms, storage building, plaza, fire lane access pavement, two (2) dual batting cages, and two little league size fields with bullpens (200' outfield, 60' base paths). The structural loads are not known at this time; however, we are anticipating low structural loads.
- Six (6) exploratory borings (BH-1 through BH-6) were drilled within the project site to evaluate the subsurface earth materials for the proposed Athletic Fields Project on March 19, 2020. The borings were drilled using limited access drill rig with a 6-inch diameter hollow stem auger to a maximum depth of 51.5 feet below the existing ground surface (bgs). Each boring was visually logged by a Converse engineer and sampled at regular intervals and at changes in subsurface soils, in accordance with the Unified Soil Classification System. Percolation tests were performed in borings BH-1, BH-2, BH-4, and BH-5 up to depth of 20 feet below existing ground surface.
- The observed fill soils consist primarily of clay and sandy clay. The depth of the fill was approximately two (2) feet. The alluvial sediments consist predominately of clay, sandy clay, and silty clay to depths to 51.5 feet below ground surface.
- During our exploration, groundwater was encountered at depth of 30 feet bgs in Boring No. 3. The historically highest groundwater contour level for the project site is approximately 20 feet bgs as shown on Plate No.1.2 of the Seismic Hazard Zone Report No. 022 for the Baldwin Park 7.5-Minute Quadrangle. Groundwater is not expected to be encountered during the planned construction however may need to be considered in design.
- The project site is not located within a currently designated State of California Earthquake Fault Zone (formerly Alquist-Priolo Special Studies Zones) for surface fault rupture. The Alquist-Priolo Earthquake Fault Zoning Act requires the California Geological Survey to zone "active faults" within the State of California.



- Seismic design parameters based on the CBC 2019 code can be found in Section 6.1 Seismic Design Parameters.
- Site soils consisted primarily of clay, sandy clay, and silty clay. The earth materials at the site should be excavatable with conventional heavy-duty earth-moving equipment. Gravel and cobble size rock materials may be encountered in the alluvium beneath the project site and should be anticipated. Oversize rock materials will not be suitable for fill materials.
- The sulfate content of the sampled soil corresponds to American Concrete Institute (ACI) exposure category S0 (soluble sulfate in soil is less than 0.1, percent by weight). Based on the site location and the results of chloride testing, we do not anticipate concrete structures will be exposed to external sources of chlorides, such as deicing chemicals, salt, brackish water, or seawater. ACI specifies exposure category C1 where concrete is exposed to moisture, but not to external sources of chlorides. The minimum electrical resistivity when saturated was 1,200 Ohm-cm. The value indicates that the tested soil is slightly corrosive to ferrous metals (if any) in contact with the soil.
- Shallow spread and continuous footings are considered suitable for structure support provided the recommendations in this report are incorporated into the project plans and specifications are followed during site construction
- For non-building structures (e.g. signs, fence walls, short retaining walls, etc.), conventional footings can be used.
- Footings may be designed based on an allowable net bearing capacity of 2,500 pounds per square foot (psf).
- A coefficient of friction of 0.30 may be used with the dead load forces. Passive earth pressure of 200 psf per foot of depth may be used for the sides of footings poured against compacted native soils. The maximum value of the passive earth pressure should be limited to 2,000 psf.
- Short-term static settlement of compacted fills is anticipated to be 1.0 inch or less. Static differential settlement is anticipated to be one-half of the total settlement or less over a lateral distance of 30 feet.

Results of our investigation indicate that the site is suitable from a geotechnical standpoint for the proposed development, provided that the recommendations contained in this report are incorporated into the design and construction of the project.



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## 1.0 INTRODUCTION

This report contains the findings and recommendations of our geotechnical study performed at the site of the Kwis Elementary School Athletic Fields Project located within the existing Kwis Elementary School site, in Hacienda Heights, Los Angeles County California, as shown on Drawing No. 1, *Site Location Map*.

The purpose of the study was to evaluate the subsurface soil conditions and provide geotechnical recommendations and design recommendations for the design and construction of the proposed project, consistent with the current edition of California Building Code, Title 24, Chapter 16A; Earthquake Design, Chapter 18A, Foundation and Retaining Wall; Appendix Chapter 33, Excavation and Grading; and CGS Note 48-Checklist for the review of Geologic/Seismic Reports for California Public Schools, Hospitals and Essential Services Buildings.

This report is written for the project described herein and is intended for use solely by Hacienda Heights Unified School District, Kwis Elementary School, and their design team. It should not be used as a bidding document but may be made available to the potential contractors for information on factual data only. For bidding purposes, the contractors should be responsible for making their own interpretation of the data contained in this report.

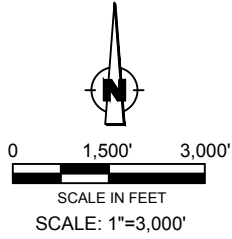
## 2.0 SITE AND PROJECT DESCRIPTION

### 2.1 Site Description

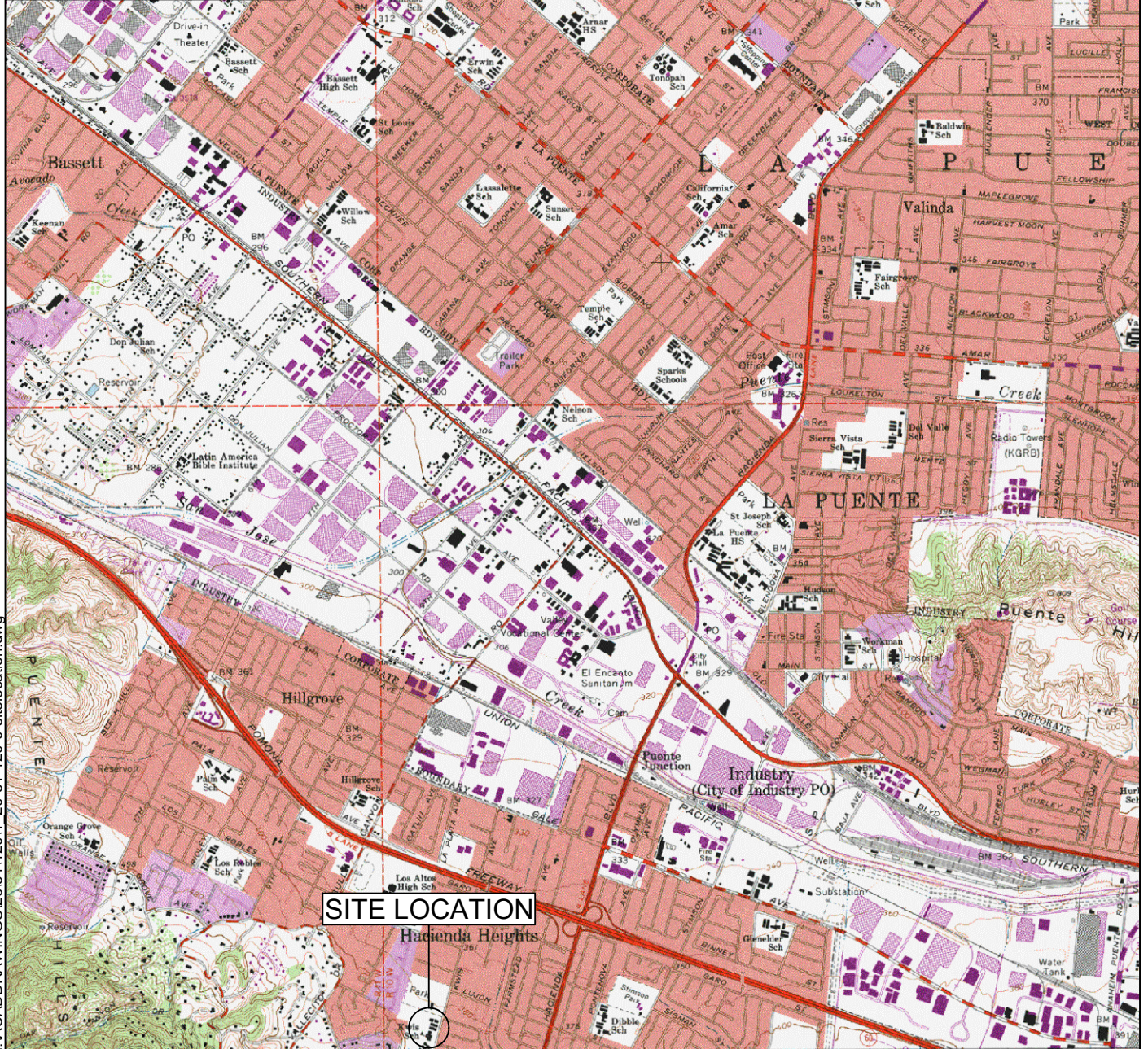
The project site is located at 1925 Kwis Avenue in Hacienda Heights, Los Angeles County, California. The site is located west of Kwis Avenue and south of Manzanita Park. The Kwis Elementary School Athletic Fields Project is planned to be within the existing Kwis Elementary School site in Hacienda Heights, California. The proposed athletic fields are planned to be situated along the northwest side of the Elementary School, as shown on Drawing No. 2, *Boring Location Map*. The subject site has surface elevations ranging from approximately 377 to 383 feet relative to mean-sea-level (MSL), respectively, with general surface gradients down toward the northeastward direction.

The site coordinates for the Kwis Elementary School Athletic Fields project are: 34.0021 degrees North Latitude, -117.9751 degrees West Longitude. The site coordinates were centered on the subject site and used to calculate earthquake ground motions. Review of Engineering Geology and Seismology for Public Schools and Hospitals in California dated August 9, 2005 (page 35) indicates that accuracy to within a few hundred meters of these coordinates is sufficient for the computation of the earthquake ground motion of the project site.





REFERENCE: USGS MAP  
BALDWIN PARK QUADRANGLE 1981



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## SITE LOCATION MAP

Kwis Elementary School Athletic Fields  
1925 Kwis Avenue  
Hacienda Heights, California 91745  
Converse Project No. 20-31-120-01

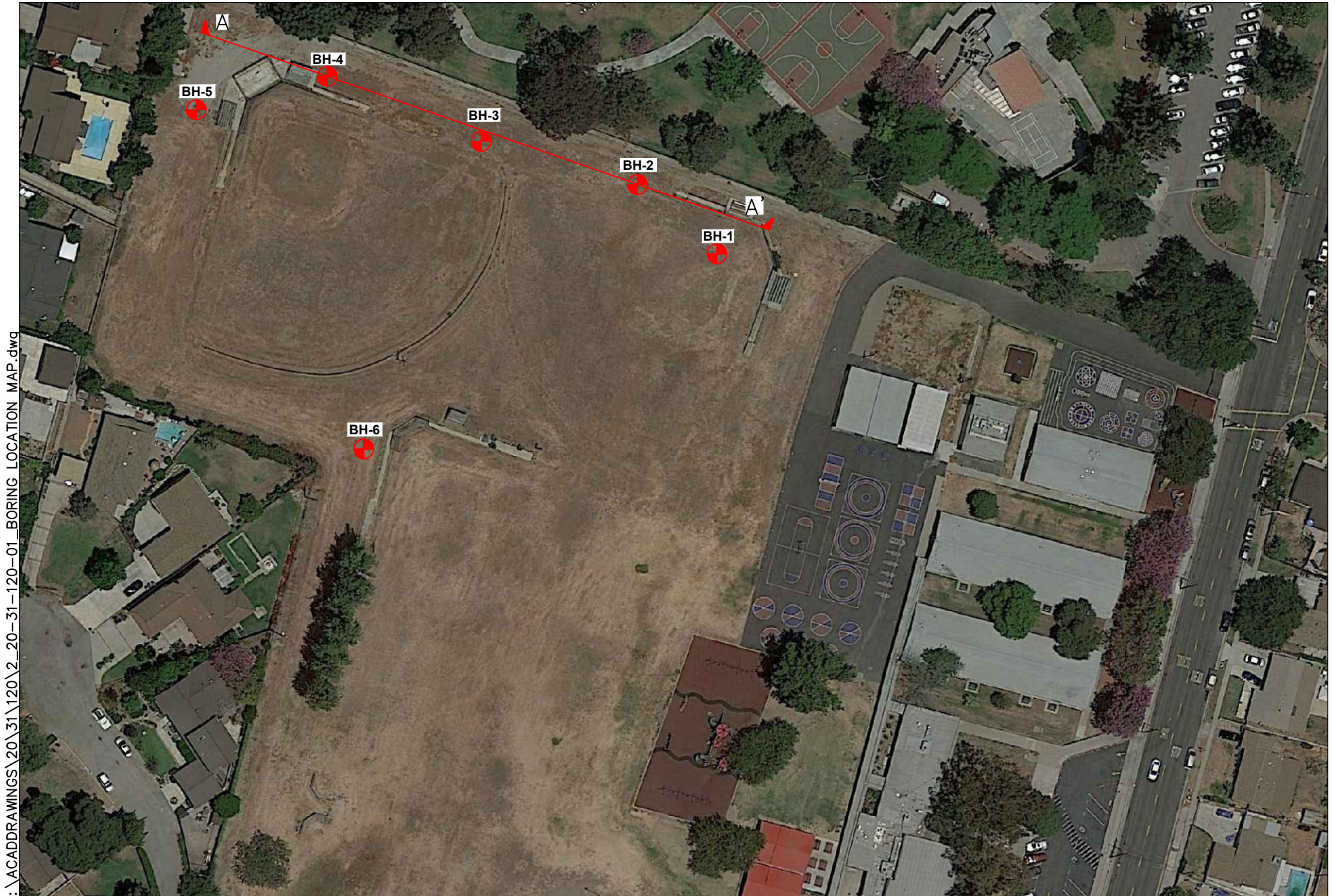
Project No.  
20-31-120-01



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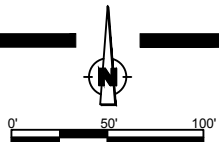
Drawing No.

1



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## BORING LOCATION MAP



Kwis Elementary School Athletic Fields  
1925 Kwis Avenue  
Hacienda Heights, California 91745

Project No.  
20-31-120-01

Drawing No.  
**2**

## 2.2 Project Description

The proposed project entails construction of new athletic fields. New construction consists of a concession stand, restrooms, storage building, plaza, fire lane access pavement, two (2) dual batting cages, and two (2) little league size fields with bullpens (200' outfield, 60' base paths). The structural load is not known at this time; however, we are anticipating low structural loads. The structures are planned to be founded on shallow foundations. The project site is shown on Drawing No. 2, *Boring Location Map*.

## 3.0 SCOPE OF WORK

Our scope of work consists of the tasks described in the following subsections.

### 3.1 Site Reconnaissance and Data Review

During the site reconnaissance on March 4, 2020, the surface conditions were noted, and the locations of the borings were determined. The borings were located using existing boundary features as a guide and should be considered accurate only to the degree implied by the method used. Underground Service Alert (USA) of Southern California was notified of our proposed drilling locations at least 48 hours prior to initiation of the subsurface field work.

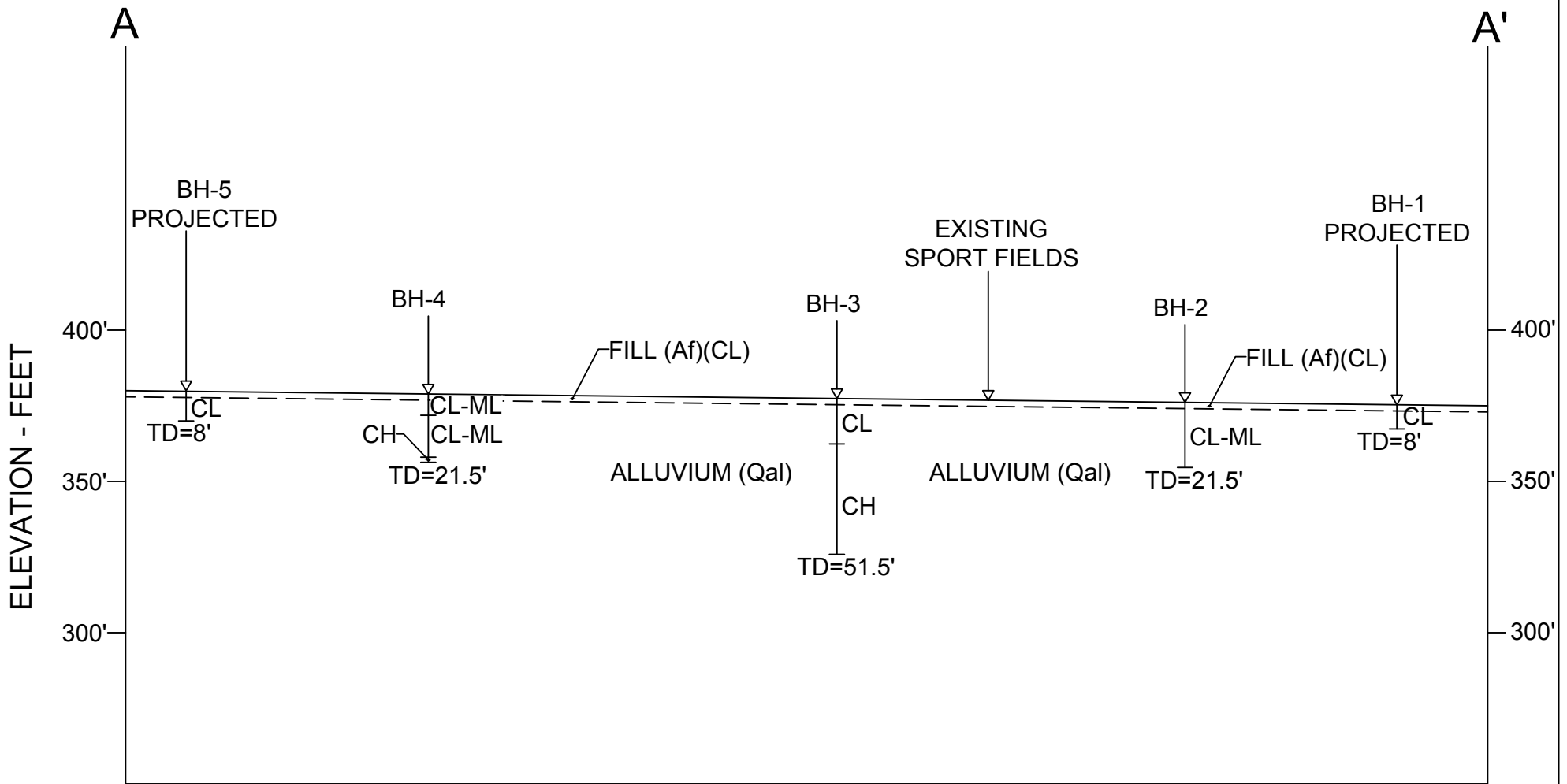
### 3.2 Subsurface Exploration

Six (6) exploratory borings (BH-1 through BH-6) were drilled within the project site to evaluate the subsurface earth materials for the proposed new athletic fields and improvements on March 19, 2020. The borings were drilled using a limited access drill rig with a 6-inch diameter hollow stem auger to a maximum drilled depth of approximately 51.5 feet below the existing ground surface (bgs). Each boring was visually logged by a Converse engineer and sampled at regular intervals and at changes in subsurface soils, in accordance with the Unified Soil Classification System. Detailed descriptions of the field exploration and sampling program are presented in Appendix A, *Field Exploration*.

California Modified Sampler (ring samples), Standard Penetration Test samples, and bulk soil samples were obtained for laboratory testing. Standard Penetration Tests (SPTs) were performed in selected borings at selected intervals using a standard (1.4 inches inside diameter and 2.0 inches outside diameter) split-barrel sampler. Borings extending into groundwater or deeper than 10 feet were backfilled with cement grout and capped to match surface conditions.

The approximate locations of the exploratory borings are shown in Drawing No. 2, *Boring Location Map*. Drawing No. 3, *Geologic Cross Section A-A'* shows geologic cross sections of the project site. For a description of the field exploration and sampling program, see Appendix A, *Field Exploration*.





### GEOLOGIC SECTION A-A'



**Converse Consultants**

Kwis Elementary School Athletic Fields  
1925 Kwis Avenue  
Hacienda Heights, California 91745

Project No.  
20-31-120-01

Drawing No.  
**3**

### 3.3 Laboratory Testing

Representative samples of the site soils were tested in the laboratory to aid in the classification and to evaluate relevant engineering properties. The tests performed included:

- In situ moisture contents and dry densities (ASTM Standard D2216)
- Percent finer than Sieve No. 200 (ASTM Standard D1140)
- Grain size distribution (ASTM Standard C136)
- Maximum dry density and optimum-moisture content relationship (ASTM Standard D1557)
- Direct shear (ASTM Standard D3080)
- Consolidation (ASTM Standard D2435)
- Expansion index (ASTM Standard D4829)
- R-value (ASTM D2844)
- Soil corrosivity tests (Caltrans 643, 422, 417, and 532)

### 3.4 Analyses and Report

Data obtained from the exploratory fieldwork and laboratory-testing program were analyzed and evaluated with respect to the planned construction. This report was prepared to provide the findings, conclusions and recommendations developed during our study and evaluation.

## 4.0 GEOLOGIC CONDITIONS

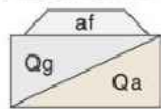
### 4.1 Regional Geologic Setting

The site is located within the south eastern portion of the San Gabriel Valley Basin, a broad sediment-filled basin located at the convergence of the Transverse Ranges and Peninsular Ranges geomorphic provinces of California. Local stream channels and drainages have deposited stream and flood sediments across the northern flank of the Puente Hills during Holocene time (0 – 11,000 years) to form a gently sloping alluvial fan that descends into the lower valley basin. Soils underlying the project site consist of clay, sandy silts, and silt sediments deposited over time by rivers and local stream tributaries which once drained across the valley basin to the Pacific Ocean. Most of these natural river and stream channels are now controlled by dams, debris basins and flood control channels that collect surface runoff and convey storm water to the ocean. Drawing No. 4, *Regional Geologic Map*, has been prepared to show the project site with respect to regional geology of the project site and Hacienda Heights area.



# EL MONTE AND BALDWIN PARK MAP (DF-69)

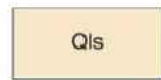
## LEGEND



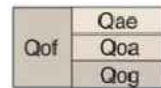
### SURFICIAL SEDIMENTS

Undissected alluvial deposits

- af** Artificial fill, and cut and fill areas
- Qg** Gravel and sand of major streams, and alluvial fan detritus from San Gabriel Mountains, grades southward into alluvium (**Qa**) as sizes of clasts decrease
- Qa** Alluvial gravel, sand and silt of valleys and floodplains



### LANDSLIDE DEBRIS



### OLDER DISSECTED SURFICIAL SEDIMENTS

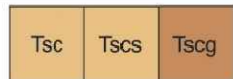
- Qof** Alluvial fan sediments derived from San Gabriel Mountains
- Qae** Slightly elevated and locally dissected alluvial gravel and sand at base of hill areas; shown as **Qa** on adjacent Los Angeles (Dibblee, 1989) and on Mt. Wilson/Azusa (Dibblee, 1998) quadrangles
- Qoa** Uplifted remnants of alluvial sand and gravel, north of hill areas
- Qog** Uplifted remnants of alluvial gravel, south of Montebello Hills

### UNCONFORMITY



### FERNANDO FORMATION

- (Of Daviess and Woodford, 1949; Yerkes, 1972): Marine to nonmarine clastic sediments, weakly indurated; early Pliocene to Pleistocene (?) age
- Tfsc** Nonmarine sandstone and conglomerate: light gray to tan, crudely bedded; conglomerate composed of pebbles and cobbles of mostly granitic detritus in friable sandstone matrix, probably nonmarine; sandstone may be in part marine; late (?) Pliocene to Pleistocene age; unit is lithologically similar to Saugus Formation of Ventura basin
  - Tlps** "Pico" silty sandstone facies: at southwest end of Montebello Hills, composed of light gray, very fine-grained silty sandstone to siltstone, vaguely bedded, contains gray lenticular calcareous concretions and fossil shell fragments; deposited in shallow regressive sea
  - Tfp** "Pico" claystone: gray micaceous silty claystone or siltstone, with spheroidal fracture, vaguely bedded, includes some silty sandstone; deposited in moderately deep sea; late (?) Pliocene age; probably equivalent to upper member of Fernando Fm. (of Yerkes, 1965 et al., in Puente Hills)
  - Tfs** Sandstone facies of Fernando Formation: light to medium gray, weathered brown, fine to medium-grained, arkosic, bedded, locally pebbly; deposited in moderately deep sea
  - Tfr** "Repetto" claystone member: lithologically similar to **Tfp**; early Pliocene age (Repetian Stage); probably equivalent to lower member of Fernando Fm. (of Yerkes et al., 1965, in Puente Hills)



### SYCAMORE CANYON FORMATION

- (Named by Daviess and Woodford, 1949, as uppermost member of Puente Fm.; as so mapped by Durham and Yerkes, 1965, and Yerkes, 1972, in Puente Hills; equivalent to "Unnamed Shale" in Los Angeles quadrangle (Dibblee, 1989), and to Sisuoc Fm. in Ventura basin)
- Marine clastic sediments, moderately indurated; late Miocene age
- Tsc** Gray silty clay shale: micaceous, vaguely bedded to locally thin bedded, nodular, in places includes thin layers of fine-grained sandstone
  - Tscs** Clay shale, light gray, vaguely bedded to locally thin bedded, includes thin layers of fine grained sandstone
  - Tscg** Conglomerate and sandstone: gray to rusty brown conglomerate, crudely bedded, composed of cobbles and pebbles of mostly light-colored granitic rocks and others of gray quartz diorite, gneiss, a few of andesitic porphyry and quartzite, in arkosic sandstone matrix; sandstone rusty brown, lenticular, coarse to fine-grained, arkosic

Holocene  
 QUATERNARY  
 Pleistocene  
 Pliocene  
 TERTIARY



**SITE LOCATION**

## REGIONAL GEOLOGIC MAP

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## 4.2 Subsurface Profile of Project Site

Based on our soil borings drilled at the site on March 19, 2020, the subsurface conditions generally consist of existing fill soils placed during previous site grading operations and natural alluvial soils as encountered in the borings drilled to the maximum depth explored of 51.5 feet below the ground surface (bgs). The observed fill soils consist primarily of silts and clays. The depth of the fill was approximately two (2) feet below existing ground surfaces in the exploratory borings. Deeper soils may be encountered at the project site. The alluvial sediments consist predominately of silts, clays and sandy silts.

Drawing No. 3, *Geologic Cross Section A-A'*, has been drawn across the project site to illustrate the subsurface conditions. For additional information on the subsurface conditions, see the Logs of Boring Data in Appendix A, *Field Exploration*.

## 4.3 Groundwater

Groundwater was encountered during our subsurface exploration at a depth of approximately 30 feet below ground surface in Boring BH-3. Review of the Seismic Hazard Zone Report for the Baldwin Park 7.5-Minute Quadrangle (CDMG, 1998), the historically highest groundwater level contours in the vicinity of the site are deeper than 20 feet bgs. The historic groundwater level is not shown directly beneath the subject school site. Groundwater is not anticipated during construction however may need to be considered in design.

In general, groundwater levels fluctuate with the seasons and local zones of perched groundwater may be present within the near-surface deposits due to local conditions or during rainy seasons. Groundwater conditions below any given site vary depending on numerous factors including seasonal rainfall, local irrigation, storm water recharge, groundwater recharge and pumping, among other factors. The regional groundwater table is not expected to be encountered during the planned construction.

## 4.4 Subsurface Variations

Based on results of the subsurface exploration and our experience, some variations in the continuity and nature of subsurface conditions within the project site should be anticipated. Because of the uncertainties involved in the nature and depositional characteristics of the earth material at the site, care should be exercised in interpolating or extrapolating subsurface conditions between or beyond the boring locations. If, during construction, subsurface conditions differ significantly from those presented in this report, this office should be notified immediately so that recommendations can be modified, if necessary.



## 5.0 FAULTING AND GEOLOGIC HAZARDS

Geologic hazards are defined as geologically related conditions that may present a potential danger to life and property. Typical geologic hazards in Southern California include earthquake ground shaking, fault surface rupture, liquefaction and seismically induced settlement, lateral spreading, landslides, earthquake induced flooding, tsunamis and seiches, and volcanic eruption hazard.

Results of a site-specific evaluation for each type of possible seismic hazards are discussed in the following sections.

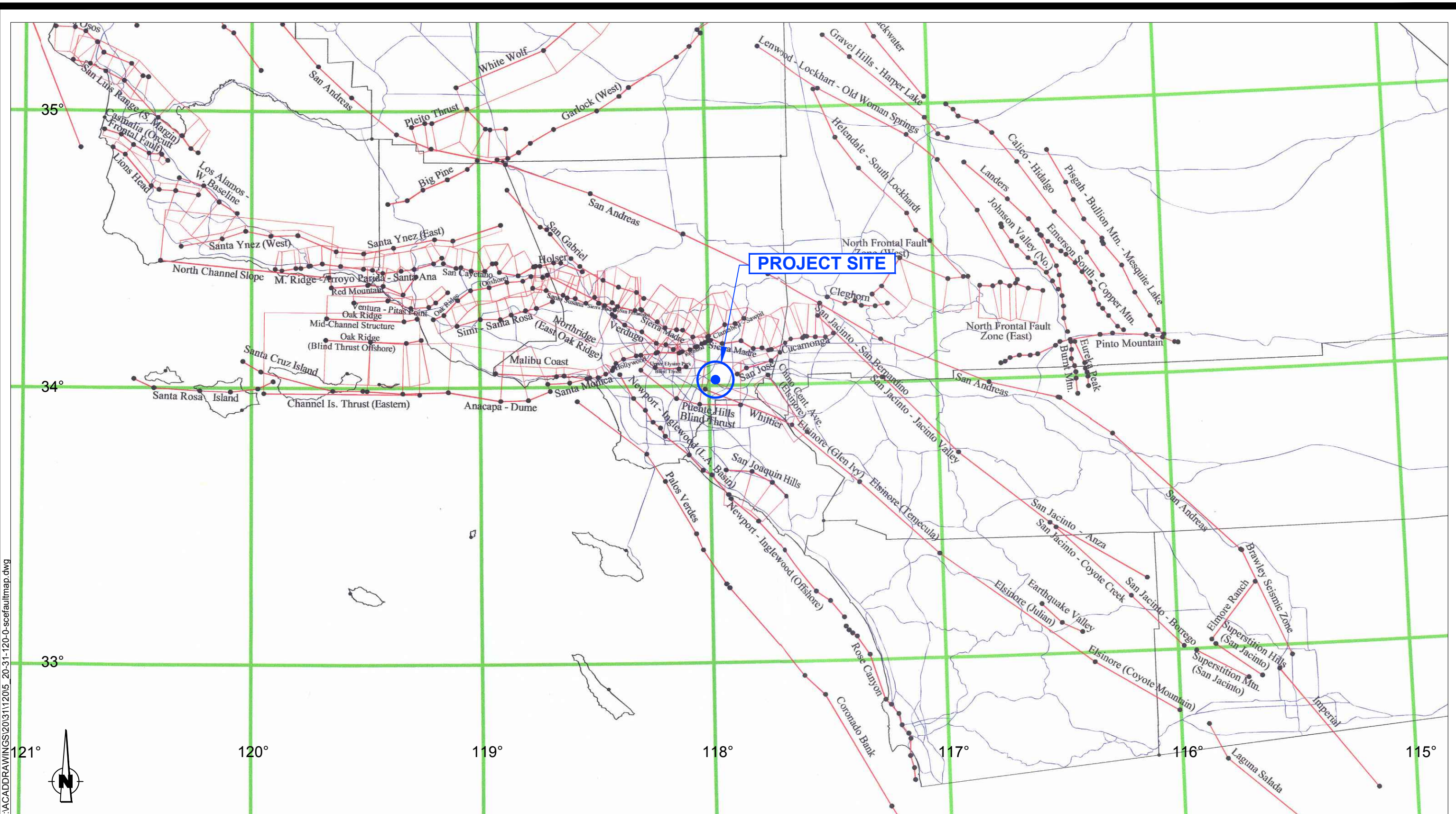
### 5.1 Seismic Characteristics of Nearby Faults

The subject site is situated within a seismically active region. As is the case for most areas of Southern California, ground-shaking resulting from earthquakes associated with nearby and more distant faults may occur at the project site. During the life of the project, seismic activity associated with active faults can be expected to generate moderate to strong ground shaking at the project site.

The project site is not located within a currently designated State of California Earthquake Fault Zone (formerly Alquist-Priolo Special Studies Zones) for surface fault rupture. No surface faults are known to project through or towards the site. The closest known fault with the potential for surface rupture is the Whittier Fault. The Whittier Heights fault segment is located approximately 0.66 miles southwest of the project site and the Whittier Workman Hill fault segment is located approximately 1.28 miles south of the project site and is zoned as an active fault (CGS, La Habra Quadrangle, 1991 & 1998) . As a result, the potential for surface rupture resulting from the movement of this fault or other nearby faults is considered to be low. The approximate locations of local and regional active faults with respect to the project site are shown on Drawing No. 5, *Southern California Regional Fault Map*. The mapped epicenters of earthquakes with magnitude 5.0 or greater in Southern California during the past 200 years are shown on Drawing No. 6, *Epicenter Map of Southern California Earthquakes (1800-1999)*.


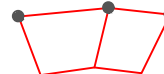
There are a number of regional fault systems, which could produce ground shaking at the site during a major earthquake. Table No. 1, *Summary of Regional Faults*, shows the location of the known most capable faults with respect to the site within 50 kilometers. The data presented below are based on updated fault data from “2008 National Seismic Hazard Maps” from U.S. Geological Survey (USGS) website.





I:\ACADDRAWINGS\20\31\11\2016\_20-31-120-0-scefaultmap.dwg

REFERENCE: PORTION OF CGS 2002 CALIFORNIA FAULT MODEL MODIFIED FOR USE WITH FRISKSP AND EQFAULT BY THOMAS F. BLAKE, AUGUST 2004

-  FAULT SOURCES
-  BLIND THRUST FAULT, POLYGONS INDICATE RUPTURE PLANES AND DIP DIRECTION

## SOUTHERN CALIFORNIA REGIONAL FAULT MAP

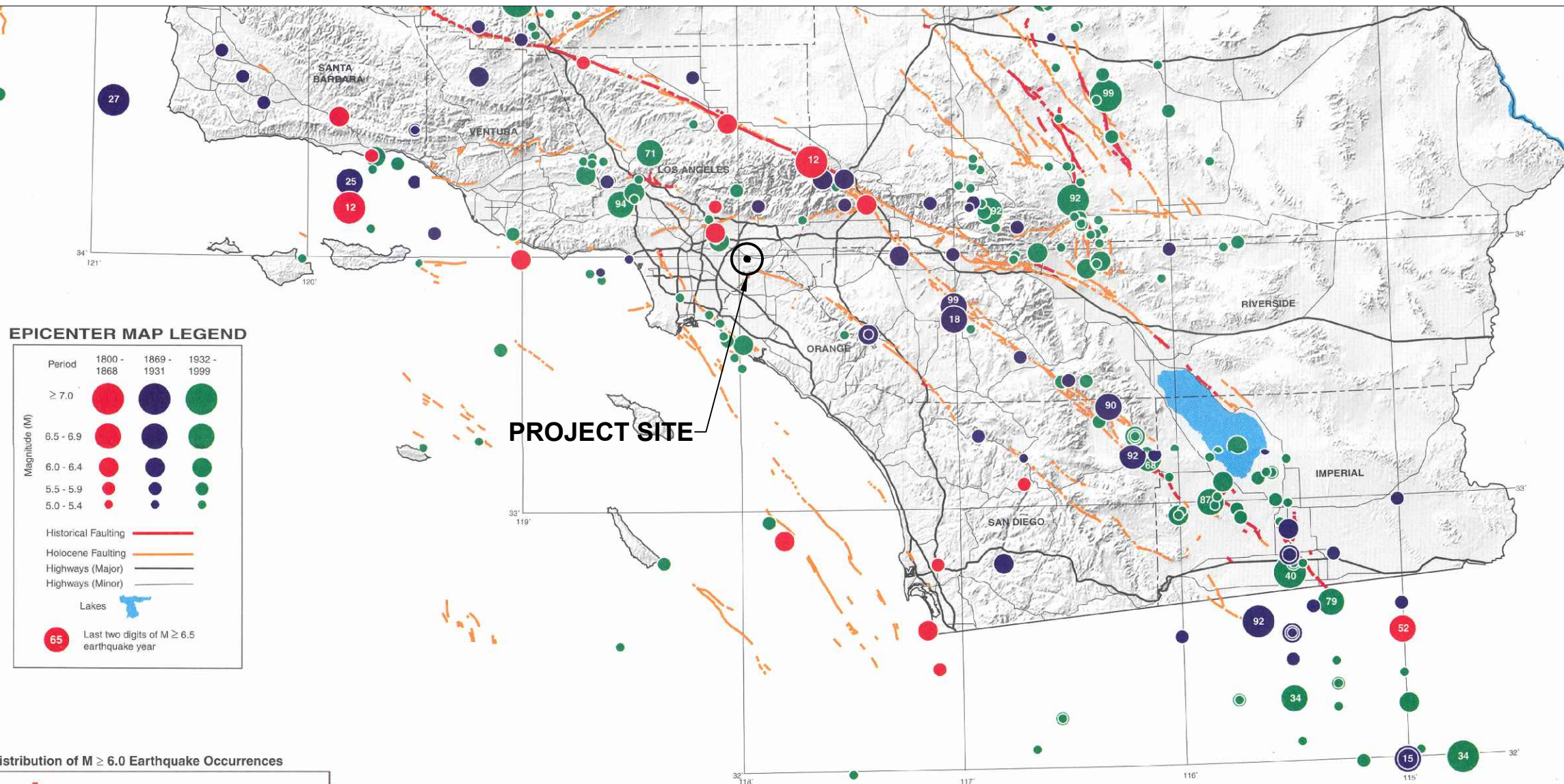


Kwis Elementary School Athletic Fields  
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 Hacienda Heights, California 91745

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**5**

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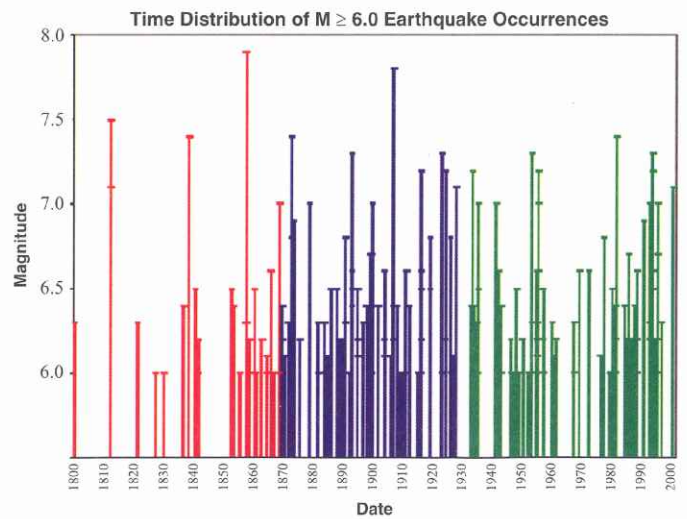


**EPICENTER MAP LEGEND**

Period	1800 - 1868	1869 - 1931	1932 - 1999
Magnitude (M)	Red circle	Dark blue circle	Green circle
≥ 7.0	Large red circle	Large dark blue circle	Large green circle
6.5 - 6.9	Medium red circle	Medium dark blue circle	Medium green circle
6.0 - 6.4	Small red circle	Small dark blue circle	Small green circle
5.5 - 5.9	Very small red circle	Very small dark blue circle	Very small green circle
5.0 - 5.4	Dot	Dot	Dot

Historical Faulting: Red line  
 Holocene Faulting: Orange line  
 Highways (Major): Thick black line  
 Highways (Minor): Thin black line  
 Lakes: Blue area

65 Last two digits of M ≥ 6.5 earthquake year



**Main Sources of Information**

Bolt, B.A. and Miller, R.D. (1975). Catalogue of earthquakes in northern California and adjoining areas, 1 January 1910 - 31 December 1972: Seismographic Stations, University of California, Berkeley, California, 567 p.

Caltech/USGS earthquake catalog, <http://www.seecdc.seec.org/catalog-search.html>. Southern California earthquake catalog and phase data, Southern California Seismic Network, U.S. Geological Survey, Pasadena; Caltech Seismological Laboratory, California Institute of Technology, Pasadena.

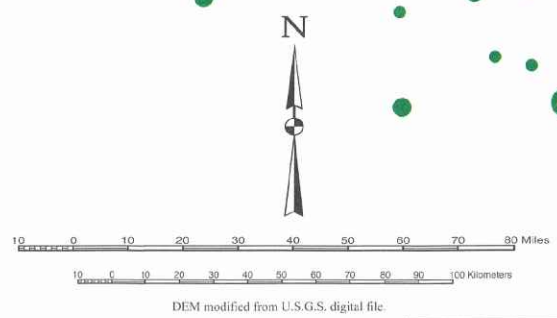
Topozada, T.R. and Branum, D.M. (in press). California M ≥ 5.5 earthquakes, history and areas damaged, in Lee, W.H., Kanamori, H. and Jennings, P., International Handbook of Earthquake and Engineering Seismology, International Association of Seismology and Physics of the Earth's Interior.

Topozada, T.R. and Parke, D.L. (1982). Areas damaged by California earthquakes, 1900-1949, California Division of Mines and Geology Open-File Report 82-17, 65 p.

Topozada, T.R., Parke, D.L. and Higgins, C.T. (1978). Seismicity of California 1900-1931, California Division of Mines and Geology Open-File Report 135.

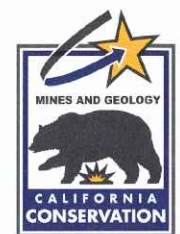
Topozada, T.R., Real, C.R. and Parke, D.L. (1981). Preparation of isoseismal maps and summaries of reported effects for pre-1900 California earthquakes, California Division of Mines and Geology Open-File Report 81-11 SAC, 182 p.

UC Berkeley/USGS earthquake catalog, <http://quake.geo.berkeley.edu/ncedc/catalog-search.html>. Northern California earthquake catalog and phase data, Northern California Seismic Network, U.S. Geological Survey, Menlo Park; Berkeley Seismological Laboratory, University of California, Berkeley, California.



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The California Department of Conservation makes no warranties as to the suitability of this product for any particular purpose.



REFERENCE: PORTION OF EPICENTERS AND AREAS DAMAGED BY M≥5 CALIFORNIA EARTHQUAKES, 1800-1999 CALIFORNIA DEPARTMENT OF CONSERVATION, MAP SHEET 49 DATED 2000.

**EPICENTER MAP OF SOUTHERN CALIFORNIA EARTHQUAKES (1800-1999)**

**Table No. 1, Summary of Regional Faults**

Fault Name and Section	Approximate Distance to Site (kilometers)	Max. Moment Magnitude (Mmax)	Slip Rate (mm/yr)
Elsinore;Whittier	2.06	7.03	2.5
Puente Hills (Santa Fe Springs)	8.85	6.7	0.7
San Jose	9.72	6.7	0.5
Puente Hills (Coyote Hills)	13.42	6.9	0.7
Elysian Park (Upper)	13.75	6.7	1.3
Puente Hills (LA)	14.5	7	0.7
Sierra Madre	16.72	7.2	2
Sierra Madre Connected	16.72	7.3	2
Raymond	16.9	6.8	1.5
Clamshell-Sawpit	19.62	6.7	0.5
Chino, alt 2	21.4	6.8	1
Chino, alt 1	21.42	6.7	1
Verdugo	21.9	6.9	0.5
Cucamonga	26.46	6.7	5
Hollywood	26.97	6.7	1
Newport Inglewood Connected alt 2	27.97	7.5	1.3
Newport-Inglewood, alt 1	28.63	7.2	1
Newport Inglewood Connected alt 1	28.63	7.5	1.3
Santa Monica Connected alt 2	30.98	7.4	2.4
San Joaquin Hills	34.26	7.1	0.5
Palos Verdes Connected	38.33	7.7	3
Palos Verdes	38.33	7.3	3
Elsinore;GI	40.38	6.89	5
Elsinore;GI+T	40.38	7.29	5
Santa Monica Connected alt 1	41.08	7.3	2.6
Santa Monica, alt 1	41.08	6.6	1
Sierra Madre (San Fernando)	42.61	6.7	2
San Gabriel	44.98	7.3	1
Newport-Inglewood (Offshore)	45.91	7	1.5
S. San Andreas;SM	48.86	7.31	29
San Jacinto;SBV	49.7	7.06	6



## 5.2 Seismic History

We have reviewed California Geologic Survey Map Sheet 49; *Epicenters and Areas Damaged by  $M \geq 5$  California Earthquakes, 1800-1999*, (CGS, Topozada et al., 2000). The mapped epicenters of earthquake with magnitude 5.0 or greater in Southern California during the past 200 years are shown on Drawing No. 6, *Epicenter Map of Southern California Earthquakes (1800-1999)*.

## 5.3 Surface Fault Rupture

The project site is not located within a currently designated State of California Earthquake Fault Zone (formerly Alquist-Priolo Special Studies Zones) for surface fault rupture. The Alquist-Priolo Earthquake Fault Zoning Act requires the California Geological Survey to zone "active faults" within the State of California. An "active fault" has exhibited surface displacement with Holocene time (within the last 11,000 years) hence constituting a potential hazard to structures that may be located across it. Public school structures are required to be set-back at least 50 feet from an active fault. The active fault set-back distance is measured perpendicular from the dip of the fault plane. Based on a review of existing geologic information, no known active faults project through or toward the site. The potential for surface rupture resulting from the movement of the nearby faults is considered low.

## 5.4 Liquefaction and Seismically-Induced Settlement

Liquefaction is the sudden decrease in the strength of cohesionless soils due to dynamic or cyclic shaking. Saturated soils behave temporarily as a viscous fluid (liquefaction) and, consequently, lose their capacity to support the structures founded on them. The potential for liquefaction decreases with increasing clay and gravel content but increases as the ground acceleration and duration of shaking increase. Liquefaction potential has been found to be the greatest where the groundwater level and loose sands occur within 50 feet of the ground surface.

The site is located within a mapped potential liquefaction zones per the State of California Seismic Hazard Zones Map for the Baldwin Park Quadrangle as shown in Drawing No. 7, *Seismic Hazard Zones Map*. Based on our field data at BH-1 through BH-6, soil materials are classified as fine-grained clays and silty clays at the site with fine contents ranging from approximately 60% at ground surface to 85% at lower depths. With the high SPT blow counts and high fine contents, we conclude there is no liquefiable layer within 50 feet below ground level, and the project site is not susceptible to liquefaction.

## 5.5 Lateral Spreading

Seismically induced lateral spreading involves primarily lateral movement of earth materials due to ground shaking. It differs from the slope failure in that complete ground failure involving large movement does not occur due to the relatively smaller gradient of



# MAP EXPLANATION

## SEISMIC HAZARD ZONES



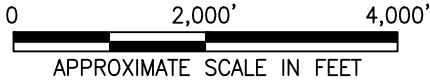
### Liquefaction Zones

Areas where historical occurrence of liquefaction, or local geological, geotechnical and ground water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

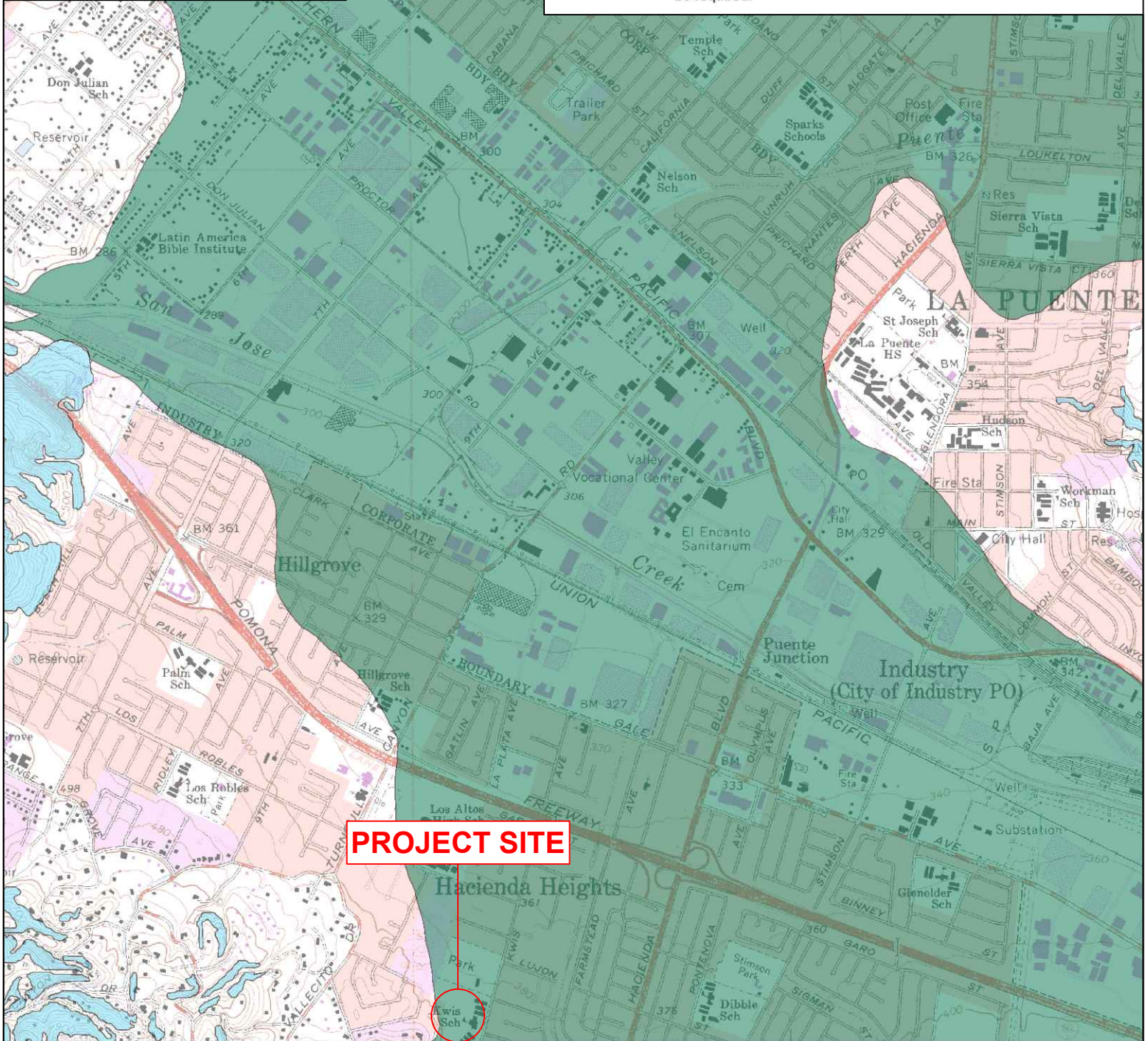


### Earthquake-Induced Landslide Zones

Areas where previous occurrence of landslide movement, or local topographic, geological, geotechnical and subsurface water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.



REFERENCE: STATE OF CALIFORNIA  
BALDWIN PARK QUADRANGLE 1999  
SEISMIC HAZARD ZONES



## SEISMIC HAZARD ZONES MAP



**Converse Consultants**

Kwis Elementary School Athletic Fields  
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the initial ground surface. Lateral spreading is demonstrated by near-vertical cracks with predominantly horizontal movement of the soil mass involved. The topography at the project site and in the immediate vicinity of the site is relatively flat, with no significant nearby slopes or embankments. Under these circumstances, the potential for lateral spreading at the subject site is considered negligible.

## **5.6 Seismically-Induced Slope Instability**

Seismically induced landslides and other slope failures are common occurrences during or soon after earthquakes. The project site is not shown with any earthquake-induced landslide areas due to the relatively flat condition of the site topography. In the absence of significant ground slopes, the potential for seismically induced landslides to affect the project site is considered to be very low.

## **5.7 Earthquake-Induced Flooding**

Review of the Flood Insurance Rate Map (FIRM), Map Number 06037C1700F, effective date September 26, 2008, from the Map Service Center (MSC) viewer, indicates that the site is designated as Zone "X", "Areas of minimal flood hazard".

The potential of earthquake induced flooding of the subject site is considered to very low.

## **5.8 Tsunami and Seiches**

Tsunamis are tidal waves generated by fault displacement or major ground movement. Based on the location of the site from the ocean and the project site elevation, tsunamis do not pose a hazard. Seiches are large waves generated in enclosed bodies of water in response to ground shaking. Based on site elevations and distances from the hillside reservoirs, seiches pose a very low hazard to the project site.

## **5.9 Volcanic Eruption Hazard**

There are no known volcanoes near the site. According to Jennings (1994), the nearest potential hazards from future volcanic eruptions is the Amboy Crater-Lavic Lake area located in the Mojave Desert more than 110 miles northeast of the site. Volcanic eruption hazards are not present.

## **6.0 SEISMIC ANALYSIS**

### **6.1 CBC Seismic Design Parameters**

General seismic parameters based on the 2019 California Building Code and ASCE 7-16 with Supplement 1 are calculated using the ATC hazard, *Seismic Design by Location*



website application and the site coordinates for (34.0021 degrees North Latitude, 117.9751 degrees West Longitude). The seismic parameters are presented below.

**Table No. 2, CBC Seismic Design Parameters**

Seismic Parameter	Value
Site Class	D
Mapped Short period (0.2-sec) Spectral Response Acceleration, $S_s$	1.851 g
Mapped 1-second Spectral Response Acceleration, $S_1$	0.656 g
Site Coefficient (from Table 1613.5.3(1)), $F_a$	1
Site Coefficient (from Table 1613.5.3(2)), $F_v$	1.7
MCE 0.2-sec period Spectral Response Acceleration, $S_{MS}$	1.851 g
MCE 1-second period Spectral Response Acceleration, $S_{M1}$	1.115 g
Design Spectral Response Acceleration for short period, $S_{DS}$	1.234 g
Design Spectral Response Acceleration for 1-second period, $S_{D1}$	0.743 g

## 6.2 Site-Specific Response Spectra

A site-specific response spectrum was developed for the project for a Maximum Considered Earthquake (MCE), defined as a horizontal peak ground acceleration that has a 2 percent probability of being exceeded in 50 years (return period of approximately 2,475 years).

In accordance with ASCE 7-16, Section 21.2 the site-specific response spectra can be taken as the lesser of the probabilistic maximum rotated component of MCE ground motion and the 84<sup>th</sup> percentile of deterministic maximum rotated component of MCE ground motion response spectra. The design response spectra can be taken as 2/3 of site-specific MCE response spectra but should not be lower than 80 percent of CBC general response spectra. The risk coefficient  $C_R$  has been incorporated at each spectral response period for which the acceleration was computed in accordance with ASCE 7-16, Section 21.2.1.1.

The 2019 CBC mapped acceleration parameters are provided in the following table. These parameters were determined using the *ATC hazard by location Seismic Design Maps* website application, and in accordance with ASCE 7-16 Sections 11.4, 11.6, 11.8 and 21.2.

**Table No. 3, 2016 CBC Mapped Acceleration Parameters**

Site Class	D	Seismic Design Category	D
$S_s$	1.851	$C_{RS}$	0.9
$S_1$	0.656	$C_{R1}$	0.902
$F_a$	1	$0.08 F_v/F_a$	0.136
$F_v$	1.7	$0.4 F_v/F_a$	0.680



Site Class	D	Seismic Design Category	D
<b>S<sub>MS</sub></b>	1.851	<b>T<sub>0</sub></b>	0.120
<b>S<sub>M1</sub></b>	1.115	<b>T<sub>s</sub></b>	0.602
<b>S<sub>DS</sub></b>	1.234	<b>T<sub>L</sub></b>	8
<b>S<sub>D1</sub></b>	0.743		

A site-specific response analysis, using faults within 200 kilometers of the sites, was developed using the computer program EZ-FRISK Version 8.06 (Fugro, 2019).

The weighted mean maximum-rotated horizontal spectral acceleration values were computed by multiplying the weighted mean geometric spectral values derived from four next-generation attenuation (NGA) West 2 ground motion attenuation models by Abrahamson et al. (2014), Boore et al. (2014), Campbell and Bozorgnia (2014), and Chiou and Youngs (2014) with the scale factors provided in ASCE 7-16 Section 21.2. An average shear wave velocity at upper 30 meters of soil profile ( $V_{s30}$ ) of 270 meters per second, depth to bedrock of with a shear wave velocity 1,000 meters per second at 150 meters below grade, and depth of bedrock where the shear wave velocity is 2,500 meters per second at 3,000 meters below grade were selected for EZ-Frisk Analysis.

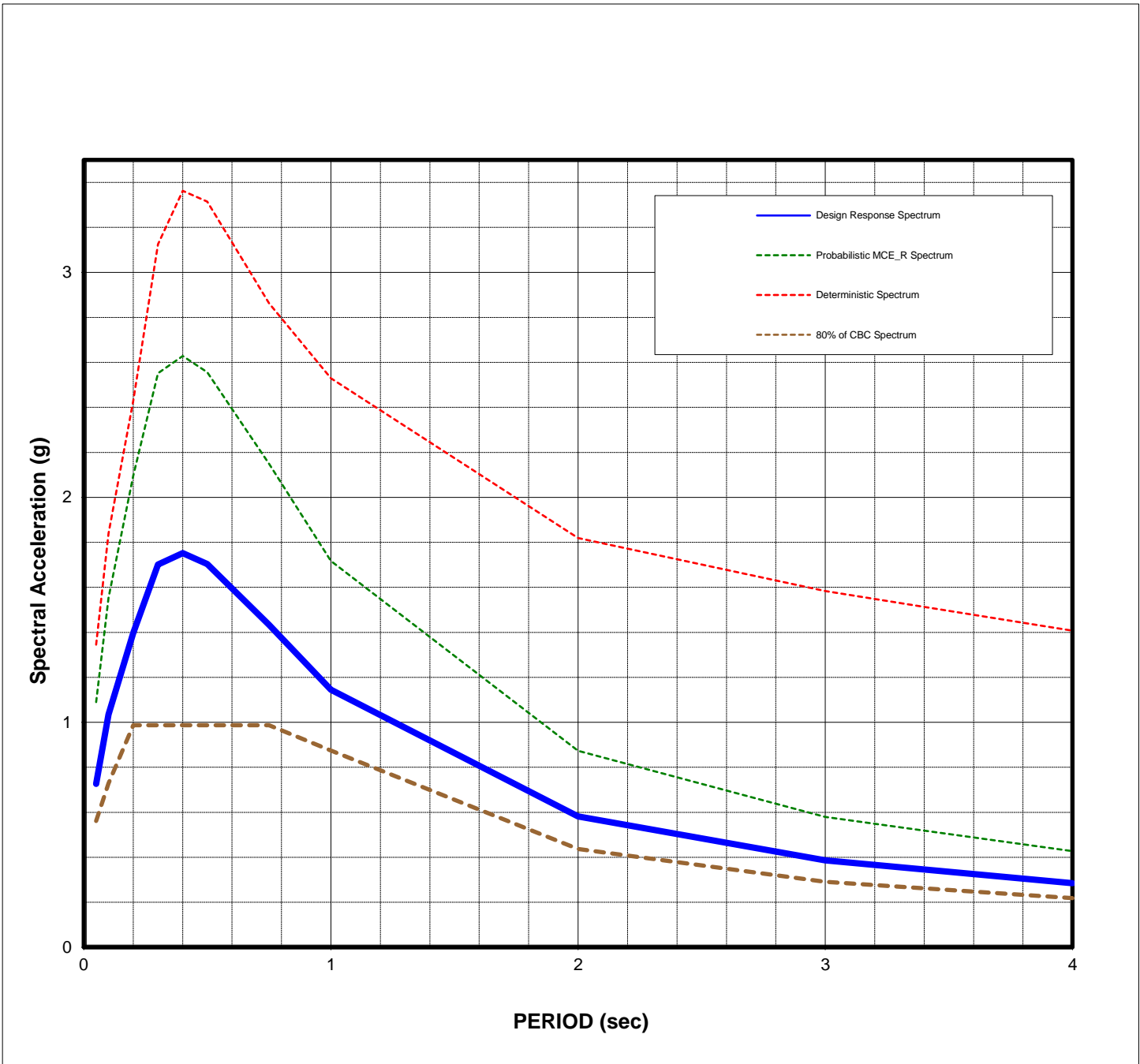
The probabilistic response spectrum results and peak ground acceleration for each attenuation relationship are presented in the following table.

**Table No. 4, Probabilistic Response Spectrum Data**

Attenuation Relationship	Probabilistic Mean	Abrahamson et al. (2014)	Boore et al. (2014)	Campbell-Bozorgnia (2014)	Chiou-Youngs (2014)
<b>Peak Ground Acceleration (g)</b>	0.977	1.021	1.186	0.815	1.069
Spectral Period (sec)	2% in 50yr Probabilistic Spectral Acceleration (g)				
0.050	1.101	1.012	1.412	1.028	1.215
0.100	1.569	1.322	2.248	1.430	1.651
0.200	2.118	2.337	2.622	1.690	2.344
0.300	2.520	3.040	2.888	2.181	2.956
0.400	2.538	3.084	2.726	2.380	2.988
0.500	2.415	2.801	2.637	2.399	2.892
0.750	1.927	2.027	2.052	2.178	2.314
1.000	1.464	1.501	1.526	1.782	1.749
2.000	0.717	0.787	0.707	1.033	0.724
3.000	0.459	0.515	0.472	0.743	0.406
4.000	0.327	0.396	0.372	0.542	0.255

Applicable response spectra data are presented in the table below and on Drawing No. 8, *Site-Specific Design Response Spectrum*. These curves correspond to response values





Note: Calculated using EZFRISK program Risk Engineering, version 8.06

### SITE SPECIFIC DESIGN RESPONSE SPECTRUM

Kwis ES

Project Number:

Los Angeles

20-31-120-01

For : HLPUSD



**Converse Consultants**

Drawing No.

8

obtained from above attenuation relations for horizontal elastic single-degree-of-freedom systems with equivalent viscous damping of 5 percent of critical damping.

**Table No. 5, Probabilistic  $MCE_R$  Spectral Acceleration (g)**

Period (sec)	2% in 50yr Probabilistic Spectral Acceleration (g) Geometric Mean	Risk Coefficient $C_R$	Scale Factors for $MCE_R$	Probabilistic $MCE_R$ Spectral Acceleration (g)
0.05	1.10	0.900	1.100	1.090
0.10	1.57	0.900	1.100	1.553
0.20	2.12	0.900	1.100	2.097
0.30	2.52	0.900	1.125	2.552
0.40	2.54	0.901	1.150	2.628
0.50	2.42	0.901	1.175	2.556
0.75	1.93	0.901	1.238	2.149
1.00	1.46	0.902	1.300	1.717
2.00	0.72	0.902	1.350	0.873
3.00	0.46	0.902	1.400	0.580
4.00	0.33	0.902	1.450	0.428

**Table No. 6, Site-Specific Response Spectrum Data**

Period (sec)	84th Percentile Deterministic Response Spectrum, (g) Geometric Mean	Scale Factors for $MCE_R$	84th Percentile Deterministic MCE Response Spectrum, (g)	Site Specific $MCE_R$ Spectral Acceleration (g)	80% CBC Design Response Spectrum	Site Specific Design Spectral Acceleration (g)
0.05	1.223	1.100	1.345	1.090	0.562	0.73
0.10	1.672	1.100	1.839	1.553	0.729	1.04
0.20	2.209	1.100	2.430	2.097	0.987	1.40
0.30	2.778	1.125	3.125	2.552	0.987	1.70
0.40	2.924	1.150	3.363	2.628	0.987	1.75
0.50	2.821	1.175	3.315	2.556	0.987	1.70
0.75	2.313	1.238	2.862	2.149	0.987	1.43
1.00	1.946	1.300	2.530	1.717	0.875	1.14
2.00	1.348	1.350	1.820	0.873	0.437	0.58
3.00	1.131	1.400	1.583	0.580	0.292	0.39
4.00	0.971	1.450	1.407	0.428	0.219	0.29

The site-specific design response parameters are provided in the following table. These parameters were determined from Design Response Spectra presented in table above and following guidelines of ASCE Section 21.4.



**Table No. 7, Site-Specific Seismic Design Parameters**

Parameter	Value (5% Damping)	Lower Limit, 80% of CBC Design Spectra
Site-Specific 0.2-second period Spectral Response Acceleration, $S_{MS}$	2.365	1.481
Site-Specific 1-second period Spectral Response Acceleration, $S_{M1}$	1.747	0.892
Site-Specific Design Spectral Response Acceleration for short period $S_{DS}$	1.577	0.987
Site-Specific Design Spectral Response Acceleration for 1-second period, $S_{D1}$	1.165	0.875

## 7.0 EARTHWORK AND SITE GRADING RECOMMENDATIONS

### 7.1 General Evaluation

Based on our field exploration, laboratory testing, and analyses of subsurface conditions at the site, remedial grading will be required to prepare the sites for support of the proposed structures that are constructed with conventional shallow footings. To reduce differential settlement, variations in the soil type, degree of compaction, and thickness of the compacted fill, the thickness of compacted fill placed underneath the shallow footings should be kept uniform.

Site grading recommendations provided below are based on our experience with similar projects in the area and our evaluation of this investigation. Site preparation for the proposed development will require removal of existing structures, improvements, and other existing underground manmade structures and utilities.

The site soils can be excavated utilizing conventional heavy-duty earth-moving equipment. The excavated site soils, free of grass, vegetation, organics, debris, and oversize rock materials may be placed as compacted fill in structural areas after proper processing. Rocks larger than 3.0 inches in the largest dimension should not be placed as fill.

On-site fine-grained soils (clays and silts) and with an expansion index exceeding 20 should not be re-used for compaction within 2 feet below the proposed shallow foundations and slabs on grade. Soils containing organic materials (roots, grass, plants, etc.) should not be used as structural fill. The extent of removal should be determined by the geotechnical representative based on soil observation during grading.

### 7.2 Over-Excavation and Re-compaction

Prior to the start of construction, all loose soils, fill and soils disturbed during demolition should be removed to firm and unyielding native alluvial sediments. In order to provide uniform support for the structures on shallow foundations, the minimum depth of over-excavation should be 5 feet below the ground surface, or 3 feet below bottom of proposed



shallow foundations or depth of undocumented fill, whichever is deeper. Deeper over-excavation will be needed if soft, yielding soils or earth materials are exposed on the excavation bottoms. Over-excavation should extend at least 5 feet laterally beyond the limits of footings or as limited by the existing structures and improvements to remain in place.

Over-excavation and re-compaction for retaining walls, if any, should be three (3) feet below bottom of footings and should extend three (3) feet laterally beyond the retaining wall area. The upper 24-inches of site soils should be removed and re-compacted in areas of sidewalks and surface parking. The upper 18 inches of soil should be processed and compacted in the field areas. The over-excavation should extend two (2) feet laterally beyond the sidewalk and surface parking areas. If loose, disturbed, or otherwise unsuitable materials are encountered at the bottom of excavation, deeper removal will be required until firm native soils are encountered.

The excavations adjacent to existing structures can be done using shoring or the “A-B-C” slot cut method. The “A-B-C” slot cuts exposing native sandy soils may be excavated with maximum 8 feet wide and 8 feet in height sections to prevent the existing utility lines and/or site structures from becoming unstable.

The exposed bottom of the over-excavation area should be scarified at least 6.0 inches, moisture conditioned as needed to near-optimum moisture content and compacted to ninety percent (90%) relative compaction. The upper 12- inches of subgrade below new pavement should be compacted to 95 percent relative compaction. Over-excavation should not undermine adjacent improvements. Remedial grading should not extend within a projected 1:1 (horizontal to vertical) plane projected down from the outer edge of adjacent improvements. If loose, yielding soil conditions are encountered at the excavation bottom, the following options can be considered:

- a. Over-excavate until a firm bottom is reached.
- b. Scarify or over-excavate an additional 18 inches deep, and then place at least 18-inch-thick layer of compacted base material (CAB or equivalent) to bridge the soft bottom. Base materials should be compacted to 95% relative compaction.
- c. Over-excavate an additional 18 inches deep, and then place a layer of geotextile reinforcement (i.e. Mirafi HP570, or equivalent), then place an 18-inch-thick layer of compacted base material (CAB or equivalent) to bridge the soft bottom. Base material should be compacted to 95% relative compaction. An additional layer of geotextile reinforcement may be needed on top of base material depending on the actual site conditions.

Excavation activities should not disturb adjacent utilities or undermine any adjacent buildings and structures to remain. Existing utilities should be removed and adequately capped at the project boundary line or salvaged/rerouted as designed.



The actual depth of removal should be based on recommendations and observation made during grading. Therefore, some variations in the depth and lateral extent of over-excavation recommended in this report should be anticipated.

### **7.3 Engineered Fill**

Following observation of the excavation bottom, subgrade soil surfaces should be scarified to a depth of at least 6 inches. The scarified soil should be moisture-conditioned to within three percent (3%) of optimum moisture for granular soils and to approximate three percent (3%) above the optimum moisture for fine-grained soils. Scarified soils shall be compacted to a minimum ninety percent (90%) of the laboratory maximum dry density as determined by the ASTM Standard D1557 test method.

Any import fill should be tested and approved by Project Geotechnical Consultant. The import fill should have an expansion potential less than 20. The imported materials should be thoroughly mixed and moisture conditioned within three percent (3%) above the optimum moisture. All fill, if not specified otherwise elsewhere in this report, should be compacted to at least 90 percent of the laboratory dry density in accordance with the ASTM Standard D2922 test method.

Where the fill is not within the areas specified above or is not to support any structures, excavated site soils, free of deleterious materials and rock particles larger than 3.0 inches in the largest dimension, should be suitable for placement as compacted fill. The site materials should be thoroughly mixed, and moisture conditioned to approximately three percent (3%) above the optimum moisture, and then compacted to at least ninety percent (90%) of relative compaction.

### **7.4 Excavatability**

Based on our field exploration, the earth materials at the site may be excavated with conventional heavy-duty earth moving and trenching equipment. The onsite materials may contain unsuitable demolition debris, gravels, and/or cobbles that should be cleaned and removed from fill soil materials. Earthwork should be performed with suitable equipment and methods for removal of debris from the engineered fill.

### **7.5 Pipeline Backfill Recommendations**

Any soft and/or unsuitable material encountered at the pipe invert should be removed and replaced with an adequate bedding material. The pipe subgrade should be level, firm, uniform and free of loose materials and properly graded to provide uniform bearing and support to the entire section of the pipe placed on bedding material. Oversize particles larger than 2.0 inches in the largest dimension, if any, should be removed from the trench bottom and replaced with compacted materials. During the digging of depressions for proper sealing of the pipe joints, the pipe should rest on a prepared bottom for as near its full length as is practicable. The bedding zone is defined as that portion of the pipe trench



from 4.0 inches below the pipe invert to one foot above the top of the pipe, in accordance with section 306-1.2.1 of the latest edition of the Standard Specifications for Public Works Construction (SSPWC)

## **7.6 Trench Zone Backfill**

The trench zone is defined as the portion of the trench above the pipe bedding extending up to the final grade level of the trench surface.

The following specifications are recommended to provide a basis for quality control during the placement of trench backfill.

Trench excavations to receive backfill shall be free of trash, debris or other unsatisfactory materials at the time of backfill placement. Excavated on-site soils free of oversize particles, defined as larger than 1.0 inch in maximum dimension in the upper 12.0 inches of subgrade soils and larger than 3.0 inches in the largest dimension in the trench backfill below, and deleterious matter after proper processing may be used to backfill the trench zone. Imported trench backfill, if used, should be approved by the project soils consultant prior to delivery at the site. No more than thirty percent (30%) of the backfill volume should be larger than 3/4 inches in the largest dimension.

Trench backfill shall be compacted to ninety percent (90%) of the laboratory maximum dry density as per ASTM Standard D1557 test method. At least the upper 12.0 inches of trench underlying pavements should be compacted to at least ninety-five percent (95%) of the laboratory maximum dry density.

Trench backfill shall be compacted by mechanical methods, such as sheepsfoot, vibrating or pneumatic rollers, or mechanical tampers, to achieve the density specified herein. The backfill materials shall be brought to within three percent (3%) of optimum moisture content and then placed in horizontal layers if the expansion index is less than or equal to 30. Should the expansion index be greater than 30, backfill materials shall be brought to approximately three percent (3%) above optimum moisture content. The thickness of uncompacted layers should not exceed 8.0 inches. Each layer shall be evenly spread, moistened or dried as necessary, and then tamped or rolled until the specified density has been achieved.

The contractor shall select the equipment and processes to be used to achieve the specified density without damage to adjacent ground and completed work. The field density of the compacted soil shall be measured by the ASTM Standard D1556 or ASTM Standard D6938 test methods or equivalent. Observation and field tests should be performed by Converse during construction to confirm that the required degree of compaction has been obtained. Where compaction is less than that specified, additional compactive effort shall be made with adjustment of the moisture content as necessary, until the specified compaction is obtained. It should be the responsibility of the contractor to maintain safe conditions during cut and/or fill operations. Trench backfill shall not be



placed, spread or rolled during unfavorable weather conditions. When the work is interrupted by heavy rain, fill operations shall not be resumed until field tests by the project's geotechnical consultant indicate that the moisture content and density of the fill are as previously specified.

#### 7.6.1 Select Imported Fill Materials for Trench Zone Backfill

Imported soils, if any, used as compacted trench backfill should be predominantly granular and meet the following criteria:

- Expansion Index less than 20
- Free of all deleterious materials
- Contain no particles larger than 3.0 inches in the largest dimension
- Contain less than thirty percent (30%) by weight retained on 3/4-inch sieve
- Contain at least fifteen percent (15%) fines (passing #200 sieve)
- Have a Plasticity Index of 10 or less

Any import fill should be tested and approved by the geotechnical representative prior to delivery to the site.

### **7.7 Expansive Soil Mitigation**

The on-site soil materials will be mixed and blended during the grading and the expansion potential might change. Therefore, the expansion index (EI) potential of site soils should be verified after the grading as slabs, foundations and pavements placed directly on expansive subgrade soil will likely crack over time. If the expansion potential of the mixed onsite soils are found to be above EI= 20, Converse recommends mixing on-site soil used for support of slabs, foundations, walkways, and pavements with 4 percent Lime to reduce expansion potential.

Any proposed import fill should have an expansion index less than 20 and should be evaluated and approved by Converse prior to import to the site.

### **7.8 Shrinkage and Subsidence**

Soil shrinkage and/or bulking as a result of remedial grading depends on several factors including the depth of over-excavation, and the grading method and equipment utilized, and average relative compaction. For preliminary estimation, bulking and shrinkage factors for various units of earth material at the site may be taken as presented below:

- The approximate shrinkage factor for the native alluvial soils is estimated to range from five to fifteen percent (5-15%).
- For estimation purposes, ground subsidence may be taken as 0.15 feet as a result of remedial grading.



Although these values are only approximate, they represent our best estimates of the factors to be used to calculate lost volume that may occur during grading. If more accurate shrinkage and subsidence factors are needed, it is recommended that field-testing using the actual equipment and grading techniques be conducted.

## **7.9 Subgrade Preparation**

Final subgrade soils for structures and slabs should be uniform and non-yielding. To obtain a uniform subgrade, soils should be well mixed and uniformly compacted. The subgrade soils should be non-expansive, granular and well-drained. The near-surface site soils should be free draining. We recommend that at least the upper 2.0 inches of subgrade soils underneath the slab-on-grade should be comprised of well-drained granular soils such as sands, gravel or crushed aggregate materials and satisfying the following criteria:

- Maximum size  $\leq$  1.5 inches
- Percent passing U.S. #200 sieve  $\leq$  twelve percent (12%)
- Sand equivalent  $\geq$  30
- The subgrade soils should be moisture conditioned before placing concrete.

## **8.0 DESIGN RECOMMENDATIONS**

### **8.1 General Evaluation**

Based on the results of our background review, subsurface exploration, laboratory testing, geotechnical analyses, and understanding of the planned site development, it is our opinion that the proposed project is feasible from a geotechnical standpoint, provided the following conclusions and recommendations are incorporated into the project plans, specifications, and are followed during site construction. The proposed structures and site improvements may be supported by shallow continuous or isolated square footings.

### **8.2 Shallow Foundations**

#### 8.2.1 Vertical Capacity

The structures can be supported by conventional shallow footings in proposed area. We recommend continuous and/or square footings be founded at least 24 inches below lowest adjacent final grade entirely into compacted fill or into native soil. A minimum footing width of 24 inches is recommended for square footings and 18 inches for continuous footings. Conventional spread footings founded on compacted fill soils may be designed for a net bearing pressure of 2,500 pounds per square foot (psf) for dead-plus-live-loads. The net allowable bearing pressure can be increased by 300 psf for each additional foot of excavation depth and by 200 psf for each additional foot of excavation width up to a maximum value of 3,500 psf.



The net allowable bearing values indicated above are for the dead loads and frequently applied live loads and are obtained by applying a factor of safety of 3.0 to the net ultimate bearing capacity.

### 8.2.2 Lateral Capacity

Resistance to lateral loads can be provided by friction acting at the base of the foundation and by passive earth pressure. A coefficient of friction of 0.30 may be assumed with normal dead load forces. An allowable passive earth pressure of 200 psf per foot of depth up to a maximum of 2,000 psf may be used for footings poured against properly compacted fill. The values of coefficient of friction and allowable passive earth pressure include a factor of safety of 1.5.

### 8.2.3 Settlement

The static settlement of structures supported on continuous and/or spread footings founded on compacted fill and native soil will depend on the actual footing dimensions and the imposed vertical loads. Based on the maximum allowable net bearing pressures presented above, static settlement is anticipated to be less than 1.0 inch. Differential settlement is expected to be up to one-half (1/2) of the total settlement over a 30-foot span. Structural engineer should consider differential settlement effect on building in upper and lower level of the slope according to column loads.

### 8.2.4 Dynamic Increases

Bearing values indicated above are for total dead load and frequently applied live loads. The above vertical bearing may be increased by thirty-three percent (33%) for short durations of loading which will include the effect of wind or seismic forces. The allowable passive pressure may be increased by thirty-three percent (33%) for lateral loading due to wind or seismic forces.

## **8.3 Modulus of Subgrade Reaction**

For the subject project, design of the structures supported on compacted fill subgrade prepared in accordance with the recommendations provided in this report may be based on a soil modulus of subgrade reaction of ( $k_s$ ) of 100 pounds per square inch per inch.

## **8.4 Lateral Earth Pressure**

The following provisional design values may be used for any utility vaults and/or walls below grade that are less than 6 feet high.

The earth pressure behind any buried wall depends primarily on the allowable wall movement, type of soil behind the wall, backfill slopes, wall inclination, surcharges, and



any hydrostatic pressure. The following earth pressures are recommended for vertical walls with no hydrostatic pressure.

**Table No. 8, Lateral Earth Pressures for Retaining Wall Design**

Backfill Slope (H:V)	Cantilever Wall Equivalent Fluid Pressure (psf)	Restrained Wall Equivalent Fluid Pressure (psf)
Level	40 (triangular pressure distribution)	55 (triangular pressure distribution)

The recommended lateral pressures assume that the walls are fully back-drained to prevent build-up of hydrostatic pressure. Adequate drainage could be provided by means of permeable drainage materials wrapped in filter fabric installed behind the walls. The drainage system should consist of perforated pipe surrounded by a minimum one square foot per lineal feet of free draining, uniformly graded, permeable material aggregate, and wrapped in filter fabric such as Mirafi 140N or equivalent. The filter fabric should overlap approximately 12.0 inches or more at the joints. The subdrain pipe should consist of perforated, 4-inch diameter, rigid ABS (SDR-35) or PVC A-2000, or equivalent, with perforations placed down. Alternatively, a prefabricated drainage composite system such as the Miradrain G100N or equivalent can be used. The subdrain should be connected to solid pipe outlets, with a maximum outlet spacing of 100 feet. Waterproofing membranes should be added to the subterranean wall levels for moisture sensitive areas to mitigate moisture migration through the walls.

In addition, walls with inclined backfill should be designed for an additional equivalent fluid pressure of one pound per cubic foot for every 2 degrees of slope inclination. Walls subjected to surcharge loads located within a distance equal to the height of the wall should be designed for an additional uniform lateral pressure equal to 1/3 or 1/2 the anticipated surcharge load for unrestrained or restrained walls, respectively. These values are applicable for backfill placed between the wall stem and an imaginary plane rising 45 degrees from below the edge (heel) of the wall footings.

Retaining walls taller than 6 feet should be designed to resist additional earth pressure caused by seismic ground shaking based on Section 1615A.1.6 of CBC 2016. A seismic earth pressure of 26H (psf), based on an inverted triangular distribution, can be used for design of wall.

### **8.5 Slabs-on-Grade**

Slabs-on-grade should have a minimum thickness of five (5) inches nominal for support of normal ground-floor live loads. Minimum reinforcement for slabs-on-grade should be No. 4 reinforcing bars, spaced at 18 inches on-center each way. The thickness and reinforcement of more heavily loaded slabs will be dependent upon the anticipated loads and should be designed by a structural engineer. A static modulus of subgrade reaction equal to 100 pounds per square inch per inch may be used in structural design of concrete slabs-on-grade.



It is critical that the exposed subgrade soils should not be allowed to desiccate prior to the slab pour. Care should be taken during concrete placement to avoid slab curling. Slabs should be designed and constructed as promulgated by the ACI and Portland Cement Association (PCA). Prior to the slab pour, all utility trenches should be properly backfilled and compacted.

In areas where a moisture-sensitive floor covering (such as vinyl tile or carpet) is used, a 15-mil-thick moisture retarder/barrier can be used between the bottom of slab and subgrade that meets the performance criteria of ASTM E1745 Class A material. Retarder/barrier sheets should be overlapped a minimum of six inches and should be taped or otherwise sealed per the product specifications.

## **8.6 Cast-In-Drilled-Hole Pile Foundations for Musco Lighting**

The planned Musco Lighting poles may be supported on a Cast-In-Drilled-Hole (CIDH) pile foundation provided the following recommendations are incorporated into design and construction.

### **8.6.1 Vertical Capacity**

CIDH piles should be at least 24-inches in diameter extending at least 10 feet below adjacent final grade on compacted fill or native alluvial soils or bedrock and can be designed for an allowable skin friction of 200 psf against the perimeter of pile. The diameter and length of CIDH pile shall be determined by the structural engineer based on design loads. The uplift capacities can be taken as one-half of compressive capacities for pile design.

### **8.6.2 Lateral Capacity**

Resistance to lateral loads can be provided by friction acting at the base of the foundation and by passive earth pressure. A coefficient of friction of 0.30 may be assumed with normal dead load forces. An allowable passive earth pressure of 200 psf per foot of depth up to a maximum of 2,000 psf may be used for foundations poured against compacted fill. The values of coefficient of friction and allowable passive earth pressure include a factor of safety of 1.5.

For ground surface restrained by concrete slab, the passive resistance may be calculated from the ground surface. For unrestrained ground condition, the passive resistance of the upper one (1) foot of earth material should be neglected in design.

### **8.6.3 Settlement**

Based on the maximum allowable net vertical capacity presented above, static settlement is anticipated to be less than 0.5 inch.



## 8.7 Cast-In-Drilled-Hole Pile Foundations for Non-building Structures

The planned non-building structures (e.g. lighting for parking lot, walkway, and court, fence walls, signs, etc.) may be supported on a Cast-In-Drilled-Hole (CIDH) pile foundation provided the following recommendations are incorporated into design and construction.

### 8.7.1 Vertical Capacity

CIDH piles should be at least 18-inches in diameter and can be designed for an allowable skin friction of 200 psf against the perimeter of pile. The diameter and length of CIDH pile shall be determined by the structural engineer based on design loads. The uplift capacities can be taken as one-half of compressive capacities for pile design.

### 8.7.2 Lateral Capacity

Resistance to lateral loads can be provided by friction acting at the base of the foundation and by passive earth pressure. A coefficient of friction of 0.30 may be assumed with normal dead load forces. An allowable passive earth pressure of 200 psf per foot of depth up to a maximum of 2,000 psf may be used for foundations poured against compacted fill. The values of coefficient of friction and allowable passive earth pressure include a factor of safety of 1.5.

For ground surface restrained by concrete slab, the passive resistance may be calculated from the ground surface. For unrestrained ground condition, the passive resistance of the upper one (1) foot of earth material should be neglected in design.

### 8.7.3 Settlement

Based on the maximum allowable net vertical capacity presented above, static settlement is anticipated to be less than 0.5 inch.

## 8.8 Soil Corrosivity Evaluation

Converse retained Environmental Geotechnology Laboratory, Inc., located in Arcadia, California, to test one sample taken in the general area of the proposed structures. The tests included minimum resistivity, pH, soluble sulfates, and chloride content, with the results summarized on the following table:

**Table No. 9, Soil Corrosivity Test Results**

Boring No.	Sample Depth (feet)	pH (Caltrans 643)	Soluble Chlorides (Caltrans 422) ppm	Soluble Sulfate (Caltrans 417) % by Weight	Saturated Resistivity (Caltrans 532) Ohm-cm
BH-6	0-5	7.84	210	0.022	1,200



In accordance with the Caltrans Corrosive Guidelines (2012), the pH, soluble sulfate, and chloride content values of the sample tested are in the “non-corrosive” range. The minimum saturated resistivity is not in the corrosive range to ferrous metal. Mitigation measures to protect ferrous metal pipes in contact with the soils may be anticipated.

The test results presented herein are considered preliminary. If advanced corrosivity study is desired by the design team, a corrosion engineer can be consulted for appropriate mitigation procedures and construction design. In general, conventional corrosion mitigation measures may include the following:

- Steel and wire concrete reinforcement should have at least three inches of concrete cover where cast against soil, unformed.
- Below-grade ferrous metals should be given a high-quality protective coating, such as 18-mil plastic tape, extruded polyethylene, coal-tar enamel, or Portland cement mortar.
- Below-grade metals should be electrically insulated (isolated) from above-grade metals by means of dielectric fittings in ferrous utilities and/or exposed metal structures breaking grade.

## 8.9 Flexible Pavement

The flexible pavement structural section design recommendations were performed in accordance with the method contained in the *CALTRANS Highway Design Manual*, Chapter 630, without the factor of safety. No specific traffic study was performed to determine the Traffic Index (TI) for the proposed project, therefore a wide range of TI values were evaluated.

Due to various earth materials encountered at the site, flexible pavement structural section recommendations are prepared for both subgrade soils. We recommend that the project structural engineer consider the traffic loading conditions at various locations and select the appropriate pavement sections from the following table:

**Table No. 10, Flexible Pavement Structural Sections**

Design R-value	Design TI	Asphalt Concrete (AC) Over Aggregate Base (AB) Structural Sections		Full AC Structural Section
		AC (inches)	AB (inches)	AC (inches)
13	4	3.0	4.5	5.0
	5	4.0	6.0	6.5
	6	5.0	8.0	8.0
	7	6.0	10.0	9.5
	8	7.0	11.5	11.0
	9	8.0	12.5	12.5



Base material shall conform to requirements for Crushed Miscellaneous Base (CMB) or equivalent and should be placed in accordance with the requirements of the Standard Specifications for Public Works Construction (SSPWC, latest Edition). Asphaltic materials should conform to Section 203-1, "Paving Asphalt," of the Standard Specifications for Public Works Construction (SSPWC, latest Edition) and should be placed in accordance with Section 302-5, "Asphalt Concrete Pavement," of the SSPWC, 2012 edition.

Positive drainage should be provided away from all pavement areas to prevent seepage of surface and/or subsurface water into the pavement base and/or subgrade.

### 8.10 Rigid Pavement

Rigid pavement design recommendations were provided in accordance with the Portland Cement Association's (PCA) Southwest Region Publication P-14, Portland Cement Concrete Pavement (PCCP) for Light, Medium and Heavy Traffic Rigid Pavement. We recommend that the project structural engineer consider the loading conditions at various locations and select the appropriate pavement sections from the following table:

**Table No. 11, Rigid Pavement Structural Sections**

Design R-Value	Design Traffic Index (TI)	PCCP Pavement Section (inches)
13	5.0	7.5
	6.0	7.5
	7.0	8.0
	8.0	8.5
	9.0	8.5

The above pavement section is based on a minimum 28-day Modulus of Rupture (M-R) of 550 psi and a compressive strength of 3,750 psi. The third point method of testing beams should be used to evaluate modulus of rupture. The concrete mix design should contain a minimum cement content of 5.5 sacks per cubic yard. Recommended maximum and minimum values of slump for pavement concrete are 3.0 inches to 1.0 inch, respectively.

Transverse contraction joints should not be spaced more than 10 feet and should be cut to a depth of 1/4 the thickness of the slab. Longitudinal joints should not be spaced more than 12 feet apart. A longitudinal joint is not necessary in the pavement adjacent to the curb and gutter section.

Prior to placement of concrete, at least the upper 12.0 inches of subgrade soils below rigid pavement sections should be compacted to at least ninety-five percent (95%) relative compaction as defined by the ASTM D 1557 standard test method.



Positive drainage should be provided away from all pavement areas to prevent seepage of surface and/or subsurface water into pavement base and/or subgrade.

### **8.11 Site Drainage**

Adequate positive drainage should be provided away from the structures to prevent ponding and to reduce percolation of water into structural backfills. We recommend that the landscape area immediately adjacent to the foundation shall be designed sloped away from the building with a minimum five percent (5%) slope gradient for at least 10 feet measured perpendicular to the face of the wall. Impervious surfaces within 10 feet of the foundation shall have a minimum two percent (2%) slope away from the building per 2016 CBC.

Planters and landscaped areas adjacent to the building perimeter should be designed to minimize water infiltration into the subgrade soils. Gutters and downspouts should be installed on the roof, and runoff should be directed to the storm drain through non-erosive devices. Lower level walkways and open patio areas may require special drainage provisions and sump pumps to provide suitable drainage.

## **9.0 CONSTRUCTION CONSIDERATIONS**

### **9.1 General**

Site soils should be excavatable using conventional heavy-duty excavating equipment. Temporary sloped excavation is feasible if performed in accordance with the slope ratios provided in Section 9.2, *Temporary Excavations*. Existing utilities should be accurately located and either protected or removed as required. For steeper temporary construction slopes or deeper excavations, shoring should be provided by the contractor as necessary, to protect the workers in the excavation.

### **9.2 Temporary Excavations**

Based on the sandy materials encountered in the exploratory borings, sloped temporary excavations (if necessary) may be constructed according to the slope ratios presented in Table No. 12, *Slope Ratios for Temporary Excavations*. Any loose utility trench backfill or other fill encountered in excavations will be less stable than the native soils. Temporary cuts encountering loose fill or loose dry sand may have to be constructed at a flatter gradient than presented in the following table:



**Table No. 12, Slope Ratios for Temporary Excavations**

Maximum Depth of Cut (feet)	Maximum Slope Ratio* (horizontal: vertical)
0 – 4	vertical
4 – 8	1:1
8+	1.5:1

\*Slope ratio assumed to be uniform from top to toe of slope.

Surfaces exposed in slope excavations should be kept moist but not saturated to minimize raveling and sloughing during construction. Adequate provisions should be made to protect the slopes from erosion during periods of rainfall. Surcharge loads, including construction, should not be placed within 5 feet of the unsupported trench edge. The above maximum slopes are based on a maximum height of 6 feet of stockpiled soils placed at least 5 feet from the trench edge.

All applicable requirements of the California Construction and General Industry Safety Orders, the Occupational Safety and Health Act of 1987 and current amendments, and the Construction Safety Act should be met. The soils exposed in cuts should be observed during excavation by the project's geotechnical consultant. If potentially unstable soil conditions are encountered, modifications of slope ratios for temporary cuts may be required.

If the excavation occurs near existing structures, special construction considerations would be required during excavation to protect these existing structures during construction. The proposed excavation should not cause loss of bearing and/or lateral supports of the existing structures.

### **9.3 Slot Cut Recommendations**

Temporary excavations during possible improvements should not extend below a 1:1 horizontal:vertical (H:V) plane extending beyond and down from the bottom of the existing utility lines or structures. The remedial grading excavations should not cause loss of bearing and/or lateral support for adjacent utilities or structures.

If remedial grading excavations extend below a 1:1 horizontal:vertical (H:V) plane extending beyond and down from the bottom of adjacent off-site utility lines or structure foundations, shoring or slot cutting shall be employed. "A-B-C" slot cuts exposing native sandy soils may be excavated with maximum 8 feet wide sections to prevent the existing utility lines or off-site structures from becoming unstable. Backfill should be accomplished in the shortest period of time possible and in alternating sections.

The ABC slot cutting method for retaining walls could be a possible option as an alternative to shoring for excavation less than 8 feet or with cohesive soils. In general, for structures it is not recommended for slot cutting if the height of excavation exceeds more than 8 feet or into sandy soils and with surcharging load.



## 9.4 Geotechnical Services During Construction

This report has been prepared to aid in the site preparation and site grading plans and specifications, and to assist the architect, civil and structural engineers in the design of the proposed structure. It is recommended that this office be provided an opportunity to review final design drawings and specifications to verify that the recommendations of this report have been properly implemented.

Recommendations presented herein are based upon the assumption that adequate earthwork monitoring will be provided by the geotechnical engineer of record. Excavation bottoms should be observed by a geotechnical engineer or his/her representative prior to the placement of compacted fill. Structural fill and backfill should be placed and compacted during continuous observation and testing. Footing excavations should be observed prior to placement of steel and concrete so that footings are founded on satisfactory materials and excavations are free of loose and disturbed materials.

During construction, the geotechnical engineer and/or their authorized representatives should be present at the site to provide a source of advice to the client regarding the geotechnical aspects of the project and to observe and test the earthwork performed. Their presence should not be construed as an acceptance of responsibility for the performance of the completed work, since it is the sole responsibility of the contractor performing the work to ensure that it complies with all applicable plans, specifications, ordinances, etc.

This firm does not practice or consult in the field of safety engineering. We do not direct the contractor's operations and cannot be responsible for other than our own personnel on the site; therefore, the safety of others is the responsibility of the contractor. The contractor should notify the owner if he considers any recommended actions presented herein to be unsafe.

## 10.0 CLOSURE

The findings and recommendations of this report were prepared in accordance with generally accepted professional engineering and engineering geologic principles and practice. We make no other warranty, either expressed or implied. Our conclusions and recommendations are based on the results of the field and laboratory investigations, combined with an interpolation and extrapolation of soil conditions between and beyond boring locations. If conditions encountered during construction appear to be different from those shown by the borings, this office should be notified.

Design recommendations given in this report are based on the assumption that the earthwork and site grading recommendations contained in this report are implemented. Additional consultation may be prudent to interpret Converse's findings for contractors, or



to possibly refine these recommendations based upon the review of the final site grading and actual site conditions encountered during construction. If the scope of the project changes, if project completion is to be delayed, or if the report is to be used for another purpose, this office should be consulted.

## 11.0 REFERENCES

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# Appendix A

Field Exploration



## APPENDIX A: FIELD EXPLORATION

Field exploration included a site reconnaissance and subsurface exploration program. During the site reconnaissance, the surface conditions were noted, and the approximate locations of the borings were determined. The exploratory borings were approximately located using existing boundary and other features as a guide and should be considered accurate only to the degree implied by the method used. The various field study methods performed are discussed below.

### Exploratory Borings

Six (6) exploratory borings (BH-1 through BH-6) were drilled within the project site to evaluate the subsurface earth materials for the proposed new athletic fields and site improvements on March 19, 2020. The borings were drilled using a limited access drill rig with a 6-inch diameter hollow stem auger to a maximum depth of approximately 51.5 feet below the existing ground surface (bgs). Each boring was visually logged by a Converse engineer and sampled at regular intervals and at changes in subsurface soils, in accordance with the Unified Soil Classification System. Detailed. Where appropriate, field descriptions and classifications have been modified to reflect laboratory test results.

Ring samples of the subsurface materials were obtained at frequent intervals in the exploratory borings using a drive sampler (2.4-inches inside diameter and 3.0-inches outside diameter) lined with sample rings. The steel ring sampler was driven into the bottom of the borehole with successive drops of a 140-pound driving weight falling 30 inches, using an automatic hammer. Samples are retained in brass rings (2.4-inches inside diameter and 1.0-inch in height). The central portion of the samples were retained and carefully sealed in waterproof plastic containers for shipment to the Converse laboratory. Blow counts for each sample interval are presented on the logs of borings. Bulk samples of typical soil types were also obtained.

Standard Penetration Test (SPT) was also performed using a standard split-barrel sampler (1.4-inches inside diameter and 2.0-inches outside diameter). The mechanically driven hammer for the SPT sampler was 140 pounds, falling 30 inches for each blow. The recorded blow counts for every six inches for a total of 1.5 feet of sampler penetration are shown on the Logs of Borings in the "BLOWS" column. The standard penetration test was performed in accordance with the ASTM Standard D1586 test method.

It should be noted that the exact depths at which material changes occur cannot always be established accurately. Changes in material conditions that occur between driven samples are indicated in the logs at the top of the next drive sample. A key to soil symbols and terms is presented as Drawing No. A-1, *Soil Classification Chart*. The log of the exploratory boring is presented in Drawing Nos. A-2 through A-7, *Log of Borings*.



# SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS	
			GRAPH	LETTER		
MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE  MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS  MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS <small>(LITTLE OR NO FINES)</small>		<b>GW</b>	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES	
		GRAVELS WITH FINES <small>(APPRECIABLE AMOUNT OF FINES)</small>		<b>GP</b>	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES	
		GRAVELS WITH FINES <small>(APPRECIABLE AMOUNT OF FINES)</small>		<b>GM</b>	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES	
		GRAVELS WITH FINES <small>(APPRECIABLE AMOUNT OF FINES)</small>		<b>GC</b>	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES	
	SAND AND SANDY SOILS  MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS <small>(LITTLE OR NO FINES)</small>		<b>SW</b>	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	
		SANDS WITH FINES <small>(APPRECIABLE AMOUNT OF FINES)</small>		<b>SP</b>	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES	
		SANDS WITH FINES <small>(APPRECIABLE AMOUNT OF FINES)</small>		<b>SM</b>	SILTY SANDS, SAND - SILT MIXTURES	
		SANDS WITH FINES <small>(APPRECIABLE AMOUNT OF FINES)</small>		<b>SC</b>	CLAYEY SANDS, SAND - CLAY MIXTURES	
		FINE GRAINED SOILS  MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS  LIQUID LIMIT LESS THAN 50		<b>ML</b>	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
					<b>CL</b>	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
	<b>OL</b>			ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY		
SILTS AND CLAYS  LIQUID LIMIT GREATER THAN 50			<b>MH</b>	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS		
			<b>CH</b>	INORGANIC CLAYS OF HIGH PLASTICITY		
			<b>OH</b>	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS		
HIGHLY ORGANIC SOILS				<b>PT</b>	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS	

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

## BORING LOG SYMBOLS

### SAMPLE TYPE

- STANDARD PENETRATION TEST**  
Split barrel sampler in accordance with ASTM D-1586-84 Standard Test Method
- DRIVE SAMPLE** 2.42" I.D. sampler.
- DRIVE SAMPLE** No recovery
- BULK SAMPLE**
- GROUNDWATER WHILE DRILLING**
- GROUNDWATER AFTER DRILLING**

### LABORATORY TESTING ABBREVIATIONS

#### TEST TYPE

(Results shown in Appendix B)

#### CLASSIFICATION

Plasticity pi  
Grain Size Analysis ma  
Passing No. 200 Sieve wa  
Sand Equivalent se  
Expansion Index ei  
Compaction Curve max  
Hydrometer h

#### STRENGTH

Pocket Penetrometer p  
Direct Shear ds  
Direct Shear (single point) ds\*  
Unconfined Compression uc  
Triaxial Compression tx  
Vane Shear vs  
Consolidation c  
Collapse Test col  
Resistance (R) Value r  
Chemical Analysis ca  
Electrical Resistivity er

## UNIFIED SOIL CLASSIFICATION AND KEY TO BORING LOG SYMBOLS



**Converse Consultants**

Project Name  
Kwis Elementary School Athletic Fields  
1925 Kwis Avenue  
Hacienda Heights, California 91745  
Converse Project No. 20-31-120-01

Project No.  
20-31-120-01

Figure No.  
A-1

# Log of Boring No. BH-1

Dates Drilled: 3/19/2020      Logged by: Babak      Checked By: MBS

Equipment: 6" HOLLOW STEM AUGER      Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 377      Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS <small>This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.</small>	SAMPLES		BLOWS	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
			DRIVE	BULK				
5		<p><b>3" GRASS, FIELD AREA</b></p> <p><b>FILL (Af):</b> <b>SANDY CLAY (CL):</b> fine to coarse-grained, brown.</p> <p><b>ALLUVIUM (Qal):</b> <b>SANDY CLAY (CL):</b> fine-grained, some gravel, brown.</p>	  		24/26/21	11	124	
		<p>End of boring at 8 feet. No ground water was encountered. Percolation test was performed. Borehole backfilled with soil cuttings at 3/19/2020.</p>						



**Converse Consultants**

Project Name  
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Converse Project No. 20-31-120-01

Project No.      Figure No.  
20-31-120-01      A-2

# Log of Boring No. BH-2

Dates Drilled: 3/19/2020      Logged by: Babak      Checked By: MBS

Equipment: 6" HOLLOW STEM AUGER      Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 376      Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS <small>This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.</small>	SAMPLES		BLOWS	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
			DRIVE	BULK				
5	3" GRASS, FIELD AREA <u>FILL (Af):</u> <b>SANDY CLAY (CL):</b> fine to coarse-grained, brown. <u>ALLUVIUM (Qal):</u> <b>SILTY CLAY (CL-ML):</b> medium-grained, some sand, brown.				5/6/11	17	109	ma (fc=58%)
10	some gravel,				14/29/38			pi
15					12/20/25	15	112	
20					8/12/19	16	112	
		End of boring at 21.5 feet. No ground water was encountered. Percolation test was performed. Borehole backfilled with soil cuttings on 3/19/2020.						



**Converse Consultants**

Project Name  
Kwis Elementary School Athletic Fields  
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Hacienda Heights, California 91745  
Converse Project No. 20-31-120-01

Project No.      Figure No.  
20-31-120-01      A-3

# Log of Boring No. BH-3

Dates Drilled: 3/19/2020      Logged by: Babak      Checked By: MBS

Equipment: 6" HOLLOW STEM AUGER      Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 377      Depth to Water (ft): 30

Depth (ft)	Graphic Log	<p style="text-align: center;"><b>SUMMARY OF SUBSURFACE CONDITIONS</b></p> <p style="font-size: small;">This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.</p>	SAMPLES		BLOWS	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
			DRIVE	BULK				
5		<p><b>3" GRASS, FIELD AREA</b></p> <p><b>FILL (Af):</b></p> <p><b>LEAN CLAY (CL):</b> brown.</p> <p><b>ALLUVIUM (Qal):</b></p> <p><b>SANDY CLAY (CL):</b> some gravel, brown.</p> <p><b>SANDY CLAY (CL):</b> fine to coarse-grained, some gravel, brown.</p>			10/15/30	12	121	c,ds
10		some gravel,			8/14/40			wa (fc=67.74%)
15		<p><b>CLAY WITH SAND (CH):</b> fine to coarse-grained, brown.</p>			18/50@6"	13	118	
20					12/50@6"	17	113	wa (fc=73%)
25					6/12/18			
30		<p>ground water was encountered during drilling,</p>			7/14/15	16	113	



**Converse Consultants**

Project Name  
 Kwis Elementary School Athletic Fields  
 1925 Kwis Avenue  
 Hacienda Heights, California 91745  
 Converse Project No. 20-31-120-01

Project No.      Figure No.  
 20-31-120-01      A-4a

# Log of Boring No. BH-3

Dates Drilled: 3/19/2020      Logged by: Babak      Checked By: MBS  
 Equipment: 6" HOLLOW STEM AUGER      Driving Weight and Drop: 140 lbs / 30 in  
 Ground Surface Elevation (ft): 377      Depth to Water (ft): 30

Depth (ft)	Graphic Log	<b>SUMMARY OF SUBSURFACE CONDITIONS</b> This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES		BLOWS	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
			DRIVE	BULK				
40		<b>ALLUVIUM (Qal):</b> <b>CLAY WITH SAND (CH):</b>  some cobble,	X		3/3/3			wa (fc=83.3%)
45			X		7/8/11			
50				X		7/20/30	19	107
		End of boring at 51.5 feet. Borehole backfilled with cement grout at 3/19/2020.						



**Converse Consultants**

Project Name  
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 1925 Kwis Avenue  
 Hacienda Heights, California 91745  
 Converse Project No. 20-31-120-01

Project No.      Figure No.  
 20-31-120-01      A-4b

# Log of Boring No. BH-4

Dates Drilled: 3/19/2020      Logged by: Babak      Checked By: MBS

Equipment: 6" HOLLOW STEM AUGER      Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 378      Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS <small>This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.</small>	SAMPLES		BLOWS	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
			DRIVE	BULK				
	3" GRASS, FIELD AREA (FILL): <u>FILL (Af):</u> <u>CLAY (CL):</u> brown. <u>ALLUVIUM (Qal):</u> <u>SILTY CLAY (CL-ML):</u> some gravel, brown. <u>SILTY CLAY WITH SAND (CL-ML):</u> fine to coarse-grained, moist, some gravel, brown.		22/34/47	10	121			
5				18/32/46	16	112		
10				9/20/29	18	112		
15				7/15/21	17	115		
20	<u>CLAY (CH):</u> moist, brown.							
	End of boring at 21.5 feet. No groundwater was encountered. Percolation test performed Borehole was backfilled with cement grout on 3/19/2020.							



**Converse Consultants**

Project Name  
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 Converse Project No. 20-31-120-01

Project No.      Figure No.  
 20-31-120-01      A-5

# Log of Boring No. BH-5

Dates Drilled: 3/19/2020      Logged by: Babak      Checked By: MBS

Equipment: 6" HOLLOW STEM AUGER      Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 380      Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	<p style="text-align: center;"><b>SUMMARY OF SUBSURFACE CONDITIONS</b></p> <p>This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.</p>	SAMPLES		BLOWS	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
			DRIVE	BULK				
5		<p><b>3" GRASS, FIELD AREA</b></p> <p><b>FILL (Af):</b> <b>CLAY WITH GRAVEL (CL):</b> medium to coarse-grained, brown.</p> <p><b>ALLUVIUM (Qal):</b> <b>CLAY WITH GRAVEL (CL):</b> medium to coarse-grained, dark brown. some gravel,</p>			50@6"	14	109	
		<p>End of boring at 8 feet. No groundwater was encountered. Percolation test performed Borehole was backfilled with soil cuttings on 3/19/2020.</p>						



**Converse Consultants**

Project Name  
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Project No.      Figure No.  
20-31-120-01      A-6

# Log of Boring No. BH-6

Dates Drilled: 3/19/2020      Logged by: Babak      Checked By: MBS

Equipment: 6" HOLLOW STEM AUGER      Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 382      Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS <small>This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.</small>	SAMPLES		BLOWS	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
			DRIVE	BULK				
5		<p><b>3" GRASS, FIELD AREA</b></p> <p><b>FILL (Af):</b></p> <p><b>CLAY (CL):</b> brown.</p> <p><b>ALLUVIUM (Qal):</b></p> <p><b>CLAY WITH SAND (CL):</b> trace gravel, brown.</p>			30/50@5"	11	121	max
		<p>End of boring at 6.5 feet Boring backfilled with soil cuttings on 3/19/2020.</p>						



**Converse Consultants**

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Project No.      Figure No.  
 20-31-120-01      A-7

# Appendix B

Laboratory Testing Program



## APPENDIX B: LABORATORY TESTING PROGRAM

Tests were conducted in our laboratory on representative soil samples for the purpose of classification and evaluation of their relevant physical characteristics and engineering properties. The amount and selection of tests were based on the geotechnical requirements of the project. Test results are presented herein and on the Logs of Borings in Appendix A, *Field Exploration*. The following is a summary of the laboratory tests conducted for this project.

### Moisture Content and Dry Density

Results of moisture content and dry density tests performed on relatively undisturbed ring samples were used to aid in the classification of the soils and to provide quantitative measure of the *in-situ* dry density. Data obtained from this test provides qualitative information on strength and compressibility characteristics of site soils. For test results, see the Logs of Borings in Appendix A, *Field Exploration*.

### Grain-Size Analysis

To assist in classification of soils, mechanical grain-size analysis was performed on one (1) selected sample. Testing was performed in general accordance with the ASTM Standard C136 test method. Grain-size curve is shown in Drawing No. B-1, *Grain Size Distribution Results*.

### Percent Finer Than Sieve No. 200

The percent finer than sieve No. 200 tests were performed on four (4) selected soil sample to aid in the classification of the on-site soils and to estimate other engineering parameters. Testing was performed in general accordance with the ASTM Standard D1140 test method. The test results are presented in the boring logs.

**Table No. B-1, Summary of Percent Passing Sieve #200 Test Results**

Boring No.	Depth (feet)	Soil Classification	Percent Passing Sieve No. 200
BH-2*	0-5	Sandy Clay (CL)	58.0
BH-3	10	Sandy Clay (CL)	67.4
BH-3	20	Clay with sand (CH)	73.0
BH-3	35	Clay with sand (CH)	83.3

\*Data from Sieve Analysis

### Maximum Dry Density Test

One (1) laboratory maximum dry density-moisture content relationship test was performed on a representative bulk sample of the upper 5 feet of soil material. The testing



was conducted in accordance with ASTM Standard D1557 laboratory procedure. The test result is presented on Drawing No. B-2, *Moisture-Density Relationship Results*.

### Direct Shear

Direct shear tests were performed on one (1) undisturbed soil samples. For the test, three samples contained in brass sampler rings were placed, one at a time, directly into the test apparatus and subjected to a range of normal loads appropriate for the anticipated conditions. The samples were then sheared at a constant strain rate of 0.004 inch/minute. Shear deformation was recorded until a maximum of about 0.50-inch shear displacement was achieved. Ultimate strength was selected from the shear-stress deformation data and plotted to determine the shear strength parameters. For test data, including sample density, see Drawing No. B-3, *Direct Shear Test Results*, and the following table:

**Table No. B-2, Direct Shear Test Results**

Boring No.	Depth (feet)	Soil Classification	Peak Strength Parameters	
			Friction Angle (degrees)	Cohesion (psf)
BH-3	5	Sandy Clay (CL)	22	410

### Consolidation Test

Consolidation tests were performed on one (1) relatively undisturbed samples. Data obtained from this test was used to evaluate the settlement characteristics of the foundation soils under load. Preparation for this test involved trimming the sample and placing the 1-inch high brass ring into the test apparatus, which contained porous stones, both top and bottom, to accommodate drainage during testing. Normal axial loads were applied to one end of the sample through the porous stones, and the resulting deflections were recorded at various time periods. The load was increased after the sample reached a reasonable state equilibrium. Normal loads were applied at a constant load-increment ratio, successive loads being generally twice the preceding load. The sample was tested at field and submerged conditions. The test results, including sample density and moisture content, are presented in Drawing No. B-4, *Consolidation Test Results*.

### Atterberg Limits

Atterberg limits test was performed on one (1) sample to assist the classification of the soil and fill materials according to ASTM Standard D4318 test method. The test results are presented in the following table and on Drawing No. B-5, *Atterberg Limits Results*.

**Table No. B-1 Atterberg Limit Test Results**

Boring No.	Depth (feet)	Soil Classification	Liquid Limit (%)	Plastic Limit (%)	Plastic Index (%)
BH-2	5	Silty Clay (CL-ML)	26	20	6



## Soil Corrosivity

One (1) representative soil sample was tested to determine minimum electrical resistivity, pH, and chemical content, including chloride concentrations, and soluble sulfate. The purpose of these tests is to determine the corrosion potential of site soils when placed in contact with common construction materials. These tests were performed by EGL in Arcadia, California. The test results received from EGL are included in the following table:

**Table No. B-4, Corrosivity Test Results**

Boring No.	Sample Depth (feet)	pH (Caltrans 643)	Soluble Chlorides (Caltrans 422) ppm	Soluble Sulfate (Caltrans 417) (%)	Saturated Resistivity (Caltrans 643) Ohm-cm
BH-6	0-5	7.84	210	0.022	1,200

## R-value

One (1) representative bulk soil sample was tested for resistance value (R-value) in accordance with ASTM D2844 Standard. This test is designed to provide a relative measure of soil strength for use in pavement design. The test results are shown in the following table:

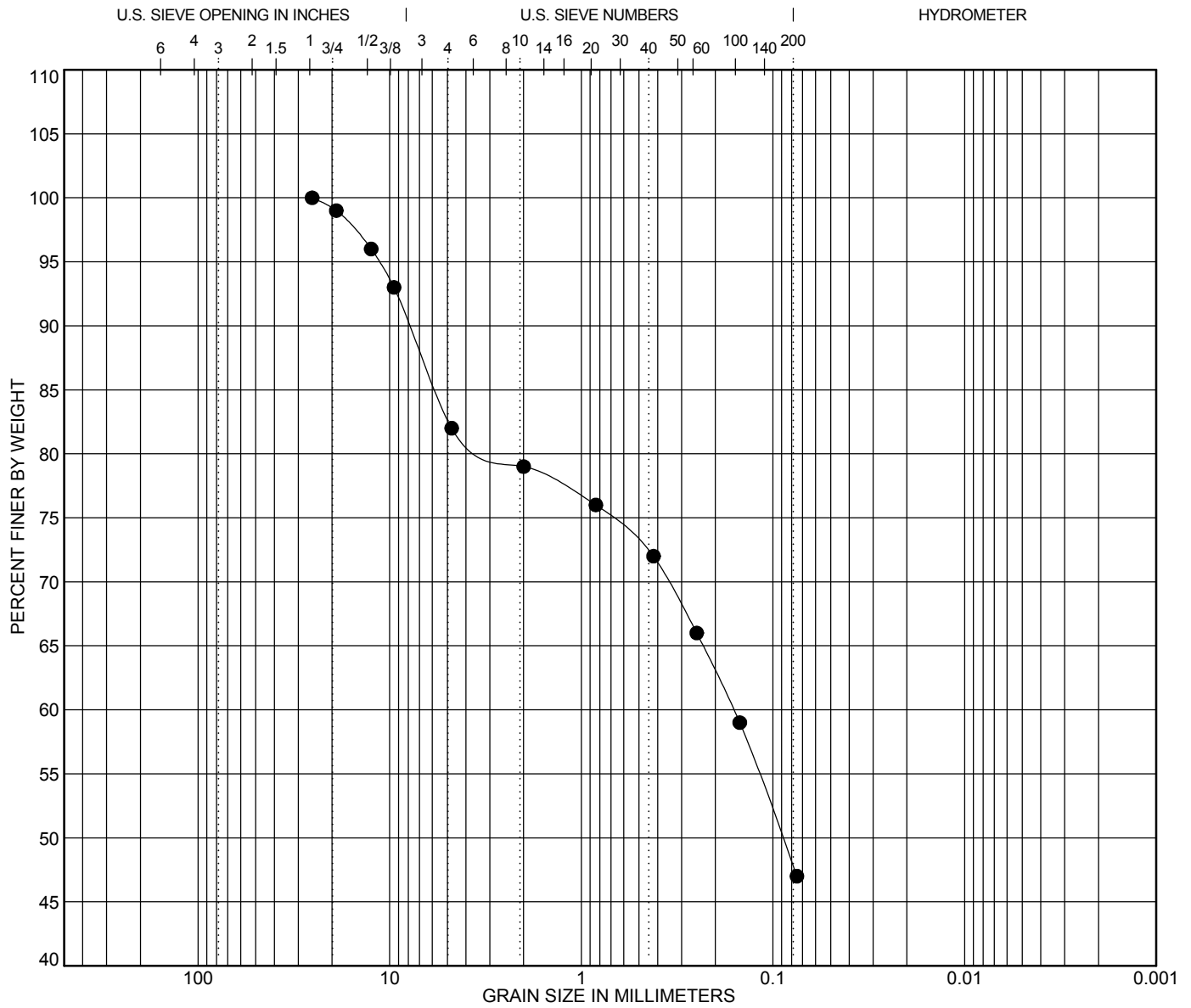
**Table No. B-5, R-value Test Result**

Boring No.	Depth (feet)	Soil Classification	Measured R-value
BH-4	1-5	Silty Clay (CL-ML)	13

## Sample Storage

Soil samples presently stored in our laboratory will be discarded 30 days after the date of this report, unless this office receives a specific request to retain the samples for a longer period of time.





COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Boring No.	Depth (ft)	Description					LL	PL	PI	Cc	Cu
● BH-2	5	Sandy Clay (CL)									
Boring No.	Depth (ft)	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay		
● BH-2	5	25.4	0.16			18.0	35.0	47.0			

### GRAIN SIZE DISTRIBUTION RESULTS

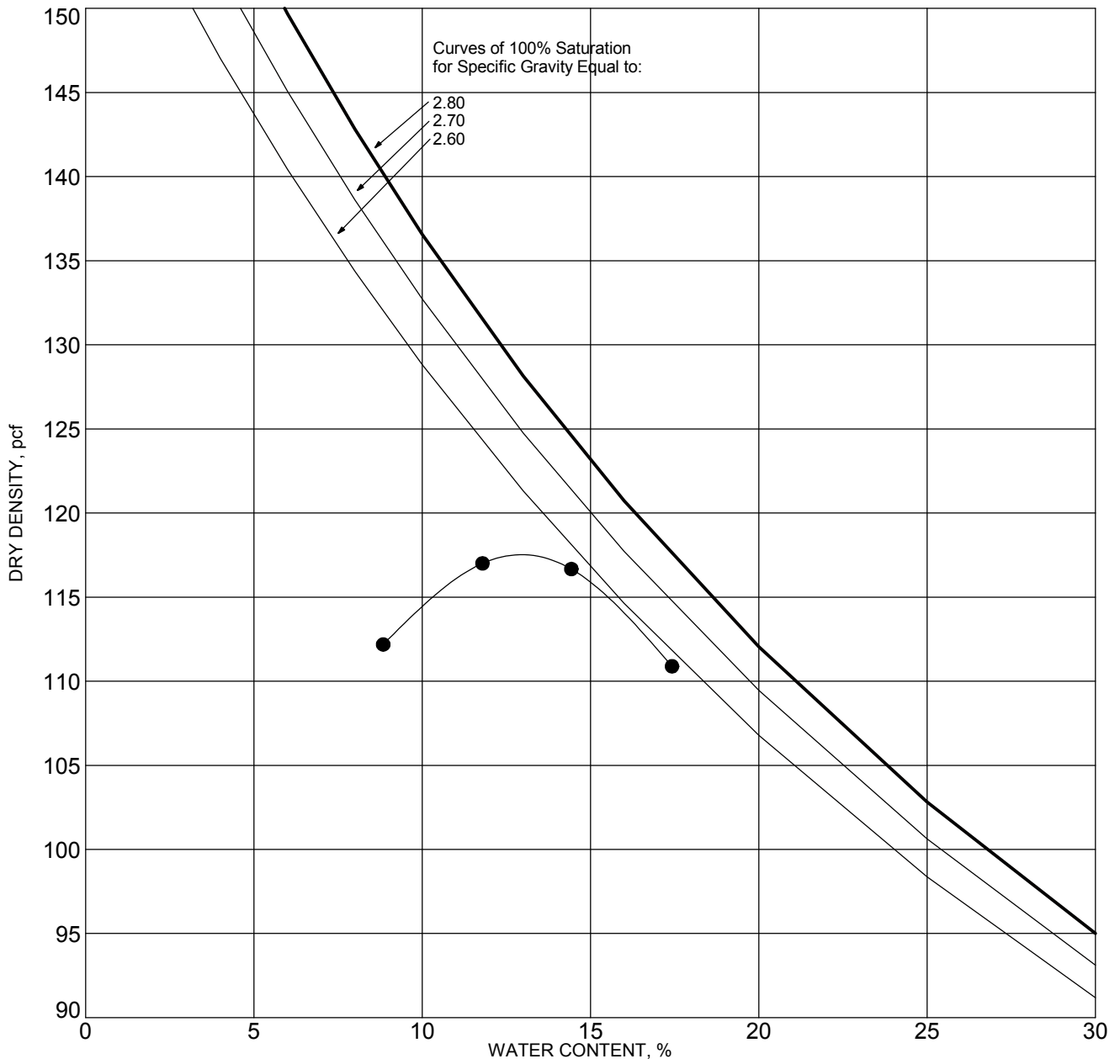


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Project No.  
 20-31-120-01

Drawing No.  
 B-1



SYMBOL	BORING NO.	DEPTH (ft)	DESCRIPTION	ASTM TEST METHOD	OPTIMUM WATER, %	MAXIMUM DRY DENSITY, pcf
●	BH-6	5	Clay (CL)	D1557 Method C	13.3	118.2

## MOISTURE-DENSITY RELATIONSHIP RESULTS

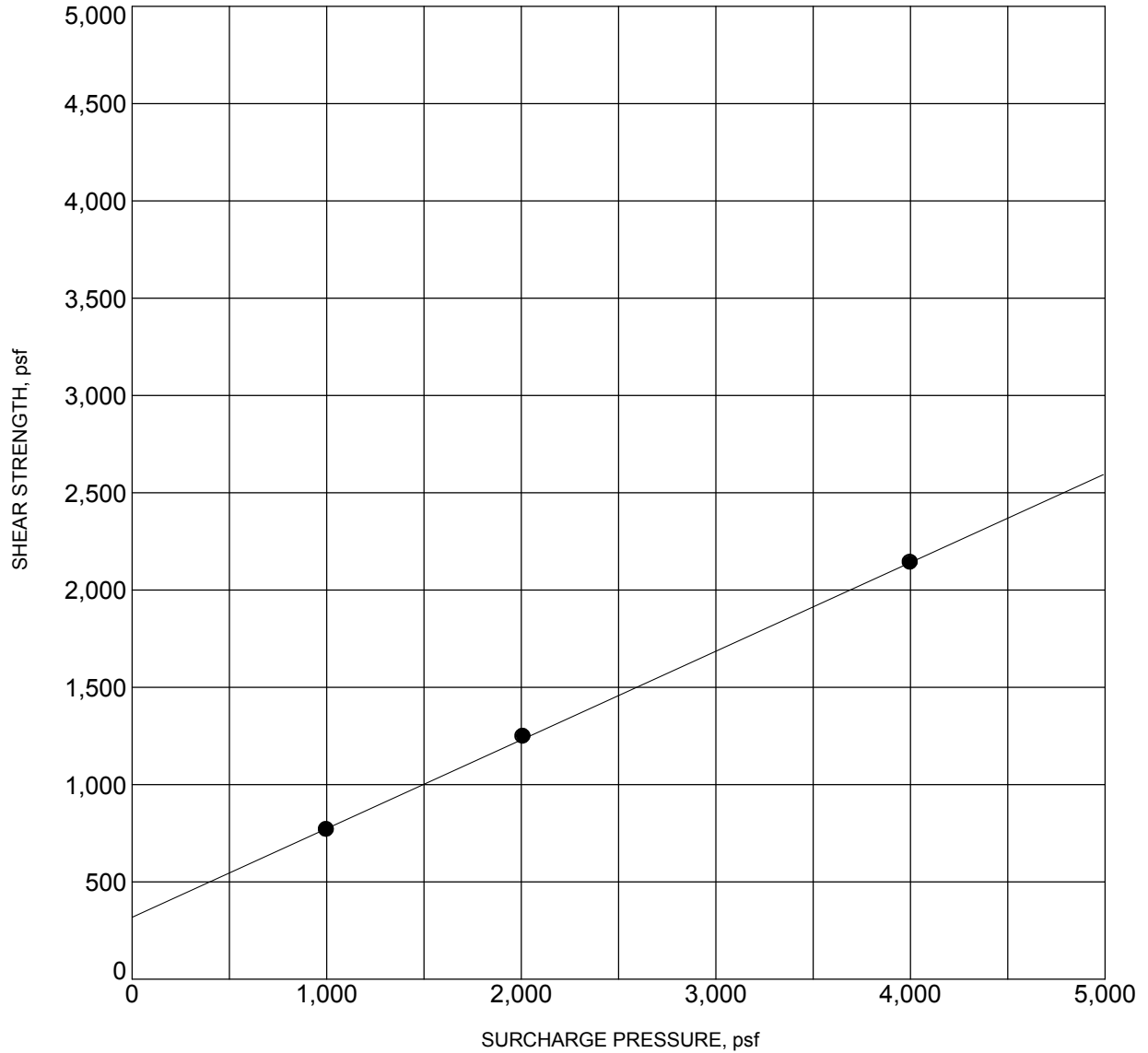


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Project No.  
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Drawing No.  
 B-2



BORING NO. :	<b>BH-3</b>	DEPTH (ft) :	<b>5</b>
DESCRIPTION :	<b>Sandy Clay (CL)</b>		
COHESION (psf) :	<b>410</b>	FRICTION ANGLE (degrees):	<b>22</b>
MOISTURE CONTENT (%) :	<b>12.0</b>	DRY DENSITY (pcf) :	<b>121.4</b>

NOTE: Ultimate Strength.

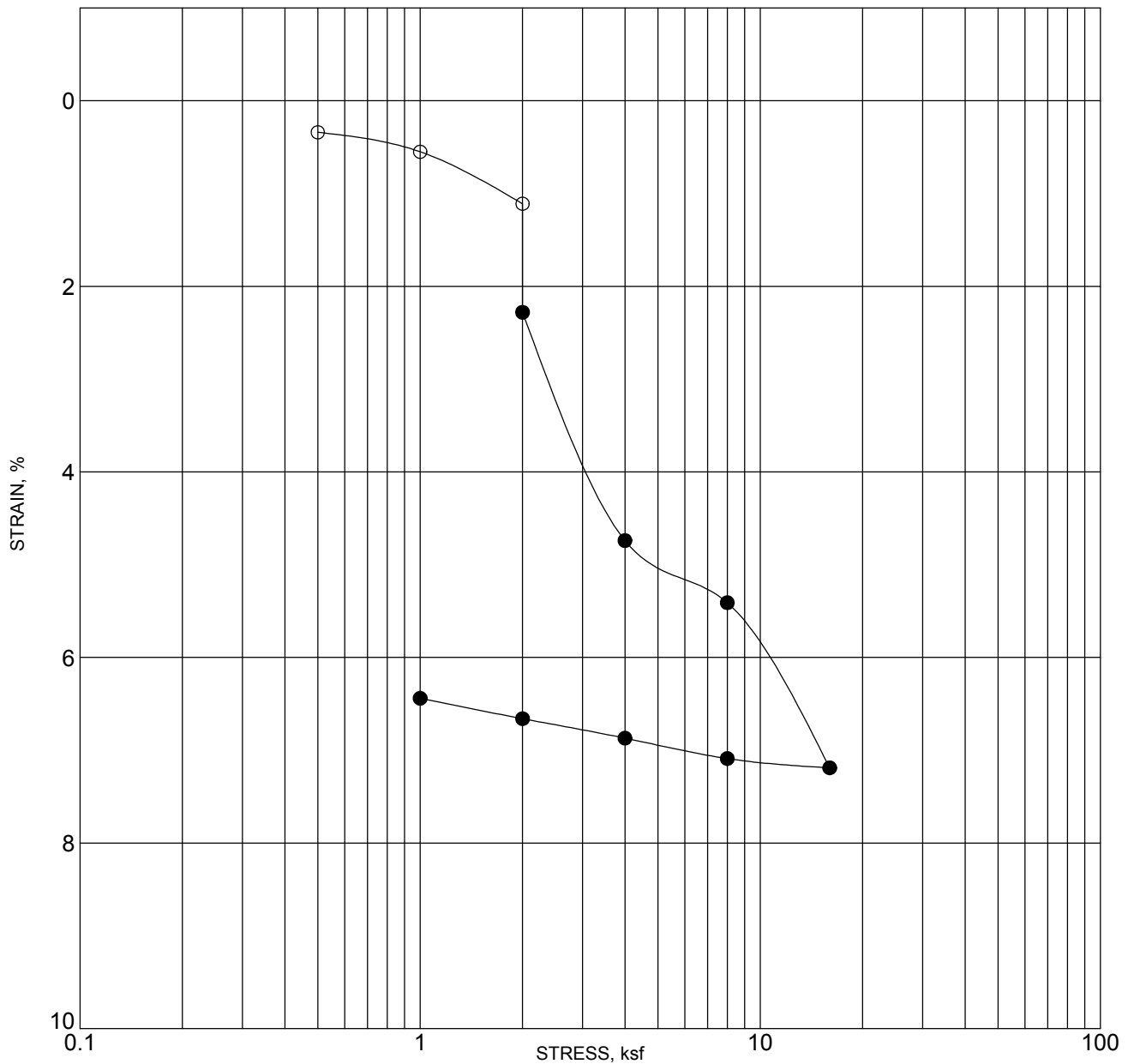
## DIRECT SHEAR TEST RESULTS



**Converse Consultants**

Project Name  
**Kwis Elementary School Athletic Fields**  
 1925 Kwis Avenue  
 Hacienda Heights, California 91745  
 Converse Project No. 20-31-120-01

Project No. Drawing No.  
**20-31-120-01 B-3**



BORING NO. : <b>BH-3</b>		DEPTH (ft) : <b>5</b>	
DESCRIPTION : <b>Sandy Clay (CL)</b>			
MOISTURE CONTENT (%)	DRY DENSITY (pcf)	PERCENT SATURATION	VOID RATIO
INITIAL <b>12.0</b>	<b>121.42</b>	<b>0.83</b>	<b>0.39</b>
FINAL			

NOTE: SOLID CIRCLES INDICATE READINGS AFTER ADDITION OF WATER

## CONSOLIDATION TEST RESULTS



**Converse Consultants**

Project Name  
 Kwis Elementary School Athletic Fields  
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Project No. Drawing No.  
 20-31-120-01 B-4

# Appendix C

Percolation Testing



## APPENDIX C: PERCOLATION TESTING

The boring percolation test procedure (equivalent to USBR 7300-89) was utilized for percolation testing in accordance with the *LA County Department of Public Works Guideline for Design, Investigation, and Reporting of Low Impact Development Stormwater Infiltration*, dated December 2014.

The test locations were prepared by placement of a perforated 2-inch diameter PVC pipe surrounded by pea gravel after drilling and sampling.

During testing, the test holes were filled with water to the top surface of the soil. The time between tests was dependent on the pre-soak conditions. If a pre-soaked hole drains entirely within thirty minutes, twice, then the depth measurement will be taken and logged every ten minutes; otherwise, the time between measurements would be thirty minutes. This method was repeated until eight readings had been taken, or when a stabilized rate from the highest and lowest readings were within 10 percent of each other from three consecutive readings. The drop in water level would be recorded to the nearest 1/8 inch. The data collected would be recorded in inches per hour. In this scenario, none of the holes drained within thirty minutes, and thus the time between tests was thirty minutes for all holes. And all were presoaked at least for four hours.

Percolation testing and subsurface exploration was performed on March 19, 2020. The results of the percolation tests are tabulated in the tables below:

**Table No. C-1, Percolation Test Results**

Boring No.	Depth of Boring (feet)	Predominant Soil Types (USCS)	Average Percolation Rate (inches/hour)	Lowest Percolation Rate (inches/hour)	Design Percolation Rate (inches/hour)
BH-1	0-8	Sandy Clay (CL)	0.15	0.15	0.15
BH-2	0-20	Clay with Sand (CL)	0.02	0.02	0.02
BH-4	0-10	Silty Clay with Sand (ML-CL)	0.06	0.06	0.06
BH-5	0-8	Clay with Gravel (CL)	0.01	0.01	0.01

In accordance with County of Los Angeles requirements, the minimum percolation rate for design of infiltration system for storm water management is 0.30 inch per hour. Percolation rates of for infiltration system do not meet the minimum rate and are not considered suitable for percolation drainage systems or water percolation tank. Alternative mitigation options may have to be considered. It should be noted that the above percolation rates are obtained by using clean, clear water, which does not consider any effects of sediments, fines or other debris that will significantly reduce the percolation rates. Furthermore, any proposed infiltration system must comply with the following setbacks in accordance with the County of Los Angeles guidelines summarized in Table No. C-2 below.



**Table No. C-2, Infiltration Facility Setback Requirements per Los Angeles County**

Setback from	Distance
Property lines and public right of way	5 feet
Any foundation	15 feet or within 1:1 plane drawn up from the bottom of foundation, whichever greater
Face of any slope	H/2, 5 feet minimum (H is height of slope)
Water wells used for drinking water	100 feet
Historically highest groundwater levels	10 feet above

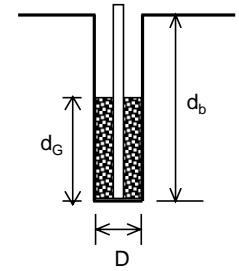
The project Civil Engineer should review the raw data of percolation test presented herein to determine specific soil layers and percolation rates for design of the proposed infiltration system. Such systems should be constructed a minimum distance of 10 feet laterally from any existing or future planned building or subsurface structure as not to disturb or undermine foundations. The proposed infiltration system should be constructed at least 10 feet above historically highest groundwater levels. Additional details about drywell design and requirements can be found in the Low Impact Development Manual, County of Los Angeles Department of Public Works, latest edition. The infiltration system should be properly maintained periodically to minimize sedimentation in the infiltration system. The detailed percolation test results are shown on the following data sheet.



**Percolation Testing**

Job Name: Kwis Elementary School Athletic Fields  
 Job No.: 20-31-120-01  
 Location: 1925 Kwis Ave, Hacienda Heights, CA 91745  
 Test Date: March 19, 2020

**Test Boring No.** BH-1  
 Depth of Boring ( $d_b$ ): 8.0 feet  
 Diameter of Boring (D): 0.50 feet  
 Test Performer: BA



Ground water was encountered at 29.2 feet below ground level. Percolation test was performed between 5 feet and 15 feet below ground level.

Time of Testing			Water Level Measurement		Water Level Calculations				Percolation Rate Calculations		
Initial Time	Final Time	Time Interval	Initial depth to water	Final depth to water	Initial Height of water column	Final Height of water column	Drop in Height	Average height of water column	Pre-adjusted Percolation Rate	Reduction Factor	Adjusted Percolation Rate
$T_i$	$T_f$	$\Delta T$	$d_1$	$d_2$	$d_i$	$d_f$	$\Delta d = d_i - d_f$	$L_{ave}$	$k_i = \Delta d / \Delta T$	$R_f$	$k = k_i / R_f$
		(hr)	(feet)	(feet)	(feet)	(feet)	(feet)	(feet)	(inch/hr)		(inch/hr)
<b>Presoak</b>	1/25/2020	1.2									
<b>Percolation Test</b>											
0.00	30.00	0.50	0.00	0.21	8.00	7.79	0.21	7.90	5.00	32.6	0.15
30.00	60.00	0.50	0.00	0.20	8.00	7.80	0.20	7.90	4.75	32.6	0.15
60.00	90.00	0.50	0.00	0.22	8.00	7.78	0.22	7.89	5.25	32.6	0.16
90.00	120.00	0.50	0.00	0.20	8.00	7.80	0.20	7.90	4.75	32.6	0.15

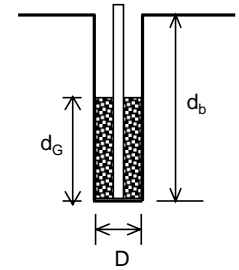
Note: Reduction Factor,  $R_f = (2*d_i - \Delta d)/D + 1$

**Lowest Percolaton Rate = 0.15 inch/hr**  
**Average Percolation Rate = 0.15 inch/hr**  
**Design Percolation Rate = 0.15 inch/hr**

**Percolation Testing**

Job Name: Kwis Elementary School Athletic Fields  
 Job No.: 20-31-120-01  
 Location: 1925 Kwis Ave, Hacienda Heights, CA 91745  
 Test Date: March 19, 2020

**Test Boring No.** BH-2  
 Depth of Boring ( $d_b$ ): 20.0 feet  
 Diameter of Boring (D): 0.50 feet  
 Test Performer: BA



Ground water was encountered at 29.2 feet below ground level. Percolation test was performed between 5 feet and 15 feet below ground level.

Time of Testing			Water Level Measurement		Water Level Calculations				Percolation Rate Calculations		
Initial Time	Final Time	Time Interval	Initial depth to water	Final depth to water	Initial Height of water column	Final Height of water column	Drop in Height	Average height of water column	Pre-adjusted Percolation Rate	Reduction Factor	Adjusted Percolation Rate
$T_i$	$T_f$	$\Delta T$	$d_1$	$d_2$	$d_i$	$d_f$	$\Delta d = d_i - d_f$	$L_{ave}$	$k_i = \Delta d / \Delta T$	$R_f$	$k = k_i / R_f$
		(hr)	(feet)	(feet)	(feet)	(feet)	(feet)	(feet)	(inch/hr)		(inch/hr)
<b>Presoak</b>	1/25/2020	1.2									
<b>Percolation Test</b>											
0.00	30.00	0.50	0.00	0.07	20.00	19.93	0.07	19.96	1.75	80.9	0.02
30.00	57.00	0.45	0.00	0.06	20.00	19.94	0.06	19.97	1.67	80.9	0.02
57.00	87.00	0.50	0.00	0.07	20.00	19.93	0.07	19.96	1.75	80.9	0.02
87.00	117.00	0.50	0.00	0.07	20.00	19.93	0.07	19.96	1.75	80.9	0.02

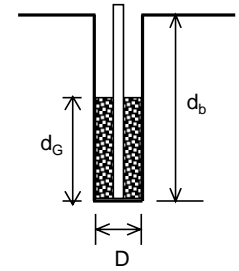
Note: Reduction Factor,  $R_f = (2*d_i - \Delta d)/D + 1$

**Lowest Percolaton Rate = 0.02 inch/hr**  
**Average Percolation Rate = 0.02 inch/hr**  
**Design Percolation Rate = 0.02 inch/hr**

**Percolation Testing**

Job Name: Kwis Elementary School Athletic Fields  
 Job No.: 20-31-120-01  
 Location: 1925 Kwis Ave, Hacienda Heights, CA 91745  
 Test Date: March 19, 2020

**Test Boring No.** BH-4  
 Depth of Boring ( $d_b$ ): 20.0 feet  
 Diameter of Boring (D): 0.50 feet  
 Test Performer: BA



Ground water was encountered at 29.2 feet below ground level. Percolation test was performed between 5 feet and 15 feet below ground level.

Time of Testing			Water Level Measurement		Water Level Calculations				Percolation Rate Calculations		
Initial Time	Final Time	Time Interval	Initial depth to water	Final depth to water	Initial Height of water column	Final Height of water column	Drop in Height	Average height of water column	Pre-adjusted Percolation Rate	Reduction Factor	Adjusted Percolation Rate
$T_i$	$T_f$	$\Delta T$	$d_1$	$d_2$	$d_i$	$d_f$	$\Delta d = d_i - d_f$	$L_{ave}$	$k_i = \Delta d / \Delta T$	$R_f$	$k = k_i / R_f$
		(hr)	(feet)	(feet)	(feet)	(feet)	(feet)	(feet)	(inch/hr)		(inch/hr)
<b>Presoak</b>	1/25/2020	1.2									
<b>Percolation Test</b>											
0.00	30.00	0.50	0.00	0.22	20.00	19.78	0.22	19.89	5.25	80.6	0.07
30.00	57.00	0.45	0.00	0.22	20.00	19.78	0.22	19.89	5.83	80.6	0.07
57.00	87.00	0.50	0.00	0.20	20.00	19.80	0.20	19.90	4.75	80.6	0.06
87.00	117.00	0.50	0.00	0.20	20.00	19.80	0.20	19.90	4.75	80.6	0.06

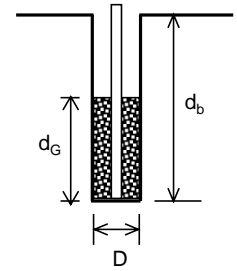
Note: Reduction Factor,  $R_f = (2*d_i - \Delta d)/D + 1$

**Lowest Percolaton Rate = 0.06 inch/hr**  
**Average Percolation Rate = 0.06 inch/hr**  
**Design Percolation Rate = 0.06 inch/hr**

**Percolation Testing**

Job Name: Kwis Elementary School Athletic Fields  
 Job No.: 20-31-120-01  
 Location: 1925 Kwis Ave, Hacienda Heights, CA 91745  
 Test Date: March 19, 2020

**Test Boring No.** BH-5  
 Depth of Boring ( $d_b$ ): 20.0 feet  
 Diameter of Boring (D): 0.50 feet  
 Test Performer: BA



Ground water was encountered at 29.2 feet below ground level. Percolation test was performed between 5 feet and 15 feet below ground level.

Time of Testing			Water Level Measurement		Water Level Calculations				Percolation Rate Calculations		
Initial Time	Final Time	Time Interval	Initial depth to water	Final depth to water	Initial Height of water column	Final Height of water column	Drop in Height	Average height of water column	Pre-adjusted Percolation Rate	Reduction Factor	Adjusted Percolation Rate
$T_i$	$T_f$	$\Delta T$	$d_1$	$d_2$	$d_i$	$d_f$	$\Delta d = d_i - d_f$	$L_{ave}$	$k_i = \Delta d / \Delta T$	$R_f$	$k = k_i / R_f$
		(hr)	(feet)	(feet)	(feet)	(feet)	(feet)	(feet)	(inch/hr)		(inch/hr)
<b>Presoak</b>	1/25/2020	1.2									
<b>Percolation Test</b>											
0.00	30.00	0.50	0.00	0.03	20.00	19.97	0.03	19.98	0.75	80.9	0.01
30.00	60.00	0.50	0.00	0.03	20.00	19.97	0.03	19.98	0.75	80.9	0.01
60.00	90.00	0.50	0.00	0.03	20.00	19.97	0.03	19.98	0.75	80.9	0.01
90.00	120.00	0.50	0.00	0.03	20.00	19.97	0.03	19.98	0.75	80.9	0.01

Note: Reduction Factor,  $R_f = (2*d_i - \Delta d)/D + 1$

**Lowest Percolaton Rate = 0.01 inch/hr**  
**Average Percolation Rate = 0.01 inch/hr**  
**Design Percolation Rate = 0.01 inch/hr**

# Appendix D

Earthwork Specifications



## APPENDIX D: EARTHWORK SPECIFICATIONS

### Scope of Work

The work includes all labor, supplies and construction equipment required to construct the building pads in a good, workman-like manner, as shown on the drawings and herein specified. The major items of work covered in this section include the following:

- Site Inspection
- Authority of Geotechnical Engineer
- Site Clearing
- Excavations
- Preparation of Fill Areas
- Placement and Compaction of Fill
- Observation and Testing

### Site Inspection

- The Contractor shall carefully examine the site and make all inspections necessary, in order to determine the full extent of the work required to make the completed work conform to the drawings and specifications. The Contractor shall satisfy himself as to the nature and location of the work, ground surface and the characteristics of equipment and facilities needed prior to and during prosecution of the work. The Contractor shall satisfy himself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered. Any inaccuracies or discrepancies between the actual field conditions and the drawings, or between the drawings and specifications must be brought to the Owner's attention in order to clarify the exact nature of the work to be performed.
- This *Geotechnical Study Report* by Converse Consultants may be used as a reference to the surface and subsurface conditions on this project. The information presented in this report is intended for use in design and is subject to confirmation of the conditions encountered during construction. The exploration logs and related information depict subsurface conditions only at the particular time and location designated on the boring logs. Subsurface conditions at other locations may differ from conditions encountered at the exploration locations. In addition, the passage of time may result in a change in subsurface conditions at the exploration locations. Any review of this information shall not relieve the Contractor from performing such independent investigation and evaluation to satisfy himself as to the nature of the surface and subsurface conditions to be encountered and the procedures to be used in performing his work.



## Authority of the Geotechnical Engineer

- The Geotechnical Engineer will observe the placement of compacted fill and will take sufficient tests to evaluate the uniformity and degree of compaction of filled ground.
- As the Owner's representative, the Geotechnical Engineer will (a) have the authority to cause the removal and replacement of loose, soft, disturbed and other unsatisfactory soils and uncontrolled fill; (b) have the authority to approve the preparation of native ground to receive fill material; and (c) have the authority to approve or reject soils proposed for use in building areas.
- The Civil Engineer and/or Owner will decide all questions regarding (a) the interpretation of the drawings and specifications, (b) the acceptable fulfillment of the contract on the part of the Contractor and (c) the matters of compensation.

## Site Clearing

- Clearing and grubbing shall consist of the removal from building areas to be graded of all existing structures, pavement, utilities, grass and vegetation.
- Organic and inorganic materials resulting from the clearing and grubbing operations shall be hauled away from the areas to be graded.

## Excavations

- Based on observations made during our field explorations, the surficial soils can be excavated with conventional earthwork equipment.

## Preparation of Fill Areas

- All organic material, grass, organic soils, incompetent alluvium, undocumented fill soils and debris should be removed from the proposed building areas.
- In order to provide uniform support for the new structures, the minimum depth of over-excavation should be 5 feet below the existing grade, or 3 feet below proposed shallow foundations whichever is deeper. Deeper over-excavation will be needed if soft, yielding soils are exposed on the excavation bottom. The actual depth of removal should be determined based on observations made during grading. Over-excavation should extend a least 5 feet beyond the limits of footings, or equal distance of over-excavation depth, whichever is greater, or as limited by the existing structures. Excavation activities should not disturb existing utilities, buildings, and remaining structures. Existing utilities should be removed and adequately capped at the project boundary line or salvaged/rerouted as designed for sidewalks and flatwork area, at least the upper 24.0 inches of existing



soils should be scarified and recompacted to at least ninety percent (90%) of compaction. Deeper over-excavation will be needed if soft, yielding soils are exposed on the excavation bottom. The excavation should be extended to at least 12.0 inches beyond the driveway and flatwork limit where space is permitted.

- The subgrade in all areas to receive fill shall be scarified to a minimum depth of 6.0 inches, the soil moisture adjusted within three percent (3%) above optimum, and then compacted to at least ninety percent (90%) of the laboratory maximum dry density as determined by ASTM Standard D1557 test method.
- Compacted fill may be placed on native soils that have been properly scarified and re-compacted as discussed above.
- All areas to receive compacted fill will be observed and approved by the Geotechnical Engineer before the placement of fill.

### **Placement and Compaction of Fill**

- Compacted fill placed for the support of footings, slabs-on-grade, exterior concrete flatwork, and driveways will be considered structural fill. Structural fill may consist of approved on-site soils or imported fill that meets the criteria indicated below.
- Fill consisting of selected on-site earth materials or imported soils approved by the Geotechnical Engineer shall be placed in layers on approved earth materials. Soils used as compacted structural fill shall have the following characteristics:
  - All fill soil particles shall not exceed 3.0 inches in nominal size and shall be free of organic matter and miscellaneous inorganic debris and inert rubble.
  - Imported fill materials shall have an Expansion Index (EI) less than 20. All imported fill should be compacted to at least ninety percent (90%) of the laboratory maximum dry density (ASTM Standard D1557) at about to three percent (3%) above optimum moisture.
  - Fill soils shall be evenly spread in maximum 8-inch lifts, watered or dried as necessary, mixed and compacted to at least the density specified below. The fill shall be placed and compacted on a horizontal plane, unless otherwise approved by the Geotechnical Engineer.
  - All fill placed at the site shall be compacted to at least ninety percent (90%) of the laboratory maximum dry density as determined by ASTM Standard D1557 test method. The on-site soils shall be moisture conditioned at approximate three percent (3%) above the optimum moisture content.



- Representative samples of materials being used, as compacted fill will be analyzed in the laboratory by the Geotechnical Engineer to obtain information on their physical properties. Maximum laboratory density of each soil type used in the compacted fill will be determined by the ASTM Standard D1557 compaction method.
- Fill materials shall not be placed, spread or compacted during unfavorable weather conditions. When site grading is interrupted by heavy rain, filling operations shall not resume until the Geotechnical Engineer approves the moisture and density conditions of the previously placed fill.
- It shall be the Grading Contractor's obligation to take all measures deemed necessary during grading to provide erosion control devices in order to protect slope areas and adjacent properties from storm damage and flood hazard originating on this project. It shall be the contractor's responsibility to maintain slopes in their as-graded form until all slopes are in satisfactory compliance with job specifications, all berms have been properly constructed, and all associated drainage devices meet the requirements of the Civil Engineer.

### **Trench Backfill**

The following specifications are recommended to provide a basis for quality control during the placement of trench backfill.

- Trench excavations to receive backfill shall be free of trash, debris or other unsatisfactory materials at the time of backfill placement.
- Trench backfill shall be compacted to a minimum relative compaction of ninety percent (90%) as per ASTM Standard D1557 test method.
- Rocks larger than 1.0 inch should not be placed within 12.0 inches of the top of the pipeline or within the upper 12.0 inches of pavement or structure subgrade. No more than thirty percent (30%) of the backfill volume shall be larger than 3/4-inches in largest dimension. Rocks shall be well mixed with finer soil.
- The pipe design engineer should select bedding material for the pipe. Bedding materials generally should have a Sand Equivalent (SE) greater than or equal to 30, as determined by the ASTM Standard D2419 test method.
- Trench backfill shall be compacted by mechanical methods, such as sheepsfoot, vibrating or pneumatic rollers, or mechanical tampers, to achieve the density specified herein. The backfill materials shall be brought to between optimum and three percent (3%) above optimum, then placed in horizontal layers. The thickness of uncompacted layers should not exceed 8.0 inches. Each layer shall be evenly



spread, moistened or dried as necessary, and then tamped or rolled until the specified density has been achieved.

- The contractor shall select the equipment and processes to be used to achieve the specified density without damage to adjacent ground and completed work.
- The field density of the compacted soil shall be measured by the ASTM Standard D1556 or ASTM Standard D2922 test methods or equivalent.
- Observation and field tests should be performed by Converse during construction to confirm that the required degree of compaction has been obtained. Where compaction is less than that specified, additional compactive effort shall be made with adjustment of the moisture content as necessary, until the specified compaction is obtained.
- It should be the responsibility of the Contractor to maintain safe conditions during cut and/or fill operations.
- Trench backfill shall not be placed, spread or rolled during unfavorable weather conditions. When the work is interrupted by heavy rain, fill operations shall not be resumed until field tests by the project's geotechnical consultant indicate that the moisture content and density of the fill are as previously specified.

### **Observation and Testing**

- During the progress of grading, the Geotechnical Engineer will provide observation of the fill placement operations.
- Field density tests will be made during grading to provide an opinion on the degree of compaction being obtained by the contractor. Where compaction of less than specified herein is indicated, additional compactive effort with adjustment of the moisture content shall be made as necessary, until the required degree of compaction is obtained
- A sufficient number of field density tests will be performed to provide an opinion to the degree of compaction achieved. In general, density tests will be performed on each one-foot lift of fill, but not less than one for each 500 cubic yards of fill placed.

