

Project Title:

City of Cupertino McClellan Ranch Preserve Environmental Education Center and Blacksmith Shop Relocation Re-Bid Project No. 2012-9133



Issue Note:
Construction Documents
01/10/2014

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Deferred Permit Submittals:

The following items are to be provided on a Design / Build basis. Contractors are responsible for providing complete design and securing necessary permits, insuring systems are code compliant, fully operational and complete. Design documents for these permits will be submitted separately to the City of Cupertino by respective contractors following Architect's and Design Consultant's review for compliance to architectural and structural design intent.

1. Fire Sprinkler System.
2. Fire Sprinkler Underground System.
3. Fire Alarm System. (Fire alarm system will have all devices noted in contract documents, however full design drawings with voltage drop and battery calculations will be supplied by the selected sub-contractor)
4. Mechanical Equipment Anchorage.
5. Seismic Bracing of Pipes and Ducts.
6. Site and Fire Suppression System.
7. Photovoltaic System.

Code Information:

Applicable Codes:

- 2010 California Building Code
- 2010 California Plumbing Code
- 2010 California Mechanical Code
- 2010 California Electrical Code
- 2010 California Fire Code
- 2010 California Energy Code
- 2010 California Green Building Standards Code
- Title II of ADA
- Cupertino Municipal Code

Special Conditions List:

1. Geologic Hazard: Soil Inundation - Liquefaction Zone
2. FEMA Flood Zone AE
3. Alternate Materials / Methods for Building Set-back from Ascending Slope

Special Inspections:

See Structural sheet S0-0.1 section 01400 Inspection for special inspections required.

Project Information:

Project Address:

McClellan Ranch Preserve
22221 McClellan Ranch Road
Cupertino, CA 95014

Accessor Parcel Number:

375-06-018

Owner Representative:

Carmen Lynaugh
City of Cupertino
Public Works Projects Manager
10300 Torre Avenue
Cupertino, CA 95014

Project Description:

The project comprises work on various new and existing buildings as well as site improvements.

An Environmental Education Center of approximately 2,000 square foot new single story classroom and office building. Building to be fully sprinklered.

Existing Park Restroom facilities to be revised to meet current accessibility compliance.

An existing Blacksmith Shop is to be relocated and rehabilitated. Building to be fully sprinklered.

Site Improvements include revising the entry path to accessible slope, revising the existing accessible parking to current compliance, additional new pathwork and tree removal.

Both the Environmental Education Center (EEC) & the Blacksmith Shop (BSS) will be provided with sprinkler systems.

Project Team:

Architect

Siegel & Strain Architects
1295 59th Street
Emeryville, CA 94608
(510) 547-8092
FAX (510) 547-2604
www.siegelstrain.com

Civil

Mark Thomas & Company
1960 Zanker Road
San Jose, CA 95112
(408) 453-5373
FAX (408) 453-5390
www.markthomas.com

Structural

Ware Associates
130 Webster Street, Suite 105
Oakland, CA 94607
(510) 922-9888
FAX (510) 922-9624
www.ware-associates.com

Mechanical / Plumbing

Integral Group
427 13th Street
Oakland, CA 94612
(510) 663-2070
www.integralgroup.com

Electrical

Integral Group
1084 Foxworthy Ave, Suite 150
San Jose, CA 95118
(408) 448-6300
www.integralgroup.com

Code Compliance:

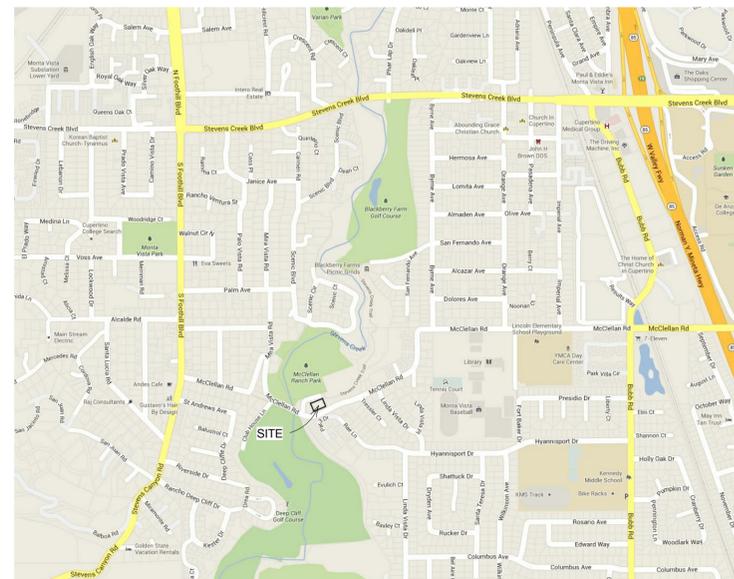
Building	Occupancy	Square Footage	Type of Construction	Stories	Fully Sprinklered
Environmental Education Center	Primary for Education Use: E Primary for Assemble Use: A-3 Secondary: B / S-1	Interior: 2,165SF Porches: 1,104SF Total: 3,269SF	V-B	1	Yes
Blacksmith Shop	Primary: B	Total: 586SF	V-B	1	Yes

See sheet A0-0.3 for additional code compliance summary.

General Notes:

1. These notes apply to all drawings and govern unless noted or specified for more specific requirements applicable to particular divisions of the work. See specifications and sheet notes contained in subsections of these drawings.
2. The general conditions of the contract for construction and the specifications supplement these drawings and are a part of the contract documents.
3. Contractor shall visit site and be fully cognizant of all field conditions prior to submitting bid. Any conflicts or discrepancies between the drawings and site conditions shall be immediately brought to the contracting officer.
4. Contractor to verify all existing dimensions in field. On drawings, only written dimensions shall be used. Do not scale drawings. Contractor shall verify and be made completely responsible for all dimensions and conditions on the job. Architect must be notified in writing of any proposed or required variations from the dimensions and conditions shown, and a written change order issued before making any changes at the job site.
5. By accepting and using these drawings, contractor agrees that he shall assume sole and complete responsibility for job site conditions during the course of construction of this project, including safety of all persons and property; that this requirement shall apply continuously and not be limited to normal working hours.
6. Contractor acknowledges thorough familiarization with the building site conditions, with the drawings and specifications, with the delivery facilities, and all other matters and conditions which may affect the operations and completion of the work, and assumes all risk therefrom.
7. The drawings schematically indicate existing and new construction. Due to the nature of the work, adjustments will likely be required in the field to meet the design objectives.
8. Approval of these plans does not release the Owner and/or Contractor of the responsibility for the corrections of mistakes, errors, or omissions contained therein. If during the course of construction improvements, public interest requires a modification of or a departure from the City of Cupertino specification or these improvement plans, the City Engineer shall have the authority to require such modification or departure and to specify the manner in which the same is to be completed, at the sole expense of the Owner and/or Contractor.
11. Contractor is responsible for dust control and ensuring the area adjacent to the work is left in a clean condition.
12. Contractor shall review City Detail 6-4 on tree protection prior to accomplishing any work or removing any trees.
13. Utilize Best Management Practices (BMP's), as required by the State Water Resources Control Board, for ANY activity, which disturbs the soil.
17. All downspouts to be released to the ground surface, directed away from building foundations and directed to landscaped areas.
18. A licensed land surveyor or authorized civil engineer will prepare and submit, to the Public Works Dept, an elevation certificate for the new structure.

Location Map:



Reviewed By:

Carmen Lynaugh
Carmen Lynaugh
Public Works Project Manager

01/10/2014
Date

Approved By:

Timm Borden
Timm Borden, RLE #45512
Director of Public Works

01/10/2014
Date

In the Santa Clara Valley, storm drains flow directly to our local creeks, and on to San Francisco Bay, with no treatment.

Storm water pollution is a serious problem for wildlife dependent on our waterways and for the people who live near polluted streams or bays.

Proper management of construction sites reduces pollution significantly.

This sheet summarizes the "Best Management Practices" (BMPs) for storm water pollution prevention.

ORDINANCE OF THE CITY OF CUPERTINO FOR STORM WATER POLLUTION PREVENTION & WATERCOURSE PROTECTION: Chapter 9.18

9.18.040 Discharge into the storm drain prohibited
It shall be unlawful to discharge, or cause, allow, or permit to be discharged into any storm drain or natural outlet or channel all waste, including but not restricted to, sewage, industrial wastes, petroleum products, coal tar or any refuse substance arising from the manufacture of gas from coal or petroleum, chemicals, detergents, solvents, paints, contaminated or chlorinated swimming pool water, pesticides, herbicides and fertilizers.

9.18.070 Accidental Discharge
All persons shall notify the Director of Public Works by telephone immediately upon accidentally discharging wastes to enable countermeasures to be taken by the City to minimize damage to storm drains and the receiving waters. This notification shall be followed, within ten (10) days of the date of occurrence, by a detailed written statement describing the causes of the accidental discharge and the measures being taken to prevent further occurrences. Such notifications will not relieve persons of liability for violations of this chapter or for any fines imposed on the city on account thereof under Section 13350 of the California Water Code, or for violations of Section 5650 of California Fish and Wildlife Code, or any other applicable provisions of State or Federal laws.

9.18.220 Violation*
Any person who violates any provision of this Chapter shall be guilty of a misdemeanor and upon conviction thereof shall be punished as provided in Chapter 1.12 of the City of Cupertino Municipal Code.

Chapter 1.12: General Penalty, Section 1.12.010, paragraph D, states*:

- Unless otherwise specified by this code, an infraction is punishable by:
1. A fine not to exceed \$100 for a first violation
 2. A fine not to exceed \$200 for a second violation
 3. A fine not to exceed \$500 for a third violation of the same chapter within one year.

9.18.240 Civil penalty for illicit discharges*
Any person who discharges pollutants, in violation of this Chapter, by the use of illicit connections shall be civilly liable to the City in a sum not to exceed twenty-five thousand dollars per day per violation for each day in which such violation occurs.

*Excerpts – For complete CODE language refer to the City of Cupertino Municipal Code.

Cupertino
Building Dept: 408-777-3228
Public Works Dept: 408-777-3354

Santa Clara County
Recycling Hotline: 800-533-8414
www.reducewaste.org
www.recyclestuff.com
Small Business Hazardous Waste: 408-299-7300

Cupertino Sanitary Sewer Distr
408-253-7071

Santa Clara Valley Urban Runoff Pollution Prevention Prgm
800-794-2482

State Office of Emergency Services
1-800-852-7550 (24 hrs)

Report spills to 911

General Construction and Site Supervision

Storm Drain Pollution from Construction Activities

Construction sites are common sources of storm water pollution. Materials and wastes that blow or wash into a storm drain, gutter, or street have a direct impact on local creeks and the Bay.

As a contractor, or site supervisor, owner or operator of a site, you may be responsible for any environmental damage caused by your subcontractors or employees.

General Principles

- Keep an orderly site and ensure good housekeeping practices are used.
- Maintain equipment properly.
- Cover materials when they are not in use.
- Keep materials away from streets, storm drains and drainage channels.
- Ensure dust control water doesn't leave site or discharge to storm drains.

Advance Planning To Prevent Pollution

- Schedule excavation and grading activities for dry weather periods. To reduce soil erosion, plant temporary vegetation or place other erosion controls before rain begins. Use the *Erosion and Sediment Control Manual*, available from the Regional Water Quality Control Board, as a reference.
- Control the amount of runoff crossing your site (especially during excavation!) by using berms or temporary or permanent drainage ditches to divert water flow around the site. Reduce stormwater runoff velocities by constructing temporary check dams or berms where appropriate.
- Train your employees and subcontractors. The city can provide brochures about these issues for you to distribute to workers at your construction site. Inform your subcontractors about the stormwater requirements and their own responsibilities. Use *Blueprint for a Clean Bay*, a construction best management practices guide available at our Building Dept. counter.

Good Housekeeping Practices

- Designate one area of the site for auto parking, vehicle refueling, and routine equipment maintenance. The designated area should be well away from streams or storm drain inlets, bermed if necessary. Make major repairs off site.
- To prevent off-site tracking of dirt, provide entrances with stabilized aggregate surfaces. Or provide a tire wash area.
- Keep materials out of the rain – prevent runoff contamination at the source. Cover exposed piles of soil or construction materials with plastic sheeting or temporary roofs. Before it rains, sweep and remove materials from surfaces that drain to storm drains, creeks, or channels.
- Keep pollutants off exposed surfaces. Place trash cans and recycling receptacles around the site to minimize litter.
- Clean up leaks, drips and other spills immediately so they do not contaminate soil or groundwater or leave residue on paved surfaces. Use dry cleanup methods whenever possible. If you must use water, use just enough to keep the dust down.
- Cover and maintain dumpsters. Place dumpsters under roofs or cover with tarps or plastic sheeting secured around the outside of the dumpster. Never clean out a dumpster by hosing it down on the construction site.
- Place portable toilets away from storm drains. Make sure portable toilets are in good working order. Check frequently for leaks.

Materials/Waste Handling

- Practice Source Reduction – minimize waste when you order materials. Estimate carefully.
- Recycle excess materials, whenever possible, such as concrete, asphalt, scrap metal, solvents, degreasers, cleaned vegetation, paper, rock, and vehicle maintenance materials such as used oil, antifreeze, batteries, and tires.
- Dispose of all wastes properly. Materials that cannot be recycled must be taken to an appropriate landfill or disposed of as hazardous waste. Never bury waste materials or leave them in the street or near a creek or stream bed.

Permits

- In addition to local grading and building permits, you will need to obtain coverage under the State's General Construction Activity Stormwater Permit if your construction site's disturbed area totals 5 acres or more. Information on the General Permit can be obtained from the Regional Water Quality Control Board. (This criteria will change to one acre as of Mar. 2003.)

Landscaping, Gardening, and Pool Maintenance

Landscaping/Garden Maintenance

- Protect stockpiles and landscaping materials from wind and rain by storing them under tarps or secured plastic sheeting.
- Schedule grading and excavation projects during dry weather.
- Use temporary check dams or ditches to divert runoff away from storm drains.
- Protect storm drains with sandbags, gravel-filled bags, straw wattles, or other sediment controls.
- Re-vegetation is an excellent form of erosion control for any site.
- Store pesticides, fertilizers, and other chemicals indoors or in a shed or storage cabinet.
- Use pesticides sparingly, according to instructions on the label. Rinse empty containers, and use insecticide as product. Dispose of rinsed, empty containers in the trash. Dispose of unused pesticides as hazardous waste.
- In Cupertino, residents with curbside recycling can collect lawn, garden and tree trimmings in yardwaste totes. Yardwaste will be collected and composted by the city's contractors. Residents are encouraged to compost yardwaste on-site themselves. Or take yardwaste to a landfill where it will be composted.

- Landscaping contractors should take clippings and pruning waste to a landfill that composts yard waste (BFF's Newby Island and Zanker Rd. landfill are the nearest).
- Do not blow or rake leaves into the street.

Storm Drain Pollution from Landscaping and Swimming Pool Maintenance

Many landscaping activities expose soils and increase the likelihood that earth and garden chemicals will run off into the storm drains during irrigation or when it rains.

Swimming pool water containing chlorine and copper-based algaecides should never be discharged to storm drains. These chemicals are toxic to aquatic life.

Pool/Fountain/Spa Maintenance

When it's time to drain a pool, spa, or fountain, please be sure to call the Cupertino Sanitary District before you start for further guidance on flow rate restrictions, backflow prevention, and handling special cleaning waste (such as acid wash). Discharge flows should be kept to the low levels typically possible through a garden hose.

Higher flow rates may be prohibited by local ordinance.

- Never discharge pool or spa water to a street or storm drain; discharge to a sanitary sewer cleanout.
- If possible, when emptying a pool or spa, let chlorine dissipate for a few days and then recycle/reuse water by draining it gradually onto a landscaped area.
- Do not use copper-based algaecides. Control algae with chlorine or other alternatives, such as sodium bromide.

Filter Cleaning

- Never clean a filter in the street or near a storm drain. Rinse cartridge and diatomaceous earth filters onto a dirt area, and spade filter residue into soil. Dispose of spent diatomaceous earth in the garbage.
- If there is no suitable dirt area, call Cupertino Sanitary for instructions on discharging filter backwash or rinsewater to the sanitary sewer.

Earth-Moving Activities

Storm Drain Pollution from Earth-Moving Activities

Soil excavation and grading operations loosen large amounts of soil that can flow or blow into storm drains when handled improperly. Sediments in runoff can clog storm drains, smother aquatic life, and destroy habitats in creeks and the Bay. Erosion control practices reduce the amount of runoff crossing a site and slow the flow with check dams or roughened ground surfaces.

Practices During Construction

- Remove existing vegetation only when absolutely necessary. Plant temporary vegetation for erosion control on slopes or where construction is not immediately planned.
- Protect downslope drainage courses, streams, and storm drains with wattles, or temporary drainage swales. Use check dams or ditches to divert runoff around excavations. Refer to the Regional Water Quality Control Board's *Erosion and Sediment Control Field Manual* for proper erosion and sediment control measures.
- Cover stockpiles and excavated soil with secured tarps or plastic sheeting.



The property owner and the contractor share ultimate responsibility for the activities that occur on a construction site. You may be held responsible for any environmental damage caused by your subcontractors or employees.

Painting and Application of Solvents and Adhesives

Storm Drain Pollution from Paints, Solvents, and Adhesives

All paints, solvents, and adhesives contain chemicals that are harmful to wildlife in local creeks, San Francisco Bay, and the Pacific Ocean. Toxic chemicals may come from liquid or solid products or from cleaning residues or rags. Paint material and wastes, adhesives and cleaning fluids should be recycled when possible, or disposed of properly to prevent these materials from flowing into storm drains and watercourses.

Handling Paint Products

- Keep all liquid paint products and wastes away from the gutter, street, and storm drains.

Painting Cleanup

- Never clean brushes or rinse paint containers into a street, gutter, storm drain, French drain, or creek.
- For water-based paints, paint out brushes to the extent possible, and rinse into an inside sink drain that goes to the sanitary sewer.
- For oil-based paints, paint out brushes to the extent possible and clean with thinner or solvent. Filter and reuse thinners and solvents, where possible. Dispose of excess liquids and residue as hazardous waste.
- When thoroughly dry, empty paint cans, used brushes, rags, and drop cloths may be disposed of as garbage.



Paint Removal

- Paint chips and dust from non-hazardous dry stripping and sand blasting may be swept up or collected in plastic drop cloths and disposed of as trash.
- Chemical paint stripping residue, and chips and dust from marine paints, or paints containing lead, mercury or tributyl tin must be disposed of as hazardous wastes. Lead based paint removal requires a state-certified contractor.
- When stripping or cleaning building exteriors with high-pressure water, block storm drains. Direct washwater onto a dirt area and spade into soil. Or, check with Cupertino Sanitary District to find out if you can mop or vacuum the washwater and dispose of it in a sanitary sewer drain. Sampling of the washwater may be required.
- Washwater from painted buildings constructed before 1978 can contain high amounts of Lead, even if paint chips are not present. Before you begin stripping paint or cleaning pre-1978 building exteriors with water under high pressure, test paint for lead by taking paint scrapings to a local laboratory. (See Yellow Pages for a state-certified laboratory.)
- If there is loose paint on the building, or if the paint tests positive for lead, block storm drains. Check with Cupertino Sanitary District to determine whether you may discharge water to the sanitary sewer, or if you must send it offsite for disposal as hazardous waste.

Paint Disposal, Return or Donation

- Dispose of unwanted liquid paint, thinners, solvents, glues, and cleaning fluids as hazardous waste (call the Small Business Hazardous Waste Prgm: 299-7300).
- Or return to supplier. (Unopened cans of paint may be able to be returned. Check with the vendor regarding its "buy-back" policy.)
- Donate excess paint (call 299-7300 to donate).

Roadwork and Paving



Storm Drain Pollution from Roadwork

Road paving, surfacing, and pavement removal happen right in the street, where there are numerous opportunities for asphalt, saw-cut slurry, or excavated material to illegally enter storm drains. Extra planning is required to store and dispose of materials properly and guard against pollution of storm drains, creeks, and the Bay.

During Construction

- Avoid paving and seal coating in wet weather, or when rain is forecast, to prevent fresh materials from contacting stormwater runoff.
- Cover and seal catch basins and manholes when applying seal coat, slurry seal, fog seal, or similar materials.
- Protect drainage ways by using earth dikes, sand bags, or other controls to divert or trap and filter runoff.
- Never wash excess material from exposed aggregate concrete or similar treatments into a street or storm drain. Collect and recycle, or dispose to dirt area.
- Cover stockpiles (asphalt, sand, etc.) and other construction materials with plastic tarps. Protect from rainfall and prevent runoff with temporary roofs or plastic sheets and berms.
- Park paving machines over drip pans or absorbent material (cloth, rags, etc.) to catch drips when not in use.
- Clean up all spills and leaks using "dry" methods (with absorbent materials and/or rags), or dig up, remove, and properly dispose of contaminated soil.
- Collect and recycle or appropriately dispose of excess abrasive gravel or sand. ???
- Avoid over-application by water trucks for dust control.

Fresh Concrete and Mortar Application

Storm Drain Pollution from Fresh Concrete and Mortar Applications

Fresh concrete and cement-related mortars that wash into lakes, streams, or estuaries are toxic to fish and the aquatic environment. Disposing of these materials to the storm drains or creeks can block storm drains, cause serious problems, and is prohibited by law.

General Business Practices

- Wash out concrete mixers only in designated washout areas in your yard, away from storm drains and waterways, where the water will flow into a temporary waste pit in a dirt area. Let water percolate through soil and dispose of settled, hardened concrete as garbage. Whenever possible, recycle washout by pumping back into mixers for reuse.
- Wash out chutes onto dirt areas that do not flow to streets or drains.
- Always store both dry and wet materials under cover, protected from rainfall and runoff and away from storm drains or waterways. Protect dry materials from wind.
- Secure bags of cement after they are open. Be sure to keep wind-blown cement powder away from streets, gutters, storm drains, rainfall, and runoff.
- Do not use diesel fuel as a lubricant on concrete forms, tools, or trailers.

During Construction

- Don't mix up more fresh concrete or cement than you will use in a two-hour period.
- Set up and operate small mixers on tarps or heavy plastic drop cloths.
- When cleaning up after driveway or sidewalk construction, wash fines onto dirt areas, not down the driveway or into the street or storm drain.
- Protect applications of fresh concrete and mortar from rainfall and runoff until the material has dried.
- Wash down exposed aggregate concrete only when the washwater can (1) flow onto a dirt area, (2) drain onto a bermed surface from which it can be pumped and disposed of properly, or (3) be vacuumed from a catchment created by blocking a storm drain inlet. If necessary, divert runoff with temporary berms. Make sure runoff does not reach gutters or storm drains.
- When breaking up pavement, be sure to pick up all the pieces and dispose of properly. Recycle large chunks of broken concrete. See www.reducewaste.org for info on recyclers.
- Never bury waste material. Dispose of small amounts of excess dry concrete, grout, and mortar in the trash.
- Never dispose of washout into the street, storm drains, drainage ditches, or streams.



Heavy Equipment Operation

Storm water Pollution from Heavy Equipment on Construction Sites

Poorly maintained vehicles and heavy equipment that leak fuel, oil, antifreeze or other fluids on the construction site are common sources of storm drain pollution. Prevent spills and leaks by isolating equipment from runoff channels, and by watching for leaks and other maintenance problems. Remove construction equipment from the site as soon as possible.

Site Planning and Preventive Vehicle Maintenance

- Designate one area of the construction site well away from streams or storm drain inlets, for auto and equipment parking, refueling, and routine vehicle and equipment maintenance. Contain the area with berms, sand bags, or other barriers.
 - Maintain all vehicles and heavy equipment in good working order and repair leaks.
 - Perform major maintenance, repair jobs, and vehicle and equipment washing off-site, where cleanup is easier.
 - If you must drain and replace motor oil, radiator coolant, or other fluids on site, use drip pans or drop cloths to catch drips and spills. Collect all spent fluids, store in separate containers, and properly dispose of hazardous waste (recycle whenever possible).
 - Do not use diesel oil to lubricate equipment parts, or clean equipment. Use only water for any on-site cleaning.
 - Cover exposed fifth wheel hitches and other oily or greasy equipment during rain events.
- #### Spill Cleanup
- Clean up spills immediately.
 - Never allow down "dirty" pavement or impermeable surfaces where fluids have spilled. Use dry cleanup methods (absorbent materials, cat litter, a sand or rag) whenever possible and properly dispose of absorbent materials.
 - Sweep up spilled dry materials immediately. Never attempt to "wash them away" with water, or bury them.
 - Use as little water as possible for dust control. Ensure water used doesn't leave silt or discharge to storm drains.
 - Clean up spills on dirt areas by digging up and properly disposing of contaminated soil.
 - Call 911 for significant spills.
 - If the spill poses a significant hazard to human health and safety, property or the environment, you must also report it to the State Office of Emergency Services.

Small Business Hazardous Waste Disposal Prgm
Businesses that generate less than 27 gallons or 220 pounds of hazardous waste per month are eligible to use this program.
Call 408-299-7300 for a quote.



APPROVED BY:
TIMM BORDEN, RCE 45512 12/31/12
DIRECTOR OF PUBLIC WORKS

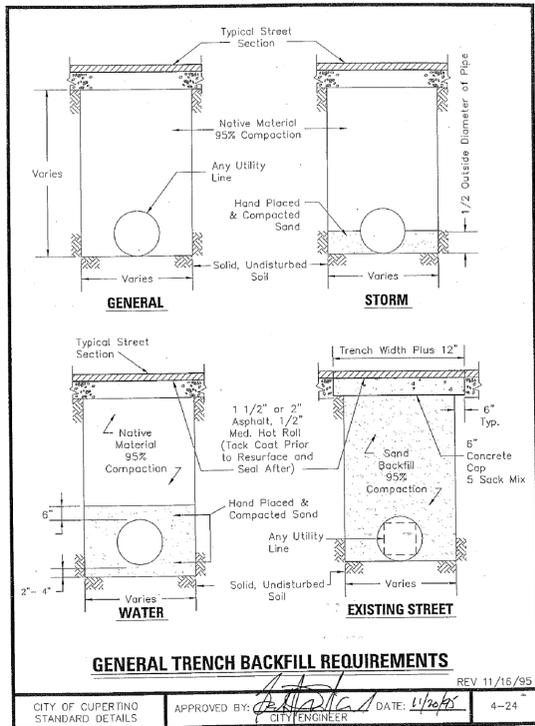
1/26/2011
DATE

CONSTRUCTION BEST MANAGEMENT PRACTICES

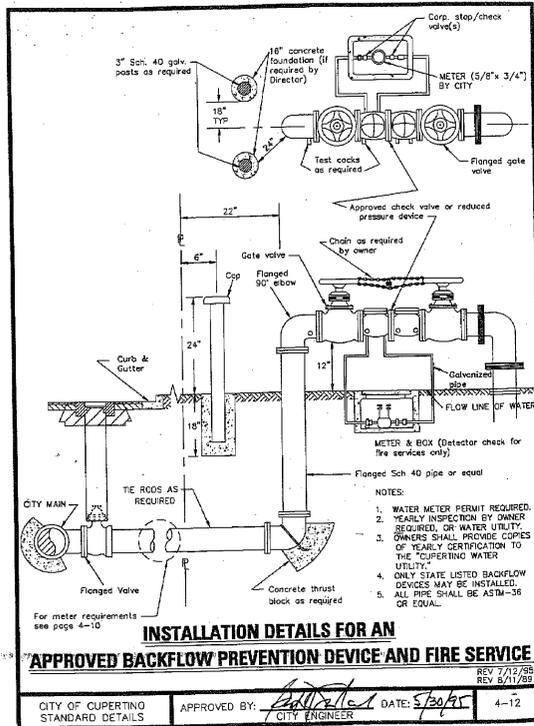
CITY OF CUPERTINO
DEPARTMENT OF PUBLIC WORKS

SHEET:
G2
OF SHEETS
FILE:

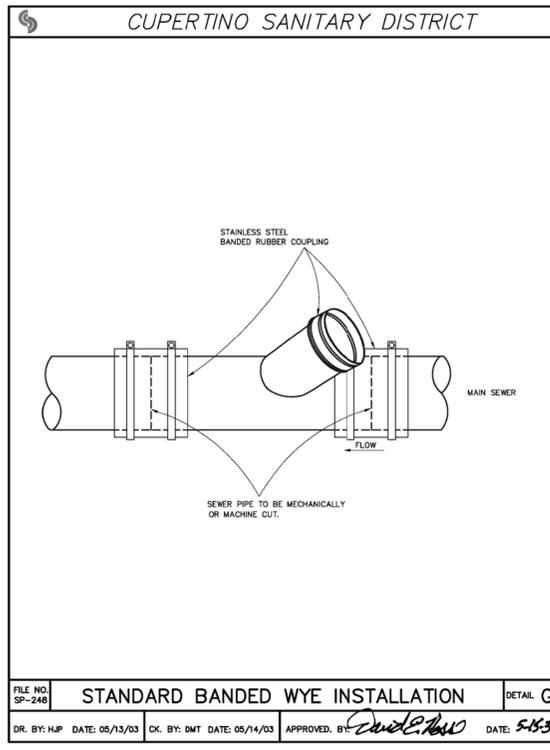
UPDATED JANUARY 2011



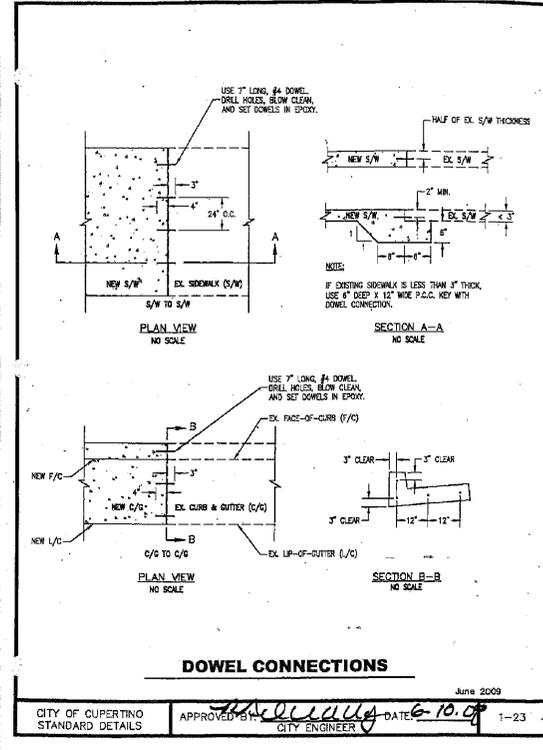
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SCALE: NONE



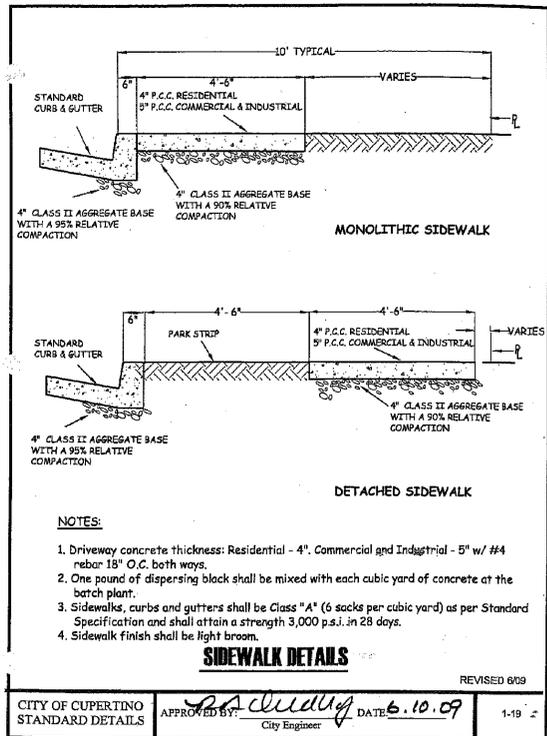
BACKFLOW PREVENTION DEVICE 2
SCALE: NONE



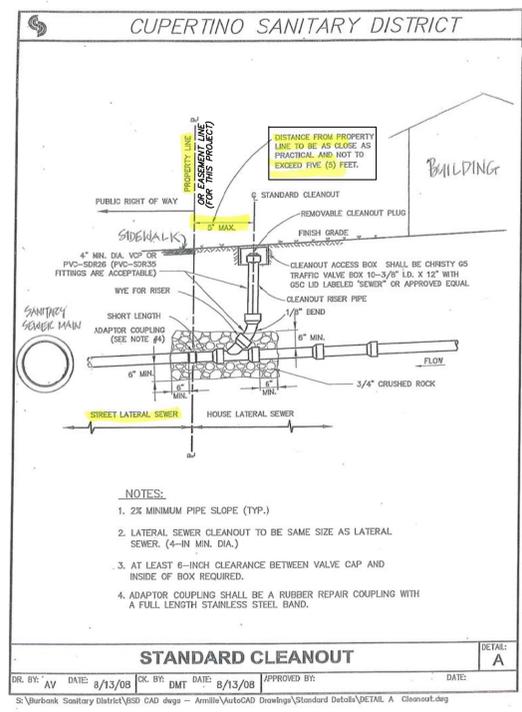
BANDED WYE INSTALLATION 3
SCALE: NONE



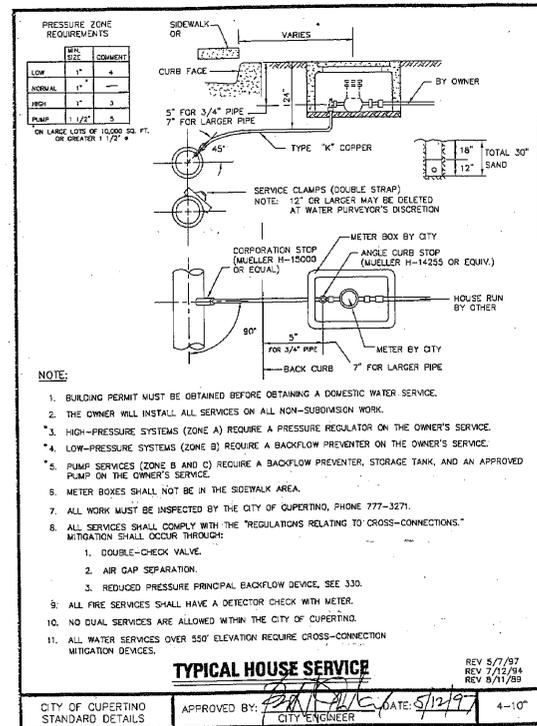
DOWEL CONNECTIONS 4
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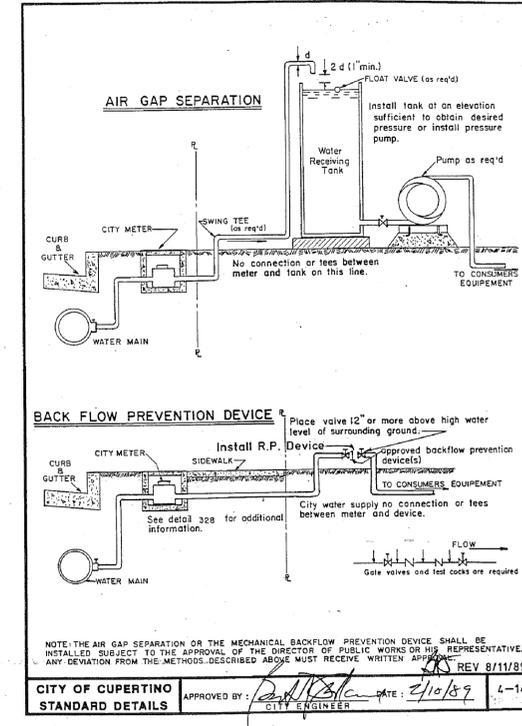
SIDEWALK DETAILS 5
SCALE: NONE



STANDARD CLEANOUT DETAIL 6
SCALE: NONE



WATER METER INSTALLATION 7
SCALE: NONE



BFP AND RP DEVICE 8
SCALE: NONE

Project Title:
City of Cupertino - McClellan Ranch Preserve Environmental Education Center Blacksmith Shop Relocation Re-Bid

Design Firm:
IEGEL & STRAIN Architects
1295 58th Street
Emeryville, CA 94608
510 / 547-8092
FAX 510 / 547-2604
info@siegelstrain.com

Consultant:
MARK THOMAS & COMPANY, INC.
Providing Engineering, Surveying, and Planning Services
1960 Zanker Road
San Jose, CA 95112
(408) 453-5373

Stamp:
Professional Engineer Seal for Jimmy W. Sims, No. 55438, Exp. 09/30/15, State of California, Civil.

No.	Description	Date

Issue Note:
Construction Documents 01/10/2014

Project ID: SJ-12123
File Name: SJ12123-StdDets-C7
Drawn by: CCC
Checked by: MF
Plot Date: 01/08/2014
Scale: None

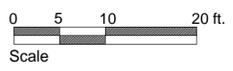
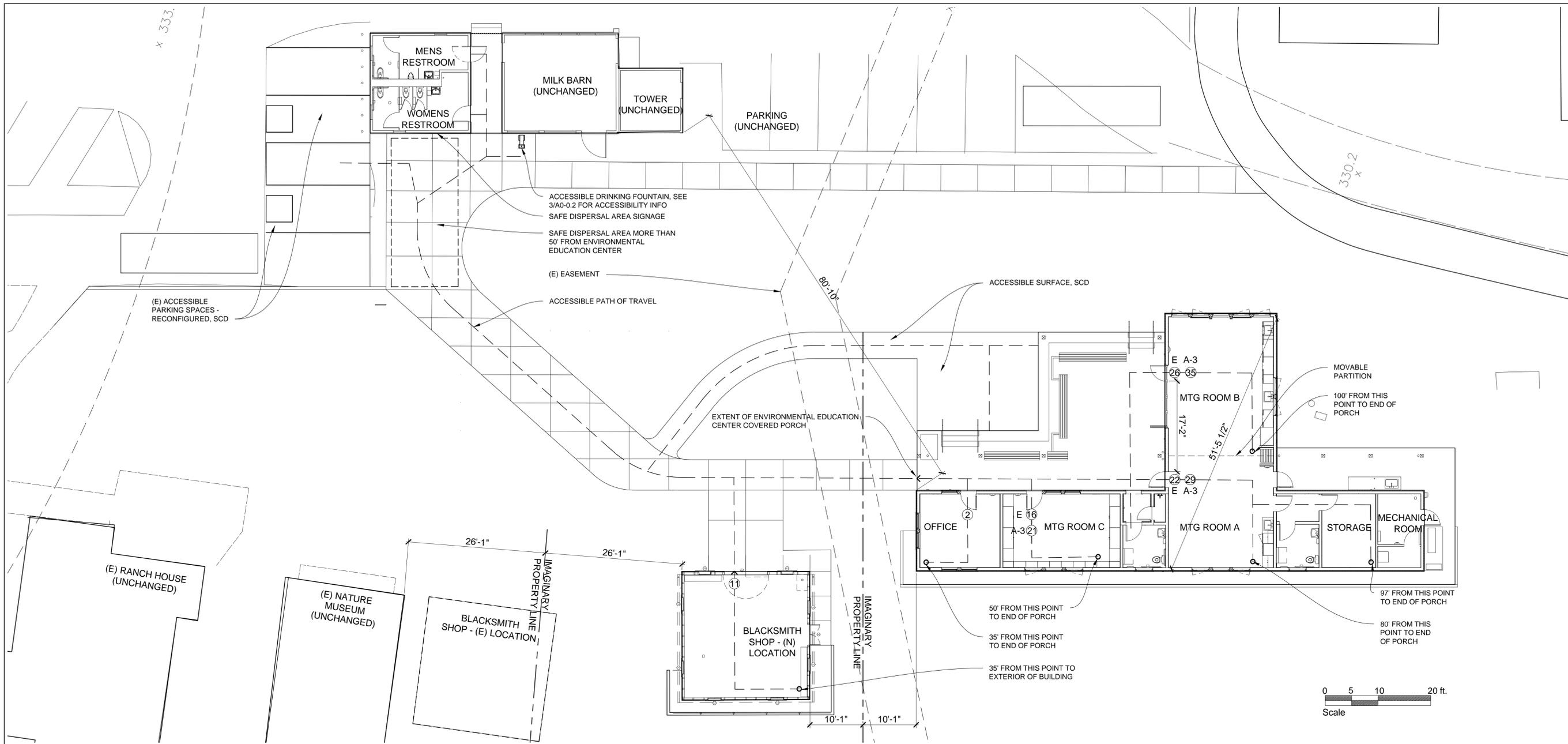
Sheet Title:
City Standard Plans

Sheet No.: **C7.0**

City of Cupertino - McClellan Ranch Preserve
Environmental Education Center and
Blacksmith Shop Relocation
Re-Bid

Design Firm:
SIEGEL & STRAIN Architects
1295 59th Street
Emeryville, CA 94608
510 / 547-8092
FAX 510 / 547-2604
info@siegelstrain.com

Consultant:



CODE SUMMARY - 2010 CALIFORNIA BUILDING CODE (CBC)

SUMMARY OF THE PRIMARY BUILDING CODE ISSUES RELATED TO THE BUILDINGS. CODE REFERENCES ARE PARAPHRASED AND ARE NOT INTENDED TO BE COMPLETE.

OCCUPANCY	
ENVIRONMENTAL EDUCATION CENTER (EEC) - FOR EDUCATION USE:	
PRIMARY - GROUP E	CBC 305.1
SECONDARY - GROUP B	CBC 304.1
SECONDARY - GROUP S-1	CBC 311.2
ENVIRONMENTAL EDUCATION CENTER (EEC) - FOR ASSEMBLY USE:	
PRIMARY - GROUP A-3	CBC 303.1
SECONDARY - GROUP B	CBC 304.1
SECONDARY - GROUP S-1	CBC 311.2
BLACKSMITH SHOP (BSS):	
GROUP B - TRAINING & SKILL DEVELOPMENT	CBC 304.1
CONSTRUCTION TYPE	
EEC & BSS:	CBC TABLE 601
TYPE V-B	
BUILDING SEPARATION	
10'-1" FROM IMAGINARY PROPERTY LINE	CBC TABLE 602
NO FIRE RESISTANCE RATING REQUIRED FOR TYPE V-B, E & B OCCUPANCIES WITH ≥ 10'-0" FIRE SEPARATION DISTANCE	
EXTERIOR OPENINGS	
UNLIMITED UNPROTECTED	CBC 705.8.1 EXCEPTION 2

FIRE SPRINKLER SYSTEM			
EEC - FULLY SPRINKLERED		PER LOCAL ORDINANCE	
BSS - VOLUNTARILY FULLY SPRINKLERED		NOT REQ'D PER CBC 903.2	
FIRE & SMOKE ALARM SYSTEMS			
ENVIRONMENTAL EDUCATION CENTER (EEC):			
AUTOMATIC FIRE ALARMS - REQ'D. FOR E OCCUPANCY	CBC 907.2.3		
MANUAL FIRE ALARM PULL BOXES - 1 REQ'D.	CBC 907.2.3.6	EXCEPTION #2	
SMOKE ALARM SYSTEM REQ'D.	CBC 907.2.3.3 / 907.2.3.4		
VISIBLE & AUDIBLE ALARMS REQ'D.			
BSS - VOLUNTARILY PROVIDED		NOT REQ'D PER CBC 907.2.2	
BUILDING HEIGHT & AREA			
BUILDING	STORIES	HEIGHT (FT)	AREA (SF)
EEC	1	14'-11"	2,165 SF INTERIOR + 1,104 SF COVERED PORCHES = 3,269 SF
BSS	1	13'-8"	586 SF
ALLOWED BUILDING HEIGHT & AREA OCCUPANCY			
OCCUPANCY	STORIES	HEIGHT (FT)	AREA PER STORY (SF)
EDUCATION - E	1	40	9,500
ASSEMBLY - A-3	1	40	6,000
BUSINESS - B	2	40	9,000

OCCUPANT LOAD			
ROOM	AREA (SF)	AREA / OCCUPANT	(SF) OCCUPANT LOAD
EEC FOR GROUP E OCCUPANCY:			
EEC - MEETING RM A	421	20	21
EEC - MEETING RM B	523	20	26
MEETING RM A/B	944	20	47
EEC - MEETING RM C	310	20	16
EEC - OFFICE	212	100	2
EEC - STORAGE	151	300	1
EEC - MECHANICAL RM 111	300		1
TOTAL EEC OCCUPANTS FOR GROUP E OCCUPANCY			67
EEC FOR GROUP A-3 OCCUPANCY:			
EEC - MEETING RM A	421	15	28
EEC - MEETING RM B	523	15	35
MEETING RM A/B	944	15	63
EEC - MEETING RM C	310	15	21
EEC - OFFICE	212	100	2
EEC - STORAGE	151	300	1
EEC - MECHANICAL RM 111	300		1
TOTAL EEC OCCUPANTS FOR GROUP A-3 OCCUPANCY			88
BSS - SHOP	544	50	11
TOTAL BSS OCCUPANTS			11
EGRESS WIDTH:			
EEC MEETING RM A/B EXIT: 63 OCCUPANTS X .2" = 12.6"		CBC 1005.1	36" DOOR PROVIDED
BSS SHOP: 11 OCCUPANTS X .2" = 2.2"			36" DOOR PROVIDED
PANIC HARDWARE:			
REQUIRED AT COMBINED MEETING ROOM DOORS		CBC 1008.1.10	
EXIT ACCESS TRAVEL DISTANCE			
250' MAX. ALLOWED (W/ SPRINKLER SYSTEM)		CBC TABLE 1016.1	

COMMON PATH OF EGRESS TRAVEL	
75' MAX. ALLOWED (W/ SPRINKLER SYSTEM)	CBC 1014.3
MINIMUM NUMBER OF EXITS	
1 EXIT REQ'D. AT EACH MEETING ROOMS	CBC 1015.1
2 EXITS REQ'D. FOR COMBINED MEETING ROOMS	CBC 1015.1
SEPARATION OF EXITS	
REQ'D AT COMBINED MEETING ROOMS	CBC 1015.2.1
SEPARATION DISTANCE ONE-THIRD OF THE MAX DIAGONAL OF THE SPACE SERVED PER 1015.2.1 EXEPTION #2 FOR SPRINKLER SYSTEM	
EXIT SIGNS	
REQ'D AT EXIT DOORS IN COMBINED MEETING RMS	CBC 1011.1
ADA PARKING	
(E) PARKING LOT = 24 SPACES	
REQUIRED ADA SPACES = 1 (VAN ACCESSIBLE)	CBC 1129B
PROVIDED ADA SPACES = 2 (1 - VAN ACCESSIBLE)	

CODE SUMMARY - 2010 CALIFORNIA PLUMBING CODE (CPC)

OCCUPANT LOAD			
	AREA	FACTOR	OCCUPANTS
BUILDING & OCCUPANCY FOR GROUP E OCCUPANCY:			
ENVIRONMENTAL EDUCATION CENTER			
GROUP E	1255 SF	50	26 OCCUPANTS
GROUP B	201 SF	200	2 OCCUPANTS
BLACKSMITH SHOP			
EDUCATIONAL FACILITIES OTHER THAN GROUP E	544 SF	50	11 OCCUPANTS
MILK BARN			
GROUP S	385 SF	5,000	1 OCCUPANT
TOTAL			40 OCCUPANTS
FOR GROUP A-3 OCCUPANCY:			
ENVIRONMENTAL EDUCATION CENTER			
GROUP A	1255 SF	30	42 OCCUPANTS
GROUP B	201 SF	200	2 OCCUPANTS
BLACKSMITH SHOP			
EDUCATIONAL FACILITIES OTHER THAN GROUP E	544 SF	50	11 OCCUPANTS
MILK BARN			
GROUP S	385 SF	5,000	1 OCCUPANT
TOTAL			56 OCCUPANTS
MINIMUM PLUMBING FIXTURES			
FOR GROUP E OCCUPANCY: - OFFICE OR PUBLIC BUILDINGS	REQUIRED:	CPC TABLE 4-1	PROVIDED:
WOMEN (20 OCCUPANTS):	3 WC + 1 LAV		3 WC + 1 LAV
MEN (20 OCCUPANTS):	1 WC + 1 URINAL + 1 LAV		1 WC + 1 URINAL + 1 LAV
UNISEX	-		2 WC + 2 LAV
DRINKING FOUNTAIN (40 OCCUPANTS):	1 DF		1 DF
FOR GROUP A-3 OCCUPANCY: - ASSEMBLY PLACES FOR PUBLIC USE	REQUIRED:	CPC TABLE 4-1	PROVIDED:
WOMEN (28 OCCUPANTS):	3 WC + 1 LAV		3 WC + 1 LAV
MEN (28 OCCUPANTS):	1 WC + 1 URINAL + 1 LAV		1 WC + 1 URINAL + 1 LAV
UNISEX	-		1 WC + 1 LAV
DRINKING FOUNTAIN (56 OCCUPANTS):	1 DF		1 DF

No.	Description	Date

Issue Note:
Construction Documents
01/10/2014

Project ID: MRE-12-018
File Name: MRE_01_CODE_COM
Drawn by: MOH
Checked by: HS
Plot Date: 01/08/2014
Scale: 1" = 10'

Code Compliance

Sheet No.:
A0-0.3

Design Firm:
IEGEL & STRAIN Architects
1295 59th Street
Emeryville, CA 94608
510 / 547-8092
FAX 510 / 547-2604
info@iegelstrain.com

Consultant:

Stamp:

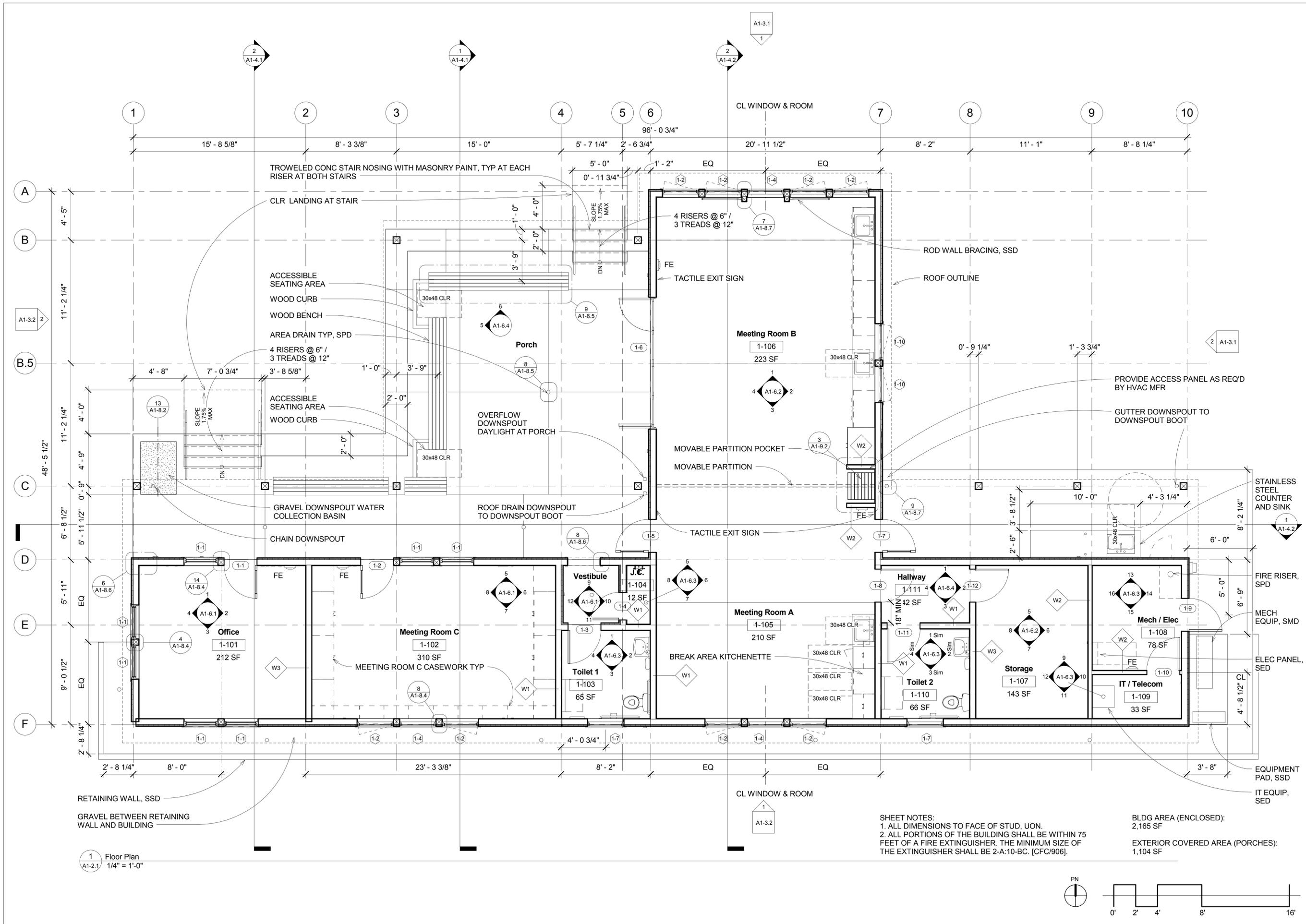


No.	Description	Date
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Issue Note:
Construction Documents
01/10/2014

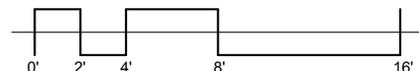
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Drawn by:	MOH
Checked by:	HS
Plot Date:	01/08/2014
Scale:	1/4" = 1'-0"

Sheet Title:
Floor Plan
Sheet No.:
A1-2.1



SHEET NOTES:
 1. ALL DIMENSIONS TO FACE OF STUD, UON.
 2. ALL PORTIONS OF THE BUILDING SHALL BE WITHIN 75 FEET OF A FIRE EXTINGUISHER. THE MINIMUM SIZE OF THE EXTINGUISHER SHALL BE 2-A:10-BC. (CFC/906).

BLDG AREA (ENCLOSED):
2,165 SF
 EXTERIOR COVERED AREA (PORCHES):
1,104 SF



1 Floor Plan
A1-2.1 1/4" = 1'-0"

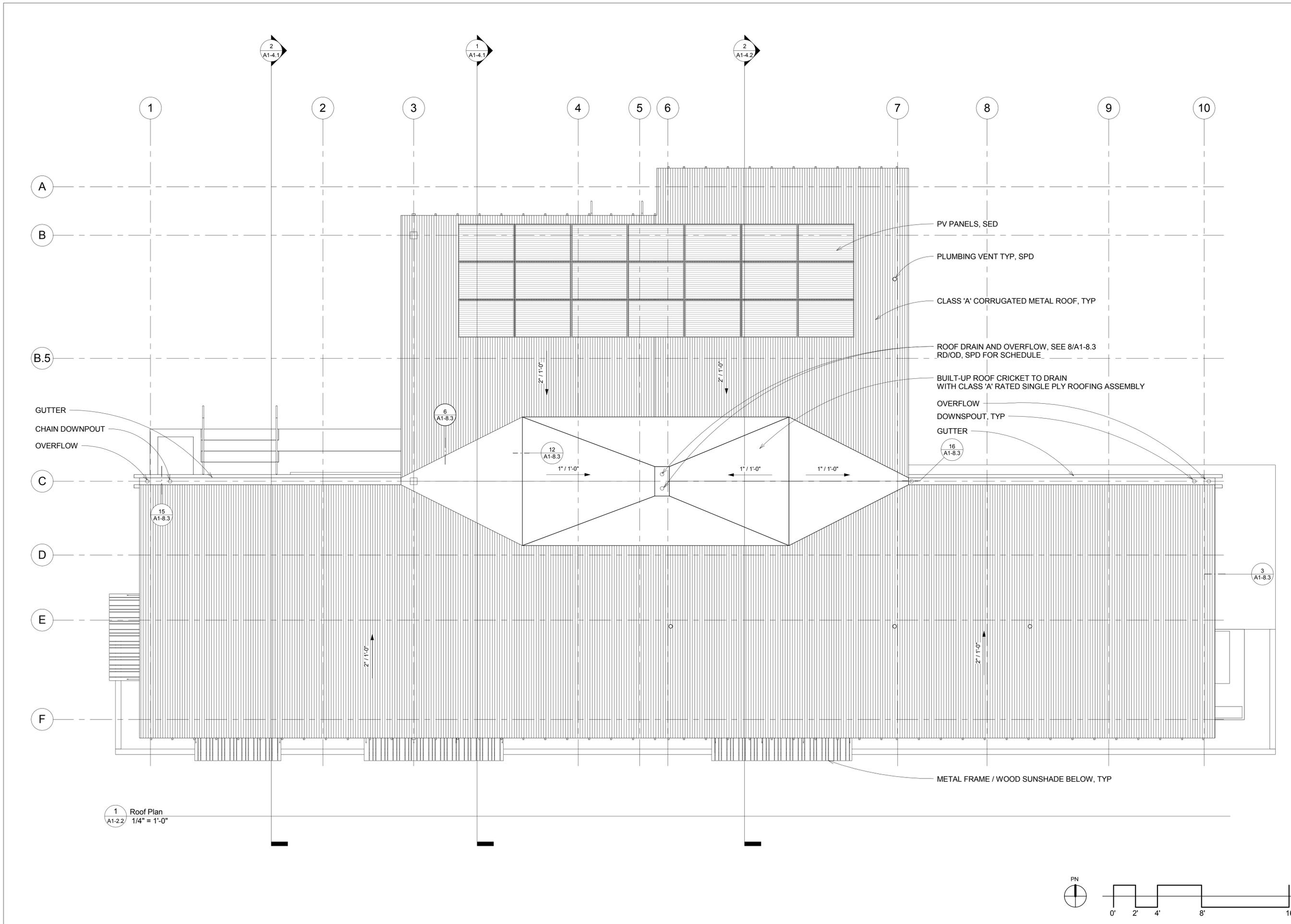


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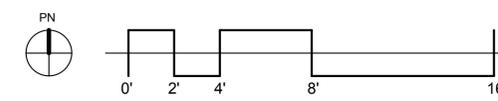
Construction Documents
01/10/2014

Roof Plan

A1-2.2



1 Roof Plan
A1-2.2 1/4" = 1'-0"



City of Cupertino - McClellan Ranch Preserve
Environmental Education Center
Re-Bid

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1295 59th Street
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FAX 510 / 547-2604
info@siegelstrain.com

Consultant:

Stamp:



No.	Description	Date
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Issue Note:
Construction Documents
01/10/2014

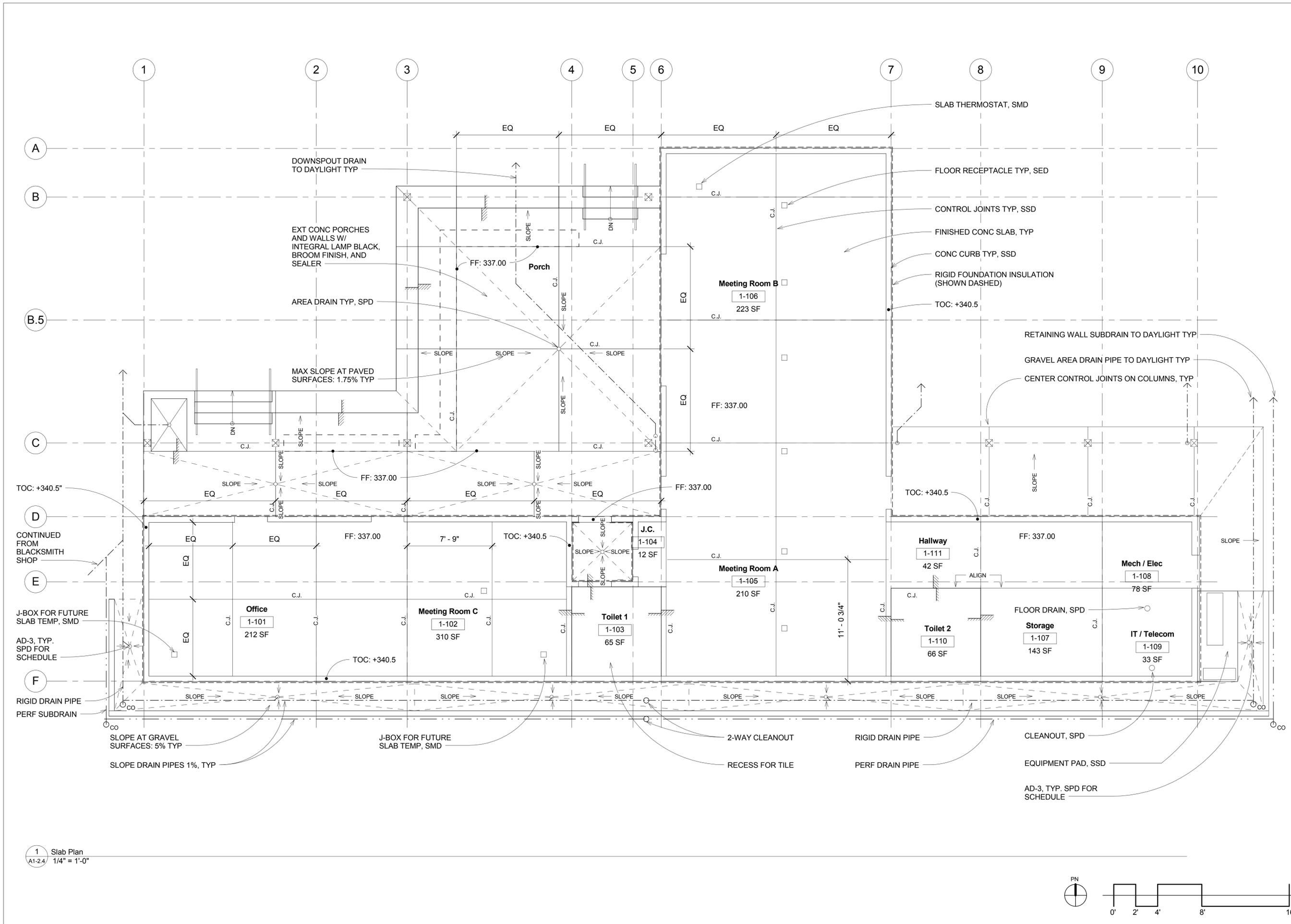
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File Name: MRE-A-00-CD.RVT
Drawn by: MOH
Checked by: HS
Plot Date: 01/08/2014
Scale: 1/4" = 1'-0"

Sheet Title:

Slab Plan

Sheet No.:

A1-2.4



1 Slab Plan
A1-2.4 1/4" = 1'-0"

City of Cupertino - McClellan Ranch Preserve
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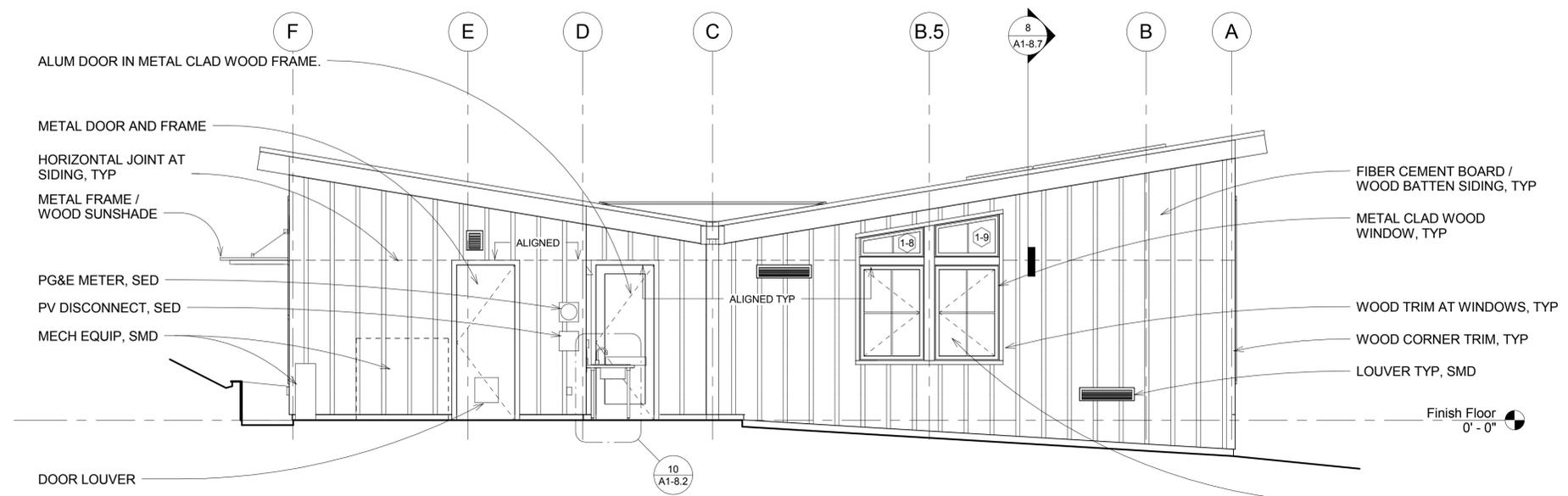
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Issue Note:
Construction Documents
01/10/2014

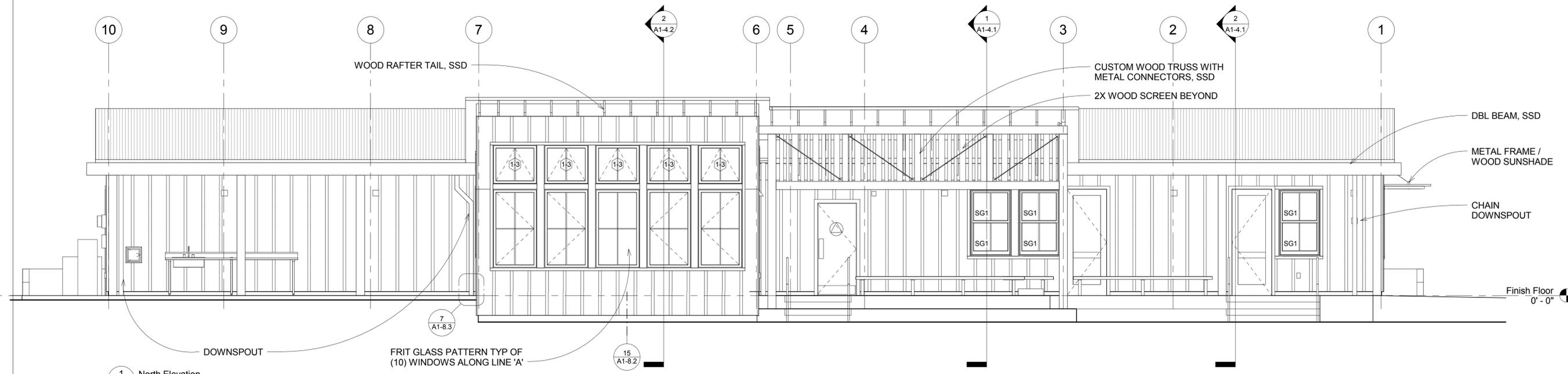
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Drawn by: MOH
Checked by: HS
Plot Date: 01/08/2014
Scale: 1/4" = 1'-0"

Sheet Title:
Elevations

Sheet No.:
A1-3.1

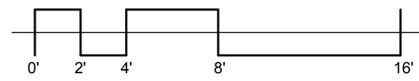


2 East Elevation
A1-3.1 1/4" = 1'-0"



1 North Elevation
A1-3.1 1/4" = 1'-0"

SHEET NOTES:
1. SEE A0-0.2 FOR STANDARD MOUNTING HEIGHTS



City of Cupertino - McClellan Ranch Preserve
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510 / 547-8092
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info@siegelstrain.com

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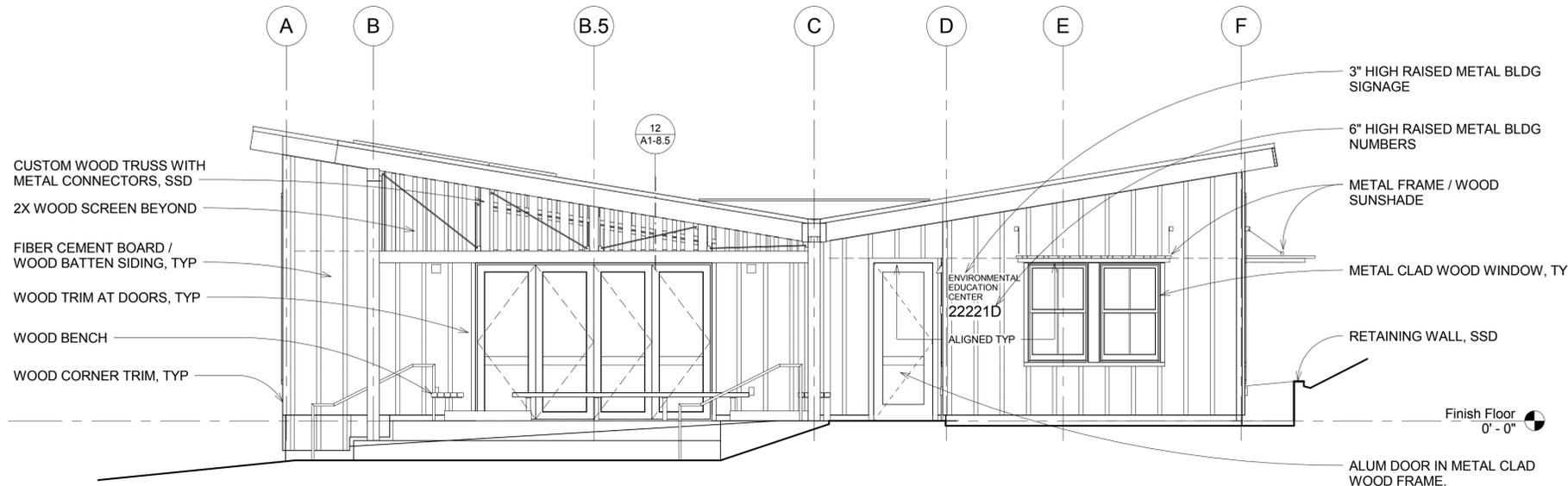
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Issue Note:
Construction Documents
01/10/2014

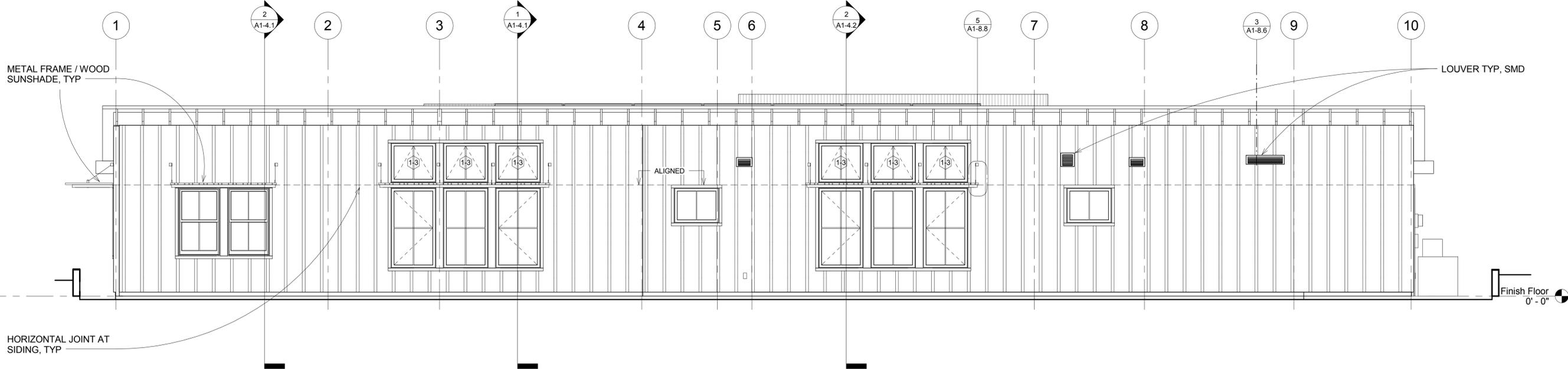
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Checked by: HS
Plot Date: 01/08/2014
Scale: 1/4" = 1'-0"

Sheet Title:
Elevations

Sheet No.:
A1-3.2

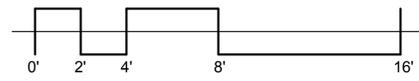


2 West Elevation
A1-3.2 1/4" = 1'-0"



1 South Elevation
A1-3.2 1/4" = 1'-0"

SHEET NOTES:
1. SEE A0-0.2 FOR STANDARD MOUNTING HEIGHTS



City of Cupertino - McClellan Ranch Preserve
Environmental Education Center
Re-Bid

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Consultant:

Stamp:



No.	Description	Date
1		

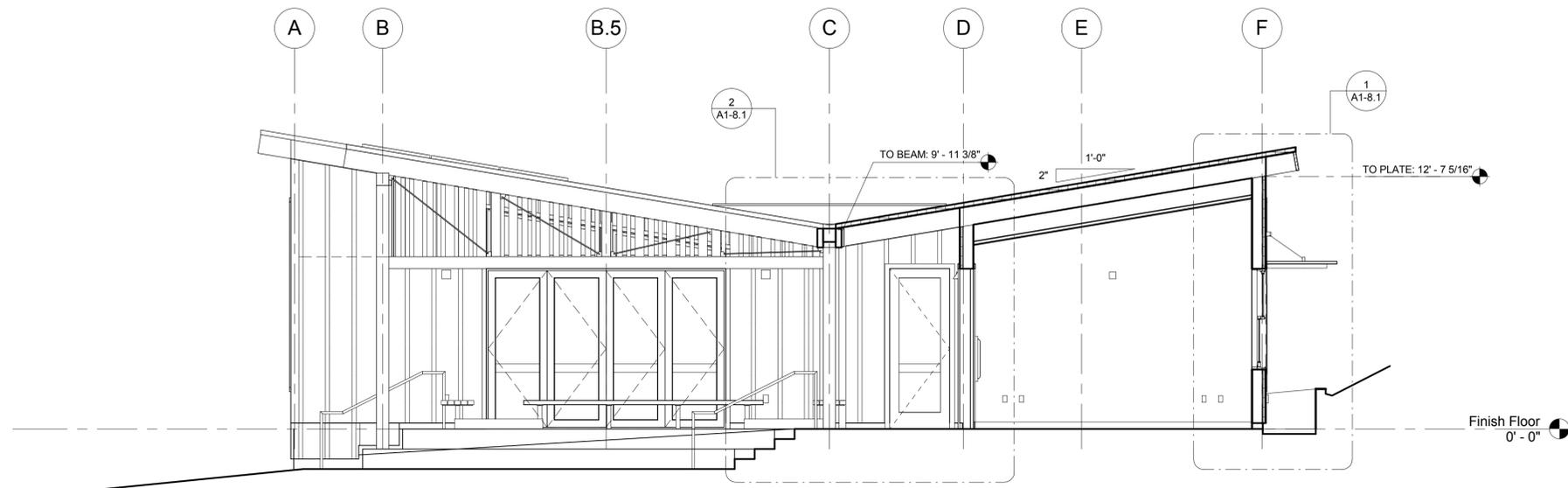
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Construction Documents
01/10/2014

Project ID: 12-018
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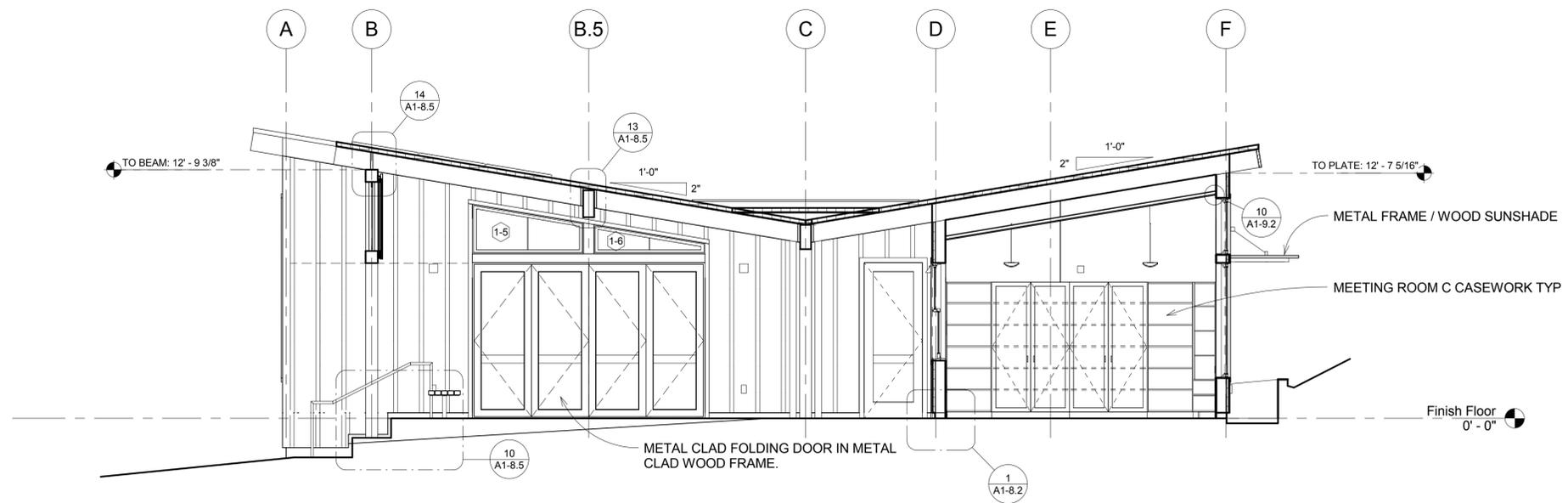
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Sections

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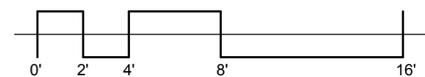
A1-4.1



2 Section at Office
A1-4.1 1/4" = 1'-0"



1 Section at Meeting Room C and Porch
A1-4.1 1/4" = 1'-0"



City of Cupertino - McClellan Ranch Preserve
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Consultant:

Stamp:



No.	Description	Date

Issue Note:
Construction Documents
01/10/2014

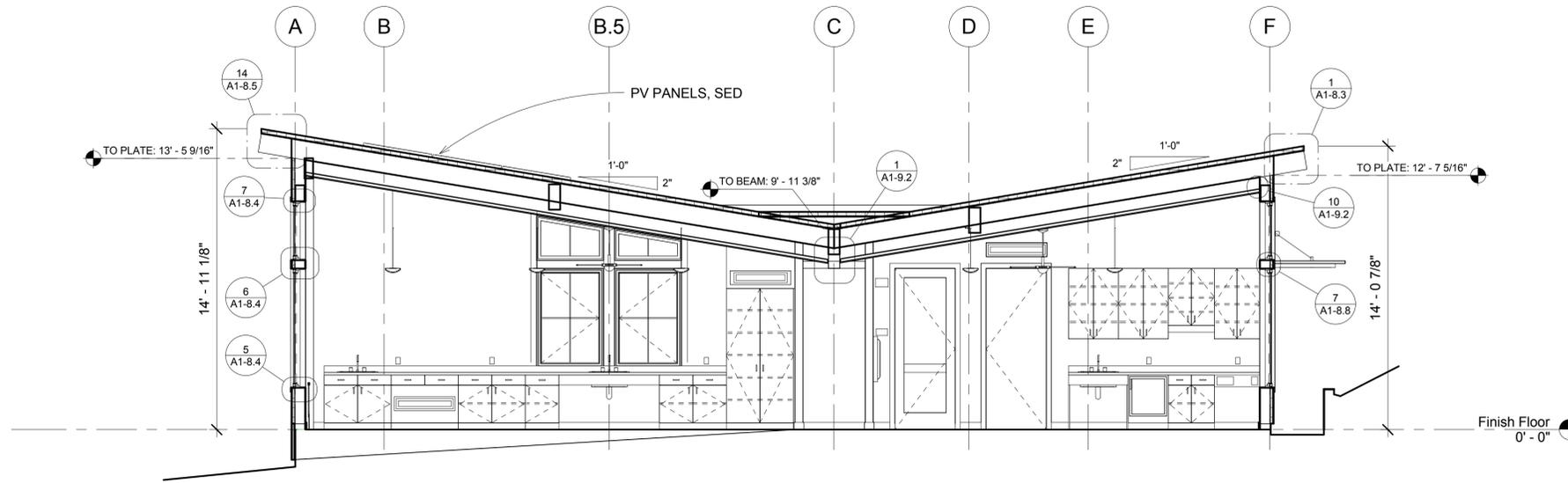
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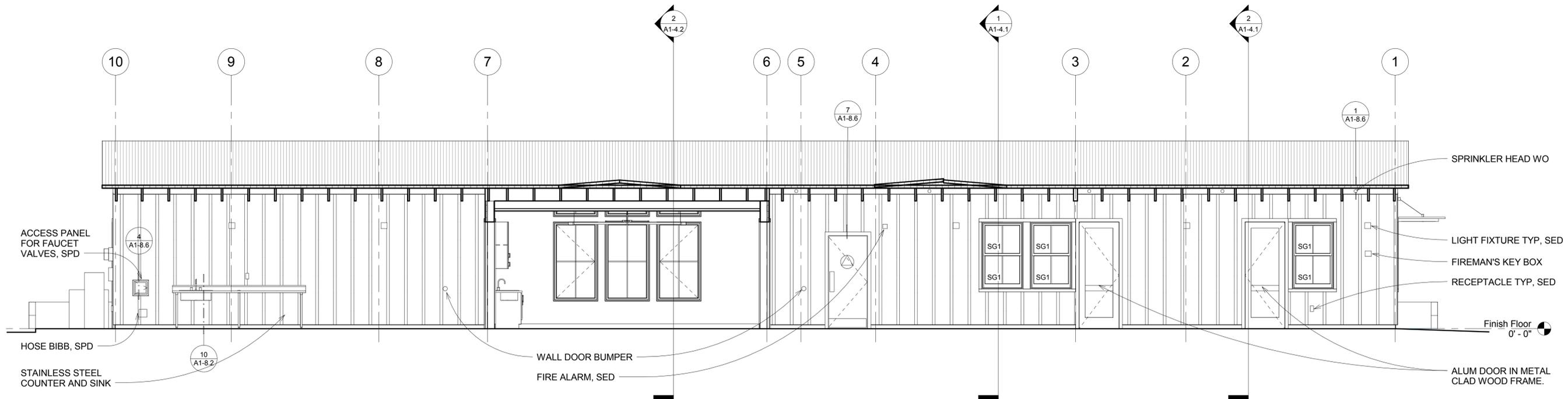
Sections

Sheet No.:

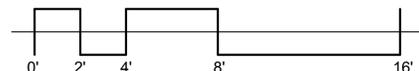
A1-4.2



2 Section at Classrooms
A1-4.2
1/4" = 1'-0"



1 Porch Elevation Section
A1-4.2
1/4" = 1'-0"



City of Cupertino - McClellan Ranch Preserve
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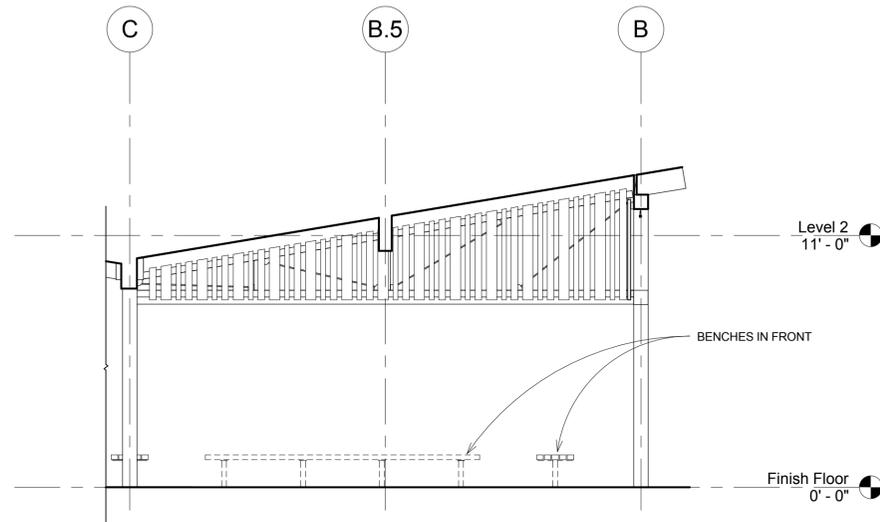
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Issue Note:
Construction Documents
01/10/2014

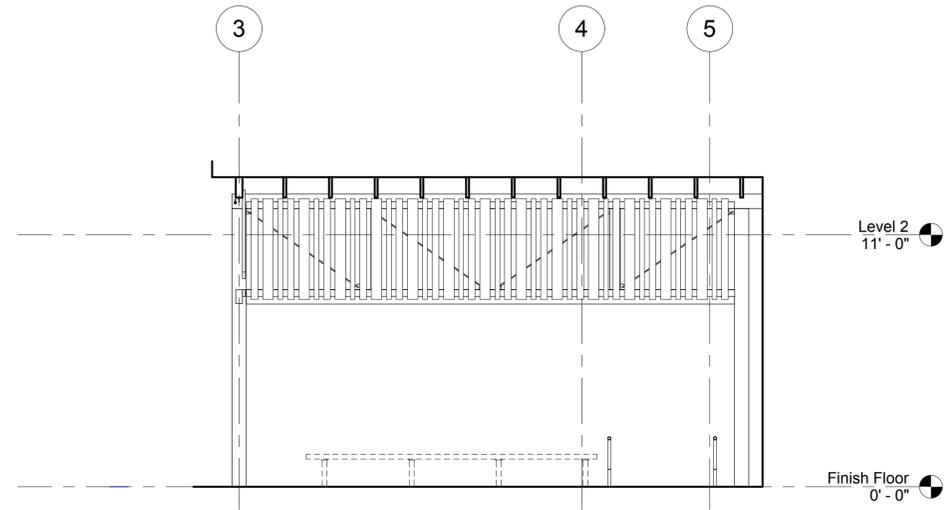
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Scale: 1/4" = 1'-0"

Sheet Title:
Interior Elevations

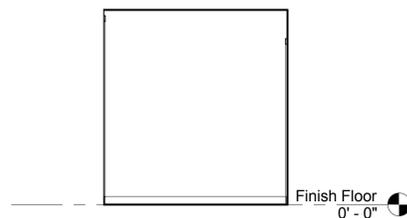
Sheet No.:
A1-6.4



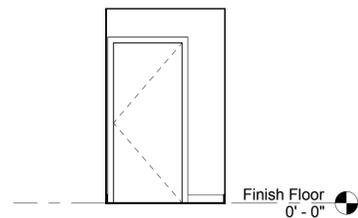
5 Porch - East
A1-6.4 1/4" = 1'-0"



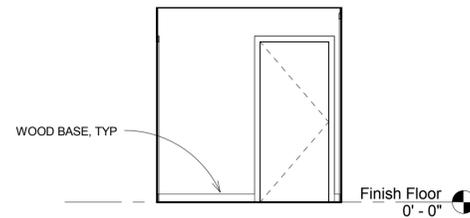
6 Porch - North
A1-6.4 1/4" = 1'-0"



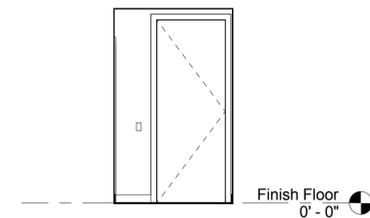
1 Hallway-North
A1-6.4 1/4" = 1'-0"



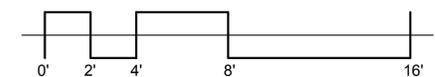
2 Hallway-East
A1-6.4 1/4" = 1'-0"



3 Hallway-South
A1-6.4 1/4" = 1'-0"



4 Hallway-West
A1-6.4 1/4" = 1'-0"



City of Cupertino - McClellan Ranch Preserve
Environmental Education Center
Re-Bid

Design Firm:
STIEGEL & STRAIN Architects
1295 59th Street
Emeryville, CA 94608
510 / 547-8092
FAX 510 / 547-2604
info@stiegelstrain.com

Consultant:

Stamp:



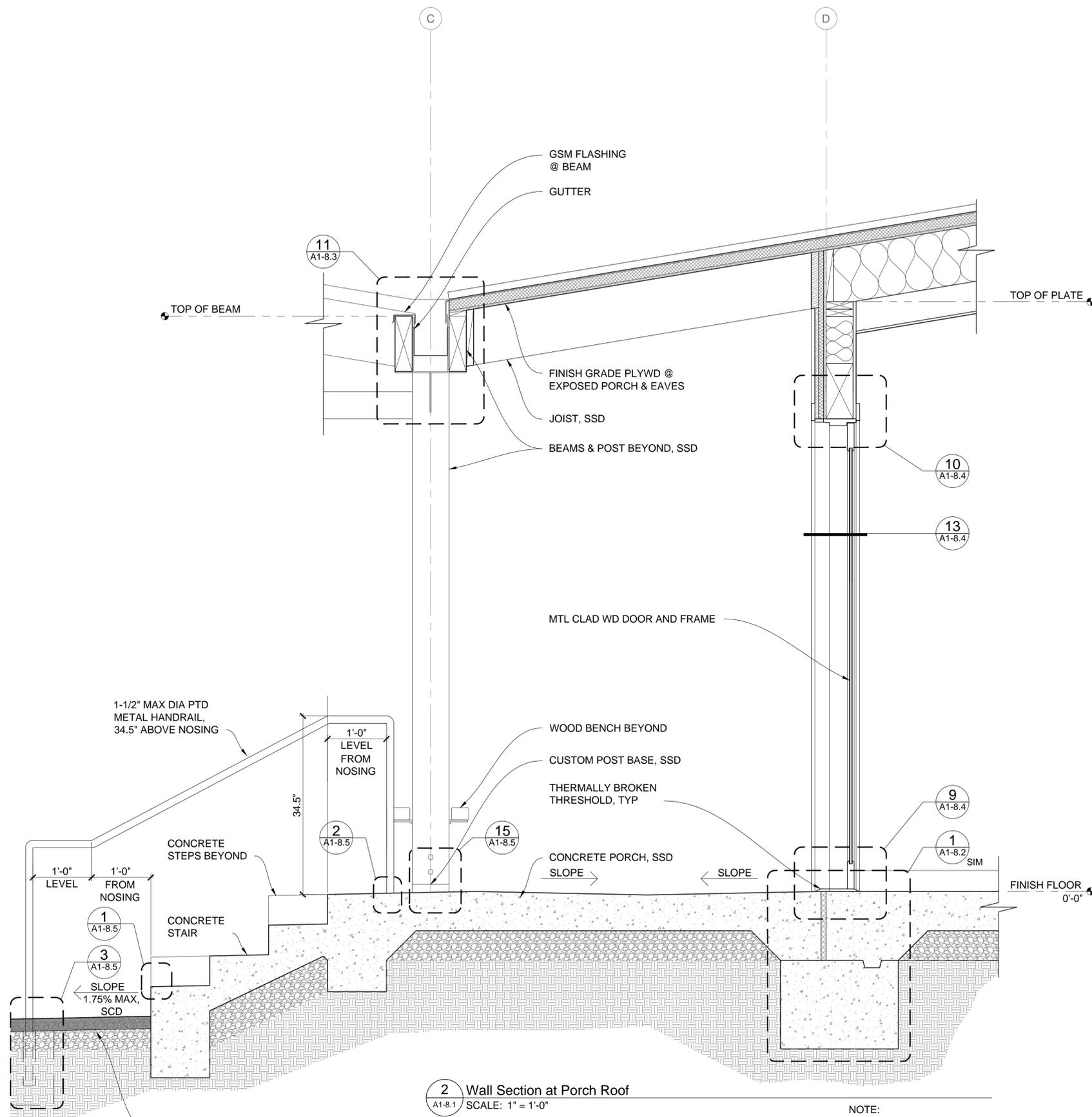
No.	Description	Date

Issue Note:
Construction Documents
01/10/2014

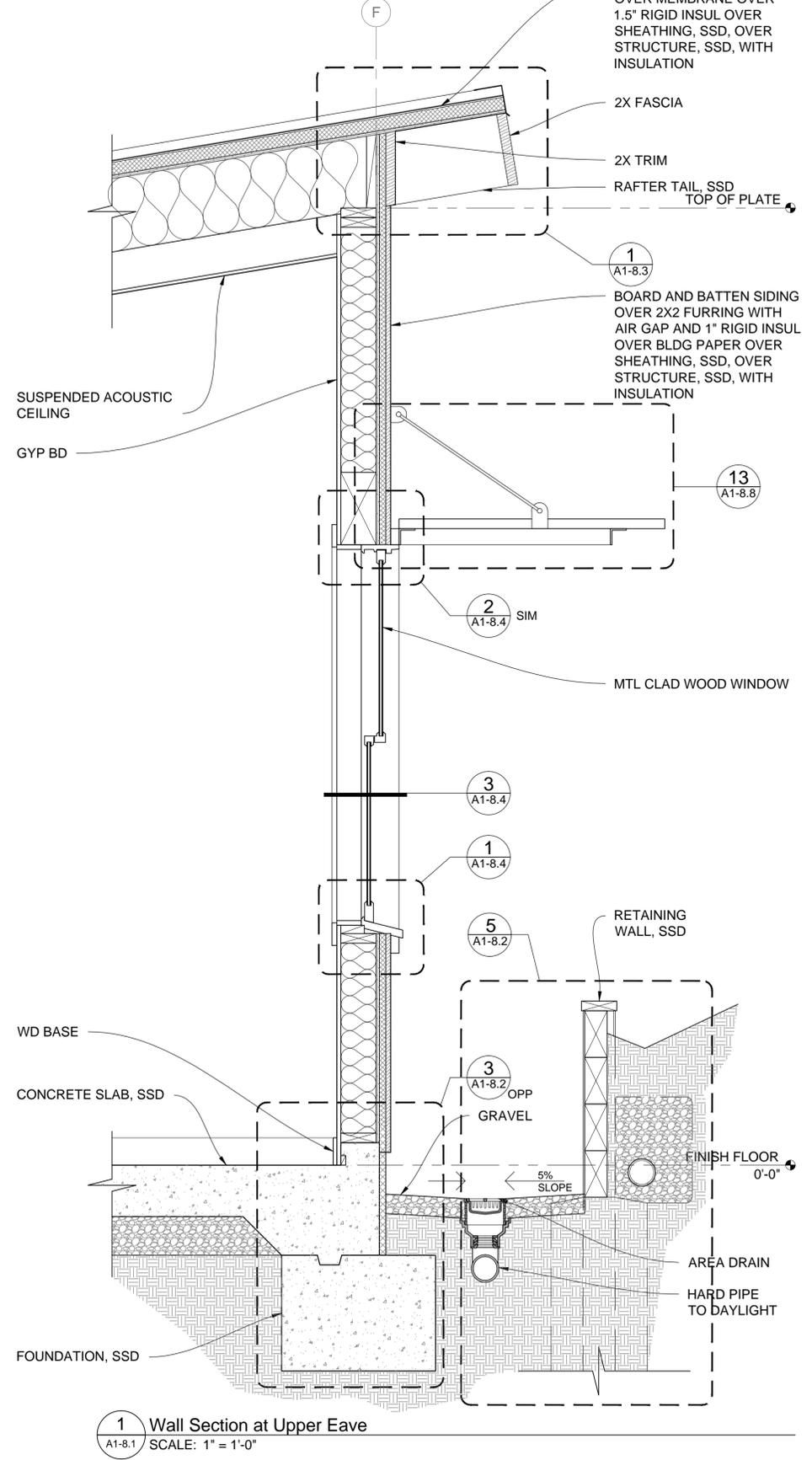
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File Name: MRE_08_DET-EXT
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Checked by: HS
Plot Date: 01/08/2014
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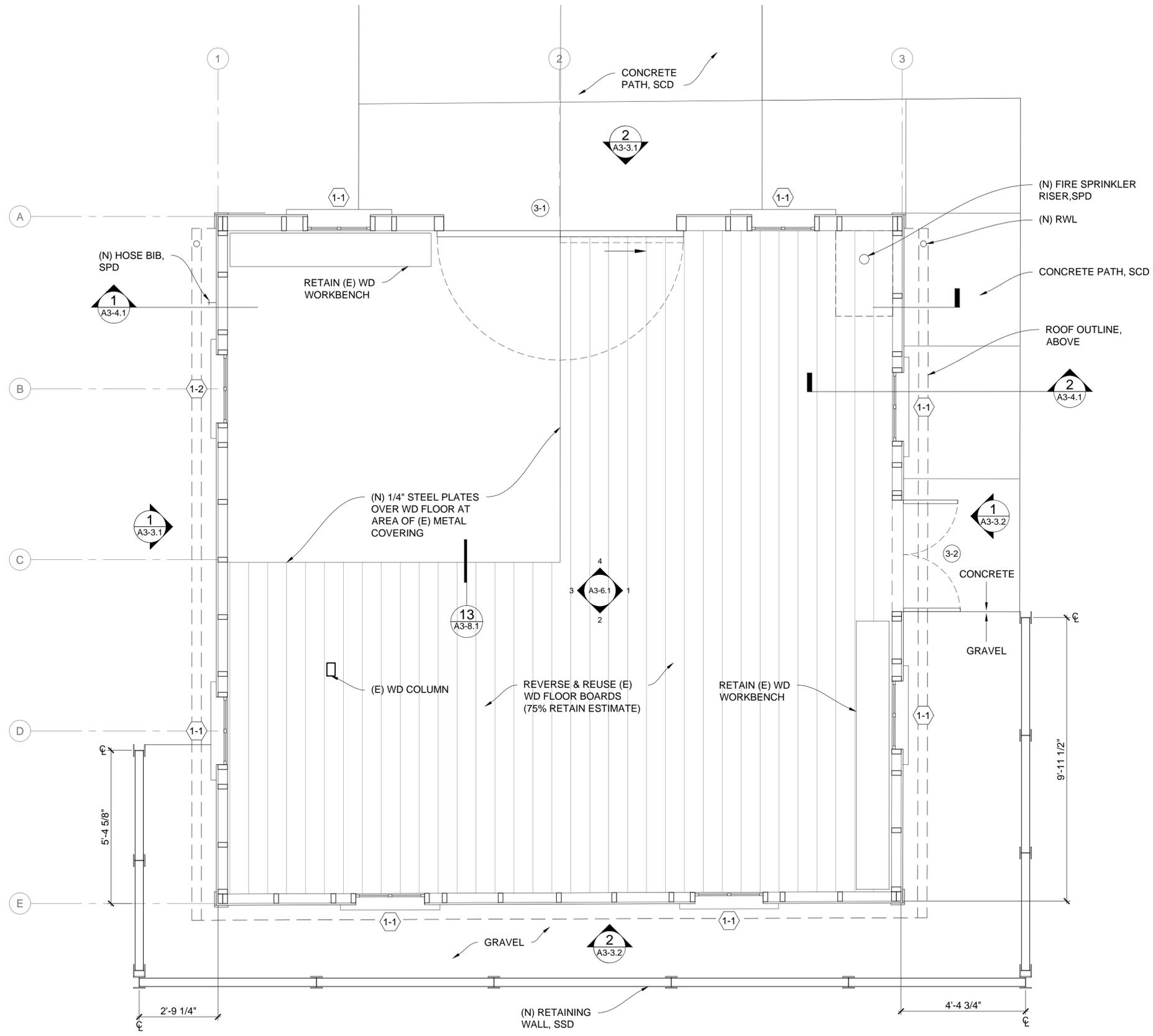
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Sheet No.:
A1-8.1

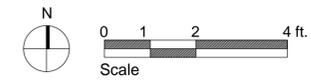


NOTE:
SEE 1/A1-8.1 FOR
INFORMATION NOT NOTED





1 Existing Blacksmith Shop Floor Plan
 A3-2.1 SCALE: 1/2" = 1'-0"



Project Title:
**City of Cupertino - McClellan Ranch Preserve
 Blacksmith Shop Relocation
 Re-Bid**

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 1295 59th Street
 Emeryville, CA 94608
 510 / 547-8092
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 info@siegelstrain.com

Consultant:



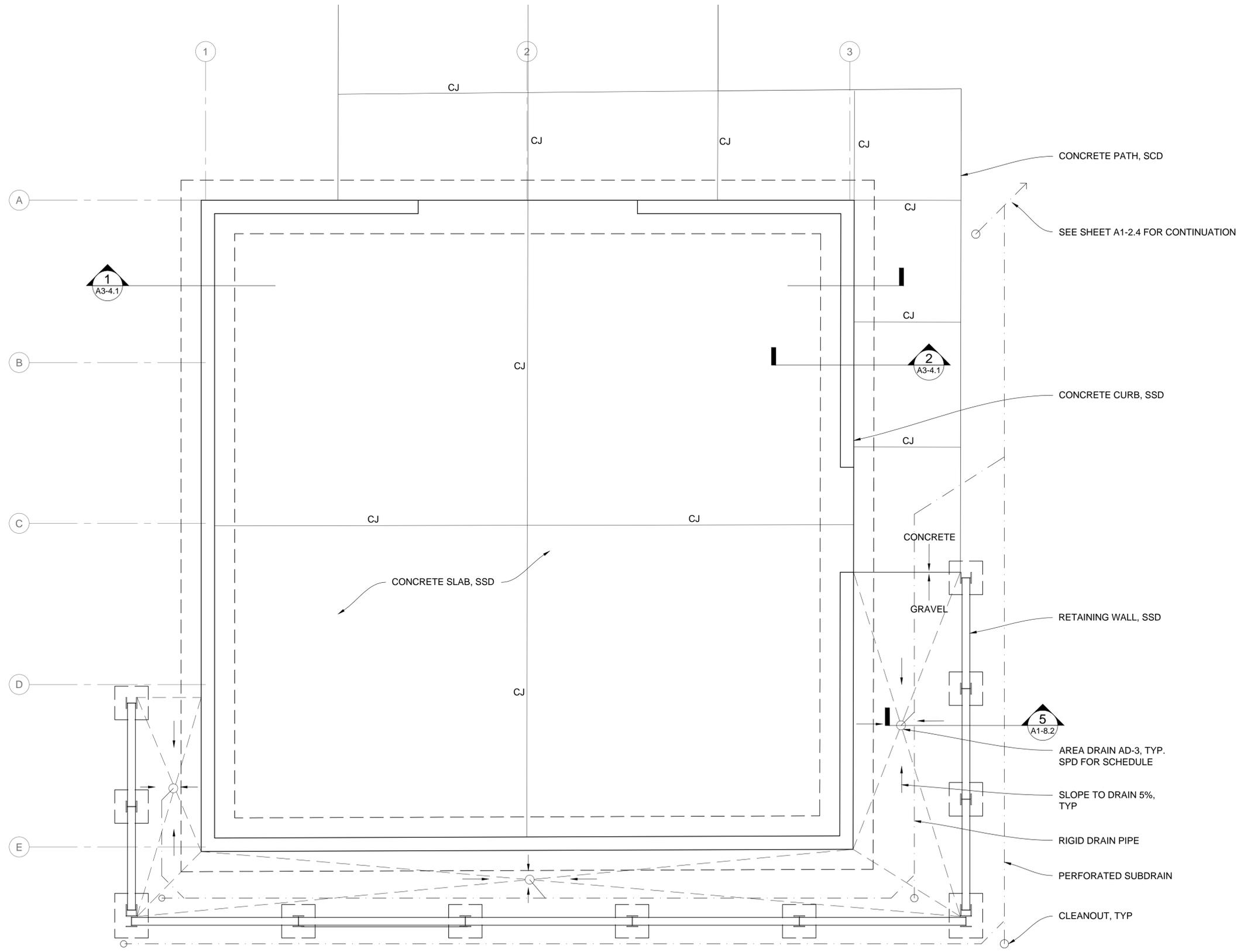
No.	Description	Date

Issue Note:
Construction Documents
 01/10/2014

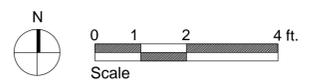
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 File Name: BSS_02_FLRPL1
 Drawn by: MOH
 Checked by: BPE
 Plot Date: 01/08/2014
 Scale: 1/2" = 1'-0"

Sheet Title:
Floor Plan

Sheet No.:
A3-2.1



1 Blacksmith Foundation Plan
 A3-2.4 SCALE: 1/2" = 1'-0"



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No.	Description	Date

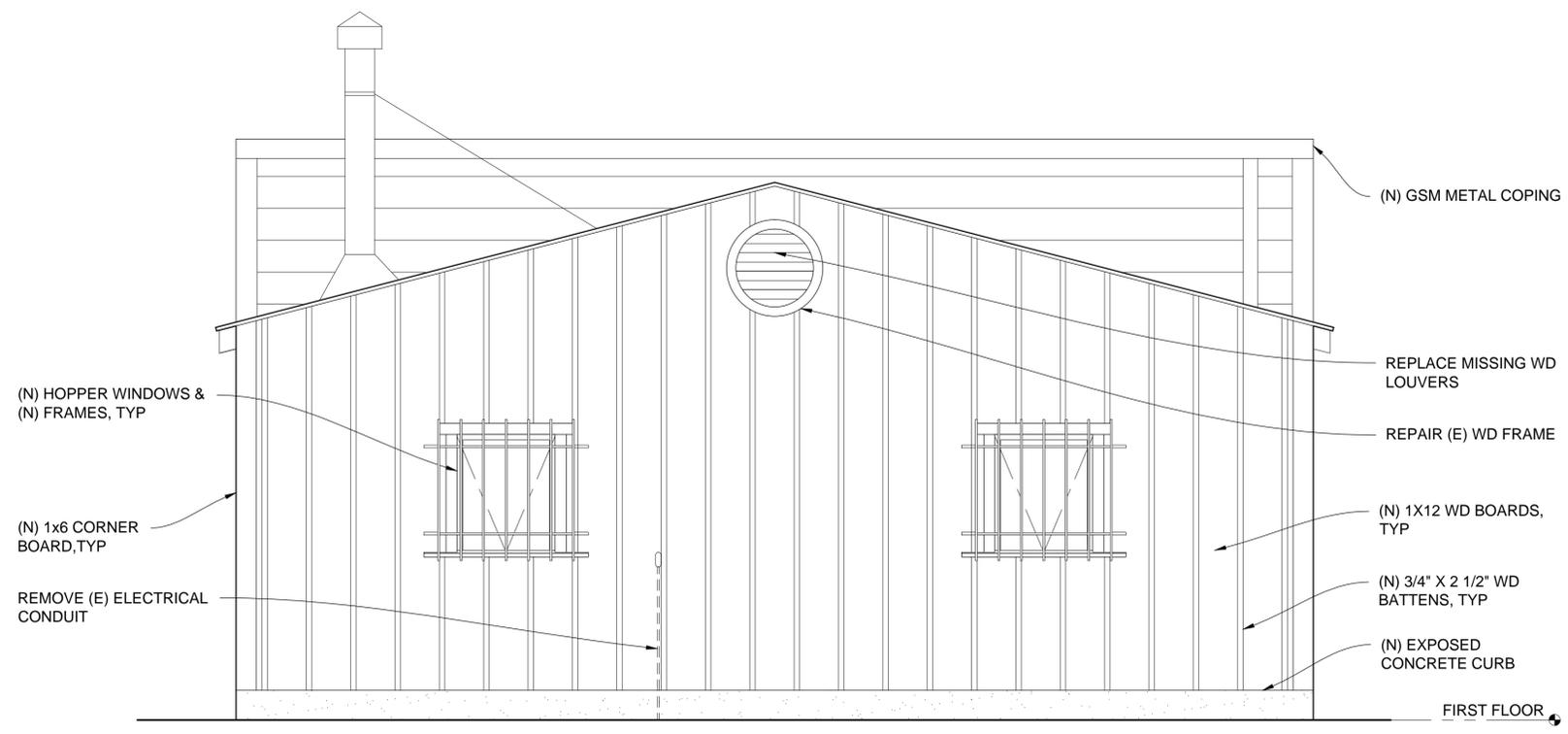
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**Construction Documents
 01/10/2014**

Project ID: BSS: 13-002
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 Drawn by: MOH
 Checked by: BPE
 Plot Date: 01/08/2014
 Scale: 1/2" = 1'-0"

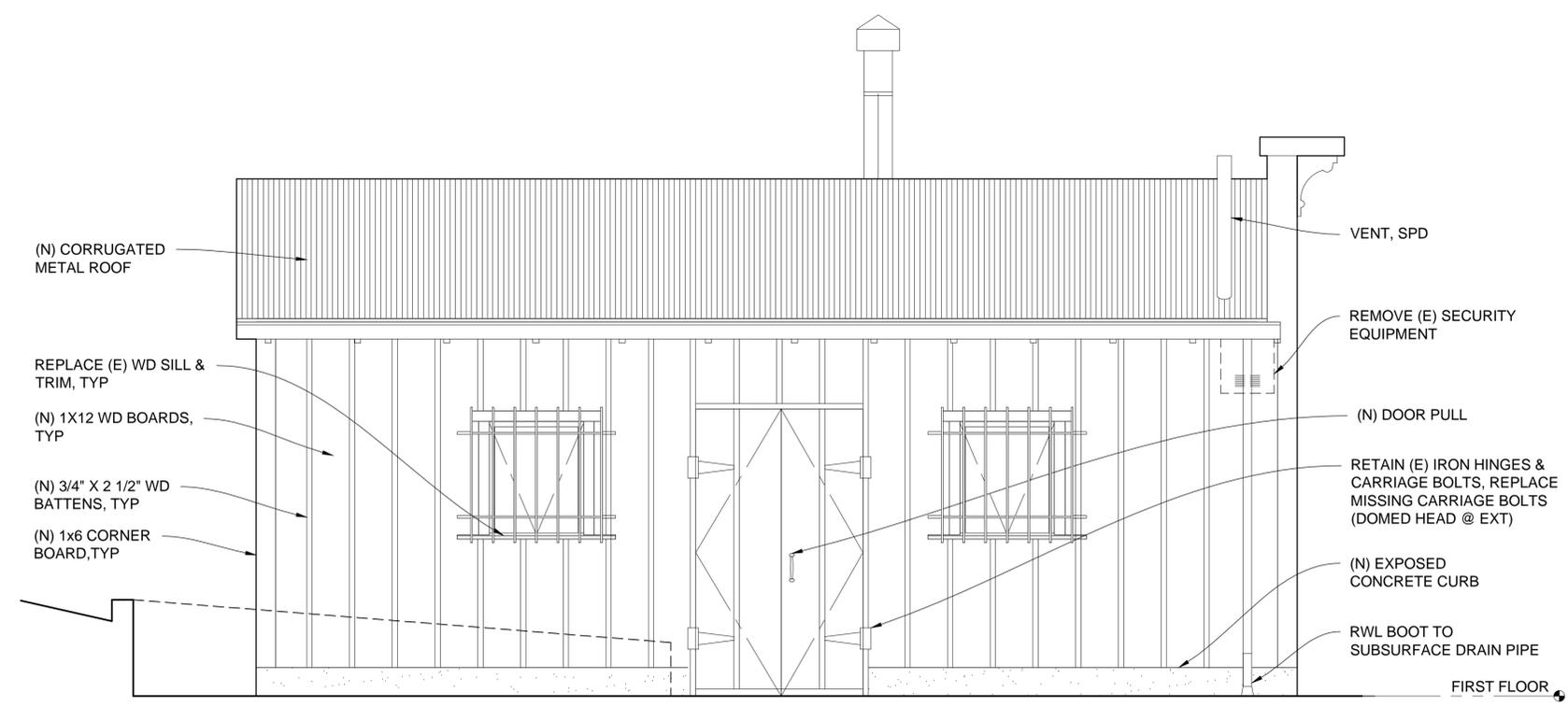
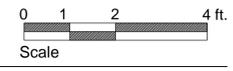
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Foundation Slab Plan

Sheet No.:
A3-2.4

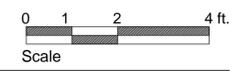
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2 Blacksmith Shop South Elevation
A3-3.2 SCALE: 1/2" = 1'-0"



1 Blacksmith Shop East Elevation
A3-3.2 SCALE: 1/2" = 1'-0"



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Consultant:



No.	Description	Date

Issue Note:
**Construction Documents
 01/10/2014**

Project ID: BSS: 13-002
 File Name: BSS_03_ELEV
 Drawn by: MOH
 Checked by: BPE
 Plot Date: 01/08/2014
 Scale: 1/2" = 1'-0"

Sheet Title:
Elevations

Sheet No.:
A3-3.2

GENERAL STRUCTURAL NOTES

The Contractor shall thoroughly review all of the drawings prior to beginning construction. If any discrepancies between the plans and details exist the Contractor shall call the Engineer for clarification. For member sizes, the plans shall generally take precedence over the details. Conform to the following except where more stringent requirements are specified.

Refer to architectural drawings for the following: floor finishes; depressions and curbs on floors; opening required for windows, doors, ducts, vents, plumbing, etc; flashing, insets, anchorages, hangers, etc, embedded or attached to the structure; roadways, walks, paving, stairs, terraces, exterior grades, extensions of roof surface and locations of drains and partition walls.

01000 GENERAL

01310 PRECONSTRUCTION CONFERENCE

Prior to beginning any construction, the Contractor shall schedule a Pre-Construction Conference with the Engineer, Geotechnical Engineer and the Architect to review the conventions and information shown on the plans, details, and specifications as well as the Construction Administration process to be followed during construction. This is also a time for the Contractor to ask any general questions of the design team that may be pertinent to the construction process.

01315 COORDINATION

The Contractor shall coordinate Architectural and Structural requirements. Notify the Architect of any conflicts and do not proceed with the work until conflicts are resolved.

01330 SUBMITTALS

Show drawings of all steel frame fabrication shall be submitted for the Engineer's review. Items submitted for review shall have Contractor's approval and date indicated on each copy. Submit two copies in addition to copies desired to be returned to Contractor. The Engineer requires two weeks for a complete review of shop drawings. Once approved, if variations between the shop drawings and the original construction drawings (plans & details) exist, the shop drawings shall take precedence.

01400 INSPECTION

Provide Special Inspection in accordance with CBC Chapter 17 for the following work:

- 1704.3 Periodic inspection of material verification and high strength bolting.
- 1704.3 Continuous inspection during the welding of any structural steel with single-pass fillet welds greater than 3/8" welds, multipass welds and complete and partial penetration groove welds.
- 1704.3 Periodic inspection during the welding of any structural steel with single-pass fillet welds less than or equal to 3/8".
- 1704.4 Taking of test specimens and the placing of all concrete.
- 1704.4 Prior to and during the placement of bolts installed in concrete.
- 1704.4 Prior to the enclosing of forms for all reinforcing steel.
- 1704.7 Verify materials, densities and lift thickness during placed and compaction of controlled fill.
- 1704.7 Periodic inspection of materials below footings, proper excavation depth, subgrade preparation.
- 1704.9 During the drilling of piers and verification of pier placement, plumbness, diameter, lengths, and embedment into bedrock.

Contractor shall call Building Official for inspection of all foundation steel and excavations prior to placing concrete.

The Building Inspector shall notify the Engineer of any construction that is not in conformance with the Contract Documents. This notification shall be by telephone to (510) 922-9888, including leaving a message at the office of the Engineer as to the nature of the situation, with confirmation in writing. Contractor shall be immediately advised of any construction that, in Inspector's opinion, is not in conformance with the Contract Documents.

01401 CONSTRUCTION OBSERVATION

The project Engineer-of-Record shall perform the structural observations per CBC Section 1710. The Project Engineer shall be retained by the owner to perform these structural observations per CBC Section 1710, reporting any observed deficiencies to the Owner, Contractor, and Building Official, and submitting a final summary report stating site visits have been made, noting any deficiencies, that corrective work has been completed, and that construction proceeded in accordance with the approved plans and applicable codes.

Contractor shall give Engineer 48 hours notice prior to all required testing and observations. U.O.N. Contractor shall call Engineer for observation of all foundation steel and excavations prior to placing concrete. Contractor shall call Engineer for holdown observation prior to sheathing, and framing, nailing and shear wall observation prior to covering either side of sheathing with finished materials. The Contractor shall call Engineer to observe all structural members and connections for conformance with the Construction Documents prior to concealment with finish materials.

The Engineer's visits to the construction site are not intended, nor shall they be construed to include a review of the adequacy of the Contractor's safety measures.

The Engineer is not responsible for construction means, methods, techniques, sequences or procedures of construction safety precautions - these are the sole responsibility of the Contractor.

01402 TYPICAL CONDITIONS

Typical details apply to all construction except where shown differently elsewhere.

01403 SPECIFICATIONS

The specifications shall govern where information is not given in these general structural notes or on the drawings. Where reference is made to standard specifications, the latest adopted revisions shall be used.

01404 SIMILARITY

If certain features are not fully shown or called for on the drawings or specifications, their construction shall be of the same character as similar conditions that are shown or called for.

01405 EQUIPMENT SUPPORTS

Provide mechanical and electrical equipment supports, anchorages, openings, recesses and reveals as required. At concrete, provide these items prior to casting concrete.

01406 EXISTING CONDITIONS

Contractor shall inspect all existing conditions that affect the work shown and shall notify Engineer of any existing conditions which conflict with or differ from the new work shown. Contractor shall not proceed with the work until these conflicts and/or differences are resolved.

01408 BRACING AND SHORING

The Contractor is solely responsible for the conduct of the work, including all construction means, methods, sequencing, and procedures; all bracing and shoring, and all site safety. The Contractor's responsibility for shoring shall include the basic design, assumed soils conditions and estimation of all forces to be resisted together with plans and specifications of the materials and methods to be used, and shall be prepared by a registered Civil Engineer. The Contractor is solely responsible for the structure's temporary stability, including the removal of shoring, backfilling of retaining walls, and any other action which imposes temporary loads on the structure prior to its final stable condition under design loading. The Engineer's site observation visits shall not be interpreted as a review of the Contractor's safety measures.

01420 DESIGN NOTES

01421 CODE

2010 California Building Code (based on International Building Code 2009 Edition).

01422 DESIGN LOADS

Dead loads: in-place material weights with materials as shown in Construction Documents.

Roofs (reduced per CBC)	17 psf
Roofs (Flat / Sloping)	20 psf
Floors	40 psf
Exterior Balconies	60 psf
Concentrated loads, per CBC.	

Design Wind Pressure (primary frame), Method 2, Projected Area Method, CBC 1609:

Exposure B, Basic Wind Speed 85 mph, I = 1.0 (Occupancy Category III):
To 1'3" above ground 15.3 psf.

Seismic Force, Equivalent Lateral Force Procedure per CBC Section 1613:

Seismic Design Category	E
Site Class	C
Occupancy Category II, Importance Factor	I = 1.0
Fundamental Period	T = 0.15s
Mapped Short Period Acceleration	S _s = 2.41g
Site Coefficient	F _a = 1.0
Design Short Period Acceleration	S _{ds} = 1.60g
Mapped One Second Period Acceleration	S ₁ = 0.86g
Site Coefficient	F _v = 1.00
Design One Second Acceleration	S _{d1} = 0.74
Response Modification Factor	R = 6.5, typ., R = 3.25 Grdline A
Base Shear	V = 0.247W (At Strength Level)
Redundancy Factor	p = 1.3

Allowable Soil Pressures	
Conventional Spread Footing	
Dead + Live Loads	2,400 psf
Dead + Live + Lateral Loads	3,600 psf
Slab on Grade	
Dead + Live Loads	3,600 psf
Dead + Live + Lateral Loads	5,250 psf
Retaining Walls	
Dead + Live Loads	2,400 psf
Dead + Live + Lateral Loads	3,600 psf

Retaining Wall Loads	
Active Lateral Earth Pressure	
Cantilevered	45 pcF (2.5:1 backstop)
Passive Earth Pressure	400 pcF
Fricition Factor	0.39

02000 FOUNDATIONS

02100 FOUNDATION ON GRADE

Clear project area of all organic matter before beginning work. See Geotechnical Report prepared by Cotton, Shires and Associates, Inc., (408) 354-5542 dated May 2, 2013. The upper 6'-0" of existing material shall be removed and replaced. If organic material or poor soil is observed excavate foundations until firm undisturbed soil can be found.

02150 RETAINING WALLS

Do not backfill against any concrete or masonry retaining walls until they have achieved design strength. At retaining walls that are backfilled prior to completion of structure, provide bracing as necessary to support retaining walls until adjacent structure has been completed and has achieved design strength. Filter fabric shall be Miraf 140NC or approved equal and shall totally enclose the drain rock.

02351 PIER FOUNDATIONS

Maximum skin friction on sides of piers:	
Dead plus Live Load	450 psf

Prior to placing grade beam concrete, thoroughly wet and saturate the soil below the grade beams so they are in fully expanded condition at the time of the concrete placement.

02352 OBSERVATION AND ACCEPTANCE

The Geotechnical Report prepared by Cotton, Shires and Associates, Inc., (408) 354-5542 dated May 2, 2013 is available in Appendices of Specifications Division 0 & 01. The Contractor shall conform to the recommendations of the Geotechnical Report. Obtain Geotechnical Engineer's approval of foundation excavations and pier depths prior to placing retaining wall and concrete. All determinations of the acceptability of soil conditions shall be by Geotechnical Engineer. The Geotechnical Engineer shall be present at the site to verify proper depth of over-excavation of poor existing fill material as well as engineered fill recompaction and drilling of all piers and observation of excavation before placing any fill material, steel reinforcing or concrete.

03000 CONCRETE

03001 GENERAL

All concrete shall conform to American Concrete Institute "Specifications for Structural Concrete for Buildings (ACI 301)," with selected ACI and ASTM references, as well as ACI field reference manual, SP-15, except as modified below. (numbers in parentheses refer to corresponding paragraphs of ACI 301).

03200 CONCRETE REINFORCEMENT

Reinforcing Bars: ASTM A615, Grade 60 minimum; lap per schedule or 63 bar diameters minimum (5.2,5.5,7). welded wire fabric: ASTM A185; lap 22" min (5.2,5). Do not weld reinforcement (5.3). Concrete protective cover for reinforcement (5.5.1); Contractor shall provide no more and no less than the specified cover for all beam ties, column splices, and wall and slab reinforcing.

Detailing and placing: conform with ACI 315, concrete reinforcing steel institute MSP-2, and CRSI "Placing Reinforcing Bars," latest edition (5.1.2).

03250 CONCRETE ACCESSORIES

03251 Capsule: HIH HVA adhesive anchor as supplied by HIH, Inc., Tulsa, OK, or approved equivalent, installed in accordance with the manufacturer's written instructions. 03252 Powder-driven Fasteners: as manufactured by HIH, Inc., Tulsa, OK, or approved equivalent, installed in accordance with the manufacturer's written instructions.

03253 EPOXY ANCHORS

1. Simpson "SET-XP" epoxy anchors as supplied by Simpson Strong-Tie, installed in accordance with the manufacturer's written instructions and ICC-ESR Report 2508, latest edition. 2. HIH "HIT-HY 200" epoxy anchors as supplied by HIH, Inc., installed in accordance with the manufacturer's written instructions and ICC-ESR Report 3187, latest edition. 3. Or equivalent as approved by Engineer of Record.

03254 EXPANSION ANCHORS:

1. Simpson "Strong-Bolt" expansion anchor as supplied by Simpson Strong-Tie, installed in accordance with the manufacturer's written instructions and ICC-ESR Report 1771, latest edition. 2. HIH "Kwik Bolt-TZ" expansion anchor as supplied by HIH, Inc., installed in accordance with the manufacturer's written instructions and ICC-ESR Report 1917, latest edition. 3. Or equivalent as approved by Engineer of Record.

03255 POWDER ACTUATED FASTENERS:

1. Simpson "POD" pins as supplied by Simpson Strong-Tie, installed in accordance with the manufacturer's written instructions and ICC-ESR Report 2138, latest edition. 2. HIH "X-DIN" pins as supplied by HIH, Inc., installed in accordance with the manufacturer's written instructions and ICC-ESR Report 1663, latest edition. 3. Or equivalent as approved by Engineer of Record.

03300 CAST-IN-PLACE CONCRETE

03301 GENERAL

Minimum Compressive Strength, f_c at 28 days for fly ash replacement concrete (3.2): 3,000 psi Maximum slump (3.5): 4" Maximum water to cement ratio: 0.45 Replace a minimum of 20% and a maximum of 35% of cement content with fly ash conforming to ASTM C618 Class C or F. Aggregate shall be 1" x #4 coarse, clean, uncoated, processed aggregate containing no clay, mud, loam or foreign matter, as follows: a. Crushed stone, processed from natural rock or stone. b. Natural or crushed gravel. Do not use pit, bank run, or pea gravel. Use no calcium chloride in any concrete (3.7.1). Provide internal vibration of all concrete (3.8.4) Hot weather concreting: conform to recommendations contained in "Hot Weather Concreting," ACI 305R-10. Cold weather concreting: conform to recommendations contained in "Cold Weather Concreting," ACI 306R-10.

03302 CURING

Concrete surfaces exposed to the atmosphere within 7 days of placement shall be protected and cured as necessary until specified design strength has been achieved (12.2). At greater rates of cement replacement with either slag or fly ash the early strength and setting for flat work can be delayed, and in some cases, the 28 day design strength may have to be exceeded to 56 days or more. In either case, the construction needs and schedules will impact the cement replacement percentage. Care should be taken to ensure that proper curing is maintained for concretes in which slag or fly ash has been substituted for a portion of the Portland cement. With an increased time of set and a reduced rate of strength gain, concretes containing ground granulated blast furnace slag may be more susceptible to cracking caused by drying shrinkage.

03304 SLABS ON GRADE

Place slabs over vapor barrier over 6" clean, free-draining crushed rock over approved 12 inches (6 inches for exterior concrete flatwork) non-expansive structural fill (95% relative compaction) placed on the prepared and approved subgrade soil. See Geotechnical Report: 6'-0" removed and replaced engineering fill required below foundations and slabs. Slope subgrade to drain. Refer to Specifications Section 07 26 00 - Vapor Retarders for specific vapor barrier specifications.

03321 CONCRETE FIELD TESTING

1. Concrete Test Samples: Samples for concrete tests shall be taken in accordance with ASTM C 172. Test cylinders shall be cured under conditions not more favorable than the most unfavorable conditions for portions of concrete which specimens represent. Casting and curing on test cylinders shall be the responsibility of the Contractor. Testing of samples shall be carried out by an independent testing agency meeting the requirements of ASTM C 1077.

2. Compressive Strength Tests on concrete:

a. Frequency of concrete sampling: For concrete (A) at or below grade, (B) above grade and not part of the lateral force resisting system, (C) which is part of the lateral force resisting system (shear walls, moment frames, transfer beams, diaphragms, etc.) Samples for concrete compressive strength tests of each class of concrete placed each day shall be taken not less than once per day or per batch, nor less than once for every (A)150, (B)25, (C)10 yds³ of concrete, nor less than once for every (A)5000, (B)3000, (C)1000 ft² surface area for slabs or walls. A sample shall consist of (A) or (B) four, (C) five standard cylinders, one to be tested at 7 days, one to be tested at 14 days, and the remainder to be tested at 28 days, as required. b. Acceptance of concrete shall be based on strength test results of standard cured cylinders in accordance with ASTM C 31 and tested at 28 days in accordance with ASTM C 39. Strength test results are defined as the average of a minimum of two specimens. Additional specimens for testing may be made at contractor's option and expense.

c. When cylinders are made, tests of slump, air content, temperature, and density shall be made and recorded with the strength test results.

d. Strength of each concrete class shall be deemed satisfactory when the following criterion is met: No individual compressive-strength test result (i.e. the average of two cylinders minimum) falls below specified compressive strength by more than 500 psi.

e. When compressive strength tests indicate low strength, follow procedure in ACI 318 chapter 5.6.4 Investigation of low-strength test results.

f. Submit certified test report of cylinders to Engineer.

05000 STRUCTURAL STEEL

05120 MATERIALS

All structural steel, fabrication and erection methods shall conform to the American Institute of Steel Construction (AISC) "Code of Standard Practice for Steel Buildings and Bridges," June, 2010. Where applicable, all cross sectional dimensions and production tolerances shall meet ASTM A6.

Rolled steel angles and channels: ASTM A36, minimum yield stress fy=36 ksi or ASTM A572, minimum yield stress fy=50 ksi Rolled steel plates and bars: ASTM A572, minimum yield stress fy=50 ksi Rolled steel W and WT sections: ASTM A992, minimum yield stress fy=50 ksi Round steel smooth rod: ASTM A36, minimum yield stress fy=36 ksi Steel pipe: ASTM A53, Type E or S, Grade B, minimum yield stress fy=35 ksi HSS rectangular sections: ASTM A500, Grade B, minimum yield stress fy=48 ksi HSS round section: ASTM A500, Grade B, minimum yield stress fy=42 ksi Weathering steel: ASTM A588 or ASTM A847, Grade B, minimum yield stress fy=46 ksi Structural shapes shall be spliced only as shown on the drawings. Steel shall be primed with "10-99 Trimec primer," or "Rustoleum No. 5769 primer," or approved equal.

05121 CONNECTIONS

All bolted connections shall conform to the AISC and shall use high strength threaded fasteners U0N. Anchor Bolts: ASTM F1554 - 55ksi yield strength, provide washers under nuts and heads. All anchor bolts in contact with treated wood with high copper content shall be stainless steel, hot dipped galvanized G-185 coated, or corrosion resistant polymer coated.

Portland Bolt (or equal) (800) 547-6758, Interior Painted S.A.D., All Exterior galvanized. Unfinished Threaded Fasteners: ASTM A307, Grade A, regular low carbon steel bolts and nuts. All exterior fasteners including bolts, nuts, washers, rods, turnbuckles shall be galvanized. High Strength Threaded Fasteners: ASTM A325, heavy hexagonal structural diameter. Bolts: heavy hexagonal nuts, and hardened washers. Holes shall be cut, drilled or punched to a diameter 1/16" larger than the bolt holes. Holes shall not be burned or enlarged by flame cutting.

05122 WELDING

Nails: If splitting occur during nailing, predrill wood with hole size one size smaller than nail diameter. All fasteners in contact with pressure treated wood shall be stainless steel, hot dipped galvanized or corrosion resistant polymer coated.

05130 BASE PLATES

Bearing plates shall be clean and free from bond-reducing materials, to improve bond during concrete pour. Tighten anchor bolts after the supported members have been positioned and plumbed. Pack 5000 PSI non-shrink grout solidly between bearing surfaces and bases or plates to assure that no voids remain.

06000 STRUCTURAL WOOD

06050 FASTENERS AND ADHESIVES

Nails: If splitting occur during nailing, predrill wood with hole size one size smaller than nail diameter. All fasteners in contact with pressure treated wood shall be stainless steel, hot dipped galvanized or corrosion resistant polymer coated.

Lag bolts: predrill full shank diameter for shank; predrill 60-75 percent of shank diameter for threaded portion.

Bolts: drill 1/16" oversize lead holes in wood and steel. Do not force bolts into misaligned or undersized holes.

06051 HARDWARE

Provide framing hardware as shown at top and bottom of all posts; provide sizes to fit members; nail fully. Bolts: ASTM A307, provide washers under nuts and heads. Provide Simpson Strong-Tie Co., Inc., hardware as shown or approved equivalent. All prefabricated metal connectors in contact with pressure treated wood are to be Simpson Zmax or Simpson HDG coated or are to have an equivalent G185 zinc coating per ASTM A 153.

Fasteners for preservative-treated or fire-retardant-treated wood shall be hot dip zinc coated galvanized steel, stainless steel, silicon bronze, or copper. The coating weights for zinc-coated fasteners shall be in accordance with ASTM A 153.

06052 SHEAR WALL HOLDOWNS

Provide Simpson Strong-Tie Co., Inc., or approved equivalent. Note: designations on plans (H2, H3 etc.) refer to Holdown Schedule. Schedule indicates actual holdown size (HDU5, HD9 etc.). Bolts shall not be countersunk.

06053 MISCELLANEOUS STEEL

Steel: ASTM A36, minimum yield stress fy=36 ksi. Bolts: ASTM A307, provide washers under nuts and heads. Fabrication shall conform to the American Institute of Steel Construction (AISC) "Code of Standard Practice for Steel Buildings and Bridges," 2010. Welding shall conform to the American Welding Society "Structural Welding Code-Steel (ANSIIAWS D1.1, D1.1M:2011)" and shall be performed by AWS qualified welders and inspected by AWS certified inspectors.

06100 ROUGH CARPENTRY

06101 FRAMING LUMBER

Exterior Eave, Porch and Wood Trellis framing shall be FSC Certified, WCLB, WRCLA Western Red Cedar No. 1. Select for Exposed, kiln-dried, acclimated to max. 10 percent moisture content before installation. Provide with WCLB "Not Grade Stamped" certificate of grading. Texture shall be surfaced four sides (S4S), smooth face, square corners, milled form rough stock. Lumber for clear finish shall be solid lumber stock. Profiles shall be as indicated on the drawings.

Reclaimed Lumber: 2x reclaimed wall framing (shear walls shall be 3x) Standard Lumber: 2x FSC Standard wall framing (Shear Walls shall be 3x)

All lumber shall be FSC Certified and (including pressure treated lumber) shall be Douglas Fir-Larch U.O.N.; grades as follows:

2x and 3x studs	stud grade, reclaimed lumber shall be permitted for framing
4x, 6x members	No. 1.
2x Joists	No. 1, reclaimed lumber shall be permitted
Other members	No. 2.
Max. Moisture content in wood members	19% (U.O.N.).

All exposed Douglas Fir-Larch lumber shall be provided with "Not Grade Stamped" certificate of grading. Texture shall be surfaced four sides (S4S), smooth face, square corners, milled form rough stock. Lumber for clear finish shall be solid lumber stock. Profiles shall be as indicated on the drawings.

06102 GENERAL FRAMING

Conform to the General Construction Requirements of the CBC, Section 2304. Keep all untreated wood 1/2" minimum away from concrete or masonry. Provide studs or posts full width of beams entering walls; provide solid posts and blocking down to foundation. Connect top and bottom of isolated posts with prefabricated metal connectors, (Simpson BC, UNO). At bearing wall openings 4'-0" or narrower; provide 4 x 8 minimum header. Provide 5/8" x 9" minimum anchor bolts @ 4'-0" O.C., maximum U.O.N.

06103 PLYWOOD NAILING

All nails called for in the plans and specifications shall be Common nails. Substitutions will be accepted only if the minimum nail diameter and required nail penetrations shown in the "Typical Common Nail Penetration" Table are satisfied. Nail all plywood panel edges with 10d nails at spacing specified; use 10d nails at 12" and thicker plywood. Provide 3/8" minimum edge distances at plywood and at framing members. Drive nails flush with plywood surface; do not fracture surface by overdriving nails; replace overdriven nails in new holes. Stagger nails as possible without violating minimum edge distances. Field nail to intermediate framing members at 12" O.C. maximum.

06104 SHEAR WALLS

Block at plywood joints with blocking same size as studs. Edge nail sheathing to studs at holdowns. Extend shear walls through floor and roof systems with blocking equivalent to shear wall sheathing. At exterior wall top plate splices, lap 4'-0" minimum. Nail splices with 20-10c minimum, minimum on each side.

06115 SHEATHING

06116 PLYWOOD

APA trademarked plywood conforming to service Report No. ESR-2586; exterior glue; grade and thickness as specified. Center plywood joints on framing member or blocking. Space panels 1/8" at sides and ends. Provide 1/2" space between untreated plywood and concrete or masonry.

PLYWOOD NAILING

All nails called for in the plans and specifications shall be Common nails. Substitutions will be accepted only if the minimum nail diameter and required nail penetrations shown in the "Typical Common Nail Penetration" Table are satisfied. Nail all plywood panel edges with 10d nails at spacing specified; use 10d nails at 1/2" and thicker plywood. Provide 3/8" minimum edge distances at plywood and at framing members. Drive nails flush with plywood surface; do not fracture surface by overdriving nails; replace overdriven nails in new holes. Stagger nails as possible without violating minimum edge distances. Field nail to intermediate framing members at 12" O.C. maximum.

06118 ROOF SHEATHING

5/8" CDX minimum plywood unless otherwise specified on the plans; minimum panel span rating 32/16. Lay with face grain as shown on plans; stagger plywood panels 4'-0" lengthwise; minimum panel dimension; 2'-0", support all plywood edges with 2 x 4 minimum block or panel sheathing clips.

06119 SHEAR WALL SHEATHING

Apply directly to studs; edge directly to studs; lay-up with face grain vertical. Block joints with blocking same size as studs, minimum. Edge nail sheathing to all studs containing holdowns. The Contractor and Owner shall take precautions not to penetrate shearwalls with holes for plumbing, HVAC, etc. after shearwalls have been inspected.

06170 PARA-LAMINATED MEMBERS

Conform with AITC 117; wet-use adhesive; industrial appearance grade; 2.0E DF Parallam Minimum stress values:

Positive Bending, Fb	2,900 psi
Negative Bending, Fb	2,900 psi
Horizontal Shear, Fv	290 psi
Comp. Perp. to grain, Fcp	750 psi
Modulus of Elasticity, E	2,000,000 psi

06172 MICROLAM MEMBERS

