

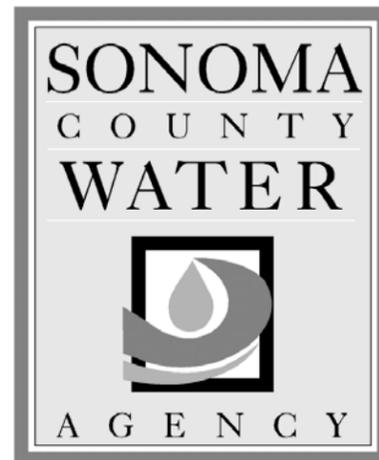
CONTRACT NO.  
0-85-7 #1

PROJECT MANUAL

VOLUME 3 OF 3

FOR

**Westside Facility  
(9703 Wohler Road)**



**JUNE 2014**





**PURPOSE STATEMENT**

THESE DRAWINGS HAVE BEEN PREPARED FOR THE CONSTRUCTION OF GRADING AND DRAINAGE IMPROVEMENTS IN SUPPORT OF THE CONSTRUCTION AND INSTALLATION OF THE SONOMA COUNTY WATER AGENCY'S EDUCATIONAL FACILITY.

**GRADING AND DRAINAGE NOTES**

- PERFORM GRADING AND DRAINAGE IMPROVEMENTS IN ACCORDANCE WITH CHAPTER 11A AND 11 OF THE SONOMA COUNTY CODE (SCC), APPLICABLE SONOMA COUNTY REGULATIONS AND TO THE RECOMMENDATIONS OF THE LIMITED GEOTECHNICAL INVESTIGATION, PREPARED BY BRUNSON ASSOCIATES, DATED JULY 19, 2013.
- ALL WORK SHALL BE DONE IN COMPLIANCE WITH THE APPROVED PLANS AND SPECIFICATIONS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF RECORD UPON DISCOVERING DISCREPANCIES, ERRORS, OR OMISSIONS IN THE PLANS. PRIOR TO PROCEEDING, THE OWNER SHALL HAVE THE PLANS REVISED TO CLARIFY IDENTIFIED DISCREPANCIES, ERRORS, OR OMISSIONS. THE APPROVED PLANS AND SPECIFICATIONS SHALL NOT BE CHANGED WITHOUT THE WRITTEN APPROVAL OF THE SONOMA COUNTY PERMIT AND RESOURCE MANAGEMENT DEPARTMENT (PRMD). PROPOSED MODIFICATIONS TO THE APPROVED PLANS AND SPECIFICATIONS SHALL BE SUBMITTED TO THE PERMIT AUTHORITY (PRMD) IN WRITING, TOGETHER WITH ALL NECESSARY TECHNICAL INFORMATION AND DESIGN DETAILS.
- THE GRADING/DRAINAGE PERMIT AND AN APPROVED COPY OF THE GRADING/DRAINAGE PLANS SHALL BE MAINTAINED ON THE PROJECT SITE THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITIES.
- PRMD MAY ORDER THAT ANY WORK STOP IMMEDIATELY IF IT IS PERFORMED CONTRARY TO CHAPTER 11A AND 11 OF THE SONOMA COUNTY CODE, THE APPROVED PLANS AND SPECIFICATIONS, PERMIT CONDITIONS, OR ANY WORK THAT HAS BECOME HAZARDOUS TO PROPERTY OR THE PUBLIC. A GRADING/DRAINAGE PERMIT MAY BE SUSPENDED, REVOKED, OR MODIFIED BY PRMD IN ACCORDANCE WITH SCC 11.24.040.
- ISSUANCE OF A GRADING/DRAINAGE PERMIT BY PRMD DOES NOT ELIMINATE THE RESPONSIBILITY OF THE OWNER TO SECURE PERMITS FROM OTHER AGENCIES WITH REGULATORY RESPONSIBILITIES FOR THE CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE WORK ON THESE PLANS. FAILURE TO OBTAIN ALL REQUIRED PERMITS MAY RESULT IN FINES FROM THE RESPECTIVE AGENCY.
- ISSUANCE OF A PERMIT BY PRMD TO CONSTRUCT A DAM OR A RESERVOIR DOES NOT ELIMINATE THE RESPONSIBILITY OF THE OWNER TO SECURE PERMITS FROM OTHER AGENCIES WITH REGULATORY RESPONSIBILITIES INCLUDING THE CALIFORNIA DIVISION OF DAMS WHEN WORK FALLS UNDER STATE JURISDICTION. FAILURE TO OBTAIN OTHER PERMITS MAY RESULT IN FINES FROM THE RESPECTIVE AGENCY.
- EXISTING DRAINAGE COURSES RECEIVING WATERS FROM THIS SITE AND LOCATED THROUGHOUT THIS SITE SHALL REMAIN OPEN AND CLEAR OF DEBRIS TO PROPERLY CONVEY STORM WATER. IF EXISTING DRAINAGE COURSES RECEIVING WATERS FROM THIS SITE ARE LOCATED IN THE COUNTY RIGHT-OF-WAY AND NEED MAINTENANCE, CONTACT THE DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS AT (707) 565-2231 FOR FURTHER ASSISTANCE. IN ANY EVENT, THE OWNER AND/OR CONTRACTOR SHALL BE HELD LIABLE FOR ANY DAMAGE DUE TO OBSTRUCTING NATURAL DRAINAGE PATTERNS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING UNDERGROUND SERVICE ALERT (U.S.A.), TOLL FREE AT 1-800-542-2444, AT LEAST TWO WORKING DAYS BUT NOT MORE THAN 14 CALENDAR DAYS PRIOR TO EXCAVATION. THE CONTRACTOR SHALL UNCOVER RELEVANT UTILITIES TO VERIFY THEIR LOCATION AND ELEVATION. IF UNEXPECTED OR CONFLICTING UTILITIES ARE ENCOUNTERED DURING EXCAVATION, NOTIFY U.S.A., THE UTILITY OWNER, AND/OR THE ENGINEER OF RECORD IMMEDIATELY. UTILITIES INCLUDE BUT ARE NOT LIMITED TO WATER, SEWER, ELECTRICAL, GAS, TELEPHONE, AND CABLE/TV. IF PRACTICAL, THE EXCAVATOR SHALL DELINEATE WITH WHITE PAINT OR OTHER SUITABLE MARKINGS THE AREA TO BE EXCAVATED.
- IN THE EVENT CULTURAL RESOURCES (I.E., HISTORICAL, ARCHAEOLOGICAL, AND PALEONTOLOGICAL RESOURCES AND HUMAN REMAINS) ARE DISCOVERED DURING GRADING OR OTHER CONSTRUCTION ACTIVITIES, WORK SHALL IMMEDIATELY BE HALTED WITHIN THE VICINITY OF THE FIND. THE NORTHEAST INFORMATION CENTER SHALL BE NOTIFIED AT (707) 664-0880. A QUALIFIED ARCHEOLOGIST SHALL BE CONSULTED FOR AN ON-SITE EVALUATION. ADDITIONAL MITIGATION MAY BE REQUIRED BY THE COUNTY PER THE ARCHEOLOGIST'S RECOMMENDATIONS AND SCC 11.16.100. IF HUMAN BURIALS OR HUMAN REMAINS ARE ENCOUNTERED, THE CONTRACTOR SHALL ALSO NOTIFY THE COUNTY CORONER AT (707) 565-5070.
- SHOULD GRADING OPERATIONS ENCOUNTER HAZARDOUS MATERIALS, OR WHAT APPEAR TO BE HAZARDOUS MATERIALS, STOP WORK IMMEDIATELY IN THE AFFECTED AREA AND CONTACT 911 OR THE APPROPRIATE AGENCY FOR FURTHER INSTRUCTION.
- RETAINING WALLS, UNLESS EXEMPTED PER SCC 7.13(A)(3), ARE NOT APPROVED UNDER A GRADING PERMIT. A SEPARATE BUILDING PERMIT IS REQUIRED.
- EQUIPMENT SHALL NOT CROSS OR DISTURB CHANNELS OF ACTIVELY FLOWING STREAMS WITHOUT PRMD APPROVED ROLLING PERMIT AND BEST MANAGEMENT PRACTICES (SCC 23.1 AND 11.04.1100).
- GRADING AND DRAINAGE IMPROVEMENTS SHALL BE SET BACK FROM STREAMS, LAKES, PONDS, AND WETLANDS IN COMPLIANCE WITH THE REQUIREMENTS OF SCC 11.16.120, 11.16.130, AND 11.16.140. EXISTING VEGETATION SHALL BE RETAINED IN STREAM SETBACK AREAS TO FILTER SOIL AND OTHER POLLUTANTS CARRIED IN STORMWATER.
- EXCESS SOIL SHALL BE REMOVED FROM THE SITE UNLESS DEPICTED TO REMAIN ON SITE PER THE APPROVED PLAN. THE SITE RECEIVING SOIL MAY REQUIRE A GRADING PERMIT UNLESS EXEMPTED BY SCC 11.04.020.
- CONTOURS, ELEVATIONS, AND SHAPES OF FINISHED SURFACES SHALL BE BLENDED WITH ADJACENT NATURAL TERRAIN TO ACHIEVE A CONSISTENT GRADE AND NATURAL APPEARANCE. THE TOP OF CUT SLOPES SHALL BE ROUNDED OFF TO BLEND WITH THE NATURAL TERRAIN. BORDERS OF CUT SLOPES AND FILLS SHALL BE ROUNDED OFF TO A MINIMUM RADIUS OF 5 FEET TO BLEND WITH THE NATURAL TERRAIN.
- FILL MATERIAL SHALL NOT INCLUDE ORGANIC, FROZEN, OR OTHER DELETERIOUS MATERIALS. NO ROCK OR SIMILAR IRREDUCIBLE MATERIAL GREATER THAN 6 INCHES IN ANY DIMENSION SHALL BE INCLUDED IN FILLS EXCEPT WHERE APPROVED BY THE SOILS ENGINEER. FILLS SHALL BE CONSTRUCTED IN LIFTS NOT EXCEEDING 8 INCHES IN DEPTH. COMPLETED FILLS SHALL BE STABLE, WELL-INTEGRATED, AND BONDED TO ADJACENT MATERIALS AND THE MATERIALS ON WHICH THEY REST. FILLS SHALL BE COMPACTED TO SUPPORT ANTICIPATED LOADS AND BE STABLE AT THE DESIGN SLOPES SHOWN ON THE APPROVED PLANS AND SPECIFICATIONS OR AS DIRECTED BY THE SOILS ENGINEER.
- GROUND SURFACES SHALL BE PREPARED TO RECEIVE FILL BY REMOVING VEGETATION, TOPSOIL, AND OTHER UNSUITABLE MATERIALS, AND SCARIFYING THE GROUND TO PROVIDE A BOND WITH THE FILL MATERIAL.
- FILL SHALL NOT BE PLACED ON NATURAL SLOPES STEEPER THAN 2H:1V (50%).
- FILLS INTENDED TO SUPPORT STRUCTURES OR SURCHARGES SHALL BE COMPACTED TO A MINIMUM OF 90% OF MAXIMUM DRY DENSITY, AS DETERMINED BY ASTM D 1557, MODIFIED PROCTOR. A HIGHER COMPACTED PERCENTAGE MAY BE REQUIRED BY THE SOILS ENGINEER.
- FILLS NOT INTENDED TO SUPPORT STRUCTURES OR SURCHARGES SHALL BE COMPACTED AS FOLLOWS: (1) FILL GREATER THAN 3 FEET IN DEPTH SHALL BE COMPACTED TO THE DENSITY SPECIFIED BY THE SOILS ENGINEER. (2) FILLS NO GREATER THAN 3 FEET IN DEPTH SHALL BE COMPACTED TO THE DENSITY NECESSARY FOR THE INTENDED USE OR AS DIRECTED BY THE SOILS ENGINEER.

**STORM DRAINS**

- TRENCH AND BACKFILL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CALTRANS' STANDARD PLAN A62-D FOR CONCRETE CULVERTS AND A62-F FOR METAL AND PLASTIC CULVERTS, EXCEPT THAT THE TRENCH WIDTH NEED ONLY BE ONE FOOT ON EACH SIDE OF THE PIPE.
- OFF-SITE DRAINAGE IMPROVEMENTS SHALL BE COMPLETED PRIOR TO NOVEMBER 1ST.

**MISCELLANEOUS**

- TESTING FOR RELATIVE DENSITIES SHALL BE IN ACCORDANCE WITH CALTRANS' TEST METHOD NO. 216 PART II OR ASTM 1557. THE USE OF SAND CONE METHODS - SUCH AS ASTM 1556 OR CALTRANS 216, PART I - SHALL NOT BE ALLOWED.
- PLACEMENT OF MAILBOXES MUST BE COORDINATED WITH AND APPROVED BY THE LOCAL BRANCH OF THE UNITED STATES POST OFFICE.

**GRADING AND DRAINAGE INSPECTION NOTES**

- THE PERMITTEE AND THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR THE WORK TO BE PERFORMED IN COMPLIANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND ANY PERMIT CONDITIONS. WORK SHALL BE SUBJECT TO INSPECTION AS REQUIRED BY PERMIT AUTHORITY, PRMD, TO VERIFY COMPLIANCE. THE CONTRACTOR SHALL CONSULT THE PROJECT JOB CARD FOR COORDINATION OF INSPECTION REQUESTS.
- PRIOR TO THE START OF ANY GRADING WORK, THE PERMITTEE SHALL HAVE A PRE-CONSTRUCTION CONSULTATION WITH PRMD STAFF TO DISCUSS THE SCOPE OF THE PROJECT, PERMIT CONDITIONS, REQUIRED INSPECTIONS, APPROPRIATE APPLICATION OF BEST MANAGEMENT PRACTICES (BMPs) AND ANY OTHER CONSTRUCTION ISSUES.
- INSPECTION REQUESTS SHALL BE MADE THROUGH THE SONOMA COUNTY AUTOMATED INSPECTION REQUEST SYSTEM (SELECTRON) 707-565-3551. SELECTRON ALLOWS SCHEDULING AND CANCELING OF INSPECTIONS FROM 8:00AM TO 12:00AM, 7 DAYS A WEEK.
- PRMD MAY REQUIRE PROFESSIONAL INSPECTIONS AND CERTIFICATIONS TO VERIFY PROPER COMPLETION OF THE WORK. WHERE THE USE OF PROFESSIONAL PERSONNEL IS REQUIRED, THESE PERSONNEL SHALL IMMEDIATELY REPORT IN WRITING TO PRMD AND THE PERMITTEE OR ANY PERMIT CONDITIONS. IF PROFESSIONAL PERSONNEL IS CHANGED DURING THE COURSE OF THE WORK, THE WORK SHALL BE STOPPED UNTIL THE REPLACEMENT INDIVIDUAL HAS NOTIFIED PRMD IN WRITING OF THEIR AGREEMENT TO ACCEPT RESPONSIBILITY FOR APPROVAL OF THE COMPLETED WORK WITHIN THE AREA OF THEIR TECHNICAL COMPETENCE.
- PRMD SHALL FINAL A PERMIT WHEN ALL WORK, INCLUDING THE INSTALLATION OF ALL DRAINAGE IMPROVEMENTS AND THEIR PROTECTIVE DEVICES, AND ALL STORM WATER BEST MANAGEMENT PRACTICES, HAVE BEEN COMPLETED IN COMPLIANCE WITH THE APPROVED PLANS AND SPECIFICATIONS, AND ALL FINAL REPORTS REQUIRED BY SCC 11.14.040A HAVE BEEN SUBMITTED AND ACCEPTED. FINAL REPORTS MAY INCLUDE: AS-BUILT PLANS, TESTING RECORDS, PROFESSIONAL OPINIONS, AND DECLARATIONS ABOUT COMPLETED WORK FROM PROFESSIONAL PERSONNEL. SIMILAR REPORTS MAY BE REQUIRED AT OTHER STAGES OF THE WORK.
- THE PERMITTEE SHALL PROVIDE ADEQUATE AND SAFE ACCESS TO THE SITE FOR INSPECTION DURING THE PERFORMANCE OF ALL WORK.
- DURING CONSTRUCTION ACTIVITIES, THE PROJECT SITE ADDRESS SHALL BE POSTED AS FOLLOWS: (1) THE STREET NUMBERS MUST BE AT LEAST FOUR INCHES TALL, WITH A REFLECTIVE SURFACE. (2) THE ADDRESS MUST BE VISIBLE FROM BOTH DIRECTIONS ALONG THE ROAD. (3) THE ADDRESS MUST BE POSTED AT ALL FORKS IN ANY ACCESS ROAD AND AT THE SITE.

**ADDITIONAL GENERAL NOTES**

UNAUTHORIZED CHANGES & USES: THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR OR LIABLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PERMIT AND RESOURCE MANAGEMENT DEPARTMENT AND THE PREPARER OF THESE PLANS.

THE CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

THE CONTRACTOR AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT LIABILITY ARISING FROM THE WILLFUL MISCONDUCT OR SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

THE LOCATIONS OF UNDERGROUND OBSTRUCTIONS SHOWN ON THE PLANS ARE APPROXIMATE ONLY AND SHOULD NOT BE TAKEN AS FINAL OR ALL INCLUSIVE. THE CONTRACTOR IS CAUTIONED THAT THE PLANS MAY NOT INCLUDE ALL EXISTING UTILITIES AND THAT THE OWNER AND ENGINEER ASSUME NO RESPONSIBILITY FOR OBSTRUCTIONS WHICH MAY BE ENCOUNTERED.

THE CONTRACTOR SHALL EXPOSE ALL EXISTING UTILITIES AS A FIRST ORDER OF WORK, INCLUDING SEWER AND STORM DRAINS, TO VERIFY DESIGN ASSUMPTIONS AND EXACT FIELD LOCATION.

EXISTING UTILITIES MAY REQUIRE RELOCATION AND/OR PROPOSED IMPROVEMENTS MAY REQUIRE GRADE OR ALIGNMENT REVISION DUE TO FIELD CONDITIONS.

THE CONTRACTOR IS CAUTIONED NOT TO ORDER PREFABRICATED ITEMS OR INSTALL ANY IMPROVEMENTS UNTIL ALL CONFLICTS ARE RESOLVED. ALL IMPROVEMENTS INSTALLED OR ORDERED PRIOR TO CONFLICT RESOLUTION SHALL BE DONE SOLELY AT THE CONTRACTOR'S RISK AND AT NO EXPENSE TO THE OWNER.

THE CONTRACTOR SHALL RECOGNIZE THAT UNDERGROUND FACILITIES NOT SHOWN AS CIVIL IMPROVEMENTS (P&E, TELEPHONE, TELEVISION, IRRIGATION, ETC.) SHALL BE COORDINATED AND CONSTRUCTED PRIOR TO PLACEMENT OF BASE ROCK AND PAVING.

**EARTHWORK SUMMARY**

EARTHWORK QUANTITIES ARE APPROXIMATE ONLY AND COMPUTED FROM EXISTING TO FINISHED LOT GRADE OR SUBGRADE. ACTUAL VOLUMES ARE VARIABLE BASED ON THE CONTRACTOR'S METHODS OF STRIPPING, COMPACTION, TRENCHING, ETC.

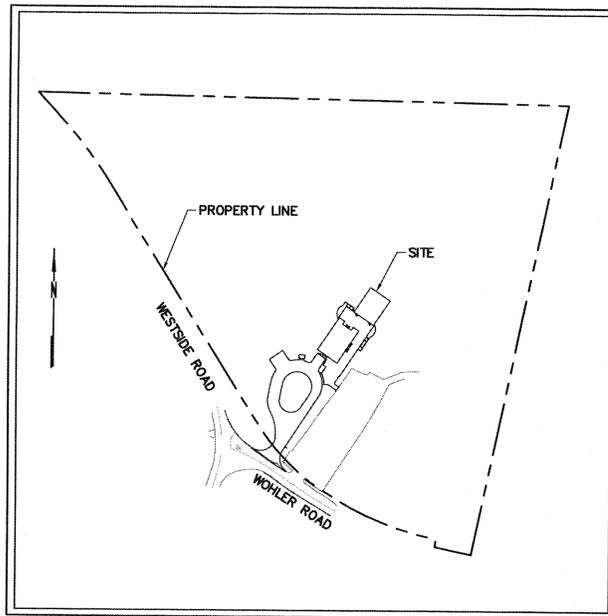
EARTHWORK TO BALANCE ON SITE BASED ON ESTIMATED IMPORT/EXPORT.

REDISTRIBUTE STRIPPING ON LOTS.

STOCKPILE STRIPPING AS SHOWN.

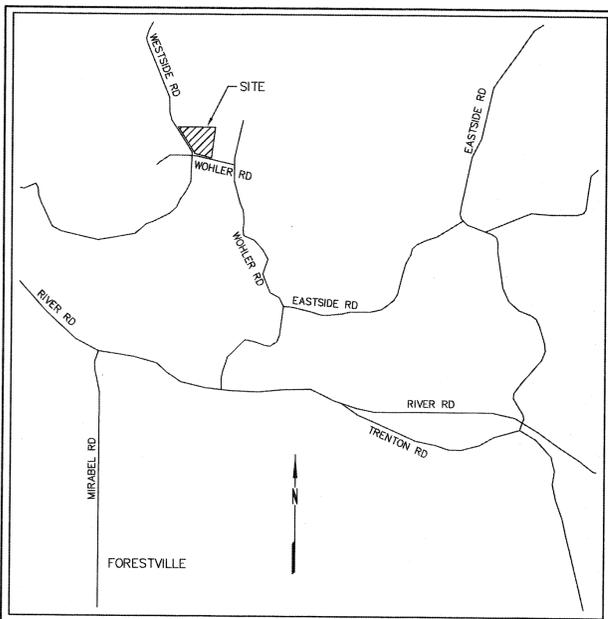
**ESTIMATED QUANTITY**

|            |         |
|------------|---------|
| EXCAVATION | 400 CY  |
| EMBANKMENT | 1250 CY |
| IMPORT     | 850 CY  |
| EXPORT     | 0 CY    |



**PROJECT LOCATION MAP**

NO SCALE



**VICINITY MAP**

NO SCALE

**MAPPING**

TOPOGRAPHIC INFORMATION SHOWN HEREON WAS PROVIDED TO BKF ENGINEERS BY QUATTROCCHI KWOK ARCHITECTS ON NOVEMBER 28, 2012.

SURVEYING WAS PERFORMED BY THE SONOMA COUNTY WATER AGENCY.

"THE BASIS OF BEARINGS AND COORDINATES FOR THE SURVEY WE PROVIDED IS THE WATER AGENCY'S LOCAL CONTROL NETWORK FOR THE WOHLER/MIRABEL FACILITIES. THE WATER AGENCY'S LOCAL CONTROL NETWORK FOR THE WOHLER/MIRABEL FACILITIES IS BASED UPON THE NORTH AMERICAN DATUM OF 1983 (1992), AND NORTH AMERICAN VERTICAL DATUM OF 1988 (HPGN-D). COORDINATES ARE BASED UPON THE CALIFORNIA COORDINATE SYSTEM OF 1983, ZONE 2. UNITS ARE U.S. SURVEY FEET. WE SET A STEEL "SURVEY MARK" NAIL WITH A 1.5" DIA. BRASS WASHER STAMPED "S.C.W.A. CONTROL" IN THE PARKING ADJACENT TO THE SITE (POINT #100 IN THE SURVEY POINT DATABASE) THAT COULD BE LISTED AS A TEMPORARY BENCH MARK (TBM), ELEVATION = 77.98 FEET."

—JOHN WONAGHAN  
WATER AGENCY LAND SURVEYOR  
SONOMA COUNTY WATER AGENCY  
(EMAIL SENT TO BRIAN PAULSON MARCH 25, 2014)

OWNER: SONOMA COUNTY WATER AGENCY  
404 AVIATION BOULEVARD  
SANTA ROSA, CA 95403  
PH: 526-5370

CIVIL ENGINEER: BKF ENGINEERS  
325 TESCONI CIRCLE  
SANTA ROSA, CA. 95401  
PH: 583-8500  
FAX: 583-8539

ARCHITECT: QUATTROCCHI KWOK ARCHITECTS  
636 FIFTH STREET  
SANTA ROSA, CA 95404  
PH: 576-0829  
FAX: 576-0295

**ABBREVIATIONS**

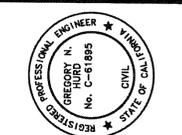
|      |                          |       |                                |
|------|--------------------------|-------|--------------------------------|
| ±    | MORE OR LESS             | FL    | SURFACE FLOWLINE               |
| AB   | AGGREGATE BASE           | GB    | GRADE BREAK                    |
| AC   | ASPHALT CONCRETE         | HDPE  | HIGH-DENSITY POLYETHYLENE PIPE |
| APN  | ASSESSOR'S PARCEL NUMBER | INV   | INVERT-BOTTOM INSIDE OF PIPE   |
| CBC  | CALIFORNIA BUILDING CODE | R     | RADIUS                         |
| CMP  | CORRUGATED METAL PIPE    | RWDW  | REDWOOD                        |
| CONC | CONCRETE                 | RSP   | ROCK SLOPE PROTECTION          |
| DIA  | DIAMETER                 | SD    | STORM DRAIN                    |
| (E)  | EXISTING                 | TC    | TOP FACE OF CURB               |
| EG   | EXISTING GROUND          | TG    | TOP OF GRATE                   |
| FG   | FINISHED GRADE           | (TYP) | TYPICAL                        |

**SYMBOLS & LEGEND**

| EXISTING | PROPOSED |   |
|----------|----------|---|
| (Symbol) | (Symbol) | STREET SIGN   |
| (Symbol) | (Symbol) | NYLOPLAST DRAINAGE STRUCTURE                                    |
| (Symbol) | (Symbol) | TREE  |
| (Symbol) | (Symbol) | PROPERTY LINE   |
| (Symbol) | (Symbol) | GRADE BREAK   |
| (Symbol) | (Symbol) | FLOW LINE   |
| (Symbol) | (Symbol) | FENCE   |
| (Symbol) | (Symbol) | TREE PROTECTION FENCE   |
| (Symbol) | (Symbol) | RETAINING WALL  |
| (Symbol) | (Symbol) | FACE OF CURB  |
| (Symbol) | (Symbol) | STORM DRAIN   |
| (Symbol) | (Symbol) | UTILITY POINT OF CONNECTION                                     |
| (Symbol) | (Symbol) | ASPHALT   |
| (Symbol) | (Symbol) | CONCRETE  |
| (Symbol) | (Symbol) | DETAIL IDENTIFICATION SHEET WHERE DETAIL IS SHOWN               |
| (Symbol) | (Symbol) | CROSS SECTION IDENTIFICATION SHEET WHERE CROSS SECTION IS SHOWN |



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



APR 24 2014  
GREGORY N. HURD  
C 61895



**WESTSIDE FACILITY**  
SONOMA COUNTY WATER AGENCY

9703 Wohler Rd.  
Forestville, CA

ARCH PROJECT NO: 1245.00  
DRAWN BY: EJB  
DRAWING SCALE: AS SHOWN

CD's  
APRIL 7, 2014

**PROJECT INFORMATION**

SHEET NUMBER

1 OF 4

PRMD APPROVED FOR CONSTRUCTION  
JUNE 18, 2014



QUATTROCCHI KWOK  
ARCHITECTS  
636 FIFTH ST.  
SANTA ROSA, CA  
95404  
(707) 576-0829  
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SONOMA COUNTY  
WATER AGENCY

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Forestville, CA

3/20/14 REVISED PER COUNTY OF SONOMA FIRE AND EMERGENCY SERVICES DEPARTMENT MEMO 2/10/14

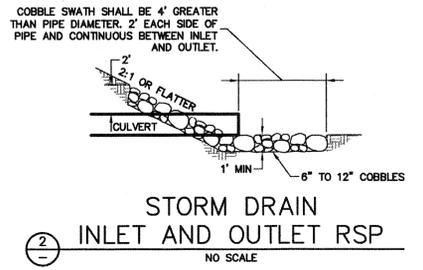
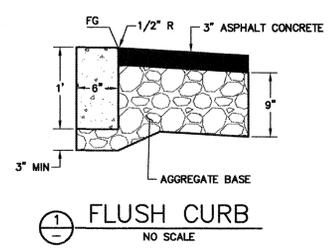
ARCH PROJECT NO: 1245.00  
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CD's  
APRIL 7, 2014

**SITE LAYOUT PLAN**

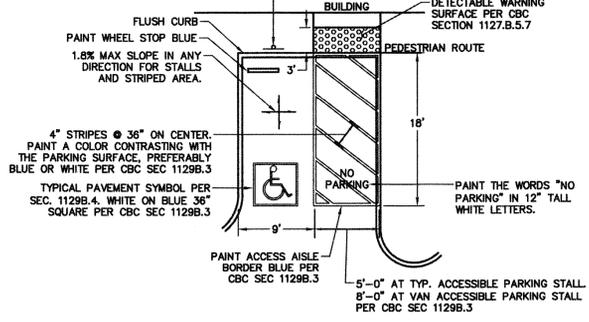
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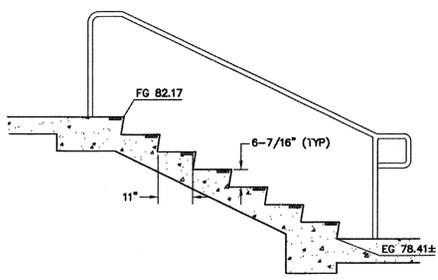


NOTES  
INSTALL A 17\"/>

70 SQ. IN. DARK BLUE REFLECTIVE PORCELAIN, ENAMEL STEEL SIGN WITH WHITE INTERNATIONAL SYMBOL OF ACCESSIBILITY MOUNTED 80\"/>

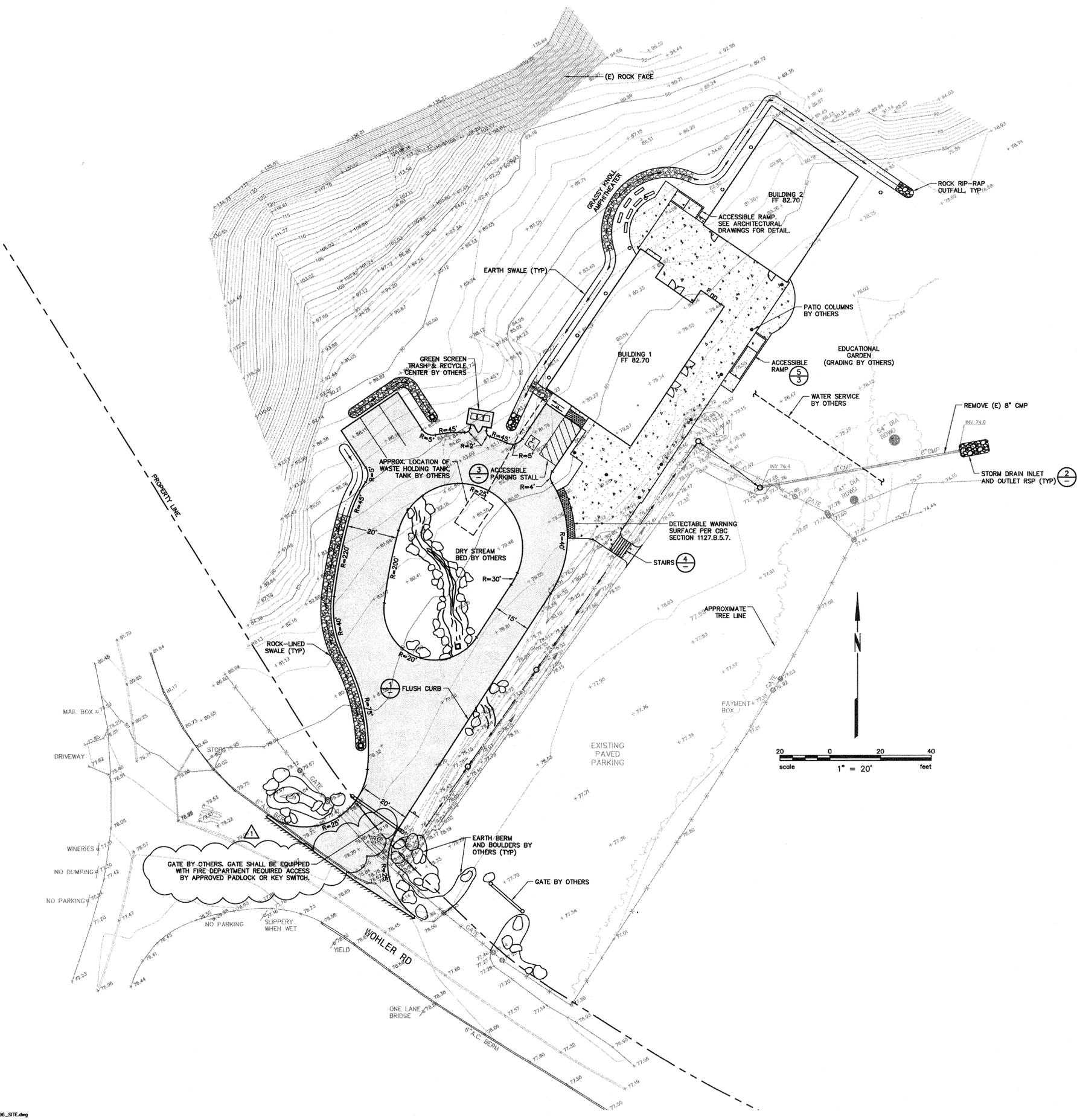


3 ACCESSIBLE PARKING STALL  
NO SCALE



STAIR NOTES  
PROVIDE STAIR RISERS HAVING EQUAL HEIGHTS IN ACCORDANCE WITH THE CALIFORNIA BUILDING CODE.  
PROVIDE A BROOMED FINISH ON THE STAIRS AND ASSOCIATED CONCRETE WALKWAYS.  
SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL DETAILS.

4 STAIRS  
NO SCALE



Plot: Apr 24, 2014, at 1:49pm  
129086\_SITE.dwg

PRMD APPROVED  
FOR CONSTRUCTION  
JUNE 18, 2014



QUATTROCCHI KWOK  
ARCHITECTS  
636 FIFTH ST.  
SANTA ROSA, CA  
95404  
(707) 576-0829  
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APR 24 2014  
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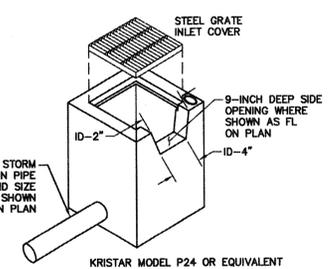
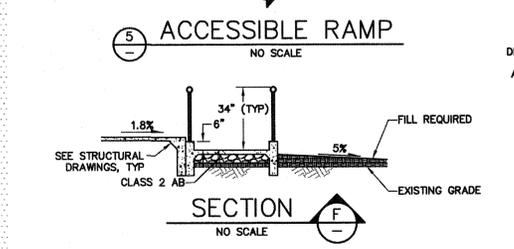
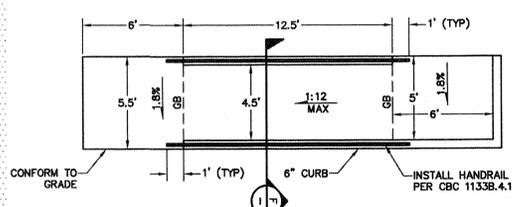
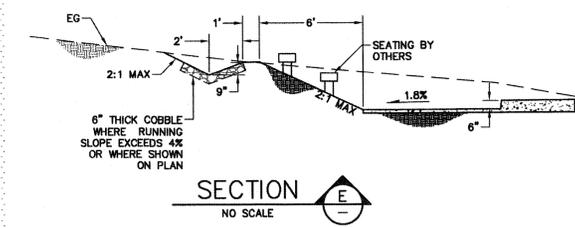
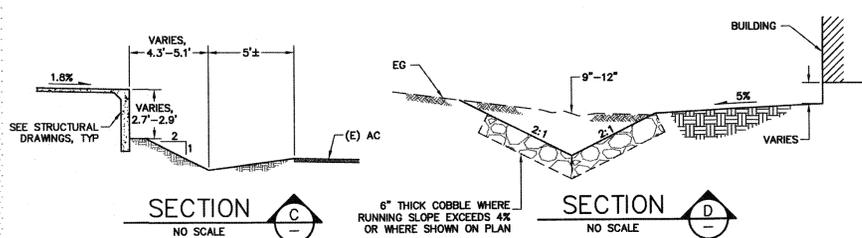
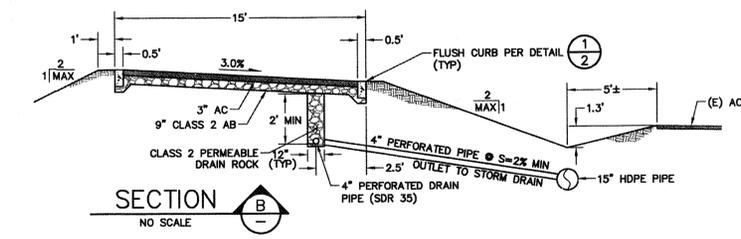
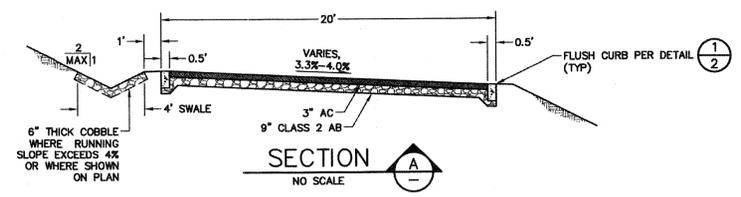
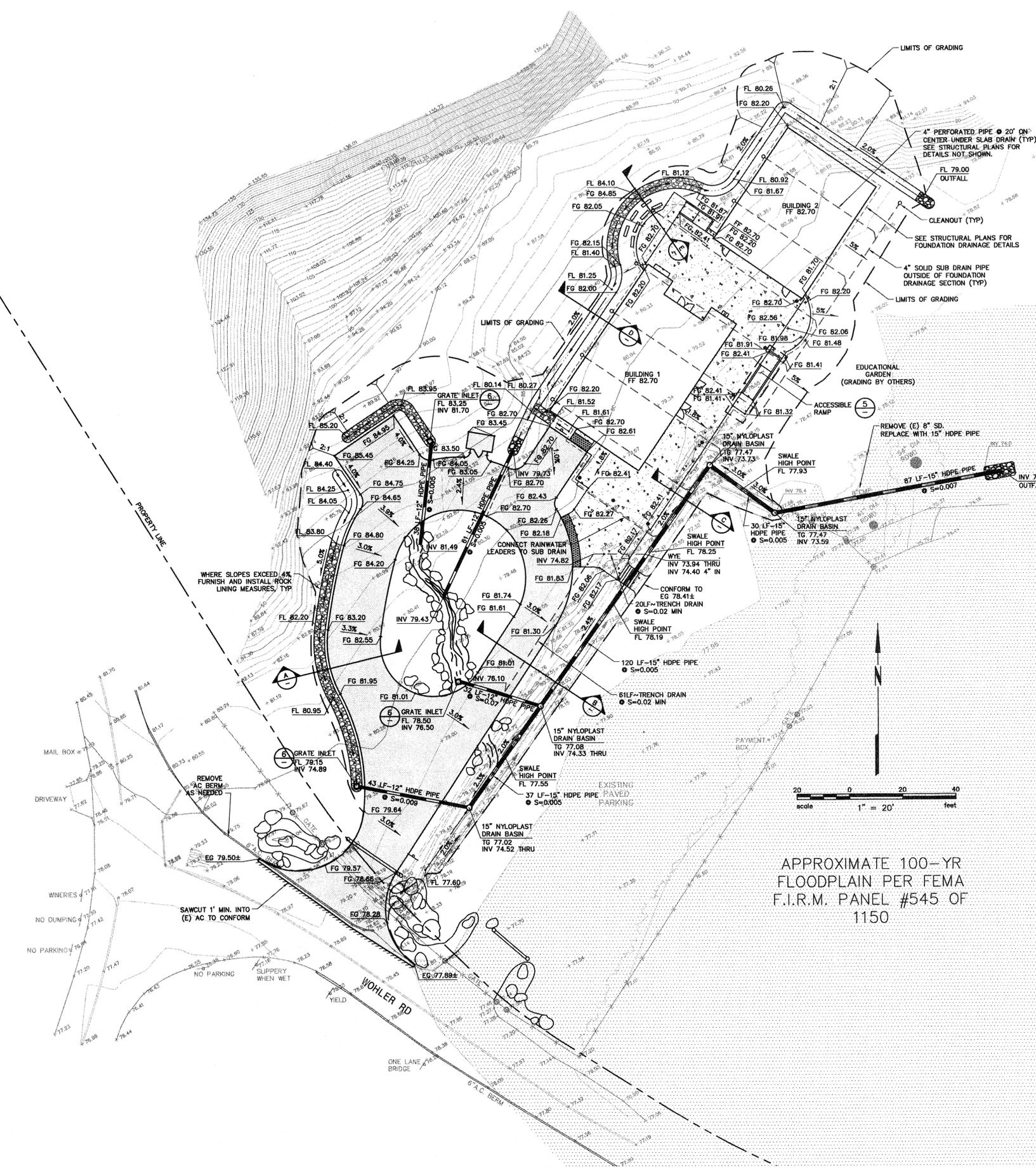
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DRAWING SCALE: AS SHOWN

CD's  
APRIL 7, 2014

**GRADING AND DRAINAGE PLAN**  
SHEET NUMBER

3 OF 4



6 GRATE INLET  
NO SCALE

APPROXIMATE 100-YR  
FLOODPLAIN PER FEMA  
F.I.R.M. PANEL #545 OF  
1150

PRMD APPROVED  
FOR CONSTRUCTION  
JUNE 18, 2014

**EROSION PREVENTION AND SEDIMENT CONTROL NOTES**

**GENERAL**

1. PERFORM EROSION PREVENTION AND SEDIMENT CONTROL IN ACCORDANCE WITH CHAPTER 11A AND 11 OF THE SONOMA COUNTY CODE (SCC).
2. THE APPROVED PLANS SHALL CONFORM WITH THE PERMIT AND RESOURCE MANAGEMENT DEPARTMENT'S (PRMD) EROSION PREVENTION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMP'S) GUIDE AS POSTED ON THE PRMD WEBSITE.
3. THE OWNER IS RESPONSIBLE FOR PREVENTING STORM WATER POLLUTION GENERATED FROM THE CONSTRUCTION SITE YEAR ROUND. WORK SITES WITH INADEQUATE EROSION AND SEDIMENT CONTROL MAY BE SUBJECT TO A STOP WORK ORDER.
4. IF DISCREPANCIES OCCUR BETWEEN THESE NOTES, MATERIAL REFERENCED HEREIN OR MANUFACTURER'S RECOMMENDATIONS, THEN THE MOST PROTECTIVE SHALL APPLY.
5. AT ALL TIMES THE OWNER IS RESPONSIBLE FOR OBTAINING AND COMPLYING WITH THE STATE OF CALIFORNIA NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT WASTE DISCHARGE REQUIREMENTS FOR DISCHARGES OF STORM WATER RUNOFF ASSOCIATED WITH CONSTRUCTION ACTIVITY. CONSTRUCTION ACTIVITIES INCLUDE BUT ARE NOT LIMITED TO CLEARING, GRADING, EXCAVATION, STOCKPILING, AND RECONSTRUCTION OF EXISTING FACILITIES INVOLVING REMOVAL AND REPLACEMENT.

**RAINY SEASON OPERATIONS**

1. THE OWNER MUST IMPLEMENT AN EFFECTIVE COMBINATION OF EROSION PREVENTION AND SEDIMENT CONTROL ON ALL DISTURBED AREAS DURING THE RAINY SEASON (OCTOBER 15 - APRIL 15). CONSTRUCTION GRADING AND DRAINAGE IMPROVEMENT SHALL BE PERMITTED DURING THE RAINY SEASON ONLY WHEN ON-SITE SOIL CONDITIONS PERMIT THE WORK TO BE PERFORMED IN COMPLIANCE WITH SCC CHAPTER 11 AND 11A. STORM WATER BMP'S REFERENCED OR DETAILED IN THE PERMIT AUTHORITY'S BEST MANAGEMENT PRACTICES GUIDE SHALL BE IMPLEMENTED AND FUNCTIONAL ON THE SITE AT ALL TIMES.
2. THE AREA OF ERODIBLE LAND EXPOSED AT ANY ONE TIME DURING THE WORK SHALL NOT EXCEED 1 ACRE OF ERODIBLE LAND EXPOSED BY THE WORK AREA, WHICHEVER IS GREATER, AND THE TIME OF EXPOSURE SHALL BE MINIMIZED TO THE MAXIMUM EXTENT PRACTICABLE.
3. AGRICULTURAL GRADING AND DRAINAGE IMPROVEMENTS, AND INITIAL LAND PREPARATION WORK FOR VINEYARD AND ORCHARD PLANTING, SHALL BE PERMITTED DURING THE RAINY SEASON ONLY FROM APRIL 1 TO APRIL 15, AND ONLY WHEN ON-SITE SOIL CONDITIONS PERMIT THE WORK TO BE PERFORMED IN COMPLIANCE WITH SCC CH. 11A AND 11.

**YEAR-ROUND REQUIREMENTS**

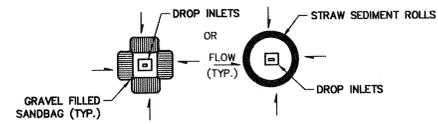
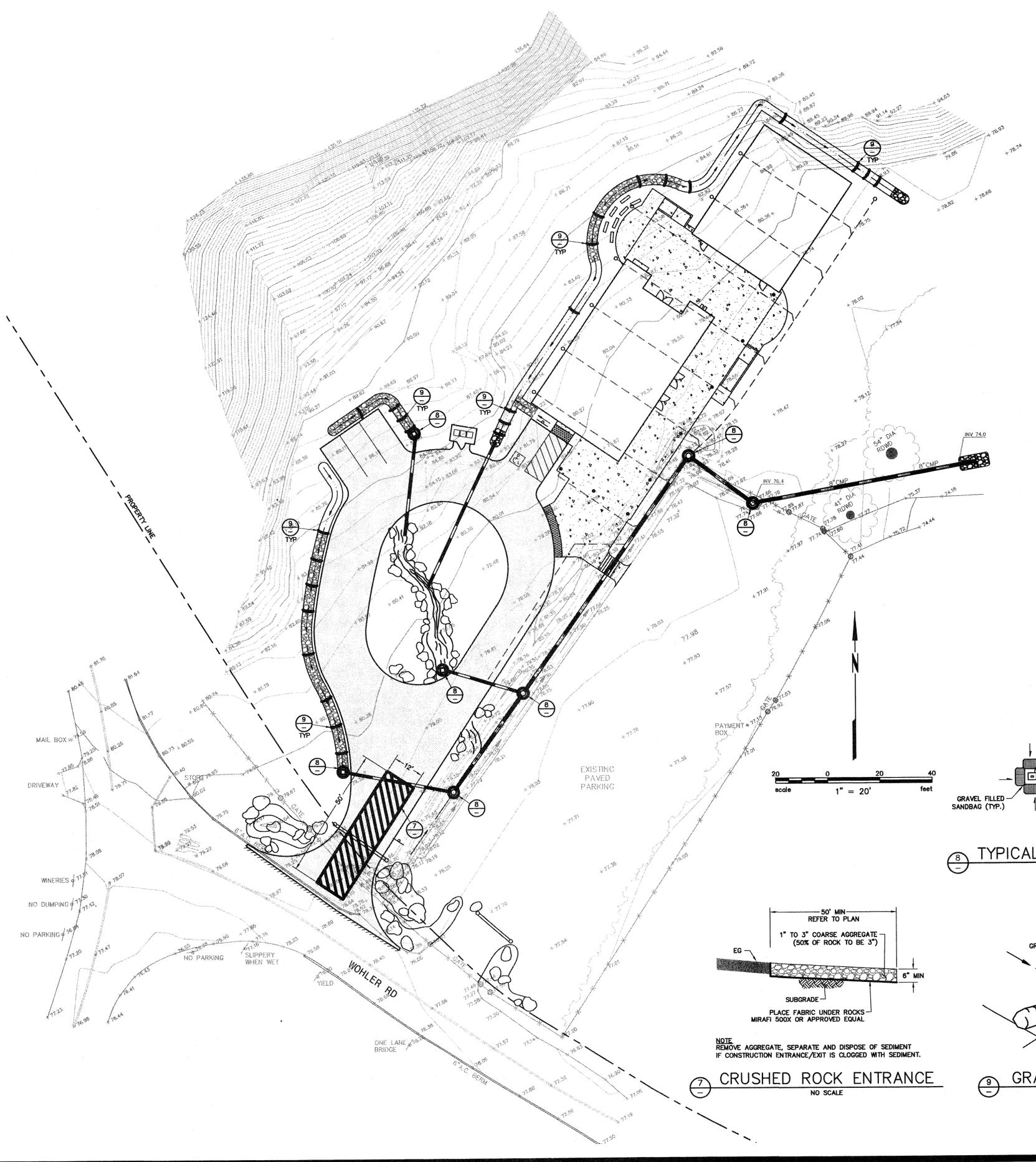
1. DURING THE NON-RAINY SEASON, ON ANY DAY WHEN THE NATIONAL WEATHER SERVICE FORECAST IS A CHANCE OF RAIN OF 30% OR GREATER WITHIN THE NEXT 24 HOURS, STORM WATER BMP'S REFERENCED OR DETAILED IN PRMD'S BEST MANAGEMENT PRACTICES GUIDE SHALL BE IMPLEMENTED, INSTALLED, AND FUNCTIONAL ON THE SITE TO PREVENT SOIL AND OTHER POLLUTANT DISCHARGES. AT ALL OTHER TIMES, BMP'S SHOULD BE STORED ON SITE IN PREPARATION FOR INSTALLATION PRIOR TO RAIN EVENTS.
2. EROSION PREVENTION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED BY THE OWNER BEFORE FORECASTED STORM EVENTS AND AFTER STORM EVENTS TO ENSURE MEASURES ARE FUNCTIONING PROPERLY. EROSION PREVENTION AND SEDIMENT CONTROL MEASURES THAT HAVE FAILED OR ARE NO LONGER EFFECTIVE SHALL BE PROMPTLY REPLACED. EROSION PREVENTION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED UNTIL DISTURBED AREAS ARE STABILIZED.
3. THE LIMITS OF GRADING SHALL BE DEFINED AND MARKED ON SITE TO PREVENT DAMAGE TO SURROUNDING VEGETATION. PRESERVATION OF EXISTING VEGETATION SHALL OCCUR TO THE MAXIMUM EXTENT PRACTICABLE. ANY EXISTING VEGETATION WITHIN THE LIMITS OF GRADING THAT IS TO REMAIN UNDISTURBED BY THE WORK SHALL BE IDENTIFIED AND PROTECTED FROM DAMAGE BY MARKING, FENCING, OR OTHER MEASURES.
4. CHANGES TO THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN MAY BE MADE TO RESPOND TO FIELD CONDITIONS AND SHALL BE NOTED ON THE PLAN.
5. DISCHARGES OF POTENTIAL POLLUTANTS FROM CONSTRUCTION SITES SHALL BE PREVENTED USING SOURCE CONTROLS TO THE MAXIMUM EXTENT PRACTICABLE. POTENTIAL POLLUTANTS INCLUDE BUT ARE NOT LIMITED TO: SEDIMENT, TRASH, NUTRIENTS, PATHOGENS, PETROLEUM HYDROCARBONS, METALS, CONCRETE, CEMENT, ASPHALT, LIME, PAINT, STAINS, GLUES, WOOD PRODUCTS, PESTICIDES, HERBICIDES, CHEMICALS, HAZARDOUS WASTE, SANITARY WASTE, VEHICLE OR EQUIPMENT WASH WATER, AND CHLORINATED WATER.
6. ENTRANCE(S) TO THE CONSTRUCTION SITE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF POTENTIAL POLLUTANTS OFFSITE. POTENTIAL POLLUTANTS DEPOSITED ON PAVED AREAS WITHIN THE COUNTY RIGHT-OF-WAY, SUCH AS ROADWAYS AND SIDEWALKS, SHALL BE PROPERLY DISPOSED OF AT THE END OF EACH WORKING DAY OR MORE FREQUENTLY AS NECESSARY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING CONSTRUCTION VEHICLES LEAVING THE SITE ON A DAILY BASIS TO PREVENT DUST, SILT, AND DIRT FROM BEING RELEASED OR TRACKED OFFSITE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AT THE END OF EACH WORKING DAY OR MORE OFTEN AS NECESSARY.
7. ALL DISTURBED AREAS SHALL BE PROTECTED BY USING EROSION PREVENTION MEASURES TO THE MAXIMUM EXTENT PRACTICABLE, SUCH AS ESTABLISHING VEGETATION COVERAGE, HYDROSEEDING, STRAW MULCH, GEOTEXTILES, PLASTIC COVERS, BLANKETS OR MATS. TEMPORARY OR PERMANENT REVEGETATION SHALL BE INSTALLED AS SOON AS PRACTICAL AFTER VEGETATION REMOVAL BUT IN ALL CASES PRIOR TO OCTOBER 15. PRIOR TO FINAL INSPECTION, ALL DISTURBED AREAS SHALL BE REVEGETATED OR LANDSCAPING SHALL BE INSTALLED.
8. WHENEVER IT IS NOT POSSIBLE TO USE EROSION PREVENTION MEASURES ON EXPOSED SLOPES, SEDIMENT CONTROL DEVICES SUCH AS FIBER ROLLS AND SILT FENCES SHALL BE INSTALLED TO PREVENT SEDIMENT MIGRATION. FIBER ROLLS AND SILT FENCES SHALL BE TRENCHED AND KEVED INTO THE SOIL AND INSTALLED ON CONTOUR. SILT FENCES SHALL BE INSTALLED APPROXIMATELY 2 TO 5 FEET FROM TOE OF SLOPE.
9. HYDROSEEDING SHALL BE CONDUCTED IN A THREE STEP PROCESS. FIRST, EVENLY APPLY SEED MIX AND FERTILIZER TO THE EXPOSED SLOPE. SECOND, EVENLY APPLY MULCH OVER THE SEED AND FERTILIZER. THIRD, STABILIZE THE MULCH IN PLACE. AN EQUIVALENT SINGLE STEP PROCESS, WITH SEED, FERTILIZER, WATER, AND BONDED FIBERS IS ACCEPTABLE.

APPLICATIONS SHALL BE BROADCASTED MECHANICALLY OR MANUALLY AT THE RATES SPECIFIED BELOW. SEED MIX AND FERTILIZER SHALL BE WORKED INTO THE SOIL BY ROLLING OR TAMPING. IF STRAW IS USED AS MULCH, STRAW SHALL BE DERIVED FROM WHEAT, RICE, OR BARLEY AND BE APPROXIMATELY 6 TO 8 INCHES IN LENGTH. STABILIZATION OF MULCH SHALL BE DONE HYDRAULICALLY BY APPLYING AN EMULSION OR MECHANICALLY BY CRIMPING OR PUNCHING MULCH INTO THE SOIL. EQUIVALENT METHODS AND MATERIALS MAY BE USED ONLY IF THEY ADEQUATELY PROMOTE VEGETATION GROWTH AND PROTECT EXPOSED SLOPES.

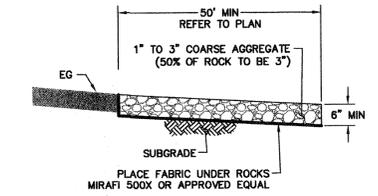
| MATERIALS                            | APPLICATION RATE (POUNDS PER ACRE) |
|--------------------------------------|------------------------------------|
| SEED MIX                             |                                    |
| Bromus mollis (BLANDO BROME)         | 40                                 |
| Trifolium hirtum (HYKON ROSE CLOVER) | 20                                 |
| FERTILIZER                           |                                    |
| 16-20-0 & 15% SULPHUR                | 500                                |
| MULCH                                |                                    |
| STRAW                                | 4000                               |
| HYDRAULIC STABILIZING*               | 75-100                             |
| M-BINDER OR SENTINEL                 | PER MANUFACTURER                   |
| EQUIVALENT MATERIAL                  |                                    |

\*NON-ASPHALTIC, DERIVED FROM PLANTS

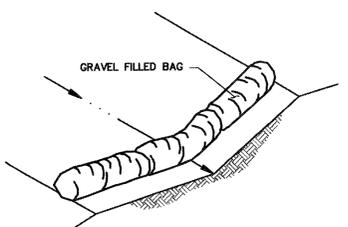
10. DUST CONTROL SHALL BE PROVIDED BY THE CONTRACTOR DURING ALL PHASES OF CONSTRUCTION.
11. STORM DRAIN INLETS SHALL BE PROTECTED FROM POTENTIAL POLLUTANTS UNTIL DRAINAGE CONVEYANCE SYSTEMS ARE FUNCTIONAL AND CONSTRUCTION HAS BEEN COMPLETED.
12. ENERGY DISSIPATORS SHALL BE INSTALLED AT STORM DRAIN OUTLETS WHICH MAY CONVEY EROSION STORM WATER FLOW.
13. SOIL, MATERIAL STOCKPILES, AND FERTILIZING MATERIAL SHALL BE PROPERLY PROTECTED TO MINIMIZE SEDIMENT AND POLLUTANT TRANSPORT FROM THE CONSTRUCTION SITE.
14. SOLID WASTE, SUCH AS TRASH, DISCARDED BUILDING MATERIALS AND DEBRIS, SHALL BE PLACED IN DESIGNATED COLLECTION AREAS OR CONTAINERS. THE CONSTRUCTION SITE SHALL BE CLEARED OF SOLID WASTE DAILY OR AS NECESSARY. REGULAR REMOVAL AND PROPER DISPOSAL SHALL BE COORDINATED BY THE CONTRACTOR.
15. A CONCRETE WASHOUT AREA, SUCH AS A TEMPORARY PIT, SHALL BE DESIGNATED TO CLEAN CONCRETE TRUCKS AND TOOLS. AT NO TIME SHALL CONCRETE PRODUCTS AND WASTE BE ALLOWED TO ENTER COUNTY WATERWAYS SUCH AS CREEKS OR STORM DRAINS. NO WASHOUT OF CONCRETE, MORTAR MIXERS, OR TRUCKS SHALL BE ALLOWED ON SOIL.
16. PROPER APPLICATION, CLEANING, AND STORAGE OF POTENTIALLY HAZARDOUS MATERIALS, SUCH AS PAINTS AND CHEMICALS, SHALL BE CONDUCTED TO PREVENT THE DISCHARGE OF POLLUTANTS.
17. TEMPORARY RESTROOMS AND SANITARY FACILITIES SHALL BE LOCATED AND MAINTAINED DURING CONSTRUCTION ACTIVITIES TO PREVENT THE DISCHARGE OF POLLUTANTS.
18. APPROPRIATE VEHICLE STORAGE, FUELING, MAINTENANCE, AND CLEANING AREAS SHALL BE DESIGNATED AND MAINTAINED TO PREVENT DISCHARGE OF POLLUTANTS.



8 TYPICAL SEDIMENT DEVICES  
NO SCALE



7 CRUSHED ROCK ENTRANCE  
NO SCALE



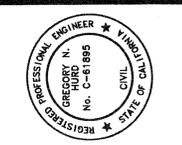
9 GRAVEL BAG DETAIL  
NO SCALE

NOTE: REMOVE AGGREGATE, SEPARATE AND DISPOSE OF SEDIMENT IF CONSTRUCTION ENTRANCE/EXIT IS LOGGED WITH SEDIMENT.

PRMD APPROVED FOR CONSTRUCTION  
JUNE 18, 2014



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APR 24 2014  
GREGORY N. HURD  
C 61895



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Forestville, CA

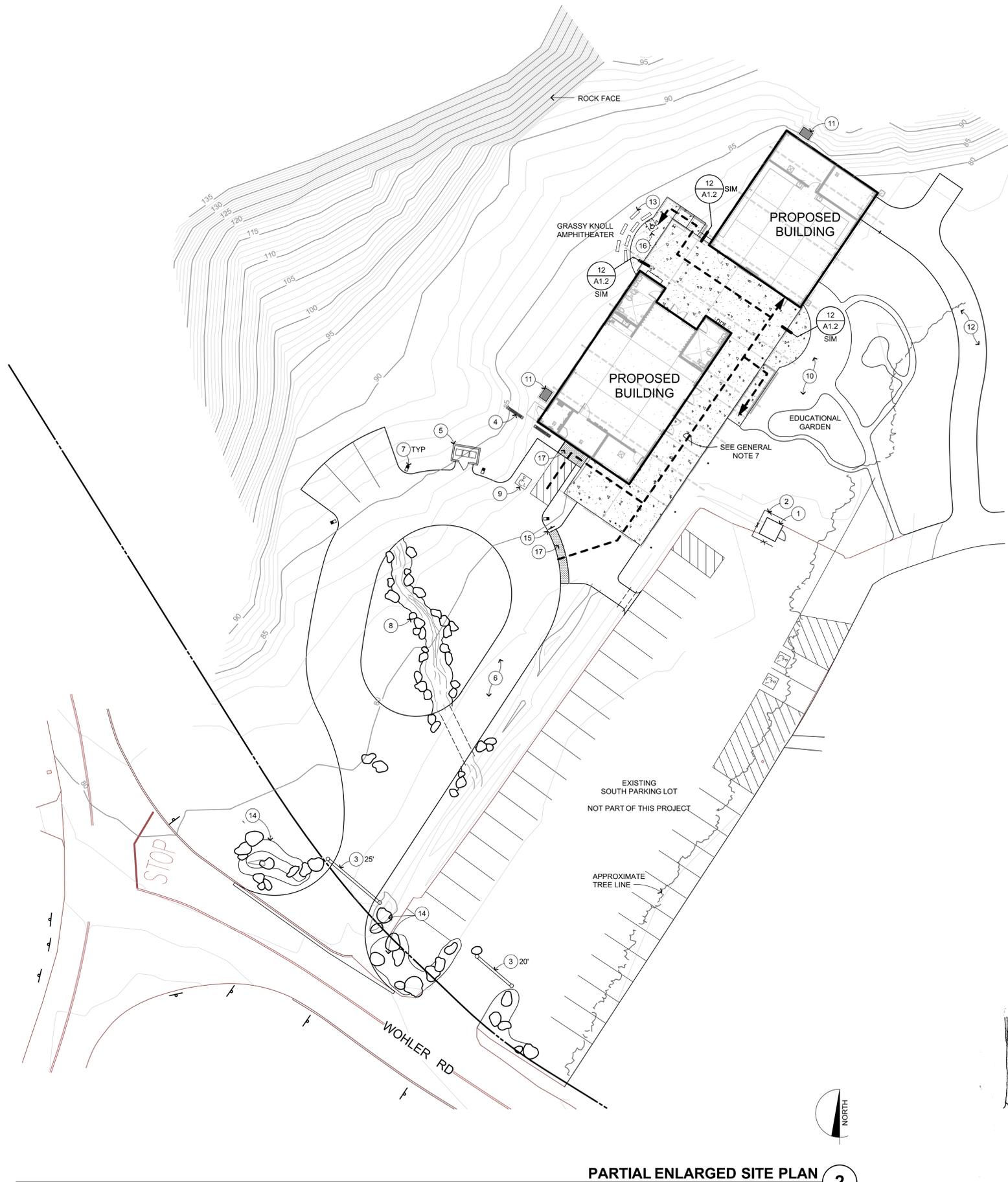
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APRIL 7, 2014

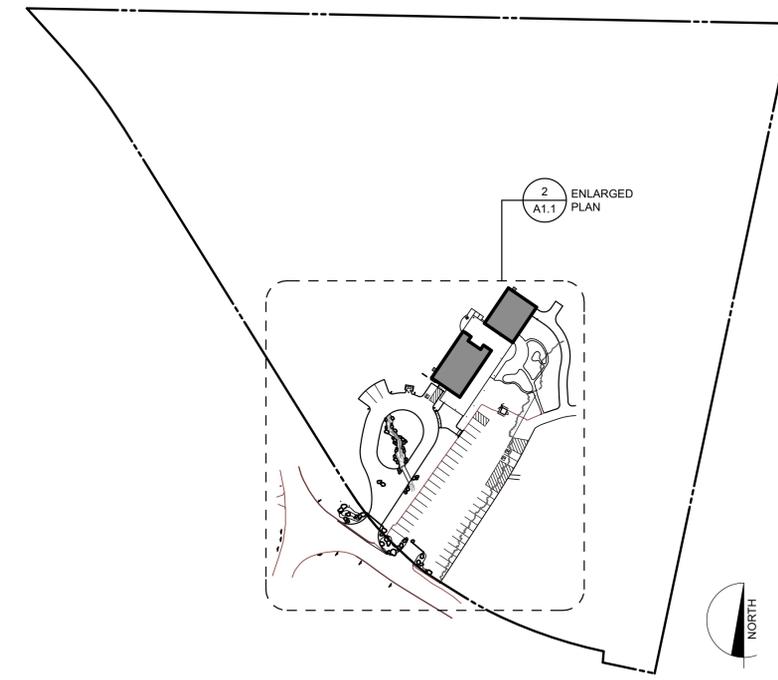
SEDIMENT CONTROL PLAN  
SHEET NUMBER

4 OF 4

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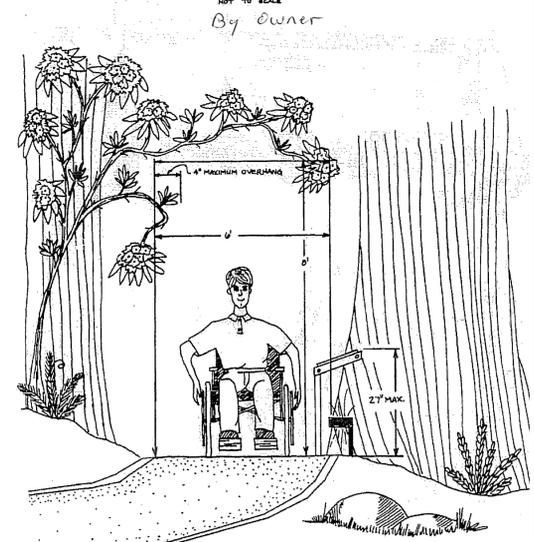


**PARTIAL ENLARGED SITE PLAN** 2  
1" = 20'



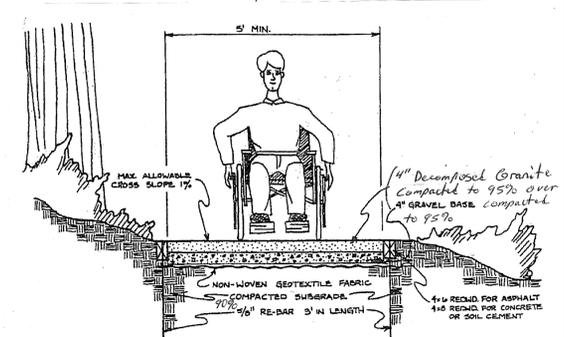
**OVERALL SITE PLAN** 1  
1" = 100'

**ACCESSIBILITY OBSTRUCTION GUIDELINE**  
NOT TO SCALE  
By Owner



All accessible trail surfaces shall be firm, textured for good traction when wet, free of standing water and suitable for year-round use. Vertical surface differences shall not exceed 1/4 inch and horizontal joints and gaps shall not exceed 1/2 inch. Gratings and decking shall have openings of less than 1/2 inch width and run perpendicular to the direction of travel.

**ACCESSIBILITY TRAIL CONSTRUCTION**  
NOT TO SCALE  
By Owner



**KEY NOTES**

- 1 (E) PORT-A-POTTY RELOCATED AS SHOWN
- 2 WOOD FENCE 16 A1.3
- 3 VEHICLE CONTROL GATE, SIZE AS NOTED 2 A1.2
- 4 GREEN SCREEN ELEMENT 11 A1.2
- 5 GREEN SCREEN REFUSE ENCLOSURE 3 A1.3
- 6 A.C. PAVING, S.C.D.
- 7 PATHLIGHTS, S.E.D.
- 8 DRY STREAM BED, BOULDERS & LANDSCAPING BY OWNER
- 9 ACCESSIBLE PARKING, S.C.D.
- 10 EDUCATIONAL GARDEN, ADA PATHWAYS PER CALIFORNIA STATE PARKS TRAIL ACCESSIBILITIES STANDARDS AND LANDSCAPING BY OWNER. CONTRACTOR TO GRADE AREA AS SHOWN ON CIVIL DWG'S
- 11 GROUND MOUNTED MECHANICAL UNIT ON CONC. PAD, S.M.D.
- 12 GRAVEL DRIVE, N.I.C.
- 13 STONE SEATS, N.I.C.
- 14 EARTH BERMS AND BOULDERS, CONTRACTOR TO CREATE EARTH BERMS FROM SITE SPOILS, LANDSCAPE AND BOULDERS BY OTHERS.
- 15 REFLECTORIZED SIGN TO READ "PASSENGER LOADING ZONE ONLY" WITH INTERNATIONAL SYMBOL OF ACCESSIBILITY 8 A1.3
- 16 ACCESSIBLE WHEELCHAIR SEATING 36"x48", STRIPE OUTLINE IN BLUE PAINT
- 17 DETECTABLE WARNING DEVICE, S.C.D.

**GENERAL NOTES**

1. ALL NEW WORK SHALL BE ACCESSIBLE. ALL NEW WALKWAYS SHALL CONFORM TO CBC 1133B.7
  - CONCRETE SHALL SLOPE MIN. 1/8" PER FOOT AWAY FROM BUILDINGS, S.C.D.
  - EXTERIOR DOOR LANDINGS SHALL SLOPE 1/4" PER FOOT MAX. AWAY FROM BUILDING FOR DRAINAGE.
2. REFER TO CIVIL ENGINEERING DWGS FOR SIDEWALK GRADES.
3. REFER TO CIVIL ENGINEERING DRAWINGS AND LANDSCAPE PLANS FOR SITE FEATURES NOT OTHERWISE INDICATED.
4. PARKING AND PEDESTRIAN SITE SIGNAGE SHALL COMPLY WITH CBC SECTIONS 1117B.5 & 1129B.4.
5. BUILDING SIGNAGE SHALL COMPLY WITH CBC 1117B.5
6. PEDESTRIAN GATES SHALL COMPLY WITH CBC 1008.2 & 1133B.2
7. INDICATES BARRIER FREE PATH OF TRAVEL
  - 1:20 MAXIMUM SLOPE WITHOUT A RAMP.
  - 1:50 MAXIMUM CROSS SLOPE.
  - NO ABRUPT VERTICAL CHANGES EXCEEDING 1/4". CHANGES BETWEEN 1/4" TO 1/2" VERTICAL CAN BE AT 1:2 MAX SLOPE. CHANGES LESS THAN 1/4" CAN BE VERTICAL.
  - 48" MIN. CLEAR IN WIDTH (60" MIN PASSING SPACE)
  - NON-SLIP SURFACE - HEAVY BROOM FINISH AT EXTERIOR CONCRETE PAVING WHERE SLOPED >6%, MEDIUM BROOM FINISH AT SLOPES <6%.
  - MAINTAIN FREE OF OVERHANGING OBSTRUCTIONS TO 80" MIN.
  - PROTRUDING OBJECTS NOT GREATER THAN 4" SHALL BE MOUNTED BETWEEN 27" AND 80" A.F.F.
  - WHERE A DRAIN INLET IS IN THE PATH OF TRAVEL, THE GRATE SHALL BE ORIENTED SO THAT MAX. OPENING IS 1/2" & LONG DIM IS PERPENDICULAR TO THE PREDOMINANT DIRECTION OF PEDESTRIAN TRAVEL.
  - CONTRACTOR TO VERIFY THAT NO BELOW-GRADE PULL BOXES OCCUR WITHIN THE AREA OF TRUNCATED DOMES.

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**WESTSIDE FACILITY**

SONOMA COUNTY WATER AGENCY

9703 Wohler Rd  
Forestville, CA

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JUNE 18, 2014

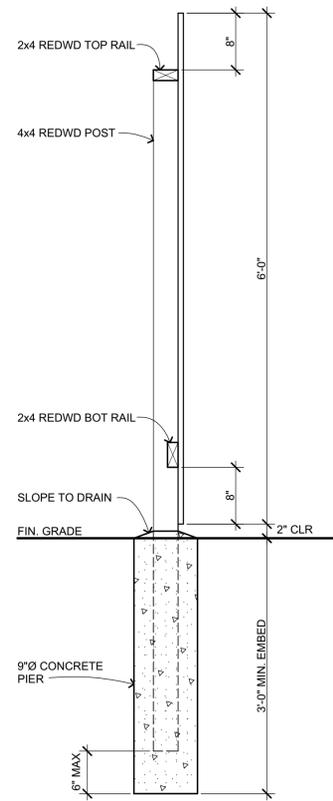
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| DRAWING SCALE:   |               |
| PTN:             |               |
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|                  | APRIL 7, 2014 |
| SHEET TITLE      |               |

**SITE PLAN**

SHEET NUMBER  
**A1.1**



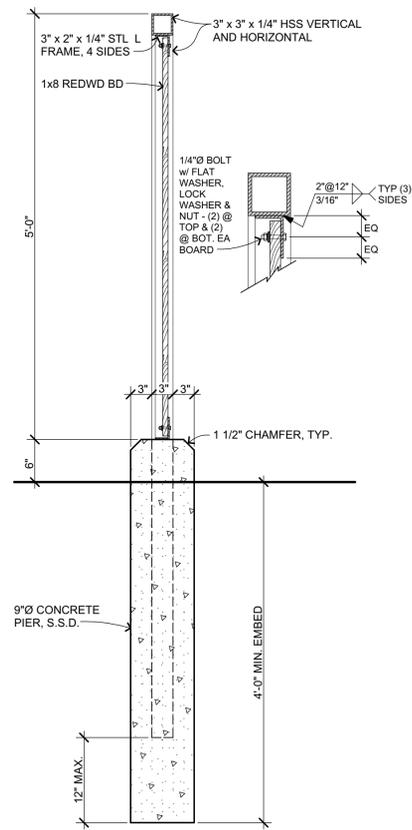
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**WOOD FENCE SECTION**

1" = 1'-0"

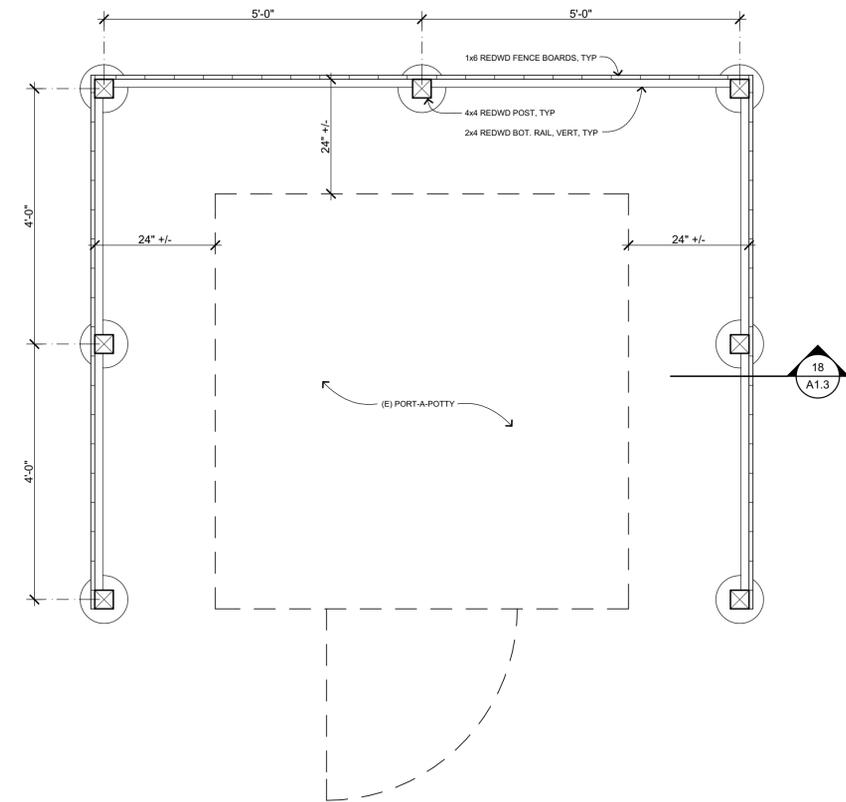
WF01 **18**



**SECTION @ REFUSE ENCLOSURE**

1" = 1'-0"

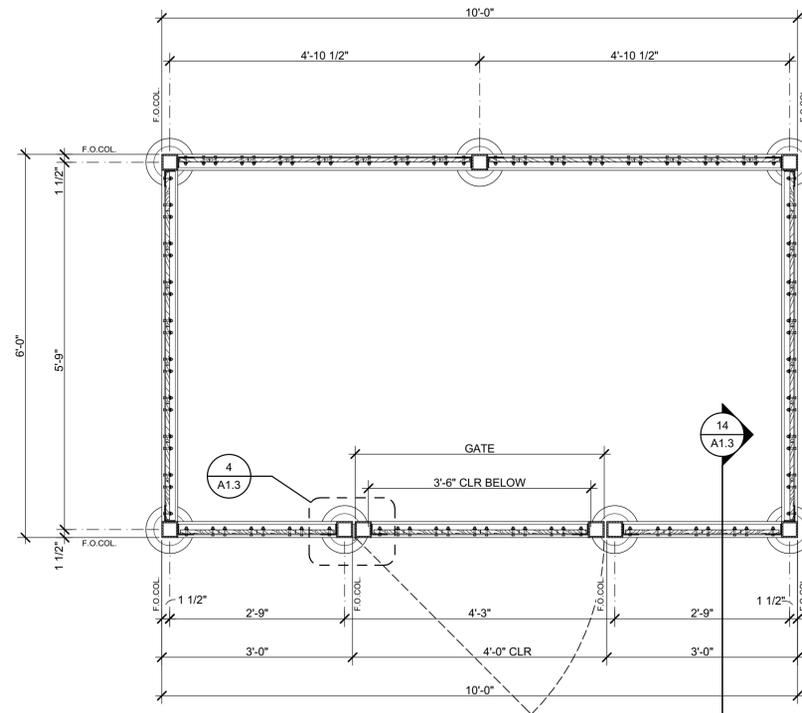
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**WOOD FENCE PLAN**

3/4" = 1'-0"

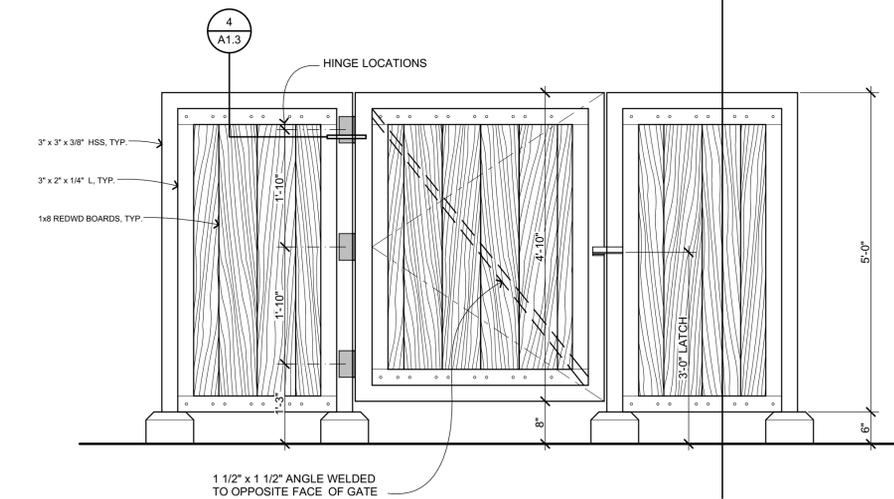
WF02 **16**



**REFUSE ENCLOSURE PLAN & ELEVATION**

3/4" = 1'-0"

RE02-1245.00 **3**



**PASSENGER LOADING ZONE**

1/2" = 1'-0"

G202203 **8**

**REFUSE GATE JAMB**

3" = 1'-0"

RE03-1245.00 **4**



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|                  | APRIL 7, 2014 |
| SHEET TITLE      |               |

**SITE DETAILS**

SHEET NUMBER

**A1.3**



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ARCH PROJECT NO: 1245.00

DRAWN BY: TF

DRAWING SCALE:

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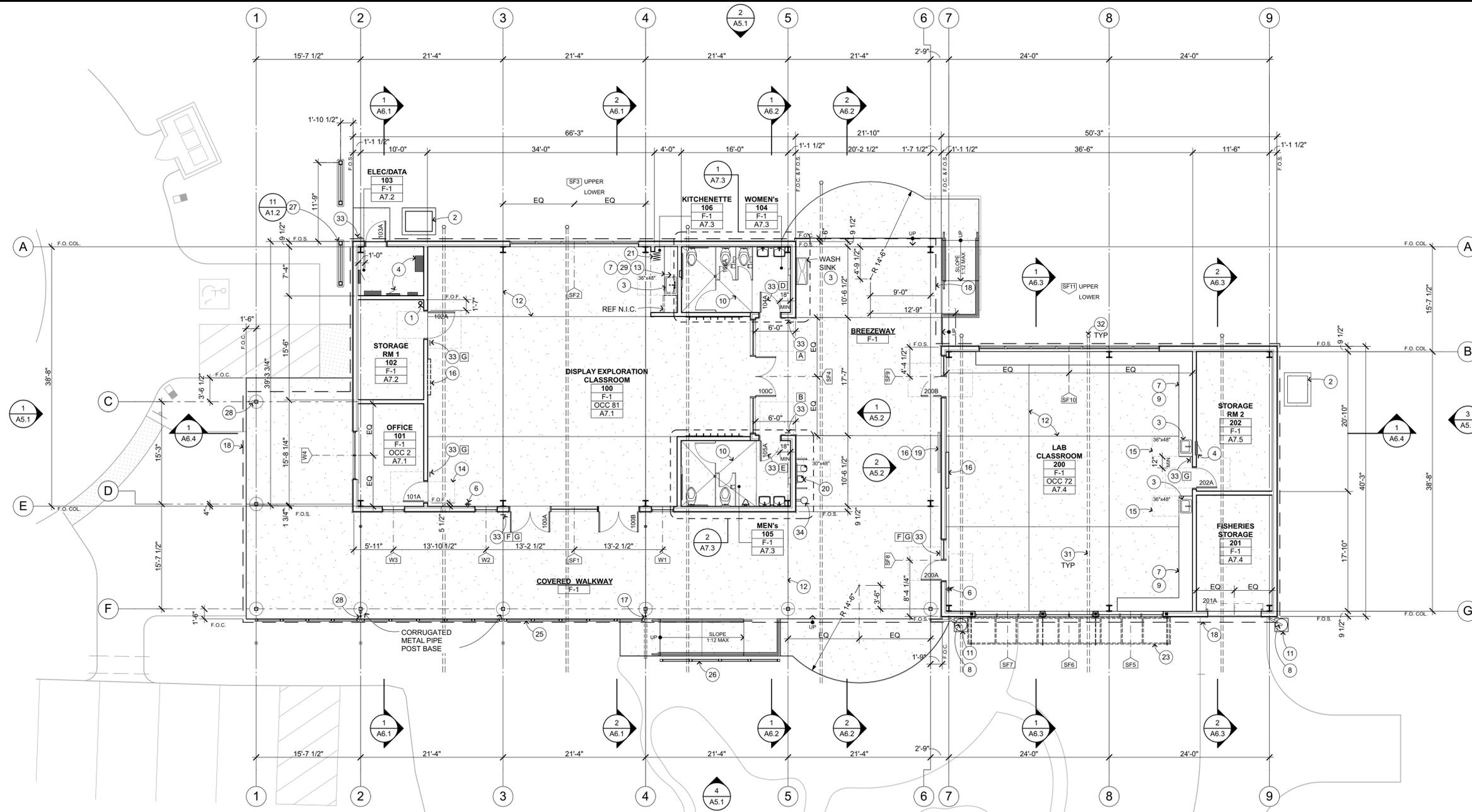
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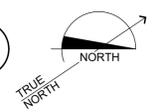
**FLOOR PLAN**

SHEET NUMBER

**A2.1**



**Floor Plan 1**  
1/8" = 1'-0"



**FLOOR FINISH NOTES**

- F-1 STAINED CONCRETE

**FLOOR PLAN GENERAL NOTES**

1. EXTERIOR CONCRETE FLATWORK SHALL HAVE A MAXIMUM SLOPE OF 1:20, U.N.O.; EXTERIOR DOOR LANDINGS SHALL SLOPE 1/4" PER FOOT FOR 60° PERPENDICULAR TO DOOR FACE, MAXIMUM FOR DRAINAGE. CONCRETE SHALL SLOPE MINIMUM 1/8" PER FOOT AWAY FROM BUILDINGS. S.C.D.
2. FINISHED FLOOR ELEVATIONS SHOWN INDICATE FLOOR SLABS FOR THIS BUILDING. FOR ELEVATIONS RELATIVE TO THE REST OF THE SITE, REFER TO CIVIL ENGINEERING DRAWINGS.
3. REFER TO CIVIL ENGINEERING DRAWINGS AND SITE PLAN FOR SITE FEATURES NOT OTHERWISE INDICATED.
4. REFER TO ARCHITECTURAL GRAPHICS DRAWINGS FOR SIGNAGE NOT SHOWN.
5. REFER TO REFLECTED CEILING PLAN FOR CLERESTORY WINDOWS.
6. ALL INTERIOR WALL FRAMING AND GYP.BD. EXTEND TO UNDERSIDE OF ROOF/FLOOR STRUCTURE ABOVE, U.O.N.

**FLOOR PLAN KEYNOTES**

- 1 FIRE SPRINKLER RISER, SEE FIRE PROTECTION DRAWINGS
- 2 MECHANICAL ITEM ON CONC. PAD, S.M.D.
- 3 ACCESSIBLE SINK, S.P.D., AND 19 (A10.1)
- 4 ELECTRICAL ITEM, S.E.D.
- 5 STRUCTURAL ITEM, S.S.D.
- 6 FIRE EXTINGUISHER (2A-10-BC) w/ VALID CERTIFICATION ATTACHED, SEE 1 (A10.1)
- 7 CASEWORK, SEE INTERIOR ELEVATIONS
- 8 RAIN WATER LEADER, CONNECT TO RAIN WATER COLLECTION BARREL
- 9 EPOXY RESIN COUNTERTOP
- 10 SLOPE SLAB TO F.D., 1/8"/FT
- 11 RAIN WATER COLLECTION BARREL ON CONC. PAD

- 12 CONTROL JOINT, S.S.D.
- 13 HIGH CABINETS ABOVE
- 14 ACCESSIBLE DOOR CLEARANCES, SEE SHEET A8.1
- 15 30"x48" ACCESSIBLE CLEAR SPACE
- 16 PROVIDE BLOCKING/BACKING IN WALL FOR MOUNTING OF EQUIPMENT SHOWN
- 17 RAINWATER LEADER TO BELOW SLAB, SPILL AT FACE OF TURNED DOWN SLAB INTO SHALE
- 18 EDGE OF ROOF ABOVE
- 19 DISPLAY CABINET
- 20 ACCESSIBLE HI-LO DRINKING FOUNTAIN, SEE 1 (A10.1)
- 21 ACCORDIAN DOOR
- 22 NOT USED
- 23 SUNSHADE, METAL BUILDING SUPPLIER TO PROVIDE FOR STRUCTURAL SUPPORT

- 24 NOT USED
- 25 GREEN SCREEN GUARDRAIL 18 (A1.2) 22 (A1.2)
- 26 GREEN SCREEN GUARDRAIL @ RAMP 24 (A1.2)
- 27 GREEN SCREEN 11 (A1.2)
- 28 RAINWATER LEADER, CONNECT TO SUBDRAIN 16 (A9.2)
- 29 PLASTIC LAMINATE COUNTERTOP
- 30 CARD READER BY OTHERS
- 31 4" PERFORATED DRAIN LINE @ 20'-0" c.c. BELOW SLAB PER GEOTECH REPORT. S.C.D. FOR CONNECTION TO STORM DRAIN SYSTEM 19 (A1.2)
- 32 CLEANOUT TO GRADE IN YARD BOX 1 (A8.2)
- 33 SIGN 1 (A8.2)
- 34 BOTTLE FILLER, S.P.D.

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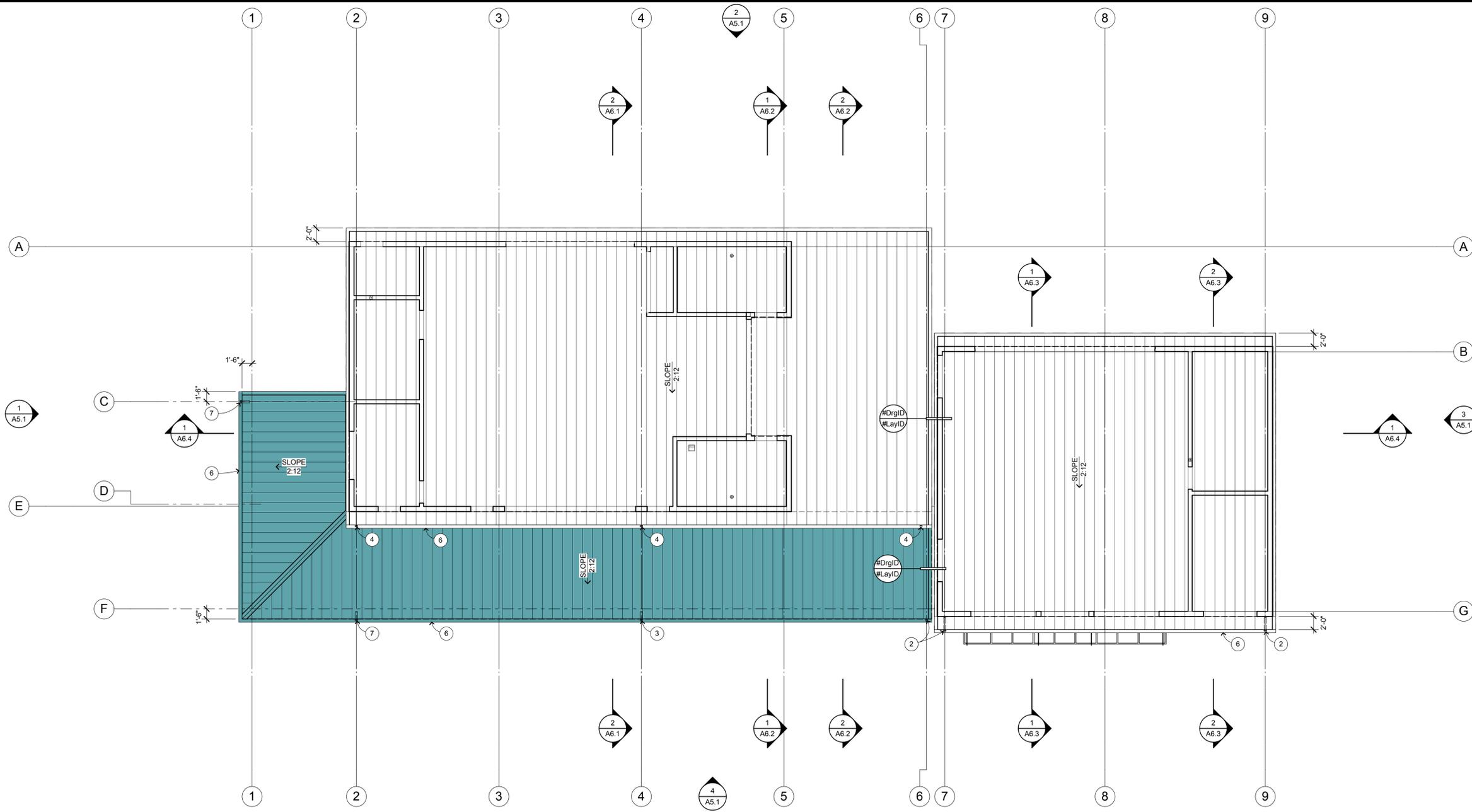
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NOVEMBER 2013  
SHEET TITLE

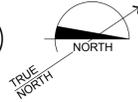
**ROOF PLAN**

SHEET NUMBER

**A4.1**



**ROOF PLAN 1**  
1/8" = 1'-0"



**ROOF PLAN GENERAL NOTES**

1. LOCATE ALL METAL ROOF PENETRATIONS IN THE CENTER OF THE PANEL. DO NOT INTERRUPT STANDING SEAMS.
2. ALL ROOFING TO BE CLASS A.
3. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR ROOF PENETRATION LOCATIONS NOT OTHERWISE INDICATED, TYPICAL.
4. MECHANICAL OR PLUMBING VENT FLASHING, BOOTS, SEE

**ROOF PLAN KEYNOTES**

- PREFORMED STANDING SEAM METAL PANELS
- RAINWATER LEADER DOWN TO RAINWATER COLLECTION BARREL
- RAINWATER LEADER DOWN TO BELOW SLAB - SPILL AT FACE OF TURNED DOWN SLAB
- DOWNSPOUT, SPILL ONTO ROOF BELOW
- SUNSHADE
- GUTTER
- RAINWATER LEADER, CONNECT TO SUB-DRAIN

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**WESTSIDE  
FACILITY**

SONOMA COUNTY  
WATER AGENCY

9703 Wohler Rd  
Forestville, CA

PRMD APPROVED  
FOR CONSTRUCTION  
JUNE 18, 2014

MAY 28, 2014

ARCH PROJECT NO: 1245.00

DRAWN BY: TF

DRAWING SCALE:

PTN:

CD Phase

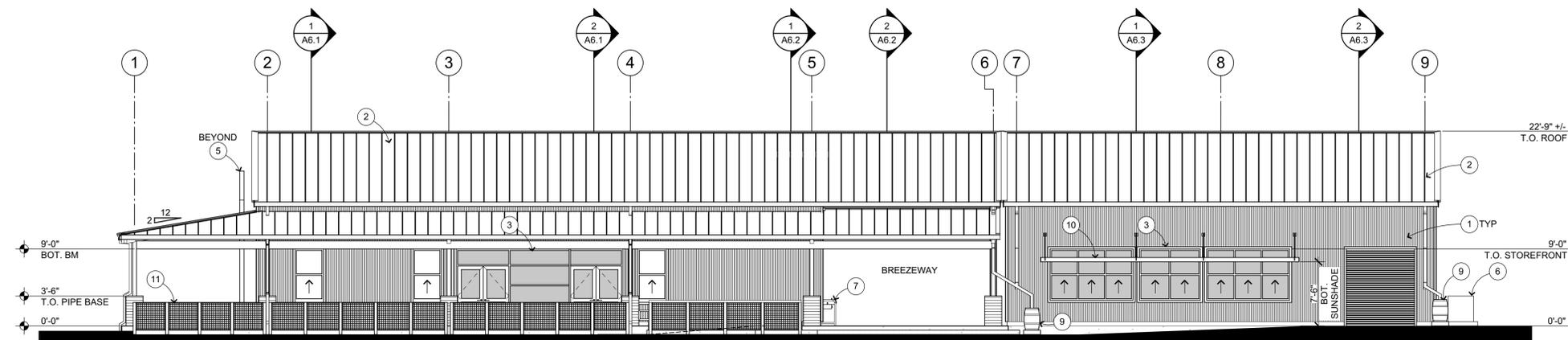
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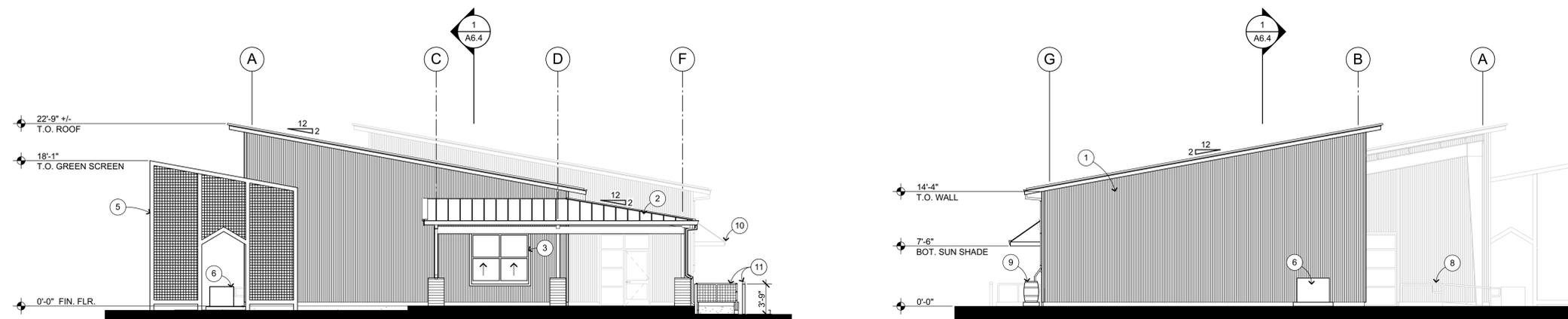
**EXTERIOR  
ELEVATIONS**

SHEET NUMBER

**A5.1**

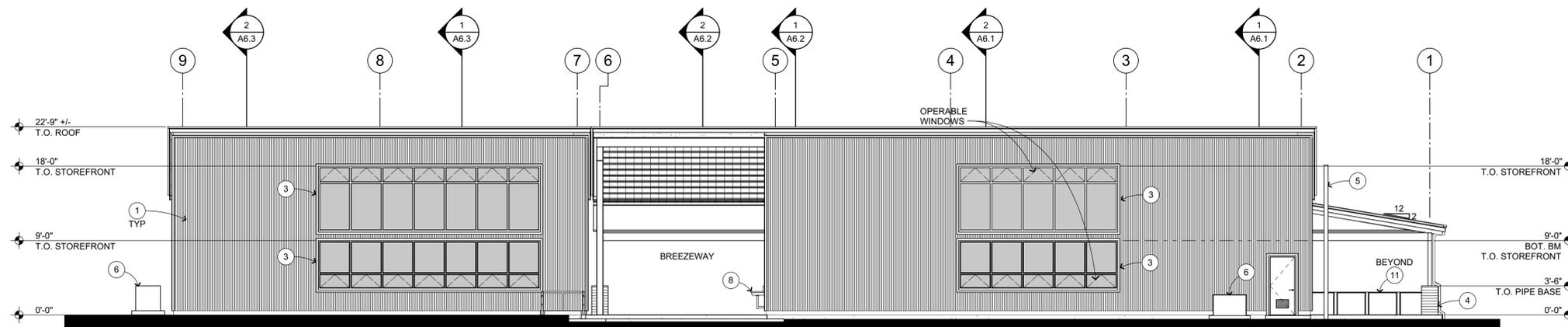


**EAST**



**SOUTH**

**NORTH**



**WEST**

**EXTERIOR ELEVATION GENERAL NOTES**

1. NOTES AND SYMBOLS ARE TO APPLY AT ALL AREAS OF SIMILAR GRAPHIC REPRESENTATION. SUCH INDICATIONS MAY BE LIMITED TO PROMOTE CLARITY OR AVOID REDUNDANCY. NO LIMITATION OF APPLICATION SHALL BE CONSTRUED WITHOUT SPECIFIC NOTATION.
2. ALL PENETRATIONS THROUGH EXTERIOR ROOF AND WALLS, AND FLOORS SHALL BE FLASHED AND SEALED WEATHER TIGHT. ALL PENETRATIONS THROUGH THE BUILDING INSULATION ENVELOPE SHALL BE PACKED WITH INSULATION.
3. PROVIDE OPENING FLASHINGS AT ALL WINDOWS, DOORS, LOUVERS AND SIMILAR WALL OPENINGS PER
4. REFER TO MECHANICAL DRAWINGS FOR REGISTERS AND VENTS NOT OTHERWISE SHOWN.
5. REFER TO ELECTRICAL DRAWINGS FOR HORNS, SPEAKERS, PULL STATIONS AND OTHER FEATURES NOT OTHERWISE SHOWN.

**EXTERIOR ELEVATION KEYNOTES**

- 1 METAL SIDING
- 2 PREFORMED STANDING SEAM METAL PANELS
- 3 STOREFRONT SYSTEM
- 4 STEEL COLUMNS w/ CORRUGATED METAL PIPE BASE
- 5 GREEN SCREEN ELEMENT
- 6 MECHANICAL SCREEN ON CONCRETE PAD
- 7 ADA ACCESSIBLE DRINKING FOUNTAIN
- 8 ADA ACCESSIBLE WASH-UP SINK, S.P.D. AND
- 9 RAINWATER COLLECTION BARREL, SET ON CONC. PAD BARREL SUPPLIED BY OWNER, CONC. PAD BY G.C.
- 10 SUN SHADE
- 11 GREEN SCREEN RAILING



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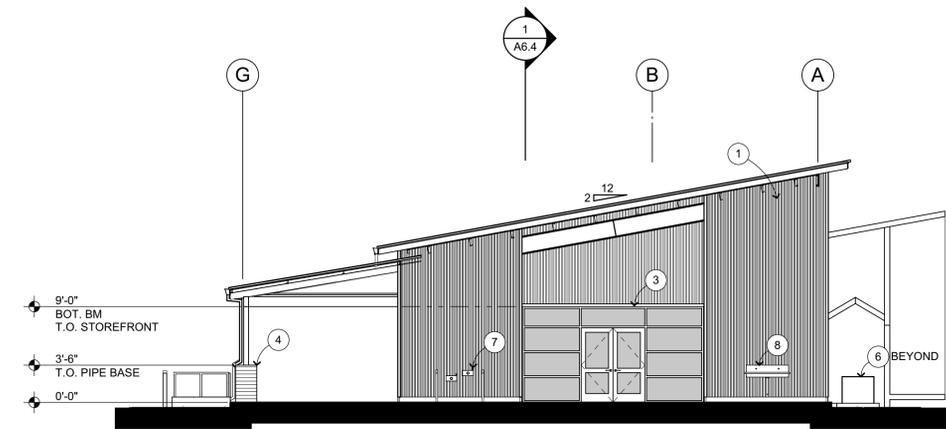
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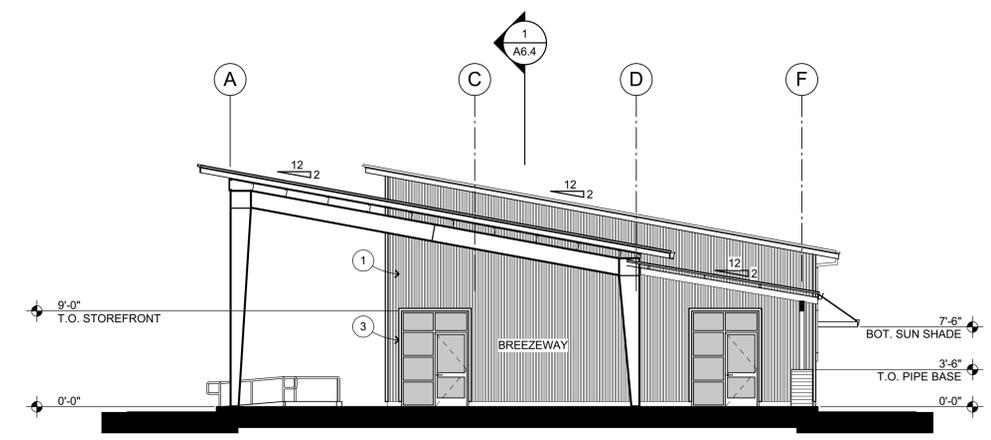
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| DRAWING SCALE:   |               |
| PTN:             |               |
|                  | CD Phase      |
|                  | NOVEMBER 2013 |
| SHEET TITLE      |               |

**EXTERIOR ELEVATIONS**

SHEET NUMBER  
**A5.2**



**BREEZEWAY NORTH**



**BREEZEWAY SOUTH**

**EXTERIOR ELEVATION GENERAL NOTES**

- NOTES AND SYMBOLS ARE TO APPLY AT ALL AREAS OF SIMILAR GRAPHIC REPRESENTATION. SUCH INDICATIONS MAY BE LIMITED TO PROMOTE CLARITY OR AVOID REDUNDANCY. NO LIMITATION OF APPLICATION SHALL BE CONSTRUED WITHOUT SPECIFIC NOTATION.
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- PROVIDE OPENING FLASHINGS AT ALL WINDOWS, DOORS, LOUVERS AND SIMILAR WALL OPENINGS PER 20/A9.1
- REFER TO MECHANICAL DRAWINGS FOR REGISTERS AND VENTS NOT OTHERWISE SHOWN.
- REFER TO ELECTRICAL DRAWINGS FOR HORNS, SPEAKERS, PULL STATIONS AND OTHER FEATURES NOT OTHERWISE SHOWN.

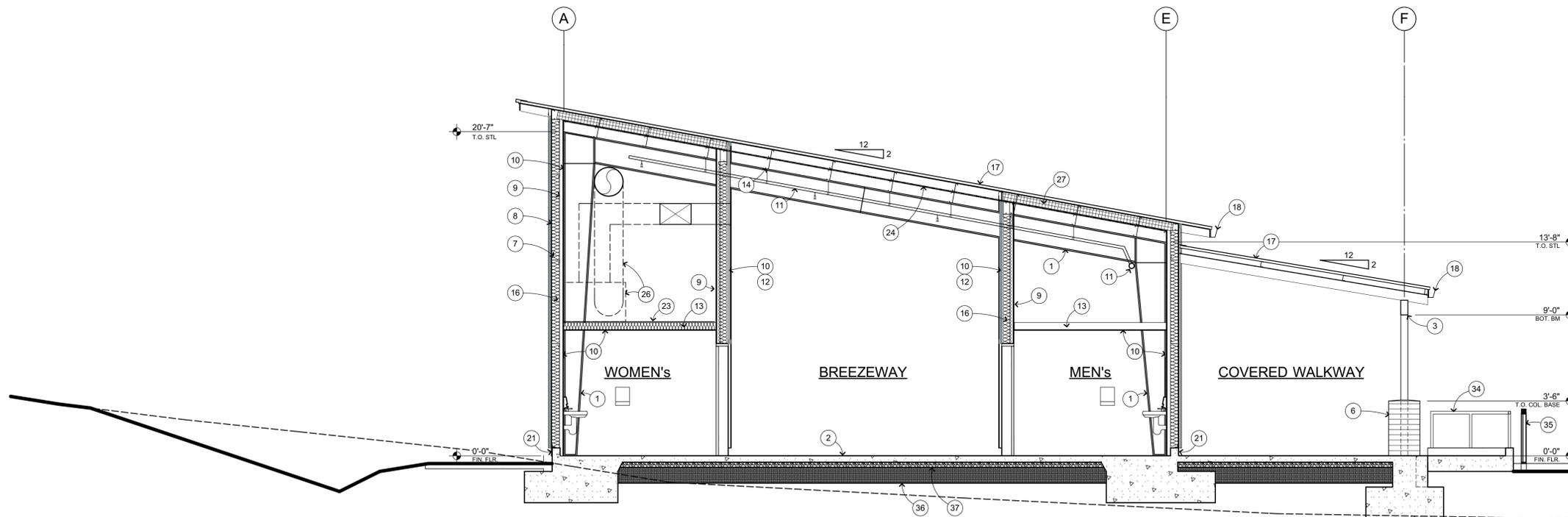
**EXTERIOR ELEVATION KEYNOTES**

- METAL SIDING
- PREFORMED STANDING SEAM METAL PANELS
- STOREFRONT SYSTEM
- STEEL COLUMNS w/ CORRUGATED METAL PIPE BASE 20/A9.2
- GREEN SCREEN ELEMENT 11/A1.2
- MECHANICAL SCREEN ON CONCRETE PAD
- ADA ACCESSIBLE DRINKING FOUNTAIN 1/A10.1
- ADA ACCESSIBLE WASH-UP SINK, S.P.D. AND 19/A10.1
- RAINWATER COLLECTION BARREL, SET ON CONC. PAD BARREL SUPPLIED BY OWNER, CONC. PAD BY G.C.
- SUN SHADE 1/A9.2
- GREEN SCREEN RAILING 18/A1.2 19/A1.2 24/A1.2

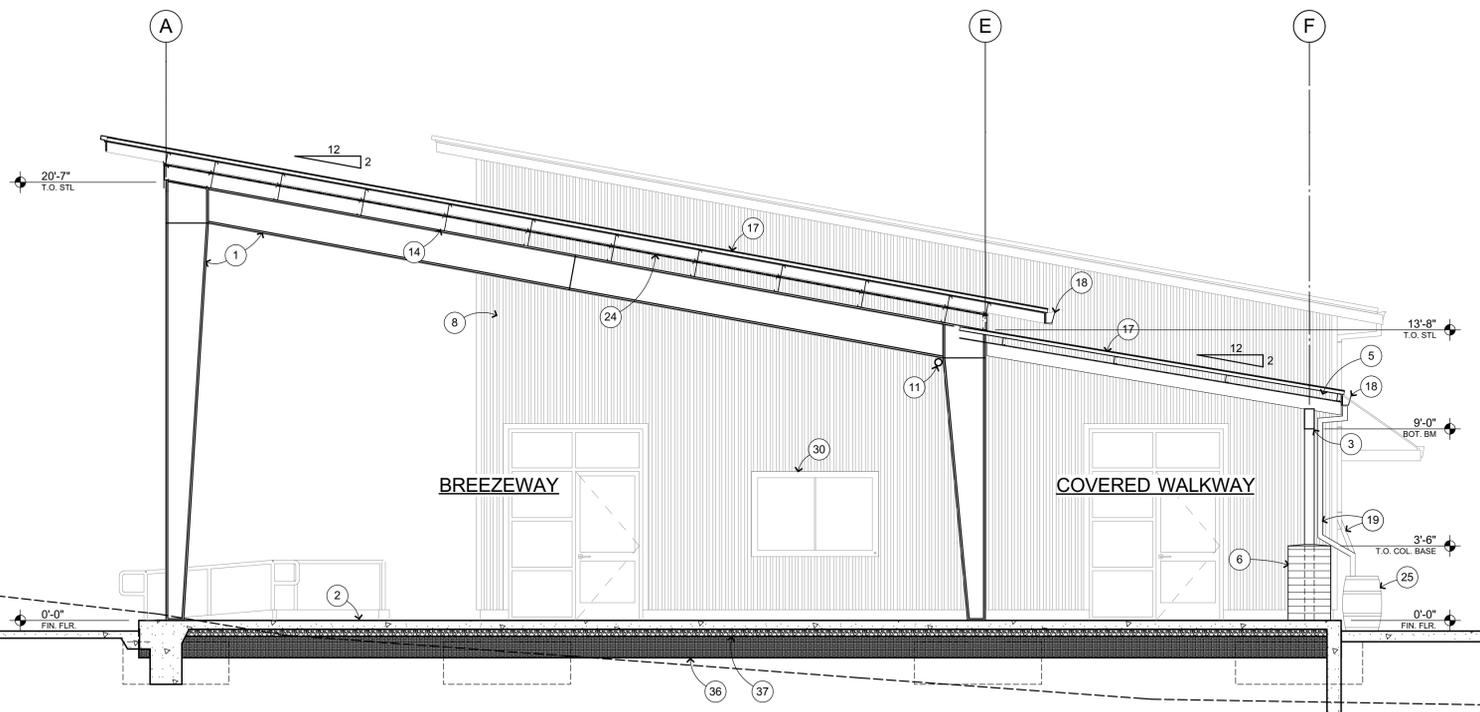
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**BUILDING SECTION 'C'** 1  
1/4" = 1'-0"



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

**SECTION KEYNOTES**

- 1 STRUCTURAL FRAME
- 2 CONC. SLAB / FOOTING, S.S.D.
- 3 H.S.S. BEAM
- 4 H.S.S. COL.
- 5 H.S.S. RAFTERS
- 6 CORRUGATED STEEL PIPE COLUMN BASE, FILL WITH CONC. AND SLOPE TOP TO DRAIN 20 A9.2
- 7 GIRTS AS REQ'D
- 8 METAL SIDING
- 9 2 1/2" MTL STUDS
- 10 GYPSUM BD.
- 11 FIRE SPRINKLER LINE
- 12 MTL STUDS, FULL HT.
- 13 CEILING JOISTS
- 14 PURLINS
- 15 PERFORATED LINER PANELS
- 16 R-19 BLANKET INSUL.
- 17 PREFORMED METAL ROOFING
- 18 GUTTER w/ LEAF GUARDS, PER CBC CHAPTER 7A
- 19 DOWNSPOUT
- 20 DOWNSPOUT COLLECTOR, DOWN IN FOOTING, SPILL AT FACE
- 21 EXTERIOR WALLS ON 6" CONC. CURB
- 22 STRUCTURE TO SUPPORT STOREFRONT AS DETERMINED BY METAL BUILDING MANUFACTURER
- 23 3/4" PLYWD MECH. PLATFORM
- 24 LINER PANELS
- 25 RAIN COLLECTOR BARRELS
- 26 MECHANICAL UNIT AND DUCT WORK, S.M.D.
- 27 R-19 RIGID INSUL.
- 28 FOOTING BEYOND, S.S.D.
- 29 RUN DOWNSPOUT UNDER RAMP AND DAYLIGHT INTO SWALE, S.C.D.
- 30 LOCKABLE DISPLAY CASE
- 31 SUN SHADE 1 A9.2
- 32 GREEN SCREEN ELEMENT 11 A1.2
- 33 GREEN SCREEN RAILING 18 A1.2 22 A1.2
- 34 PIPE RAILING 8 A1.2
- 35 GREEN SCREEN RAILING @ RAMP 24 A1.2
- 36 12" COMPACTED FILL
- 37 4" DRAIN ROCK
- 38 4" PERFORATED PIPE @ 20' o.c.

**SECTION GENERAL NOTES**

- 1. NOTES AND SYMBOLS ARE TO APPLY AT ALL AREAS OF SIMILAR GRAPHIC REPRESENTATION. SUCH INDICATIONS MAY BE LIMITED TO PROMOTE CLARITY OR AVOID REDUNDANCY. NO LIMITATION OF APPLICATION SHALL BE CONSTRUED WITHOUT SPECIFIC NOTATION.
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- 3. PROVIDE OPENING FLASHINGS AT ALL WINDOWS, DOORS, LOUVERS AND SIMILAR WALL OPENINGS PER DETAIL 20 A9.1
- 4. PROVIDE FIRESTOPPING AT CONCEALED SPACES, INCLUDING BETWEEN STAIR STRINGERS & BETWEEN STUDS WITH STAIR RUN, FURRED SPACES, CEILING/FLOOR LEVELS AND 10'-0" INTERVALS ALONG LENGTHS OF WALL, SOFFITS, DROP CEILINGS, AND COVE CEILINGS PER CBC 708.
- 5. REFER TO INTERIOR ELEVATIONS FOR WALL FINISHES AND INFORMATION NOT SHOWN, TYPICAL.
- 6. REFER TO FLOOR PLAN FOR FLOOR FINISHES, TYPICAL.
- 7. REFER TO REFLECTED CEILING PLAN FOR CEILING FINISHES, TYPICAL.
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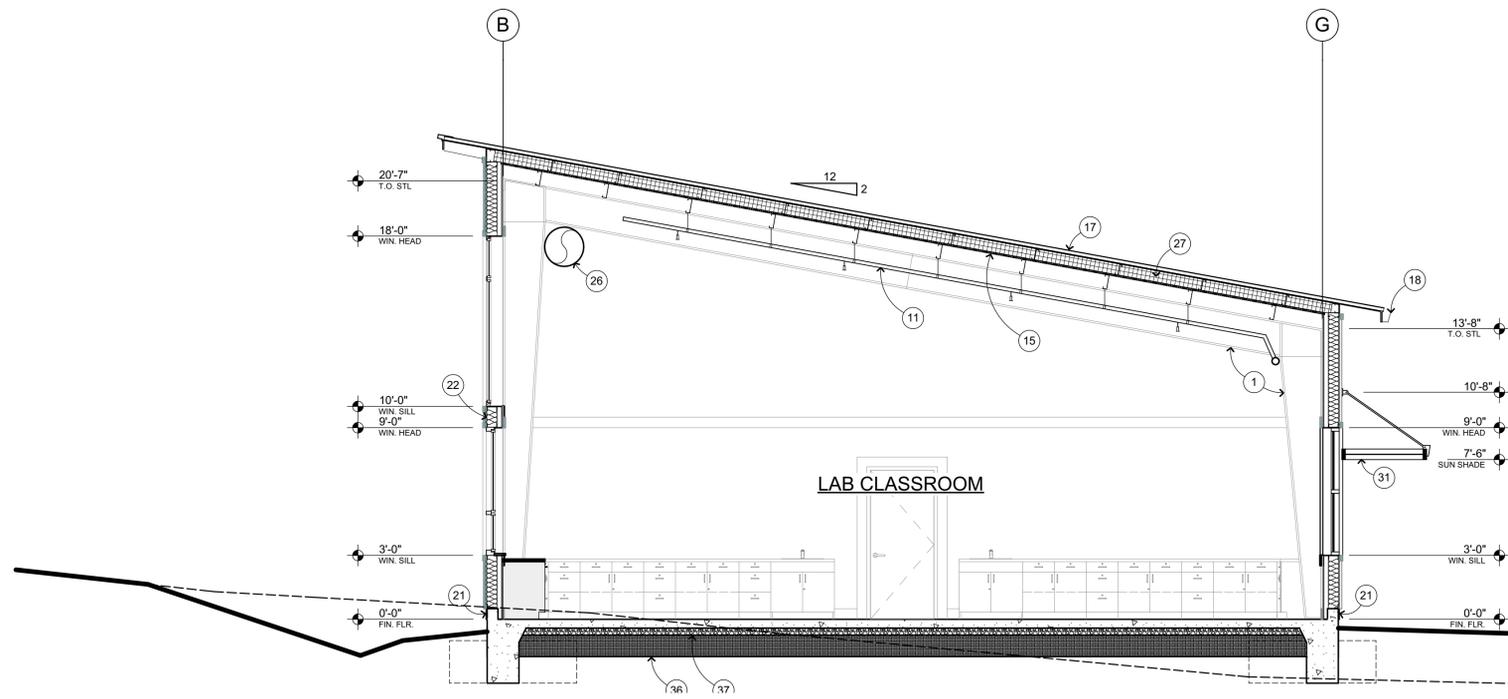
PRMD APPROVED  
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|                  | MAY 28, 2014  |
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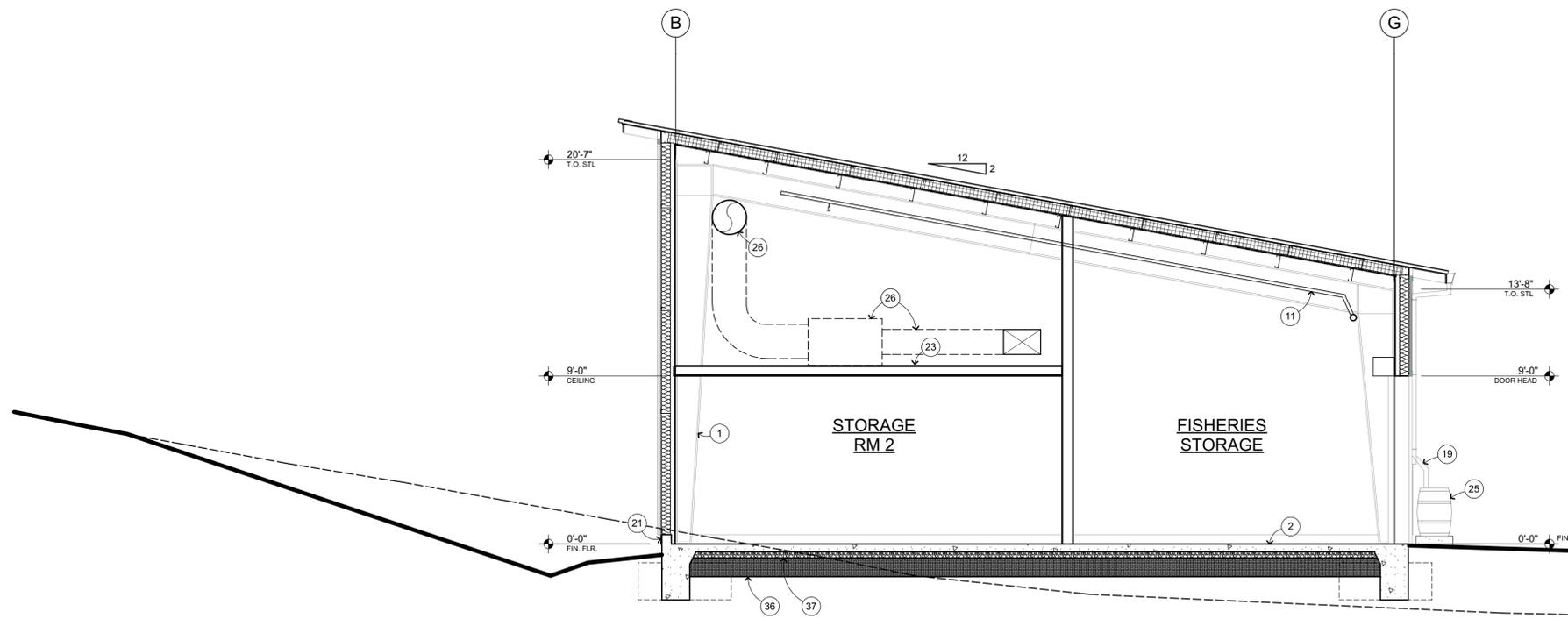
**BUILDING SECTIONS**

SHEET NUMBER  
**A6.2**

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



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

**SECTION KEYNOTES**

- 1 STRUCTURAL FRAME
- 2 CONC. SLAB / FOOTING, S.S.D.
- 3 H.S.S. BEAM
- 4 H.S.S. COL.
- 5 H.S.S. RAFTERS
- 6 CORRUGATED STEEL PIPE COLUMN BASE, FILL WITH CONC. AND SLOPE TOP TO DRAIN
- 7 GIRTS AS REQ'D
- 8 METAL SIDING
- 9 2 1/2" MTL STUDS
- 10 GYPSUM BD.
- 11 FIRE SPRINKLER LINE
- 12 MTL STUDS, FULL HT.
- 13 CEILING JOISTS
- 14 PURLINS
- 15 PERFORATED LINER PANELS
- 16 R-19 BLANKET INSUL.
- 17 PREFORMED METAL ROOFING
- 18 GUTTER w/ LEAF GUARDS, PER CBC CHAPTER 7A
- 19 DOWNSPOUT
- 20 DOWNSPOUT COLLECTOR, DOWN IN FOOTING, SPILL AT FACE
- 21 EXTERIOR WALLS ON 6" CONC. CURB
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- 29 RUN DOWNSPOUT UNDER RAMP AND DAYLIGHT INTO SWALE, S.C.D.
- 30 LOCKABLE DISPLAY CASE
- 31 SUN SHADE
- 32 GREEN SCREEN ELEMENT
- 33 GREEN SCREEN RAILING
- 34 PIPE RAILING
- 35 GREEN SCREEN RAILING @ RAMP
- 36 12" COMPACTED FILL
- 37 4" DRAIN ROCK
- 38 4" PERFORATED PIPE @ 20' o.c.

**SECTION GENERAL NOTES**

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6. REFER TO FLOOR PLAN FOR FLOOR FINISHES, TYPICAL.
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**WESTSIDE FACILITY**

SONOMA COUNTY WATER AGENCY

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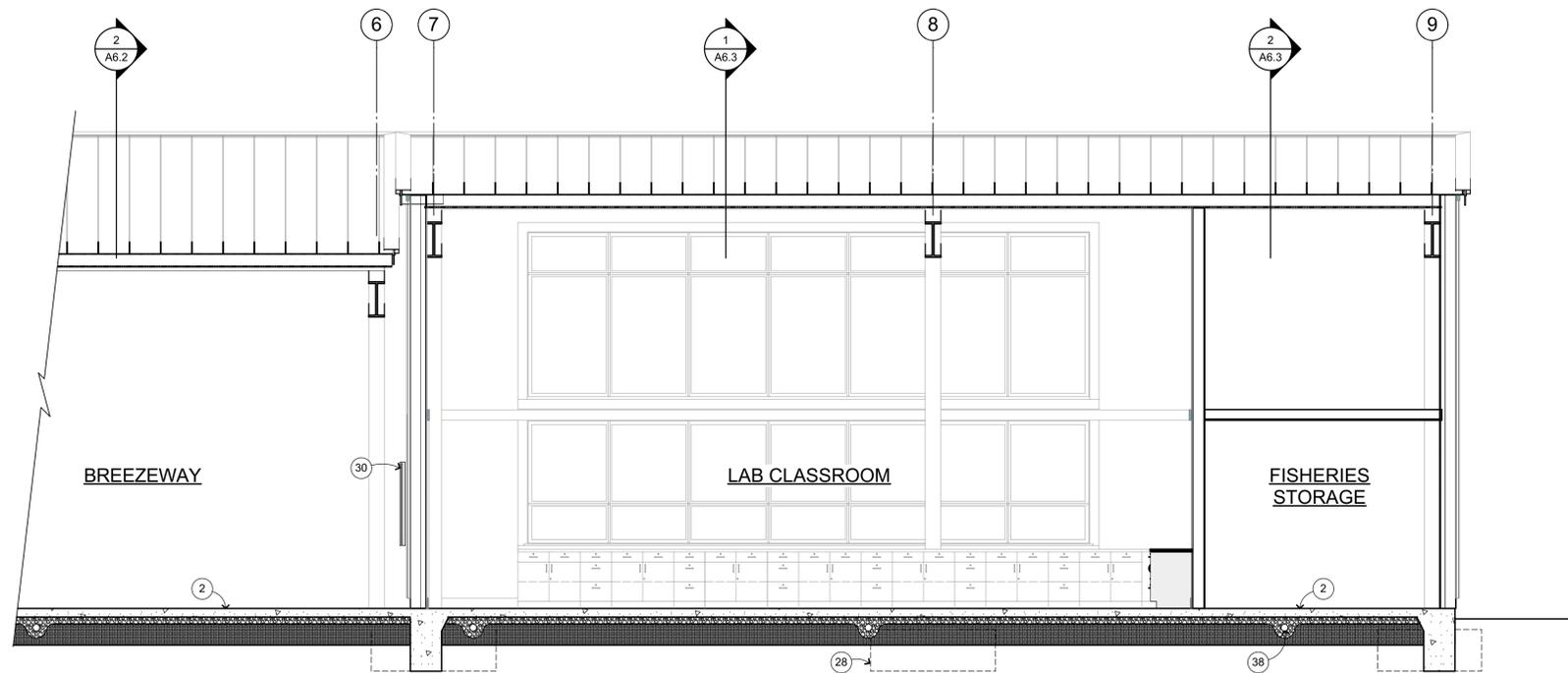
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JUNE 18, 2014

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| DRAWN BY:        | TF            |
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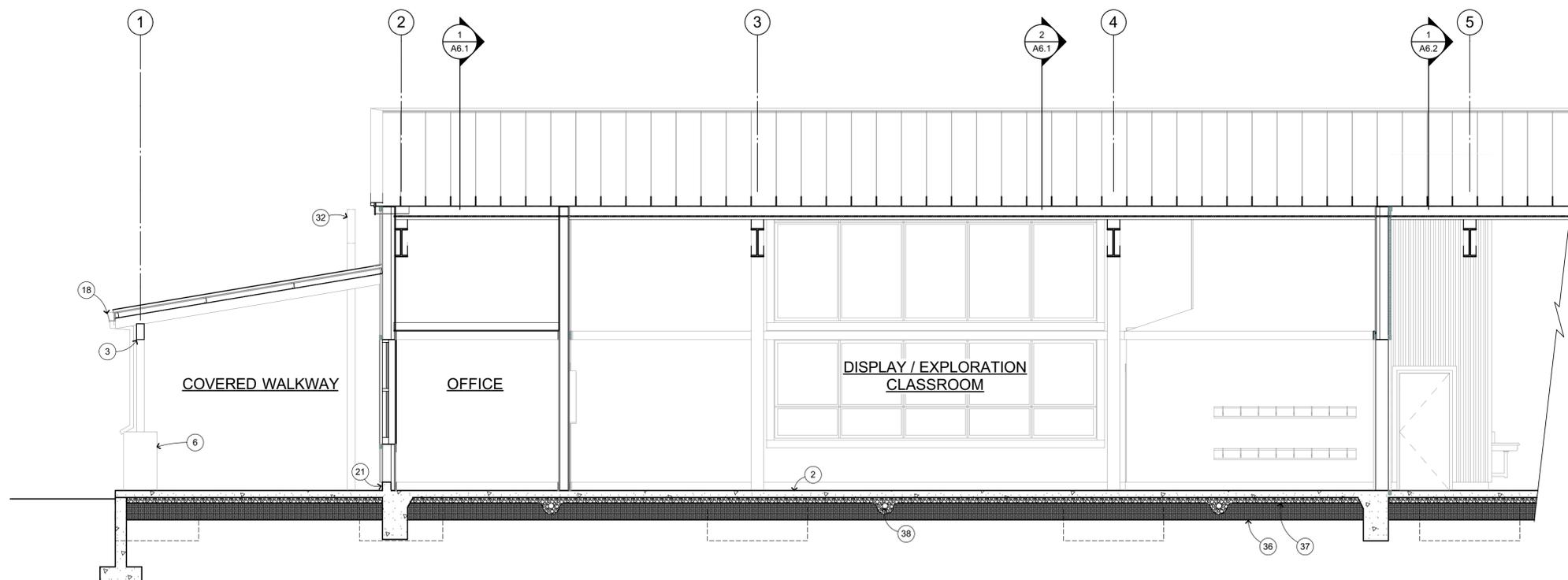
**BUILDING SECTIONS**

SHEET NUMBER

**A6.3**



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



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

**SECTION KEYNOTES**

- 1 STRUCTURAL FRAME
- 2 CONC. SLAB / FOOTING, S.S.D.
- 3 H.S.S. BEAM
- 4 H.S.S. COL.
- 5 H.S.S. RAFTERS
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- 11 FIRE SPRINKLER LINE
- 12 MTL STUDS, FULL HT.
- 13 CEILING JOISTS
- 14 PURLINS
- 15 PERFORATED LINER PANELS
- 16 R-19 BLANKET INSUL.
- 17 PREFORMED METAL ROOFING
- 18 GUTTER w/ LEAF GUARDS, PER CBC CHAPTER 7A
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- 34 PIPE RAILING
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**SECTION GENERAL NOTES**

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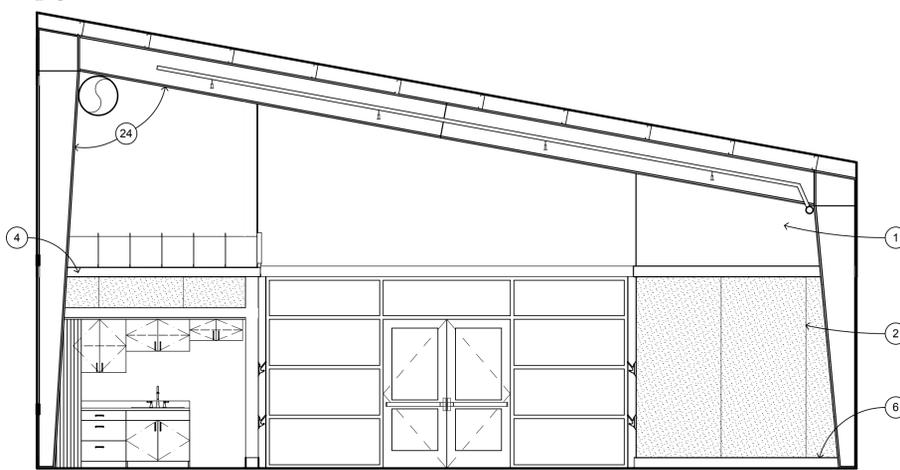
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**BUILDING SECTIONS**

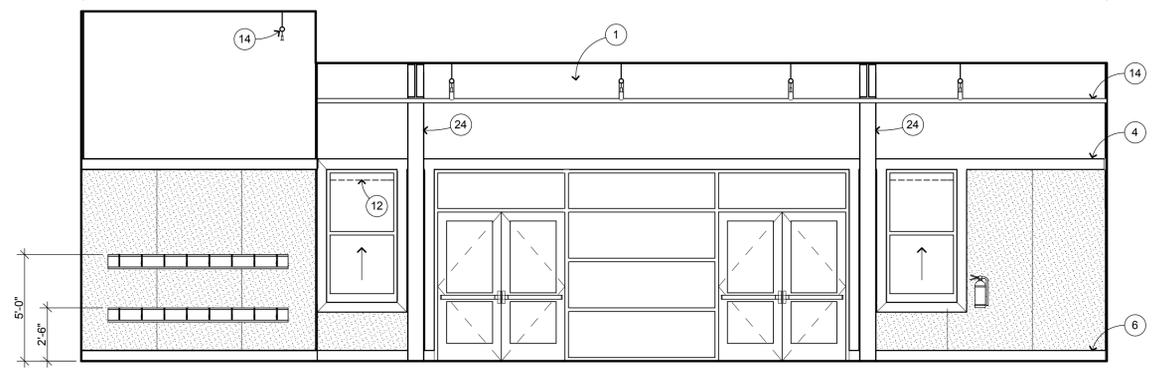
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**A6.4**

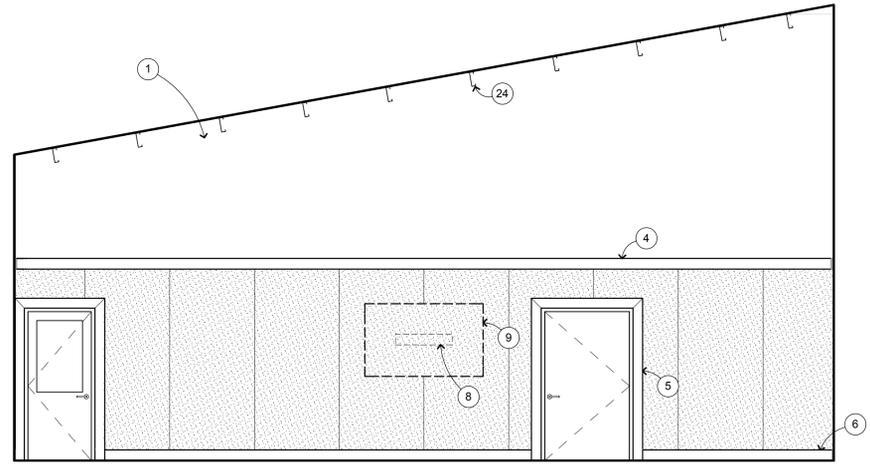
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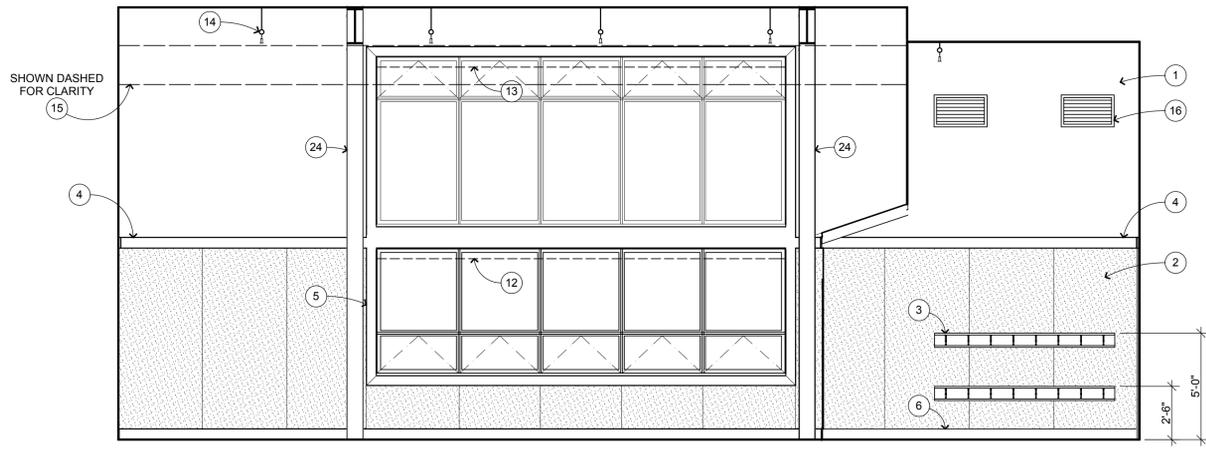
NORTH



EAST

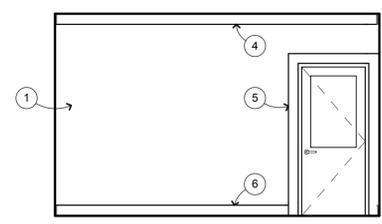


SOUTH

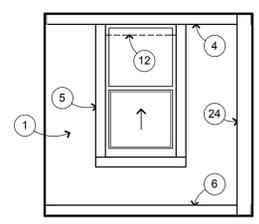


WEST

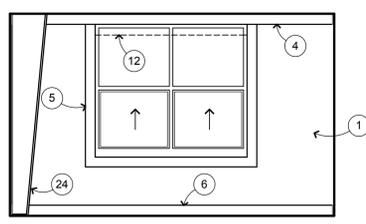
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1/4" = 1'-0" A2.1



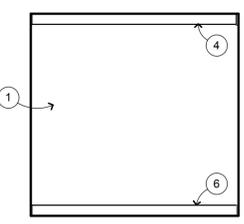
NORTH



EAST



SOUTH



WEST

OFFICE 101  
1/4" = 1'-0" A2.1

**INTERIOR ELEVATION KEYNOTES**

- 1 GYP. BD.
- 2 TACKABLE PANELS w/ WALL COVERING of GYP. BD.
- 3 BACKPACK HOOKS
- 4 1" x 6" WOOD TRIM
- 5 1" x 6" WOOD TRIM
- 6 1" x 6" WOOD BASE
- 7 1X WOOD CASING
- 8 PROVIDE BLOCKING/BACKING FOR MOUNTING OF EQUIPMENT SHOWN
- 9 FLAT SCREEN TV AND WALL MOUNT, N.I.C.
- 10 ACCORDION DOOR
- 11 RUBBER BASE
- 12 WINDOW SHADES
- 13 MOTORIZED WINDOW SHADES
- 14 FIRE SPRINKLERS
- 15 MECH. DUCT, S.M.D.
- 16 MECH. GRILLE, S.M.D.
- 17 ACCESSIBLE SINK
- 18 BACKSPLASH TO UNDERSIDE OF WINDOW STOOL
- 19 4" RUBBER BASE
- 20 FRP PANEL
- 21 FIRE RISER
- 22 MOP SINK
- 23 3/4" PLYWD BACKBOARD
- 24 STRUCTURAL ITEM, S.S.D.
- 25 6" CONCRETE CURB, S.S.D.
- 26 NO INTERIOR FINISH THIS WALL

**INTERIOR ELEVATION GENERAL NOTES**

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- 3. REFER TO ELECTRICAL DRAWINGS FOR HORNS, SPEAKERS, PULL STATIONS AND OTHER FEATURES NOT OTHERWISE SHOWN.
- 4. TYPICAL MOUNTING HEIGHTS OF ACCESSIBLE ELEMENTS AT ACCESSIBLE FIXTURES SEE (1/A10.1)
- 5. FLUSH VALVE HANDLES SHALL BE LOCATED AT THE WIDE SIDE OF ACCESSIBLE STALL.
- 6. FLOORING & BASE SHALL EXTEND UNDER ACCESSIBLE SINK/LAVATORY BASE CABINETS TO THE WALL. HOT WATER AND DRAINPIPES ACCESSIBLE UNDER LAVATORIES SHALL BE INSULATED OR OTHERWISE COVERED. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES.
- 7. PROVIDE SOLID BLOCKING FOR CABINET, ACCESSORY, OR EQUIPMENT MOUNTING (3/A10.1)

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



**WESTSIDE FACILITY**

SONOMA COUNTY WATER AGENCY

9756 Wohler Rd  
Forestville, CA

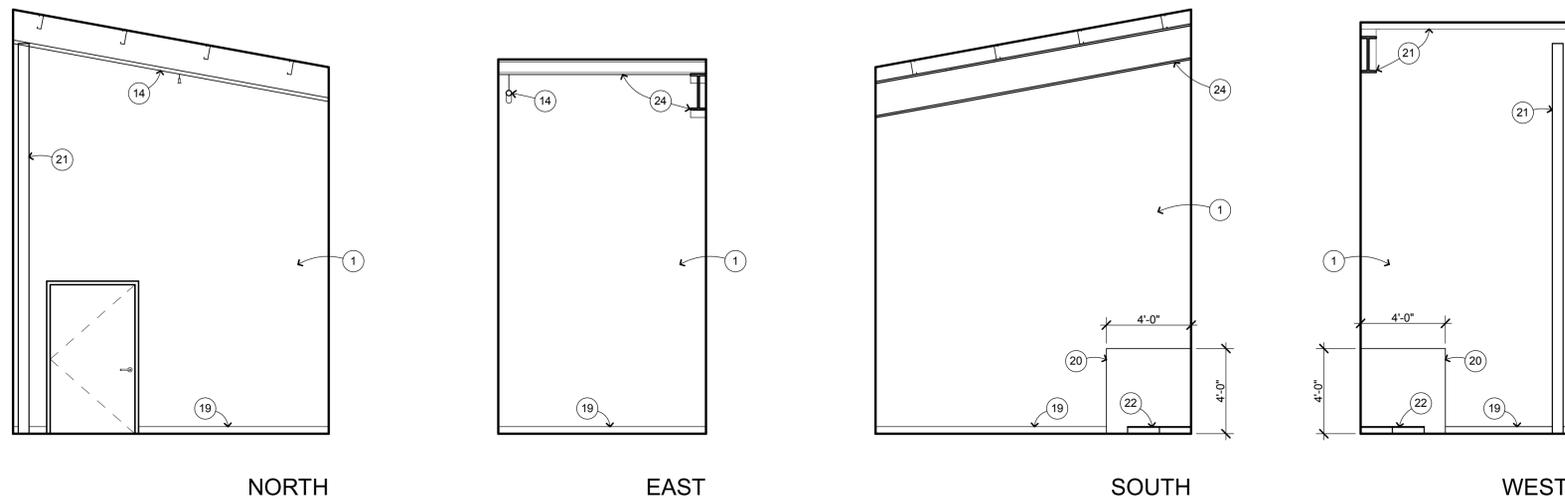
PRMD APPROVED FOR CONSTRUCTION  
JUNE 18, 2014

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ARCH PROJECT NO: 1245.00  
DRAWN BY: TF  
DRAWING SCALE:  
PTN:  
CD Phase  
NOVEMBER 2013  
SHEET TITLE

**INTERIOR ELEVATIONS**

SHEET NUMBER  
**A7.1**



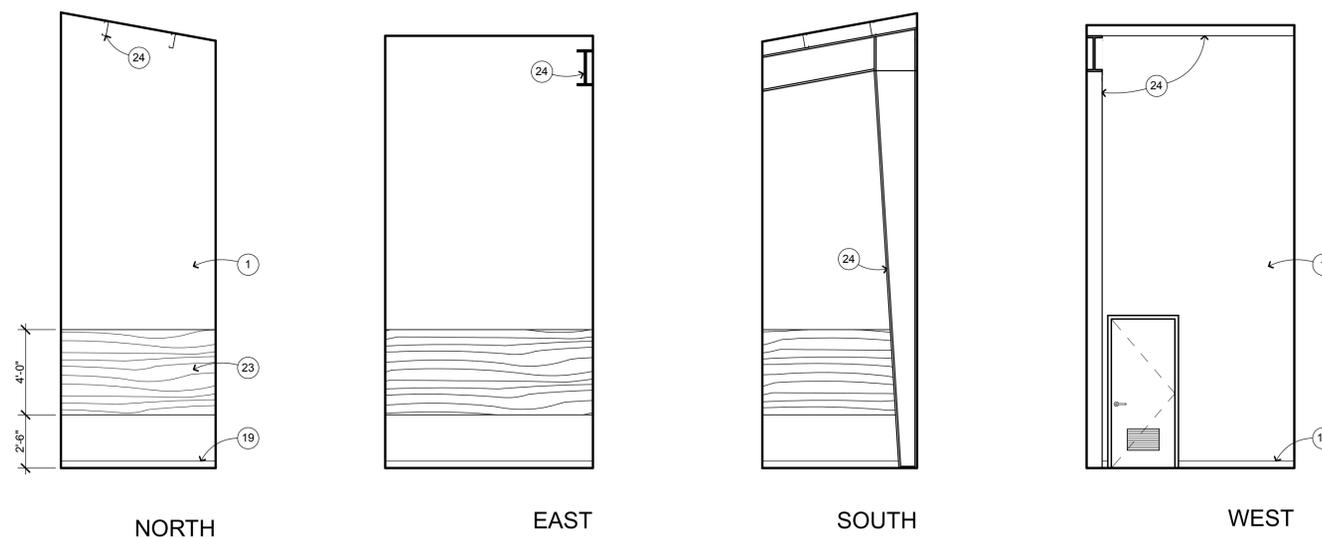
NORTH

EAST

SOUTH

WEST

STORAGE RM 1 **102**  
1/4" = 1'-0" **A2.1**



NORTH

EAST

SOUTH

WEST

ELEC-DATA **103**  
1/4" = 1'-0" **A2.1**

**INTERIOR ELEVATION KEYNOTES**

- 1 GYP. BD.
- 2 TACKABLE PANELS w/ WALL COVERING or GYP. BD.
- 3 BACKPACK HOOKS
- 4 1" x 6" WOOD TRIM
- 5 1" x 6" WOOD TRIM
- 6 1" x 6" WOOD BASE
- 7 1X WOOD CASING
- 8 PROVIDE BLOCKING/BACKING FOR MOUNTING OF EQUIPMENT SHOWN
- 9 FLAT SCREEN TV AND WALL MOUNT, N.I.C.
- 10 ACCORDION DOOR
- 11 RUBBER BASE
- 12 WINDOW SHADES
- 13 MOTORIZED WINDOW SHADES
- 14 FIRE SPRINKLERS
- 15 MECH. DUCT, S.M.D.
- 16 MECH. GRILLE, S.M.D.
- 17 ACCESSIBLE SINK
- 18 BACKSPLASH TO UNDERSIDE OF WINDOW STOOL
- 19 4" RUBBER BASE
- 20 FRP PANEL
- 21 FIRE RISER
- 22 MOP SINK
- 23 3/4" PLYWD BACKBOARD
- 24 STRUCTURAL ITEM, S.S.D.
- 25 6" CONCRETE CURB, S.S.D.
- 26 NO INTERIOR FINISH THIS WALL

**INTERIOR ELEVATION GENERAL NOTES**

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A10.1
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- 7. PROVIDE SOLID BLOCKING FOR CABINET, ACCESSORY, OR EQUIPMENT MOUNTING 3  
A10.1



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DRAWN BY: TF

DRAWING SCALE:

PTN:

CD Phase

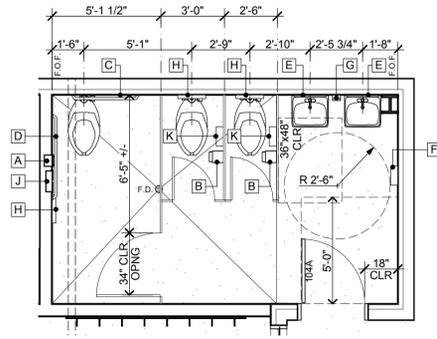
NOVEMBER 2013

SHEET TITLE

**INTERIOR  
ELEVATIONS**

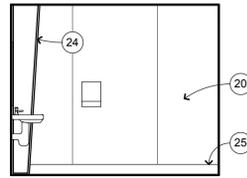
SHEET NUMBER

**A7.2**

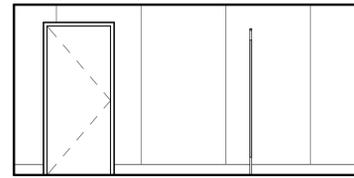


**Enlarged Plan - Women's**

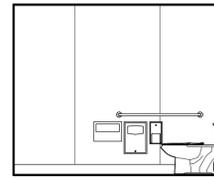
1/4" = 1'-0"



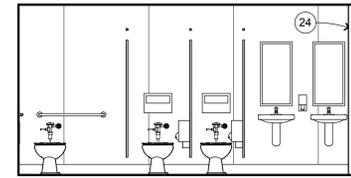
**NORTH**



**EAST**



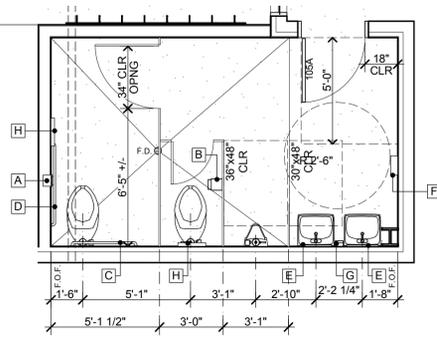
**SOUTH**



**WEST**

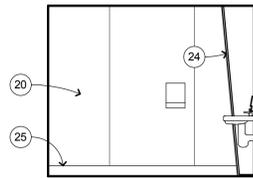
**WOMEN'S 104**

1/4" = 1'-0" A2.1

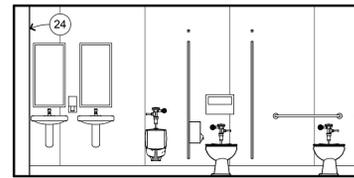


**Enlarged Plan - Men's**

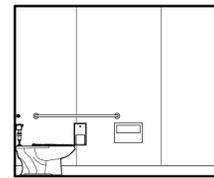
1/4" = 1'-0"



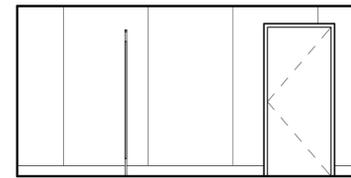
**NORTH**



**EAST**



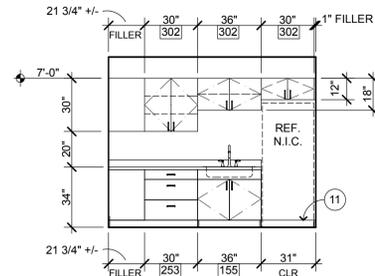
**SOUTH**



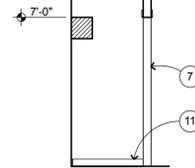
**WEST**

**MEN'S 105**

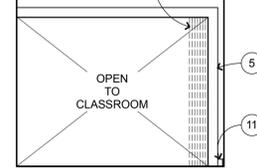
1/4" = 1'-0" A2.1



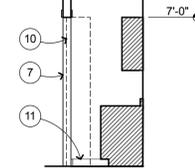
**NORTH**



**EAST**



**SOUTH**



**WEST**

**KITCHENETTE 106**

1/4" = 1'-0" A2.1

**INTERIOR ELEVATION KEYNOTES**

- 1 GYP. BD.
- 2 TACKABLE PANELS w/ WALL COVERING of GYP. BD.
- 3 BACKPACK HOOKS
- 4 1" x 6" WOOD TRIM
- 5 1" x 6" WOOD TRIM
- 6 1" x 6" WOOD BASE
- 7 1X WOOD CASING
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- 21 FIRE RISER
- 22 MOP SINK
- 23 3/4" PLYWD BACKBOARD
- 24 STRUCTURAL ITEM, S.S.D.
- 25 6" CONCRETE CURB, S.S.D.
- 26 NO INTERIOR FINISH THIS WALL

**ACCESSORY SCHEDULE**

|   |  |                       |
|---|--|-----------------------|
| A | TOILET PAPER DISPENSER, RECESSED, (3" MAXIMUM PROJECTION)    |                       |
| B | TOILET PAPER DISPENSER, SURFACE MOUNTED                      |                       |
| C | 36" GRAB BAR, FOR ATTACHMENT SEE                             | 15, 1, A-10.2, A-10.2 |
| D | 48" GRAB BAR, FOR ATTACHMENT SEE                             | 12, 1, A-10.2, A-10.2 |
| E | MIRROR (TYP), FOR ATTACHMENT SEE                             |                       |
| F | PAPER TOWEL DISPENSER, SURFACE MOUNTED                       |                       |
| G | SOAP DISPENSER, SURFACE MOUNTED                              |                       |
| H | TOILET SEAT COVER DISPENSER, SURFACE MOUNTED                 |                       |
| J | SANITARY NAPKIN RECEPTACLE, RECESSED (3" MAXIMUM PROJECTION) |                       |
| K | SANITARY NAPKIN RECEPTACLE                                   |                       |
| L | ELECTRIC HAND DRYER  |                       |

**INTERIOR ELEVATION GENERAL NOTES**

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- 7. PROVIDE SOLID BLOCKING FOR CABINET, ACCESSORY, OR EQUIPMENT MOUNTING 3 A10.1



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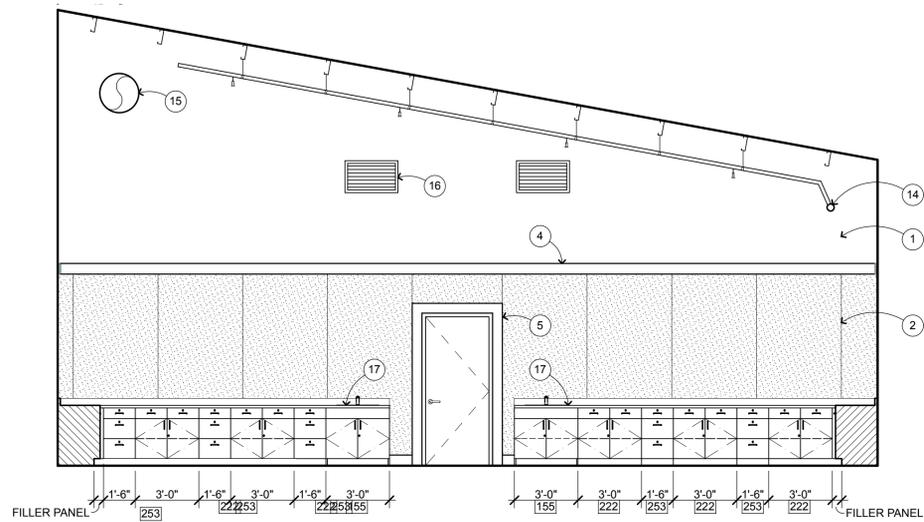
PRMD APPROVED FOR CONSTRUCTION  
JUNE 18, 2014

ARCH PROJECT NO: 1245.00  
DRAWN BY: TF  
DRAWING SCALE:  
PTN:  
CD Phase  
NOVEMBER 2013  
SHEET TITLE

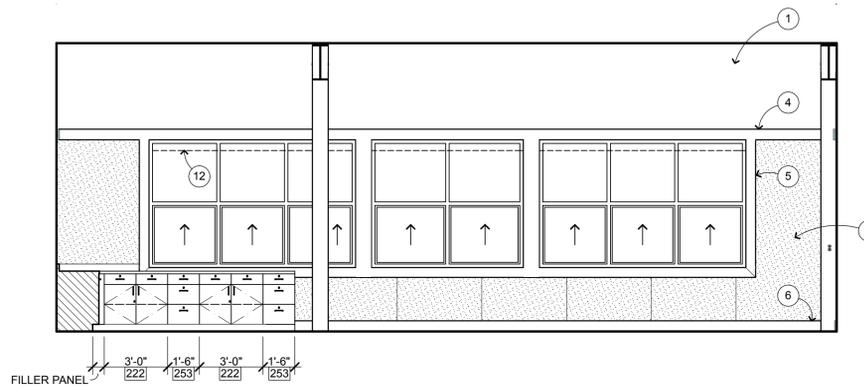
**INTERIOR ELEVATIONS**

SHEET NUMBER

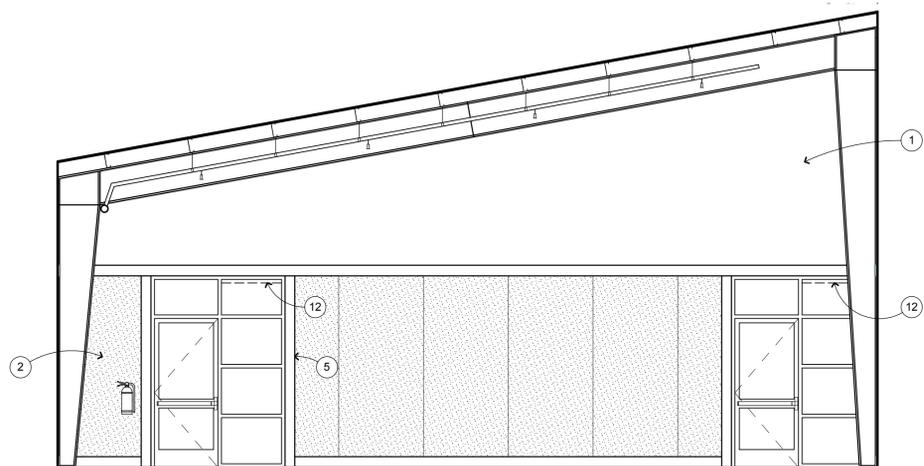
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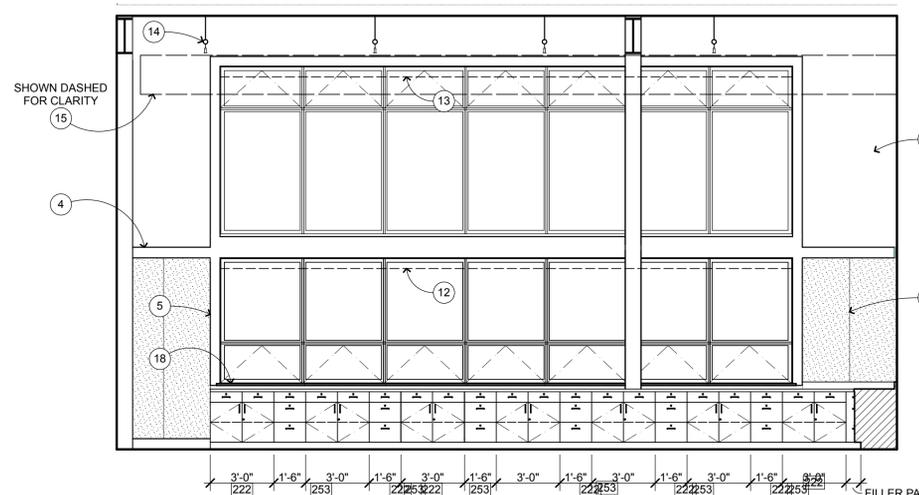
NORTH



EAST

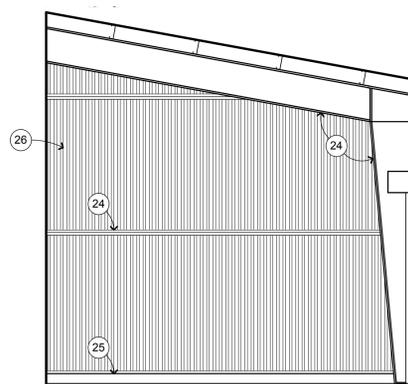


SOUTH

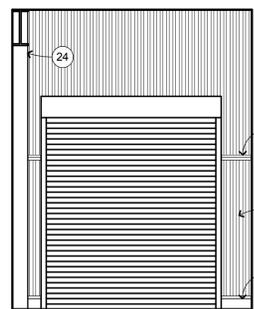


WEST

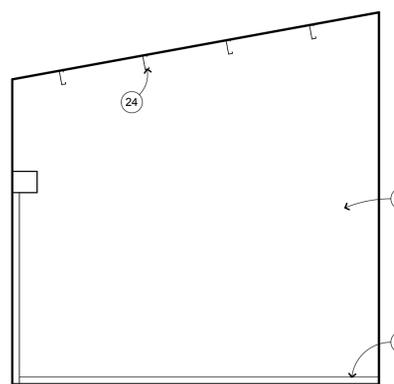
LAB CLASSROOM **200**  
1/4" = 1'-0" **A2.1**



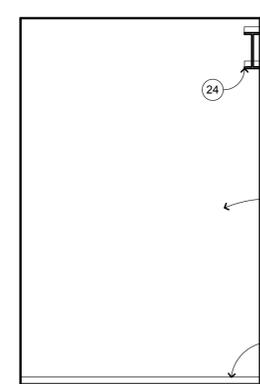
NORTH



EAST



SOUTH



WEST

FISHERIES STORAGE **201**  
1/4" = 1'-0" **A2.1**

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- 1 GYP. BD.
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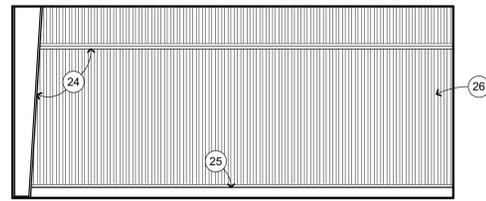
PRMD APPROVED  
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|                  |         |
|------------------|---------|
| ARCH PROJECT NO: | 1245.00 |
| DRAWN BY:        | TF      |
| DRAWING SCALE:   |         |
| PTN:             |         |
| CD Phase         |         |
| NOVEMBER 2013    |         |
| SHEET TITLE      |         |

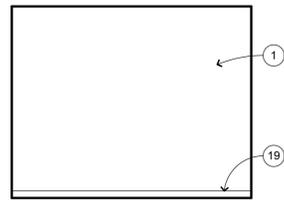
**INTERIOR ELEVATIONS**

SHEET NUMBER

**A7.4**



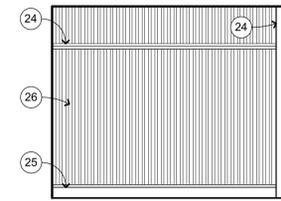
NORTH



EAST



SOUTH



WEST

STORAGE RM 2 **202**  
1/4" = 1'-0" **A2.1**

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A10.1
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A10.1



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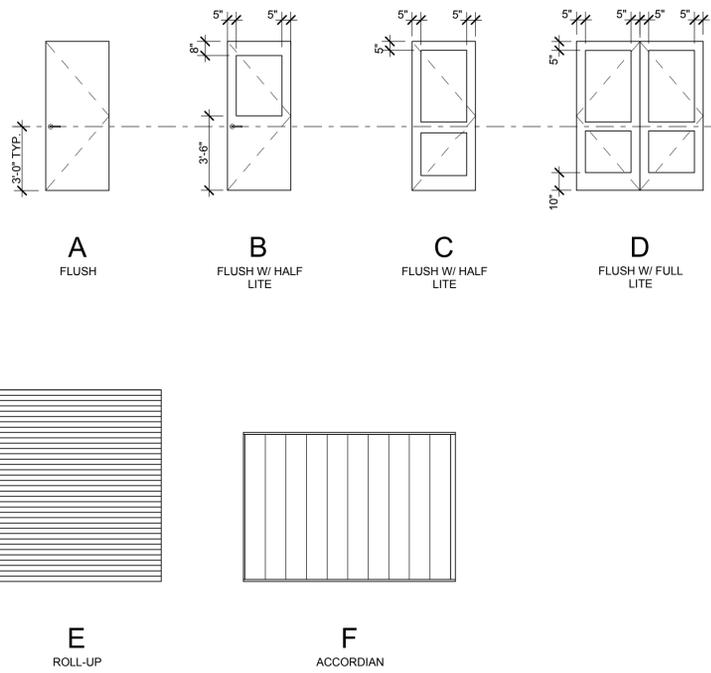
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**INTERIOR ELEVATIONS**

SHEET NUMBER

**A7.5**

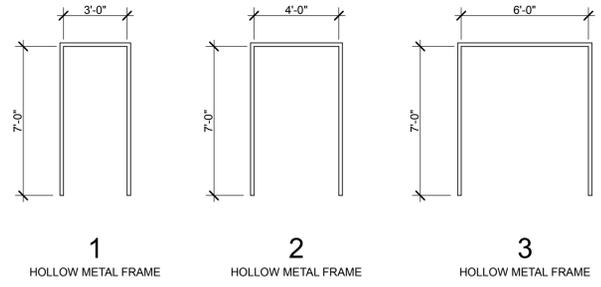
**DOOR PANEL TYPES**



**DOOR SCHEDULE**

| ID   | TYPE | DOOR               |      |         | FRAME |         |         | VENT SIZE     | LABEL | HDWR | P. H. | DETAILS |         |             | REMARKS                          |
|------|------|--------------------|------|---------|-------|---------|---------|---------------|-------|------|-------|---------|---------|-------------|----------------------------------|
|      |      | SIZE               | MAT  | FIN     | TYPE  | MAT     | FIN     |               |       |      |       | HEAD    | JAMB    | THSHLD      |                                  |
| 100A | D    | PR - 3'-0" x 7'-0" | ALUM | FAC FIN | ALUM  | FAC FIN |         |               | -     | 8    | PH    |         |         | 18/A9.1     |                                  |
| 100B | D    | PR - 3'-0" x 7'-0" | ALUM | FAC FIN | ALUM  | FAC FIN |         |               | -     | 1    | PH    |         |         | 18/A9.1     |                                  |
| 100C | D    | PR - 3'-0" x 7'-0" | ALUM | FAC FIN | ALUM  | FAC FIN |         |               | -     | 1    | PH    |         |         | 18/A9.1     |                                  |
| 101A | B    | 3'-0" x 7'-0"      | WOOD | STAIN   | 1     | H.M.    | FAC FIN |               |       | 6    |       | 17/A9.1 | 17/A9.1 |             |                                  |
| 102A | A    | 4'-0" x 7'-0"      | WOOD | STAIN   | 1     | H.M.    | FAC FIN |               |       | 4    |       | 17/A9.1 | 17/A9.1 |             | PROVIDE SIGN "FIRE RISER INSIDE" |
| 103A | A    | 3'-0" x 7'-0"      | H.M. | PAINT   | 1     | H.M.    | PAINT   | 1'-6" x 1'-0" | -     | 5    |       | 1/A9.1  | 1/A9.1  | 18/A9.1     |                                  |
| 104A | A    | 3'-0" x 7'-0"      | H.M. | PAINT   | 1     | H.M.    | PAINT   |               | -     | 7    |       | 1/A9.1  | 1/A9.1  | 18/A9.1 SIM |                                  |
| 105A | A    | 3'-0" x 7'-0"      | H.M. | PAINT   | 1     | H.M.    | PAINT   |               | -     | 7    |       | 1/A9.1  | 1/A9.1  | 18/A9.1 SIM |                                  |
| 106A | F    | 10'-0" x 7'-0"     | -    | -       | WOOD  | FAC FIN |         |               |       |      |       | 9/A9.1  | 9/A9.1  | 9/A9.1      | ACCORDIAN DOOR, HDWR BY MFR      |
| 200A | C    | 3'-0" x 7'-0"      | ALUM | FAC FIN | ALUM  | FAC FIN |         |               | -     | 2    | PH    |         |         | 18/A9.1     |                                  |
| 200B | C    | 3'-0" x 7'-0"      | ALUM | FAC FIN | ALUM  | FAC FIN |         |               | -     | 2    | PH    |         |         | 18/A9.1     |                                  |
| 201A | E    | 8'-0" x 9'-0"      |      |         |       |         |         |               |       |      |       |         |         |             | ROLL-UP DOOR, HDWR BY DOOR MFR   |
| 202A | A    | 3'-0" x 7'-0"      | WOOD | STAIN   | 1     | H.M.    | FAC FIN |               | -     | 3    |       | 17/A9.1 | 17/A9.1 |             |                                  |

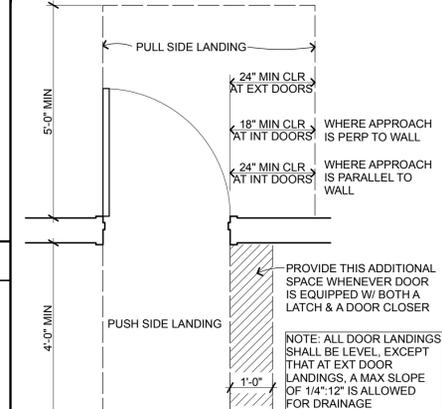
**DOOR FRAME TYPES**



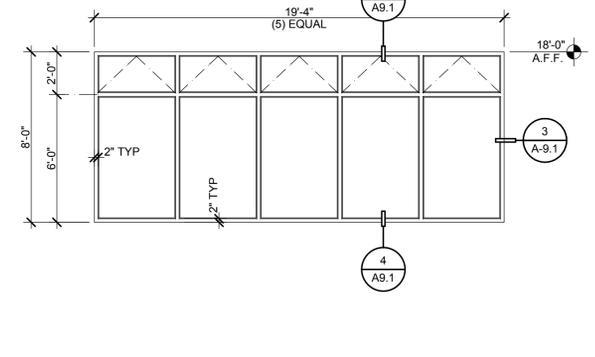
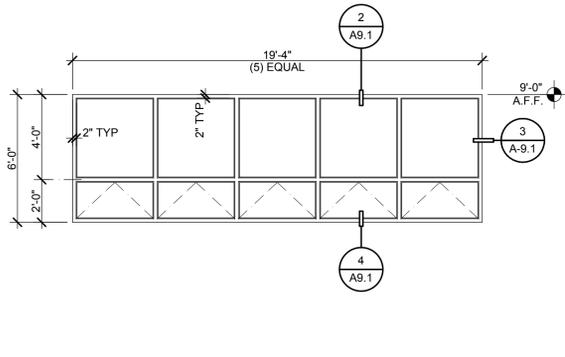
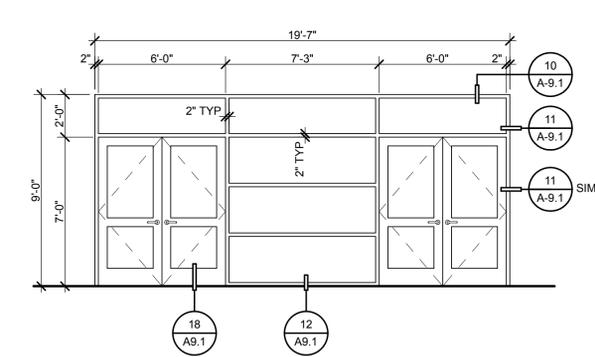
**DOOR GENERAL NOTES**

- ALL EXIT DOORS, INCLUDING BUT NOT LIMITED TO DOORS OF TOILET ROOMS AND STORAGE ROOMS SHALL CONFORM TO CBC 1008. EXIT DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY, OR SPECIAL KNOWLEDGE OR EFFORT.
- EXIT DEVICES (PANIC HARDWARE) SHALL BE INSTALLED IN CONFORMANCE WITH CBC 1008.1.9. THE ACTIVATING MEMBER SHALL BE CENTERED AT A HEIGHT OF NOT LESS THAN 30 INCHES OR MORE THAN 44 INCHES ABOVE THE FLOOR. UNLATCHING FORCE SHALL NOT EXCEED 5 POUNDS APPLIED IN THE DIRECTION OF TRAVEL, UNLESS APPROVED BY THE AUTHORITY HAVING JURISDICTION MAY INCREASE THE MAXIMUM EFFORT TO OPERATE TO 15 POUNDS MAX.
- PANIC HARDWARE REQUIRED FROM ROOMS AND CORRIDORS OF OCCUPANCY WHERE OCCUPANT LOAD IS 50 OR MORE PER CBC 1008.1.10.
- DOORS WITH CLOSERS SHALL BE ADJUSTED TO PROVIDE MINIMUM DOOR CLOSER PERIOD OF THREE SECONDS FROM A POSITION OF 70 DEGREES TO WITHIN 3 INCHES OF THE DOOR LATCH, MEASURED FROM THE LEADING EDGE OF THE DOOR.
- MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED 5 POUNDS FOR EXTERIOR DOORS AND 5 POUNDS FOR INTERIOR DOORS. CBC 1133B.2.5.
- SEE ARCHITECTURAL SIGNAGE DRAWINGS FOR SIGNS ON DOORS AND SIGNS RELATED TO ENTRANCE AND EXIT. REFER TO SITE PLAN FOR SITE SIGNAGE.

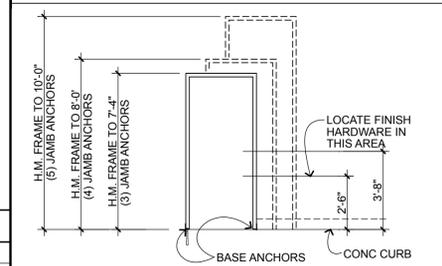
**ACCESSIBLE DOOR CLEARANCES**



**STOREFRONT DOOR & WINDOW TYPES**



**HM FRAME ANCHORAGE**



- NOTES:
- PROVIDE DOOR FRAME ANCHORAGE AS FOLLOWS: PROVIDE A MINIMUM OF 3-FRAME ANCHORS AT EA JAMB OF DOOR FRAMES. AT CONCRETE SLABS PROVIDE SNAP-IN FRAME ANCHORS AT 24" O.C. (2 MIN) WITH 3/8" DIA I.C.C. APPROVED EXPANSION BOLTS FROM ANCHOR TO CONCRETE (TYP) JAMB ANCHORS TO BE SPACED EQUALLY.
  - ATTACH ANCHORS TO WOOD FRAMING WITH #12 F.H.W.S., 1 1/2" MINIMUM PENETRATION.
  - BASE ANCHORS ARE ADDITIONAL TO THE NUMBER OF JAMB ANCHORS INDICATED ON THIS DIAGRAM.

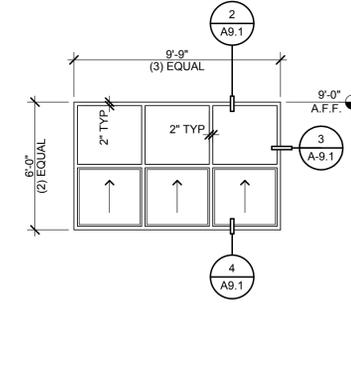
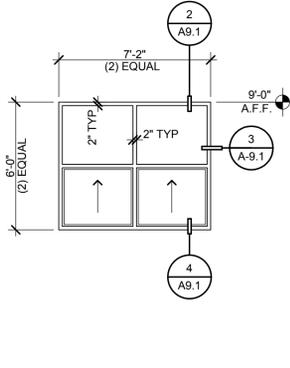
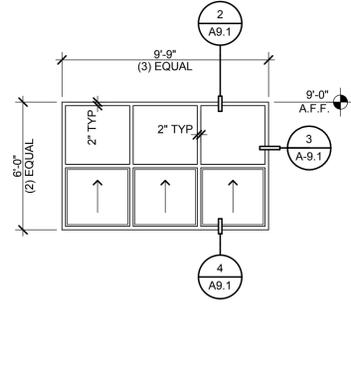
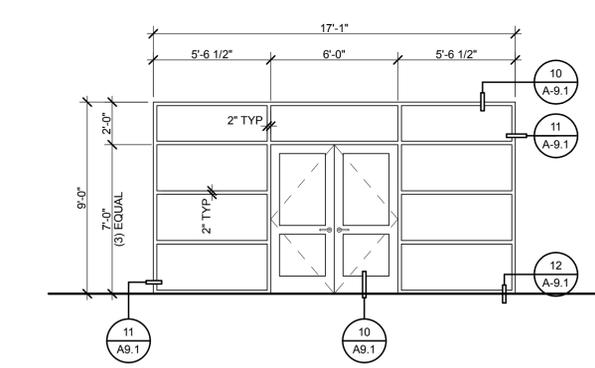
**GLAZING GENERAL NOTES**

- ALL INTERIOR GLAZING SHALL BE 1/4" CLEAR TEMPERED, U.O.N.
- ALL EXTERIOR GLAZING SHALL BE INSULATED GLASS UNITS w/ 1/2" TEMPERED GLASS, U.O.N.
- PROVIDE RATED GLASS ASSEMBLIES IN ACCORDANCE w/ CBC CHAPTERS 7 AND 24.
- FOR DETAILED DOOR AND WINDOW GLAZING INFORMATION REFER TO SPECIFICATION SECTION 08800.

| SF-1      |                     |
|-----------|---------------------|
| TYPE      | ALUMINUM STOREFRONT |
| GLAZING   | DOUBLE GLAZED       |
| OPERATION | FIXED WINDOW        |
| RATING    | -                   |
| NOTES     | -                   |

| SF-2      |                       |
|-----------|-----------------------|
| TYPE      | ALUMINUM STOREFRONT   |
| GLAZING   | DOUBLE GLAZED         |
| OPERATION | FIXED / AWNING WINDOW |
| RATING    | -                     |
| NOTES     | -                     |

| SF-3      |                       |
|-----------|-----------------------|
| TYPE      | ALUMINUM STOREFRONT   |
| GLAZING   | DOUBLE GLAZED         |
| OPERATION | FIXED / AWNING WINDOW |
| RATING    | -                     |
| NOTES     | -                     |



| SF-4      |                     |
|-----------|---------------------|
| TYPE      | ALUMINUM STOREFRONT |
| GLAZING   | DOUBLE GLAZED       |
| OPERATION | FIXED WINDOW        |
| RATING    | -                   |
| NOTES     | -                   |

| SF-5      |                     |
|-----------|---------------------|
| TYPE      | ALUMINUM STOREFRONT |
| GLAZING   | DOUBLE GLAZED       |
| OPERATION | SINGLE HUNG WINDOW  |
| RATING    | -                   |
| NOTES     | -                   |

| SF-6      |                     |
|-----------|---------------------|
| TYPE      | ALUMINUM STOREFRONT |
| GLAZING   | DOUBLE GLAZED       |
| OPERATION | SINGLE HUNG WINDOW  |
| RATING    | -                   |
| NOTES     | -                   |

| SF-7      |                     |
|-----------|---------------------|
| TYPE      | ALUMINUM STOREFRONT |
| GLAZING   | DOUBLE GLAZED       |
| OPERATION | SINGLE HUNG WINDOW  |
| RATING    | -                   |
| NOTES     | -                   |



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**WESTSIDE FACILITY**

SONOMA COUNTY WATER AGENCY

9756 Wohler Rd  
Forestville, CA

PRMD APPROVED FOR CONSTRUCTION  
JUNE 18, 2014

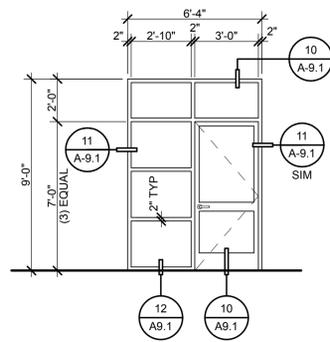
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|------------------|---------------|
| ARCH PROJECT NO: | 1245.00       |
| DRAWN BY:        | TF            |
| DRAWING SCALE:   |               |
| PTN:             |               |
|                  | CD Phase      |
|                  | NOVEMBER 2013 |
| SHEET TITLE:     |               |

**DOOR / WINDOW TYPES AND SCHEDULE**

SHEET NUMBER  
**A8.1**

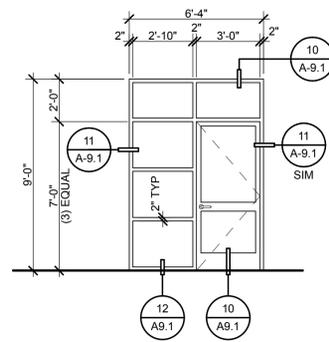
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**STOREFRONT DOOR & WINDOW TYPES**



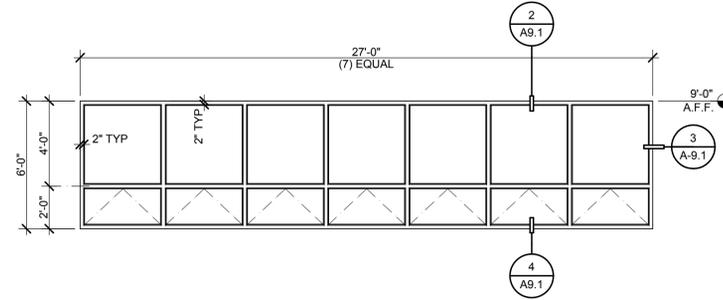
**SF-8**

|           |                     |
|-----------|---------------------|
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| OPERATION | FIXED WINDOW        |
| RATING    | -                   |
| NOTES     | -                   |



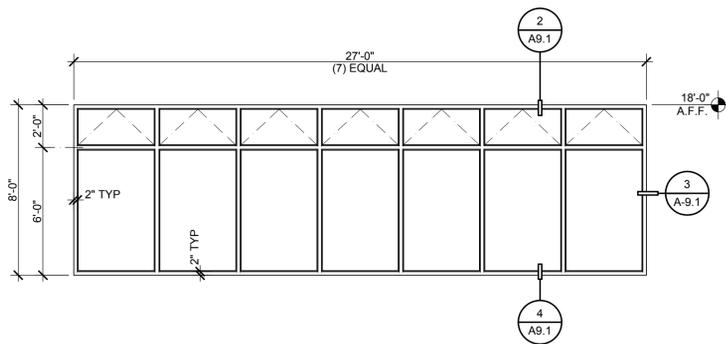
**SF-9**

|           |                     |
|-----------|---------------------|
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| OPERATION | FIXED WINDOW        |
| RATING    | -                   |
| NOTES     | -                   |



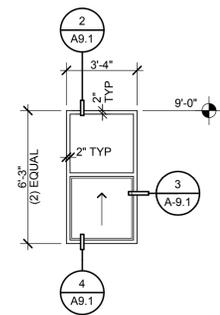
**SF-10**

|           |                       |
|-----------|-----------------------|
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| OPERATION | FIXED / AWNING WINDOW |
| RATING    | -                     |
| NOTES     | -                     |

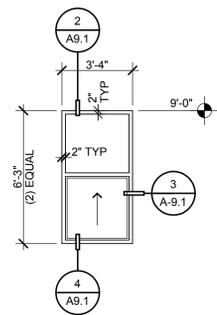


**SF-11**

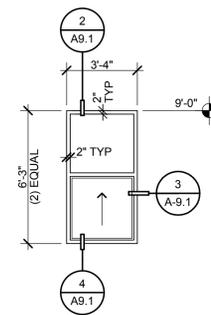
|           |                     |
|-----------|---------------------|
| TYPE      | ALUMINUM STOREFRONT |
| GLAZING   | DOUBLE GLAZED       |
| OPERATION | FIXED WINDOW        |
| RATING    | -                   |
| NOTES     | -                   |



**W1**



**W2**



**W3**

**MINIMUM CBC REQUIREMENTS. REFER TO ARCHITECTURAL SIGNAGE DRAWINGS AND SPECIFICATIONS FOR SPECIFIC GRAPHICS. ALSO SEE PLANS FOR ADDITIONAL SIGNAGE REQUIREMENTS**

**MINIMUM CBC REQUIREMENTS.**

**TYPICAL PLAQUE NOTES U.N.O.**

PLAQUES WITH TACTILE LETTERING AND SYMBOLS (RAISED 1/32") INCLUDES CALIFORNIA CONTRACTED GRADE 2 BRAILLE RAISED 1/40" PER CBC REQUIREMENTS. SAN SERIF FONT SELECTION SHALL HAVE A WIDTH-TO-HEIGHT RATIO OF BETWEEN 60% AND 110% MEASURED BY THE WIDTH OF THE UPPERCASE LETTER "O" AND THE HEIGHT OF THE UPPERCASE LETTER "I". A STROKE WIDTH TO HEIGHT OF THE UPPERCASE LETTER "I" SHALL BE 10% MIN AND 20% MAX OF HT OF CHARACTER.

CUSTOM COLORS, LAYOUT & LETTERSTYLES TO BE SELECTED & APPROVED BY ARCHITECT. SIGNAGE SYMBOLS, BACKGROUND, MOUNTING SURFACE TO CONTRAST, 70% MINIMUM CONTRAST.

**TEXT**

TEXT HT A.F.F. | TEXT SIZE\*

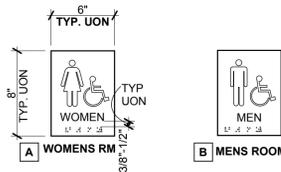
|         |                        |
|---------|------------------------|
| 48"-70" | 5/8" MIN. TEXT (48 PT) |
| > 70"   | 2" MAX.                |

\* FOR WALL MOUNTED SIGNS WHICH MAY BE VIEWED W/O OBSTRUCTION.

**STRIKE SIDE TOILET ROOM SIGNAGE**

(PLAQUE NOTES TYP FOR EACH SIGN)

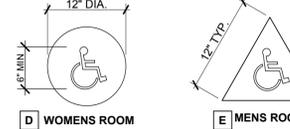
PROVIDE AT ACCESSIBLE TOILET ROOMS. USE "GIRLS" & "BOYS" WHERE TOILET ROOMS ARE PRIMARILY USED BY CHILDREN. 5/8" MIN. TEXT (48 PT)



**TOILET ROOM DOOR SIGNAGE**

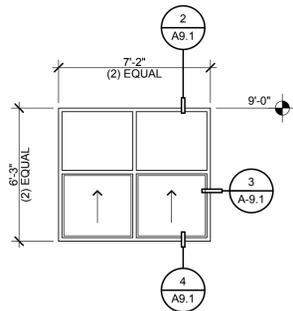
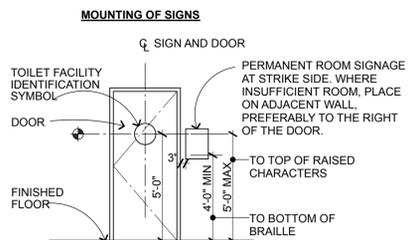
(NOTES TYP FOR EACH SIGN)

PROVIDE AT ACCESSIBLE TOILET ROOMS. 1/4" THICK BACKPAINTED MATTE CLEAR PLAQUES WITH REVERSE CUT VINYL SYMBOLS



**ACCESSIBLE DOOR SIGNAGE**

1/4" = 1'-0"



**W4**

|           |                     |
|-----------|---------------------|
| TYPE      | ALUMINUM STOREFRONT |
| GLAZING   | DOUBLE GLAZED       |
| OPERATION | SINGLE HUNG WINDOW  |
| RATING    | -                   |
| NOTES     | -                   |



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(707) 576-0295 FAX



**WESTSIDE FACILITY**

SONOMA COUNTY WATER AGENCY

9756 Wohler Rd  
Forestville, CA

PRMD APPROVED FOR CONSTRUCTION  
JUNE 18, 2014

|                  |         |
|------------------|---------|
| ARCH PROJECT NO: | 1245.00 |
| DRAWN BY:        | TF      |
| DRAWING SCALE:   |         |
| PTN:             |         |

CD Phase  
NOVEMBER 2013

SHEET TITLE

**DOOR / WINDOW TYPES AND SCHEDULE**

SHEET NUMBER

**A8.2**

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WESTSIDE FACILITY

SONOMA COUNTY WATER AGENCY

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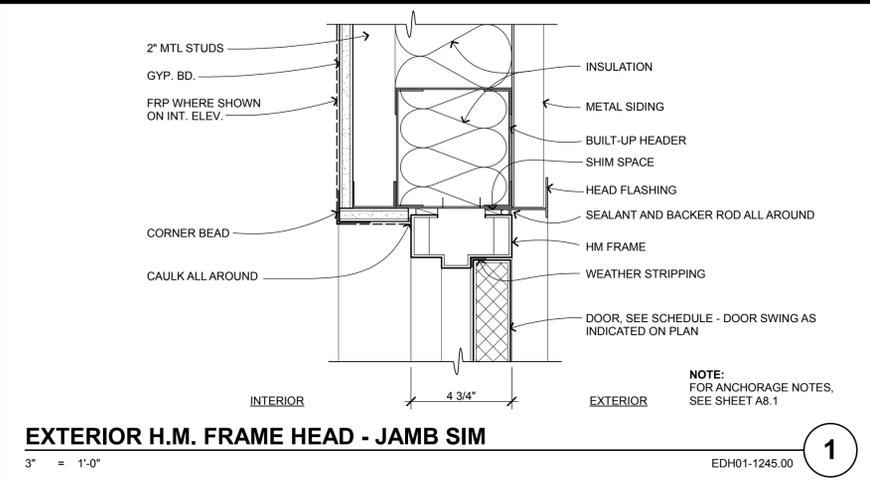
PRMD APPROVED FOR CONSTRUCTION  
JUNE 18, 2014

ARCH PROJECT NO: 1245.00  
DRAWN BY: TF  
DRAWING SCALE:  
PTN:  
CD Phase  
NOVEMBER 2013  
SHEET TITLE

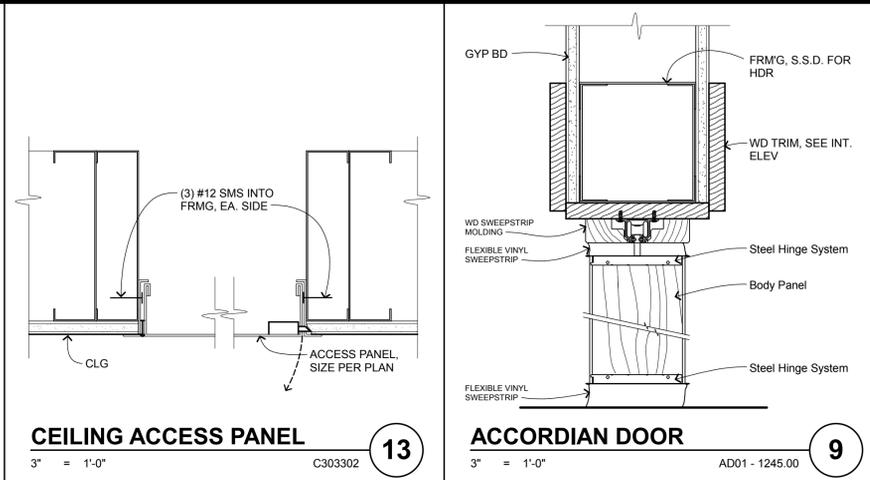
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SHEET NUMBER

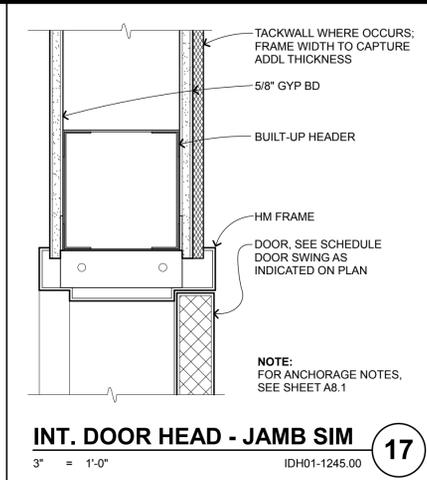
A9.1



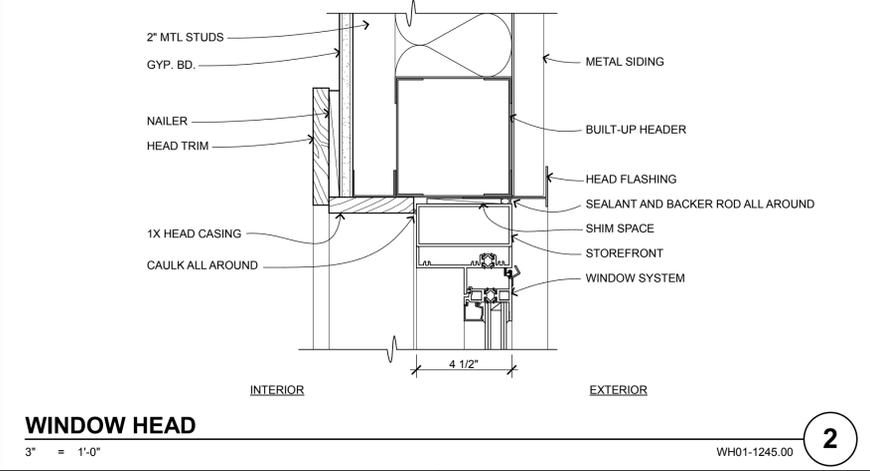
**EXTERIOR H.M. FRAME HEAD - JAMB SIM** 1  
3\"/>



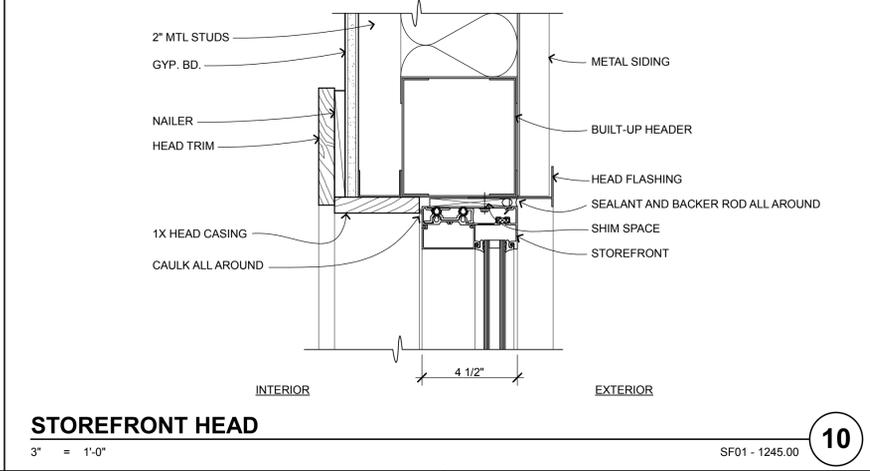
**ACCORDIAN DOOR** 9  
3\"/>



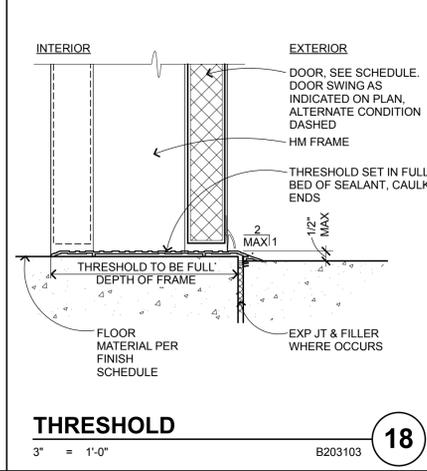
**INT. DOOR HEAD - JAMB SIM** 17  
3\"/>



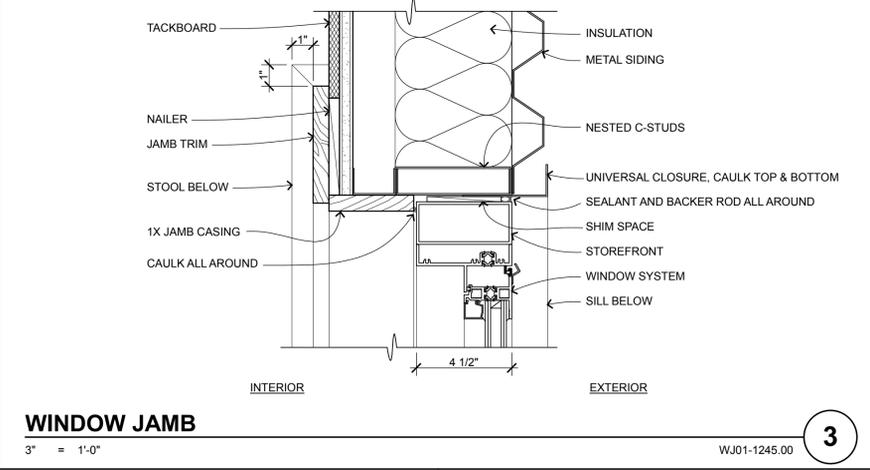
**WINDOW HEAD** 2  
3\"/>



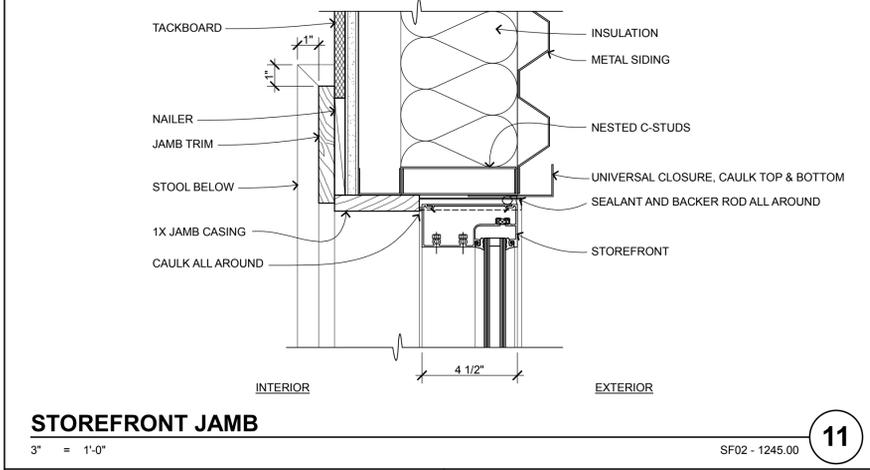
**STOREFRONT HEAD** 10  
3\"/>



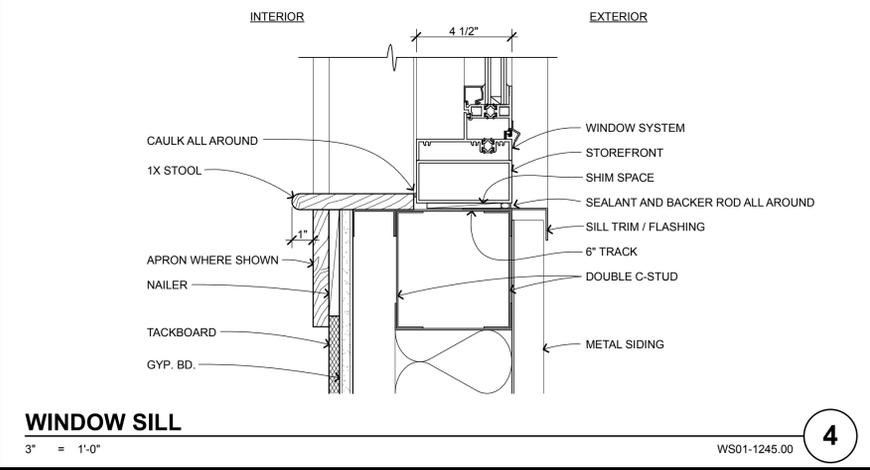
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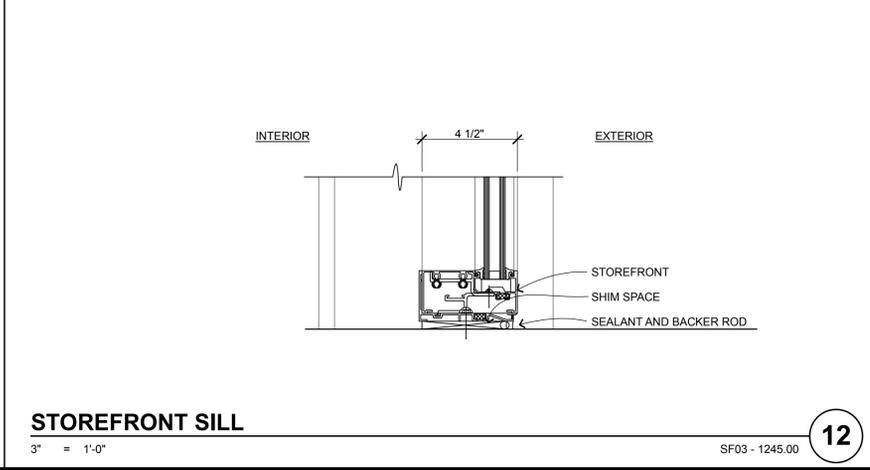
**WINDOW JAMB** 3  
3\"/>



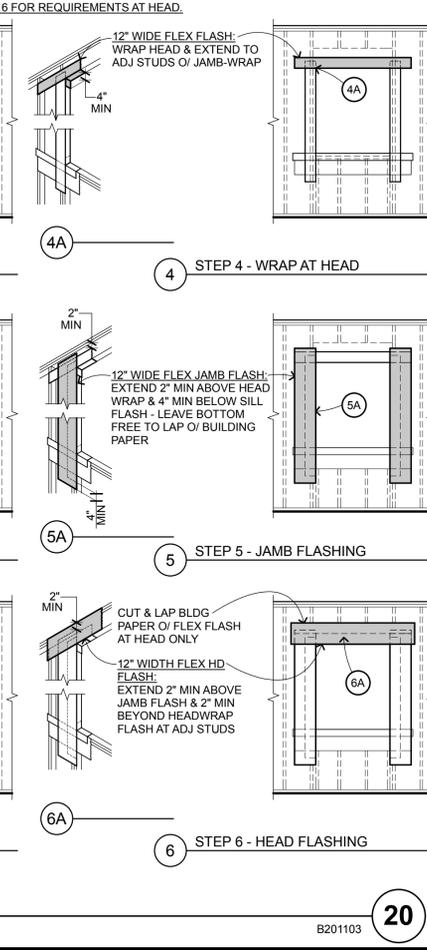
**STOREFRONT JAMB** 11  
3\"/>



**WINDOW SILL** 4  
3\"/>



**STOREFRONT SILL** 12  
3\"/>

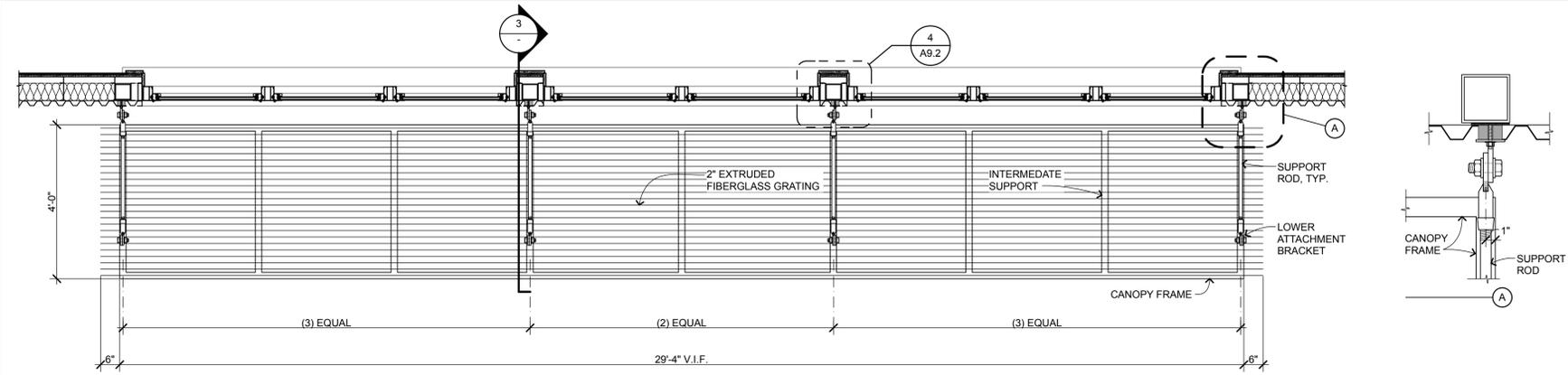


**TYPICAL FLASHING/PAPERING** 20  
1/4\"/>

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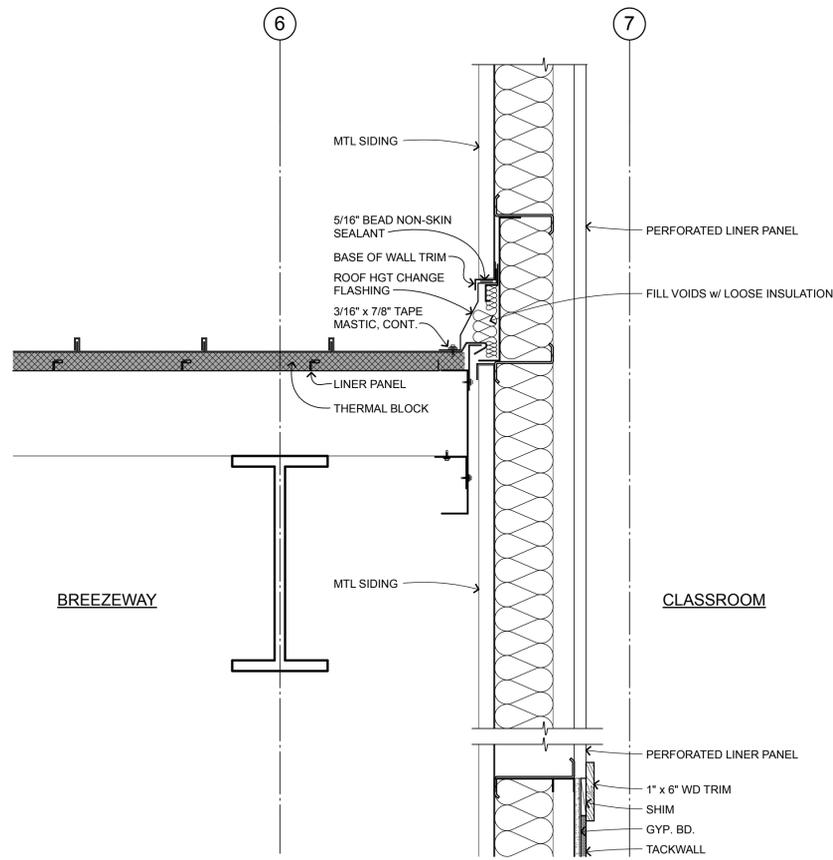


**SUN SHADE LAYOUT**

1/2" = 1'-0"

SS-01 1245.00

1

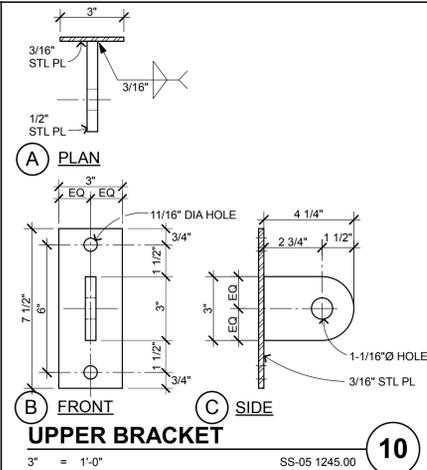


**BREEZEWAY ROOF TO BLDG**

1 1/2" = 1'-0"

RF-01 1245.00

15

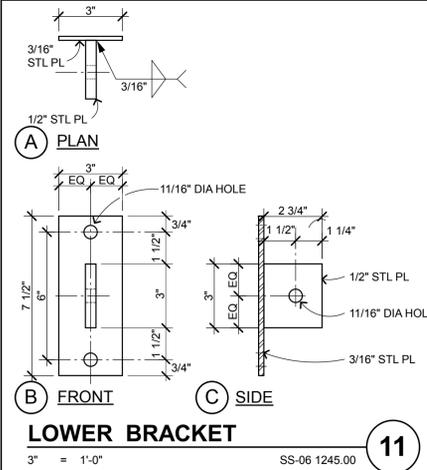


**UPPER BRACKET**

3" = 1'-0"

SS-05 1245.00

10

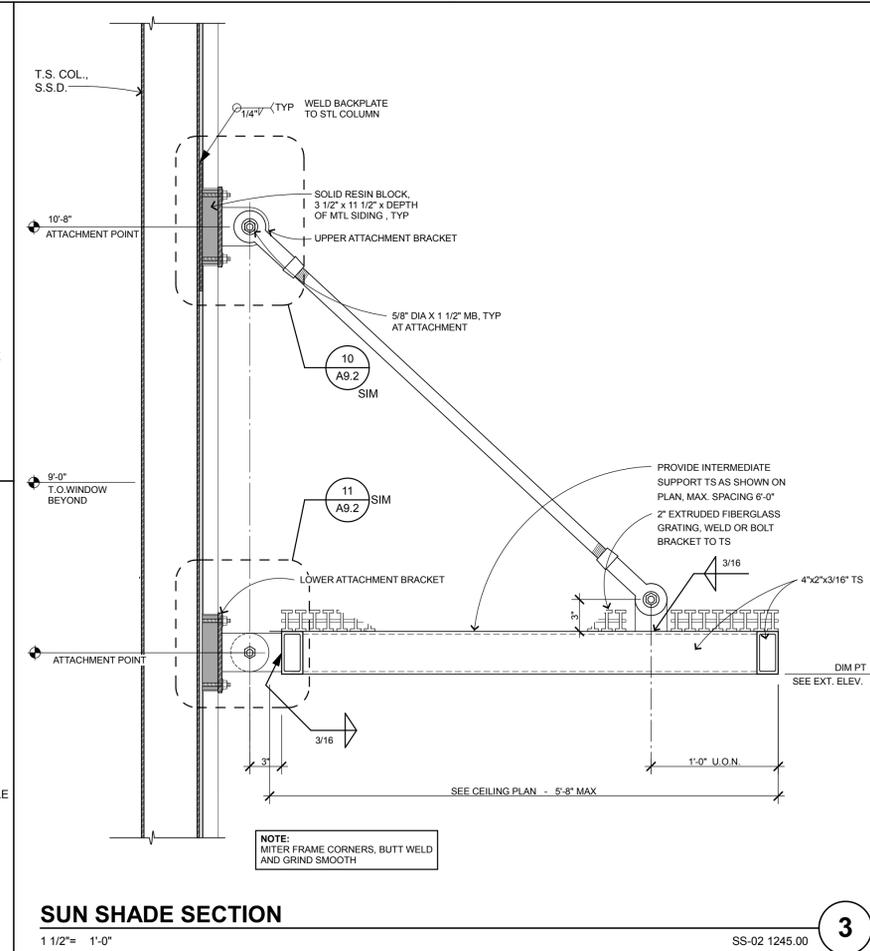


**LOWER BRACKET**

3" = 1'-0"

SS-06 1245.00

11

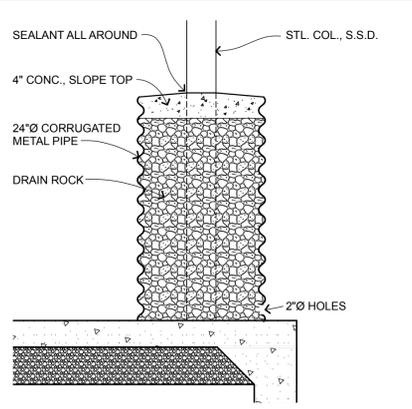


**SUN SHADE SECTION**

1 1/2" = 1'-0"

SS-02 1245.00

3

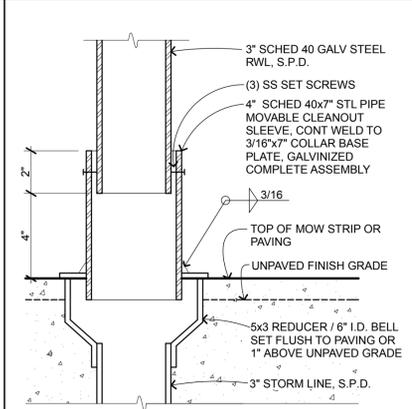


**COLUMN BASE**

3/4" = 1'-0"

CB01

20

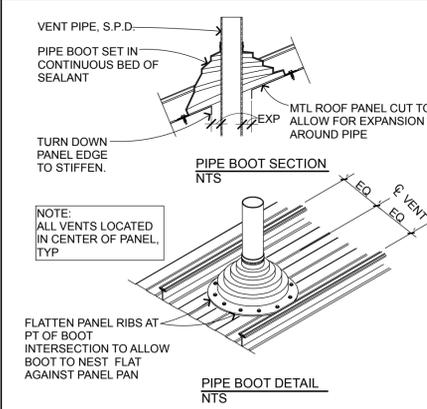


**TYP SECT @ RWL SLEEVE**

3" = 1'-0"

B304209

16

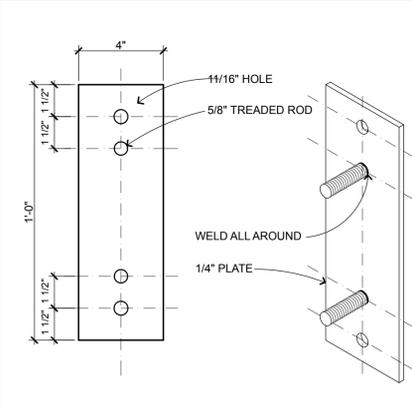


**VENT BOOT @ MTL ROOF**

6" = 1'-0"

B301115

12

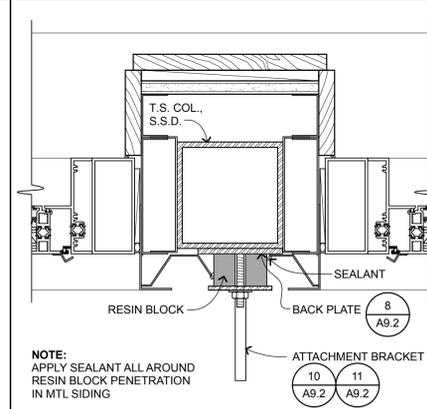


**BACK PLATE**

3" = 1'-0"

SS-04 1245.00

8



**SUN SHADE ATTACHMENT**

3" = 1'-0"

SS-03 1245.00

4

**WESTSIDE FACILITY**

SONOMA COUNTY  
WATER AGENCY

9756 Wohler Rd  
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PRMD APPROVED  
FOR CONSTRUCTION  
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ARCH PROJECT NO: 1245.00  
DRAWN BY: TF  
DRAWING SCALE:  
PTN:  
CD Phase  
NOVEMBER 2013  
SHEET TITLE

**DETAILS**

SHEET NUMBER

**A9.2**

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| ABBREVIATIONS |                                      |
|---------------|--------------------------------------|
| AB            | ANCHOR BOLT                          |
| ABV           | ABOVE                                |
| AC            | AIR CONDITIONING                     |
| ADJ           | ADJACENT                             |
| ADDL          | ADDITIONAL                           |
| ALT           | ALTERNATE                            |
| ARCH          | ARCHITECT                            |
| BLDG          | BUILDING                             |
| BLK/BLKG      | BLOCK/BLOCKING                       |
| BLW           | BELOW                                |
| BN            | BEAM                                 |
| BNL           | BOUNDARY NAIL                        |
| BOT           | BOTTOM                               |
| BRG           | BEARING                              |
| BTWN          | BETWEEN                              |
| BUL           | BUILT UP                             |
| BEYOND        | BEYOND                               |
| CS            | AMERICAN STANDARD CHANNEL            |
| CHNT          | CHANNEL                              |
| CB            | CANTILEVER                           |
| CIP           | CARRIAGE BOLT                        |
| COL           | CAST IN PLACE                        |
| CJ            | CERTIFIED GLUED LUMBER               |
| CJL           | CENTERLINE                           |
| CJP           | COMPLETE JOINT                       |
| CLG           | CEILING                              |
| CLR           | CLEAR                                |
| COLL          | COLLUMN                              |
| COLL          | COLLECTOR                            |
| CONC          | CONCRETE                             |
| CONN          | CONNECTION                           |
| CONT          | CONTINUOUS                           |
| COORD         | COORDINATE                           |
| COORD         | COORDINATION                         |
| CMU           | CONCRETE MASONRY UNIT                |
| CSK           | COUNTERSINK                          |
| CW            | CUT WASHER                           |
| DBL           | DOUBLE                               |
| DCW           | DEMAND CRITICAL WELD                 |
| DF            | DOUGLAS FIR                          |
| DIA or Ø      | DIAMETER                             |
| DIA           | DIRECTIONAL                          |
| DIM           | DIMENSION                            |
| DJ            | DOWEL JOINT                          |
| DL            | DEAD LOAD                            |
| DN            | DOWN                                 |
| DO            | DOTTO                                |
| DWG           | DRAWING                              |
| DWL           | DOWEL                                |
| EA            | EACH                                 |
| EA            | EACH END                             |
| EF            | EACH FACE                            |
| ELEV          | ELEVATION/ELEVATION                  |
| EMBED         | EMBEDMENT                            |
| EQ            | EQUAL                                |
| EQUIP         | EQUIPMENT                            |
| ES            | EACH SIDE                            |
| EW            | EACH WAY                             |
| EXIST or (E)  | EXISTING                             |
| EXP           | EXPANSION                            |
| EXT           | EXTERIOR                             |
| FDN           | FOUNDATION                           |
| FIN           | FINISH                               |
| FG            | FINISH GRADE                         |
| FL            | FERRULE LOOP INSERT                  |
| FLR           | FLOOR                                |
| FN            | FACE NAIL                            |
| FCC           | FACE OF CONCRETE                     |
| FCM           | FACE OF MASONRY                      |
| FDS           | FACE OF STUD                         |
| FRMG          | FRAMING                              |
| FS            | FACE SIDE                            |
| FTG           | FOOTING                              |
| GA            | GAGE or GAUGE                        |
| GALV          | GALVANIZED                           |
| GB            | GRADE BEAM                           |
| GLB           | GLUE LAMINATED BEAM                  |
| GR            | GRADE                                |
| HD            | HOLD DOWN                            |
| HDR           | HANGER                               |
| HGR           | HORIZONTAL                           |
| HK            | HOOK                                 |
| HS            | HIGH STRENGTH                        |
| HSH           | HIGH STRENGTH BOLT                   |
| HSSB          | HIGH STRENGTH BOLT                   |
| HSG           | HIGH STRENGTH GROUT                  |
| HSH           | HORIZONTAL SLOTTED HOLE              |
| HSS           | HOLLOW STRUCTURAL SECTION            |
| HHT           | HEIGHT                               |
| ID            | INSIDE DIAMETER                      |
| LI            | LSHAPED WOOD BUILT UP TRUSS          |
| INT           | INTERIOR                             |
| JST           | JOIST                                |
| JT            | JOINT                                |
| L             | STEEL ANGLE                          |
| Ld or #       | POUNDS                               |
| LGW           | LIGHT GAGE METAL                     |
| LGW/FC        | FRAMING CONTRACTOR                   |
| LL            | LIVE LOAD                            |
| LLH           | LONG LEG HORIZONTAL LOCATION         |
| LLV           | LONG LEG VERTICAL LOCATION           |
| LS            | LAG SCREW                            |
| LVL           | LAMINATED STRAND LUMBER              |
| LVL           | LAMINATED VENEER LUMBER              |
| MB            | MACHINE BOLT                         |
| MBM           | METAL BUILDING MANUFACTURER          |
| MC            | MISCELLANEOUS CHANNEL                |
| MECH          | MECHANICAL                           |
| MEZZ          | MEZZANINE                            |
| MFR           | MOMENT FRAME MANUFACTURER            |
| MIB           | MIMIMUM                              |
| MISC          | MISCELLANEOUS                        |
| MW            | MALLEABLE IRON WASHER                |
| MTL           | METAL                                |
| NI            | NEW                                  |
| NIC           | NOT IN CONTRACT                      |
| NTS           | NOT TO SCALE                         |
| NS            | NEAR SIDE                            |
| NSG           | NON-SHRINK GROUT                     |
| NTS           | NOT TO SCALE                         |
| O             | OVER                                 |
| OC            | ON CENTER                            |
| OD            | OUTSIDE DIAMETER                     |
| OPNG          | OPENING                              |
| OP            | OPPOSITE HAND                        |
| OPW           | OTHERWISE                            |
| OWT           | OPEN WEB TRUSS                       |
| P             | PLATE or PROPERTY LINE               |
| PA            | POST ABOVE                           |
| PDP           | POWDER DRIVEN PINS                   |
| PEN           | PLYWOOD EDGE NAIL                    |
| PERP          | PERPENDICULAR                        |
| SHTG          | PLYWOOD                              |
| PLF           | POUNDS PER LINEAR FOOT               |
| PNL           | PANEL                                |
| PJP           | PARTIAL JOINT PENETRATION            |
| PSF           | POUNDS PER SQUARE FOOT               |
| PSI           | POUNDS PER SQUARE INCH               |
| PSL           | PARALLEL STRAND LUMBER               |
| PTB           | PANEL TIE BAR                        |
| PTFP          | PRESSURE TREATED DOUGLAS FIR         |
| PT            | POST                                 |
| R             | RADIUS                               |
| R             | RATER                                |
| REF           | REFERENCE                            |
| REIN          | REINFORCING                          |
| REQD          | REQUIRED                             |
| RET           | RETAINING                            |
| REV           | REVISION                             |
| RF            | ROOF                                 |
| RWD           | REGWOOD                              |
| S             | AMERICAN STANDARD BEAM               |
| SAD           | SEE ARCHITECTURAL DRAWINGS           |
| SB            | SHEATHING                            |
| SC            | SLIP CRITICAL                        |
| SCD           | SEE CIVIL DRAWINGS                   |
| SCHED         | SCHEDULE                             |
| SED           | SEE ELECTRICAL DRAWINGS              |
| SEOR          | STRUCTURAL ENGINEER OF RECORD        |
| SHTG          | SHEATHING                            |
| SIM           | SIMILAR                              |
| SKYLT         | SKYLIGHT                             |
| SLAS          | SEISMIC LOAD RESISTING SYSTEM        |
| SMS           | SHEET METAL SCREW                    |
| SND           | SEE MECHANICAL DRAWINGS              |
| SDG           | SLAB ON GRADE                        |
| SFG           | SPACING                              |
| SFD           | SEE PLUMBING DRAWINGS                |
| SPEC          | SPECIFICATION                        |
| SS            | SELECT STRUCTURAL or STAINLESS STEEL |
| STGR          | STAGGERED                            |
| STD           | STANDARD                             |
| STFF          | STIFFENER                            |
| STL           | STEEL                                |
| STRUCT        | STRUCTURAL                           |
| SYM           | SYMMETRICAL                          |
| T&B           | TOP AND BOTTOM                       |
| T&G           | TONGUE AND GROOVE                    |
| THK           | THICK                                |
| THRD          | THREADED                             |
| THRU          | THROUGH                              |
| TL            | TOTAL LOAD                           |
| TN            | TOP NAIL                             |
| TOC           | TOP OF CONCRETE                      |
| TOF           | TOP OF FRAMING                       |
| TOI           | TOP OF MASONRY                       |
| TOP           | TOP OF PLYWOOD                       |
| TOE           | TOP OF STEEL                         |
| TOT           | TOTAL                                |
| TU            | TILT UP                              |
| TVT           | TYPICAL                              |
| UNO           | UNLESS NOTED OTHERWISE               |
| VERT          | VERTICAL                             |
| VIF           | VERIFY IN FIELD                      |
| VSH           | VERTICAL SLOTTED HOLE                |
| W             | WIDE FLANGE STEEL BEAM               |
| W             | WITH                                 |
| W/O           | WITHOUT                              |
| WD            | WOOD                                 |
| WHS           | WELDED HEADED STUD                   |
| WLD           | WELDED                               |
| WP            | WORK POINT/WATERPROOF                |
| WS            | WOOD SCREW                           |
| WTS           | WELDED THREADED STUD                 |
| WWF           | WELDED WIRE FABRIC                   |

### C FOUNDATION NOTES

- FOUNDATION DESIGN PRESSURES ARE:  
SHALLOW FOOTINGS:  
DL + LL = xxxxx PSF  
DL + LL + LATERAL = xxxxx PSF
- ALL SOILS WORK SHALL BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS, THE REQUIREMENTS OF THE GEOTECHNICAL REPORT NOTED BELOW, AND CHAPTER 19 OF THE 2010 CBC. ALL FOUNDATIONS SHALL BEAR ON FIRM, UNDISTURBED, NATIVE SOILS OR ENGINEERED FILL AT OR EXCEEDING DEPTHS SHOWN ON THE DRAWINGS. ENGINEERED FILL TO BE COMPACTED PER GEOTECHNICAL REPORT. INCREASE FILL AND OR FOOTING DEPTH AS REQUIRED BY GEOTECHNICAL ENGINEER. ALL FOOTING EXCAVATIONS SHALL BE AS NEAT AS PRACTICABLE. MAXIMUM OVER EXCAVATION IN WIDTH SHALL BE LESS THAN 12 INCHES OR 25% OF FOOTING WIDTH, WHICH EVER IS LESS. 6 INCHES MAXIMUM PER SIDE. LARGER OVER-EXCAVATIONS IN WIDTH SHALL BE FILLED WITH ADDITIONAL REINFORCED CONCRETE AS DIRECTED BY THE ENGINEER, OR FORMWORK SHALL BE PROVIDED. OVER-EXCAVATIONS IN DEPTH MAY BE FILLED WITH LEAN CONCRETE OR COMPACTED APPROVED BACKFILL. ALL LOOSE SOILS SHALL BE REMOVED FROM EXCAVATIONS PRIOR TO PLACEMENT OF REINFORCING OR CONCRETE. GEOTECHNICAL REPORT BY:  
  
GEOTECHNICAL REPORT NO. XX-XX  
DATED: XX-XX
- WHERE BOTTOM OF ADJACENT FOOTINGS ARE DIFFERENT PROVIDE STEPPED FOOTING PER §11.1.
- TYPICAL SLAB, 5" CONCRETE REINFORCED WITH #3 @ 18"oc AT MID-DEPTH OVER VAPOR RETARDER (PER SPECIFICATIONS) AND 6" MINIMUM FREE DRAINING COMPACTED ROCK PER SPECIFICATIONS ON SUBGRADE PER THE GEOTECHNICAL RECOMMENDATIONS, AND AS APPROVED BY THE GEOTECHNICAL ENGINEER. DO NOT DRIVE CONCRETE TRUCKS OR LARGE SCREED MACHINES ON VAPOR BARRIER WITHOUT ADDITIONAL BUFFER MATERIAL AND APPROVAL FROM THE STRUCTURAL ENGINEER.
- REFER TO ARCHITECTURAL AND PLUMBING DRAWINGS FOR DEPRESSED SLABS FOR ARCHITECTURAL FLOORING OR INSERTS, SLOPED SLABS TO DRAIN AND PIPES OR CONDUITS AT SLAB. SEE §11.1 & §11.1 AT DEPRESSED SLAB & §11.1 FOR PIPES AND CONDUITS.
- PROVIDE CONTROL JOINTS (OR CONSTRUCTION/DOWEL JOINTS AT CONTRACTOR'S OPTION) AS SHOWN ON PLAN (15'-0"oc MAX. UNO) PER §11.1. INSTALL JOINTS TO DIVIDE SLAB INTO RECTANGULAR AREAS WITH LONG DIMENSION LESS THAN 1.5 x SHORT DIMENSION. INSTALL JOINTS AT FACE OF STUDS OF WALL WHERE POSSIBLE. SUBMIT JOINT LAYOUT PLAN FOR REVIEW PRIOR TO PLACEMENT.
- TOP OF FOOTING ELEVATIONS TO BE DETERMINED BY THE CONTRACTOR BASED ON INFORMATION FROM THE CIVIL DRAWINGS, GEOTECHNICAL REPORT, LANDSCAPE, ETC.

### D SPECIAL INSPECTION BY OWNERS TESTING AGENCY

- SPECIAL INSPECTIONS AND TESTING SHALL BE PERFORMED BY AN APPROVED AGENCY IN ACCORDANCE WITH CALIFORNIA BUILDING CODE (CBC) SECTIONS 1703, 1704, 1707 AND 1708, AND WITH THE STATEMENT OF SPECIAL INSPECTIONS AS REQUIRED BY CBC SECTIONS 1704.1.1 AND 1705 FOR BUILDING STRUCTURAL ELEMENTS SUMMARIZED AS FOLLOWS:
- STRUCTURAL STEEL CONSTRUCTION** PER CBC SECTIONS 1704.3, 1707.1, 1708.3 AND TABLE 1704.3 INCLUDING MATERIAL IDENTIFICATION, SHOP AND FIELD WELDING, AND INSTALLATION OF HIGH-STRENGTH BOLTS.
  - CONCRETE CONSTRUCTION** PER CBC SECTIONS 1704.4, 1707.1, 1708.2 AND TABLE 1704.4 INCLUDING FORMWORK, REINFORCING STEEL, CAST-IN-PLACE BOLTS, MIX DESIGNS, CONCRETE SAMPLES, AND PLACEMENT FOR ALL CONCRETE. REINFORCING DOWELS FROM FOOTINGS TO RETAINING WALLS SHALL BE INSPECTED PRIOR TO PLACEMENT OF FOOTINGS CONCRETE AND WALL GROUT OR CONCRETE. CONTINUOUS OR ISOLATED SPREAD FOOTINGS WITH DESIGN STRENGTH NO GREATER THAN 2500 PSI, NON-STRUCTURAL SLABS ON GRADE, AND EXTERIOR FLATWORK DO NOT REQUIRE SPECIAL INSPECTION PER CBC 1704.4.
  - SOILS** PER CBC SECTION 1704.7, TABLE 1704.7 AND THE APPROVED SOILS REPORT INCLUDING SUBGRADE PREPARATION, FOUNDATION BEARING MATERIALS AND DEPTH OF EXCAVATIONS, AND VERIFICATION, PLACEMENT AND TESTING OF CONTROLLED FILL.
  - SPECIAL CASES** PER CBC SECTION 1704.15 AND PRODUCT ICC REPORTS FOR ALL STRUCTURAL MATERIALS AND SYSTEMS REQUIRED TO BE INSTALLED IN ACCORDANCE WITH ADDITIONAL MANUFACTURER'S INSTRUCTIONS THAT PRESCRIBE REQUIREMENTS NOT CONTAINED IN THE CBC OR REFERENCED STANDARDS INCLUDING POST-INSTALLED ANCHOR BOLTS IN CONCRETE AND CMU, AND PRE-MANUFACTURED SHEAR PANELS AND BRACED FRAMES.
  - METAL BUILDING** INSPECTIONS REQUIRED FOR METAL BUILDINGS AS REQUIRED BY METAL BUILDING MANUFACTURER.

### E MATERIAL DATA

(INFORMATION SHOWN IS FOR STRUCTURAL DESIGN REFERENCE ONLY. SEE THE PROJECT SPECIFICATIONS FOR ALL MATERIAL SPECIFICATIONS.)

CONCRETE 28-DAY ULTIMATE COMPRESSIVE STRENGTH:  
F<sub>c</sub> = 4,000 PSI FOUNDATIONS  
F<sub>c</sub> = 4,000 PSI INTERIOR SLAB ON GRADE

REINFORCING STEEL YIELD STRENGTH:  
F<sub>y</sub> = 40,000 PSI AT #3 AND SMALLER  
F<sub>y</sub> = 60,000 PSI AT #4 AND LARGER

STEEL YIELD STRENGTH (UNO):  
F<sub>y</sub> = 50,000 PSI W SHAPES  
F<sub>y</sub> = 36,000 PSI ANGLES AND CHANNELS  
F<sub>y</sub> = 50,000 PSI PLATES  
F<sub>y</sub> = 46,000 PSI RECTANGULAR HSS  
F<sub>y</sub> = 42,000 PSI ROUND HSS

FASTENERS:  
MACHINE BOLTS SHALL BE ASTM A307  
HIGH STRENGTH BOLTS SHALL BE ASTM A325 UNO  
ANCHOR RODS SHALL BE ASTM F1554 GR 36 UNO  
ARC-WELDING ELECTRODES SHALL BE E70

### A DESIGN CRITERIA

- DESIGN CRITERIA:** 2010 CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 2 (CBC)  
**FLOOR LIVE LOAD:** N/A SLAB ON GRADE  
**METAL BUILDING:** BASIC FORCE RESISTING SYSTEM(S); PER METAL BUILDING MANUFACTURER. SEE B1-NOTE #6 FOR ADDITIONAL REQUIREMENTS  
MAXIMUM ELASTIC DEFLECTION: PER CBC REQUIREMENTS

### B GENERAL NOTES

- REFER TO SHEET §11 FOR STANDARD DETAILS OF CONSTRUCTION. REFER TO THE PROJECT SPECIFICATIONS FOR MATERIALS AND METHODS.
- BUILDING DIMENSIONS SHOWN ARE FOR GENERAL REFERENCE ONLY. SEE ARCHITECTURAL DRAWINGS (SAD) FOR ALL ACTUAL BUILDING DIMENSIONS. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER SO CLARIFICATION CAN BE MADE PRIOR TO COMMENCING WORK. ALL DIMENSIONS RELATED TO EXISTING CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AND SUBMITTED IN WRITING TO THE ARCHITECT/ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.
- STRUCTURAL DRAWINGS SHALL NOT BE SCALED. ALL DIMENSIONS AND FIT SHALL BE DETERMINED AND VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCING WORK.
- DETAILS NOT FULLY OR SPECIFICALLY SHOWN SHALL BE OF SAME NATURE AS OTHER SIMILAR CONDITIONS.
- REFER TO ARCHITECTURAL DRAWINGS FOR SIDEWALK SLABS AND DIMENSIONS.  
A. METAL BUILDING.
- COORDINATION OF MECHANICAL, ELECTRICAL, PLUMBING, AND SITE UTILITY SYSTEMS WITH THE STRUCTURAL SYSTEM IS THE RESPONSIBILITY TO THE GENERAL CONTRACTOR. USE DETAILS §11.1, §11.1, AND §11.1. AT CONDITIONS WHERE THESE DETAILS DO NOT APPEAR TO APPLY, NOTIFY THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION. AT CONDITIONS WHERE FIELD MODIFICATIONS OF MECHANICAL, ELECTRICAL, PLUMBING, OR SITE UTILITIES AFFECT STRUCTURAL SYSTEMS, NOTIFY STRUCTURAL ENGINEER PRIOR TO INSTALLATION.
- VERIFY WEIGHTS AND LOCATIONS OF MECHANICAL UNITS WITH MECHANICAL ENGINEER PRIOR TO PLACEMENT. UNITS VARYING OVER 10% IN WEIGHT SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION (MECHANICAL WEIGHTS SHOWN ARE MAXIMUM). CONTRACTOR TO VERIFY MECHANICAL UNIT SIZES AND WEIGHTS AS INSTALLED PRIOR TO INSTALLATION OF SPECIAL FRAMING TO ENSURE CORRECT PLACEMENT UNDER CURBS, ETC.
- SHORING AND BRACING DESIGN, MATERIALS AND INSTALLATION SHALL BE PROVIDED BY THE GENERAL CONTRACTOR, AND SHALL BE ADEQUATE FOR ALL LOADS. LEAVE IN PLACE AS LONG AS MAY BE REQUIRED FOR SAFETY AND UNTIL FINAL STRUCTURAL CONSTRUCTION IS COMPLETED.
- SPECIAL INSPECTIONS ARE REQUIRED PER DL AND THE TESTING AND INSPECTION FORM.  
MINIMUM FOOTING SIZE AND REINFORCING STEEL  
NOTIFY ZFA FOR REVIEW PRIOR TO COVERING ABOVE LISTED WORK. PROVIDE 2 WORKING DAYS MINIMUM SCHEDULING NOTICE PRIOR TO STRUCTURAL OBSERVATION REVIEW DATE.



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

ZFA STRUCTURAL ENGINEERS  
1212 fourth street | suite z zfa.com  
santa rosa ca 95404 707.526.0992  
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### EDUCATIONAL FACILITY

SONOMA COUNTY WATER AGENCY

9765 Wohler Rd.  
Forestville, CA

PRMD APPROVED FOR CONSTRUCTION  
JUNE 18, 2014

#### REVISIONS

| NO. | DESCRIPTION |
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ZFA NO: 12392  
DRAWN BY: ZFA  
DRAWING SCALE: As Indicated  
PTN:

CD PHASE  
MAY 2013

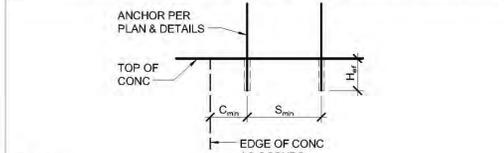
SHEET TITLE

### GENERAL NOTES AND SPECIFICATIONS

SHEET NUMBER

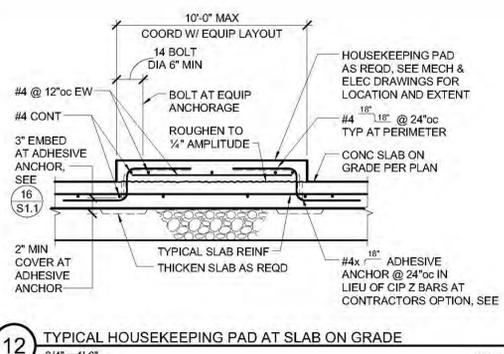
S0.1

| ADHESIVE ANCHOR IN 2500 PSI MIN CONCRETE |          |       |                               |                                    |                              |                                 |
|--|----------|-------|-------------------------------|------------------------------------|------------------------------|---------------------------------|
| ADHESIVE TYPE                            | ANCHOR   |       | MIN EMBED UNO H <sub>em</sub> | MIN EDGE DISTANCE C <sub>min</sub> | MIN SPACING S <sub>min</sub> | MIN CONC DEPTH H <sub>min</sub> |
|  | THRD ROD | REBAR |                               |                                    |                              |                                 |
| SIMPSON SET-XP                           | 3/16"    | #3    | 3"                            | 1 1/2"                             | 3"                           | 5"                              |
|  | 1/8"     | #4    | 3/4"                          | 1 1/2"                             | 3"                           | 6 1/2"                          |
|  | 3/16"    | #5    | 3/4"                          | 5"                                 | 1 1/2"                       | 8 1/2"                          |
|  | 1/2"     | #6    | 3/4"                          | 6"                                 | 1 1/2"                       | 9 1/2"                          |
|  | 3/4"     | #7    | 1"                            | 7"                                 | 1 1/2"                       | 11 1/2"                         |
| HILTI HIT-RE 500-SD                      | 1/2"     | #8    | 1 1/2"                        | 8"                                 | 5"                           | 10"                             |
|  | 3/4"     | #9    | 1 1/2"                        | 9"                                 | 5 1/2"                       | 11 1/2"                         |
|  | 1"       | #10   | 1 1/2"                        | 10"                                | 6 1/2"                       | 12 1/2"                         |
|  | 1 1/4"   | #11   | 1 1/2"                        | 11"                                | 7 1/2"                       | 13 1/2"                         |
|  | 1 3/4"   | #12   | 1 1/2"                        | 12"                                | 8 1/2"                       | 14 1/2"                         |

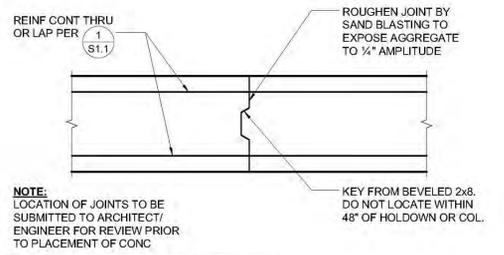


- NOTES:**
- INSTALL ADHESIVE ANCHORS PER MANUFACTURER'S INFORMATION AND ICC REPORT.
  - ACCEPTABLE ADHESIVES ARE: SIMPSON SET-XP, ICC NO. ESR-2508; HILTI HIT-RE 500-SD, ICC NO. ESR-2322. THREADED RODS TO BE ASTM F1554 GRADE 36 UNO. REBAR TO BE ASTM A615 GRADE 60 UNO.
  - CONTRACTOR TO VERIFY MINIMUM EDGE DISTANCES, SPACING AND THICKNESS ARE IN ACCORDANCE WITH SCHEDULE PRIOR TO INSTALLING ANCHOR.
  - HOLES TO BE DRILLED WITH ROTARY DRILL ONLY. WHEN DRILLING HOLES IN EXISTING CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. MAINTAIN A REASONABLE CLEARANCE BETWEEN REINFORCEMENT AND THE DRILLED-IN ANCHOR.
  - SPECIAL INSPECTION IS REQUIRED PER SECTION 1704 AND THE REQUIREMENTS OF THE ICC REPORTS. THE SPECIAL INSPECTOR MUST BE ON THE JOB SITE PERIODICALLY DURING ANCHOR INSTALLATION TO VERIFY ANCHOR TYPE, ANCHOR DIMENSIONS, HOLE CLEANLINESS, EMBEDMENT DEPTH, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, DRILL BIT DIAMETER, HOLE DEPTH, EDGE DISTANCE(S), ANCHOR SPACING(S), CONCRETE THICKNESS, AND ADHESIVE INJECTION. SEE DRAWINGS FOR SPECIFIC TENSION TEST LOADS FOR ANCHORS.

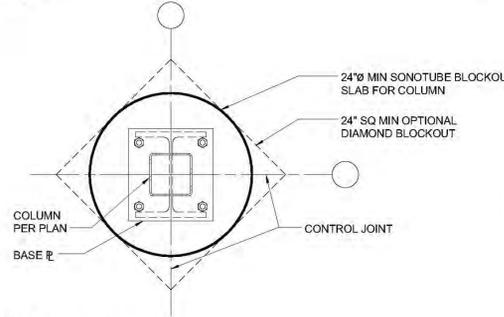
**16 ADHESIVE ANCHOR IN CONCRETE**  
3/4" = 1'-0"



**12 TYPICAL HOUSEKEEPING PAD AT SLAB ON GRADE**  
3/4" = 1'-0"

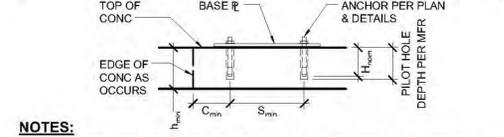


**13 FOOTING CONSTRUCTION JOINT**  
3/4" = 1'-0"



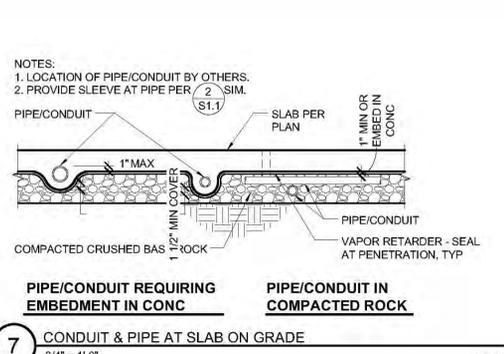
**14 SLAB BLOCKOUT**  
1" = 1'-0"

| CARBON STEEL EXPANSION ANCHORS IN 2500 PSI MIN CONC |                         |                                   |                                    |                              |                                     |                        |
|---|-------------------------|-----------------------------------|------------------------------------|------------------------------|-------------------------------------|------------------------|
| ANCHOR TYPE   | ANCHOR & PILOT HOLE DIA | MIN NOMINAL EMBED H <sub>em</sub> | MIN EDGE DISTANCE C <sub>min</sub> | MIN SPACING S <sub>min</sub> | MIN CONC THICKNESS H <sub>min</sub> | INSTALL TORQUE (FT-LB) |
| SIMPSON STRONG-BOLT 2 (ICC-ESR 3037)                | 3/8"                    | 1 1/4"                            | 6"                                 | 3"                           | 3 1/2"                              | 30                     |
|   | 1/2"                    | 2 1/4"                            | 7"                                 | 7"                           | 4 1/2"                              | 60                     |
|   | 5/8"                    | 3 3/4"                            | 6 1/2"                             | 5"                           | 5 1/2"                              | 90                     |
|   | 3/4"                    | 4 1/4"                            | 6 1/2"                             | 8"                           | 6 1/2"                              | 150                    |
| HILTI KWIK BOLT TZ (ICC-ESR 1917)                   | 1"                      | 5 1/4"                            | 8"                                 | 8"                           | 9"                                  | 230                    |
|   | 3/8"                    | 2 1/4"                            | 2 1/2"                             | 5"                           | 4"                                  | 25                     |
|   | 1/2"                    | 2 3/4"                            | 2 3/4"                             | 5 1/2"                       | 4"                                  | 40                     |
|   | 5/8"                    | 3 3/4"                            | 3 3/4"                             | 6 1/2"                       | 5"                                  | 60                     |
|   | 3/4"                    | 4 1/4"                            | 4 3/4"                             | 10 1/2"                      | 8"                                  | 110                    |

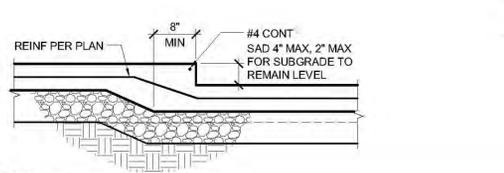


- NOTES:**
- INSTALL EXPANSION ANCHORS PER MANUFACTURER'S INFORMATION AND ICC REPORT INSTRUCTIONS. SPECIAL INSPECTION IS REQUIRED PER SECTION 1704 AND THE REQUIREMENTS OF THE ICC REPORTS.
  - CONTRACTOR TO VERIFY MINIMUM EDGE DISTANCES, SPACING AND THICKNESS ARE IN ACCORDANCE WITH SCHEDULE PRIOR TO INSTALLING ANCHOR.
  - WHEN INSTALLING DRILLED-IN ANCHORS IN EXISTING REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. MAINTAIN A REASONABLE CLEARANCE BETWEEN REINFORCEMENT AND THE DRILLED-IN ANCHOR.
  - THE SPECIAL INSPECTOR MUST BE ON THE JOBSITE PERIODICALLY DURING ANCHOR INSTALLATION TO VERIFY ANCHOR TYPE, ANCHOR DIMENSIONS, HOLE CLEANLINESS, EMBEDMENT DEPTH, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, DRILL BIT DIAMETER, HOLE DEPTH, EDGE DISTANCE(S), ANCHOR SPACING(S), CONCRETE THICKNESS, AND TIGHTENING TORQUE.

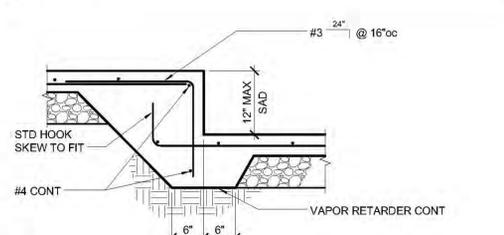
**15 EXPANSION ANCHOR IN CONCRETE**  
3/4" = 1'-0"



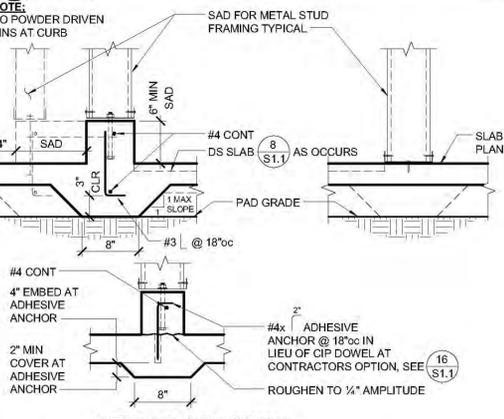
**7 CONDUIT & PIPE AT SLAB ON GRADE**  
3/4" = 1'-0"



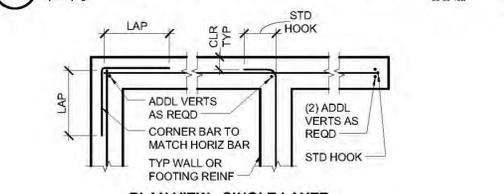
**8 DEPRESSED SLAB - 4" MAX**  
3/4" = 1'-0"



**9 DEPRESSED SLAB - 12" MAX**  
3/4" = 1'-0"

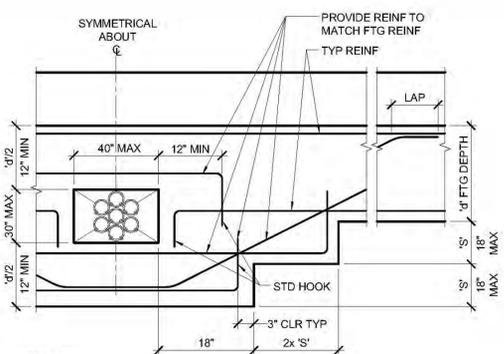


**10 TYPICAL INTERIOR NON-BEARING WALL AT SLAB**  
1" = 1'-0"

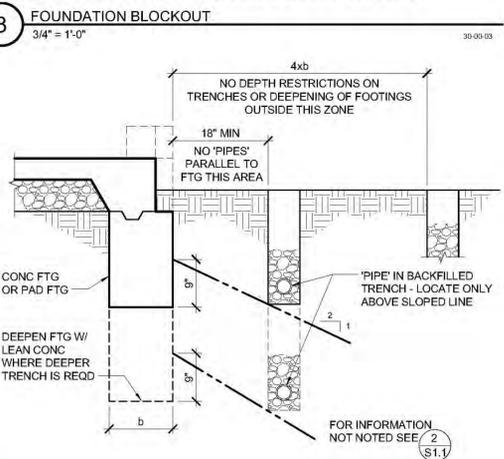


- NOTE:** FOOTING REINFCNT AT CORNER AND INTERSECTION TO BE SIMILAR

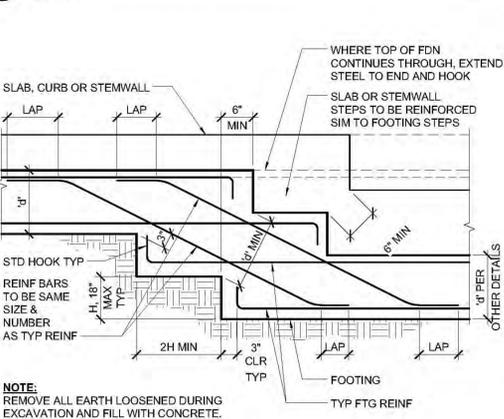
**11 TYP CORNER, INTERSECTION & END REINF.**  
3/4" = 1'-0"



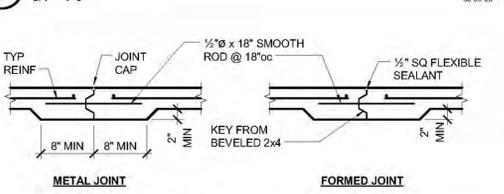
**3 FOUNDATION BLOCKOUT**  
3/4" = 1'-0"



**4 TRENCHING ADJACENT TO FOOTING**  
3/4" = 1'-0"



**5 STEPPED FOOTING**  
3/4" = 1'-0"



- NOTE:** REMOVE ALL EARTH LOOSEENED DURING EXCAVATION AND FILL WITH CONCRETE.

**6 SLAB ON GRADE JOINTS**  
3/4" = 1'-0"

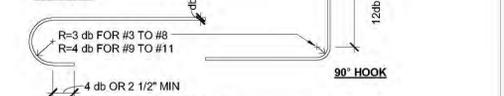
| MINIMUM BAR LAPS FOR REINFORCING STEEL<br>CONCRETE STRENGTH: 2500 PSI OR GREATER (STAGGER SPLICES) |            |      |            |      |            |
|--|------------|------|------------|------|------------|
| SIZE   | LAP LENGTH | SIZE | LAP LENGTH | SIZE | LAP LENGTH |
| #3   | 14"        | #6   | 36"        | #9   | 94"        |
| #4   | 24"        | #7   | 60"        | #10  | 112"       |
| #5   | 36"        | #8   | 78"        | #11  | 132"       |

(CLASS B TOP BAR)  
BAR SPACING SHALL NOT BE LESS THAN 4x BAR DIAMETER OR 4".  
\* WHERE COVER NOT LESS THAN 1 1/2", #5 LAP LENGTH = 30"

**CONC COVER FOR REINF STEEL** ..... 'CLR'  
CAST AGAINST EARTH OR GRADE ..... 3"  
EXPOSED TO EARTH (FORMED) OR WEATHER  
#5 & SMALLER ..... 1 1/2"  
#6 & LARGER ..... 2"

NOT EXPOSED TO EARTH OR WEATHER  
#5 & SMALLER ..... 1"  
#6 & LARGER, & ALL BM STIRRUPS, COL TIES & SPIRALS ..... 1 1/2"

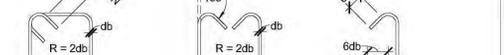
ALL REINFORCING BARS SHALL EXTEND AS FAR AS POSSIBLE AND END IN A STANDARD 90° OR 180° HOOK UNLESS DETAILED OTHERWISE



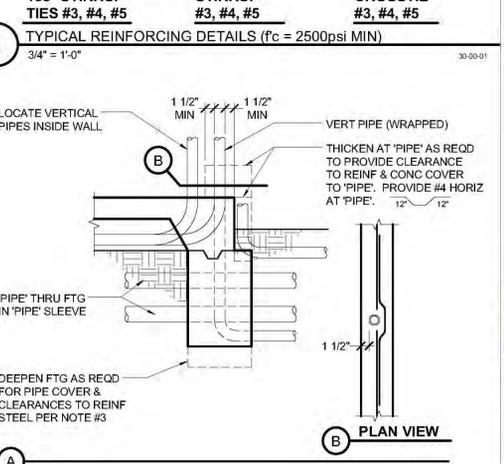
**STANDARD HOOKS & BENDS**



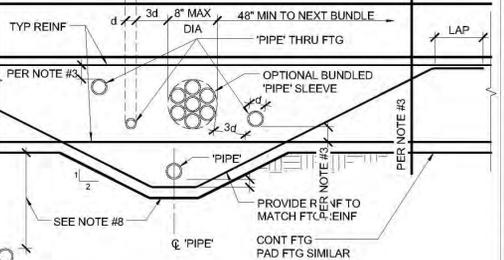
**COL BAR & STRUCT OFFSET**    **SPlice**



**1 TYPICAL REINFORCING DETAILS (fc = 2500psi MIN)**  
3/4" = 1'-0"



**PLAN VIEW**



- NOTES:**
- PIPE = ANY PENETRATION THRU OR EMBEDDED IN FOUNDATION.
  - ALL PIPES THROUGH FOOTINGS TO BE WRAPPED OR SLEEVED AS FOLLOWS:
    - SLEEVES: PROVIDE 1" MIN CLEAR ALL AROUND O.D. PIPE TO I.D. SLEEVE. UNO. SEAL SLEEVE ENDS WITH MASTIC OR PLASTIC BUTYRUBIOUS CEMENT.
    - WRAPPED VERTICAL PIPES: PROVIDE 1/2" NOMINAL SHEET FOAM WITH (a) WRAPS MINIMUM, UNO.
    - WRAPPED HORIZONTAL PIPES: PROVIDE 1/2" NOMINAL SHEET FOAM WITH (b) WRAPS MINIMUM, UNO.
    - UNDERGROUND FIRE LINES 4" AND LARGER:
      - SLEEVES: PROVIDE 2" MIN CLEAR ALL AROUND O.D. PIPE TO I.D. SLEEVE. SEAL ENDS PER ABOVE.
      - WRAPPED: PROVIDE 1/2" NOMINAL SHEET FOAM WITH (a) WRAPS MINIMUM.
  - WRAPPED AND SLEEVED PIPES SHALL HAVE 1 1/2" MIN CLEAR TO REINF STEEL. MINIMUM CONCRETE COVER AT PIPES TO BE 3".
  - CLEARANCE BETWEEN PIPES TO BE 3x MIN TYP WITH A MAXIMUM OF (8) PIPES PER 48". GROUPS OF PIPES MAY BE BUNDLED AS SHOWN EXCEPT IN PAD FOOTINGS.
  - NO PIPE TO RUN PARALLEL IN FOOTINGS, STEM OR CURB.
  - PVC CONDUIT (PIPE) EMBEDDED IN CURB/STEM MAY BE WIRE TIED TO HORIZONTAL REINF.
  - NO HORIZONTAL PIPES ALLOWED THROUGH FOOTING WITHIN 2'-0" EACH SIDE OF HOLDOWNS OR STEEL COLLARS. NO VERTICAL PIPES ALLOWED IN FOOTINGS AT BRACED FRAMES.
  - PROVIDE 18" MIN OF COMPACTED FILL ABOVE PIPES UP TO 12". FOR LARGER PIPES INCREASE COMPACTED FILL DEPTH 1'-0" OF FOR EACH 1" INCREASE IN PIPE DIAMETER. OTHERWISE DEEPEEN FOOTING AS SHOWN.

**2 PIPES THRU FOOTING**  
3/4" = 1'-0"

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

**ZFA STRUCTURAL ENGINEERS**  
1212 fourth street | suite z zfa.com  
santa rosa ca 95404 707.526.0992  
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**EDUCATIONAL FACILITY**

SONOMA COUNTY WATER AGENCY

9765 Wohler Rd.  
Forestville, CA

PRMD APPROVED FOR CONSTRUCTION  
JUNE 18, 2014

REVISIONS

| NO. | DESCRIPTION |
|-----|-------------|
|     |             |
|     |             |
|     |             |
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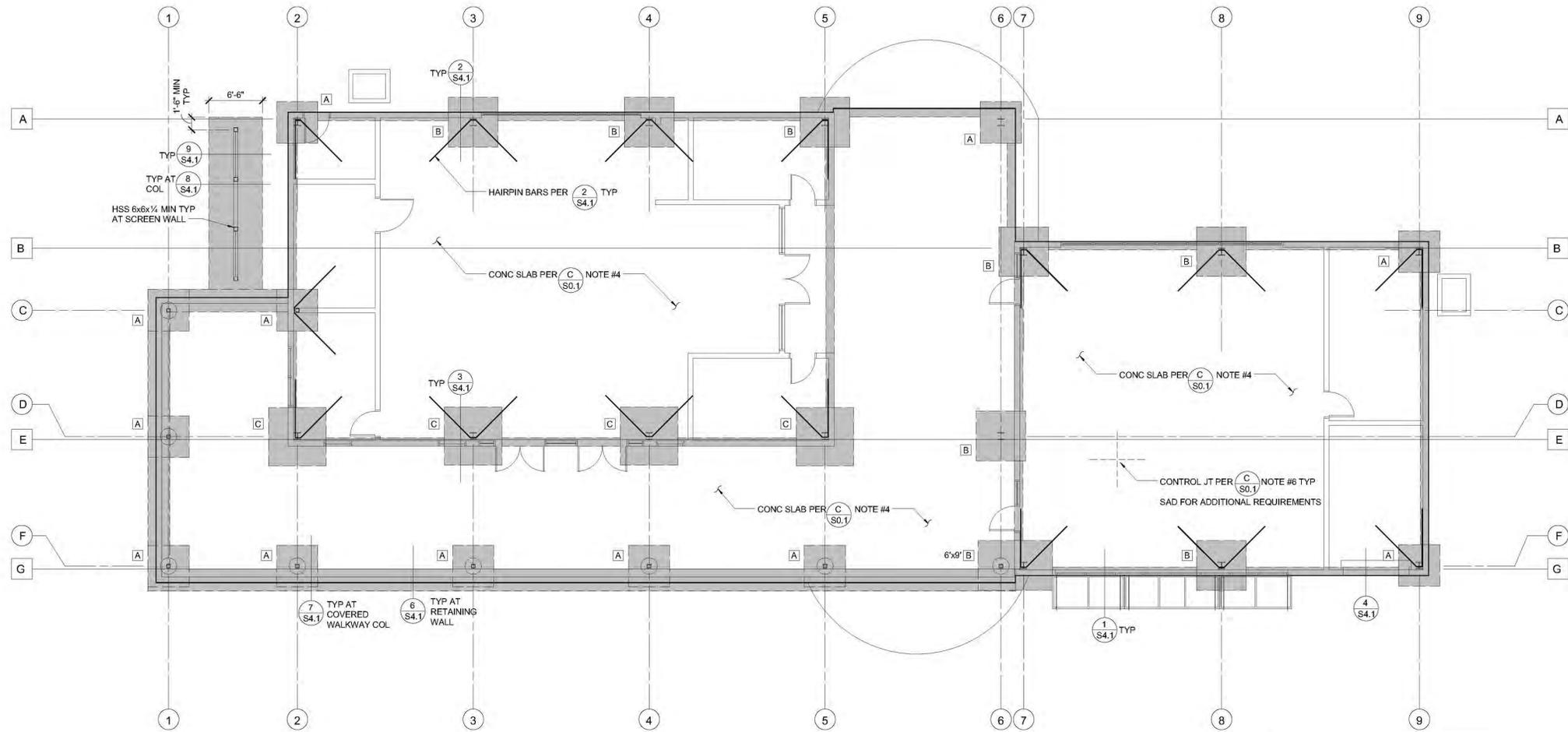
ZFA NO: 12392  
DRAWN BY: ZFA  
DRAWING SCALE: As indicated  
PTN:

CD PHASE  
MAY 2013

**TYPICAL CONCRETE DETAILS**

SHEET NUMBER

**S1.1**

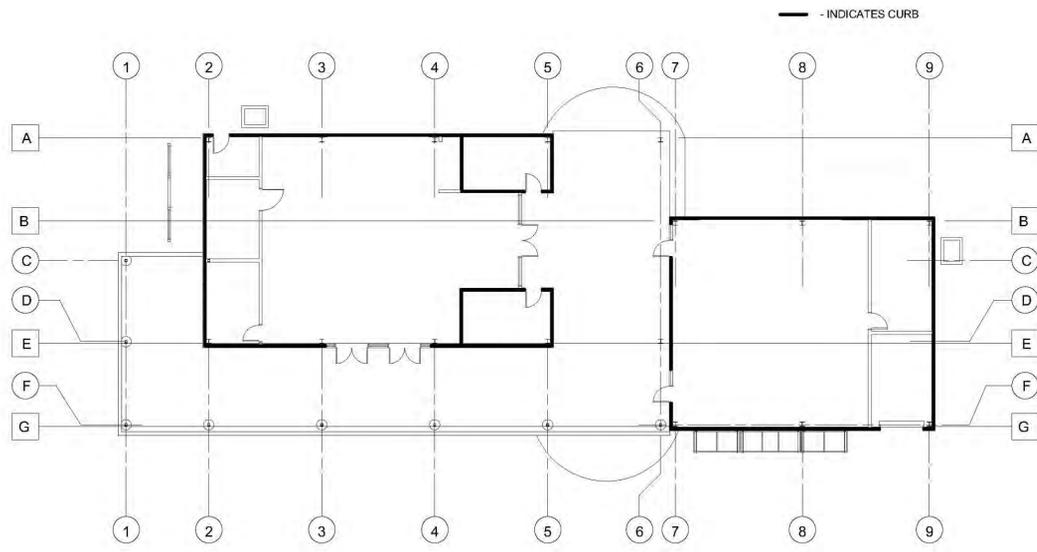


**NOTE:**  
ALL FOUNDATION AND ANCHORAGE/EMBEDMENT CONNECTION INFORMATION PROVIDED IS PRELIMINARY AND SUBJECT TO CHANGE. METAL BUILDING MANUFACTURER TO SUBMIT ACTUAL COLUMN REACTIONS FOR REVISIONS TO FOUNDATION SIZE AND COLUMN ANCHORAGE.

- FOUNDATION PLAN NOTES:**
- REFER TO SHEETS S0.1 AND S1.1 FOR STANDARD NOTES AND DETAILS.
  - LEGEND:
    - INDICATES METAL STUD WALL.
    - INDICATES (E) FRAMING.
    - INDICATES HSS COLUMN.
    - INDICATES WF COLUMN.
    - INDICATES DEPRESSED SLAB, SAD AND SPD FOR COMPLETE LOCATIONS, DEPTH AND SLOPE INFORMATION.
    - INDICATES GRIDLINE AT FACE OF COLUMN.
    - INDICATES GRIDLINE AT C. OF COLUMN.
    - INDICATES SLAB STEP, SAD.
    - DENOTES PAD FOOTING PER SCHEDULE ON 2/94.1 UNO ON PLAN.
    - DENOTES THRUST ANGLE PER 2/94.1, USE (A) UNO.

- COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
- SEE CURB PLAN FOR CURB LOCATIONS. COORDINATE WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
- PLUMBING AND ELECTRICAL CONDUIT AND GROUND STRAP SHALL NOT BE LAID WITHIN FOUNDATIONS. ALL PLUMBING AND CONDUITS THROUGH FOUNDATIONS SHALL BE PER STANDARD DETAILS. NO UTILITY PIPES OR CONDUITS SHALL BE LOCATED THRU COLUMN FOOTINGS OR FRAME FOOTINGS. NO PIPES OR CONDUITS THRU SILL PLATES SHALL BE WITHIN 12" OF HOLDOWN BOLTS. NO MECHANICAL, ELECTRICAL, OR PLUMBING OPENINGS SHALL BE LOCATED IN SHEAR WALLS UNLESS SHOWN AND DETAILED ON THE STRUCTURAL DRAWINGS. NO VERTICAL OR HORIZONTAL PIPES OR CONDUITS SHALL BE LOCATED THROUGH STEEL FRAMES, STEEL COLUMNS, OR STEEL BASE PLATES. PROVIDE FURRING AND/OR THICKENED CONCRETE WHERE REQUIRED TO CLEAR UTILITY SYSTEMS. NOTIFY STRUCTURAL ENGINEER/ARCHITECT PRIOR TO ANY INSTALLATION NOT CONFORMING TO THESE DETAILS.

**FOUNDATION PLAN**  
1/8" = 1'-0"



**CURB PLAN**  
1/16" = 1'-0"



**ZFA STRUCTURAL ENGINEERS**  
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santa rosa ca 95404 707.526.0992  
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**EDUCATIONAL FACILITY**

SONOMA COUNTY WATER AGENCY

9765 Wohler Rd.  
Forestville, CA

PRMD APPROVED FOR CONSTRUCTION  
JUNE 18, 2014

REVISIONS

| NO. | DESCRIPTION |
|-----|-------------|
|     |             |
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|     |             |

ZFA NO: 12392  
DRAWN BY:  
DRAWING SCALE: As indicated  
PTN:

CD PHASE  
MAY 2013

SHEET TITLE

**FOUNDATION PLAN**

SHEET NUMBER

**S2.1**



**PERFORMANCE CERTIFICATE OF COMPLIANCE (Part 1 of 3) PERF-1C**

Project Name: **Westside Facility** Date: **11/18/2013**

Project Address: **9765 Wohler Road Forestville** Climate Zone: **CA Climate Zone 02** Total Cond. Floor Area: **1,535** Addition Floor Area: **n/a**

**GENERAL INFORMATION**

Building Type:  Nonresidential  High-Rise Residential  Hotel/Motel Guest Room  Other

Phase of Construction:  New Construction  Addition  Alteration

**STATEMENT OF COMPLIANCE**

This certificate of compliance lists the building features and specifications needed to comply with Title 24, Parts 1 and 6 of the California Code of Regulations. This certificate applies only to a building using the performance compliance approach.

The documentation author hereby certifies that the documentation is accurate and complete.

**Documentation Author**

Name: **Jake Miller** Signature: *[Signature]*

Company: **15000 Inc.** Date: **11/18/2013**

Address: **613 4th Street, Suite 203A** Phone: **(707) 577-0363**

City/State/Zip: **Santa Rosa, CA 95404**

The Principal Designer hereby certifies that the proposed building design represented in this set of construction documents is consistent with the other compliance forms and worksheets, with the specifications, and with any other calculations submitted with this permit application. The proposed building has been designed to meet the energy efficiency requirements contained in sections 110, 116 through 118, and 140 through 149 of Title 24, Part 6. Please check one:

**ENV, LTG, MECH.**

I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation, and that I am licensed in the State of California as a civil engineer, mechanical engineer, electrical engineer, or I am a licensed architect.

I affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code by section 5537.2 or 6737.3 to sign this document as the person responsible for its preparation, and that I am a licensed contractor performing this work.

I affirm that I am eligible under Division 3 of the Business and Professions Code to sign this document because it pertains to a structure or type of work described as exempt pursuant to Business and Professions Code Sections 5537, 5538 and 6737.1.

**Principal Envelope Designer**

Name: **Jake Miller** Signature: *[Signature]*

Company: **Quattrochi Kwok Architects** Date: **11/18/2013**

Address: **636 3rd Street** License #: **976-0829**

City/State/Zip: **Santa Rosa, CA 95404** Phone: **(707) 577-0329**

**Principal Mechanical Designer**

Name: **Mike Stockard** Signature: *[Signature]*

Company: **15000 Inc.** Date: **11/18/2013**

Address: **613 4th Street, Suite 203A** License #: **M30730**

City/State/Zip: **Santa Rosa, CA 95404** Phone: **(707) 577-0363**

**Principal Lighting Designer**

Name: **Brian Consulting** Signature: *[Signature]*

Company: **Brian Consulting** Date: **11/18/2013**

Address: **2190 Laguna Road** License #: **827-3064**

City/State/Zip: **Santa Rosa, CA 95401** Phone: **(707) 827-3064**

**INSTRUCTIONS TO APPLICANT COMPLIANCE & WORKSHEETS (check box if worksheets are included)**

ENV-1C Certificate of Compliance. Required on plans.  MECH-1C Certificate of Compliance. Required on plans.

LTG-1C Certificate of Compliance. Required on plans.  MECH-2C Air/Water Side/Service Hot Water & Pool Requirements.

LTG-2C Lighting Controls Credit Worksheet.  MECH-3C Mechanical Ventilation and Exhaust.

LTG-3C Indoor Lighting Power Allowance.  MECH-4C Mechanical Equipment Details.

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**PERFORMANCE CERTIFICATE OF COMPLIANCE (Part 2 of 3) PERF-1C**

Project Name: **Westside Facility** Date: **11/18/2013**

**ANNUAL TDV ENERGY USE SUMMARY (kBtu/sqft-yr)**

| Energy Component   | Standard Design | Proposed Design | Compliance Margin |
|--------------------|-----------------|-----------------|-------------------|
| Space Heating      | 17.40           | 28.33           | -61.1%            |
| Space Cooling      | 121.06          | 89.02           | 26.4%             |
| Indoor Fans        | 38.20           | 29.01           | 24.1%             |
| Heat Rejection     | 0.00            | 0.00            | 0.0%              |
| Pumps & Misc.      | 0.00            | 0.00            | 0.0%              |
| Domestic Hot Water | 0.00            | 0.00            | 0.0%              |
| Lighting           | 69.87           | 9.39            | 86.6%             |
| Receptacle         | 57.02           | 37.02           | 35.1%             |
| Process            | 0.00            | 0.00            | 0.0%              |
| Process Lighting   | 0.00            | 0.00            | 0.0%              |
| <b>TOTALS</b>      | <b>300.55</b>   | <b>209.95</b>   | <b>-30.1%</b>     |

Percent better than Standard: **30.1% (excluding process)**

**BUILDING COMPLIES**

**GENERAL INFORMATION**

Building Orientation: **(E) 90 deg** Conditioned Floor Area: **1,535** sqft.

Number of Stories: **1** Unconditioned Floor Area: **488** sqft.

Number of Systems: **1** Conditioned Footprint Area: **1,535** sqft.

Number of Zones: **2** Natural Gas Available On Site: **Yes**

**Front Elevation** Orientation: **(E)** Gross Area: **520** sqft. Glazing Area: **176** sqft. Glazing Ratio: **33.8%**

**Left Elevation** Orientation: **(S)** Gross Area: **711** sqft. Glazing Area: **114** sqft. Glazing Ratio: **16.0%**

**Rear Elevation** Orientation: **(W)** Gross Area: **827** sqft. Glazing Area: **378** sqft. Glazing Ratio: **45.7%**

**Right Elevation** Orientation: **(N)** Gross Area: **0** sqft. Glazing Area: **0** sqft. Glazing Ratio: **0.0%**

**Total** Gross Area: **2,058** sqft. Glazing Area: **668** sqft. Glazing Ratio: **32.5%**

**Roof** Orientation: **(E)** Gross Area: **1,580** sqft. Glazing Area: **0** sqft. Glazing Ratio: **0.0%**

**Prescriptive Lighting Power Density** Standard: **1.100** W/sqft. Proposed: **0.150** W/sqft.

**Prescriptive Envelope TDV Energy** Standard: **96.081** kBtu/sqft. Proposed: **130.751** kBtu/sqft.

**Remarks:**

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**PERFORMANCE CERTIFICATE OF COMPLIANCE (Part 3 of 3) PERF-1C**

Project Name: **Westside Facility** Date: **11/18/2013**

**ANNUAL TDV ENERGY USE SUMMARY (kBtu/sqft-yr)**

| System Name | Zone Name                   | Occupancy Type       | Floor Area (sqft) | Inst. LPD (W/sqft) | Crtd. Credits (W/sqft) | Allowed LPD (W/sqft) | Proc. Loads (W/sqft) |
|-------------|-----------------------------|----------------------|-------------------|--------------------|------------------------|----------------------|----------------------|
| FC-2MP-2    | Lab Classroom Zone          | Comp. Bldg Classroom | 1,535             | 0.168              | 0.030                  |                      |                      |
|             | Unconditioned Lab Classroom | Comp. Bldg Classroom | 488               | 0.600              |                        |                      |                      |

**EXCEPTIONAL CONDITIONS COMPLIANCE CHECKLIST**

The local enforcement agency should pay special attention to the items specified in this checklist. These items require special written justification and documentation, and special verification to be used with the performance approach. The local enforcement agency determines the adequacy of the justifications, and may reject a building or design that otherwise complies based on the adequacy of the special justification and documentation submitted.

The exceptional features listed in this performance approach application have specifically been reviewed. Adequate written justification and documentation for their use have been provided by the applicant.

Authorized Signature or Stamp: \_\_\_\_\_

EnergyPro 5.1 by EnergySoft User Number: 6120 RunCode: 2013-11-18T08:51:28 ID: 763.00 Page 5 of 24

**CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 3) ENV-1C**

Project Name: **Westside Facility** Date: **11/18/2013**

Project Address: **9765 Wohler Road Forestville** Climate Zone: **2** Total Cond. Floor Area: **1,535** Addition Floor Area: **n/a**

**GENERAL INFORMATION**

Building Type:  Nonresidential  High-Rise Residential  Hotel/Motel Guest Room

Schools (Public School)  Relocatable Public School Bldg  Conditioned Spaces  Unconditioned Spaces

Skylight Area for Large Enclosed Space  $\geq 8000$  ft<sup>2</sup> (if checked include the ENV-4C with submittal)

Phase of Construction:  New Construction  Addition  Alteration

Approach of Compliance:  Component  Overall Envelope  Unconditioned (file affidavit)

Front Orientation: **N, E, S, W or in Degrees:** **90 deg**

**FIELD INSPECTION ENERGY CHECKLIST**

**OPAQUE SURFACE DETAILS**

| TagID | Assembly Type | Area (ft <sup>2</sup> ) | Orientation N, E, S, W | U-Factor | Chf. R-Value | Exterior Fin. | Interior Fin. | Insulation | Notes | Condition Status | Pass | Fail                     |
|-------|---------------|-------------------------|------------------------|----------|--------------|---------------|---------------|------------|-------|------------------|------|--------------------------|
| 1     | Wall          | 449                     | (SW)                   | 0.112    | R-13         |               |               |            |       | 4.3.9-A5         | New  | <input type="checkbox"/> |
| 2     | Wall          | 597                     | (SE)                   | 0.112    | R-13         |               |               |            |       | 4.3.9-A5         | New  | <input type="checkbox"/> |
| 3     | Wall          | 344                     | (NE)                   | 0.112    | R-13         |               |               |            |       | 4.3.9-A5         | New  | <input type="checkbox"/> |
| 4     | Roof          | 1,880                   | (NE)                   | 0.085    | R-19         |               |               |            |       | 4.2.7-A9         | New  | <input type="checkbox"/> |
| 5     | Slab          | 1,535                   | (N)                    | 0.730    | None         |               |               |            |       | 4.2.7-A1         | New  | <input type="checkbox"/> |
| 6     | Demising      | 423                     | (W)                    | 0.057    | R-13         | 13.0          | None          |            |       | 4.3.3-A3         | New  | <input type="checkbox"/> |
| 7     | Demising      | 38                      | (W)                    | 0.057    | R-13         | 13.0          | None          |            |       | 4.3.3-A3         | New  | <input type="checkbox"/> |
| 8     | Demising      | 284                     | (W)                    | 0.057    | R-13         | 13.0          | None          |            |       | 4.3.3-A3         | New  | <input type="checkbox"/> |

**FENESTRATION SURFACE DETAILS**

| TagID | Fenestration Type | Area (ft <sup>2</sup> ) | Orientation N, E, S, W | Max U-Factor | Min SHGC | Min NRC | Min SBC | Min Overhang | Conditions Status | Pass                     | Fail                     |
|-------|-------------------|-------------------------|------------------------|--------------|----------|---------|---------|--------------|-------------------|--------------------------|--------------------------|
| 1     | Window            | 378                     | (SW)                   | 0.770        | NFRC     | 0.400   | NFRC    |              | New               | <input type="checkbox"/> | <input type="checkbox"/> |
| 2     | Window            | 57                      | (SE)                   | 0.770        | NFRC     | 0.400   | NFRC    |              | New               | <input type="checkbox"/> | <input type="checkbox"/> |
| 3     | Window            | 57                      | (SE)                   | 0.770        | NFRC     | 0.400   | NFRC    |              | New               | <input type="checkbox"/> | <input type="checkbox"/> |
| 4     | Window            | 176                     | (NE)                   | 0.770        | NFRC     | 0.400   | NFRC    |              | New               | <input type="checkbox"/> | <input type="checkbox"/> |

1. See Instructions in the Nonresidential Compliance Manual, page 3-95.  
2. If Fail then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. A fail does not meet compliance.

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**CERTIFICATE OF COMPLIANCE AND FIELD INSPECTION ENERGY CHECKLIST (Part 2 of 3) ENV-1C**

Project Name: **Westside Facility** Date: **11/18/2013**

**ROOFING PRODUCT (COOL ROOFS)**

(Note: If the roofing product is not CRRC certified, this compliance approach cannot be used.) Go to Overall Envelope Approach or Performance Approach.

**CHECK APPLICABLE BOX BELOW IF EXEMPT FROM THE ROOFING PRODUCT "COOL ROOF" REQUIREMENTS:**

Roofing compliance not required in Climate Zones 1 and 5 with a Low-Sloped, 2:12 pitch or less.

Roofing compliance not required in Climate Zone 1 with a Slope-Sloped with less than 5 ft/ft. Greater than 2:12 pitch.

Low-sloped Wood framed roofs in Climate Zones 3 and 5 are exempted: solar reflectance and thermal emittance or SRI that have a U-factor of 0.09 or lower. See Opaque Surface Details roof assembly, column H of ENV-2C.

Low-sloped Metal building roofs in Climate Zones 3 and 5 are exempted: solar reflectance and thermal emittance or SRI that have a U-factor of 0.049 or lower. See Opaque Surface Details roof assembly, column H of ENV-2C.

The roof area covered by building integrated photovoltaic panels and building integrated solar thermal panels are exempted. Solar reflectance and thermal emittance or SRI see spreadsheet calculator at [www.energy.ca.gov/1624](http://www.energy.ca.gov/1624).

Roof constructions that have thermal mass over the roof membrane with a weight of at least 25 lb/ft<sup>2</sup> are exempt from the Cool Roof criteria below.

High-rise residential buildings and hotels and motels with low-sloped roofs in Climate Zones 1 through 9, 12 and 16 are exempted from the low-sloped roofing criteria.

1. If Fail then describe on this page of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary.

**CRRC Product ID**

| Product Number | Roof Slope $\leq 2:12$   | Product Weight $\geq 25$ lb/ft <sup>2</sup> | Thermal Reflectance      | Thermal Emittance        | SRI                      | Pass                     | Fail                     |
|----------------|--------------------------|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                | <input type="checkbox"/> | <input type="checkbox"/>                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|                | <input type="checkbox"/> | <input type="checkbox"/>                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|                | <input type="checkbox"/> | <input type="checkbox"/>                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|                | <input type="checkbox"/> | <input type="checkbox"/>                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|                | <input type="checkbox"/> | <input type="checkbox"/>                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|                | <input type="checkbox"/> | <input type="checkbox"/>                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|                | <input type="checkbox"/> | <input type="checkbox"/>                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
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**PERFORMANCE CERTIFICATE OF COMPLIANCE (Part 1 of 3) PERF-1C**

Project Name: **Westside Facility** Date: **11/18/2013**

Project Address: **9765 Wohler Road Forestville** Climate Zone: **CA Climate Zone 02** Total Cond. Floor Area: **1,896** Addition Floor Area: **n/a**

**GENERAL INFORMATION**

Building Type:  Nonresidential  High-Rise Residential  Hotel/Motel Guest Room  Relocatable - indicate specific climate zone  all climates

Phase of Construction:  New Construction  Addition  Alteration

**STATEMENT OF COMPLIANCE**

This certificate of compliance lists the building features and specifications needed to comply with Title 24, Parts 1 and 6 of the California Code of Regulations. This certificate applies only to a Building using the performance compliance approach. The documentation author hereby certifies that the documentation is accurate and complete.

**Documentation Author**

Name: **Jake Miller** Signature: \_\_\_\_\_ Date: **11/18/2013**

Company: **15000 Inc.** Address: **613 4th Street, Suite 203a** Phone: **(707) 977-0363** City/State/Zip: **Santa Rosa, CA 95404**

The Principal Designer hereby certifies that the proposed building design represented in this set of construction documents is consistent with the other compliance forms and worksheets, with the specifications, and with any other calculations submitted with this permit application. The proposed building has been designed to meet the energy efficiency requirements contained in sections 110, 116 through 118, and 140 through 149 of Title 24, Part 6. Please check one:

ENV. LTG. MECH.  I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation, and that I am licensed in the State of California as a civil engineer, mechanical engineer, electrical engineer, or I am a licensed architect.

I affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code by section 5537.2 or 6737.3 to sign this document as the person responsible for its preparation, and that I am a licensed contractor performing this work.

I affirm that I am eligible under Division 3 of the Business and Professions Code to sign this document because it pertains to a structure or type of work described as exempt pursuant to Business and Professions Code Sections 5537, 5538 and 6737.1.

**Principal Envelope Designer**

Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Company: **Quattrocchi Kwok Architects** Address: **638 5th Street** License #: \_\_\_\_\_ City/State/Zip: **Santa Rosa, CA 95404** Phone: **(707) 977-0363**

**Principal Mechanical Designer**

Name: **Miss Beckland** Signature: \_\_\_\_\_ Date: **11/19/2013**

Company: **15000 Inc.** Address: **613 4th Street, Suite 203a** License #: **M30730** City/State/Zip: **Santa Rosa, CA 95404** Phone: **(707) 977-0363**

**Principal Lighting Designer**

Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Company: **Baskov Consulting** Address: **2190 Laguna Road** License #: \_\_\_\_\_ City/State/Zip: **Santa Rosa, CA 95401** Phone: **(707) 627-3264**

**INSTRUCTIONS TO APPLICANT COMPLIANCE & WORKSHEETS (check box if worksheets are included)**

ENV-1C Certificate of Compliance. Required on plans  MECH-1C Certificate of Compliance. Required on plans  LTG-1C Certificate of Compliance. Required on plans  MECH-2C Air/Water Side/Service Hot Water & Pool Requirements  LTG-2C Lighting Controls Credit Worksheet  MECH-3C Mechanical Ventilation and Exhaust  LTG-3C Indoor Lighting Power Allowance  MECH-5C Mechanical Equipment Details

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**PERFORMANCE CERTIFICATE OF COMPLIANCE (Part 2 of 3) PERF-1C**

Project Name: **Westside Facility** Date: **11/18/2013**

Project Address: **9765 Wohler Road Forestville** Climate Zone: **CA Climate Zone 02** Total Cond. Floor Area: **1,896** Addition Floor Area: **n/a**

**ANNUAL TDV ENERGY USE SUMMARY (kBtu/sqft-yr)**

| Energy Component   | Standard Design | Proposed Design | Compliance Margin |
|--------------------|-----------------|-----------------|-------------------|
| Space Heating      | 19.83           | 28.72           | -8.73             |
| Space Cooling      | 115.27          | 73.02           | 42.25             |
| Indoor Fans        | 35.18           | 28.89           | 6.29              |
| Heat Rejection     | 0.00            | 0.00            | 0.00              |
| Pumps & Misc.      | 0.00            | 0.00            | 0.00              |
| Domestic Hot Water | 0.00            | 0.00            | 0.00              |
| Lighting           | 68.85           | 10.33           | 58.52             |
| Receptacle         | 57.00           | 57.00           | 0.00              |
| Process            | 0.00            | 0.00            | 0.00              |
| Process Lighting   | 0.00            | 0.00            | 0.00              |
| <b>TOTALS</b>      | <b>206.23</b>   | <b>194.89</b>   | <b>11.34</b>      |

Percent better than Standard: **34.2%** (34.2% excluding process)

**BUILDING COMPLIES**

**GENERAL INFORMATION**

Building Orientation: **(E) 90 deg** Conditioned Floor Area: **1,896** sqft  
 Number of Stories: **1** Unconditioned Floor Area: **653** sqft  
 Number of Systems: **1** Conditioned Footprint Area: **1,896** sqft  
 Number of Zones: **2** Natural Gas Available On Site: **Yes**

Front Elevation: **(E)** Gross Area: **654** sqft Glazing Area: **242** sqft Glazing Ratio: **36.5%**  
 Left Elevation: **(S)** Gross Area: **206** sqft Glazing Area: **47** sqft Glazing Ratio: **16.3%**  
 Rear Elevation: **(W)** Gross Area: **811** sqft Glazing Area: **271** sqft Glazing Ratio: **32.4%**  
 Right Elevation: **(N)** Gross Area: **312** sqft Glazing Area: **100** sqft Glazing Ratio: **48.8%**  
 Total: **2,072** sqft Glazing Area: **716** sqft Glazing Ratio: **34.5%**  
 Roof: **1,844** sqft Glazing Area: **0** sqft Glazing Ratio: **0.0%**

Prescriptive Lighting Power Density: **Standard 1.100 W/sqft Proposed 0.183 W/sqft**  
 Prescriptive Envelope TDV Energy: **Standard 103.054 W/sqft Proposed 103.739 W/sqft**

Prescriptive Values for Comparison only. See LTG-1C for allowed LPD.

**Remarks:**

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**PERFORMANCE CERTIFICATE OF COMPLIANCE (Part 3 of 3) PERF-1C**

Project Name: **Westside Facility** Date: **11/18/2013**

Project Address: **9765 Wohler Road Forestville** Climate Zone: **2** Total Cond. Floor Area: **1,896** Addition Floor Area: **n/a**

**ZONE INFORMATION**

| System Name | Zone Name                      | Occupancy Type      | Floor Area (sqft) | Inst. LPD (W/sf) | Clt. Credits (W/sf) | Allowed LPD (W/sf) | Procc. Loads (W/sf) |
|-------------|--------------------------------|---------------------|-------------------|------------------|---------------------|--------------------|---------------------|
| FC-1/FP-1   | Display/Exploration Zone       | Comp Bldg Classroom | 1,896             | 0.219            | 0.054               |                    |                     |
|             | Unconditioned Exploration Zone | Comp Bldg Classroom | 663               | 0.193            | 0.029               |                    |                     |

**EXCEPTIONAL CONDITIONS COMPLIANCE CHECKLIST**

The local enforcement agency should pay special attention to the items specified in this checklist. These items require special justification and documentation, and special verification to be used with the performance approach. The local enforcement agency determines the adequacy of the justifications, and may reject a building or design that otherwise complies based on the adequacy of the special justification and documentation submitted.

Notes: 1. See LTG-1C items marked with asterisk, see LTG-1C by others. 2. See LTG-3C by others. 3. See LTG-3C by others. 4. See LTG-4C. Items above require a special documentation.

**EXCEPTIONAL CONDITIONS COMPLIANCE CHECKLIST**

The local enforcement agency should pay special attention to the items specified in this checklist. These items require special justification and documentation, and special verification to be used with the performance approach. The local enforcement agency determines the adequacy of the justifications, and may reject a building or design that otherwise complies based on the adequacy of the special justification and documentation submitted.

The exceptional features listed in this performance approach application have specifically been reviewed. Adequate written justification and documentation for their use have been provided by the applicant.

Authorized Signature or Stamp: \_\_\_\_\_

EnergyPro 5.1 by EnergySoft User Number: 6130 RunCode: 2013-11-18709-09-46 ID: 763.00 Page 5 of 26

**CERTIFICATE OF COMPLIANCE (Part 1 of 3) ENV-1C**

Project Name: **Westside Facility** Date: **11/18/2013**

Project Address: **9765 Wohler Road Forestville** Climate Zone: **2** Total Cond. Floor Area: **1,896** Addition Floor Area: **n/a**

**GENERAL INFORMATION**

Building Type:  Nonresidential  High-Rise Residential  Hotel/Motel Guest Room  Schools (Public School)  Relocatable Public School Bldg.  Conditioned Spaces  Unconditioned Spaces  Skylight Area for Large Enclosed Space  $\geq$  8000 ft<sup>2</sup> (if checked include the ENV-4C with submittal)

Phase of Construction:  New Construction  Addition  Alteration

Approach of Compliance:  Component  Overall Envelope  Unconditioned (file affidavit)

Front Orientation: **N, E, S, W** or in Degrees: **90 deg**

**FIELD INSPECTION ENERGY CHECKLIST**

| TagID | Assembly Type | Area (ft <sup>2</sup> ) | Orientation N, E, S, W | U-Factor U-Factor | Shading Coefficient | Exterior R-Value | Exterior Finishing | Water Vapor Barrier | Interior Finishing | Joint Appendix 4 | Condition Status | Pass | Fail                     |                          |
|-------|---------------|-------------------------|------------------------|-------------------|---------------------|------------------|--------------------|---------------------|--------------------|------------------|------------------|------|--------------------------|--------------------------|
| 1     | Wall          | 240                     | (SW)                   | 0.113             | R-13                |                  |                    |                     |                    |                  | 4.3.9-A.6        | New  | <input type="checkbox"/> | <input type="checkbox"/> |
| 2     | Wall          | 156                     | (NW)                   | 0.113             | R-13                |                  |                    |                     |                    |                  | 4.3.9-A.5        | New  | <input type="checkbox"/> | <input type="checkbox"/> |
| 3     | Wall          | 290                     | (NE)                   | 0.113             | R-13                |                  |                    |                     |                    |                  | 4.3.9-A.5        | New  | <input type="checkbox"/> | <input type="checkbox"/> |
| 4     | Roof          | 1,780                   | (NE)                   | 0.055             | R-19                |                  |                    |                     |                    |                  | 4.2.7-A.9        | New  | <input type="checkbox"/> | <input type="checkbox"/> |
| 5     | Slab          | 1,716                   | (N)                    | 0.730             | None                |                  |                    |                     |                    |                  | 4.2.7-A.1        | New  | <input type="checkbox"/> | <input type="checkbox"/> |
| 6     | Ceiling       | 416                     | (N)                    | 0.217             | R-13                |                  |                    |                     |                    |                  | 4.3.3-A.3        | New  | <input type="checkbox"/> | <input type="checkbox"/> |
| 7     | Ceiling       | 334                     | (N)                    | 0.217             | R-13                |                  |                    |                     |                    |                  | 4.3.3-A.3        | New  | <input type="checkbox"/> | <input type="checkbox"/> |
| 8     | Ceiling       | 284                     | (N)                    | 0.217             | R-13                |                  |                    |                     |                    |                  | 4.3.3-A.3        | New  | <input type="checkbox"/> | <input type="checkbox"/> |
| 9     | Ceiling       | 179                     | (N)                    | 0.217             | R-13                |                  |                    |                     |                    |                  | 4.3.3-A.3        | New  | <input type="checkbox"/> | <input type="checkbox"/> |
| 10    | Wall          | 239                     | (SE)                   | 0.113             | R-13                |                  |                    |                     |                    |                  | 4.3.9-A.5        | New  | <input type="checkbox"/> | <input type="checkbox"/> |

**FENESTRATION SURFACE DETAILS**

| TagID | Fenestration Type | Area (ft <sup>2</sup> ) | Orientation N, E, S, W | Max U-Factor | U-Factor | Max SHGC (FWS) | SHGC Source | Overhang                 | Conditions Status | Pass                     | Fail                     |
|-------|-------------------|-------------------------|------------------------|--------------|----------|----------------|-------------|--------------------------|-------------------|--------------------------|--------------------------|
| 1     | Window            | 271                     | (SW)                   | 0.870        | NFRC     | 0.200          | NFRC        | <input type="checkbox"/> | New               | <input type="checkbox"/> | <input type="checkbox"/> |
| 2     | Window            | 153                     | (NW)                   | 0.870        | NFRC     | 0.200          | NFRC        | <input type="checkbox"/> | New               | <input type="checkbox"/> | <input type="checkbox"/> |
| 3     | Window            | 180                     | (NE)                   | 0.870        | NFRC     | 0.200          | NFRC        | <input type="checkbox"/> | New               | <input type="checkbox"/> | <input type="checkbox"/> |
| 4     | Window            | 21                      | (NE)                   | 0.870        | NFRC     | 0.200          | NFRC        | <input type="checkbox"/> | New               | <input type="checkbox"/> | <input type="checkbox"/> |
| 5     | Window            | 21                      | (NE)                   | 0.870        | NFRC     | 0.200          | NFRC        | <input type="checkbox"/> | New               | <input type="checkbox"/> | <input type="checkbox"/> |
| 6     | Window            | 47                      | (SE)                   | 0.870        | NFRC     | 0.200          | NFRC        | <input type="checkbox"/> | New               | <input type="checkbox"/> | <input type="checkbox"/> |
| 7     | Window            | 21                      | (NE)                   | 0.870        | NFRC     | 0.200          | NFRC        | <input type="checkbox"/> | New               | <input type="checkbox"/> | <input type="checkbox"/> |

1. See Instructions in the Nonresidential Compliance Manual, page 3-96.  
 2. If Fail, then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary.

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**CERTIFICATE OF COMPLIANCE (Part 1 of 3) ENV-1C**

Project Name: **Westside Facility** Date: **11/18/2013**

Project Address: **9765 Wohler Road Forestville** Climate Zone: **2** Total Cond. Floor Area: **1,896** Addition Floor Area: **n/a**

**GENERAL INFORMATION**

Building Type:  Nonresidential  High-Rise Residential  Hotel/Motel Guest Room  Schools (Public School)  Relocatable Public School Bldg.  Conditioned Spaces  Unconditioned Spaces  Skylight Area for Large Enclosed Space  $\geq$  8000 ft<sup>2</sup> (if checked include the ENV-4C with submittal)

Phase of Construction:  New Construction  Addition  Alteration

Approach of Compliance:  Component  Overall Envelope  Unconditioned (file affidavit)

Front Orientation: **N, E, S, W** or in Degrees: **90 deg**

**FIELD INSPECTION ENERGY CHECKLIST**

| TagID | Assembly Type | Area (ft <sup>2</sup> ) | Orientation N, E, S, W | U-Factor U-Factor | Shading Coefficient | Exterior R-Value | Exterior Finishing | Water Vapor Barrier | Interior Finishing | Joint Appendix 4 | Condition Status | Pass | Fail                     |                          |
|-------|---------------|-------------------------|------------------------|-------------------|---------------------|------------------|--------------------|---------------------|--------------------|------------------|------------------|------|--------------------------|--------------------------|
| 11    | Wall          | 122                     | (ND)                   | 0.113             | R-13                |                  |                    |                     |                    |                  | 4.3.9-A.5        | New  | <input type="checkbox"/> | <input type="checkbox"/> |
| 12    | Roof          | 163                     | (ND)                   | 0.065             | R-14                |                  |                    |                     |                    |                  | 4.2.7-A.9        | New  | <input type="checkbox"/> | <input type="checkbox"/> |
| 13    | Slab          | 180                     | (N)                    | 0.730             | None                |                  |                    |                     |                    |                  | 4.2.7-A.1        | New  | <input type="checkbox"/> | <input type="checkbox"/> |
| 14    | Ceiling       | 192                     | (N)                    | 0.217             | R-13                |                  |                    |                     |                    |                  | 4.3.3-A.3        | New  | <input type="checkbox"/> | <input type="checkbox"/> |

**FENESTRATION SURFACE DETAILS**

| TagID | Fenestration Type | Area (ft <sup>2</sup> ) | Orientation N, E, S, W | Max U-Factor | U-Factor | Max SHGC (FWS) | SHGC Source | Overhang | Conditions Status | Pass | Fail |
|-------|-------------------|-------------------------|------------------------|--------------|----------|----------------|-------------|----------|-------------------|------|------|
|       |                   |                         |                        |              |          |                |             |          |                   |      |      |

1. See Instructions in the Nonresidential Compliance Manual, page 3-96.  
 2. If Fail, then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary.

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**CERTIFICATE OF COMPLIANCE (Part 2 of 3) ENV-1C**

Project Name: **Westside Facility** Date: **11/18/2013**

Project Address: **9765 Wohler Road Forestville** Climate Zone: **2** Total Cond. Floor Area: **1,896** Addition Floor Area: **n/a**

**ROOFING PRODUCT (COOL ROOFS)**

(Note: If the roofing product is not CRRC certified, this compliance approach cannot be used). Go to Overall Envelope Approach or Performance Approach.

**CHECK APPLICABLE BOX BELOW IF EXEMPT FROM THE ROOFING PRODUCT "COOL ROOF" REQUIREMENTS:**

| Requirement  | Pass                     | Fail                     | N/A                      |
|--|--------------------------|--------------------------|--------------------------|
| Roofing compliance as required in Climate Zones 1 and 6 with a Low-Sloped, 2:12 pitch or less.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Roofing compliance as required in Climate Zones 1 and 6 with a Steep-Sloped with less than 5 lb/ft <sup>2</sup> . Greater than 2:12 pitch.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Low-sloped Wood framed roofs in Climate Zones 3 and 5 are exempted, solar reflectance and thermal emittance or SRI that have a U-factor of 0.080 or lower. See Opaque Surface Details roof assembly, Column H of ENV-2C.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Low-sloped Metal building roofs in Climate Zones 3 and 5 are exempted, solar reflectance and thermal emittance or SRI that have a U-factor of 0.040 or lower. See Opaque Surface Details roof assembly below, Column H of ENV-2C.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| The roof area covered by building integrated photovoltaic panels and building integrated solar thermal panels are exempted. Solar reflectance and thermal emittance or SRI, see spreadsheet calculator at <a href="http://www.energy.ca.gov/100/04">www.energy.ca.gov/100/04</a> . | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Roof constructions that have thermal mass over the roof membrane with a weight of at least 25 lb/ft <sup>2</sup> are exempt from the Cool Roof criteria below.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| High-rise residential buildings and hotels and motels with low-sloped roofs in Climate Zones 1 through 9, 12 and 16 are exempted from the low-sloped roofing criteria.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

1. If Fail, then describe on this page of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary.

| CRRC Product ID Number | Roof Slope $\leq$ 2:12 - 2:12 | Product Weight $\leq$ 5 lb/ft <sup>2</sup> | Product Type <sup>2</sup> | Aged Solar Reflectance <sup>3</sup> | Thermal Emittance <sup>4</sup> | SRI <sup>5</sup>         | Pass                     | Fail                     |
|------------------------|-------------------------------|--|---------------------------|-------------------------------------|--------------------------------|--------------------------|--------------------------|--------------------------|
|                        | <input type="checkbox"/>      | <input type="checkbox"/>                   | <input type="checkbox"/>  | <input type="checkbox"/>            | <input type="checkbox"/>       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

1. The CRRC Product ID Number can be obtained from the Cool Roof Rating Council's Rated Product Directory at [www.coolroofs.org/products/index.php](http://www.coolroofs.org/products/index.php).  
 2. Indicate the type of product to be used for the roof top, i.e. single-sly roof, asphalt roof, metal roof, etc.  
 3. If the Aged Reflectance is not available in the Cool Roof Rating Council's Rated Product Directory then use the Initial Reflectance value from the same directory and use the equation  $(0.2+0.77e^{-0.02})$  to obtain a calculated aged value. Where p is the Initial Solar Reflectance from the Cool Roof Rating Council's Rated Product Directory.  
 4. Check Box if the Aged Reflectance is a calculated value using the equation above.  
 5. The SRI value needs to be calculated from a spreadsheet calculator at <http://www.energy.ca.gov/100/04>.  
 6. If Fail, then describe on this page of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary.

To apply Liquid Field Applied Coatings, the coating must be applied across the entire roof surface and meet the dry film thickness or coverage recommended by the coatings manufacturer and meet minimum performance requirements listed in §11810.4. Select the applicable coating:

Aluminum-Pigmented Asphalt Roof Coating  Cement-Based Roof Coating  Other

**Discrepancies:**

EnergyPro 5.1 by EnergySoft User Number: 6130 RunCode: 2013-11-18709-09-46 ID: 763.00 Page 8 of 26

**CERTIFICATE OF COMPLIANCE (Part 3 of 3) ENV-1C**

Project Name: **Westside Facility** Date: **11/18/2013**

Project Address: **9765 Wohler Road Forestville** Climate Zone: **2** Total Cond. Floor Area: **1,896** Addition Floor Area: **n/a**

**REQUIRED ACCEPTANCE TESTS**

**Designer:**

This form is to be used by the designer and attached to the plans. Listed below is the acceptance test for Envelope Fenestrations system. The designer is required to check the acceptance tests and list all the fenestration products that require an acceptance test. If all the site-built fenestration of a certain type requires a test, list the different fenestration products and the number of systems. The NA? Section in the Appendix of the Nonresidential Reference Appendices Manual describes the test. Since this form will be part of the plans, completion of this section will allow the responsible party to budget for the scope of work appropriately.

**Enforcement Agency:**

**Systems Acceptance:** Before Occupancy Permit is granted for a newly constructed building or space or whenever new fenestration is installed in the building or space shall be certified as meeting the Acceptance Requirements. The ENV-2A form is not considered a complete form and is not to be accepted by the enforcement agency unless the boxes are checked and/or filled and signed. In addition, a Certificate of Acceptance forms shall be submitted to the enforcement agency that certifies plans, specifications, installation certificates, and operating and maintenance information meet the requirements of §10-103(b) of Title 24 Part 6. The field inspector must receive the properly filled out and signed forms before the building can receive final occupancy. A copy of the ENV-2A for each different fenestration product line must be provided to the owner of the building for their records.

| Test Description   | Area of like Products | ENV-2A Building Envelope Acceptance Test | Test Performed By: |
|--|-----------------------|--|--------------------|
| Fenestration Products Name or ID Requiring Testing or Verification |                       |  |                    |
| Milgard DuoMini CV Low-E   | 716                   | <input type="checkbox"/>                 |                    |

EnergyPro 5.1 by EnergySoft User Number: 6130 RunCode: 2013-11-18709-09-46 ID: 763.00 Page 9 of 26

**CERTIFICATE OF COMPLIANCE (Part 1 of 3) LTG-1C**

Project Name: **Westside Facility** Date: **11/18/2013**

Project Address: **9765 Wohler Road Forestville** Climate Zone: **2** Total Cond. Floor Area: **1,896** Addition Floor Area: **n/a**

**INDOOR LIGHTING SCHEDULE AND FIELD INSPECTION ENERGY CHECKLIST**

Installation Certificate, LTG-1-INST (Retain a copy and verify form is completed and signed.)  Field Inspector

Certificate of Acceptance, LTG-2A and LTG-3A (Retain a copy and verify form is completed and signed.)  Field Inspector

A separate Lighting Schedule Must Be Filled Out for Conditioned and Unconditioned Spaces. Installed Lighting Power listed on this Lighting Schedule is only for:

UNCONDITIONED SPACE  UNCONDITIONED SPACE

The actual indoor lighting power listed below includes all installed permanent and portable lighting systems in accordance with §148(a).

Only for offices: Up to the first 0.2 watts per square foot of portable lighting shall not be required to be included in the calculation of actual indoor lighting power density in accordance with the Exception to §148(a). All portable lighting in excess of 0.2 watts per square foot is treated below.

| A   | B   | C                    | D                        | E                    | F                       | G               | H                        |
|---|---|----------------------|--------------------------|----------------------|-------------------------|-----------------|--------------------------|
| Luminaire (Type, Lamps, Ballasts)           | How wattage was determined  | CEC Default From NAB | According To §148(a-e)   | Number of Luminaires | Installed Watts (D x F) | Field Inspector | Pass                     |
| None or Item Tag                            | Complete Luminaire Description <sup>1</sup> (e.g. 3 lamp fluorescent troffer, F20T8, one dimmable electronic ballast) | Watts per Luminaire  |                          |                      |                         |                 |                          |
| (1) 8 ft Fluorescent T8 Rapid Start Troffer |   | 32.0                 | <input type="checkbox"/> | 13                   | 416                     |                 | <input type="checkbox"/> |

Installed Watts Page Total: **416**

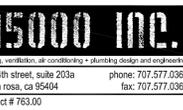
Installed Watts Building Total (Sum of all pages): **416**

Enter into LTG-1C Page 4 of 4

1. Wattage shall be determined according to Section 130 (d and e). Wattage shall be rating of light fixture, not rating of bulb.  
 2. If Fail, then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary.

EnergyPro 5.1 by EnergySoft User Number: 6130 RunCode: 2013-11-18709-09-46 ID: 763.00 Page 10 of 26

P:\1245.00 - Sonoma County Water Agency West Side Ed. SCWADDrawings\03-DD\Floor Plan - Scheme C.pln.2/19/2013, 10:12 AM



**WESTSIDE FACILITY**

SONOMA COUNTY WATER AGENCY

9703 Wohler Rd.  
 Forestville, CA

PRMD APPROVED FOR CONSTRUCTION  
 JUNE 18, 2014

ARCH PROJECT NO: 1245.00/763.00  
 DRAWN BY: JRM/JMT  
 DRAWING SCALE: NOTED

CD  
 APRIL 7, 2014

TITLE 24 (LAB BLDG.)

SHEET NUMBER  
**MO.3**



### EXHAUST FAN SCHEDULE

| TAG # | MANUFACTURER MODEL # | CFM | ESP (INCHES OF WC) | RPM  | WATTS | HP | BHP | SONES | VOLTS-ØHz | WEIGHT (LBS) | DUTY | REMARKS |
|-------|----------------------|-----|--------------------|------|-------|----|-----|-------|-----------|--------------|------|---------|
| CEF 1 | GREENHECK SP-B200    | 120 | 0.25               | 1100 | 173   | NA | NA  | 4.0   | 120/1/60  | 10           | VENT | 1, 2    |
| CEF 2 | GREENHECK SP-A250    | 240 | 0.25               | 1000 | 83    | NA | NA  | 2.0   | 120/1/60  | 21           | VENT | 1, 2    |
| CEF 3 | GREENHECK SP-A410    | 320 | 0.25               | 944  | 121   | NA | NA  | 3.0   | 120/1/60  | 31           | VENT | 2, 3    |
| CEF 4 | GREENHECK SP-A410    | 320 | 0.25               | 944  | 121   | NA | NA  | 3.0   | 120/1/60  | 31           | VENT | 1, 2    |
| CEF 5 | GREENHECK SP-A250    | 240 | 0.25               | 1000 | 83    | NA | NA  | 2.0   | 120/1/60  | 21           | VENT | 2, 3    |

REMARKS:  
 1. PROVIDE 30-MINUTE TIMER MOUNTED AT 48" A.F.F. AS NOTED ON PLANS.  
 2. PROVIDE SPEED CONTROLLER MOUNTED ON FAN HOUSING. ALLOW FOR ACCESS THROUGH FAN.  
 3. INTERLOCK WITH LIGHT SWITCH, S.E.E.D.

### HEAT PUMP SCHEDULE

| TYPE # | MANUFACTURER MODEL # | EER  | SEER | COOLING (MBH) |      | HEATING (MBH) |      | ELECTRICAL DATA |     |      |      | WEIGHT | REMARKS |
|--------|----------------------|------|------|---------------|------|---------------|------|-----------------|-----|------|------|--------|---------|
|        |                      |      |      | TC            | SC   | W             | W/O  | V/ØH            | FLA | MCA  | MOCP |        |         |
| HP 1   | TRANE TWA073         | 11.0 | 12.5 | 74.0          | 54.2 | 78.3          | 51.0 | 208/3/60        | NA  | 34.4 | 50   | 350    | 1, 2    |
| HP 2   | TRANE TWA073         | 11.0 | 12.5 | 74.0          | 54.2 | 78.3          | 51.0 | 208/3/60        | NA  | 34.4 | 50   | 350    | 1, 2    |

REMARKS:  
 1. HAIL/VANDAL GUARD.  
 2. MOUNT LEVEL DIRECTLY ON HOUSEKEEPING PAD.

### FAN COIL SCHEDULE

| TAG #  | MANUFACTURER MODEL # | CFM  | ESP  | COOLING (MBH) |      | HEATING (MBH) |      | ELECTRICAL DATA |     |      |      | WEIGHT | REMARKS    |
|--------|----------------------|------|------|---------------|------|---------------|------|-----------------|-----|------|------|--------|------------|
|        |                      |      |      | TC            | SC   | W             | W/O  | V/ØH            | FLA | MCA  | MOCP |        |            |
| FC 1/2 | TRANE TWE090         | 2400 | 0.40 | 74.0          | 54.2 | 78.3          | 51.0 | 208/1/60        | na  | 34.5 | 40   | 250    | 1, 2, 3, 4 |
| FC 1/2 | TRANE TWE090         | 2400 | 0.40 | 74.0          | 54.2 | 78.3          | 51.0 | 208/1/60        | na  | 34.5 | 40   | 250    | 1, 2, 3, 4 |

REMARKS:  
 1. PROVIDE OPTIONAL 8KW AUXILIARY HEATER.  
 2. PROVIDE SMOKE DETECTOR AND INTERLOCK TO SHUT DOWN FAN UPON ACTIVATION.  
 3. OPTIONAL STEEL SPRING BASE ISOLATORS  
 4. WHITE RODGERS SERIES 95 TOUCHSCREEN 7-DAY PROGRAMMABLE THERMOSTAT

### AIR OUTLET SCHEDULE

| TAG  | TYPE                    | MANUFACTURER MODEL # | DESCRIPTION   | REMARKS |
|------|-------------------------|----------------------|---|---------|
| BR-1 | BAROMETRIC RELIEF       | TITUS 350RL          | SINGLE DEFLECTION   | 1       |
| EL-1 | EXTERIOR LOUVER         | RUSKIN 37SELF        | SELF DRAINING, ALUMINUM                                   | 1       |
| SG-1 | SURFACE SUPPLY GRILLE   | TITUS 27ZRL          | 0° DEFLECTION, PAINT AS INDICATED ON PLANS                |         |
| SG-2 | SURFACE SUPPLY GRILLE   | TITUS 27ZRL          | 22° DEFLECTION, PAINT AS INDICATED ON PLANS               |         |
| RG-1 | WALL RETURN GRILLE      | TITUS 350RL          | STANDARD WHITE #36  |         |
| CD-1 | CEILING SUPPLY DIFFUSER | TITUS TDC            | MATCH BORDER TYPE TO CEILING. THROW AS INDICATED ON PLANS |         |

REMARKS:  
 1. COLOR SHALL BE SELECTED BY ARCHITECT. SUBMIT PALETTE TO DESIGN TEAM.

### HVAC GENERAL NOTES

- DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO BE USED AS A GUIDE FOR THE INSTALLATION OF A COMPLETE MECHANICAL SYSTEM. CONTRACTOR SHALL AMEND ALL INFORMATION AS REQUIRED AS SITE CONDITIONS WARRANT.
- PROVIDE ALL EQUIPMENT AND LABOR NECESSARY FOR THE COMPLETE INSTALLATION OF ALL SPECIFIED AND OWNER SUPPLIED EQUIPMENT AND FIXTURES.
- ALL WORK SHALL BE PERFORMED IN FULL ACCORDANCE WITH ALL APPLICABLE CODES AND ORDINANCES.
- ALL DAMPERS INSTALLED OVER AREAS WITH HARD CEILINGS SHALL BE PROVIDED WITH EITHER REMOTE OPERATORS OR ACCESS PANELS. COORDINATE LOCATION OF ALL ACCESS PANELS WITH OWNER.
- DO NOT CUT ANY STRUCTURAL MEMBERS OR STUDS WITHOUT PROPER COORDINATION WITH GENERAL CONTRACTOR AND STRUCTURAL DRAWINGS.
- ALL DUCTWORK SHALL BE RUN PERPENDICULAR TO STRUCTURE UNLESS OTHERWISE NOTED.
- DUCTWORK SHALL AVOID ARCHITECTURAL OPENINGS AND SHALL BE RUN CONCEALED UNLESS OTHERWISE NOTED.
- DUCTWORK SHALL MAINTAIN A CLEARANCE OF 1" MINIMUM FROM ALL COMBUSTIBLE SURFACES.
- CONTRACTOR SHALL VISIT SITE, AND FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO BID. ANY DISCREPANCIES BETWEEN CONTRACT DOCUMENTS AND ACTUAL CONDITIONS SHALL BE SUBMITTED IN WRITING TO THE OWNER'S REPRESENTATIVE PRIOR TO BID.
- ALL EQUIPMENT INSTALLED WITH SEISMIC VIBRATION ISOLATORS SHALL HAVE A MINIMUM 2" STATIC DEFLECTION.
- REFRIGERANT PIPING SHALL BE SIZED AS RECOMMENDED BY THE MANUFACTURER.
- THE DRAWINGS REPRESENT THE DIAGRAMMATIC GRAPHICAL REPRESENTATION OF THE SCOPE OF WORK AND SHOULD NOT BE USED SOLELY TO DETERMINE SCOPE. CONTRACTORS SHALL BID THE ENTIRE SET OF CONTRACT DOCUMENTS INCLUDING CROSS DISCIPLINE INFORMATION AND WRITTEN SPECIFICATIONS. ALL BIDS BASED UPON DRAWING INFORMATION ONLY CAN BE ASSUMED TO BE INCOMPLETE AND INCONCLUSIVE TO DETERMINE ENTIRE SCOPE OF WORK.
- AIR MOVING SYSTEMS SUPPLYING IN EXCESS OF 2000 CUBIC FEET PER MINUTE TO ENCLOSED SPACES WITHIN BUILDINGS SHALL BE EQUIPPED WITH AN AUTOMATIC SHUTOFF. SHUTOFFS SHALL STOP THE AIR-MOVING EQUIPMENT WHEN SMOKE IS DETECTED IN A SUPPLY-AIR DUCT OR WHEN SMOKE IS DETECTED IN ROOMS SERVED BY THE SYSTEM. EXCEPTIONS: (1) ROOMS HAVE A DIRECT EXIT TO THE EXTERIOR OF THE BUILDING, OR (2) SYSTEMS ARE DESIGNED FOR SMOKE CONTROL (SEC. 609.2010 CMC)
- CONTRACTOR SHALL VERIFY VOLTAGES AND ALL OTHER ELECTRICAL CHARACTERISTICS WITH ELECTRICAL PRIOR TO ORDERING EQUIPMENT.

### ABBREVIATIONS

NOT ALL ABBREVIATIONS LISTED HEREIN APPEAR ON THE DRAWINGS.

|                                     |   |
|-------------------------------------|---|
| (N) NEW                             | K KILOGRAMS                                 |
| (E) EXISTING                        | LAT LEAVING AIR TEMPERATURE                 |
| LBS POUNDS                          | LAT ACCESS DOOR                             |
| AFC ABOVE FINISHED CEILING          | LWT LEAVING WATER TEMPERATURE               |
| AFF ABOVE FINISHED FLOOR            | MAX MAXIMUM                                 |
| AFG ABOVE FINISHED GRADE            | MBH BTUH, THOUSANDS                         |
| AL ACOUSTICALLY LINED               | MCA MINIMUM CIRCUIT AMPERES                 |
| ALM ALUMINUM                        | MFR MANUFACTURER                            |
| AP ACCESS PANEL                     | MIN MINIMUM                                 |
| APSI ABSOLUTE PRESSURE              | MOCP MAXIMUM OVERCURRENT PROTECTION         |
| ATR ALL THREAD ROD                  | NA NOT APPLICABLE                           |
| BDD BACKDRAFT DAMPER                | NIC NOT IN CONTRACT                         |
| BG BELOW GRADE                      | OA OUTSIDE AIR                              |
| BHP BRAKE HORSEPOWER                | OC ON CENTER                                |
| BLKG BLOCKING                       | OD OVERFLOW DRAIN                           |
| BO BY OTHERS                        | OP OWNER PROVIDED                           |
| BTU BRITISH THERMAL UNITS           | POC POINT OF CONNECTION                     |
| BTUH BRITISH THERMAL UNITS PER HOUR | PRTV PRESSURE/TEMPERATURE RELIEF VALVE      |
| BV BALL VALVE                       | PRV PRESSURE RELIEF VALVE                   |
| CD CONDENSATE DRAIN PIPING          | PSI GAUGE PRESSURE (POUNDS PER SQUARE INCH) |
| CF CAPPED FOR FUTURE                | PTDF PRESSURE TREATED DOUGLAS FIR           |
| CFH CUBIC FEET PER HOUR             | RA RETURN AIR                               |
| CFM CUBIC FEET PER MINUTE           | RD ROOF DRAIN                               |
| CHWR CHILLED WATER RETURN           | RL REFRIGERANT LIQUID PIPING                |
| CHWS CHILLED WATER SUPPLY           | RBPB REDUCED PRESSURE BACKFLOW PREVENTER    |
| CK CHECK VALVE                      | RS REFRIGERANT SUCTION PIPING               |
| COTG CLEANOUT TO GRADE              | RWL RAINWATER LEADER                        |
| CTE CONNECT TO EXISTING             | S SENSOR                                    |
| CW DOMESTIC COLD WATER              | SA SHOCK ABSORBER                           |
| DB DRY BULB TEMPERATURE             | SA SUPPLY AIR                               |
| DIA DIAMETER                        | SAD SEE ARCHITECTURAL DRAWINGS              |
| DN DOWN                             | SCD SEE CIVIL DRAWINGS                      |
| EA EXHAUST AIR                      | SD STORM DRAIN                              |
| EAT ENTERING AIR TEMPERATURE        | SD SMOKE DETECTOR                           |
| EC ELECTRICAL CONTRACTOR            | SED SEE ELECTRICAL DRAWINGS                 |
| EFF EFFICIENCY                      | SMD SEE MECHANICAL DRAWINGS                 |
| ESP EXTERNAL STATIC PRESSURE        | SMS SHEET METAL SCREW                       |
| EWT ENTERING WATER TEMPERATURE      | SOV SHUT OFF VALVE                          |
| F DEGREES FAHRENHEIT                | SP SPRINKLER                                |
| FBO FURNISHED BY OTHERS             | SP STATIC PRESSURE                          |
| FC FLOOR CLEANOUT                   | SPD SEE PLUMBING DRAWINGS                   |
| FD FLOOR DRAIN                      | SQFT SQUARE FEET                            |
| FD FIRE DAMPER                      | SS SANITARY SEWER                           |
| FLA FULL LOAD AMPERES               | SSD SEE STRUCTURAL DRAWINGS                 |
| FS FLOOR FIN                        | T THERMOSTAT                                |
| FSD COMBINATION FIRE/SMOKE DAMPER   | TH THERMOMETER                              |
| FT FEET                             | TPV TRAP PRIMER VALVE                       |
| FT2 SQUARE FEET                     | TSP TOTAL STATIC PRESSURE                   |
| FP GAS PIPING                       | TYP TYPICAL                                 |
| GC GAS COCK                         | UG UNDERGROUND                              |
| GC GENERAL CONTRACTOR               | UNON UNLESS OTHERWISE NOTED                 |
| GPM GALLONS PER MINUTE              | V VENT PIPING                               |
| GSMS GALVANIZED SHEET METAL SCREW   | VIF VERIFY IN FIELD                         |
| GV GATE VALVE                       | VIPH VOLTS/PHASE/HERTZ                      |
| HB HOSE BIBB                        | VD VOLUME DAMPER                            |
| HHWR HEATING HOT WATER RETURN       | VTR VENT THROUGH ROOF                       |
| HWS HEATING HOT WATER SUPPLY        | WI WITH                                     |
| HP HORSEPOWER                       | WIO WITHOUT                                 |
| HW DOMESTIC HOT WATER               | WA WATER HAMMER ARRESTOR                    |
| IFC IN FURRED CEILING               | WB WET BULB TEMPERATURE                     |
| IN INCH                             | WC WATER COLUMN                             |
| INS INCHES                          | WCO WALL CLEANOUT                           |
| INS INSULATION                      | WT WEIGHT                                   |
| IS IN SOFFIT                        |   |
| IW INDIRECT WASTE                   |   |

### HVAC LEGEND

|  |  |
|--|--|
|  | DUCT, ROUND OR RECTANGULAR (AS NOTED PER PLANS)                                |
|  | DUCT, ROUND OR RECTANGULAR (AS NOTED PER PLANS)                                |
|  | VOLUME DAMPER  |
|  | DUCT, INTERNALLY INSULATED (ROUND OR RECTANGULAR)                              |
|  | DUCT, INTERNALLY INSULATED (ROUND OR RECTANGULAR)                              |
|  | FLEXIBLE DUCT/EQUIPMENT CONNECTION   |
|  | FLEXIBLE DUCTWORK @ GRILLE/DIFFUSER  |
|  | TURNING VANES IN RECTANGULAR DUCTWORK  |
|  | AIR OUTLET/INLET CALL-OUT (SEE AIR OUTLET SCHEDULE FOR TYPE)                   |
|  | DUCTWORK CROSS SECTION   |
|  | SUPPLY DIFFUSER OUTLET (CEILING)   |
|  | RETURN GRILLE INLET (CEILING)  |
|  | EXHAUST GRILLE INLET (CEILING)   |
|  | DUCT CROSS-SECTION   |
|  | THERMOSTAT @ 48" AFF   |
|  | DETAIL REFERENCE (1/2) -- DETAIL NUMBER SHEET NUMBER                           |
|  | EQUIPMENT TAG (AC 1) -- EQUIPMENT TAG EQUIPMENT #                              |
|  | AIR OUTLET TAG (CD-1) -- AIR OUTLET TAG CFM SIZE                               |
|  | U.S. GREEN BUILDING COUNCIL LOGO (PRODUCT APPROVED FOR LEEDS CREDIT)           |
|  | RECYCLING LOGO (PRODUCT CONTAINS RECYCLED MATERIAL)                            |
|  | FIRE/SMOKE DAMPER  |
|  | LOW LEAKAGE OPPOSED BLADE MOTORIZED DAMPER                                     |
|  | SUPPLY DIFFUSER OUTLET (CEILING)   |
|  | CFM (+) INDICATES MINIMUM UNIT OA QUANTITY IN A FULL ECONOMIZER CAPABLE SYSTEM |
|  | POINT OF CONNECTION  |



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



15000 INC.  
 Heating, ventilation, air conditioning • plumbing design and engineering  
 613 4th street, suite 203a phone: 707.577.0363  
 santa rosa, ca 95404 fax: 707.577.0364  
 Project # 763.00



### WESTSIDE FACILITY

SONOMA COUNTY WATER AGENCY

9703 Wohler Rd.  
 Forestville, CA

PRMD APPROVED FOR CONSTRUCTION  
 JUNE 18, 2014

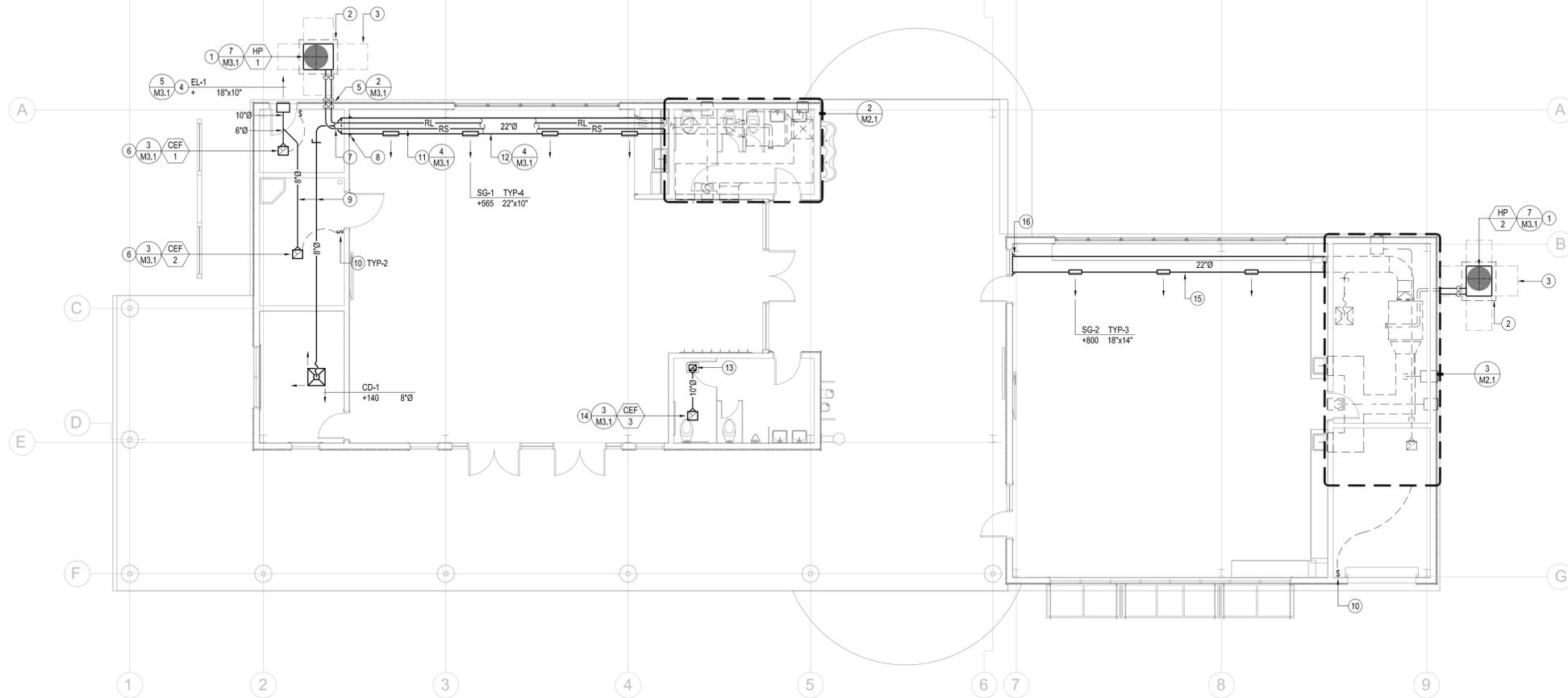
ARCH PROJECT NO: 1245.00/763.00  
 DRAWN BY: JRM/JMT  
 DRAWING SCALE: NOTED  
 PTN:

CD  
 APRIL 7, 2014  
 SHEET TITLE

### HVAC SCHEDULES, NOTES AND LEGEND

SHEET NUMBER

# M1.1



**1 OVERALL HVAC PLAN**  
SCALE: 1/8"=1'-0"



**HVAC SHEET NOTES**

- 1 HEAT PUMP MOUNTED ON HOUSEKEEPING PAD. COORDINATE LOCATION WITH SITE PLAN.
- 2 6" HOUSEKEEPING PAD. EXTEND PAD A MINIMUM OF 6" BEYOND THE EDGE OF HEAT PUMP.
- 3 MAINTAIN MINIMUM RECOMMENDED CLEARANCES.
- 4 EXTERIOR LOUVER MOUNTED AS HIGH AS POSSIBLE. REFER TO ARCHITECTURAL ELEVATIONS FOR EXACT LOCATION.
- 5 REFRIGERANT PIPING TO ENTER EXTERIOR WALL 6" A.F.G. (OR CURB). PROVIDE EYEBROW FLASHING PER 2/M3.1 AND ROUTE PIPING UP AS HIGH AS POSSIBLE.
- 6 EXHAUST FAN MOUNTED IN CEILING AND/OR EXPOSED AS HIGH AS POSSIBLE.
- 7 REFRIGERANT PIPING OVER DUCTWORK.
- 8 PROVIDE ESCUTCHEON AROUND DUCTWORK PENETRATION THROUGH WALL FOR FINISHED LOOK. PAINT OUT ESCUTCHEON THE SAME COLOR AS DUCTWORK.
- 9 DUCTWORK ABOVE CEILING.
- 10 PROVIDE WALL MOUNTED 30 MINUTE TIMER SWITCH FOR CEF-1, CEF-2 AND CEF-4. INSTALL SWITCH AT 48" A.F.F.
- 11 REFRIGERANT PIPING TO BE INSTALLED ABOVE DUCTWORK TO CONCEAL INSTALLATION. REFER TO 4/M3.1 FOR ADDITIONAL INFORMATION.
- 12 COORDINATE DUCTWORK INSTALLATION WITH REFRIGERANT PIPING. PAINT OUT DUCTWORK AND ALL ACCESSORIES WITH PRIME COAT AND TWO FINAL COATS. SUBMIT COLOR PALETTE TO ARCHITECT FOR SELECTION.
- 13 10"x8" DUCTWORK UP TO BROAN LOW PROFILE ROOF CAP. PAINT OUT CAP TO MATCH ROOF COLOR AND COORDINATE INSTALLATION AND FLASHING WITH ROOFING MANUFACTURER. SUBMIT PRODUCT TO ROOFING MANUFACTURER FOR DETAIL ON FLASHING.
- 14 EXHAUST FAN MOUNTED IN CEILING. INTERLOCK OPERATION WITH LIGHTSWITCH.
- 15 DUCTWORK EXPOSED AS HIGH AS POSSIBLE. PAINT OUT DUCTWORK AND ALL ACCESSORIES WITH PRIME COAT AND TWO FINAL COATS. SUBMIT COLOR PALETTE TO ARCHITECT FOR SELECTION.
- 16 TERMINATE DUCTWORK AT WALL WITH FULL PERIMETER ESCUTCHEON. PAINT OUT ESCUTCHEON SAME COLOR AS DUCTWORK.



**WESTSIDE FACILITY**

**SONOMA COUNTY WATER AGENCY**

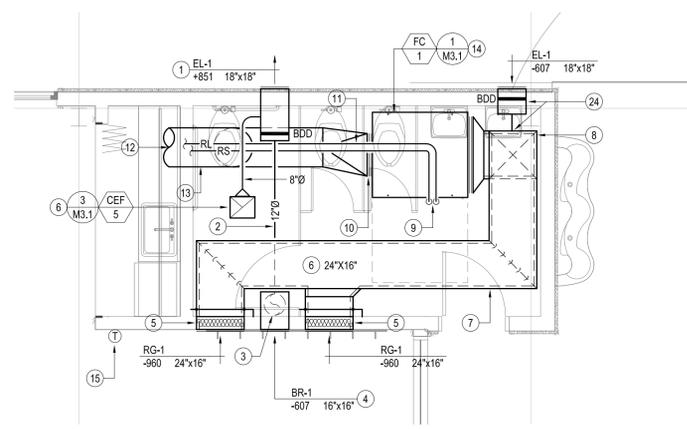
9703 Wohler Rd.  
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JUNE 18, 2014**

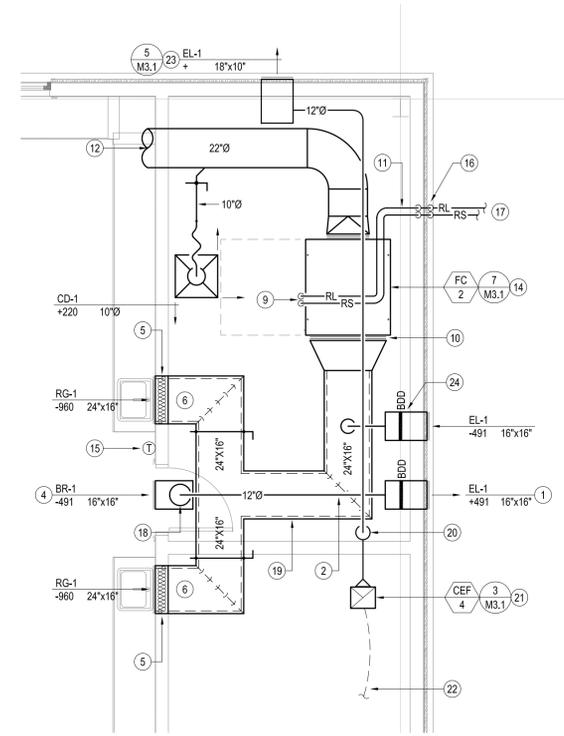
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DRAWN BY: JRM/JMT  
DRAWING SCALE: NOTED  
PTN: CD  
**APRIL 7, 2014**  
SHEET TITLE

**HVAC PLAN**

SHEET NUMBER  
**M2.1**



**2 ENLARGED HVAC PLAN**  
SCALE: 1/4"=1'-0"



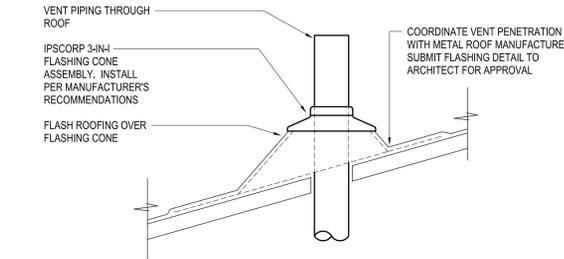
**3 ENLARGED HVAC PLAN**  
SCALE: 1/4"=1'-0"



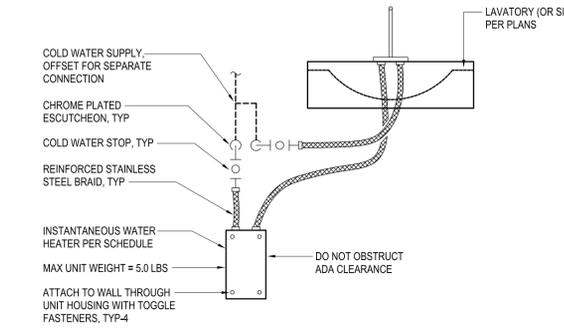
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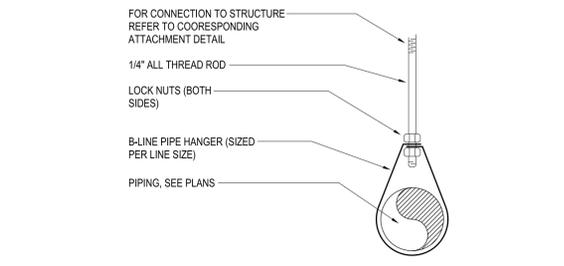
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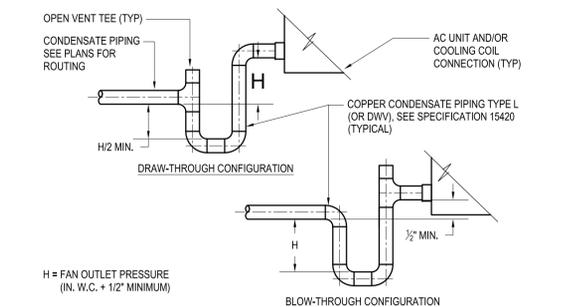
**4 VENT THROUGH ROOF**  
SCALE: NONE



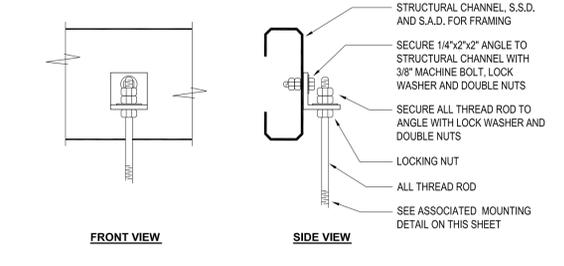
**5 INSTA-HOT MOUNTING/ PIPING DETAIL**  
SCALE: NONE



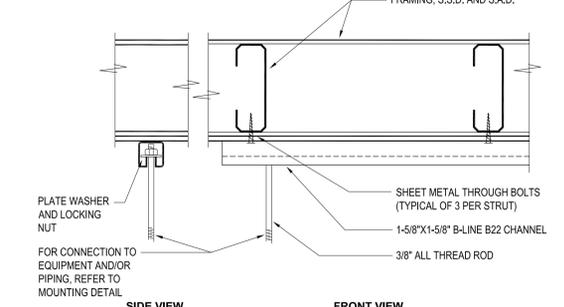
**6 PIPE HANGING DETAIL**  
SCALE: NONE



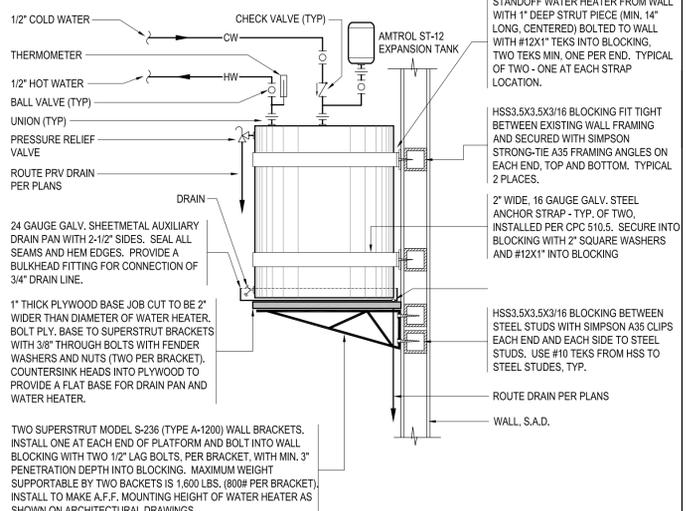
**7 CONDENSATE DRAIN CONNECTION**  
SCALE: NONE



**2 ROD ATTACHMENT TO METAL STRUCTURE ROOF FRAMING**  
SCALE: NONE



**3 ROD ATTACHMENT TO METAL FRAMING**  
SCALE: NONE



**1 WATER HEATER MOUNTING AND PIPING DETAIL**  
SCALE: NONE

**ELECTRIC WATER HEATER SCHEDULE**

| TAG # | MANUFACTURER MODEL # | GALLONS | NO. OF ELEMENTS | V/PHHZ   | WATTS | FIRST HR. GALLONS | REC. TEMP. | REC. GALLONS | ENERGY FACTOR | WEIGHT | REMARKS |
|-------|----------------------|---------|-----------------|----------|-------|-------------------|------------|--------------|---------------|--------|---------|
| WH 1  | A.O. SMITH EJCS-20   | 19      | 1               | 120/1/60 | 2500  | 30                | 90         | 11           | NA            | 65     | 3       |
| IWH 1 | EEMAX SP3512         | 0       | 1               | 120/1/60 | 3500  | NA                | 48         | 0.5 GPM      | NA            | 3      | 1, 2    |
| IWH 2 | EEMAX SP3512         | 0       | 1               | 120/1/60 | 3500  | NA                | 48         | 0.5 GPM      | NA            | 3      | 1, 2    |
| IWH 3 | EEMAX SP3512         | 0       | 1               | 120/1/60 | 3500  | NA                | 48         | 0.5 GPM      | NA            | 3      | 1, 2    |
| IWH 4 | EEMAX EX35DL         | 0       | 1               | 240/1/60 | 3500  | NA                | 48         | 0.5 GPM      | NA            | 3      | 1, 2    |
| IWH 5 | EEMAX EX35DL         | 0       | 1               | 240/1/60 | 3500  | NA                | 48         | 0.5 GPM      | NA            | 3      | 1, 2    |

REMARKS:  
1. INSTALL ON WALL PER MANUFACTURER'S RECOMMENDATIONS.  
2. PROVIDE ACCESSORY STAINLESS STEEL BRAIDED WATER CONNECTORS  
3. ROUTE PRV TO APPROVED RECEPTOR PER PLANS.

**LOCAL CONNECTION SCHEDULE**

| TAG # | TYPE                   | SS | V     | CW    | HW  | GAS | IW | REMARKS |
|-------|------------------------|----|-------|-------|-----|-----|----|---------|
| BF 1  | BOTTLE FILLING STATION | 2  | 1-1/2 | 1/2   | -   | -   | -  | 3       |
| DF 1  | DRINKING FOUNTAIN      | 2  | 1-1/2 | 1/2   | -   | -   | -  | 3       |
| FD 1  | FLOOR DRAIN            | 3  | 1-1/2 | -     | -   | -   | -  | 6       |
| L 1   | LAVATORY               | 2  | 1-1/4 | 1/2   | 1/2 | -   | -  | 3       |
| MS 1  | MOP SINK               | 3  | 1-1/2 | 1/2   | 1/2 | -   | -  | 1       |
| SK 1  | SINK                   | 2  | 1-1/2 | 1/2   | 1/2 | -   | -  | 2, 3    |
| SK 2  | SINK (EXTERIOR)        | 2  | 1-1/2 | 1/2   | -   | -   | -  | 4       |
| SK 3  | SINK                   | 2  | 1-1/2 | 1/2   | 1/2 | -   | -  | 2, 3    |
| U 1   | URINAL                 | 2  | -     | -     | -   | -   | -  | 5       |
| WC 1  | WATER CLOSET           | 4  | 2     | 1-1/4 | -   | -   | -  | 3       |
| WC 2  | WATER CLOSET           | 4  | 2     | 1-1/4 | -   | -   | -  | 3       |

REMARKS:  
1. FLOOR/CORNER MOUNTED.  
2. STAINLESS STEEL  
3. ADA COMPLIANT  
4. EXTERIOR MOUNTED WITH SAND TRAP.  
5. WATERLESS URINAL.  
6. PROVIDE WITH 1/2\"/>

**PLUMBING / PIPING LEGEND**

NOT ALL SYMBOLS SHOWN HEREIN APPEAR ON THE DRAWINGS.

|  |  |
|--|--|
|  | PIPE DROP                                |
|  | PIPE UP                                  |
|  | PIPE BREAK                               |
|  | FLOOR CLEANOUT                           |
|  | CLEANOUT TO GRADE                        |
|  | GATE VALVE                               |
|  | BALL VALVE                               |
|  | CHECK VALVE                              |
|  | UNION                                    |
|  | THERMOMETER                              |
|  | PRESSURE/TEMPERATURE RELIEF VALVE        |
|  | HOSE BIBB (DIAGRAM)                      |
|  | HOSE BIBB                                |
|  | FLOOR DRAIN                              |
|  | POINT OF CONNECTION                      |
|  | CAP INSTALLED ON (E) PIPE                |
|  | WALL CLEAN OUT                           |
|  | DIRECTION OF PITCH IN PIPING, AT % GRADE |
|  | SANITARY SEWER PIPE, BG                  |
|  | SANITARY SEWER PIPE, AFG OR AFF          |
|  | KITCHEN GREASE WASTE PIPE, BG            |
|  | FUEL GAS PIPE (NATURAL OR PROPANE)       |
|  | DOMESTIC COLD WATER PIPE                 |
|  | DOMESTIC HOT WATER PIPE                  |
|  | DOMESTIC HOT WATER RETURN PIPE           |
|  | VENT PIPE, ABOVE FINISHED GRADE          |

**ABBREVIATIONS**

NOT ALL ABBREVIATIONS LISTED HEREIN APPEAR ON THE DRAWINGS.

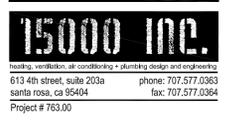
|      |                                |      |   |
|------|--------------------------------|------|---|
| (N)  | NEW                            | K    | KILOGRAMS                               |
| (E)  | EXISTING                       | LAT  | LEAVING AIR TEMPERATURE                 |
| AD   | ACCESS DOOR                    | LBS  | POUNDS                                  |
| AFC  | ABOVE FINISHED CEILING         | LWT  | LEAVING WATER TEMPERATURE               |
| AFF  | ABOVE FINISHED FLOOR           | MAX  | MAXIMUM                                 |
| AFG  | ABOVE FINISHED GRADE           | MBH  | BTUH, THOUSANDS                         |
| AL   | ACOUSTICALLY LINED             | MCA  | MINIMUM CIRCUIT AMPERES                 |
| ALM  | ALUMINUM                       | MFR  | MANUFACTURER                            |
| AP   | ACCESS PANEL                   | MIN  | MINIMUM                                 |
| APSI | ABSOLUTE PRESSURE              | MOCP | MAXIMUM OVERCURRENT PROTECTION          |
| ATR  | ALL THREAD ROD                 | NA   | NOT APPLICABLE                          |
| BF   | BELOW FLOOR                    | NIC  | NOT IN CONTRACT                         |
| BG   | BELOW GRADE                    | OA   | OUTSIDE AIR                             |
| BHP  | BRAKE HORSEPOWER               | OC   | ON CENTER                               |
| BLKG | BLOCKING                       | OD   | OVERFLOW DRAIN                          |
| BO   | BY OTHERS                      | OP   | OWNER PROVIDED                          |
| BTU  | BRITISH THERMAL UNITS          | POC  | POINT OF CONNECTION                     |
| BTUH | BRITISH THERMAL UNITS PER HOUR | PRV  | PRESSURE/TEMPERATURE RELIEF VALVE       |
| BV   | BALL VALVE                     | PRV  | PRESSURE RELIEF VALVE                   |
| CD   | CONDENSATE DRAIN PIPING        | PSI  | GAUGE PRESSURE (POUNDS PER SQUARE INCH) |
| OFF  | CAPPED FOR FUTURE              | PTDF | PRESSURE TREATED DOUGLAS FIR            |
| CFH  | CUBIC FEET PER HOUR            | RA   | RETURN AIR                              |
| CFM  | CUBIC FEET PER MINUTE          | RD   | ROOF DRAIN                              |
| CHWR | CHILLED WATER RETURN           | RL   | REFRIGERANT LIQUID PIPING               |
| CHWS | CHILLED WATER SUPPLY           | RBPB | BACKFLOW PREVENTER                      |
| CK   | CHECK VALVE                    | RS   | REFRIGERANT SUCTION PIPING              |
| COTG | CLEANOUT TO GRADE              | RWL  | RAINWATER LEADER                        |
| CTE  | CONNECT TO EXISTING            | S    | SENSOR                                  |
| CW   | DOMESTIC COLD WATER            | SA   | SHOCK ABSORBER                          |
| DB   | DRY BULB TEMPERATURE           | SA   | SUPPLY AIR                              |
| DIA  | DIAMETER                       | SAD  | SEE ARCHITECTURAL DRAWINGS              |
| DN   | DOWN                           | SCD  | SEE CIVIL DRAWINGS                      |
| EA   | EXHAUST AIR                    | SD   | STORM DRAIN                             |
| EAT  | ENTERING AIR TEMPERATURE       | SD   | SMOKE DETECTOR                          |
| EC   | ELECTRICAL CONTRACTOR          | SED  | SEE ELECTRICAL DRAWINGS                 |
| EFF  | EFFICIENCY                     | SMD  | SEE MECHANICAL DRAWINGS                 |
| ESP  | EXTERNAL STATIC PRESSURE       | SMS  | SHEET METAL SCREW                       |
| EWT  | ENTERING WATER TEMPERATURE     | SOV  | SHUT OFF VALVE                          |
| F    | DEGREES FAHRENHEIT             | SP   | SPRINKLER                               |
| FBO  | FURNISHED BY OTHERS            | SP   | STATIC PRESSURE                         |
| FC   | FLEXIBLE CONNECTION            | SPD  | SEE PLUMBING DRAWINGS                   |
| FD   | FLOOR CLEANOUT                 | SOFT | SQUARE FEET                             |
| FD   | FLOOR DRAIN                    | SS   | SANITARY SEWER                          |
| FD   | FIRE DAMPER                    | SSD  | SEE STRUCTURAL DRAWINGS                 |
| FLA  | FULL LOAD AMPERES              | T    | THERMOSTAT                              |
| FS   | FLOOR SINK                     | TH   | THERMOMETER                             |
| FSD  | COMBINATION FIRE/SMOKE DAMPER  | TPV  | TRAP PRIMER VALVE                       |
| FT   | FEET                           | TSP  | TOTAL STATIC PRESSURE                   |
| FT2  | SQUARE FEET                    | TYP  | TYPICAL                                 |
| G    | GAS PIPING                     | U    | UNION                                   |
| GC   | GAS COCK                       | UG   | UNDERGROUND                             |
| GC   | GENERAL CONTRACTOR             | UN   | UNLESS OTHERWISE NOTED                  |
| GPM  | GALLONS PER MINUTE             | V    | VENT PIPING                             |
| GSMS | GALVANIZED SHEET METAL SCREW   | VIF  | VERIFY IN FIELD                         |
| GV   | GATE VALVE                     | VPH  | VOLTS/PHASE/HERTZ                       |
| HB   | HOSE BIBB                      | VD   | VOLUME DAMPER                           |
| HHWR | HEATING HOT WATER RETURN       | VTR  | VENT THROUGH ROOF                       |
| HWS  | HEATING HOT WATER SUPPLY       | W    | WITHOUT                                 |
| HP   | HORSEPOWER                     | WA   | WATER HAMMER ARRESTOR                   |
| IW   | INDIRECT WASTE                 | WB   | WET BULB TEMPERATURE                    |
| IN   | INCH                           | WC   | WATER COLUMN                            |
| INS  | INCHES                         | WCO  | WALL CLEANOUT                           |
| INS  | INSULATION                     | WT   | WEIGHT                                  |
| IS   | IN SOFFIT                      |      |   |
| IW   | INDIRECT WASTE                 |      |   |

**PLUMBING GENERAL NOTES**

- DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO BE USED AS A GUIDE FOR THE INSTALLATION OF A COMPLETE PLUMBING SYSTEM. CONTRACTOR SHALL AMEND ALL INFORMATION AS REQUIRED AS SITE CONDITIONS WARRANT.
- PROVIDE ALL EQUIPMENT AND LABOR NECESSARY FOR THE COMPLETE INSTALLATION OF ALL SPECIFIED AND OWNER SUPPLIED EQUIPMENT AND FIXTURES.
- ALL WORK SHALL BE PERFORMED IN FULL ACCORDANCE WITH ALL APPLICABLE CODES AND ORDINANCES.
- ALL PLUMBING SHALL BE RUN PERPENDICULAR TO STRUCTURE UNLESS OTHERWISE NOTED.
- PLUMBING SHALL AVOID ARCHITECTURAL OPENINGS AND SHALL BE RUN CONCEALED UNLESS OTHERWISE NOTED.
- PLUMBING SHALL MAINTAIN A CLEARANCE OF 1" MINIMUM FROM ALL COMBUSTIBLE SURFACES.
- CONTRACTOR SHALL VISIT SITE, AND FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO BID. ANY DISCREPANCIES BETWEEN CONTRACT DOCUMENTS AND ACTUAL CONDITIONS SHALL BE SUBMITTED IN WRITINGS TO THE OWNER'S REPRESENTATIVE PRIOR TO BID.
- VALVES SHALL BE INSTALLED AT A SIZE EQUAL TO THE LINE SIZE OF THE PIPING SHOWN.
- VALVES, SHOCK ABSORBERS, IN-LINE EQUIPMENT, ETC., SHALL NOT BE USED AS A LOCATION FOR SUPPORTS.
- PIPING SHALL BE INSTALLED AS HIGH AS POSSIBLE AND AS CLOSE TO STRUCTURE AS POSSIBLE UNLESS OTHERWISE NOTED.
- PROVIDE SEISMIC BRACING ON ALL PIPING GREATER THAN 1/2" FROM STRUCTURE.
- MINIMUM INDIRECT WASTE AIR GAPS OVER FLOOR SINKS/DRAINS SHALL BE TWICE THE PIPE DIAMETER OF WASTE PIPE.
- THE DRAWINGS REPRESENT THE DIAGRAMMATIC GRAPHICAL REPRESENTATION OF THE SCOPE OF WORK AND SHOULD NOT BE USED SOLELY TO DETERMINE SCOPE. CONTRACTORS SHALL BID THE ENTIRE SET OF CONTRACT DOCUMENTS INCLUDING CROSS DISCIPLINE INFORMATION ONLY CAN BE ASSUMED TO BE INCOMPLETE AND INCONCLUSIVE TO DETERMINE ENTIRE SCOPE OF WORK.



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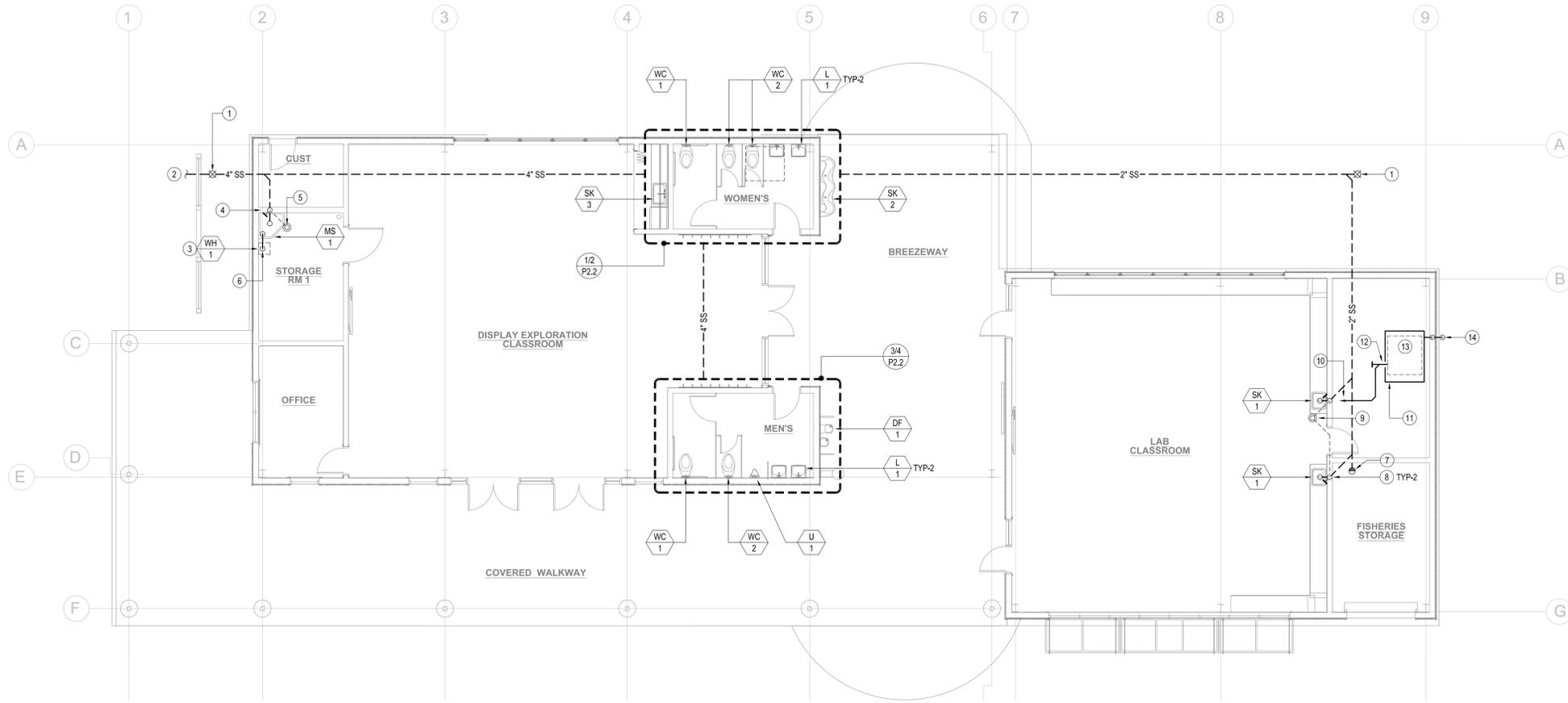
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**PLUMBING SCHEDULES, NOTES AND LEGEND**

SHEET NUMBER

**P1.1**



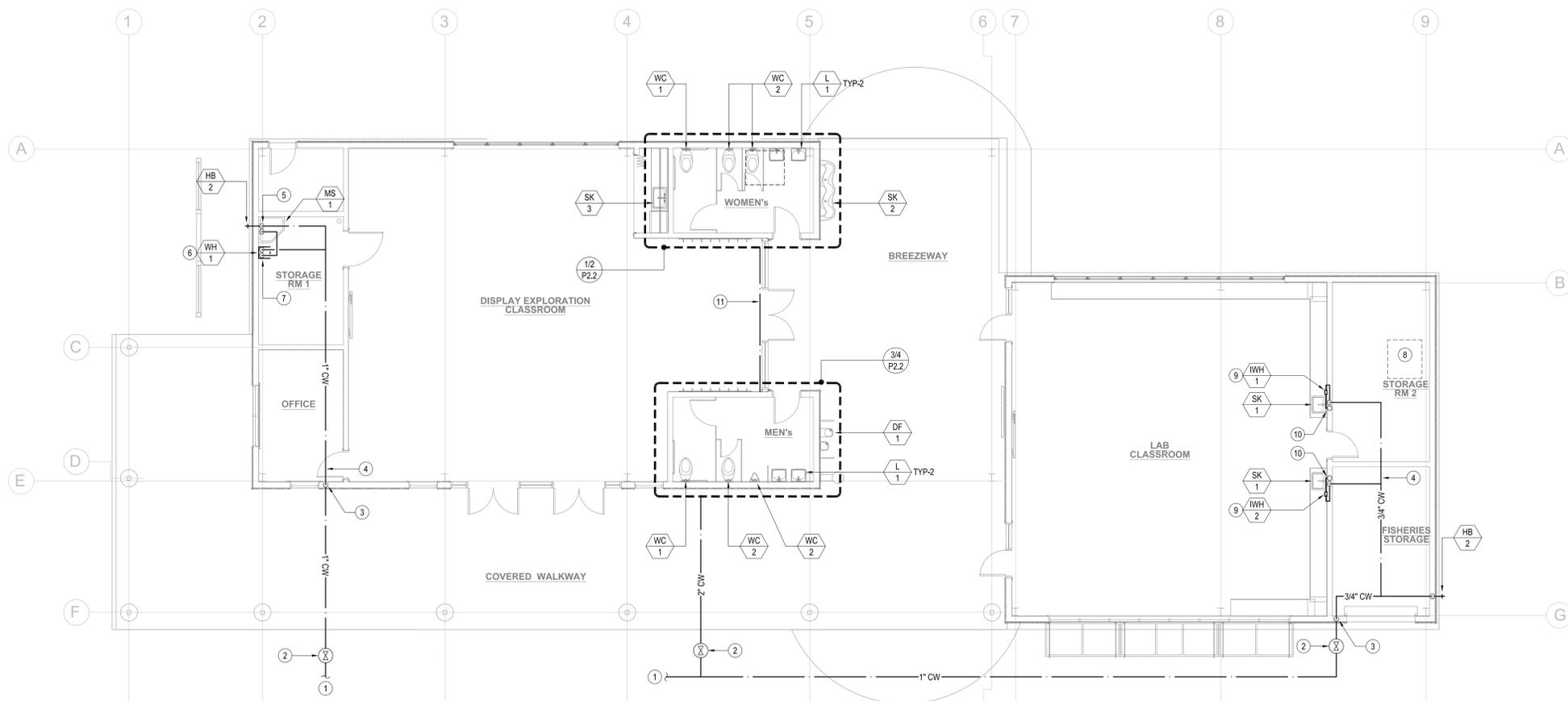
**1 PLUMBING PLAN - DRAIN, WASTE AND VENT**

SCALE: 1/8"=1'-0"



**PLUMBING SHEET NOTES**

- 1 CLEANOUT TO GRADE, TYPICAL WHERE OCCURS.
- 2 SEE CIVIL PLAN FOR CONTINUATION.
- 3 WATER HEATER MOUNTED ON WALL.
- 4 2" SS DOWN, 1-1/2" VENT UP TO CEILING SPACE. PROVIDE WALL CLEANOUT.
- 5 1-1/2" VENT THROUGH ROOF.
- 6 3/4" PRV DRAIN FROM WATER HEATER TO MS-1. SLOPE AT A MINIMUM OF 1/4" PER 12" TOWARDS SINK.
- 7 FLOOR CLEANOUT.
- 8 1-1/4" VENT UP, 1-1/2" SS DOWN. PROVIDE WALL CLEANOUT UNDER SINK.
- 9 2" VENT THROUGH ROOF.
- 10 1" CONDENSATE DRAIN DOWN TO FIXED AIR GAP AT TAILPIECE OF SK-1 FOR PRIMARY CONDENSATE DRAIN.
- 11 AUXILLARY DRAIN PAN. SEE MECHANICAL DRAWINGS (11M3.1) FOR ADDITIONAL INFORMATION.
- 12 1" PRIMARY CONDENSATE DRAIN.
- 13 HVAC EQUIPMENT, SMD.
- 14 1" SECONDARY CONDENSATE DRAIN FROM DRAIN PAN DOWN IN WALL. EXIT EXTERIOR WALL AT 6" A.F.G. (OR ABOVE CURB) AND ELBOW DOWN.



**1 PLUMBING PLAN - DOMESTIC WATER**

SCALE: 1/8"=1'-0"



**PLUMBING SHEET NOTES**

- 1 SEE CIVIL SITE PLAN FOR CONTINUATION.
- 2 PROVIDE SHUT OFF VALVE IN VALVE BOX BELOW GRADE. TOP SHALL BE MARKED "WATER". COORDINATE WITH SITE PLAN.
- 3 SLEEVE PIPING UP THROUGH FOOTING AND INTO EXTERIOR WALL. COORDINATE WITH STRUCTURAL AND METAL BUILDING MANUFACTURER. ROUTE TO AS HIGH AS POSSIBLE.
- 4 PIPING ABOVE CEILING.
- 5 1/2" CW/HW DOWN TO MS-1. OFFSET 1/2" PIPING FOR EXTERIOR HOSE BIBB.
- 6 WATER HEATER MOUNTED ON WALL. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
- 7 3/4" CW/HW DOWN TO WATER HEATER.
- 8 HVAC EQUIPMENT, SMD.
- 9 INSTANTANEOUS WATER HEATER BELOW COUNTER, INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND DO NOT IMPINGE ON ADA CLEARANCE.
- 10 OFFSET 1/2" CW PIPING TO WATER HEATER AND ROUTE TO SK-1.
- 11 2" CW WITHIN JOIST SPACE. COORDINATE DRILLING OF JOISTS WITH STRUCTURAL DRAWINGS.



QUATTROCCHI KWOK ARCHITECTS

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santa rosa, ca 95404 fax: 707.577.0364  
Project # 763.00



**WESTSIDE FACILITY**

**SONOMA COUNTY WATER AGENCY**

9703 Wohler Rd.  
Forestville, CA

PRMD APPROVED  
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**PLUMBING PLANS**

SHEET NUMBER

**P2.1**



QUATTROCCHI KWOK ARCHITECTS

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



15000 INC. Heating, ventilation, air conditioning + plumbing design and engineering 613 4th street, suite 203a phone: 707.577.0363 santa rosa, ca 95404 fax: 707.577.0364 Project # 763.00



### WESTSIDE FACILITY

SONOMA COUNTY WATER AGENCY

9703 Wohler Rd. Forestville, CA

PRMD APPROVED FOR CONSTRUCTION JUNE 18, 2014

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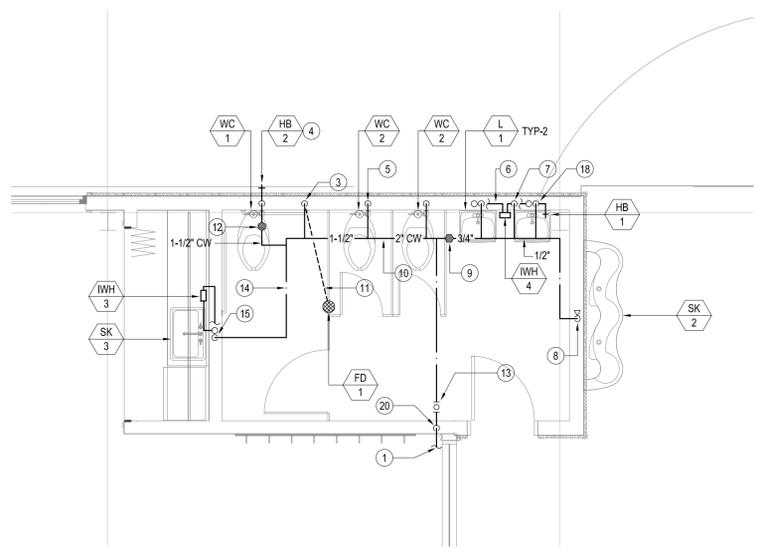
### ENLARGED PLUMBING PLANS

SHEET NUMBER

# P2.2

### PLUMBING SHEET NOTES

- 1 2" COLD WATER SERVICE. SEE OVERALL PLUMBING PLAN FOR CONTINUATION.
- 2 2" CW UP IN WALL TO CEILING SPACE. COORDINATE WITH HVAC EQUIPMENT LOCATIONS.
- 3 1/2" CW DOWN TO TRAP PRIMER VALVE. INSTALL AT 24" A.F.F. AND PROVIDE ACCESS PANEL.
- 4 1-1/2" CW DOWN IN WALL TO WC-1. OFFSET 1/2" CW TO EXTERIOR HOSE BIBB.
- 5 1-1/2" CW DOWN IN WALL TO WC-1, TYP-2.
- 6 OFFSET 1/2" HW TO EACH LAV. HOT WATER PIPING MAY BE EXPOSED STAINLESS STEEL FLEXIBLE TUBING IN LIEU OF BURIED WITHIN WALL.
- 7 1/2" CW DOWN IN WALL TO IWH. PLUMB PER MANUFACTURER'S RECOMMENDATIONS.
- 8 1/2" CW DOWN TO SK-2. PROVIDE RAINDRIP 3-DIAL COMBINATION SOLENOID VALVE AND TIMER WITHIN WALL AND ACCESS PANEL. SOLENOID VALVE SHALL BE NORMALLY CLOSED AND INTERLOCKED WITH TIMER TO PROVIDE OPEN OPERATION FROM 7 AM TO 5 PM. LOCATE TIMER WITHIN ACCESS PANEL.
- 9 PROVIDE INLINE WATER HAMMER ARRESTOR WITHIN REACH OF ACCESS PANEL.
- 10 PIPING ABOVE CEILING UNLESS OTHERWISE NOTED.
- 11 1/2" TYPE-K, SOFT DRAWN COPPER BELOW GRADE FOR TRAP PRIMER CONNECTION.
- 12 WATER HAMMER ARRESTOR AT TOP OF RISER WITHIN REACH OF ACCESS PANEL.
- 13 PROVIDE SHUT OFF BALL VALVE ABOVE CEILING.
- 14 COORDINATE PIPING LOCATION WITH ACCESS PANEL. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
- 15 1/2" PIPING DOWN IN WALL TO IWH. OFFSET PIPING AND CONNECT TO HW CONNECTION AT SINK. DO NOT OBSTRUCT ADA CLEARANCES.
- 16 PROVIDE ACCESS PANEL IN CEILING. COORDINATE LOCATION WITH ARCHITECTURAL AND LIGHTING PLANS.
- 17 3/4" CW DOWN TO U-1.
- 18 1/2" DOWN TO L-1. OFFSET AS INDICATED FOR KEYLESS HOSE BIBB.
- 19 1-1/2" CW DOWN IN WALL TO EW-1. OFFSET 1/2" TO DF-1. PROVIDE RAINDRIP 3-DIAL COMBINATION SOLENOID VALVE AND TIMER WITHIN WALL AND ACCESS PANEL. SOLENOID VALVE SHALL BE NORMALLY CLOSED AND INTERLOCKED WITH TIMER TO PROVIDE OPEN OPERATION FROM 7 AM TO 5 PM. LOCATE TIMER WITHIN ACCESS PANEL. TRANSITION AS REQUIRED.
- 20 OFFSET 2" CW INTO UPPER JOIST BAY. COORDINATE DRILLING OF JOISTS WITH STRUCTURAL DRAWINGS.



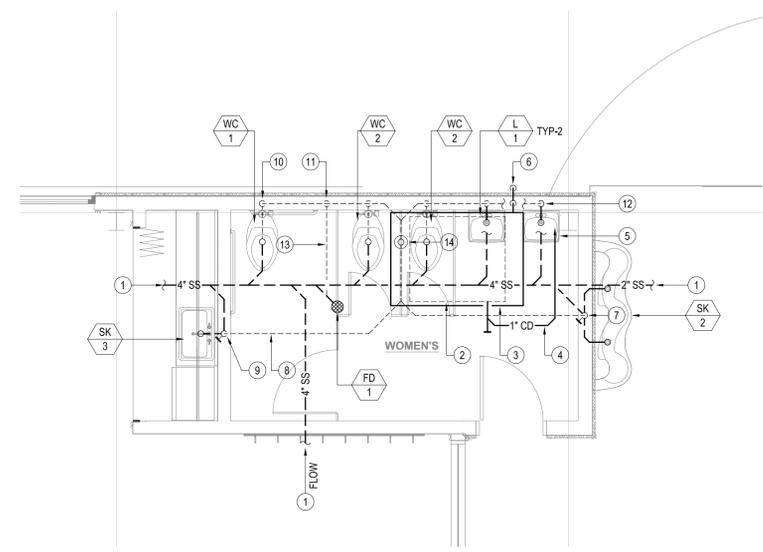
1 ENLARGED WOMEN'S RESTROOM - WATER

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



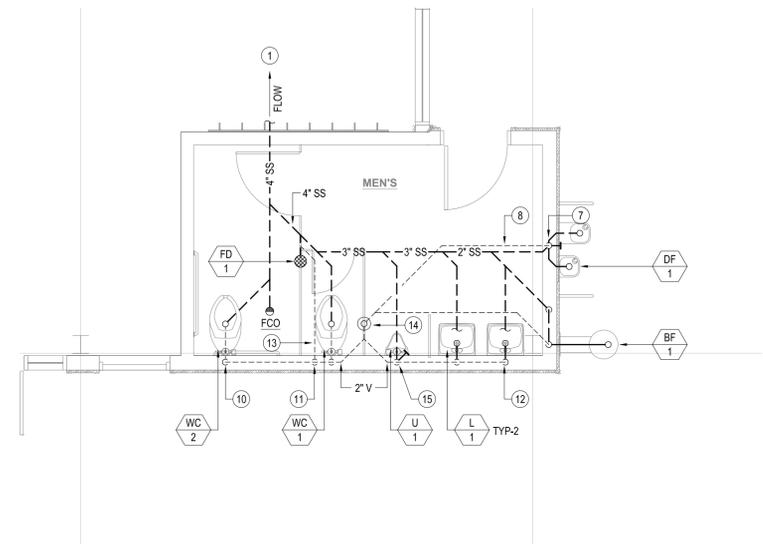
### PLUMBING SHEET NOTES

- 1 SEE OVERALL PLUMBING PLAN FOR CONTINUATION.
- 2 HVAC EQUIPMENT, SMD
- 3 PROVIDE DRAIN PAN BELOW FAN COIL UNIT. SEE HVAC INSTALLATION DETAILS FOR ADDITIONAL INFORMATION.
- 4 CONDENSATE DRAIN LINE ABOVE CEILING. SLOPE AT A MINIMUM OF 1/4" PER 12".
- 5 CONNECT 1" CONDENSATE DRAIN LINE TO FIXED AIR GAP AT TAILPIECE OF L-1.
- 6 ROUTE CONDENSATE DRAIN DOWN WITHIN EXTERIOR WALL AND EXIT AT 6" A.F.G. AND ELBOW DOWN ONTO SPLASBLOCK.
- 7 1-1/4" VENT UP, 2" SS DOWN. PROVIDE WALL CLEANOUT.
- 8 VENT PIPING ABOVE CEILING, TYPICAL UNLESS OTHERWISE NOTED.
- 9 1-1/4" VENT UP, 2" SS DOWN. PROVIDE WALL CLEANOUT BELOW SINK.
- 10 2" VENT UP IN WALL TO ABOVE CEILING SPACE, TYPICAL FOR THREE THIS WALL LINE.
- 11 1-1/2" VENT PIPING UP FROM BELOW GRADE.
- 12 1-1/4" VENT PIPING TO ABOVE CEILING SPACE, TYPICAL OF TWO THIS WALL LINE.
- 13 1-1/2" VENT BELOW GRADE.
- 14 2-1/2" VENT THROUGH ROOF.
- 15 1-1/2" VENT, 2" SS DOWN. PROVIDE WALL CLEANOUT FOR U-1.



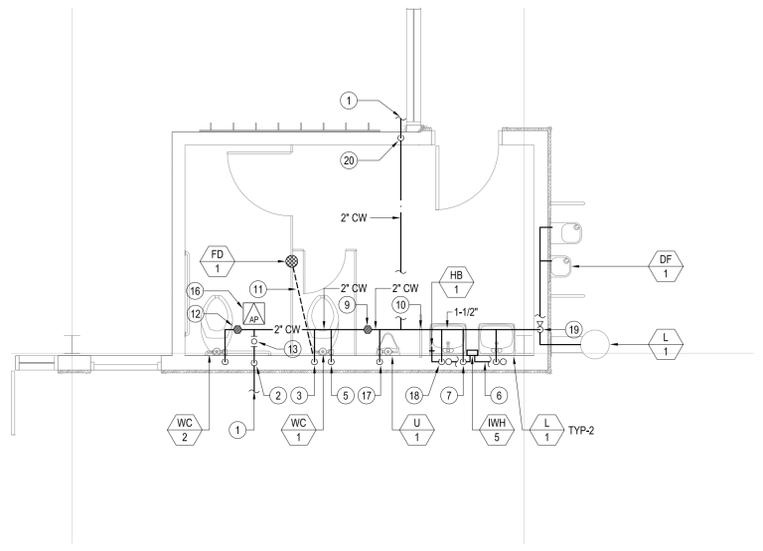
1 ENLARGED WOMEN'S RESTROOM - DWV

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



3 ENLARGED MEN'S RESTROOM - DWV

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



3 ENLARGED MEN'S RESTROOM - WATER

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



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ELECTRICAL MATERIALS AND METHODS

ELECTRICAL

1.01- RELATED DOCUMENTS

A. The General Conditions, Supplementary Conditions and Division 1 apply to the electrical work.

1.02- WORK INCLUDES

- A. Work included in this section: All materials, labor, equipment, services, and incidentals necessary to install the Electrical Work as shown on the drawings and as specified hereinafter, including, but not limited to the following:
1. Electric service as detailed on the drawings.
2. Telephone service provisions as detailed on the drawings.
3. Cable TV service provisions as detailed on the drawings.
4. Distribution system, including main switchboard, panelboards, and feeders.
5. Branch circuit wiring, wiring devices and connections to all equipment requiring electrical service.
6. Lighting fixtures with hangers, anchors and supports. Lighting Controls.
7. Electrical equipment grounding system.
8. Mechanical equipment power and control connections as stated in the mechanical and electrical specifications and as shown on the mechanical and electrical drawings.
9. Fire alarm system.
10. Security and access control.
11. Raceways, outlet boxes and power connections for security and access control system to be installed by Owner. Coordinate all requirements with Owner.
12. Sleeves, inserts and blocking in cast concrete as required for work in this section.
13. All required incidental work, such as excavating and backfilling, roof flashing, and testing.
14. Any other electrical work as might reasonably be implied as required, even though not specifically mentioned herein or shown on the drawings.

1.03 - INCORPORATED DOCUMENTS

- A. Requirements of the general conditions, supplementary conditions, and division 1 sections apply to all work in this section, unless modified herein.
B. Published specifications, standard tests or recommended methods of trade, industry or government organizations apply to work of this section where cited by abbreviations noted below, unless modified herein.
1. NATIONAL ELECTRICAL CODE, LATEST EDITION, (NEC).
2. NEMA STANDARDS
3. UNDERWRITERS' LABORATORIES, INC. (UL)
4. LOCAL UTILITY COMPANY REGULATIONS.
5. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

1.04 - CONDITIONS AT SITE:

A. Visit to site is required of all bidders prior to submission of bid. All will be held to have familiarized themselves with all discernible conditions and no extra payment will be allowed for work required because of these conditions, whether specifically mentioned or not.

1.05 - QUALITY ASSURANCE

- A. Conformance:
1. All work shall conform to the applicable requirements of Article 1.03 above.
2. The Contractor shall notify the Architect, prior to submission of bid, about any part of the design which fails to comply with abovementioned requirements.
3. If after contract is awarded, minor changes and additions are required by aforementioned authorities, even though such work is not shown on drawings or covered in specifications, they shall be included at Contractor's expense.
B. Coordination:
1. The Contractor shall become familiar with the conditions at the job site, and with the drawings and specifications and plan the installation of the electrical work to conform with the existing conditions and that shown and specified so as to provide the best possible assembly of the combined work of all trades.
2. The Contractor shall work out in advance all "light" conditions, involving all trades and if found necessary, supplementary drawings shall be prepared by this Contractor, for the Architect's approval, before work proceeds in these areas. No additional costs will be considered for work which must be relocated due to conflicts with the work of other trades.

1.06 - SUBMITTALS

- A. Product Data:
1. Comply with the General Provisions of the Contract.
2. Within 15 days after award of the Contract, submit:
a. Complete material list of all items proposed to be furnished and installed under this Section, including but not limited to the following items: Circuit breakers, lighting fixtures, conduit, devices, enclosures, etc.
b. Manufacturers' specifications and other data required to demonstrate compliance with the specified requirements.
c. Manufacturers' recommended installation procedures which, when approved by the Architect, shall become the basis for inspecting and accepting or rejecting actual installation procedures used on the work.
3. Shop Drawings: Furnish shop drawings and/or equipment cuts for the following:
a. Light Fixtures
b. Switchboard
c. Panelboards
d. Motor Starters, Control Equipment, and Control Relays
e. Disconnect Switches
f. Fire Alarm System
g. Lamps
h. Ballasts
i. Lighting Control System
j. Security and access Control
k. Switches, receptacles and faceplates.

4. Test Reports:

- a. Factory Tests where indicated for specific equipment.
b. Field Tests: Performance tests as specified for specific equipment.
c. When series rated circuit breakers are used, provide a letter from the manufacturer of the equipment confirming that U.L. series rating exists for all protective devices. State the available fault current from the Utility Company and indicate that the overcurrent devices exceed the available fault current at the respective point of protection.

1.07- MATERIALS

A. Materials of the same type or classification, used for the same purpose, shall be the product of the same manufacturer.

1.08 - ACCEPTABLE MANUFACTURERS

- A. Materials shall be of make mentioned elsewhere in this specification. All materials shall be of their several kinds, perfectly new and approved by the Underwriters' Laboratories.
B. Where material, equipment, apparatus or other products are specified by manufacturer, brand name, type or catalog number, such designation is to establish standards of desired quality, style and utility and shall be the basis of the bid. Materials so specified shall be furnished under the contract unless changed by written approval of the Owner's Representative. Where two or more designations are listed, choice shall be optional with this Contractor, but this Contractor must submit his choice for final approval.

1.09 - DELIVERY, STORAGE AND HANDLING

- A. Protection: Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the work and materials of all trades.
B. Delivery and Storage: Deliver all materials to the job site in their original containers with all labels intact and legible at time of use. Store in strict accordance with approved manufacturers' recommendations.
C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.
D. This Contractor shall personally, or through an authorized representative, check all materials upon receipt at jobsite for conformance with approved shop drawings and/or plans and specifications.

1.10 - SCHEDULING/SEQUENCING

A. Place orders for all equipment in time to prevent any delay in construction schedule or completion of project. If any materials or equipment are not ordered in time, additional charges made by equipment manufacturers to complete their equipment in time to meet the construction schedule, together with

any special handling charges, shall be borne by this Contractor.

1.11 - REQUIREMENTS

- A. The contract drawings indicate the extent and general arrangements of the conduit wiring systems, etc. If any departures from the contract drawings are deemed necessary by the Contractor, details of such departures and the reasons therefor shall be submitted as soon as practicable, and within 10 days after award of the electrical contract.
B. UNLESS MATERIAL LIST AND DATA IS RECEIVED AS A COMPLETE AND ALL INCLUSIVE SUBMITTAL WITHIN THE STIPULATED TIME ALL ITEMS SHALL BE PROVIDED AS SPECIFIED-WITH NO DEVIATIONS PERMITTED.
C. Any and all additional costs incurred by the substitution of electrical material or equipment, or installation thereof, whether architectural, structural, plumbing, mechanical or electrical, shall be borne by the Contractor under this section.

1.12 - IDENTIFICATION

- A. Switchboards, feeder circuit breakers in switchboards, panels, disconnect switches, motor starters and motor disconnect switches, cabinets, and other apparatus used for the operation of, or control of circuits, appliances or equipment, shall be properly identified by means of engraved laminated plastic descriptive nameplates mounted on apparatus using stainless steel screws. Nameplates shall have white letters with black background and be submitted to the Architect for approval. Cardholders in any form are not acceptable.
B. Each branch circuit of panelboards to have a permanently fixed number with directory, mounted under celluloid on inside of cabinet door, showing circuit numbers, room number feed and typewritten description of equipment supplied by breakers.

PART 2 - PRODUCTS:

2.01 - GENERAL

- A. Materials shall be new, packed in original containers, installed and turned over to the Owner free of defects.
B. Furnish all gear Underwriters' Laboratory label.
C. Material equipment and materials for any one system by same manufacturer.

2.02 - MATERIALS

- A. Conduit
1. Conduit shall be delivered to the site of construction in the original bundles. Each length shall bear the label of the National Board of Fire Underwriters. All conduit subjected to rough usage while on the job, before installation, shall be removed from the premises upon notice.
2. Raceway and boxes located as indicated on drawings and at other locations required for splices, taps, wire pulling, equipment connections, and compliance with regulatory requirements. Raceway and boxes are shown in approximate locations unless dimensioned. Provide raceway to complete wiring system.
3. Rigid Steel: Hot dipped galvanized, used exposed and in concrete slab, with completely watertight fittings.
4. "Schedule 40" PVC shall be provided with code size minimum bare No. 12 ground wire with "Schedule 80" elbows and sub-ups.
5. All rigid steel conduit, couplings and elbows in soil or under membrane to be 1/2 tape wrapped with Scotch #50 tape and threaded ends coated with red lead prior to installation of couplings.
6. Use flexible conduit for all motor connections; Flexible metal type provide with code size (minimum No. 12) bare ground wire in all flexible conduit.
7. Conduit Bends - Long Radius.
8. Provide conduit seals at all concrete slab penetrations.
9. Contractor shall xray all existing concrete slab before core drilling.
10. Installation:
10.1. All indoor conduit shall be installed concealed in walls or above ceiling unless noted otherwise
a. Outdoor Locations:
• Above Grade: Provide rigid steel conduit. Provide cast metal outlet, pull, and junction boxes.
• In Soil: Provide Sched 40 or 80 PVC with Sched 80 PVC elbows (in marine/high moisture environments) or Rigid Steel elbows wrapped.
• In Concrete: Provide hot dipped galvanized rigid steel or Sched 40 PVC Conduit.
• Flexible Conduit: WP Flexible metal conduit.
• Watertight and corrosion resistant fittings, couplings, boxes, etc.
b. Exposed Dry Locations: Provide galvanized rigid steel conduit or Intermediate metal conduit. Provide cast boxes. Electric Metallic Tubing may be provided in unfinished areas.
c. Concealed Dry Locations: Provide electrical metallic tubing for sizes less than 2-inches. Provide galvanized rigid steel or intermediate steel conduit in sizes 2-inches or larger. Provide cast or sheet metal boxes. Electric non-metallic tubing may be used from data/voice outlet to above non-plenum ceiling only, otherwise it is unacceptable.
d. Locations subject to Corrosive Atmosphere: Provide PVC coated, galvanized rigid steel or intermediate steel conduit. Provide PVC coated cast or sheet metal boxes.
e. Hazardous Locations (Per NEC Article 500): Galvanized rigid steel conduit. Cast iron boxes with threaded hubs for conduit entry. Conduit seals.
B. Conduit Fittings:
1. Fittings for rigid steel and flexible type conduit shall be of a type as required, malleable iron or steel, galvanized or sherardized.
C. Outlet Boxes and Junction Boxes:
1. Galvanized one piece steel knockout type, unless otherwise noted, sizes as required for conditions at each outlet or as noted, not smaller than 2 inches wide by 4 inches high, ganged where multiple switch locations are indicated.
2. Outlet boxes located on exterior to be flush type with cast aluminum gasketed covers; spring lid type for receptacles.
3. Surface mounted outlet boxes for wet locations, cast aluminum FS or FD type with gasketed spring lid cover.
4. All connectors from conduit to junction or outlet boxes shall have integral insulated throats.
5. Flush Service Floor Boxes: Multi-gang, cast iron, watertight, with corrosion resistant finish, exterior leveling screws, removable partitions, adjustable before and after concrete pour, with gasketed cover, meeting U.L. 514. Coordinate with Owner's Representative and provide brass or black carpet plate (per owners preference) where required.
6. Outlet boxes for telephone and cable TV outlets shall be 4" square minimum with single gang plaster rings.
D. Power Wire and Cable:
1. Copper 90% conductivity. Solid copper for conductors smaller than No. 8 AWG. Stranded copper for conductors No. 8 AWG and larger. No conductors smaller than No. 12 AWG, except as noted.
2. Insulation type: #12 to #1 AWG. THWN for wet locations and THHN for dry locations. #10 through #4/0 AWG: XHHW (55 Mils), 250MCM and larger: XHHW (65 Mils).
3. Conductors No. 8 and larger and as otherwise noted on drawings shall be stranded.
4. Connections to devices from "through feed" branch circuit conductors to be made with pigtails, with no interruption of the branch circuit conductors.
5. Neutral conductor identified by white outer covering band, with different traces of "EZ" numbering tags used where more than one neutral conductor is contained in a single unit.
6. Neatly arrange and "marlin" wired in panels and other equipment with "T and B Ty-rap" or approved elastic plastic type strapping.
7. Label each wire of each electrical system in each pull box, junction box, outlet box, terminal cabinet, and panelboard in which it appears with "EZ" numbering tags.
8. All wire and cable shall bear the Underwriters' Label, brought to the job in unbroken packages; wire color coded as follows:
Voltage Phasing A Phase B Phase C Phase Neutral
120/240 1p3w Black Red - White
120/208 3p 4w Black Red Blue White
208 3w Black Red Blue -
277/480 3p 4w Brown Orange Yellow White
480 3w Brown Orange Yellow -

- E. Telecommunication Wiring:
1. Category 6 UTP cable: Unshielded, 4 twisted-pair, 24 AWG copper, Category 6
2. Indoor Fiber Optic backbone cable: 12 strand, 62.5/125 m, multi-mode, riser type, NEC rated OFNR/IF74, color coded, ripcord, 300 m buffer coating
F. Switches: Leviton, or equal, rated 20 amp, 277 volt, quiet type, white color, specification grade; unless otherwise noted.
1. Single Pole \_No. 5521-W
2. Three Way \_No. 5523-W
3. Four Way \_No 5524-W
4. Momentary contact- No. 1256-W
5. Dimmer Switches- Lutron - Lyneo Series Style.
6. Wall mounted occupancy Sensors- Lutron maestro Style

G. Receptacles: Leviton, 125 volts, specification grade, conventional style, white color, except as noted:

- 1. 20A 3PG 125 volt duplex
2. 20A 3PG 125 volt ground fault interrupter receptacle
3. 20A 3PG 125 volt duplex
4. 30A 3PG 125 volt isolated ground receptacle, 3 wire, orange color 1.G.
5. Special appliances receptacles: Match NEMA configuration of equipment plug.

G. Plates: Leviton white, or equal, except as noted:

- 1. For indoor flush outlet boxes, for switches and receptacles: standard stainless steel, .030" Type 430.
2. For indoor telephone/data outlets: single gang with telephone jacks as directed by Owner's Representative, color per Owner's Representative. Green for Phone, Orange and Blue for Data.
3. For indoor TV outlets: single gang with cable TV jack, color per Owner's Representative.

- 4. Plates for surface mounted outlets: galvanized steel unless otherwise noted.
5. Plates for ground fault interrupter receptacles on exterior location: Sierra No. WPH\_GL
6. Weatherproof duplex receptacle plates for building locations and for all type FS or FD boxes \_Hubbell #522) or equal.
H. Motor Disconnect Switches and Safety Switches: Heavy Duty Type, cover interlocked with operating handle so that cover cannot be opened with switch in closed position and switch cannot be closed with cover in open position, 240 or 480 volt rating, as required or as noted on drawings, in Nema 1 enclosure indoors, 3R enclosure outdoors, or as otherwise noted. All motor circuit fuses shall be dual element fuses.

- I. Lugs and Connectors: Thomas and Betts "lock-tite", for No. 4 and larger wire; "Scotchlock" with insulator for No. 6 and smaller wire.
J. Splice Insulation: "Scotch" electrical tape with vinyl plastic backing or rubber tape with protective friction tape for interior work.

- K. Grounding:
1. Provide and install grounding system as noted on the Drawings.
2. Provide and install a grounding electrode system on all separate building, except those with only 1 circuit feeding building, NEC 250.32 (A).
3. Grounding electrode conductor: bare stranded copper type, #4/0 minimum or per NEC Table 250.66.
4. Install ground wires in rigid conduit. Provide physical protection for grounding electrode and bonding conductors in accordance with nec 250-64. Grounding conductors shall be in conduit and installed in accordance with NEC 250-64(e).

- 5. All grounding electrode conductor connections "hermite" or "cad\_weld" welded.
6. Use approved pressure type solderless connector or use fusion welding for all connections to and bonding of grounding electrode system. All connections shall be visible, readily accessible for testing purposes.
7. Terminate grounding conduits at equipment with ground bushing, with ground wire connected through bushing.
8. Provide No. 12 stranded (green) THHN conductor from outlet box to ground screw of every receptacle.
9. Ground all isolated sections of metallic raceways.
10. Provide #12 minimum stranded (green) THHN conductor sized per NEC, or as noted, connected continuously throughout branch circuit for all circuits, bonded to panel ground bus, and to all electrical devices and equipment enclosures.
11. Provide an unspliced grounding electrode conductor to the grounding electrode system
12. Where the transformer supplying the service is located outside the building, at least one additional grounding connection shall be made from the grounded service conductor to a grounded electrode at the transformer.

- 13. Use approved pressure type solderless connector or use fusion welding for all connections to grounding electrode. Connection visible, readily accessible for testing purposes. Grounding electrode conductor between the grounding electrode and service equipment: Minimum #4/0.
14. After installation, test system, using the three-point fall of potential method only. Record results and submit to Architect for approval. If resistance to ground exceeds three (3) ohms, install additional ground rods, bonded and interconnected to grounding electrode system. Provide additional grounding until resistance is less than three (3) ohms.

- 15. Provide a bonding jumper to the building interior metal water piping, exposed interior structural steel, interior metal gas piping, and other interior metal piping in accordance with nec 250-88. establish the connections at accessible locations and provide bonding jumpers across removable or electrically non-continuous joints.
16. Connect grounding electrode system to metallic water service enter metallic cold water pipe (if available) with nonferrous clamp and 1-#4 B.C. in conduit, connection shall be accessible for inspection.
17. Connect grounding electrode system to building steel. Use exothermic weld, connection shall be accessible for inspection.
18. Grounding Electrode System shall be as follows:

- a. The grounding electrode system shall consist of a ufer ground (if feasible), all available building metal structure, all available metal underground water piping, and ground rods (made and tested) or ground ring (if ufer ground is not available, in existing building or if resistance needs to be lowered), bond the electrodes together in accordance with NEC 250-50.
• Ufer Ground: Provide a concrete encased (ufer) grounding electrode per NEC 250-52(3) consisting of at least 30' of bare copper conductor min #4/0 awg (or sized per nec table 250.66) encased in concrete, conductor located 2-inch min from bottom. concrete foundation shall be in direct contact with the earth. This ufer ground shall be of the same size and continuous with the grounding electrode conductor as indicated. Embed in foundation with a loop at approximate center, brought out at top of foundation adjacent to building service equipment for connection to service equipment and for bonding to other parts of the grounding system.
• Ground Ring: Provide a ground ring encircling the building per NEC 250-52(4) consisting of at least 40' of bare copper conductor min #4/0 awg, the ground ring shall be buried at a depth not less than 30 inches below the earth's surface.
• Ground Rod: Furnish and install two "Copperweld" 3/4" x 10'-0" ground rods a minimum of 10'-0" apart. Install ground rods in accessible boxes with covers. Furnish and install 2-#4/0 bare copper cables between ground rods and main switchboard ground bus. Provide an additional ground rod if resistance of ground rod exceeds 25 ohms. Ground rod spaced a minimum of 6-feet apart in accordance with NEC 250-56.

- L. Main Switchboard:
1. General: Switchboard shall be distribution panel type, metal enclosure with ground bus and insulated full capacity neutral bus.
2. Equipment:
a. The switchboard shall be braced for a short circuit current of 100,000 amps u.o.n. Coordinate actual rating with utility company prior to ordering. Bracing shall be per NEMA and UL standards.
b. The switchboard shall comply with all the requirements of the Utility Company.
3. The switchboard shall be either floor, mounted, self-supporting, dead front and rear, and front operated, front connected, distribution type. The enclosure shall be 90 inches high, made of cold rolled steel on a structural shape, or formed, steel frame and shall be mounted on two 3 inch, 5/8" round continuous channel iron sills, which shall be closed at the ends between the two channels.
4. The switchboard shall be a minimum of 20 inches deep and shall be constructed of National Electrical Code (NEC) gauge steel.
5. The switchboard shall be provided with a cable pull section at the top of the switchboard. Provide a minimum 12 inches of vertical clearance between the cable terminal lugs bolted to the switchboard busses and the top and bottom of the switchboard enclosure. Horizontal pull sections and gutters shall be kept free and clear of busses. Where busses cross vertical pull sections, the busses shall be insulated.
6. All connections between bus bars shall be of a bolted type using Belleville washers. Clamps will not be accepted. All bus bars shall be accurately formed, and all holes shall be made in a manner which will permit bus bars and connections to be fitted into place without being forced.
7. The design of all current carrying devices or parts of the switchboard shall conform to the standard specified in the related sections of Underwriters' Laboratories, Inc. (UL) No. UL\_981 and National Electric Manufacturer's Association (NEMA) Standard PB\_2, except as these characteristics may be modified herein.

- 8. Bus bars, connection bars and wiring on the back of the switchboard shall be arranged so that maximum accessibility is provided for cable connections from the front.
9. Ampere ratings for rectangular bus bars shall be in accordance with the temperature rise standard of National Electric Manufacturer's Association (NEMA) and the Underwriters' Laboratories, Inc. (UL).
10. The enclosure shall be chemically cleaned by parkerizing, bonderizing or phosphorizing as a unit after all welding has been completed. The enclosure shall then be painted with a rust, resisting primer coat of paint and shall be finished with a coat of light gray, baked enamel.
11. Each section shall be bussed for the full connected load of that section. Extend bussing to spare circuit breaker "Spaces." Drill busses for future circuit breakers, and provide breaker connector hardware as required.
12. Provide copper bus bars and connections with silver plated contact surfaces.
13. The contact surfaces and studs of all devices to which bus connections are made shall also have

silver plated surfaces.
14. Locate ground bus, with a cross-section equal to at least 25 percent of the capacity of the main bus rating, in the back of the switchboard and extend bus throughout the length of the switchboard assembly. Ground each housing of the assembly directly to this bus.
15. Rigidly support all bus and connection bars and current transformers.
16. Fit all nuts and connections with locking devices to prevent loosening.
17. Provide load connections with solderless lugs. Factory install all devices shown on Drawings as specified herein.

- 18. Provide half-inch copper braided pigtail at side of switchboard enclosure for termination of signal system ground buses. Pigtail to be located on side of distribution section.
19. Provide ground fault protection when indicated on the single line diagram or where otherwise noted on the plans. Protection shall consist of a current sensor, relaying device, and the appropriately sized main overcurrent protection device.
20. Provide a bonding strap from the equipment ground bus to the neutral bus unless serving a separate building with a metallic path between buildings (NEC 20.32 (A)).
21. Provide transient voltage surge protection, integral to or adjacent to the the main switchboard when indicated on the plans or where otherwise noted on the plans.

M. Panelboards:

- 1. Surface or flush mounted, with branch circuits as shown on drawings.
2. Enclosures: code gauge galvanized sheet steel with welded full flange end pieces, stretcher, leveled steel trim, bagpan and door.
3. Bussing of copper with silver plated contact surfaces.
4. Trims on surface mounted cabinets secured with nickel plated screws with cup washers, bottom of all trims to have lugs for resting on cabinet flange.
5. Panels shall be 20 inches minimum in width, provided with approved gutter space, barriers and adjustable supports. Doors mounted with concealed hinges provided with combination spring latch and lock. Doors and trims and surface mounted cabinets primed and finished with one coat baked on gray enamel.
6. Breakers on same phase to be aligned horizontally. Each panel provided with 5 handle locks.
7. Each branch circuit of panelboards to have a permanently fixed number with one word directory, mounted under celluloid on inside of cabinet door, showing circuit numbers and typewritten description of outlets controlled by breakers. Color code fusion and each breaker terminal, same as conductor insulation.

- 8. Each panel shall be equipped with a copper ground bus.
N. Circuit Breakers:
1. General: Circuit breakers shall be molded case rated for 480 or 240 volts, multiple or single pole and ampere rating as shown on the drawings, but not, manually operated with "de-ion" arc chutes.
2. Main circuit breaker shall be rated to interrupt the available short circuit current min 42,000 amps RMS or as noted on the drawings.
3. Distribution circuit breakers shall be rated for the amps interrupting capacity noted on the drawings or U.L. series rated with the main circuit breaker.

- 4. Branch circuit breakers shall be rated for the amps interrupting capacity or U.L. series rated with the distribution and main circuit breakers. General Electric type TEB or equal, minimum 10,000 A.I.C for 120/208 volt, type TED or equal, minimum 14,000 A.I.C for 277/480 volt.
5. Where mechanical equipment is U.L. listed for overcurrent protection with fuses or HACR type circuit breakers, provide fuses where a fused switch is shown. Where the overcurrent protection is a circuit breaker, provide HACR, (HACR means Heating, Air-Conditioning and Refrigeration) type.
6. Provide type "SNV" circuit breakers where the circuit breaker is going to be used as a switching device in a panelboard.

- 7. Provide GFCI rated circuit breakers in all locations within 6-feet of water.
O. Starters:
1. Magnetic starters shall be rated in accordance with latest published NEMA standards for size and horsepower rating, Westinghouse A-200 series or equal. Provide with overload sensor in each phase, hand-off-auto switch, red "run" pilot light, in Indoor NEMA 1, Outdoor NEMA 4X, or NEMA 3R enclosure as shown. Coil shall be rated 120 VAC. Starters shall be across-the-line non-reversing unless otherwise noted.
2. Contacts: Across-the-line magnetic starters shall be equipped with double break silver starter contacts. All contacts shall be replaceable without removing power wiring or removing starter from panel. The starter must have straight-through wiring.
3. Coils: Coils shall be of molded construction. All coils shall be replaceable from the front without removing the starter from the panel.

- 4. Overload Relays and Thermal Units: Overload relays shall be the melting
P. Motor Connections:
1. Install motor circuits complete for all motors by other trades as shown on drawings.
2. Furnish and install all disconnect switches, outlet boxes, starters, timeswitches etc., where noted.
3. All motor and temperature control low voltage wiring shall be installed and connected by Division 15 Section of specifications, unless otherwise indicated on electrical and mechanical drawings.

- Q. Lighting Fixtures:
1. As listed in future schedule, and on drawings as indicated by type letter, completely lamped with new lamps, properly operating at time of acceptance of electrical work.
2. Lamps:
a. Unless otherwise noted, lamps described on the Drawings and in these Specifications, are ANSI nomenclature, lamps shall be manufactured by Osram/Sylvania, North American Philips, or approved equal.
b. All incandescent lamps and tungsten halogen lamps shall be 125 -130 volt rated extended life or 2,000 hour life whenever such designs are available.
c. T8 fluorescent lamps shall be 3500K-4100K color temperature, energy saving type suitable.
d. Compact fluorescent lamps shall be 3500K-4100K color temperature, twin-tube and double twin tube (as required for each fixture), as manufactured by North American Philips, approved equal.

- 3. Ballasts:
a. Fluorescent Lamp Ballasts: Solid State full light output Class P, ETL certified to CBM standards, high power factor one, two, three, or four lamp types; minimum starting temperature 50 degrees F, unless otherwise noted. Ballasts containing "PCB" are not permitted. The allowable total harmonic distortion shall be equal to or less than 10%. Maximum crest factor 1.4. Power factor .97 or greater. Advance, Magnetek, Lutron or Metrolux.
b. Sound Ratings: "A", or the lowest rating available, for the number and types of lamps ballasted. Replace noisy ballasts at no cost to the Owner.
c. All ballasts shall be high power factor energy efficient type.
d. Ballasts in refrigerated spaces or outdoors shall be zero (0) degree F. temperature rated.
e. All ballasts shall be operated without excessive or unusual noise. Noisy or otherwise defective ballasts shall be replaced.
f. Contractor shall burn in lamps per manufacturer's instructions.

- 4. Plastic:
a. Translucent Plastic Components: Translucent plastic shall be made of smooth, white, 100 percent virgin acrylic material.
b. Plastic Lenses: Lenses shall be uncolored 100 percent virgin acrylic plastic.
5. Finish on Metal Parts:
a. Steel Reflectors: Unless otherwise specified, the reflector surface finish shall be of synthetic white enamel or polyester powder coating.
b. Aluminum Reflectors: Reflecting surfaces shall be provided with either a specular or diffuse finish as indicated.
c. Non-Reflecting Surfaces: Unless otherwise specified, the finish on all non-reflecting exterior surfaces shall be aluminum oxide or aluminum; white, gray or aluminum paint on steel; nickel or chromium plating on copper alloy. Fastening devices shall be nickel, chromium, cadmium or zinc plated.

- 3.02 - PREPARATION
A. Drawings
1. The general arrangement and location of wiring and equipment is shown on the electrical drawings and shall be installed in accordance therewith, except for minor changes required by conflict with the work of other trades.
2. Drawings indicate the circuit and panel which supplies each device or fixture. Provide and install conduit and conductors to make all connections from panel to nearest device and from first device to additional devices on same circuit. Conduit size and fill shall satisfy NEC requirements. Two or

- three different phases supplied by a 3\_phase panel may share a single neutral only if circuit positions are adjacent in the panel the breakers will have to be provided with. Do not exceed 4 #12 or 3 #10 conductors in a 1/2" conduit, 7 #12 or #10 in a 3/4" conduit, or 11 #12 or 9 #10 in a 1" conduit, unless otherwise noted. If more than three current carrying conductors are installed in one conduit, conductor size shall be increased as required per Note 8 to Table 310.16 of the NEC.
3. Drawings indicate the location of all light switches. Where fixtures in a room are controlled by more than one switch, the same lower case letter is drawn adjacent a switch and each fixture are controlled by that switch. Where no lower case letter is adjacent to a switch, all fixtures in the room are controlled by that switch. Provide and install conduit and wire from fixture to switch and between fixtures as required to accomplish switching shown. Do not route branch circuit wiring for light fixtures through switch boxes.
4. Control wiring is generally not shown on the plans. Contractor shall refer to control diagrams and provide and install all wiring and raceways required to make all interconnections.
5. All branch circuit wiring No. 12 or larger as noted, all control wiring No. 14 or larger.
6. All dimensions, together with locations of doors, partitions, etc. are to be taken from the Architectural Drawings, verified at site by this Contractor.
7. Maintain "as-constructed" Record Drawings at all times, showing the exact location of concealed conduits and feeders installed under this contract, and actual numbering of each circuit. Upon completion of work and before acceptance can be considered, this Contractor must forward to the Owner's Representative corrected Record Drawings in Autocad format indicating the electrical work as installed.

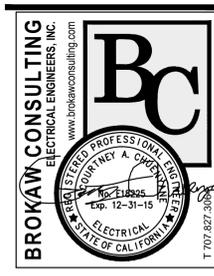
- 3.03 - FIELD QUALITY CONTROL
A. All workmanship shall be first class and carried out in a manner satisfactory to and approved by the Architect.
B. This Contractor shall personally, or through an authorized and competent representative, constantly supervise the work and so far as possible keep the same foreman and workmen on the job throughout.
3.04 - INSTALLATION/APPLICATION/ERECTION
A. Cutting, repairing and structural reinforcing for the installation of this work shall be done by the General Contractor in conformance with the Architect's requirements.
B. Provide and place in form work all conduit, inserts and sleeves in time to prevent any delay in the concrete work.
3.05 - ADJUSTING AND CLEANING
A. Main switchboard, panelboards and all other electrical equipment not "finish painted" under other sections shall be touched up where finished surface is marred or damaged. Panelboards in finished areas shall be painted to match wall.
B. All equipment, lighting fixtures, etc., shall be left in clean condition, with all shipping and otherwise unnecessary labels removed therefrom.
C. Excavate and trench as necessary for the electrical installation, and when the work has been installed, inspected and approved, backfill all excavations with imported sandy soil in maximum 8" (eight inch) layers, moisten and machine tamp to 95% compaction, and restore the ground and/or paving or floor surfaces to their original condition. Comply with requirements of Division 2.

- 3.06 - SCHEDULES
A. Coordination: Coordinate installation of electrical items with the schedule for other work to prevent unnecessary delays in the total Work.
3.07 - TESTING
A. Grounding System:
1. All ground connections shall be checked and the entire system shall be checked for continuity. The resistance of the ground system shall be measured using a 3 point fall-of-potential method. The maximum ground resistance shall be three ohms. If the measured ground resistance exceeds three ohms, additional ground rods shall be installed until a value of three ohms or less is obtained.
2. Ground tests shall meet the requirements of the National Electrical Code.
B. Lighting Systems:
1. The interior and exterior lighting systems shall be checked for proper local controls and operation of entire installation, including the operation of the low voltage lighting control system.
C. Power Distribution System:
1. Tests: Test main switchboard, distribution boards and panelboards for grounds and shorts with mains disconnected from feeders, branch circuits connected and circuit breakers closed, all fixtures in place and permanently connected and grounding jumper to neutral lifted and with all wall switches closed.
2. Test each individual circuit at each panelboard and with equipment connected for proper operation. Inspect the interior of each panel.
3. Check verification of color coding, tagging, numbering, and splice make up.
4. Verify that all conductors associated with each circuit are in same conduit.
5. Demonstrate that all lights, jacks, switches, outlets and equipment operate satisfactorily and as called for.
D. Fire Alarm System: Verify that all equipment, components, and devices function as specified and to the satisfaction of the Authority Having Jurisdiction.

- ARCH PROJECT NO: 1245.00
DRAWN BY: CAC
DRAWING SCALE:
CD
April 07, 2014
SHEET TITLE
ELECTRICAL GENERAL NOTES
SHEET NUMBER
EO.2



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WESTSIDE FACILITY
SONOMA COUNTY WATER AGENCY
9703 Wohler Rd.
Forestville, CA

PRMD APPROVED FOR CONSTRUCTION
JUNE 18, 2014

Table with 2 columns: ARCH PROJECT NO, DRAWN BY, DRAWING SCALE, SHEET NUMBER.

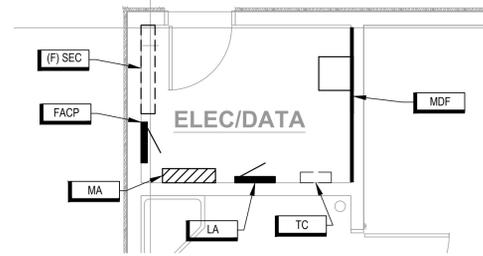
CD
April 07, 2014
SHEET TITLE

ELECTRICAL GENERAL NOTES
SHEET NUMBER

EO.2







**ENLARGED ELECTRICAL ROOM PLAN**

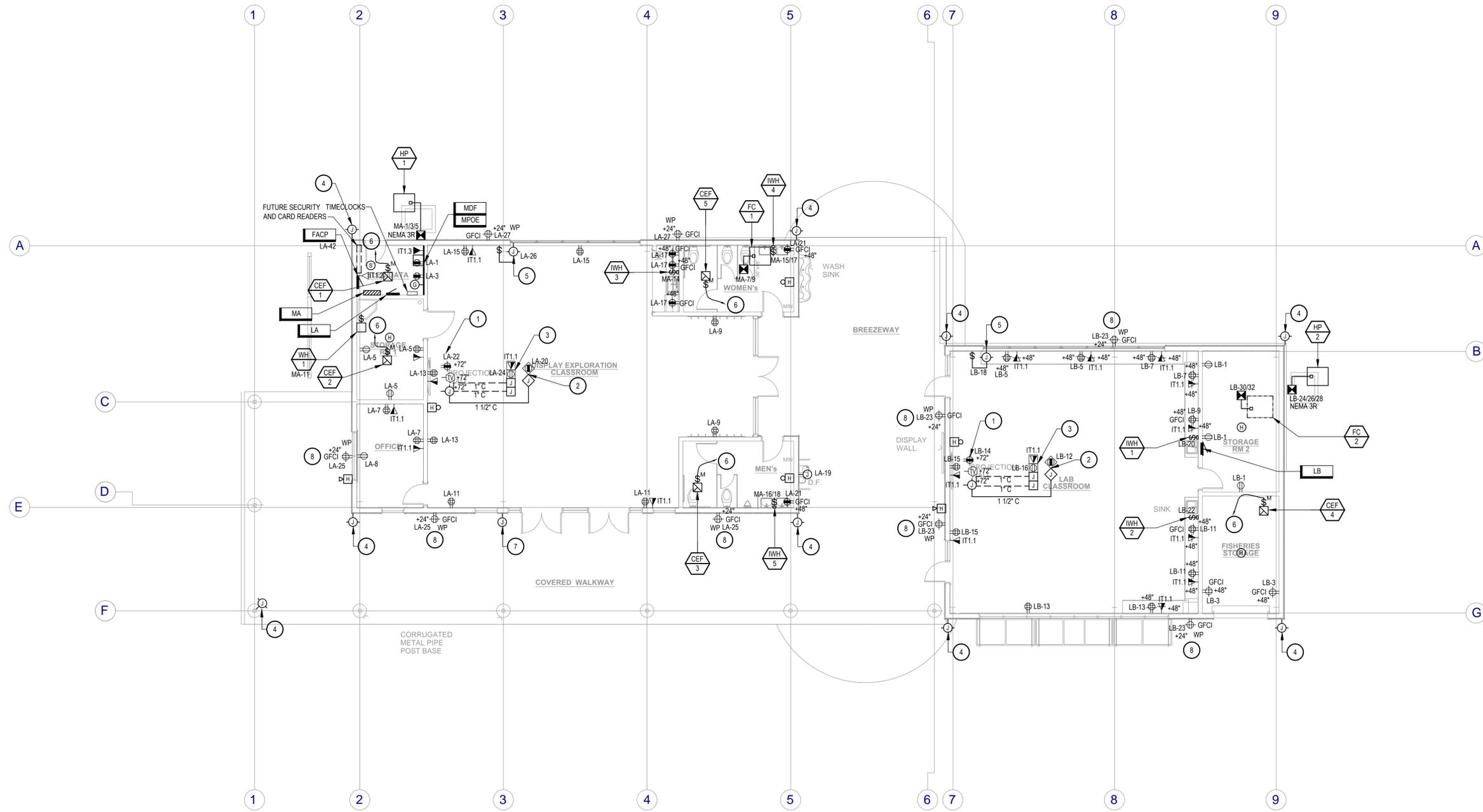
SCALE: 1/4" = 1'-0"

**KEYED NOTES**

1. LOCATE TV POWER OUTLET, TV OUTLET, DATA OUTLET AND JUNCTION BOX BEHIND MONITOR. COORDINATE WITH OWNER AND ARCHITECT EXACT LOCATION.
2. PROVIDE CEILING MOUNTED JUNCTION BOX AND RECEPTACLE FOR CONNECTION TO PROJECTOR.
3. PROVIDE FLOOR BOX FOR CONNECTION TO MONITOR, PROJECTOR, AND DESK CONTROLS. SEE DETAIL 6E7.1.
4. PROVIDE JUNCTION BOX MOUNTED AT 11FT (OR PER OWNERS REQUIREMENTS) AND (2) 3/4-INCH CONDUIT TO ELEC/DATA ROOM FOR FUTURE CCTV SYSTEM.
5. PROVIDE CIRCUIT AND SWITCH FOR MOTORIZED BLINDS. CONNECT COMPLETE.
6. CONNECT EXHAUST FANS THROUGH ROOM LIGHTING CONTROLS AND TO LIGHTING CIRCUIT. CONNECT COMPLETE.
7. PROVIDE JUNCTION BOX AND (2) 3/4-INCH CONDUIT TO ELEC/DATA ROOM FOR FUTURE CARD READER.
8. PROVIDE LOCKABLE COVERS ON EXTERIOR RECEPTACLES.

**SHEET NOTES**

- A. FOR ADDITIONAL INFORMATION PERTAINING TO THIS PROJECT, SEE ELECTRICAL PROJECT NOTES ON SHEET E02.
- B. ALL EXTERIOR MOUNTED DEVICES SHALL BE PROVIDED WITH WP OR NEMA 3R RATING.
- C. PROVIDE HUB TYPE FITTINGS ON EXTERIOR CONDUITS.
- D. ALL EMPTY BOXES SHALL BE PROVIDED WITH BLANK COVER PLATES.
- E. VERIFY COLOR OF ALL DEVICES AND COVER PLATES WITH THE OWNER'S REPRESENTATIVE PRIOR TO ORDERING.
- F. ALL EXTERIOR COVER PLATES SHALL BE STAINLESS STEEL.
- G. PROVIDE MECHANICAL EQUIPMENT MAINTENANCE RECEPTACLE WITHIN 25-FEET OF EQUIPMENT.
- H. ALL ELECTRICAL CONSTRUCTION SHALL BE COORDINATED AND MAINTAIN WALL AND CEILING RATING INDICATED ON THE ARCHITECTURAL DOCUMENTS.
- I. FOR PANEL SCHEDULES, SEE E6.1.
- M. FIRE ALARM SYSTEM SHALL BE A DEFERRED SUBMITTAL. CONTRACTOR SHALL SUPPLY FULL FIRE ALARM DRAWINGS AND CALCULATIONS TO THE AUTHORITY HAVING JURISDICTION.

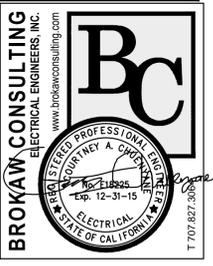


**ELECTRICAL PLAN**

SCALE: 1/8" = 1'-0"



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**WESTSIDE FACILITY**

SONOMA COUNTY WATER AGENCY

9703 Wohler Rd.  
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PRMD APPROVED  
FOR CONSTRUCTION  
JUNE 18, 2014

ARCH PROJECT NO: 1245.00  
DRAWN BY: CAC  
DRAWING SCALE:

CD  
April 07, 2014

**ELECTRICAL PLAN**

SHEET NUMBER

**E3.1**

P:\1245.00 - Sonoma County Water Agency West Side Ed. SCWA\Drawings\04-CD\Floor Plan - Scheme D.pjn:5/10/2013 9:45 AM



| LIGHTING FIXTURE SCHEDULE |   |              |                            |      |              |          |                     |                 |                       |
|---------------------------|---|--------------|----------------------------|------|--------------|----------|---------------------|-----------------|-----------------------|
| TAG                       | DESCRIPTION   | MANUFACTURER | MODEL NUMBER               | LAMP | LAMP WATTAGE | LAMP QTY | FIXTURE INPUT WATTS | MOUNTING        | NOTES                 |
| F13A-2                    | 3-FT FLUORESCENT UNDER CABINET FIXTURE                                  | HE WILLIAMS  | 1W0-3-2-21TSS-A12125-120   | T5   | 21           | 2        | 42                  | UNDER CABINET   |                       |
| F14A-2                    | 4-FT FLUORESCENT STRIP FIXTURE  | HE WILLIAMS  | 32-42-32-EM7A-EB2-120      | T8   | 32           | 2        | 62                  | PENDANT         |                       |
| F18A-2                    | 8-FT FULLY PERFORATED DIMMABLE FLUORESCENT PENDANT MOUNTED FIXTURE      | FINELITE     | S8-FP-8-2-SC-EP-120-FA-RE  | T8   | 32           | 4        | 124                 | PENDANT         | WITH DIMMABLE BALLAST |
| F18A-3                    | 8-FT FULLY PERFORATED DIMMABLE FLUORESCENT PENDANT MOUNTED FIXTURE      | FINELITE     | S8-FP-8-3-SC-EP-120-FA-RE  | T8   | 32           | 6        | 186                 | PENDANT         | WITH DIMMABLE BALLAST |
| F18B-2                    | 8-FT FLUORESCENT DRY/DAMP LOCATION LISTED FLUORESCENT FIXTURE           | HE WILLIAMS  | AV12-8-432-CPC-120         | T8   | 32           | 4        | 124                 | SURFACE/PENDANT |                       |
| F18C-1                    | 8-FT VANDAL RESISTANT FLUORESCENT SURFACE MOUNTED DAMP LOCATION FIXTURE | KENALL       | MLRSS-96-R-MB-PIA-1-32-120 | T8   | 32           | 2        | 62                  | SURFACE         |                       |
| F18D-2                    | 8-FT WALL MOUNTED FLUORESCENT FIXTURE                                   | FINELITE     | S10WM-A12-8-2-SC-EP-120    | T8   | 32           | 4        | 124                 | SURFACE         |                       |
| MHA                       | 16-FT POLE MOUNTED FIXTURE  | GARDCO       | G18-1-4XL-175PSMH          | MH   | 175          | 1        | 190                 | POLE            |                       |
| EXA                       | LED EXIT LIGHT  | HE WILLIAMS  | EXIT-G-EM-WHT              | LED  | 5            | 1        | 5                   | CEILING/WALL    |                       |

| PANEL SCHEDULE |            |              |     |                |          |          |         |          |         |                     |          |             |          |           |            |        |
|----------------|------------|--------------|-----|----------------|----------|----------|---------|----------|---------|---------------------|----------|-------------|----------|-----------|------------|--------|
| PANEL NAME: MA |            | VOLTAGE: 208 |     | NEMA RATING: 1 |          | NOTES:   |         | PHASE: 3 |         | AIC RATING: 18K AIC |          | LOCATION:   |          | PHASE: 3  |            |        |
| CKT NO         | PHASE WIRE | NEUT WIRE    | USE | DESCRIPTION    | BKR SIZE | BKR OPTS | BKR KVA | PHASE    | BKR KVA | BKR OPTS            | BKR SIZE | DESCRIPTION | USE      | NEUT WIRE | PHASE WIRE | CKT NO |
| 1              | 6          |              | H   |                |          |          | 4.20    | A        |         |                     |          | 60/3        | SPARE    |           |            | 2      |
| 3              | 6          |              | H   | HP-1           | 50/3     | HACR     | 4.20    | B        |         |                     |          |             |          |           |            | 4      |
| 5              | 6          |              | H   |                |          |          | 4.20    | C        |         |                     |          |             |          |           |            | 6      |
| 7              | 8          |              | H   |                |          |          | 3.60    | A        |         |                     |          | 40/2        | SPARE    |           |            | 8      |
| 9              | 8          |              | H   | AH-1           | 40/2     | HACR     | 3.60    | B        |         |                     |          |             |          |           |            | 10     |
| 11             | 10         | 10           | O   | IWH-1          | 30/1     |          | 2.50    | C        |         |                     |          | 40/1        | SPARE    |           |            | 12     |
| 13             |            |              | O   | SPARE          | 40/1     |          | 3.50    | A        | 3.50    |                     |          | 40/1        | IWH-3    | O         | 8          | 14     |
| 15             | 10         |              | O   |                |          |          | 1.75    | B        | 1.75    |                     |          | 20/2        | IWH-5    | O         | 10         | 16     |
| 17             | 10         |              | O   | IWH-4          | 20/2     |          | 1.75    | C        | 1.75    |                     |          |             |          | O         | 10         | 18     |
| 19             |            |              | P   |                |          |          | 5.26    | A        | 14.06   |                     |          |             |          | P         |            | 20     |
| 21             |            |              | P   | PANEL LA       | 225/3    |          | 3.90    | B        | 9.68    |                     |          |             | PANEL LB | P         |            | 22     |
| 23             |            |              | P   |                |          |          | 2.94    | C        | 11.72   |                     |          |             |          | P         |            | 24     |

LOADS:  
 PHASE A: 34.1 (KVA)  
 PHASE B: 24.9 (KVA)  
 PHASE C: 24.9 (KVA)  
 TOTAL: 83.9 (CONNECTED KVA)  
 232.9 (CONNECTED A)

USE LEGEND:  
 "H" HVAC  
 "L" LIGHTING  
 "M" MOTOR  
 "O" OTHER  
 "R" RECEPTACLE  
 "P" PANEL

LOAD TYPE:  
 HVAC  
 LIGHTING  
 MOTOR  
 OTHER  
 RECEPTACLE  
 PANEL

BREAKER OPTIONS:  
 GFCI - GROUND FAULT CIRCUIT INTERRUPTER  
 HACR - HEATING/AIR CONDITIONING RATED  
 LO - LOCK-ON DEVICE  
 PA - PADLOCK ATTACHMENT  
 ST - SHUNT TRIP

| NEC DEMAND LOAD SUMMARY               | CONN. KVA    | DEMAND FACTOR | DEMAND KVA |
|---------------------------------------|--------------|---------------|------------|
| TYPE "M": MOTOR LOADS (LARGEST MOTOR) |              | 125%          |            |
| TYPE "M": MOTOR LOADS (REMAINING)     |              | 100%          |            |
| TYPE "L": LIGHTING LOADS              |              | 125%          |            |
| TYPE "R": RECEPTACLES (FIRST 10KVA)   |              | 100%          |            |
| TYPE "R": RECEPTACLES (OVER 10KVA)    |              | 50%           |            |
| TYPE "H": HVAC LOADS                  | 19.80        | 100%          | 19.80      |
| TYPE "P": PANEL LOADS                 | 47.56        | 100%          | 47.56      |
| TYPE "O": OTHER LOADS                 | 13.00        | 100%          | 13.00      |
|                                       | DEMAND KVA:  |               | 80.36      |
|                                       | DEMAND AMPS: |               | 223.2      |

| PANEL SCHEDULE |            |              |     |                          |          |          |         |          |         |                 |          |             |                         |           |            |        |
|----------------|------------|--------------|-----|--------------------------|----------|----------|---------|----------|---------|-----------------|----------|-------------|-------------------------|-----------|------------|--------|
| PANEL NAME: LA |            | VOLTAGE: 208 |     | NEMA RATING: 1           |          | NOTES:   |         | PHASE: 3 |         | AIC RATING: 10K |          | LOCATION:   |                         | PHASE: 3  |            |        |
| CKT NO         | PHASE WIRE | NEUT WIRE    | USE | DESCRIPTION              | BKR SIZE | BKR OPTS | BKR KVA | PHASE    | BKR KVA | BKR OPTS        | BKR SIZE | DESCRIPTION | USE                     | NEUT WIRE | PHASE WIRE | CKT NO |
| 1              | 12         | 12           | R   | RECP - MDF               | 20/1     |          | 0.36    | A        | 1.00    |                 |          | 20/1        | LIGHTING - EXTERIOR     | L         | 10         | 2      |
| 3              | 12         | 12           | R   | RECP - MDF               | 20/1     |          | 0.36    | B        | 0.70    |                 |          | 20/1        | LIGHTING - CLASSROOM    | L         | 12         | 4      |
| 5              | 12         | 12           | R   | RECP - STORAGE           | 20/1     |          | 0.72    | C        |         |                 |          | 20/1        | SPARE                   |           |            | 6      |
| 7              | 12         | 12           | R   | RECP - OFFICE            | 20/1     |          | 0.90    | A        |         |                 |          | 20/1        | SPARE                   |           |            | 8      |
| 9              | 12         | 12           | R   | RECP - CLASSROOM         | 20/1     |          | 0.72    | B        | 0.50    |                 |          | 20/1        | LIGHTING - RESTROOMS    | L         | 12         | 10     |
| 11             | 12         | 12           | R   | RECP - CLASSROOM         | 20/1     |          | 0.72    | C        | 0.50    |                 |          | 20/1        | LIGHTING - STORAGE/OFFL | L         | 12         | 12     |
| 13             | 12         | 12           | R   | RECP - CLASSROOM         | 20/1     |          | 0.72    | A        | 0.20    |                 |          | 20/1        | LIGHTING - EXIT         |           |            | 14     |
| 15             | 12         | 12           | R   | RECP - CLASSROOM         | 20/1     |          | 0.72    | B        |         |                 |          | 20/1        | SPARE                   |           |            | 16     |
| 17             | 12         | 12           | R   | RECP - CLASSROOM         | 20/1     |          | 0.72    | C        |         |                 |          | 20/1        | SPARE                   |           |            | 18     |
| 19             | 12         | 12           | R   | RECP - DRINKING FOUNTAIN | 20/1     |          | 0.18    | A        | 0.18    |                 |          | 20/1        | RECP - PROJECTOR        | R         | 12         | 20     |
| 21             | 12         | 12           | R   | RECP - RESTROOM          | 20/1     |          | 0.36    | B        | 0.18    |                 |          | 20/1        | RECP - TV               | R         | 12         | 22     |
| 23             |            |              |     | SPARE                    | 20/1     |          | 0.18    | C        | 0.18    |                 |          | 20/1        | RECP - FLOORBOX         | R         | 12         | 24     |
| 25             | 12         | 12           | R   | RECP - EXTERIOR          | 20/1     |          | 0.72    | A        | 1.00    |                 |          | 20/1        | MOTORIZED BLINDS        | M         | 12         | 26     |
| 27             | 12         | 12           | R   | RECP - EXTERIOR          | 20/1     |          | 0.36    | B        |         |                 |          | 20/1        | SPARE                   |           |            | 28     |
| 29             |            |              |     | SPARE                    | 20/1     |          |         | C        |         |                 |          | 20/1        | SPARE                   |           |            | 30     |
| 31             |            |              |     | SPARE                    | 20/1     |          |         | A        |         |                 |          | 20/1        | SPARE                   |           |            | 32     |
| 33             |            |              |     | SPARE                    | 20/1     |          |         | B        |         |                 |          | 20/1        | SPARE                   |           |            | 34     |
| 35             |            |              |     | SPARE                    | 20/1     |          |         | C        |         |                 |          | 20/1        | SPARE                   |           |            | 36     |
| 37             |            |              |     | SPARE                    | 20/1     |          |         | A        |         |                 |          | 20/1        | SPARE                   |           |            | 38     |
| 39             |            |              |     | SPARE                    | 20/1     |          |         | B        |         |                 |          | 20/1        | SPARE                   |           |            | 40     |
| 41             |            |              |     | SPARE                    | 20/1     |          |         | C        | 0.10    | LO              |          | 20/1        | IFACP                   | O         | 12         | 42     |

LOADS:  
 PHASE A: 5.3 (KVA)  
 PHASE B: 3.9 (KVA)  
 PHASE C: 2.9 (KVA)  
 TOTAL: 12.1 (CONNECTED KVA)  
 33.6 (CONNECTED A)

USE LEGEND:  
 "L" LIGHTING  
 "M" MOTOR  
 "O" OTHER  
 "R" RECEPTACLE  
 "P" PANEL

LOAD TYPE:  
 HVAC  
 LIGHTING  
 MOTOR  
 OTHER  
 RECEPTACLE  
 PANEL

BREAKER OPTIONS:  
 GFCI - GROUND FAULT CIRCUIT INTERRUPTER  
 HACR - HEATING/AIR CONDITIONING RATED  
 LO - LOCK-ON DEVICE  
 PA - PADLOCK ATTACHMENT  
 ST - SHUNT TRIP

| NEC DEMAND LOAD SUMMARY               | CONN. KVA    | DEMAND FACTOR | DEMAND KVA |
|---------------------------------------|--------------|---------------|------------|
| TYPE "M": MOTOR LOADS (LARGEST MOTOR) |              | 125%          |            |
| TYPE "M": MOTOR LOADS (REMAINING)     |              | 100%          |            |
| TYPE "L": LIGHTING LOADS              | 2.70         | 125%          | 3.38       |
| TYPE "R": RECEPTACLES (FIRST 10KVA)   | 8.10         | 100%          | 8.10       |
| TYPE "R": RECEPTACLES (OVER 10KVA)    |              | 50%           |            |
| TYPE "H": HVAC LOADS                  |              | 100%          |            |
| TYPE "P": PANEL LOADS                 |              | 100%          |            |
| TYPE "O": OTHER LOADS                 | 0.10         | 100%          | 0.10       |
|                                       | DEMAND KVA:  |               | 12.83      |
|                                       | DEMAND AMPS: |               | 35.6       |

| INFORMATION TECHNOLOGY CIRCUIT SCHEDULE |            |            |     |          |            |               |             |
|---|------------|------------|-----|----------|------------|---------------|-------------|
| OUTLET                                  |            | RECEPTACLE |     | HOME RUN |            | REMARKS       |             |
| IDENT                                   | LOCATION   | TYPE       | QTY | CABLE    | METHOD     | DESTINATION   | TERMINATION |
| IT-1.1                                  |            | DATA       | 2   | CAT 6    | 1" CONDUIT | IDF-1         | DPP-1.1     |
|   |            | VOICE      | 1   | CAT 6    | 1" CONDUIT | MTTB          | VXC-1.1     |
|   |            | CATV       |     |          |            |               |             |
|   |            | BY VENDOR  |     |          |            |               |             |
| IT-1.2                                  |            | DATA       |     |          | 1" CONDUIT | MTTB          | VXC-1.1     |
|   |            | VOICE      | 1   | CAT 6    | 1" CONDUIT | MTTB          | VXC-1.1     |
|   |            | CATV       |     |          |            |               |             |
|   |            | BY VENDOR  |     |          |            |               |             |
| IT-1.3                                  |            | DATA       | 1   | CAT 6    | 1" CONDUIT | IDF-1         | DPP-1.1     |
|   |            | VOICE      |     |          |            |               |             |
|   |            | CATV       |     |          |            |               |             |
|   |            | BY VENDOR  |     |          |            |               |             |
| TV                                      | CLASSROOMS | DATA       |     |          | 1" CONDUIT | CATV SPLITTER |             |
|   |            | VOICE      |     |          |            |               |             |
|   |            | CATV       | 1   | RG6      | 1" CONDUIT | CATV SPLITTER |             |
|   |            | VIDEO      |     |          |            |               |             |

| PANEL SCHEDULE |            |              |     |                      |          |          |         |          |         |                 |          |             |                         |           |            |        |    |
|----------------|------------|--------------|-----|----------------------|----------|----------|---------|----------|---------|-----------------|----------|-------------|-------------------------|-----------|------------|--------|----|
| PANEL NAME: LB |            | VOLTAGE: 208 |     | NEMA RATING: 1       |          | NOTES:   |         | PHASE: 3 |         | AIC RATING: 10K |          | LOCATION:   |                         | PHASE: 3  |            |        |    |
| CKT NO         | PHASE WIRE | NEUT WIRE    | USE | DESCRIPTION          | BKR SIZE | BKR OPTS | BKR KVA | PHASE    | BKR KVA | BKR OPTS        | BKR SIZE | DESCRIPTION | USE                     | NEUT WIRE | PHASE WIRE | CKT NO |    |
| 1              |            |              | R   | RECP - STORAGE       | 20/1     |          | 0.54    | A        | 0.60    |                 |          | 20/1        | LIGHTING - CLASSROOM    | L         | 12         | 2      |    |
| 3              |            |              | R   | RECP - FISHERIE STOR | 20/1     |          | 0.36    | B        |         |                 |          | 20/1        | SPARE                   |           |            | 4      |    |
| 5              |            |              | R   | RECP - CLASSROOM     | 20/1     |          | 0.72    | C        | 0.40    |                 |          | 20/1        | LIGHTING - STORAGE/EXIT | L         | 12         | 6      |    |
| 7              |            |              | R   | RECP - CLASSROOM     | 20/1     |          | 0.72    | A        |         |                 |          | 20/1        | SPARE                   |           |            | 8      |    |
| 9              |            |              | R   | RECP - CLASSROOM     | 20/1     |          | 0.72    | B        |         |                 |          | 20/1        | SPARE                   |           |            | 10     |    |
| 11             |            |              | R   | RECP - CLASSROOM     | 20/1     |          | 0.72    | C        | 0.18    |                 |          | 20/1        | RECP - PROJECTOR        | R         | 12         | 12     |    |
| 13             |            |              | R   | RECP - CLASSROOM     | 20/1     |          | 0.72    | A        | 0.18    |                 |          | 20/1        | RECP - TV               | R         | 12         | 14     |    |
| 15             |            |              | R   | RECP - CLASSROOM     | 20/1     |          | 0.72    | B        | 0.18    |                 |          | 20/1        | RECP - FLOORBOX         | R         | 12         | 16     |    |
| 17             |            |              |     | SPARE                | 20/1     |          | 1.00    | C        |         |                 |          | 20/1        | MOTORIZED BLINDS        | M         | 12         | 18     |    |
| 19             |            |              |     | SPARE                | 20/1     |          | A       | 3.50     |         |                 |          | 40/1        | IWH-1                   | O         | 8          | 20     |    |
| 21             |            |              |     | SPARE                | 20/1     |          | B       | 3.50     |         |                 |          | 40/1        | IWH-2                   | O         | 8          | 22     |    |
| 23             |            |              | R   | R - EXTERIOR         | 20/1     |          | 0.90    | C        | 4.20    |                 |          |             |                         | H         | 6          | 24     |    |
| 25             |            |              |     | SPARE                | 20/1     |          | A       | 4.20     |         |                 |          | HACR        | 50/3                    |           | H          | 6      | 26 |
| 27             |            |              |     | SPARE                | 20/1     |          | B       | 4.20     |         |                 |          |             |                         | H         | 6          | 28     |    |
| 29             |            |              |     | SPARE                | 20/1     |          | C       | 3.60     |         |                 |          |             |                         | H         | 8          | 30     |    |
| 31             |            |              |     | SPARE                | 20/1     |          | A       | 3.60     |         |                 |          | HACR        | 40/2                    |           | H          | 8      | 32 |
| 33             |            |              |     | SPARE                | 20/1     |          | B       |          |         |                 |          | 20/1        | SPARE                   |           |            | 34     |    |
| 35             |            |              |     | SPARE                | 20/1     |          | C       |          |         |                 |          | 20/1        | SPARE                   |           |            | 36     |    |
| 37             |            |              |     | SPARE                | 20/1     |          | A       |          |         |                 |          | 20/1        | SPARE                   |           |            | 38     |    |
| 39             |            |              |     | SPARE                | 20/1     |          | B       |          |         |                 |          | 20/1        | SPARE                   |           |            | 40     |    |
| 41             |            |              |     | SPARE                | 20/1     |          | C       |          |         |                 |          | 20/1        | SPARE                   |           |            | 42     |    |

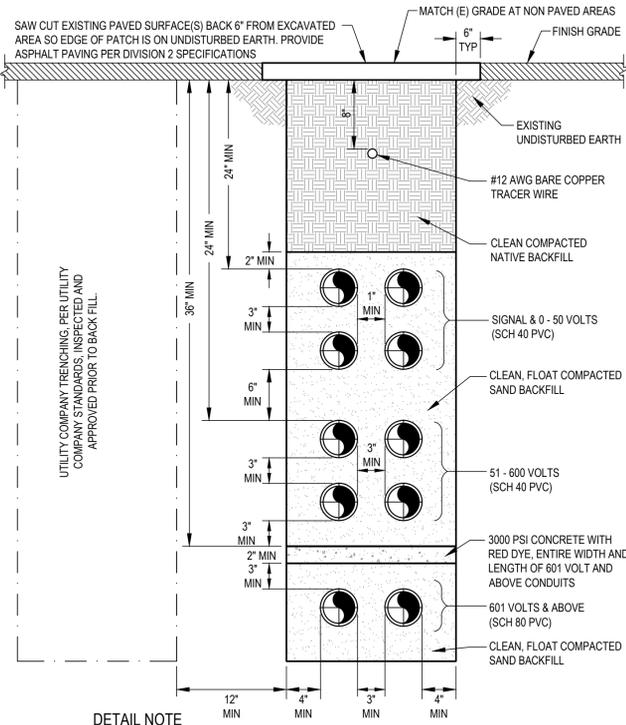
LOADS:  
 PHASE A: 14.1 (KVA)  
 PHASE B: 9.7 (KVA)  
 PHASE C: 11.7 (KVA)  
 TOTAL: 35.5 (CONNECTED KVA)  
 98.5 (CONNECTED A)

USE LEGEND:  
 "H" HVAC  
 "L" LIGHTING  
 "M" MOTOR  
 "O" OTHER  
 "R" RECEPTACLE  
 "P" PANEL

LOAD TYPE:  
 HVAC  
 LIGHTING  
 MOTOR  
 OTHER  
 RECEPTACLE  
 PANEL

BREAKER OPTIONS:  
 GFCI - GROUND FAULT CIRCUIT INTERRUPTER  
 HACR - HEATING/AIR CONDITIONING RATED  
 LO - LOCK-ON DEVICE  
 PA - PADLOCK ATTACHMENT  
 ST - SHUNT TRIP

| NEC DEMAND LOAD SUMMARY               | CONN. KVA   | DEMAND FACTOR | DEMAND KVA |
|---------------------------------------|-------------|---------------|------------|
| TYPE "M": MOTOR LOADS (LARGEST MOTOR) |             | 125%          |            |
| TYPE "M": MOTOR LOADS (REMAINING)     |             | 100%          |            |
| TYPE "L": LIGHTING LOADS              | 1.00        | 125%          | 1.25       |
| TYPE "R": RECEPTACLES (FIRST 10KVA)   | 6.66        | 100%          | 6.66       |
| TYPE "R": RECEPTACLES (OVER 10KVA)    |             | 50%           |            |
| TYPE "H": HVAC LOADS                  | 19.80       | 100%          | 19.80      |
| TYPE "P": PANEL LOADS                 |             | 100%          |            |
| TYPE "O": OTHER LOADS                 | 7.00        | 100%          | 7.00       |
|                                       | DEMAND KVA: |               | 35.96      |
|                                       |             |               |            |



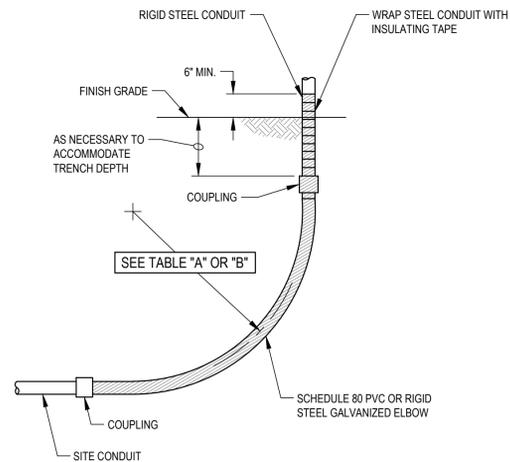
**DETAIL NOTE**

THE CONFIGURATION INDICATED IS DIAGRAMMATIC TO ILLUSTRATE THE REQUIRED MINIMUM SEPARATIONS FOR TRENCH UTILITIES. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED CONDUITS PURSUANT TO THE PLANS AND DIAGRAMS.

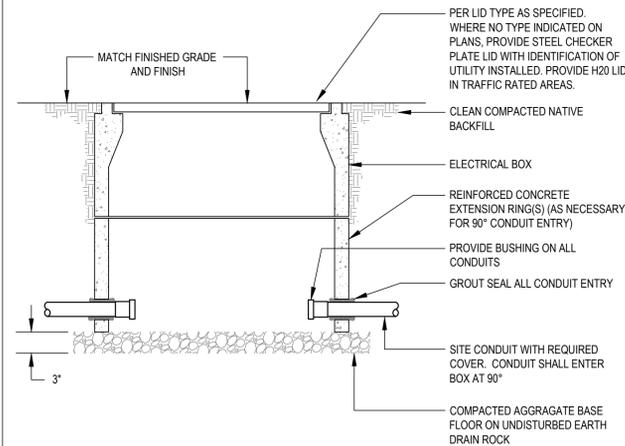
**1 TYPICAL TRENCH REQUIREMENTS**  
NOT TO SCALE

| CONDUIT SIZE | MINIMUM ELBOW RADIUS REQUIREMENTS |                            |
|--------------|-----------------------------------|----------------------------|
|              | RUNS 0-100 FEET                   | RUNS GREATER THAN 101 FEET |
| 1/2"         | 18"                               | 24"                        |
| 3/4"         | 18"                               | 24"                        |
| 1"           | 24"                               | 36"                        |
| 1 1/4"       | 24"                               | 36"                        |
| 1 1/2"       | 24"                               | 36"                        |
| 2"           | 24"                               | 36"                        |
| 2 1/2"       | 24"                               | 36"                        |
| 3"           | 36"                               | 48"                        |
| 4"           | 36"                               | 48"                        |
| 5"           | 36"                               | 48"                        |
| 6"           | 36"                               | 48"                        |

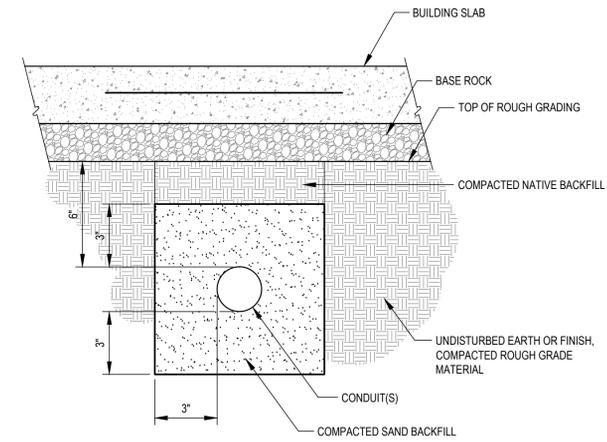
| CONDUIT SIZE | MINIMUM ELBOW RADIUS REQUIREMENTS |                            |
|--------------|-----------------------------------|----------------------------|
|              | RUNS 0-100 FEET                   | RUNS GREATER THAN 101 FEET |
| 1/2"         | 4"                                | 4"                         |
| 3/4"         | 4 1/2"                            | 4 1/2"                     |
| 1"           | 5 3/4"                            | 5 3/4"                     |
| 1 1/4"       | 7 1/4"                            | 7 1/4"                     |
| 1 1/2"       | 8 1/4"                            | 8 1/4"                     |
| 2"           | 9 1/2"                            | 9 1/2"                     |
| 2 1/2"       | 10 1/2"                           | 11 7/16"                   |
| 3"           | 13"                               | 13 3/4"                    |
| 4"           | 16"                               | 18 1/4"                    |
| 5"           | 24"                               | -                          |
| 6"           | 30"                               | -                          |



**2 CONDUIT SWEEP REQUIREMENTS**  
NOT TO SCALE



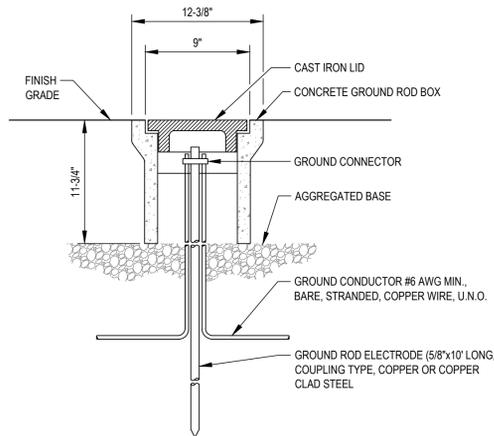
**3 IN GROUND PULLBOX**  
NOT TO SCALE



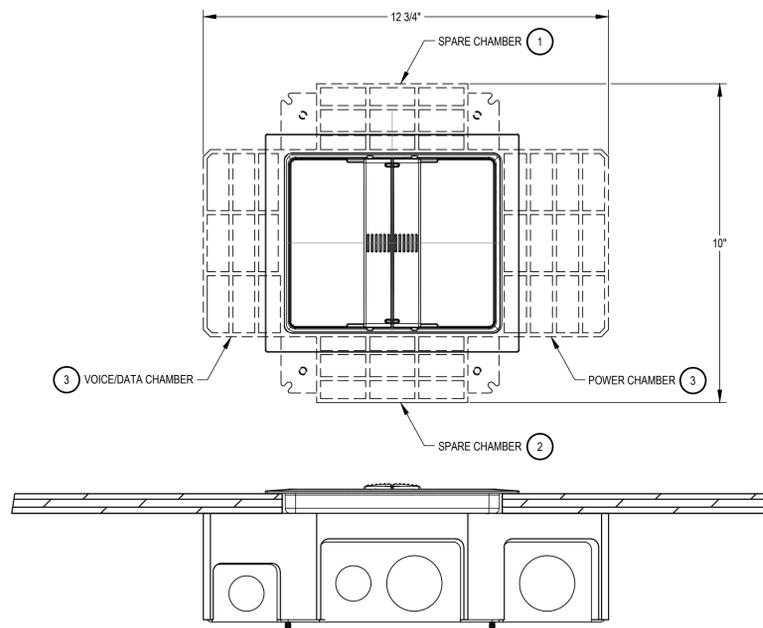
**DETAIL KEYED NOTES**

1. SHOWN FOR REFERENCE ONLY. SEE STRUCTURAL FOR EXACT REQUIREMENTS.
2. SEE DIVISION 16 FOR CONDUIT AND TRENCHING REQUIREMENTS.

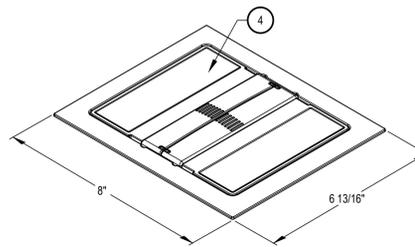
**4 UNDER SLAB CONDUIT**  
NOT TO SCALE



**5 GROUND WELL**  
NOT TO SCALE

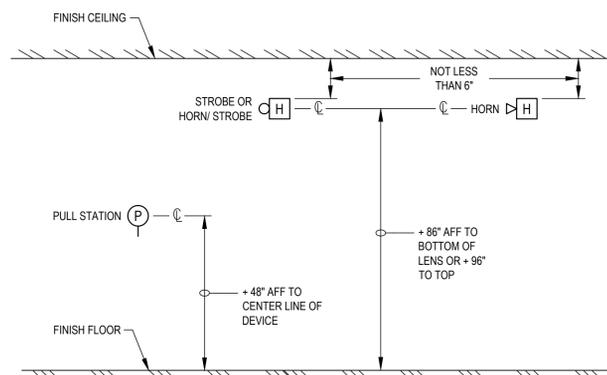


**6 FLOOR SERVICE BOX**  
NOT TO SCALE



**DETAIL KEYED NOTES**

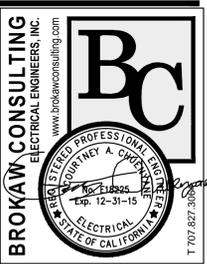
1. PROVIDE (1) 1" CO SPARE HOME RUN AND STUB-UP TO MONITOR WALL JUNCTION BOX.
2. PROVIDE (1) 1" CO SPARE HOME RUN AND STUB-UP TO MONITOR WALL JUNCTION BOX.
3. SEE PLANS FOR REQUIREMENTS.
4. PROVIDE COVER WITH INSERT AREA TO PROVIDE FINISH TO MATCH FLOOR MATERIAL.



**7 FIRE ALARM DEVICE MOUNTING**  
NOT TO SCALE



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**WESTSIDE FACILITY**

SONOMA COUNTY WATER AGENCY

9703 Wohler Rd.  
Forestville, CA

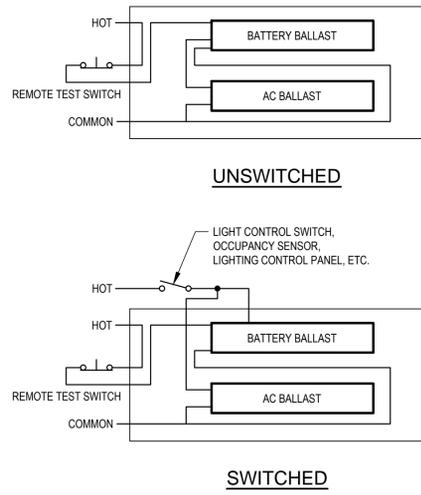
PRMD APPROVED FOR CONSTRUCTION  
JUNE 18, 2014

|                  |         |
|------------------|---------|
| ARCH PROJECT NO: | 1245.00 |
| DRAWN BY:        | CAC     |
| DRAWING SCALE:   | MVB-NTS |
| CD               |         |
| April 07, 2014   |         |
| SHEET TITLE      |         |

**ELECTRICAL DETAILS**

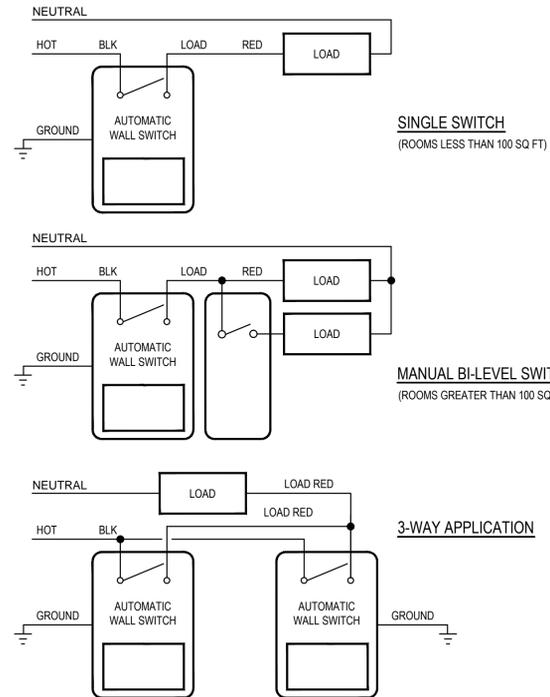
SHEET NUMBER

**E7.1**



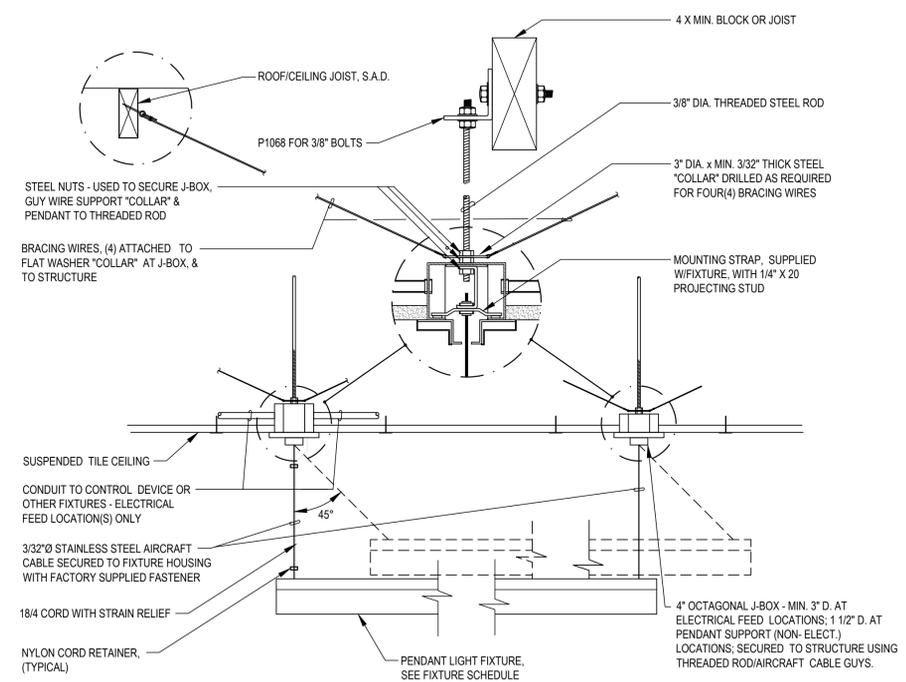
**DETAIL NOTES**  
 A. THE BATTERY BALLAST UNSWITCHED HOT CIRCUIT SHALL BE FED FROM THE SAME CIRCUIT THAT FEED THE LIGHT FIXTURE. THE HOT FEED SHALL BE CONNECTED AHEAD OF ALL SWITCHING INCLUDING ANY BUILDING MASTER OVERRIDES. CONNECTION SHALL MEET REQUIREMENTS OF NFPA 101, CHAPTER 7, 7.9.2.3.

**1 BATTERY BALLAST WIRING**  
 NOT TO SCALE



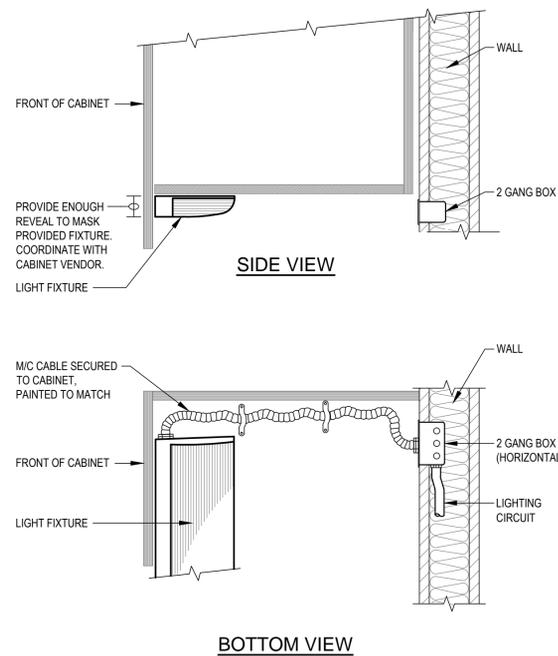
WHEN SWITCHES ARE WIRED IN A THREE-WAY WIRING CONFIGURATION THEY SHALL ONLY OPERATE AS THREE-WAY SWITCHES IF LEFT IN AUTOMATIC MODE. IF ONE SWITCH IS TURNED OFF, THE LIGHTS SHALL NOT COME AUTOMATICALLY ON UNTIL SWITCH IS TURN BACK TO THE AUTOMATIC POSITION.

**2 OCCUPANCY SENSOR DIAGRAM**  
 NOT TO SCALE

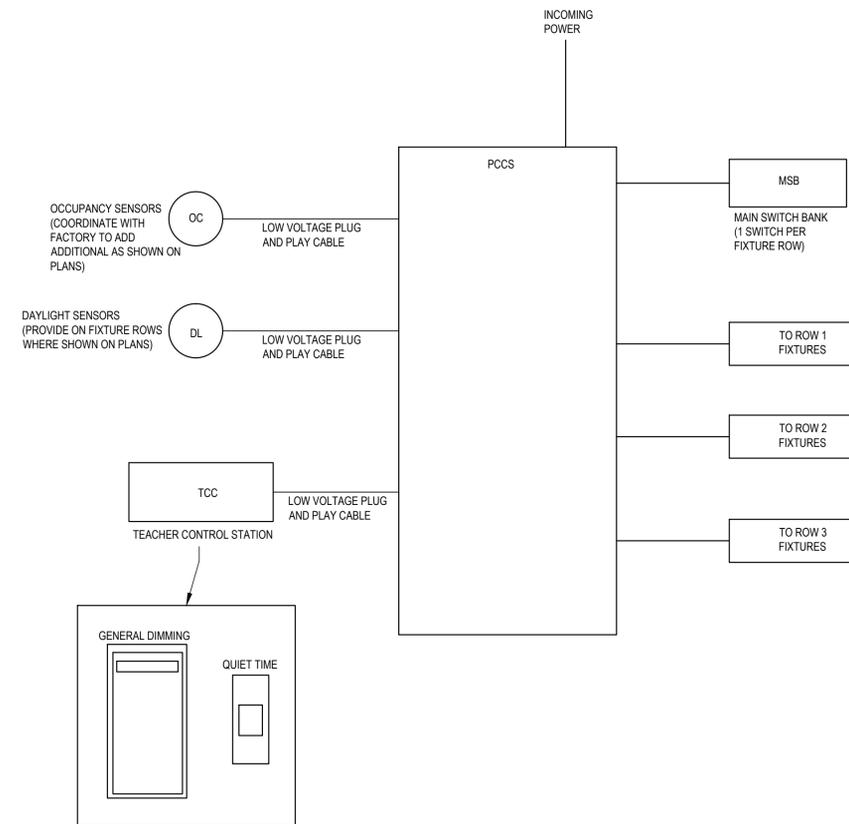


**DETAIL NOTES**  
 A. FIXTURE SHALL BE FREE TO SWING 45° FROM THE VERTICAL IN ALL DIRECTIONS WITHOUT HITTING ANY OBSTRUCTIONS.  
 B. FIXTURES SHALL BE HUNG MIN 2-FT OFF CEILING HOWEVER SHALL HANG NO LOWER THAN 8FT.

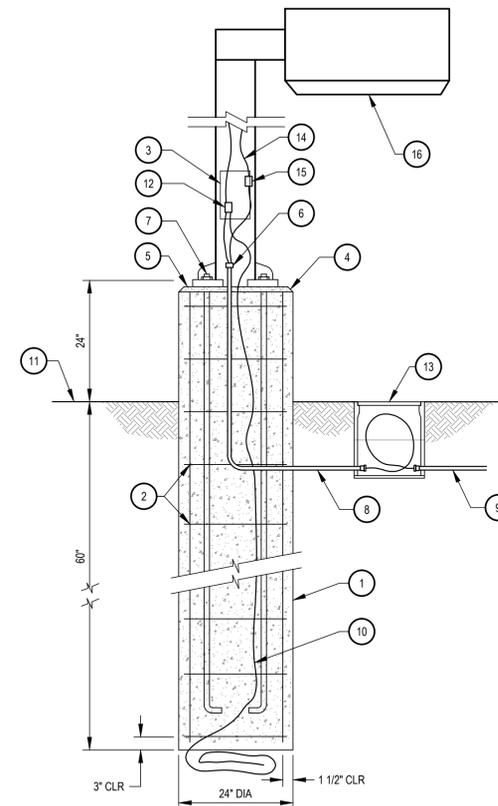
**3 PENDANT FIXTURE MOUNTING**  
 NOT TO SCALE



**4 UNDER CABINET FIXTURE**  
 NOT TO SCALE



**5 CLASSROOM LIGHTING CONTROLS**  
 NOT TO SCALE



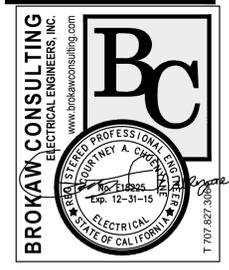
| TABLE "D"     |                            |
|---------------|----------------------------|
| POLE HEIGHT   | POLE BASE DEPTH (MIN)      |
| 0 FT - 10 FT  | 48-INCH                    |
| 10 FT - 25 FT | 60-INCH                    |
| 25 FT - 35 FT | 60-INCH                    |
| 35 FT +       | REQUIRES STRUCTURAL DESIGN |

- DETAIL KEYED NOTES**
- POURED IN PLACE ROUND CONCRETE SUPPORT BASE.
  - 1/2" REBAR AT 12" O.C.
  - ACCESS HAND-HOLE.
  - 3/4" - 45° CHAMFER ALL AROUND.
  - GROUT IN ALL AROUND BETWEEN BOTTOM OF POLE BASE FOLLOWING POLE ERECTION AND FINAL LEVELING.
  - STUB CONDUIT UP INTO POLE BASE WIRING CAVITY. (IF RGS TERMINATE WITH GROUNDING BUSHING).
  - PROVIDE SUPPORT AND LEVELING NUTS ON TOP AND BOTTOM OF POLE BASE MOUNTING PLATE. MOUNTING PLATE AND MOUNTING BOLTS SHALL BE PER MANUFACTURERS BOLT PATTERN, LENGTH SHALL BE PER MANUFACTURERS SPECIFICATIONS.
  - TYPICAL 1" PVC WITH CONDUCTORS AS INDICATED ON DRAWINGS.
  - TYPICAL INCOMING EXTERIOR BRANCH CIRCUIT CONDUIT AND WIRING FROM U.G. CONDUITS.
  - (1) #4 AWG BARE COPPER GROUND. COIL 30" AT BOTTOM OF FOUNDATION.
  - TOP OF SODDED GRADE, SIDEWALK OR ASPHALT PAVING AS INDICATED ON THE RESPECTIVE AREA SITE PLAN.
  - BOLTED TYPE WIRE GROUND CONNECTOR.
  - REINFORCED, PRECAST GRADE MOUNTED ELECTRICAL BOX. PROVIDE WITH OPEN BOTTOM. ALL SPLICES SHALL BE MADE IN THE PULL BOX AND SHALL BE CAST TYPE, WATERPROOF.
  - WIRING TO LIGHT FIXTURE. CONNECT COMPLETE.
  - WATERPROOF IN-LINE FUSES.
  - LIGHT FIXTURE: SEE SCHEDULE.

**6 LIGHT POLE FOUNDATION**  
 NOT TO SCALE

P:\1245.00 - Sonoma County Water Agency West Side Ed. SCWA\Drawings\04-CD\Floor Plan - Scheme D.pln\5/10/2013:9:45 AM

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**WESTSIDE FACILITY**

**SONOMA COUNTY WATER AGENCY**

9703 Wohler Rd.  
 Forestville, CA

**PRMD APPROVED FOR CONSTRUCTION**  
 JUNE 18, 2014

ARCH PROJECT NO: 1245.00  
 DRAWN BY: CAC  
 DRAWING SCALE: MVB-NTS  
 CD  
 April 07, 2014  
 SHEET TITLE

**ELECTRICAL DETAILS**

SHEET NUMBER

**E7.2**

**GENERAL NOTES:**

- THE PURPOSE OF THIS PROJECT IS TO CONSTRUCT A NEW WASTEWATER MANAGEMENT SYSTEM FOR THE DISPOSAL OF SANITARY WASTEWATER. SYSTEM INCLUDES ONE SW HOLDING TANK FOR USE WITH AN APPROVED HOLD AND HAUL PERMIT.
- CONTRACTOR SHALL FURNISH ALL NECESSARY LABOR, MATERIALS, SUPPLIES AND EQUIPMENT FOR CONSTRUCTION OF THE IMPROVEMENTS SHOWN ON THESE DRAWINGS AND AS DESCRIBED IN RELATED CONTRACT DOCUMENTS.
- PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL SECURE ALL REQUIRED CONSTRUCTION PERMITS FROM THE SONOMA COUNTY PERMIT AND RESOURCE MANAGEMENT DEPARTMENT (PRMD) AND OTHER AGENCIES AS NECESSARY. THE OWNER WILL PREPARE AND SUBMIT PERMIT APPLICATIONS AND PAY ALL PERMIT FEES.
- CONTRACTOR RECOMMENDED TO HAVE A CLASS A OR C-42 LICENSE WITH THE STATE OF CALIFORNIA AND EXPERIENCE INSTALLING THESE TYPES OF TANKS TO PERFORM THE WORK OUTLINED IN THESE PLANS.
- ALL CONSTRUCTION, WORKMANSHIP AND MATERIALS FOR THE IMPROVEMENTS SHOWN ON THESE PLANS SHALL CONFORM TO THE LATEST EDITION OF THE UNIFORM BUILDING CODE, UNIFORM PLUMBING CODE, APPLICABLE PRMD REGULATIONS, ORDINANCES, ZONING AND PLANNING LAWS, AND REGULATIONS OF APPLICABLE UTILITY COMPANIES.
- CONTRACTOR SHALL CONTACT THE OWNER AND THE ENGINEER TO ARRANGE FOR A PRE-CONSTRUCTION CONFERENCE FOR THE PURPOSE OF REVIEWING JOB REQUIREMENTS.
- PRMD SHALL BE NOTIFIED 24 HOURS PRIOR TO STARTING ANY WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE APPROPRIATE AGENCIES INFORMED OF THEIR SCHEDULE.
- CONTRACTOR SHALL PROVIDE 24 HOURS ADVANCE NOTICE TO THE ENGINEER FOR REQUESTED INSPECTIONS.
- CONTRACTOR SHALL NOTIFY PUBLIC OR PRIVATE UTILITY COMPANIES AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCEMENT OF NEW WORK ACTIVITIES ON THIS PROJECT TO VERIFY THE LOCATION OF EXISTING UTILITY LINES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THESE UTILITY COMPANIES INFORMED OF HIS SCHEDULE. CALL UNDERGROUND SERVICE ALERT (U.S.A.) TOLL FREE AT 1-800-227-2600, 7:00 AM TO 5:00 PM MONDAY THROUGH FRIDAY.
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THE PLANS ARE BASED ON THE BEST INFORMATION AVAILABLE. HOWEVER, THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES MAY NOT HAVE BEEN INDICATED ON THESE DRAWINGS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE INFORMATION SHOWN, OR THE INADVERTENT OMISSION OF ANY SUCH INFORMATION. CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION OF EXISTING UTILITIES. CONFLICTS AND/OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- EXISTING UTILITIES SHALL BE KEPT IN SERVICE AT ALL TIMES. UTILITIES THAT INTERFERE WITH THE WORK TO BE PERFORMED SHALL BE PROTECTED AS REQUIRED BY THE COUNTY OF SONOMA, THE LOCAL UTILITIES AND THE OWNER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING FACILITIES AND IMPROVEMENTS FROM DAMAGE RESULTING FROM CONTRACTOR'S WORK. ANY DAMAGE CAUSED BY CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- 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 PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND RAM ENGINEERING HARMLESS FROM LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THE PROJECT, EXCEPT FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR RAM ENGINEERING.
- SHOULD ANY CONTRACTOR OR SUBCONTRACTOR FIND ANY DEFICIENCIES, ERRORS, CONFLICTS OR OMISSIONS IN THESE DRAWINGS OR SPECIFICATIONS, OR SHOULD THERE BE ANY DOUBT AS TO THEIR MEANING OR INTENT, THE CONTRACTOR SHALL NOTIFY RAM ENGINEERING.
- THE DRAWINGS SHALL NOT BE SCALED. WRITTEN DIMENSIONS ALWAYS TAKE PRECEDENCE OVER SCALED DIMENSIONS. ALL WORK SHALL BE GOVERNED BY THE DIMENSIONS SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS SHOWN AND BRING DISCREPANCIES TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK.
- THESE DRAWINGS ARE INTENDED TO BE USED FOR CONSTRUCTION OF THE SITE IMPROVEMENTS SHOWN. IF THE CONTRACTOR SHOULD FIND DISCREPANCIES, CONTACT RAM ENGINEERING FOR WRITTEN CLARIFICATION. DETAILS OF CONSTRUCTION NOT INDICATED OR NOTED SHALL BE CONSIDERED OF THE SAME CHARACTER SHOWN FOR SIMILAR OF EXISTING CONSTRUCTION.
- THE SCREENED CONTOURS AND TOPOGRAPHIC INFORMATION ON THESE DRAWINGS REPRESENT THE APPROXIMATE SURFACE CONDITIONS TO BE FOUND AT THE PROJECT LOCATION AS OF 2013 AS FURNISHED BY BKF OF SANTA ROSA, CA.
- PROPERTY LINES SHOWN ON THESE DRAWINGS ARE APPROXIMATE AND FOR INFORMATIONAL PURPOSES ONLY. THIS DRAWING DOES NOT REPRESENT A BOUNDARY SURVEY.
- THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE OWNER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ACCESS TO THE SITE AND ADJOINING OPERATIONS OPEN TO THE OWNERS AT ALL TIMES.
- THE CONTRACTOR SHALL PURCHASE AND MAINTAIN SUCH INSURANCE AS WILL PROTECT AND HOLD HIMSELF, THE OWNER AND THE ENGINEER HARMLESS FROM CLAIMS WHICH MAY ARISE OUT OF OR RESULT FROM THE CONTRACTOR'S OPERATIONS UNDER THE CONTRACT, WHETHER SUCH OPERATIONS BE BY HIMSELF, BY ANY SUBCONTRACTOR OR BY ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY ANY OF THEM, OR BY ANYONE FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE.
- THE CONTRACTOR SHALL PROVIDE THE OWNER, AS A CONDITION OF COMPLETION AND RECEIPT OF FINAL PAYMENT, A WRITTEN GUARANTEE COVERING ALL MATERIALS AND WORKMANSHIP FURNISHED AND PERFORMED FOR THIS WORK AGAINST DEFECTS FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF FILING THE NOTICE OF COMPLETION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR A DAILY RECORD OF "AS BUILT" CONDITIONS WHICH DIFFER FROM THE ORIGINAL DRAWINGS. THE CONTRACTOR WILL BE PROVIDED WITH A SET OF REPRODUCIBLE DRAWINGS ON WHICH THE FINAL "AS BUILT" CONDITIONS SHALL BE RECORDED. THE "AS BUILT" DRAWING (SIGNED AND DATED) SHALL BE FURNISHED TO THE ENGINEER UPON COMPLETION OF THE WORK AND PRIOR TO FINAL PAYMENT. SUBSTITUTIONS FOR MATERIALS OR EQUIPMENT INDICATED ON THE CONTRACT DRAWINGS SHALL BE REVIEWED BY THE ENGINEER. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR WORK AFFECTED BY SUCH CHANGES ACCOMPLISHED WITHOUT HIS REVIEW.
- AS THE RESPONSIBILITY FOR THE ENGINEERING DESIGN WORK DEPICTED ON THESE DRAWINGS RESTS WITH THE FIRM OF RAM ENGINEERING, NO CHANGES ARE TO BE MADE TO THE WORK DURING OR PRIOR TO CONSTRUCTION WITHOUT THE EXPRESSED WRITTEN PERMISSION OR ACKNOWLEDGEMENT OF RAM ENGINEERING.

**INSPECTION SCHEDULES + NOTES:**

- THE ENGINEER SHALL VERIFY (WITH THE CONTRACTOR) THE PROPER STAKING OF THE TANK PRIOR TO ANY CONSTRUCTION.
- ALL MEETINGS AND INSPECTIONS SHALL BE SCHEDULED WITH THE ENGINEER & PRMD A MINIMUM OF 48 HOURS IN ADVANCE. THESE SHALL INCLUDE AS A MINIMUM:
  - (A) PRE-CONSTRUCTION CONFERENCE.
  - (B) INTERIM INSPECTION, PERFORMED PRIOR TO COVERING ANY ELEMENTS OF THE TANK. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE PRMD SANITARIAN A MINIMUM OF 24 HOURS IN ADVANCE, AND NO LATER THAN 9:00 AM OF THE PRIOR WORKING DAY.
  - (C) FINAL INSPECTION OF COMPLETED INSTALLATION AND ALL RELATED ITEMS PER THE CONSTRUCTION DOCUMENTS. NOTE: ELECTRICAL INSPECTION # 189 FOR THE CONTROL PANEL MUST BE COMPLETED BY THE BUILDING DEPARTMENT AND TELEPHONE LINE FOR TELEMETRY MUST BE INSTALLED PRIOR TO FINAL SIGN-OFF.



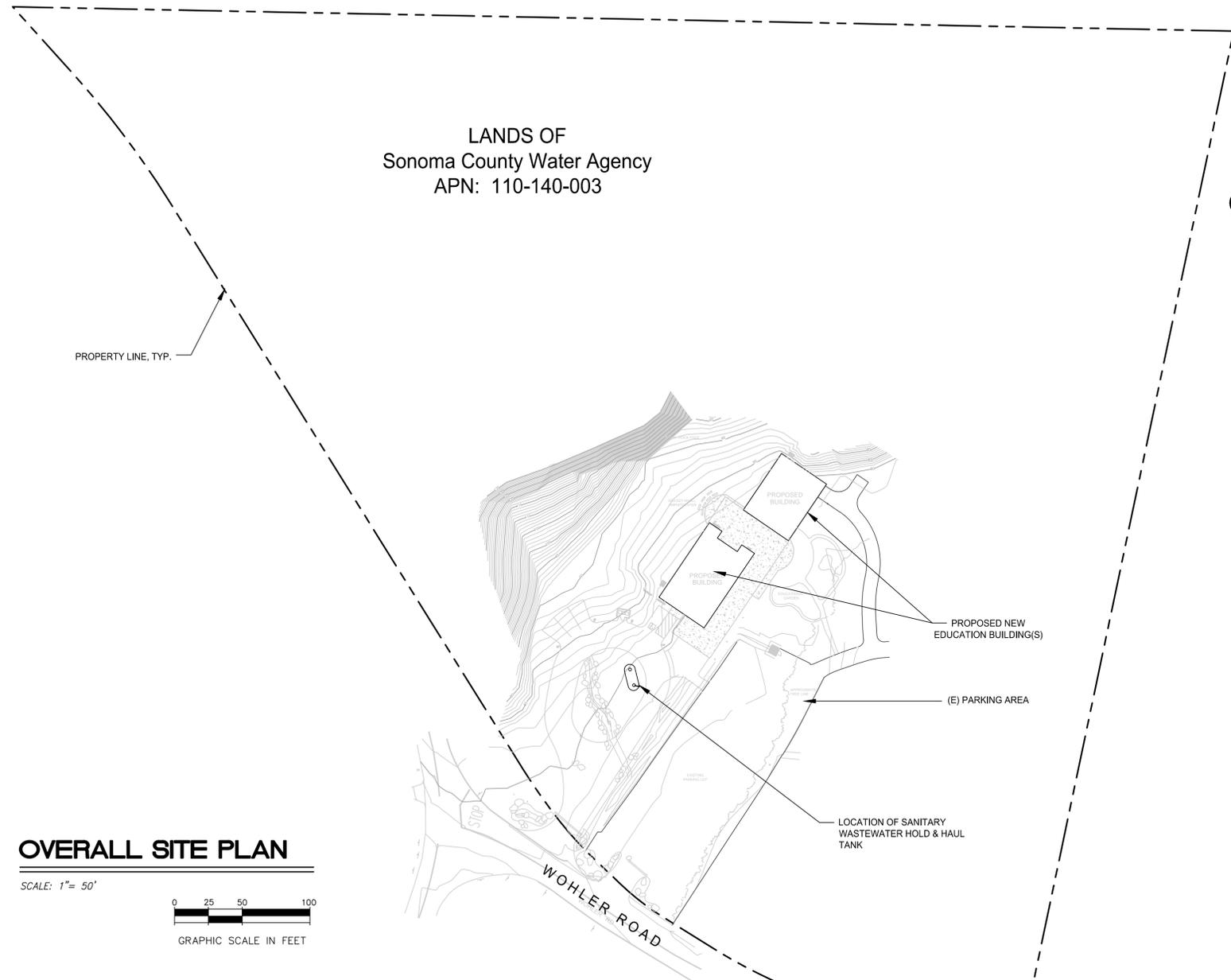
**VICINITY MAP**

NO SCALE

**SANITARY WASTEWATER SYSTEM HOLD AND HAUL FOR SWCA Wohler Bridge Education Center 9765 Wohler Road Forestville, CA AP 110-140-003**

**SHEET INDEX**

- SW1 GENERAL INFORMATION AND OVERALL SITE PLAN
- SW2 HOLD & HAUL TANK PLAN



**OVERALL SITE PLAN**

SCALE: 1" = 50'



| REVISIONS |             |
|-----------|-------------|
| DATE      | DESCRIPTION |
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**RAM**  
 RAM Engineering  
 130 South Main Street, Suite 201  
 Sebastopol, CA 95472  
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**HOLD & HAUL**  
 GENERAL INFORMATION  
 AND OVERALL SITE PLAN

**SCWA - Wohler Bridge Education Center**  
 9765 Wohler Road  
 Forestville, CA  
 AP 110-140-003



JOB RAM 2012-002  
 DATE March 3, 2014  
 DRAWN cM CHKD TM  
 FILE NO. 12-002 HH

SHEET  
**SW1**  
 OF 2

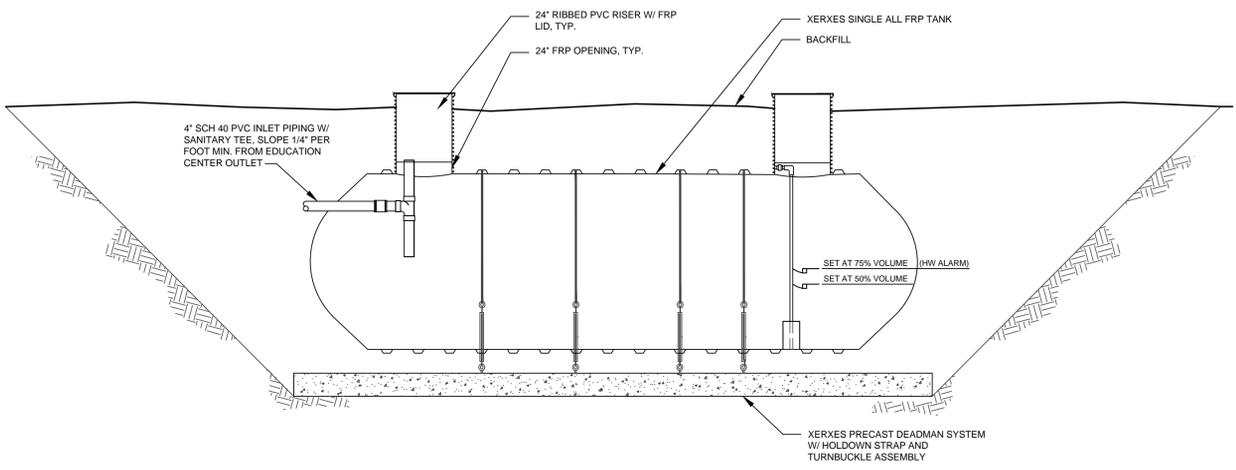


**MATERIALS SPECIFICATIONS**

1. GRAVITY PIPE SHALL BE POLYVINYL CHLORIDE (PVC) SEWER PIPE, 4" THROUGH 15" PVC SEWER PIPE, COUPLINGS, RUBBER GASKETS AND FITTINGS SHALL CONFORM TO ASTM D-3034, SDR 35.
2. THE 3000 GALLON SANITARY WASTEWATER SEPTIC TANK SHALL BE A SINGLE COMPARTMENT, IAPMO LISTED, FIBERGLASS SEPTIC TANK BY XERXES OR EQUAL.
3. FIBERGLASS SEPTIC/SETTLING TANK SHALL MEET THE FOLLOWING REQUIREMENTS:
  - A. SHALL BE IAPMO APPROVED.
  - B. SHALL HAVE A LINER IF CAUSTIC CLEANERS WILL BE USED.
  - C. OPENINGS SHALL BE PROVIDED ON THE TANK AS INDICATED ON THE DRAWINGS.
  - D. TANK, RISERS, MANHOLES & LIDS SHALL BE RATED FOR H-20 LOADING.
  - E. ALL PORTIONS OF TANK, RISERS, LIDS, ETC. SHALL BE WATER TIGHT.
4. TANK SHALL HAVE A MIN. 3' COVER AND A MAX. 6' COVER.
5. HIGH WATER ALARM FLOAT SWITCH SHALL BE A WIDE ANGLE SWITCH BY SJ ELECTRO SYSTEMS OR EQUIVALENT WITH SUFFICIENT UNINTERRUPTED CABLE LENGTH. FLOATS TO BE SET AT 50% AND 75% OF VOLUME OF TANK.
6. HIGH WATER ALARM CONTROL PANEL SHALL BE WEATHERPROOF, HAVE TELEMETRY CAPABILITIES, HAVE A LIGHT, BELL, AND CONTACT FOR REMOTE ALARM, IF NEEDED. IT SHALL PROVIDE ALARM SILENCE AND RESET BUTTONS.

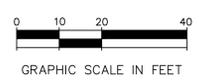
**HOLD AND HAUL OPERATIONS**

1. ALL HOLDING TANKS SHALL BE OPERATED UNDER A VALID OPERATING PERMIT ISSUED BY SONOMA COUNTY PERMIT AND RESOURCE MANAGEMENT DEPT. (PRMD).
2. PUMPING RECORDS SHALL BE KEPT FOR A MINIMUM PERIOD OF 5 YEARS AND SHALL BE AVAILABLE FOR INSPECTION BY THE ADMINISTRATIVE AUTHORITY.



**3000 GAL FIBERGLASS HOLDING TANK**

SCALE: NONE



**SANITARY WASTEWATER HOLD AND HAUL TANK PLAN**

SCALE: 1" = 20'-0"

| REVISIONS |             |
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|           |             |
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**HOLD & HAUL**  
**WASTEWATER SYSTEM**  
**PLAN**

**SCWA - Wohler Bridge**  
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**SW2**  
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