CITY OF NEWPORT BEACH
COMMUNITY DEVELOPMENT DEPARTMENT
PLANNING DIVISION ACTION REPORT

TO: CITY COUNCIL, CITY MANAGER AND PLANNING COMMISSION

FROM: Kimberly Brandt, Community Development Director
Brenda Wisneski, Deputy Community Development Director

SUBJECT: Report of actions taken by the Zoning Administrator, and/or Planning Division staff for the week ending June 26, 2015

ZONING ADMINISTRATOR ACTIONS
JUNE 25, 2015

Item 1: Jack's Surfboards/Jack's Girls Outdoor Sales Limited Term Permit No. XP2015-044 (PA2015-077)
2727 Newport Boulevard

Action**:** Approved by Resolution No. ZA2015-036 Council District 1

COMMUNITY DEVELOPMENT DIRECTOR
OR PLANNING DIVISION STAFF ACTIONS
(Non-Hearing Items)

Item 1: Sage Hill School Staff Approval No. SA2015-006 (PA2015-072)
20402 Newport Coast Drive

Action**:** Approved Council District 1
This approval supersedes action taken on June 19, 2015

APPEAL PERIOD: An appeal may be filed with the Director of Community Development or City Clerk, as applicable, within fourteen (14) days following the date the action or decision was rendered unless a different period of time is specified by the Municipal Code (e.g., Title 19 allows ten (10) day appeal period for tentative parcel and tract maps, lot line adjustments, or lot mergers). For additional information on filing an appeal, contact the Planning Division at 949 644-3200.

RESOLUTION NO. ZA2015-036

A RESOLUTION OF THE ZONING ADMINISTRATOR OF THE CITY OF NEWPORT BEACH APPROVING LIMITED TERM PERMIT NO. XP2015-044 FOR OUTDOOR SALES FOR JACK'S SURFBOARDS/JACK'S GIRLS LOCATED AT 2727 NEWPORT BOULEVARD (PA2015-077).

THE ZONING ADMINISTRATOR OF THE CITY OF NEWPORT BEACH HEREBY FINDS AS FOLLOWS:

SECTION 1. STATEMENT OF FACTS.

1. An application was filed by Jack's Surfboards, with respect to property located at 2727 Newport Boulevard, and legally described as Lake Tract, Lot 4 Block 127, and Lots 5 to 14 including portion of Lots 2/3 lying northerly of 26th Street, and all -except street- Lots 15 to 19, including all in Block 127, Tract 418, requesting approval of a Limited Term Permit for more than 90 days.

2. The applicant proposes a Limited Term Permit for a period of 12 months to allow outdoor sales of store merchandise within three (3) parking spaces of the on-site parking lot in front of the Jack's Surfboards/Jack's Girls location. The outdoor sales may take place on various dates, up to nine (9) times throughout a 12-month period beginning with the date of the first sale in August 2015. Each sale may last up to four (4) consecutive days.

3. The subject property is located within the Commercial Visitor-Serving (CV) Zoning District and the General Plan Land Use Element category is Visitor-Serving Commercial (CV).

4. The subject property is located within the coastal zone. The Coastal Land Use Plan Category is Visitor-Serving Commercial (CV-A 0.00- 0.75 FAR).

5. A public hearing was held on June 25, 2015 in the Corona del Mar Conference Room (Bay E-1st Floor) at 100 Civic Center Drive, Newport Beach. A notice of time, place and purpose of the meeting was given in accordance with the Newport Beach Municipal Code. Evidence, both written and oral, was presented to, and considered by, the Zoning Administrator at this meeting.

SECTION 2. CALIFORNIA ENVIRONMENTAL QUALITY ACT DETERMINATION.

1. This has been determined to be categorically exempt under the requirements of the California Environmental Quality Act under Class Section 15304, of the California Environmental Quality Act (CEQA) Guidelines - Class 4 (Minor Alterations to Land), which exempts minor temporary uses of land having negligible or no permanent effects on the environment.

2. This project qualifies for this exemption because there will be no permanent improvements to the site. The two (2) canvas canopies and temporary significant (water-filled or similar) barricades permitted to delineate the temporary sales area within three

(3) parking spaces of the on-site parking lot during the sales are conditioned to be removed at the end of each sale.

SECTION 3. REQUIRED FINDINGS.

In accordance with Section 20.52.040.G (Findings and Decision) of the Newport Beach Municipal Code, the following findings and facts in support of the findings for a Limited Term Permit are set forth:

Finding:

A. The operation of the requested limited duration use at the location proposed and within the time period specified would not be detrimental to the harmonious and orderly growth of the City, or endanger, jeopardize, or otherwise constitute a hazard to the public convenience, health, interest, safety, or general welfare of persons residing or working in the neighborhood of the requested limited duration.

Facts in Support of Finding:

1. The limited term permit will allow outdoor sales, which will be limited to nine (9) times throughout a 12-month period beginning with the date of the first sale in August 2015. Each sale may last up to four (4) consecutive days.

2. Outdoor sales will be limited to the sale of typical store merchandise and will be conducted in conjunction with the normal hours of operation of Jack's Surfboards/Jack's Girls, typically from 8:00 a.m. to 9:00 p.m.

3. Set-up for each sale day will occur prior to opening of the store, and all unsold merchandise will be removed from the outdoor sales area at the end of each sale day.

4. The outdoor sales area will be limited to a maximum of three (3) parking spaces located adjacent to the Jack's Surfboards/Jack's Girls storefront. Portable canopies (approximately 10 feet by 10 feet) may be erected within the three (3) parking spaces. As conditioned, no ADA parking spaces will be utilized as part of the outdoor sales area.

5. In order to enhance patron safety from vehicular traffic, the applicant has provided and the City Traffic Engineer has approved, a plan illustrating the placement of significant barricades around the perimeter of the outdoor sales area to delineate it from the adjacent parking spaces and drive aisles.

6. Similar outdoor sales for Jack's Surfboards, as conditioned and in the same location within the adjacent parking area, have been conducted in the past with approval of the City and have not been proven detrimental.

Finding:

B. The subject lot is adequate in size and shape to accommodate the limited duration use without material detriment to the use and enjoyment of other properties located adjacent to and in the vicinity of the lot.

Facts in Support of Finding:

1. The subject site is a commercial property, which is .94 acres in size and developed with two (2) detached buildings occupied by various retail and service uses. Jack's Surfboards/Jack's Girls are retail sales stores which occupy most of the square footage of the larger of the two (2) detached buildings, which is located within the southerly portion of the site.

2. Outdoor sales will be conducted within three (3) parking spaces located directly in front of Jack's Surfboards/Jack's Girls storefront. Based upon the site plan, the use of the three (3) parking spaces will not impede traffic circulation on the site, nor will it negatively impact required parking for other uses on the site. As conditioned, no ADA parking spaces will be utilized as part of the outdoor sales area.

3. The subject site is bounded by Newport Boulevard to the east, Balboa Boulevard to the west, 28th Street to the north, and 26th Street to the south. The adjacent rights-of-way (Newport Boulevard and Balboa Boulevard) serve as buffers between the nearby residential properties within the R-2 (Two-Unit Residential) Zoning District.

Finding:

C. The subject lot is adequately served by streets or highways having sufficient width and improvements to accommodate the kind and quantity of traffic that the limited duration use would or could reasonably be expected to generate.

Facts in Support of Finding:

1. The subject site has two (2) direct driveway approaches, one (1) from Newport Boulevard on the easterly side of the site and one (1) from Balboa Boulevard on the westerly side. The location of the outdoor sales area will not impede access to the site, and no traffic issues resulting from the outdoor sales are anticipated.

Finding:

D. Adequate temporary parking to accommodate vehicular traffic to be generated by the limited duration use would be available either on-site or at alternate locations acceptable to the Zoning Administrator.

Facts in Support of Finding:

1. As conditioned, a maximum of three (3) parking spaces (eighty-six (86) parking spaces on site) will be utilized for the outdoor sales area, and no ADA parking spaces will be utilized as part of the outdoor sales area.

2. It is anticipated that, in addition to customers whose destination would be Jack's Surfboards/Jack's Girls, the outdoor sales could attract both pedestrian and vehicular customers of other uses on the site as well as in the surrounding area.

3. Per City Code Enforcement records, previous outdoor sales conducted with approval of a use permit by the City and conditioned similarly to this permit have not negatively impacted the parking for neighboring uses on the subject site.

Finding:

E. The limited duration use is consistent with all applicable provisions of the General Plan, any applicable specific plan, Municipal Code, and other City regulations.

Facts in Support of Finding:

1. The General Plan Land Use Element category for the site is CV (Commercial Visitor-Serving). The CV designation is intended to provide for accommodations, goods, and services intended to primarily serve visitors to the City. The proposed use is accessory to the existing retail use, will be utilized for a limited duration on-site, and will not impede use of the site consistent with the CV designation.

2. The site is located in the CV (Commercial Visitor-Serving) Zoning District. The CV zoning designation is intended to provide for areas appropriate for accommodations, goods, and services intended to serve primarily visitors to the City. The proposed use is accessory to the existing retail use, will be utilized for a limited duration on-site, and will not impede use of the site consistent with the CV designation. The CV zoning district allows temporary uses as specified within the Zoning Code and the proposed limited duration use is consistent with this designation.

3. The site is not located within a specific plan area.

SECTION 4. DECISION.

NOW, THEREFORE, BE IT RESOLVED:

1. The Zoning Administrator of the City of Newport Beach hereby approves Limited Term Permit No. XP2015-044, subject to the conditions set forth in "Exhibit A," which is attached hereto and incorporated by reference.

PASSED, APPROVED, AND ADOPTED THIS 25TH DAY OF JUNE, 2015.

Brenda Wisneski, AICP, Deputy Director

EXHIBIT "A"

CONDITIONS OF APPROVAL

PLANNING

1. The development shall be in substantial conformance with the approved site plan except as noted in the following conditions.

2. Anything not specifically approved by this limited term permit is prohibited and must be addressed by a separate and subsequent review.

3. The outdoor sales shall be limited to nine (9) times throughout a 12-month period beginning with the date of the first sale requested in August 2013. Each sale may last up to four (4) consecutive days, provided the number of sale days does not exceed thirty (30) within the 12-month period. The dates requested by the applicant and approved with this permit are as follows: 2015 - August 7, 8, 9; August 14, 15, 16; September 4, 5, 6, 7; November 27, 28, 29; December 23, 24, 26, 27; 2016 – January 1, 2, 3; March 25, 26, 27; June 17, 18, 19; July 1, 2, 3, 4. Any changes to the dates specified shall require that the City be notified in advance.

4. To request a change to the sale dates approved with this Limited Term Permit, the applicant shall submit a letter to the Community Development Director requesting the change at least one (1) week prior to the new date.

5. This Limited Term Permit shall expire twelve (12) months from the date of the first sale requested in August 2015, unless an extension of up to one (1) additional period of 12 months is granted by the Zoning Administrator in compliance with Section 20.54.060 (Time Limits and Extensions) of the Zoning Code. A letter requesting the extension shall be submitted to the Planning Division no later than thirty (30) days prior to the expiration date of this permit.

6. The Limited Term Permit shall be limited to outdoor sales of merchandise associated with Jack's Surfboards/Jack's Girls only and does not permit outdoor sales as an independent use. The sale of snacks, food and beverages shall be prohibited.

7. Outdoor sales shall take place in conjunction with the normal hours of operation of Jack's Surfboards/Jack's Girls, typically from 8:00 a.m. to 9:00 p.m. Set-up for the sale shall occur before the store opens. All areas shall be kept clean throughout the day. Any unsold merchandise and any related items shall be removed from the outdoor sales area at the end of each day by 10 p.m. The significant (water-filled or similar) barricades may remain until the end of the last date of each sale.

8. The outdoor sales area shall occupy no more than three (3) parking spaces located directly in front of the Jack's Surfboards storefront as shown on the approved plot plan (approximately 20 feet by 10 feet for a total of 200 square feet) and shall not extend into

the public right-of-way. No ADA parking spaces shall be utilized as part of the outdoor sales area.

9. The outdoor sales area shall be separated from the adjacent building by a minimum of 20 feet.

10. No activities related to the outdoor sales are permitted on public property including any portion of a public street or public sidewalk.

11. The outdoor sales shall not create a pedestrian or traffic hazard. The sales area shall be surrounded by significant barricades (i.e. water-filled barricades or other barricades approved by the Planning Division and Public Works Department) to delineate the sales area and provide patron safety from adjacent vehicular traffic.

12. Any change to the approved plot plan/site plan delineating the location of the outdoor sales area, barricade locations, and barricade type shall be reviewed and approved by the Planning Division and City Traffic Engineer prior to the sale date and shall be submitted to the Planning Division to be included in the project file.

13. The sales area shall be signed to clearly identify that the area is closed for vehicular parking.

14. No posting of promotional signs is permitted on any portion of public property, including trees, utility poles, street signs, etc. All signage located on-site shall comply with Chapter 20.42 (Sign Standards) of the Zoning Code.

15. No amplified sound is permitted.

16. No smoking or open flames are permitted inside the canopies.

17. The sales area and vicinity will be kept clean at all times.

18. To the fullest extent permitted by law, applicant shall indemnify, defend and hold harmless City, its City Council, its boards and commissions, officials, officers, employees, and agents from and against any and all claims, demands, obligations, damages, actions, causes of action, suits, losses, judgments, fines, penalties, liabilities, costs and expenses (including without limitation, attorney's fees, disbursements and court costs) of every kind and nature whatsoever which may arise from or in any manner relate (directly or indirectly) to City's approval of the Jack's Surfboards/Jack's Girls Outdoor Sales including, but not limited to, XP2015-044 (PA2015-077). This indemnification shall include, but not be limited to, damages awarded against the City, if any, costs of suit, attorneys' fees, and other expenses incurred in connection with such claim, action, causes of action, suit or proceeding whether incurred by applicant, City, and/or the parties initiating or bringing such proceeding. The applicant shall indemnify the City for all of City's costs, attorneys' fees, and damages which City incurs in enforcing the indemnification provisions set forth in this condition. The applicant shall pay to the City

upon demand any amount owed to the City pursuant to the indemnification requirements prescribed in this condition.

FIRE

19. Tents and canopies having an aggregate area in excess of 400 square feet will not require a permit if the following is provided: a. fabric tent is open on all sides, b. individual tent does not exceed a maximum size of 700 square feet, tents placed side-by-side to not exceed an aggregate area of 700 square feet, and a minimum clearance of twelve (12) is maintained to all structures and other tents.

PUBLIC WORKS

20. All vehicles shall be lawfully parked. No fire lane exemptions.

21. No activity is permitted within the public right-of-way.

22. No posting of promotional signs is permitted on any portion of the public right-of-way, including trees, utility poles and street signs, etc.

23. No exclusive use of public parking areas is permitted.

24. Activities shall not create a pedestrian or traffic hazard. Prevent crowds from blocking sidewalks or standing in drive aisle.

25. Sales event area shall be surrounded by significant barricades (i.e. water-filled barricades), to delineate the sales area and provide patron safety from adjacent vehicular traffic within the parking lot.

26. The sales area shall be clearly signed to identify that the sales area is closed to vehicular traffic and parking.

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COMMUNITY DEVELOPMENT DIRECTOR ACTION LETTER

Application No.	**Staff Approval No. SA2015-006 (PA2015-072)**
Applicant	**Sage Hill School**
Site Address	**20402 Newport Coast Drive** **Sage Hill School Staff Approval**
Legal Description	**Parcel 1 of Parcel Map No. 97-200, being a subdivision of portions of Blocks 98 and 128 of Irvine's Subdivision filed in Book 1, Page 88, of Miscellaneous Record Maps in the office of the County Recorder or the County of Orange, State of California.**

On **June 22, 2015**, the Community Development Director approved Staff Approval No. SA2015-006 (PA2015-072). This approval is based on the following findings and is subject to the following conditions.

PROJECT SUMMARY

The applicant requests a review of substantial conformance with Use Permit No. PA97-0173 and Staff Approval No. SA2004-017 (PA2007-224) to allow a revised location for a tennis complex and aquatics center. The School also proposes to expand the grades offered from 9-12 to K-12. The school will continue to serve 600 students and the faculty/staff will increase from 75 to 99. The applicant's requests and revised phasing development plans are consistent with the total square footage, site plan, and operational chracteristics approved for the school.

ZONING DISTRICT/GENERAL PLAN

- **Zone:** PI (Private Institutions)
- **General Plan:** PI (Private Institutions)

BACKGROUND

The Orange County Planning Commission approved Use Permit PA97-0173 on November 3, 1998, to establish a private high school.

On November 21, 2007, the City of Newport Beach approved Staff Approval No. SA2007-017 (PA2007-224), finding the project phasing and development plan in substantial

conformance with Use Permit PA97-0173, allowing for the construction of a new Arts Center.

On August 27, 2013, the City of Newport Beach issued building permits for the construction of a new 12,900-square-foot Science Center in accordance with the phasing and development plan authorized under Staff Approval No. SA2007-017 (PA2007-224).

PROJECT DESCRIPTION AND PROPOSED CHANGES

The applicant requests a determination of substantial conformance with the plan approved under Use Permit No. PA97-0173 to authorize the construction of a new tennis complex and aquatics center. Additionally, the school seeks to change the operation of the school from a High School with grades 9 through 12 to all levels, elementary, middle, and high school, grades K through 12, maintaining the existing student capacity of 600 students but increasing the faculty/staff from 75 to 99.

School Operation-Traffic

Sage Hill High School is proposing to convert the existing 600 student private high school to a 600 student private K through 12 school. In terms of traffic, the high school was expected to generate 1,203 average daily trips, as shown in the attached excerpt from the original Mitigated Negative Declaration (Attachment No. CD 3). Expanding the school to grades K through 12 is expected to generate 1,488 average daily trips at a rate of 2.48 average daily trips per student. The net change is 285 new daily trips. Thus, the change to a K through 12 school does not require a traffic study in accordance with the Traffic Phasing Ordinance (TPO) where the threshold is 300 new daily trips.

Tennis Complex

The original project plans approved by Use Permit No. PA97-0173 authorized four (4) tennis courts to be located at the south east portion of the site. The applicant requests approval to locate the new tennis complex at the south westerly corner of the campus, adjacent to Sage Hill Road. The new tennis complex would consist of six (6) courts, perimeter landscaping, and eleven 50-foot-high light standards to provide court lighting.

The area is currently occupied by a small grassy area and hardscape, a staff parking area consisting of twenty-one (21) parking spaces, and the school's organic garden. The parking spaces will be removed and the garden will be relocated closer to the science center on the northerly portion of the site. Sufficient parking will remain to accommodate the school as discussed below.

The eleven 50-foot-high light standards will comply with the 65-foot height limit established for the property under Zone Change ZA97-07. The lighting has been designed to be contained on-site and dissipates within 20-60 feet of the tennis courts, depending on the location. The light spill from the courts ranges between 1- and 3-foot candles along the existing fire access road, and dissipates completely 60 feet from the courts. A photometric study will be provided at plan check to ensure that the site lighting will not cause negative impacts to nearby residential properties. A night time lighting inspection will be conducted

prior to finalizing of building permits to ensure the lighting complies with the approved plan and Zoning Code.

Aquatics Center

The original project plans approved by Use Permit No. PA97-0173 authorized an aquatics center at the southwest corner of the property and to the west of where the tennis complex is now proposed. The proposed aquatics center is located between the existing gymnasium and football/soccer stadium. It will replace several basketball courts and a sand volleyball court. The aquatics center includes a 36-yard by 25-yard swimming pool, four 35-foot-high light standards, a pool equipment/chemical storage enclosure, perimeter fencing with landscaping, and a 2,040-square-foot pool building with locker rooms, restrooms, and storage. Concrete, terraced spectator seating with wood planks is proposed along the eastern side of the pool. New wood trellises are located on the north and south portions of the pool area to denote aquatic center entry points.

The four (4) 35-foot-high LED light standards will comply with the 65-foot height limit established for the property under Zone Change ZA97-07. A photometric study will be provided at plan check to ensure that the site lighting will not cause negative impacts to nearby residential properties. The incremental increase in directed LED lighting is expected to be nominal. A night time lighting inspection will be conducted prior to finalizing of building permits to ensure the lighting complies with the approved plan and Zoning Code.

Parking

Use Permit No. PA97-0173 required parking in conformance with Section 7-9-145 of the Orange County Zoning Code. The parking rate for a high school is one (1) parking space per six (6) students plus one (1) parking space for every faculty/staff member. Based on the existing student capacity of 600 students and the increase of faculty/staff from 75 to 99, the resulting parking requirement is 199.

The conversion of the existing high school to serve grades K through 12 results in a slightly different parking requirement for grades K through 8. The parking requirement of Section 7-9-145 of the Orange County Zoning Code is two (2) parking spaces per classroom for grades K through 8. A total of forty-three (43) classrooms are provided throughout the campus. Any combination of classrooms for K through 8 and senior high school (Grades 9 through 12) will result in a parking requirement that ranges from 185 to 199 spaces.

There are a total of 470 existing parking spaces on-site. The installation of the tennis complex will result in the loss of twenty-one (21) spaces, resulting in 449 available spaces on-site. The total number of spaces following project implementation will result in a surplus of 250 to 264 spaces depending on the combination of students and classrooms allocated toward each grade classification (K through 8 vs. 9 through 12).

FINDINGS

Pursuant to Section 20.54.070 (Changes to an Approved Project), the Community Development Director may authorize minor changes to an approved site plan, architecture, or the nature of the approved use, without a public hearing, and waive the requirement for a new use permit application. This staff approval is based on the following findings and facts in support of the findings. In this case, the Director determined the proposed changes:

Finding:

A. Are consistent with all applicable provisions of this Zoning Code.

Facts in Support of Finding:

1. Sage Hill School will continue to be utilized as a school facility with the expansion to serve grades K through 12. The use is permitted within the PI (Private Institutions) Zoning District designated for the subject property.

2. The relocation of the Aquatics Center and Tennis Complex do not increase the total square footage originally approved for the project. The proposed changes are consistent with the applicable conditions of approval of the Use Permit.

3. The proposed light standards for the aquatics center and tennis complex will not exceed the 65-foot height limit established for the property under PA97-0173 and Zone Change 97-07. Light and glare for the new facilities will be designed to comply with the standards of Section 20.30.070 (Outdoor Lighting) of the Newport Beach Municipal Code. Light rays will be confined to the site and verified by the submittal of a photometric study and site visit prior to the issuance of building permits. The lighting design shall include zero (0) cut-off fixtures to minimize the potential of glare and spill-over onto surrounding sites.

4. Sufficient parking will continue to be available to serve all uses on-site. The school will provide 449 parking spaces where the code requires up to 199 parking spaces on-site to accommodate any combination of high school, elementary, or middle school students.

Finding:

B. Do not involve a feature of the project that was a basis for or subject of findings or exemptions in a negative declaration or Environmental Impact Report for the project

Facts in Support of Finding:

1. The change in grades offered will result in an increase of 285 average daily trips to the site. The high school was expected to generate 1,203 average daily trips as studied in the original Mitigated Negative Declaration. As an institution that

offers grades K through 12, the school is expected to generate 1,488 average daily trips at a rate of 2.48 trips per student. This increase does not result in a requirement for a traffic impact analysis where the threshold under the City's Traffic Phasing Ordinance is an increase in 300 average daily trips or more.

2. The proposed Aquatics Center and Tennis Complex additions to the existing school do not involve the grading of any previously undisturbed land.

3. There is no substantial evidence that the proposed project, as revised, will have any significant adverse impacts upon the environment, which cannot be mitigated, as approved under Negative Declaration PA97-0173. Applicable Mitigation Measures will eliminate impacts or reduce them to levels of insignificance.

Finding:

C. Do not involve a feature of the project that was specifically addressed or was the subject of a condition(s) of approval for the project or that was a specific consideration by the applicable review authority in the project approval.

Facts in Support of Finding:

1. The proposed changes do not negatively impact a feature that was specifically addressed in staff reports or minutes prepared for Use Permit No. PA97-0173. The project was originally described and approved as a high school. The change to serve grades K through 12 does not substantially change the operation of the use, traffic, or parking for the site as was originally authorized under PA97-0173.

2. The staff approval authorizes the construction of a tennis complex and aquatics center in different locations then they were previously approved in under Use Permit No. PA97-0173. The proposed tennis complex adds two (2) additional courts (six (6) total) than were provided in the original project plans. However, this change does not result in any additional impacts beyond those analyzed prior to original project approval.

3. No conflict exists between the project and NCCP area. Development of the site will adhere to the mitigation measures and conditions of approval. Included among these is the requirement that a biological, archeological, and paleontological monitor be present to oversee grading in accordance with the mitigation measures.

4. Off-site parking will be maintained as established in the County of Orange Zoning Code. Sufficient parking will be provided at a rate of one (1) parking space per six (6) students and one (1) per faculty for the high school (Grades 9 through12) and at a rate of two (2) parking spaces per classroom for grades K through 8. The existing parking supply of 470 parking spaces will be reduced by twenty-one (21) parking spaces for a total of 449. The project reduces the parking supply for the school but still exceeds the required parking of 185-199 spaces for any

combination of students grades K through 8 and grades 9 through 12. Thus, sufficient parking will continue to be available for the uses.

Finding:

D. Do not result in an expansion or change in operational characteristics of the use.

Facts in Support of Finding:

1. The existing school will maintain the existing uses as authorized under Use Permit No. 97-0173. The school may be modified to add grades K-8 students in addition to the existing high school, grades 9-12. The total student enrollment will remain the same with a 600 student maximum.

2. The student enrollment is anticipated to come from the local Irvine, Newport Beach, Laguna Beach, Costa Mesa areas, with a small percentage coming from the greater Orange County area. A decrease in enrollments in public schools to account for the addition of grades K-8 at Sage Hill School would be minimal, as the impact would be distributed over several schools districts.

3. The addition of the proposed tennis complex and aquatics center will not result in a change in the operational characteristics of the school but will instead provide additional amenities to complement the existing facilities. Tennis complex and aquatics centers are typical athletic facilities found at schools.

DETERMINATION

The Community Development Director determined that the proposed changes to the phasing and development plan and change to serve grades K through 12 for Sage Hill School are consistent with the plans approved by the Orange County Planning Commission in conjunction with the review and approval of Use Permit PA97-0173 and Staff Approval No. SA2007-017 (PA2007-224).

CONDITIONS

1. The development shall be in substantial conformance with the approved site plan, floor plans, materials board, and building elevations stamped and dated with the date of this approval. (Except as modified by these conditions of approval).

2. This approval shall expire unless exercised within twenty-four (24) months from the date of approval as specified in Section 20.54.060 (Time Limits and Extensions) of the Newport Beach Municipal Code, unless an extension is otherwise granted.

3. The project is subject to all applicable City ordinances, policies, and standards, unless specifically waived or modified by the conditions of approval. The applicant shall comply with all federal, state, and local laws. Material violation of any of those laws in connection with the use may be cause for revocation of this approval.

4. The applicant shall comply with all project design features, mitigation measures, and standard conditions contained within the approved Mitigation Monitoring Reporting Program (MMRP) of MND SCH No. 98091102 as approved by the County of Orange in Planning Application No. PA97-0173 for the project.

5. Student enrollment shall not exceed 600 students.

6. Any modification to the parking lot and/or number of parking spaces shall be reviewed and approved by the Planning Division. In conjunction with this review, the Planning Division shall review the 2015 parking analysis assumptions, which indicates a total of 449 parking spaces are provided on-site and a minimum of 199 parking spaces are required.

7. Prior to the issuance of building permits, documents/plans shall be submitted demonstrating compliance with the requirements of Chapter 14.17 (Water-Efficient Landscaping Ordinance) of the Municipal Code. Plans shall incorporate drought tolerant plantings and water efficient irrigation practices, and the plans shall be approved by the Planning Division and the Municipal Operations Department. All planting areas shall be provided with a permanent underground automatic sprinkler irrigation system of a design suitable for the type and arrangement of the plant materials selected. The irrigation system shall be adjustable based upon either a signal from a satellite or an on-site moisture-sensor. Planting areas adjacent to vehicular activity shall be protected by a continuous concrete curb or similar permanent barrier. Landscaping shall be located so as not to impede vehicular sight distance to the satisfaction of the Traffic Engineer.

8. All landscape materials and irrigation systems shall be maintained in accordance with the approved landscape plan. All landscaped areas shall be maintained in a healthy and growing condition and shall receive regular pruning, fertilizing, mowing and trimming. All landscaped areas shall be kept free of weeds and debris. All irrigation systems shall be kept operable, including adjustments, replacements, repairs, and cleaning as part of regular maintenance.

9. Prior to the final of building permits, the applicant shall schedule an inspection by the Planning Division to confirm that all landscaping was installed in accordance with the approved landscape plan

10. Water leaving the project site due to over-irrigation of landscape shall be minimized. If an incident such as this is reported, a representative from the Code and Water Quality Enforcement Division shall visit the location, investigate, inform and notice the responsible party, and, as appropriate, cite the responsible party and/or shut off the irrigation water.

11. Water should not be used to clean paved surfaces such as sidewalks, driveways, parking areas, etc. except to alleviate immediate safety or sanitation hazards.

12. Prior to the issuance of building permits, the applicant shall prepare a photometric study in conjunction with a final lighting plan for approval by the Planning Division. The survey shall show that lighting values are one-foot-candle or less at all property lines. Higher lighting levels are subject to the review and approval of the Community Development Director where it can be shown to be in compliance with the purpose and intent of the Outdoor Lighting section of the Zoning Code.

13. All parking area and exterior light fixtures shall be full cut-off fixtures.

14. All mechanical appurtenances (e.g. air conditioning, heating ducts and exhaust vents, swimming pool and spa pumps and filters, transformers, utility vaults and emergency power generators) shall be screened from public view and adjacent land uses. All rooftop equipment shall be architecturally treated or screened from off-site views in a manner compatible with the building materials prior to final building permit clearance for each new or remodeled building. The mechanical appurtenances shall be subject to sound rating in accordance with Section 10.26.025 (Exterior Noise Standards) of the Newport Beach Municipal Code. Rooftop screening and enclosures shall not exceed 35 feet 4 inches above the existing grade.

15. The applicant is required to obtain all applicable permits from the City's Building Division and Fire Department. The construction plans must comply with the most recent, City-adopted version of the California Building Code. The construction plans must meet all applicable State Disabilities Access requirements.

16. Prior to the issuance of building permits, the fire hydrant shall be relocated prior to new construction of the tennis courts and pool structures.

17. The location of the relocated fire hydrant will be determined by the proposed and existing structures. The fire hydrants existing location was based on required distances for the existing structures.

18. Pool chemicals storage and use shall meet California Fire Code 2013 edition.

19. The school is located in a "Very High Fire Hazard Severity Zone" (VHFHSZ), which requires specific noncombustible construction per California Building Code Chapter 7A (Materials and Construction Methods for Exterior Wildfire Exposure).

20. Fire sprinklers shall be installed to the satisfaction of the Fire Department, depending on the square footage of new development.

21. The terraced seating areas shall be ADA accessible in accordance with Section 11B-221.1).

22. At least two (2) accessible entries to the pool area shall be required.

23. The applicant shall employ the following best available control measures ("BACMs") to reduce construction-related air quality impacts:

Dust Control
- Water all active construction areas at least twice daily.
- Cover all haul trucks or maintain at least 2 feet of freeboard.
- Pave or apply water four (4) times daily to all unpaved parking or staging areas.
- Sweep or wash any site access points within two (2) hours of any visible dirt deposits on any public roadway.
- Cover or water twice daily any on-site stockpiles of debris, dirt or other dusty material.
- Suspend all operations on any unpaved surface if winds exceed 25 mph.

Emissions
- Require 90-day low-NOx tune-ups for off road equipment.
- Limit allowable idling to 30 minutes for trucks and heavy equipment

Off-Site Impacts
- Encourage carpooling for construction workers.
- Limit lane closures to off-peak travel periods.
- Park construction vehicles off traveled roadways.
- Wet down or cover dirt hauled off-site.
- Sweep access points daily.
- Encourage receipt of materials during non-peak traffic hours.
- Sandbag construction sites for erosion control.

Fill Placement
- The number and type of equipment for dirt pushing will be limited on any day to ensure that SCAQMD significance thresholds are not exceeded.
- Maintain and utilize a continuous water application system during earth placement and compaction to achieve a 10 percent soil moisture content in the top 6-inch surface layer, subject to review/discretion of the geotechnical engineer.

24. Prior to the issuance of grading permits, a Storm Water Pollution Prevention Plan (SWPPP) and Notice of Intent (NOI) to comply with the General Permit for Construction Activities shall be prepared, submitted to the State Water Quality Control Board for approval and made part of the construction program. The project applicant will provide the City with a copy of the NOI and their application check as proof of filing with the State Water Quality Control Board. This plan will detail measures and practices that will be in effect during construction to minimize the project's impact on water quality.

25. Prior to issuance of grading permits, the applicant shall prepare and submit a Water Quality Management Plan (WQMP) for the proposed project, subject to the approval of the Building Division and Code and Water Quality Enforcement Division. The WQMP shall provide appropriate Best Management Practices (BMPs) to ensure that no violations of water quality standards or waste discharge requirements occur.

26. A list of "good house-keeping" practices will be incorporated into the long-term post-construction operation of the site to minimize the likelihood that pollutants will be used, stored or spilled on the site that could impair water quality. These may include frequent parking area vacuum truck sweeping, removal of wastes or spills, limited use of harmful fertilizers or pesticides, and the diversion of storm water away from potential sources of pollution (e.g., trash receptacles and parking structures). The Stage 2 WQMP shall list and describe all structural and non-structural BMPs. In addition, the WQMP must also identify the entity responsible for the long-term inspection, maintenance, and funding for all structural (and if applicable Treatment Control) BMPs.

27. Prior to the issuance of building permits, the applicant shall obtain approval from the Irvine Ranch Water District for the proposed water and sewer improvements.

28. To the fullest extent permitted by law, applicant shall indemnify, defend and hold harmless City, its City Council, its boards and commissions, officials, officers, employees, and agents from and against any and all claims, demands, obligations, damages, actions, causes of action, suits, losses, judgments, fines, penalties, liabilities, costs and expenses (including without limitation, attorney's fees, disbursements and court costs) of every kind and nature whatsoever which may arise from or in any manner relate (directly or indirectly) to City's approval of the **Sage Hill School Staff Approval** including, but not limited to, **Staff Approval No. SA2015-006 (PA2015-072)**. This indemnification shall include, but not be limited to, damages awarded against the City, if any, costs of suit, attorneys' fees, and other expenses incurred in connection with such claim, action, causes of action, suit or proceeding whether incurred by applicant, City, and/or the parties initiating or bringing such proceeding. The applicant shall indemnify the City for all of City's costs, attorneys' fees, and damages which City incurs in enforcing the indemnification provisions set forth in this condition. The applicant shall pay to the City upon demand any amount owed to the City pursuant to the indemnification requirements prescribed in this condition.

APPEAL PERIOD: An appeal may be filed with the Director of Community Development or City Clerk, as applicable, within fourteen (14) days following the date the action or decision was rendered. For additional information on filing an appeal, contact the Planning Division at 949 644-3200.

On behalf of Kimberly Brandt, AICP, Community Development Director

By:

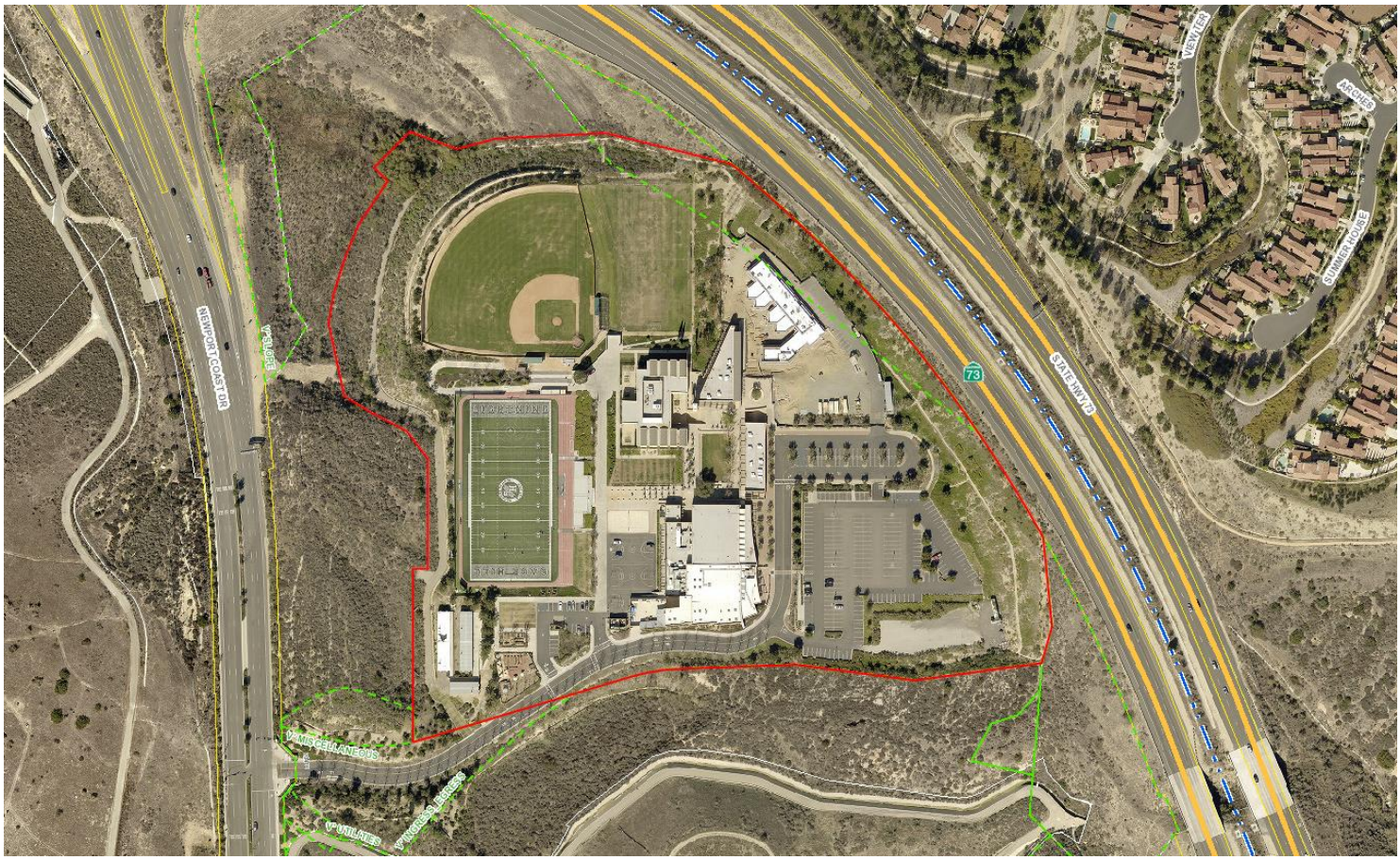
Makana Nova
Associate Planner
GR/mkn

Attachments:
CD 1 Vicinity Map
CD 2 Square Footage Summary
CD 3 Traffic Analysis from PA97-0173
CD 4 Project Plans

Attachment No. CD 1

Vicinity Map

VICINITY MAP



Staff Approval No. SA2015-006
PA2015-072

20402 Newport Coast Drive

Attachment No. CD 2

Square Footage Summary

Square Footage Summary:

	Existing Structures	Future Development Proposed by SA2015-006	As Approved by Staff Approval No. SA2007-017
Buildings A, B, C, D	79,191 sf	79,191 sf	79,191 sf
Math Science Center	10,900 sf	10,900 sf	25,000 sf
Arts Center	30,181 sf	30,181 sf	30,770 sf
Mini-Gym/ Fitness/Facilities	0 sf	0 sf	0 sf
Aquatics Center	0 sf	2,170 sf	2,000 sf
Approved & Unallocated	21,628 sf	19,458 sf	4,939 sf
TOTAL SQUARE FOOTAGE	**120,272**	**122,442 sf**	**141,900 sf**

The detail above shows the existing structures that have been constructed, the proposed floor area under this staff approval, and the floor area allocation as previously authorized under Staff Approval No. SA2007-017. The proposed Aquatics Center has been relocated and expanded. The proposed Tennis Complex has a new location within the school but will not result in additional gross floor area. The net change to the approved plan incorporates the addition of the gross floor area associated with the new Aquatics Center and accompanying mechanical enclosure.

Attachment No. CD 3

Traffic Analysis from PA97-0173

groundwater buildup is potentially significant. The following mitigation measure will reduce this potential impact to less than significant.

Mitigation Measure 4-4

Prior to issuance of grading permits, meeting the approval of the Manager, Subdivision and Grading, the project grading design plans shall include any of the following as mitigation to minimize the effects of groundwater seepage:

(1) construction of subdrain systems in all canyons and drainages where fills are proposed;
(2) construction of subdrainage systems in all slope buttresses, stabilizing fills, and shear keys;
(3) adequate drainage and water proofing of the retaining walls that are incorporated into the project design as basement walls of proposed buildings;
(4) additional subdrainage, if needed, to be determined by field conditions exposed during grading to reduce nuisance seepage.

Potential for Contaminated Nuisance Groundwater. The proposed Sage Hill School project site is located adjacent to the East Canyon portion of the now closed (1993) Coyote Canyon Landfill. A potential impact exists where the locally perched groundwater (discussed above) may by contaminated by landfill leachate. Contaminated water cannot be allowed to be introduced into the area storm drain system, water or collected in the recommended subdrain systems. Upon testing (refer to Mitigation Measure 4-5) if contamination is present in the groundwater, the following mitigation measure will ensure that this potential impact will be reduced to less than significant.

Mitigation Measure 4-5

Prior to issuance of grading permits the following procedure shall be conducted and approved by the Manager, Subdivision and Grading. During test borings conducted to determine if additional detection probes are required to address landfill gas (refer to Mitigation Measure 13-1) the groundwater shall be sampled and tested for potential landfill leachate contamination. If contamination is present, a work plan shall be prepared by responsible parties (Sage Hill School and The Irvine Company) and submitted to the Santa Ana Regional Water Quality Control Board (SARWQCB), the South Coast Air Quality Management District (AQMD) and Local Enforcement Agency (LEA) for approval prior to the issuance of the grading permit. The SARWQCB will determine if additional measures are required.

G. Altered direction or rate of flow of groundwater?

Less Than Significant Impact. Based on the previous subsurface investigations in the area of the site, the project site is located above the groundwater table and the proposed grading work will not encounter the main groundwater table. Refer to response to Checklist Item 4F, above.

H. Impacts to groundwater quality?

Less Than Significant Impact. Refer to response to Checklist Item 4F, above.

5. TRANSPORTATION/CIRCULATION. *Attachment D contains a traffic analysis of the proposed project (Robert Bein, William Frost & Associates (RBF), August, 1998).*

The traffic analysis provides the following two scenarios depicting potential trips generated by the proposed school:

1) Project trips utilizing the standard ITE trip generation rates for average daily traffic (ADT) and a.m. and p.m. peak hour school traffic, and
2) Project trips utilizing more conservative (higher) trip generation rates based on the specific characteristics of the proposed school (e.g., every student of driving age could drive separately to school; no bus service provided for the students; therefore, students younger than driving age would be dropped off and picked up, twice the trips per student than driving students).

For the project specific adjusted trip generation, the standard trip rates were increased by 30 percent for a.m. and p.m. inbound and outbound trips and 12 percent for ADT. The more conservative analysis also places p.m. trips to and from the school during the regular p.m. peak hour rather than the more usual 2:00 to 3:00 p.m. school peak.

The following analysis is in response to the Environmental Analysis Checklist questions and reflects the more conservative analysis, or a worst case scenario of potential traffic impacts that could be generated by the proposed school.

Would the proposal result in:

A. ***Increased vehicle trips or traffic congestion beyond adopted policies and/or forecasts?***

Less Than Significant Impact. The following assumptions are based on a maximum of 600 students. These maximum 600 students would generate a total of 1,203 daily trips, including 284 trips (233 inbound and 51 outbound) during the morning peak hour and 200 trips (39 inbound and 161 outbound) during the afternoon peak hour. This analysis reflects the conservative analysis, addressing afternoon trips to and from the school during p.m. peak rush hour (4:45 to 5:45 p.m.) rather than the more typical school afternoon peak hour of 2:00 to 3:00 p.m. As shown in Tables 6 and 7 of the Traffic Study (Attachment D), the existing plus project traffic condition would remain at the existing level of service (LOS) A, at study intersections and along Newport Coast Drive. Peak hour project traffic trips would not significantly deteriorate the intersection level of service or cause congestion in the project vicinity. This amount of traffic volume increase would not increase vehicle trips or traffic congestion beyond adopted policies and/or forecasts. No significant impacts are anticipated.

B. ***Safety hazards from design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?***

Less than Significant Impact. There are no project related sharp curves that would result in safety hazards as the site is set back from Newport Coast Drive. No incompatible uses that would pose traffic safety hazards are anticipated on the project site. Newport Coast Drive at the project access has been designed to allow right turn in and right turn out only. Several measures are recommended in the traffic analysis for consideration on the specific site design plans to enforce no left turn movement into or out of the school driveway from/to southbound Newport Coast Drive. These measures include 1) installation of "No Left Turns" signage as appropriate at the intersection of Newport Coast Drive/project drive ; and 2) design the access road intersection with Newport Coast Drive to only allow right turn in/right turn out movement through construction of a raised "pork chop" like divider.

U-turns will be allowed at either the intersections of Newport Coast Drive with San Joaquin Hills Road or the Gas Recovery Systems, Inc. facility road. The left turn pocket for the intersection selected to allow u-turns will need to be a minimum of 120 feet of vehicular storage to accommodated the forecast queuing vehicles.

Other safety features to be incorporated into the project design include a stop sign for vehicles exiting the school's access road onto Newport Coast Drive, and a deceleration lane for northbound traffic on Newport Coast Drive approaching the access road. These design features will help reduce the safety concern for ingress and egress to the project site. In addition, the project meets the County of Orange standard condition for sight distance, thereby eliminating potential safety hazards at the intersection formed by the project access and Newport Coast Drive. In addition, applicant will be required to adhere to County Standard Plan 1117 which addresses adequate sight distances. Mitigation Measures 5-1 and 5-2 below will reduce potential projects impacts related to circulation access to less than significant.

Mitigation Measure 5-1

Prior to the issuance of building permits, project site plans shall incorporate specific circulation design features that meet the approval of the Manager, Traffic Engineering. Design features may include, but would not be limited to the following:

1) design the access road intersection of Newport Coast Drive/Project Drive to allow right turn in/right turn out movements only with the construction of a "pork chop" type of raised divider;
2) installation of "no left turn" signage for southbound traffic at the intersection of the project drive and Newport Coast Drive;
3) installation of a stop sign at the terminus of the Project Drive at Newport Coast Drive for vehicles exiting the school property;
4) design of a deceleration lane approach for northbound traffic on Newport Coast Drive at the Project Drive; and
5) design adequate length for the left turn pocket at the intersection selected to allow "U" turns southbound on Newport Coast Drive (either at San Joaquin Hills Road or the entrance drive to the Gas Recovery Systems, Inc. gas recovery facility).

Mitigation Measure 5-2

Prior to the issuance of grading permits, the applicant shall provide adequate sight distance at all street intersections per Standard Plan 1117, in a manner meeting the approval of the Manager, Traffic Engineering. *(County Standard Condition of Approval T7)*

C. Inadequate emergency accesses or access to nearby uses?

Less Than Significant Impact. Newport Coast Drive at the project access is currently designed to allow right turn in and right turn out only. County of Orange standard conditions of approval shall be implemented to ensure adequate emergency access and access to nearby uses. Mitigation Measure 5-1 specifies the implementation of additional safety and access improvements if determined necessary by the County through the Use Permit application review process.

D. Insufficient parking capacity on site or off site?

Less Than Significant Impact. The proposed project will have ample parking spaces to accommodate parking needs for the high school use. The County Parking Code specifies a requirement of one space per six students and one space per faculty and staff member. For the proposed school, one space per 600 students equals 100 spaces; with one space per each member of the faculty/staff (75), the total requirement is 175 spaces. The site plan provides for 310 striped spaces in lots, 40 parking spaces along the access road/school drive, and 32 parking spaces around the drop-off loop for a total of 388 parking spaces). The playfields and hard courts would provide additional parking areas to accommodate an additional 312 vehicles for large events. Therefore, there will be no significant impact related to parking capacity.

E. Hazards or barriers for pedestrians or bicyclists?

Less Than Significant Impact. The proposed project will not have design features that would result in hazards or barriers for pedestrians or bicyclists. There may be some temporary rerouting of the bicycle lane on the south side of Newport Coast Drive during construction of the access road and utilities to the proposed school; however, this impact would be temporary, as the lane would be restored after completion of the access road.

F. Conflicts with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

Less Than Significant Impact. The proposed project will not conflict with adopted policies supporting alternative transportation. The project will include bicycle racks on campus.

Attachment No. CD 4

Project Plans

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f. 949.260.1190
e. info@lpainc.com
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Irvine, California 92617

SAGE HILL
Tennis Complex

Newport Coast, CA 92657

Sage Hill School
SCHEMATIC DESIGN
Feburary 24, 2015

LPA 14248.10

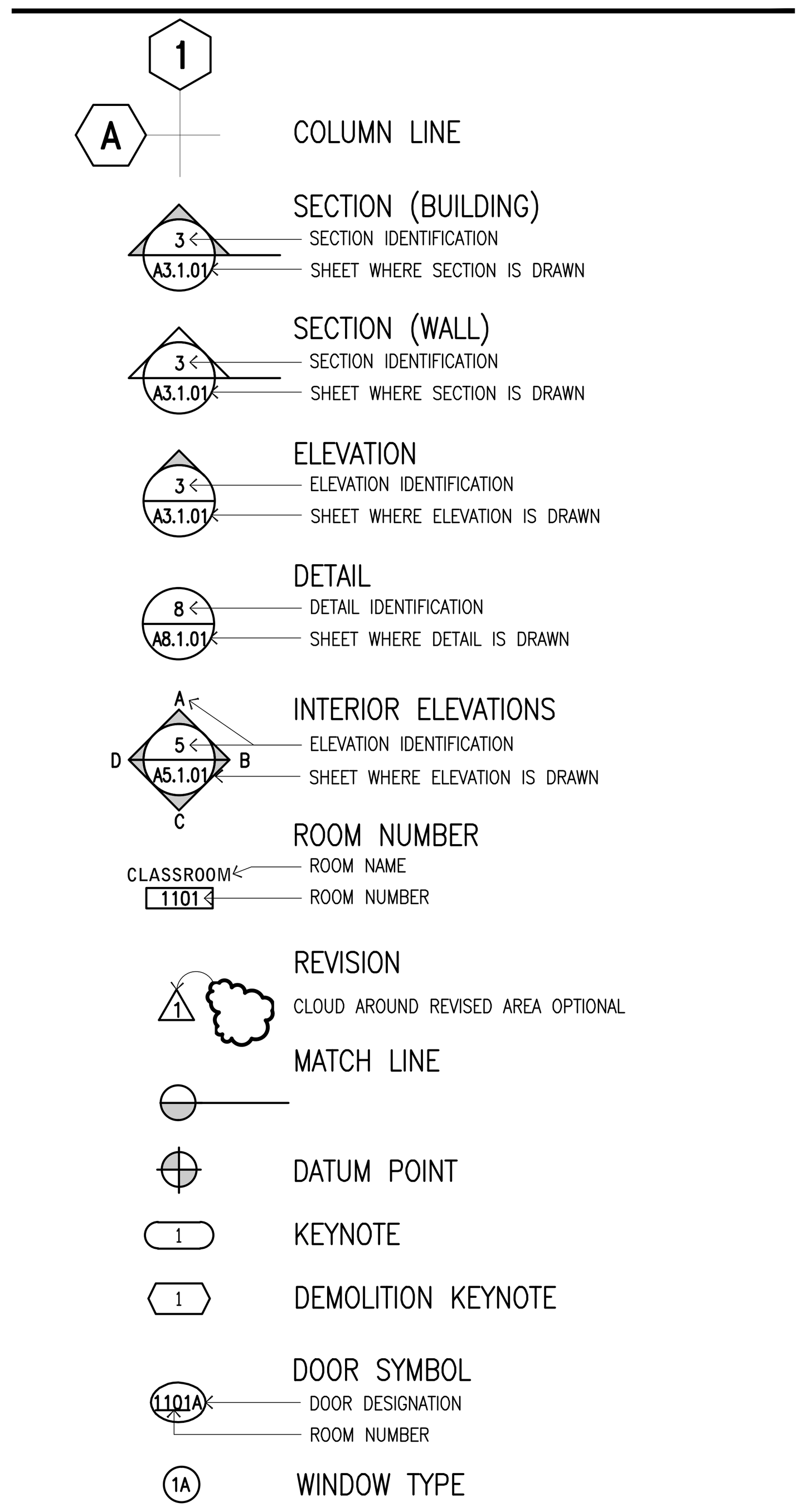
SCHEMATIC DESIGN - Feburary 24, 2015

SAGE HILL SCHOOL

ABBREVIATIONS

&	AND
L	ANGLE
@	AT
℄	CENTERLINE
Ø	DIAMETER OR ROUND
#	POUND OR NUMBER
(E)	EXISTING
(N)	NEW
ACOUS.	ACOUSTICAL
A.D.	AREA DRAIN
ADMIN.	ADMINISTRATION
ADJ.	ADJUSTABLE
A.F.F.	ABOVE FINISH FLOOR
AGGR.	AGGREGATE
AL.	ALUMINUM
APPROX.	APPROXIMATE
ARCH.	ARCHITECTURAL
ASB.	ASBESTOS
ASPH.	ASPHALT
BD.	BOARD
BITUM.	BITUMINOUS
BLDG.	BUILDING
BLK.	BLOCK
BLKG.	BLOCKING
BM.	BEAM
B.O.	BOTTOM OF
BOT.	BOTTOM
CAB.	CABINET
C.B.	CATCH BASIN
CEM.	CEMENT
CER.	CERAMIC
C.I.	CAST IRON
C.I.P	CAST IN PLACE
C.G.	CORNER GUARD
CLG.	CEILING
CLKG.	CAULKING
CLO.	CLOSET
CLR.	CLEAR
C.O.	CASED OPENING
COL.	COLUMN
CONC.	CONCRETE
CONN.	CONNECTION
CONSTR.	CONSTRUCTION
CONT.	CONTINUOUS
CORR.	CORRIDOR
CR.	CLASSROOM
CTSK.	COUNTERSUNK
CNTR.	COUNTER
CTR.	CENTER
DBL.	DOUBLE
DEPT.	DEPARTMENT
D.F.	DRINKING FOUNTAIN
DET.	DETAIL
DIA.	DIAMETER
DIM.	DIMENSION
DISP.	DISPENSER
DN.	DOWN
D.O.	DOOR OPENING
DR.	DOOR
DWR.	DRAWER
D.S.	DOWNSPOUT
D.S.S.	DRY STANDPIPE
DWG.	DRAWING
E.	EAST
EA.	EACH
E.D.F.	ELECT. DRINKING FOUNTAIN
E.J.	EXPANSION JOINT
EL.	ELEVATION
ELEC.	ELECTRICAL
ELEV.	ELEVATOR
EMER.	EMERGENCY
ENCL.	ENCLOSURE
E.P.	ELECT. PANELBOARD
EQ.	EQUAL
EQPT.	EQUIPMENT
E.W.C.	ELECT. WATER COOLER
EXST.	EXISTING
EXPO.	EXPOSED
EXP.	EXPANSION
EXT.	EXTERIOR
F.A.	FIRE ALARM
F.B.	FLAT BAR
F.D.	FLOOR DRAIN
FDN.	FOUNDATION
F.E.	FIRE EXTINGUISHER
F.E.C.	FIRE EXTINGUISHER CABINET
F.H.C.	FIRE HOSE CABINET
FIN.	FINISH
FL.	FLOOR
FLASH.	FLASHING
FLUOR.	FLUORESCENT
F.O.C.	FACE OF CONCRETE
F.O.F.	FACE OF FINISH
F.O.M.	FACE OF MASONRY
F.O.S.	FACE OF STUD
FPRF.	FIREPROOF
F.S.	FINISH SURFACE
FT.	FOOT OR FEET
FTG.	FOOTING
FURR.	FURRING
FUT.	FUTURE
GA.	GAUGE
GALV.	GALVANIZED
G.B.	GRAB BAR
G.I..M.	GALV. IRON
GL.	GLASS
GND.	GROUND
GYP.	GYPSUM
H.B.	HOSE BIB
H.C.	HOLLOW CORE
HDWD.	HARDWOOD
H.M.	HOLLOW METAL
HORIZ.	HORIZONTAL
HR.	HOUR
HGT.	HEIGHT
I.D.	INSIDE DIAMETER
INSUL.	INSULATION
INT.	INTERIOR
JAN.	JANITOR
JT.	JOINT
KIT.	KITCHEN
LAB.	LABORATORY
LAM.	LAMINATE
LAV.	LAVATORY
LKR.	LOCKER
LS.	LUNCH SHELTER
LT.	LIGHT
MAX.	MAXIMUM
M.C.	MEDICINE CABINET
MECH.	MECHANICAL
MEMB.	MEMBRANE
MET.	METAL
MFR.	MANUFACTURER
MH.	MANHOLW
MIN.	MINIMUM
MIR.	MIRROR
MISC.	MISCELLANEOUS
M.O.	MASONRY OPENING
MPR.	MULTI-PURPOSE ROOM
MTD.	MOUNTED
MTL.	MATERIAL
MUL.	MULLION
N.	NORTH
N.I.C.	NOT IN CONTRACT
NO.	NUMBER
NOM.	NOMINAL
N.T.S.	NOT TO SCALE
O.A.	OVERALL
OBS.	OBSCURE
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
OFF.	OFFICE
OPNG.	OPENING
OPP.	OPPOSITE
PRCST.	PRE-CAST
PL.	PLATE
P.LAM.	PLASTIC LAMINATE
PLAS.	PLASTER
PLYWD.	PLYWOOD
PR.	PAIR
PT.	POINT
P.T.	PRESSURE TREATED
P.T.D	PAPER TOWEL DISPENSER
P.T.D./R	COMBINATION PAPER TOWEL DISPENSER & RECEPTACLE
PTN.	PARTITION
P..R.	PAPER TOWEL RECEPTACLE
Q.T.	QUARRY TILE
R.	RISER
RAD.	RADIUS
R.D.	ROOF DRAIN
REF.	REFERENCE
REFR.	REFRIDGERATOR
RGTR.	REGISTER
REINF.	REINFORCED
RELO.	RELOCATABLE
REQ.	REQUIRED
RESIL.	RESILENT
RM.	ROOM
R.O.	ROUGH OPENING
RWD.	REDWOOD
R.W.L.	RAIN WATER LEADER
S.	SOUTH
S.C.	SOLID CORE
S.C.D.	SEAT COVER DISPENSER
SCHED.	SCHEDULE
S.A.	SOAP DISPENSER
SECT.	SECTION
SH.	SHELL
SHR.	SHOWER
SHT.	SHEET
SIM.	SIMILAR
S.M.S.	SHEET METAL SCREW
S.N.D.	SANITARY NAPKIN DISPENSER
S.N.R.	SANITARY NAPKIN RECEPTACLE
SPEC.	SPECIFICATION
SQ.	SQUARE
S.ST.	STAINLESS STEEL
S.SK.	SERVICE SINK
STA.	STATION
STD.	STANDARD
STL.	STEEL
STOR.	STORAGE
T.	TEMPERED
TRD.	TREAD
T.B.	TOWEL BAR
T.C.	TOP OF CURB
TEL.	TELEPHONE
TER.	TERRAZZO
T.&G.	TONGUE AND GROOVE
THK.	THICK
T.O.	TOP OF
T.O.P.	TOP OF PARAPET
T.P.	TOP OF PAVEMENT
T.P.D.	TOILET PAPER DISPENSER
T.S.	TUBE STEEL
T.V.	TELEVISION
T.W.	TOP OF WALL
TYP.	TYPICAL
UNF.	UNFINISHED
U.O.N.	UNLESS OTHERWISE NOTED
UR.	URINAL
VERT.	VERTICAL
VEST.	VESTIBULE
V.I.F.	VERIFY IN FIELD
W.	WEST
W/	WITH
W.C.	WATER CLOSET
WD.	WOOD
W/O	WITHOUT
W.P.	WATERPROOF
WSCT.	WAINSCOAT
WT.	WEIGHT

SYMBOLS LEGEND



GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE AS SPECIFIED AND IN ACCORDANCE WITH ALL APPLICABLE CODES, ORDINANCES, LAWS, PERMITS, AND THE CONTRACT DOCUMENTS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCURATE PLACEMENT OF ALL NEW CONSTRUCTION ON THE SITE.
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS BEFORE STARTING WORK. SHOULD A DISCREPANCY APPEAR IN THE CONTRACT DOCUMENTS, OR BETWEEN THE CONTRACT DOCUMENTS AND EXISTING CONDITIONS, NOTIFY THE ARCHITECT AT ONCE FOR INSTRUCTION ON HOW TO PROCEED.
4. SHOULD A CONFLICT OCCUR IN OR BETWEEN DRAWINGS AND SPECIFICATIONS, THE SPECIFICATIONS SHALL TAKE PRECEDENCE, UNLESS A WRITTEN DECISION FROM THE ARCHITECT HAS BEEN OBTAINED WHICH DESCRIBES A CLARIFICATION OR ALTERNATE METHOD AND/OR MATERIALS.
5. THE CONTRACTOR SHALL CONFINE HIS OPERATIONS ON THE SITE TO AREAS PERMITTED BY THE OWNER.
6. THE JOB SITE SHALL BE MAINTAINED IN A CLEAN, ORDERLY CONDITION FREE OF DEBRIS AND LITTER, AND SHALL NOT BE UNREASONABLY ENCUMBERED WITH ANY MATERIALS OR EQUIPMENT. EACH SUBCONTRACTOR IMMEDIATELY UPON COMPLETION OF EACH PHASE OF HIS WORK SHALL REMOVE ALL TRASH AND DEBRIS AS A RESULT OF HIS OPERATION.
7. ALL MATERIAL STORED ON THE SITE SHALL BE PROPERLY STACKED AND PROTECTED TO PREVENT DAMAGE AND DETERIORATION. FAILURE TO PROTECT MATERIALS MAY CAUSE FOR REJECTION OF WORK.
8. THE CONTRACTOR SHALL DO ALL CUTTING, FITTING, OR PATCHING OF THIER WORK THAT MAY BE REQUIRED TO MAKE ITS SEVERAL PARTS FIT TOGETHER PROPERLY AND SHALL NOT ENDANGER ANY OTHER WORK BY CUTTING, EXCAVATING, OR OTHERWISE ALTERING THE TOTAL WORK OR ANY PART OF IT. ALL PATCHING, REPAIRING, AND REPLACING OF MATERIALS AND SURFACES, CUT OR DAMAGED IN EXECUTION OF WORK, SHALL BE DONE WITH APPLICABLE MATERIALS SO THAT SURFACES REPLACED WILL, UPON COMPLETION, MATCH SURROUNDING SIMILAR SURFACES.
9. NO PORTION OF THE WORK REQUIRING A SHOP DRAWING OR SAMPLE SUBMISSION SHALL BE COMMENCED UNTIL THE SUBMISSION HAS BEEN REVIEWED BY THE ARCHITECT. ALL SUCH PORTIONS OF THE WORK SHALL BE IN ACCORDANCE WITH CORRECTED SHOP DRAWINGS AND SAMPLES.
10. DIMENSIONS:
    A. ALL DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE.
    B. ALL DIMENSIONS ARE TO THE FINISH UNLESS OTHERWISE NOTED.
    C. CEILING HEIGHT DIMENSIONS ARE FROM FINISHED FLOOR SLAB TO FACE OF FINISH CEILING MATERIAL UNLESS OTHERWISE NOTED.
11. WHERE LARGER STUDS OR FURRING ARE REQUIRED TO COVER PIPING AND CONDUITS, THE LARGER STUD SIZE OR FURRING SHALL EXTEND THE FULL SURFACE OF THE WALL WIDTH AND LENGTH WHERE THE FURRING OCCURS.
12. PROVIDE ALL ACCESS PANELS AS REQUIRED BY GOVERNING CODES TO ALL CONCEALED SPACES, VOIDS, ATTICS, ETC. VERIFY TYPE REQUIRED WITH ARCHITECT PRIOR TO INSTALLATION. ACCESS PANELS SHALL BE FIRE RATED WHEN INSTALLED IN RATED CONSTRUCTION AND SHALL MEET OR EXCEED WALL, FLOOR, OR CEILING RATING
13. ALL GLASS AND GLAZING SHALL COMPLY WITH C.B.C. CHAPTER 24.
14. ALL WORK SHALL CONFORM TO TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).
15. CHANGES MADE TO THE APPROVED DRAWINGS SHALL BE MADE BY AN ADDENDA OR A CCD APPROVED BY THE DIV. OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR.
16. A PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR OF RECORD (I.O.R.) ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR; CLASS 1.
17. THE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS TO MODIFY THE FACILITY FOR ACCESSIBILITY IN ACCORDANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS. SHOULD ANY CONDITIONS DEVELOP NOT COVERED BY THE CONTRACT DOCUMENTS SUCH THAT THE FINISHED WORK WILL NOT COMPLY WITH SAID TITLE 24, CALIFORNIA CODE OF REGULATIONS, A CHANGE ORDER DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA-AC BEFORE PROCEEDING WITH THE WORK.
18. TITLE 24 PARTS 1-5 SHALL BE KEPT ON SITE DURING CONSTRUCTION.
19. AN INSPECTOR WHO IS SPECIALLY QUALIFIED IN MECHANICAL AND ELECTRICAL WORK WILL BE REQUIRED FOR THIS PROJECT.
20. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
21. ALL LEGAL EXIT DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT. EXIT SIGNS SHALL BE PROVIDED AT ALL EXITS AS REQUIRED BY THE C.B.C. SECTION 1011. ALL DOOR SWINGS SERVING AN OCCUPANT LOAD OF 50 OR GREATER SHALL SWING IN THE DIRECTION OF TRAVEL.
22. PROVIDE ALL NECESSARY BLOCKING, BACKING, AND FRAMING FOR LIGHT FIXTURES, ELECTRIC UNITS, A.C. EQUIPMENT, RECESSED ITEMS, AND ALL OTHER ITEMS AS REQUIRED.
23. PROVIDE FIRE EXTINGUISHERS PER THE REQUIREMENTS OF LOCAL GOVERNING AGENCIES.
24. PROVIDE ALL ACCESS PANELS AS REQUIRED BY GOVERNING CODES TO ALL CONCEALED SPACES, VOIDS, ATTICS, ETC. VERIFY TYPE REQUIRED WITH THE ARCHITECT PRIOR TO INSTALLATION.
25. PROVIDE EXIT ILLUMINATION PER THE REQUIREMENTS OF LOCAL GOVERNMENT AGENCIES.

HAZARDOUS MATERIAL DISCLAIMER

THESE DOCUMENTS HAVE BEEN PREPARED BASED ON INFORMATION PROVIDED BY OTHERS AND ARE A REPRESENTATION OF EXISTING CONDITIONS AT A DETAIL REQUIRED BY THE SCOPE OF THE ARCHITECT'S SERVICES. THE ARCHITECT HAS NOT VERIFIED THE ACCURACY OF THIS INFORMATION INCLUDING BORING OR CORING OF STRUCTURAL AND/OR NON-STRUCTURAL ELEMENTS, MEASUREMENTS, ETC. AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY BE INCORPORATED HEREIN AS A RESULT. THE ARCHITECT HAS NOT CONDUCTED ANY CODE COMPLIANCE ANALYSIS, STRUCTURAL ANALYSIS, ASBESTOS INVESTIGATIONS, LIFE SAFETY EVALUATION ENGINEERING STUDIES OF ANY KIND TO DETERMINE THE SUITABILITY OF THIS BUILDING FOR ITS INTENDED USE. SUBSEQUENTLY THE ARCHITECT DOES NOT REPRESENT THAT THESE DOCUMENTS ILLUSTRATE EXISTING CONDITIONS THAT COMPLY WITH ANY OR ALL APPLICABLE CODES. THE DISCOVERY OF ANY DEFICIENCY IN THE BUILDING AND/OR SITE, INCLUDING THE PRESENCE OF ASBESTOS, SHALL BE IMMEDIATELY REPORTED TO THE PROPERTY OWNER WHO SHALL BE RESPONSIBLE TO DIRECT HIS CONTRACTOR AND/OR CONSULTANTS IN THE APPROPRIATE MANNER.

GENERAL FIRE NOTES

1. PROVIDE A MINIMUM, UNOBSTRUCTED WIDTH OF 20 FEET, CLEAR TO SKY, VEHICULAR ACCESS TO WITHIN 150 FEET OF ALL PORTIONS OF THE BUILDING EXTERIOR WALLS. CALIFORNIA FIRE CODE SECTION 503.
2. VEHICULAR ACCESS MUST BE MAINTAINED SERVICEABLE THROUGHOUT CONSTRUCTION.
3. FIRE APPARATUS ACCESS ROADS SHALL NOT BE OBSTRUCTED IN ANY MANNER, INCLUDING PARKING OF VEHICLES. CALIFORNIA FIRE CODE, SECTION 503.4.
4. FIRE EXTINGUISHER REQUIREMENTS SHALL BE DETERMINED BY FIELD INSPECTOR AND PROVIDED PER 2013 CALIFORNIA FIRE CODE SECTION 906.
5. PROVIDE A KEY BOX LOCATION AT ALL GATED ENTRANCES AS REQUIRED BY CALIFORNIA FIRE CODE, SECTION 506. KEY BOX TO BE DESIGNED PER COUNTY OF EL CAJON FIRE DEPARTMENT REGULATIONS.
6. COMMERCIAL DUMPSTERS OR CONTAINERS WITH AN INDIVIDUAL CAPACITY OF 1.5 CUBIC YARDS OR GREATER SHALL NOT BE STORED OR PLACED WITHIN FIVE FEET OF COMBUSTIBLE WALLS, OPENINGS OR COMBUSTIBLE ROOF EAVE LINES UNLESS AREAS CONTAINING DUMPSTERS ARE PROTECTED BY AN APPROVED SPRINKLER SYSTEM PER CALIFORNIA FIRE CODE, SECTION 304.3.3.
7. ROADS MUST BE CONSTRUCTED OF A MATERIAL WHICH PROVIDES AN ALL WEATHER DRIVING SURFACE AND CAPABLE OF SUPPORTING THE 70,000 POUND IMPOSED LOAD FOR THE FIRE APPARATUS. CALCULATIONS STAMPED AND SIGNED BY A REGISTERED ENGINEER SHALL CERTIFY THAT THE PROPOSED SURFACE MEETS THE ABOVE CRITERIA. CALIFORNIA FIRE CODE, SECTION 503.2.3.
8. ALL EXIT DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT. EXIT SIGNS SHALL BE PROVIDED AT ALL EXITS AS REQUIRED BY CALIFORNIA BUILDING CODE, CHAPTER 10. ALL DOOR SWINGS SERVING AN OCCUPANT LOAD OF 50 OR GREATER SHALL SWING IN THE DIRECTION OF TRAVEL.
9. PROVIDE EXIT ILLUMINATION PER THE REQUIREMENTS OF C.B.C., CHAPTER 10.
10. PROVIDE INFORMATION INDICATING THAT VEHICULAR/PEDESTRIAN GATES ARE PROVIDED WITH EITHER A KNOX PADLOCK OR NON-CASE-HARDENED, FRANGIBLE PADLOCK/CHAIN THAT CAN BE CUT WITH BOLT CUTTERS. COORDINATE WITH LOCAL AHJ.
11. COMPLY WITH CFC CHAPTER 33 FOR FIRE SAFETY DURING DEMOLITION AND CONSTRUCTION.

ACCESSIBILITY GENERAL NOTES

1. SLOPE. THE RUNNING SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:20. THE CROSS SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:48. (CBC 11B-40.3.3)
2. LANDINGS. RAMPS SHALL HAVE LANDINGS AT THE TOP AND THE BOTTOM OF EACH RAMP RUN. (CBC 11B-405.7) CHANGE OF DIRECTION. RAMP THAT CHANGE DIRECTION BETWEEN RUNS AT LANDINGS SHALL HAVE A CLEAR LANDING 60 INCHES MINIMUM BY 72 INCHES MINIMUM IN THE DIRECTION OF DOWNWARD TRAVEL FROM THE UPPER RAMP RUN. (CBC 11B-405.7.4)
3. ALL BUILDING ENTRANCES THAT ARE ACCESSIBLE TO AND USEABLE BY PERSONS WITH DISABILITIES SHALL BE IDENTIFIED WITH AT LEAST ONE STANDARD SIGN DISPLAYING THE INTERNATIONAL SYMBOL OF ACCESSIBILITY AND WITH ADDITIONAL DIRECTIONAL SIGNS, AS REQUIRED, TO BE VISIBLE TO PERSONS ALONG APPROACHING PEDESTRIAN WAYS.
4. IF THE BUILDING INSPECTOR DETERMINES NONCOMPLIANCE WITH ANY ACCESSIBILITY PROVISIONS, HE/SHE SHALL REQUIRE COMPLETE DETAILED PLANS CLEARLY SHOWING ALL EXISTING NON-COMPLYING CONDITIONS AND THE PROPOSED MODIFICATIONS TO MEET CURRENT ACCESSIBILITY PROVISIONS AFFECTED BY THE REMODEL (INCLUDING SITE PLAN, FLOOR PLANS, DETAILS, ETC..) THE PLANS MUST BE STAMPED BY THE FIELD INSPECTOR AND RESUBMITTED TO THE BUILDING DEVELOPMENT REVIEW DIVISION.
5. WALKS, SIDEWALKS, AND PEDESTRIAN WAYS SHALL BE FREE OR GRATINGS WHEVER POSSIBLE. FOR GRATINGS LOCATED ON THE THE SURFACES OF ANY PEDESTRIAN WAY, IN THE PATH OF TRAVEL, GRID/OPENINGS SHALL BE LIMITED TO ½" MAXIMUM IN THE DIRECTION OF TRAVEL IF SUCH CONDITIONS OCCUR.
6. MINIMUM CLEAR WIDTH OF AN ACCESSIBLE ROUTE SHALL NOT BE LESS THAN 36", EXCEPT AT DOORS.
7. ABRUPT CHANGES IN LEVEL ALONG THE PATH OF TRAVEL SHALL NOT EXCEED ¼" LEVEL CHANGES BETWEEN ¼"-1/2" ARE BEVELED WITH A MAXIMUM GRADIENT OF 1-2 (50% SLOPE)
8. SIDEWALK AND WALK SLOPE IN THE DIRECTION OF TRAVEL SHALL NOT EXCEED 1.20 GRADIENT (5%) AND CROSS SLOPE SHALL NOT EXCEED 1:50 GRADIENT (2%)
9. DOORS THAT ENCROACH INTO WALKWAYS SHALL HAVE A MINIMUM 60"X60" LEVEL LANDING ARE WITH SLOPES NO LESS THAN 1:50 GRADIENT (2%) IN ANY DIRECTION/ LEVEL LANDING AREAS SHALL EXTEND A MINIMUM OF 24" BEYOND STRIKE EDGE OF DOOR. DOORS THAT SWING AWAY FROM WALK SHALL HAVE A LEVEL LANDING AREA A MINIMUM OF 48" WIDE X 44" DEEP WITH SLOPE LESS THAN 1:50 GRADIENT (2%) IN ANY DIRECTION.
10. ALL SIDEWALKS, WALKS, AND PEDESTRIAN WAYS SHALL BE AT LEAST AS SLIP RESISTANT AS THAT DESCRIBED AS A MEDIUM SALTED FINISH.

APPLICABLE CODES

BUILDING CODES:

APPLICABLE CODE AS OF JANUARY 1, 2014

Part 1	2013 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE, TITLE 24 C.C.R.
Part 2	2013 CALIFORNIA BUILDING CODE, TITLE 24 C.C.R. (2012 INTERNATIONAL BUILDING CODE OF THE INTERNATIONAL CODE COUNCIL, WITH CALIFORNIA 2013 AMENDMENTS)
Part 3	2013 CALIFORNIA ELECTRICAL CODE, TITLE 24 C.C.R. (2011 NATIONAL ELECTRICAL CODE OF THE NATIONAL FIRE PROTECTION ASSOCIATION, NFPA AND 2013 CALIFORNIA AMENDMENTS)
Part 4	2013 CALIFORNIA MECHANICAL CODE, TITLE 24 C.C.R. (2012 UNIFORM MECHANICAL CODE OF THE INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS, IAPMO AND 2013 CALIFORNIA AMENDMENTS)
Part 5	2013 CALIFORNIA PLUMBING CODE, TITLE 24 C.C.R. (2012 UNIFORM PLUMBING CODE OF THE INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS, IAPMO AND 2013 CALIFORNIA AMENDMENTS)
Part 6	2013 CALIFORNIA ENERGY CODE, TITLE 24 C.C.R.
Part 7	CURRENTLY VACANT
Part 8	2013 CALIFORNIA HISTORICAL BUILDING CODE, TITLE 24 C.C.R.
Part 9	2013 CALIFORNIA FIRE CODE, TITLE 24 C.C.R. (2012 INTERNATIONAL FIRE CODE OF THE INTERNATIONAL CODE COUNCIL)
Part 10	2013 CALIFORNIA EXISTING BUILDING CODE, TITLE 24 C.C.R. (2012 INTERNATIONAL EXISTING BUILDING CODE OF THE INTERNATIONAL CODE COUNCIL, WITH AMENDMENTS)
Part 11	2013 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN CODE), TITLE 24 C.C.R.
Part 12	2013 CALIFORNIA REFERENCE STANDARDS CODE, TITLE 24 C.C.R.

PARTIAL LIST OF APPLICABLE STANDARDS:

2013 CALIFORNIA BUILDING CODE (FOR SFM) REFERENCED STANDARDS CHAPTER 35

NFPA 13	AUTOMATIC SPRINKLER SYSTEMS (CALIFORNIA AMENDED)	2013 EDITION
NFPA 14	STANDPIPE SYSTEMS (CALIFORNIA AMENDED)	2013 EDITION
NFPA 17	DRY CHEMICAL EXTINGUISHING SYSTEMS	2013 EDITION
NFPA 17A	WET CHEMICAL EXTINGUISHING SYSTEMS	2013 EDITION
NFPA 20	STATIONARY PUMPS	2013 EDITION
NFPA 24	PRIVATE FIRE SERVICE MAINS (CALIFORNIA AMENDED)	2013 EDITION
NFPA 72	NATIONAL FIRE ALARM AND SIGNALING CODE(CALIFORNIA AMENDED) (NOTE: SEE UL STANDARD 1971 FOR "VISUAL DEVICES")	2013 EDITION
NFPA 80	FIRE DOOR AND OTHER OPENING PROTECTIVES	2013 EDITION
NFPA 253	CRITICAL RADIANT FLUX OF FLOOR COVERING SYSTEMS	2006 EDITION
NFPA 2001	CLEAN AGENT FIRE EXTINGUISHING SYSTEMS (CALIFORNIA AMENDED)	2012 EDITION

PROJECT DIRECTORY

OWNER

SAGE HILL SCHOOL

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PH:
CONTACT:

ARCHITECT/STRUCTURAL ENGINEER/MECHANICAL ENGINEER PLUMBING ENGINEER/ELECTRICAL ENGINEER/ LANDSCAPE ARCHITECT

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CONTACT: TRAVIS RICE (LANDSCAPE ARCHITECT)
CONTACT: KATHEREEN SHINKAI (CIVIL ENGINEER)

SCOPE OF WORK

CONSTRUCTION OF NEW TENNIS COURTS WITH SPORTS LIGHTING. SCOPE INCLUDES CONSTRUCTION OF SEATING, RETAINING WALLS, AND HARDSCAPE . IRRIGATION AND PLANTING WILL ALSO BE INSTALLED.

ADD'L ACCESSIBILITY NOTES

DOOR AND GATE HARDWARE: (ALL REQUIREMENTS BELOW SHALL APPLY TO GATES AS WELL)

- DOORS AND DOORWAYS THAT ARE PART OF AN ACCESSIBLE ROUTE SHALL COMPLY WITH CBC SECTIONS 11B-404.
- HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERABLE PARTS ON ACCESSIBLE DOORS SHALL COMPLY WITH CBC SECTION 11B-309.4 AND SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. OPERABLE PARTS OF SUCH HARDWARE SHALL BE 34" MINIMUM AND 44" MAXIMUM ABOVE FINISH FLOOR OR GROUND. WHERE SLIDING DOORS ARE IN THE FULLY OPEN POSITION, OPERATING HARDWARE SHALL BE EXPOSED AND USABLE FORM BOTH SIDE. CBC SECTION 11B-404.2.7
- DOOR CLOSING SPEED SHALL BE AS FOLLOWS: CBC SECTION 11B-404.2.8
  A. CLOSER SHALL BE ADJUSTED SO THAT THE REQUIRED TIME TO MOVE A DOOR FROM AN OPEN POSITION OF 90 DEGREES TO A POSITION OF 12 DEGREES FROM THE LATCH IS 5 SECONDS MINIMUM.
  B. SPRING HINGES SHALL BE ADJUSTED SO THAT THE REQUIRED TIME TO MOVE A DOOR FROM AN OPEN POSITION OF 70 DEGREES TO THE CLOSED POSITION IS 1.5 SECONDS MINIMUM.
- THRESHOLDS SHALL COMPLY WITH CBC SECTION 11B-404.2.5.

SIGNAGE AND GRAPHICS:
RAISED CHARACTERS SHALL COMPLY WITH CBC SECTION 11B-703.2:

- DEPTH: IT SHALL BE 1/32 INCH (0.8 MM) MINIMUM ABOVE THEIR BACKGROUND AND SHALL BE SANS SERIF UPPERCASE AND BE DUPLICATED IN BRAILLE.
- HEIGHT: IT SHALL BE 5/8 INCH (15.9 MM) MINIMUM AND 2 INCHES (51 MM) MAXIMUM BASED ON THE HEIGHT OF THE UPPERCASE LETTER "I". CBC SECTION 11B-703.2.5
- FINISH AND CONTRAST: CHARACTERS AND THEIR BACKGROUND SHALL HAVE A NON-GLARE FINISH. CHARACTER SHALL CONTRAST WITH THEIR BACKGROUND WITH EITHER LIGHT CHARACTERS ON A DARK BACKGROUND OR DARK CHARACTERS ON A LIGHT BACKGROUND. CBC SECTION 11B-703.5.1
- PROPORTIONS: IT SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 60 % MINIMUM AND 110 % MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I". STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 15 % MAXIMUM OF THE HEIGHT OF THE CHARACTER. CBC SECTIONS 11B-703.4 AND 11B-703.2.6
- BRAILLE: IT SHALL BE CONTRACTED (GRADE 2) AND SHALL COMPLY WITH CBC SECTIONS 11B-703.3 AND 11B-703.4. BRAILLE DOTS SHALL HAVE A DOMED AND ROUNDED SHAPE AND SHALL COMPLY WITH CBC TABLE AND FIGURE 11B-703.3.1.
- MOUNTING HEIGHT: A TACTILE SIGN SHALL BE LOCATED 48" MINIMUM TO THE BASELINE OF THE LOWEST BRAILLE CELLS AND 60" MAXIMUM TO THE BASELINE OF THE HIGHEST LINE OF RAISED CHARACTERS ABOVE THE FINISH FLOOR OR GROUND SURFACE.
- MOUNTING LOCATION: A TACTILE SIGN SHALL BE LOCATED ON THE APPROACH SIDE, AS ONE ENTERS OR EXITS ROOMS OR SPACE, AND BE REACHED WITHIN 0" OF THE REQUIRED CLEAR FLOOR SPACE PER CBC SECTION AND FIGURE 11B -703.4.2 AS FOLLOWS:
  A. A CLEAR FLOOR SPACE OF 18' X 18" MINIMUM, CENTERED ON THE TACTILE CHARACTERS, SHALL BE PROVIDED BEYOND THE ARC OF ANY DOOR SWINGS BETWEEN THE CLOSED POSITION AND 45 DEGREE OPEN POSITION.
  B. ON THE WALL AT THE LATCH SIDE OF A SINGLE DOOR.
  C. ON THE INACTIVE LEAF OF A DOUBLE DOOR WITH ONE ACTIVE LEAF.
  D. ON THE WALL AT THE RIGHT SIDE OF A DOUBLE DOOR WITH TWO ACTIVE LEAFS.
  E. ON THE NEAREST ADJACENT WALL WHERE THERE IS NO WALL SPACE AT THE LATCH SIDE OF A SINGLE DOOR OR NO SPACE AT THE RIGHT SIDE OF A DOUBLE DOOR WITH TWO ACTIVE LEAFS.

VISUAL CHARACTERS SHALL COMPLY WITH CBC SECTION 11B-703.5 AND SHALL BE 40" MINIMUM ABOVE FINISH FLOOR OR GROUND.
PICTOGRAMS SHALL COMPLY WITH CBC SECTION 11B-703.6.
SYMBOL OF ACCESSIBILITY SHALL COMPLY WITH CBC SECTION 11B-703.7.

ACCESSIBLE TOILET COMPARTMENTS:

- WHEELCHAIR ACCESSIBLE COMPARTMENT SHALL COMPLY WITH CBC SECTION 11B-604.8.1.
- TOE CLEARANCE FOR AT LEAST ONE SIDE PARTITION OF A WHEELCHAIR ACCESSIBLE COMPARTMENT SHALL COMPLY WITH CBC SECTION AND FIGURE 11B-604.8.1.4. IT SHALL BE 9" HIGH MINIMUM ABOVE THE FINISH FLOOR AND 6" DEEP MINIMUM BEYOND THE COMPARTMENT SIDE FACE OF THE PARTITION, EXCLUSIVE OF PARTITION SUPPORT MEMBERS. IT SHALL BE 12" HIGH MINIMUM ABOVE THE FINISH FLOOR FOR CHILDREN'S USE. PARTITION COMPONENTS AT TOE CLEARANCES SHALL BE SMOOTH WITHOUT SHARP EDGES OR ABRASIVE SURFACES. TOE CLEARANCE AT THE SIDE PARTITION IS NOT REQUIRED IN A COMPARTMENT GREATER THAN 66" WIDE.
- DOOR AND DOOR HARDWARE FOR ACCESSIBLE COMPARTMENTS SHALL BE SELF-CLOSING AND SHALL COMPLY WITH CBC SECTION 11B-404 EXCEPT FOR CLEARANCE BETWEEN THE DOOR SIDE OF THE AMBULATORY ACCESSIBLE COMPARTMENT AND ANY OBSTRUCTION SHALL BE 44" PER CBC FIGURE 11B-604.8.2.
- A DOOR PULL COMPLYING WITH CBC SECTION 11B-404.2.7 SHALL BE PLACED ON BOTH SIDES OF THE DOOR NEAR THE LATCH.

EXTERIOR IMPROVEMENTS

- FOR EVERY SIX OR FRACTION OF SIX ACCESSIBLE PARKING SPACES, AT LEAST ONE SHALL BE AN ACCESSIBLE VAN PARKING SPACE. CBC SECTION 11B-208.2.4
- MINIMUM NUMBER OF REQUIRED ACCESSIBLE PARKING SPACES SHALL BE PROVIDED IN ACCORDANCE WITH CBC TABLE 11B-208.2 FOR EACH PARKING FACILITY PROVIDED.

DETECTABLE WARNING SURFACES: POSSIBLY

- DETECTABLE WARNING SURFACES SHALL DIFFER FROM ADJOINING SURFACES IN RESILIENCY OR SOUND-ON-CANE CONTACT. CBC SECTION 11B-705.1.1.4.
- PROVIDE MINIMUM 5 YEAR WARRANTY PER DSA BULLETIN 10/31/02, REVISED 04/09/08.

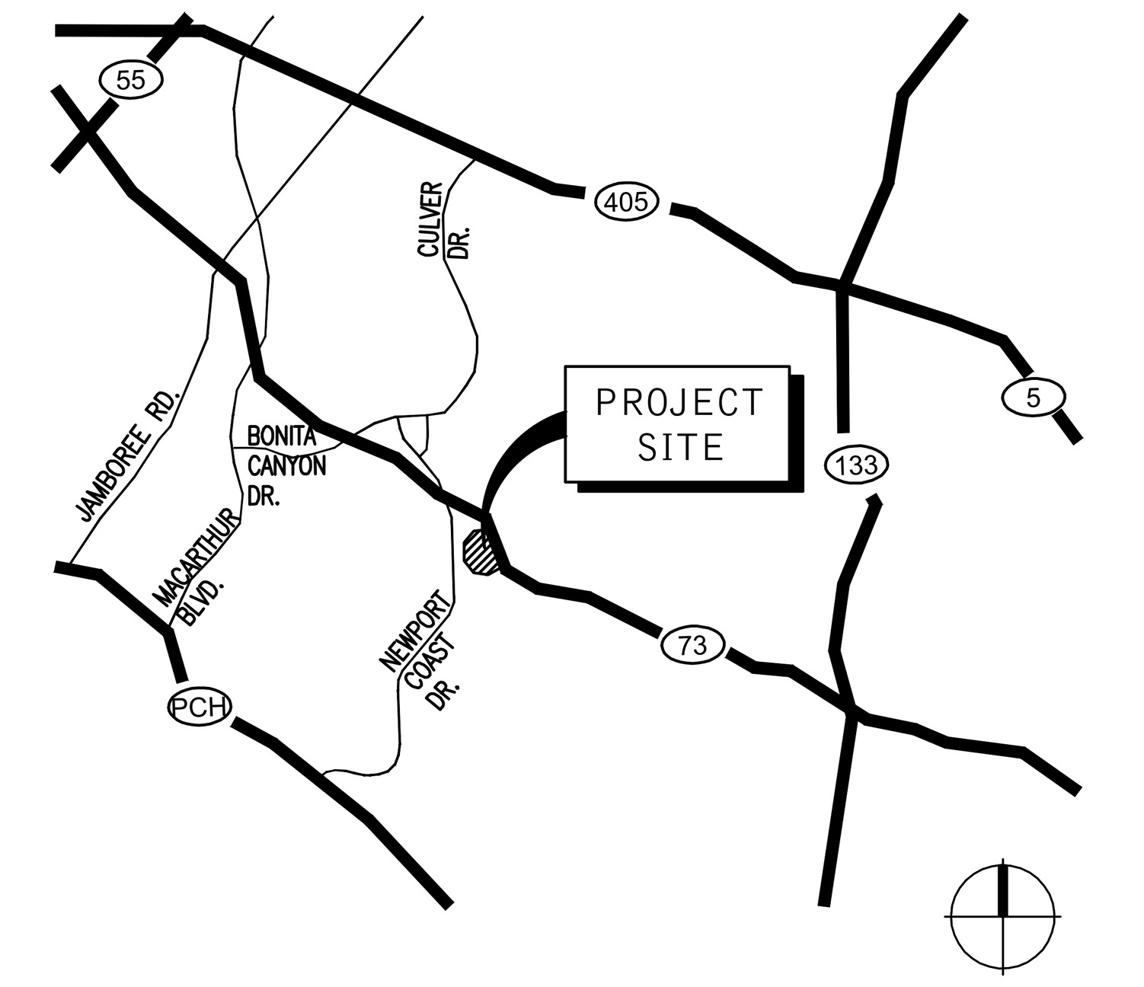
32 31 00 FENCES, GATES AND HARDWARE:

- GATES THAT ARE PART OF THE ACCESSIBLE ROUTE SHALL MEET ALL THE REQUIREMENTS OF AN ACCESSIBLE DOOR IN COMPLIANCE WITH CBC SECTION 11B-404.

SHEET INDEX

DATE ISSUED	DRAWING IN THIS ISSUE	REVISION NO.		
				GENERAL
02/24/15			G-0.00	COVER SHEET
02/24/15			G-0.01	GENERAL PROJECT INFORMATION
				CIVIL
02/24/15			C1.01	DEMOLITION PLAN
02/24/15			C2.01	GRADING PLAN
02/24/15			C3.01	UTILITY PLAN
				LANDSCAPE
02/24/15			L0.1	LANDSCAPE NOTES AND SCHEDULES
02/24/15			L1.1	MATERIALS PLAN
02/24/15			L4.1	SITE SECTIONS/ELEVATIONS
02/24/15			L7.1	PLANTING PLAN
				ARCHITECTURAL
02/24/15			A-1.01	OVERALL SITE PLAN
				STRUCTURAL
02/24/15			S0.1	GENERAL NOTES
02/24/15			S1.1	TYPICAL FOUNDATION, MISC. SITE AND PT DETAILS
02/24/15			S1.2	PT SLAB PLAN
				ELECTRICAL
02/24/15			E0.10	SYMBOL LIST
02/24/15			E0.11	SINGLE LINE, LOAD SCHED. & FEEDER SCHED.
02/24/15			E1.00	TENNIS COURT LIGHTING PLAN

VICINITY MAP



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Sage Hill
Tennis Complex

20402 Newport Coast Drive
Newport Beach, CA 92657

Developed for
Sage Hill School

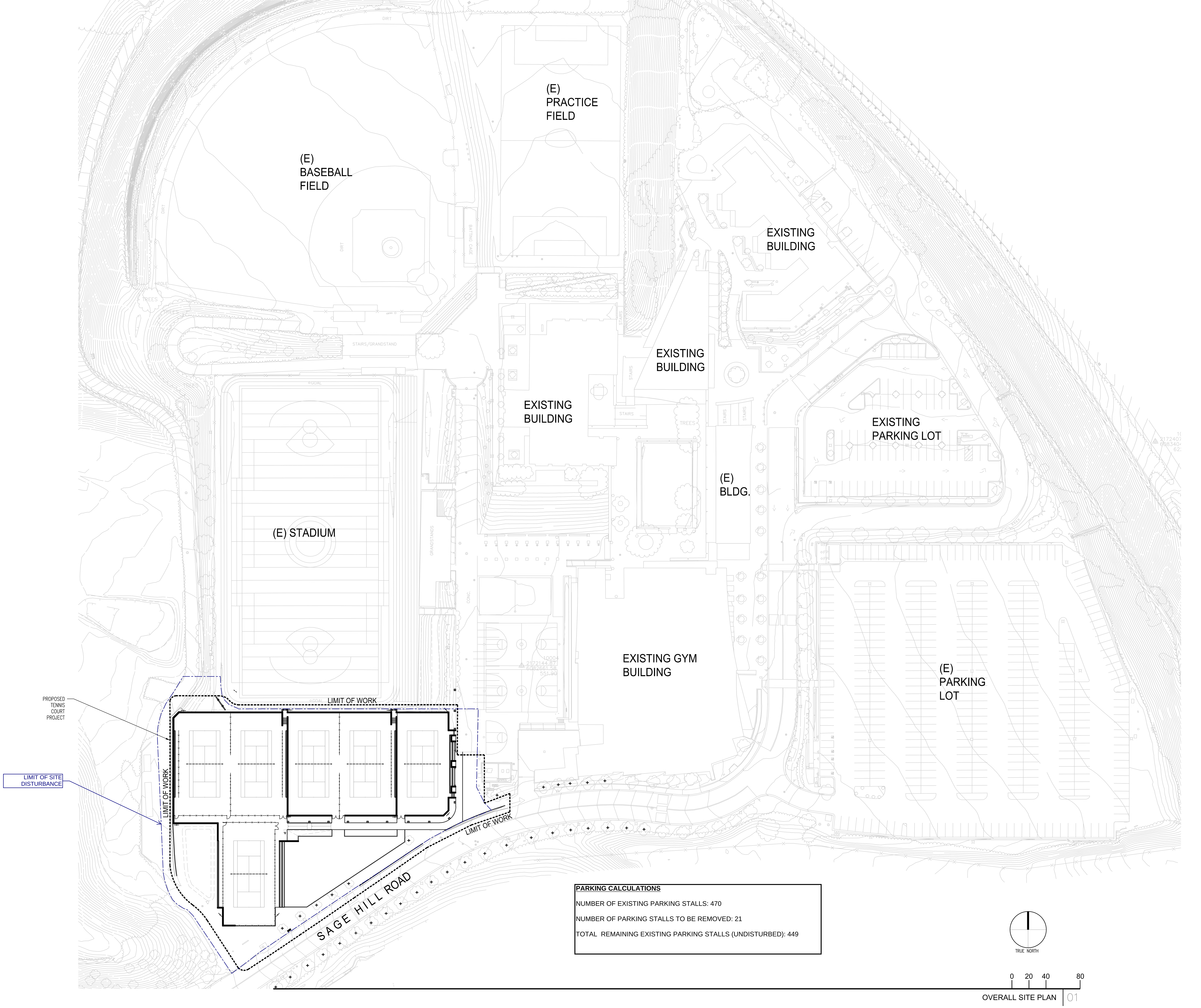
Revision	Date

Submittal	Date
SCHEMATIC DESIGN	02 - 24 -15

Job. No.	14248.10
Date	02-24-15
Checked by	
Scale	1" = 20'

GENERAL PROJECT NOTES

G0.01


(E)
PRACTICE
FIELD
(E)
BASEBALL
FIELD
EXISTING
BUILDING
EXISTING
BUILDING
EXISTING
BUILDING
EXISTING
PARKING LOT
(E)
BLDG.
(E) STADIUM
EXISTING GYM
BUILDING
(E)
PARKING
LOT
PROPOSED
TENNIS
COURT
PROJECT
LIMIT OF SITE
DISTURBANCE
LIMIT OF WORK
LIMIT OF WORK
LIMIT OF WORK
SAGE HILL ROAD
PARKING CALCULATIONS
NUMBER OF EXISTING PARKING STALLS: 470
NUMBER OF PARKING STALLS TO BE REMOVED: 21
TOTAL REMAINING EXISTING PARKING STALLS (UNDISTURBED): 449
TRUE NORTH
0
20
40
80
OVERALL SITE PLAN
01

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Date	2-24-15
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Scale	1" = 40'

OVERALL
SITE PLAN

A1.00

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REGISTERED LANDSCAPE ARCHITECT
R. TRAVIS RICE NO. 5512
STATE OF CALIFORNIA
SIGNATURE
03-31-2017
RENEWAL DATE
05/13/2015
DATE

Sage Hill
Tennis Complex
20402 Newport Coast Drive
Newport Beach, CA 92657

Developed for
Sage Hill School

Revision	Date

Submittal	Date
SCHEMATIC DESIGN	03/30/15
CITY SUBMITTAL	05/13/2015

Job. No.	14248.10
Date	05/13/2015
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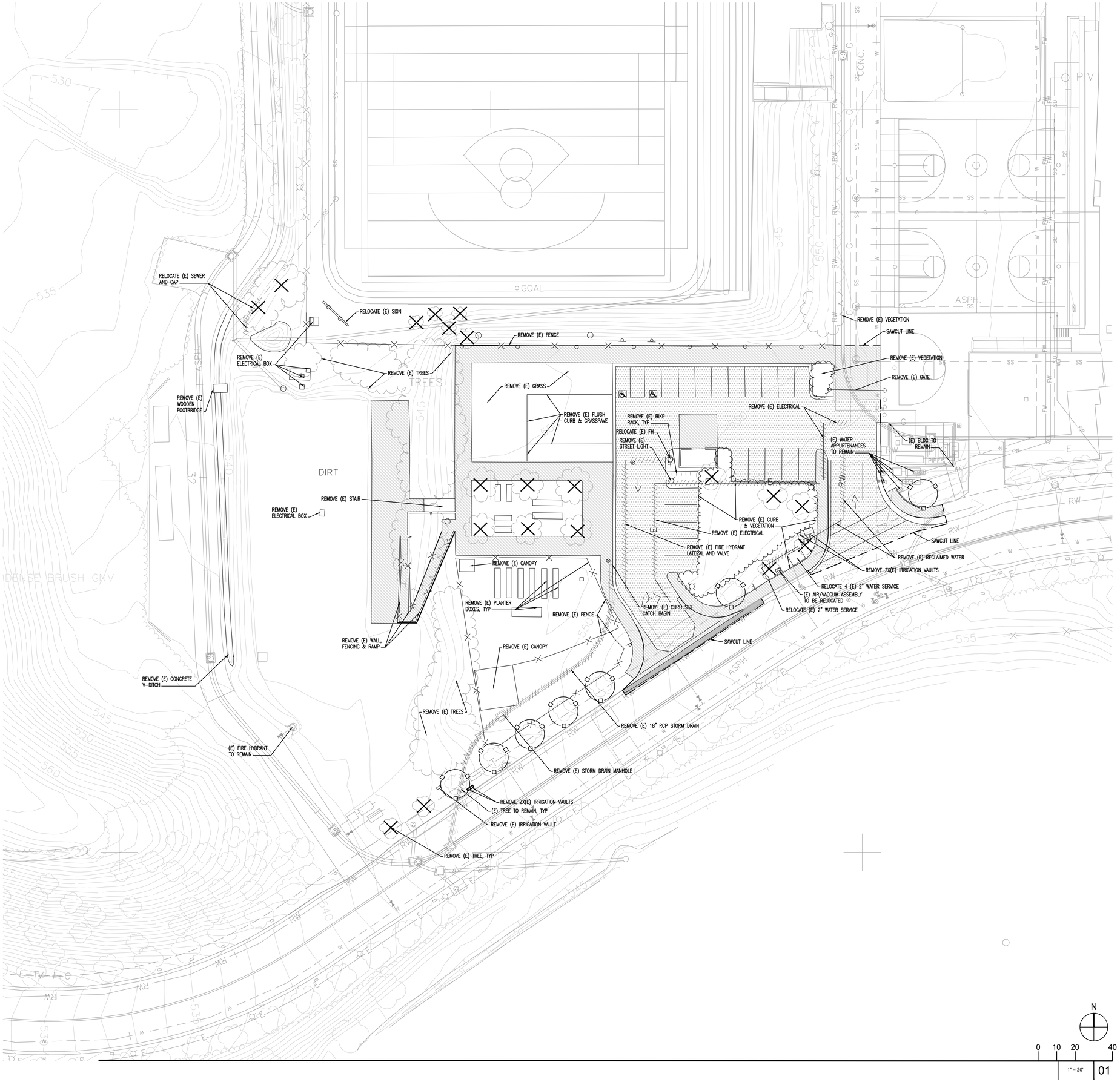
Scale	1" = 60'

OVERALL
SITE PLAN

A1.01



DEMOLITION LEGEND

LABEL	DESCRIPTION
03	REMOVE (E) CONCRETE PAVEMENT/SIDEWALK
04	REMOVE (E) AC PAVEMENT
	REMOVE (E) UTILITY, SEE DEMOLITION NOTES 2, 6, AND 7.
	REMOVE (E) TREE, SEE DEMOLITION NOTE 3.
	(E) TREE TO REMAIN AND BE PROTECTED, SEE DEMOLITION NOTE 3.
	APPROXIMATE LIMIT OF WORK LINE, SAWCUT (E) PAVEMENT AS NEEDED. SEE DEMOLITION NOTE 4

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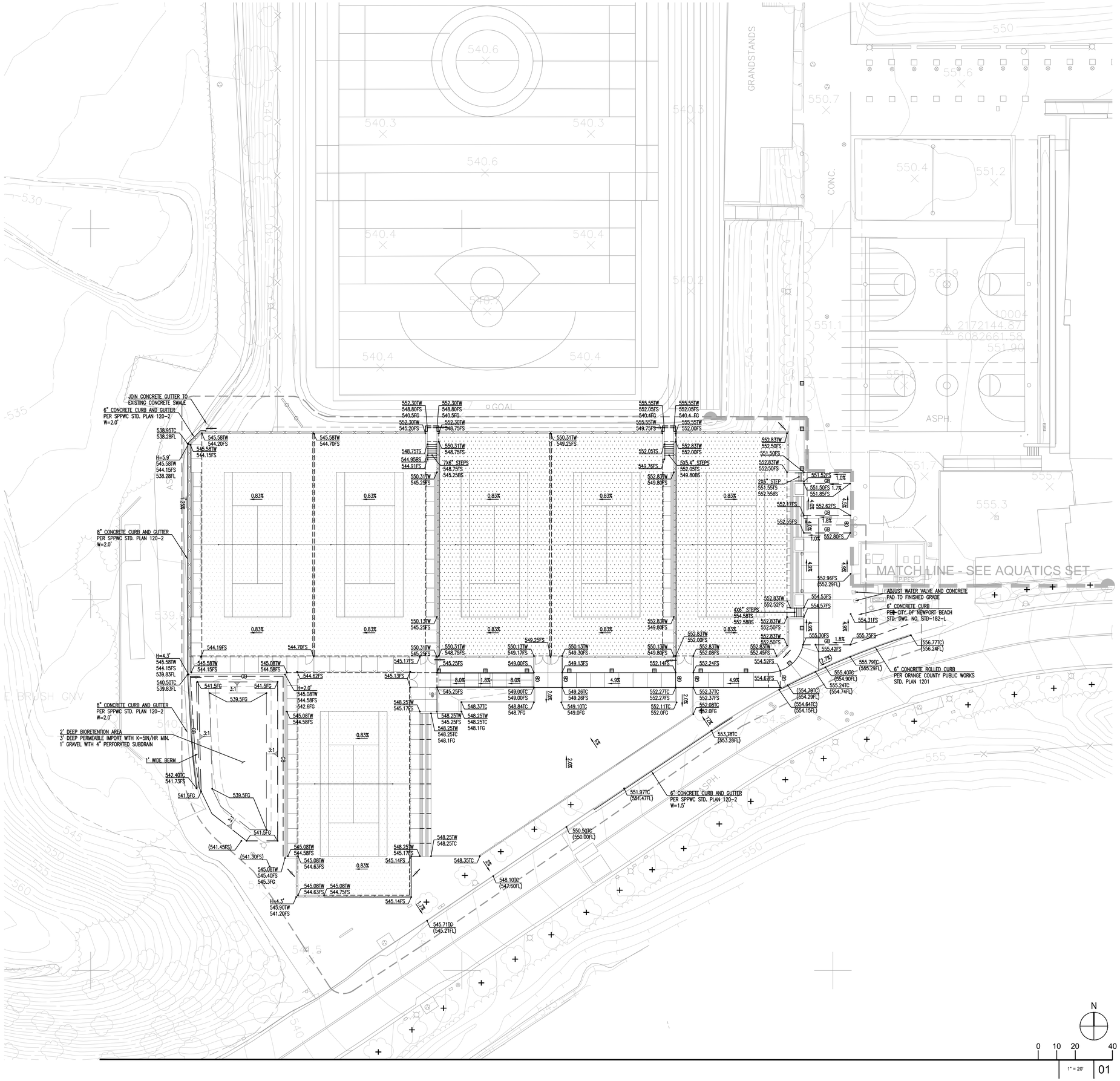
Scale	1"=20'

DEMOLITION PLAN

C1.01



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Date	02/23/15
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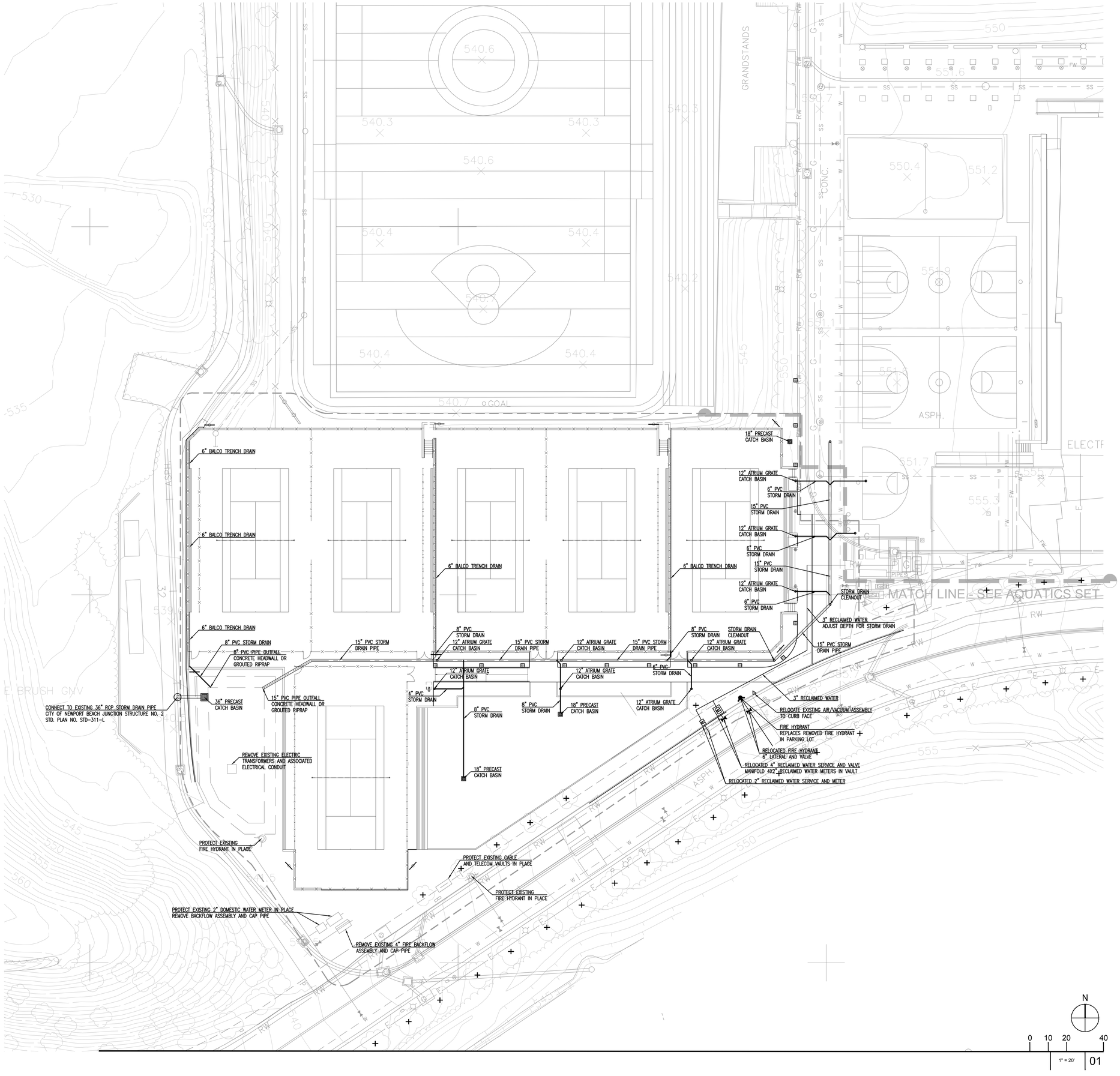
Scale	1"=20'

GRADING PLAN

C2.01



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Newport Beach, CA 92657

Developed for
Sage Hill School

Revision	Date

Submittal	Date

Job. No.	14248.10
Date	02/23/15
Checked by	AC
Scale	1"=20'

UTILITY PLAN

C3.01

ABBREVIATIONS

&	AND	HDR	HEADER
∠	ANGLE	HT.	HEIGHT
@	AT	LT.	LIGHT
℄	CENTERLINE		
ϕ	DIAMETER OR ROUND	MAX.	MAXIMUM
#	POUND OR NUMBER	MET.	METAL
ADJ.	ADJACENT	MFR.	MANUFACTURER
AGGR.	AGGREGATE	MIN.	MINIMUM
AL.	ALUMINUM	MTD.	MOUNTED
APPROX.	APPROXIMATE	MTL.	MATERIAL
ARCH.	ARCHITECTURAL	N.I.C.	NOT IN CONTRACT
A.C.	ASPHALT	N.T.S.	NOT TO SCALE
ACC.	ACCESSIBLE		
		O.C.	ON CENTER
B.C.R.	BEGINNING OF CURVE RADIUS	O.D.	OUTSIDE DIAMETER(DIM.)
B.O.C.	BACK OF CURB		
B.O.W.	BOTTOM OF WALL	PA	PLANTING AREA
B.O.S.	BOTTOM OF SLOPE	PED	PEDESTRIAN
BLDG.	BUILDING	PRCST.	PRECAST
BLK.	BLOCK	P.I.P.	POURED IN PLACE
		P.O.T.	POINT OF TANGENCY
C.E.	CIVIL ENGINEER	P.T.D.F.	PRESSURE TREATED DOUGLAS FIR
C.I.P.	CAST IN PLACE		
CLKG.	CAULKING		
CMU.	CONCRETE MASONRY UNIT	QTY	QUANTITY
CONC.	CONCRETE		
CONSTR.	CONSTRUCTION	R.	RISER
CONT.	CONTINUOUS	RAD.	RADIUS
CTR.	CENTER	REINF.	REINFORCED
		REQ.	REQUIRED
D.A.	DISABLED ACCESS		
DET.	DETAIL	SCHED.	SCHEDULE
DIA.	DIAMETER	SHT.	SHEET
DIM.	DIMENSION	SPEC.	SPECIFICATION
DN.	DOWN	S.S.	STAINLESS STEEL
DWGS	DRAWINGS	STD.	STANDARD
		STRL.	STRUCTURAL
E.J.	EXPANSION JOINT		
EL.	ELEVATION	T.	TREAD
ELEC.	ELECTRICAL	T.C.	TOP OF CURB
EQ.	EQUAL	T.O.S.	TOP OF SLOPE
EXP.	EXPANSION	T.O.W.	TOP OF WALL
EXT.	EXTERIOR	TYP.	TYPICAL
		TBS.	TO BE SELECTED
F.G.	FINISH GRADE		
F.S.	FINISH SURFACE	VEH	VEHICULAR
F.O.W.	FACE OF WALL	VERT.	VERTICAL
F.O.B.	FACE OF BUILDING	W/	WITH
F.O.C.	FACE OF CURB	W/O	WITHOUT
GA.	GAUGE	WD	WIDE
GALV.	GALVANIZED		
GND.	GROUND		
GR.	GRADE		

PLANTING NOTES

1. REFER TO CIVIL ENGINEER'S UTILITY AND GRADING PLANS FOR UTILITY LOCATIONS, TREE SUBDRAINAGE STUBOUTS (IF REQUIRED), AND FINAL GRADING. IF ACTUAL SITE CONDITIONS VARY FROM WHAT IS SHOWN ON THE LANDSCAPE ARCHITECT'S PLANS, THE CONTRACTOR SHALL CONTACT THE OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT FOR DIRECTION AS TO HOW TO PROCEED.
2. VERIFY LOCATIONS OF ALL PERTINENT SITE IMPROVEMENTS INSTALLED AS PART OTHER PLANS. IF ANY PART OF THIS PLAN CANNOT BE FOLLOWED DUE TO SITE CONDITIONS, CONTACT THE LANDSCAPE ARCHITECT FOR INSTRUCTION PRIOR TO COMMENCING WORK.
3. EXACT LOCATIONS OF PLANT MATERIALS SHALL BE REVIEWED BY THE LANDSCAPE ARCHITECT IN THE FIELD PRIOR TO INSTALLATION. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO ADJUST PLANTS TO EXACT LOCATION IN FIELD.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL PLANT COUNTS AND SQUARE FOOTAGES. QUANTITIES SHOWN ON PLANS TAKE PRECEDENCE OVER WRITTEN QUANTITIES IN "PLANTING LEGEND."
5. PROVIDE MATCHING FORMS AND SIZES FOR ALL PLANT MATERIALS WITHIN EACH SPECIES AND SIZE DESIGNATED ON THE DRAWINGS.
6. ALL SHRUBS TO BE ALIGNED AND EQUALLY SPACED, IN ALL DIRECTIONS, AS DESIGNATED PER THESE NOTES AND DRAWINGS.
7. FINISH GRADES OF ALL TURF AREAS SHALL BE (1") BELOW ADJACENT CURB OR PAVEMENT. FINISH GRADES OF ALL SHRUB AREAS SHALL BE (1-1/2") BELOW ADJACENT CURB, PAVEMENT, OR HEADER.
8. CONTRACTOR SHALL SUBMIT FOR APPROVAL AREPRESENTATIVE PHOTO OF ALL SHRUBS, GROUNDCOVER AND VINES.
   TREE PHOTOS SHOULD INCLUDE A PERSON FOR SCALE PURPOSES. ALL PLANT MATERIAL SHALL BE OF A QUALITY AS DETERMINED BY THE LANDSCAPE ARCHITECT. MATERIAL FOUND UNSUITABLE FOR THE DESIGN OR SPECIFICATION INTENT WILL BE REJECTED.
9. PROVIDE 6" CONCRETE MOW CURB AS DIVIDER BETWEEN ALL TURF AND SHRUB/GROUNDCOVER AREAS IN ADDITION TO AREAS INDICATED ON THE DRAWINGS.
10. PROVIDE A (2") LAYER OF WOOD MULCH AT TREE AND SHRUB PLANTING AREAS.
11. INSTALL JUTE MESH ON ALL SLOPES (3:1) OR GREATER. SEE SPECIFICATIONS FOR INSTALLATION METHOD AND ADDITIONAL INFORMATION.
12. CONTRACTOR SHALL CONDUCT AGRICULTURAL SUITABILITY AND FERTILITY SOILS TESTING PER SOIL PREPARATION SPECIFICATION. ANALYSIS SHALL INCLUDE RECOMMENDATIONS FOR SOIL PREPARATION AND BACKFILL MIX AS WELL AS RECOMMENDATIONS FOR POST MAINTENANCE FERTILIZATION. SUBMIT SOILS ANALYSES AND SAMPLES OF AMENDMENTS TO LANDSCAPE ARCHITECT FOR REVIEW PRIOR TO SOIL PREPARATION.
13. PROVIDE ROOT BARRIERS IN ADDITION TO THOSE INDICATED ON THE PLANS FOR ALL TREES WITHIN 5' OF ANY HARDSCAPE.
14. LANDSCAPE MAINTENANCE PERIOD IS 90 DAYS.

LAYOUT AND MATERIALS NOTES

1. THE CONTRACTOR SHALL LAYOUT AND FIELD VERIFY ALL DIMENSIONS OF DRIVEWAY, PLANTERS, WALKS, SLOPES, AND RELATED WORK PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNERS AUTHORIZED REP.
2. VERIFY LOCATIONS OF ALL SITE IMPROVEMENTS INSTALLED AS PART OF OTHER PLANS. IF ANY PART OF THIS PLAN CANNOT BE FOLLOWED DUE TO SITE CONDITIONS, CONTACT THE OWNERS AUTHORIZED REP. FOR INSTRUCTION PRIOR TO BEGINNING WORK.
3. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALING.
4. THIS DRAWING INCLUDES THE LOCATION OF AREA DRAINS FOR REFERENCE. REFER TO RELATED CIVIL ENGINEERING DRAWINGS FOR CONSTRUCTION DETAILS AND UTILITY CONNECTIONS.
5. REFER TO ELECTRICAL ENGINEER'S DRAWINGS FOR LIGHT FIXTURE SCHEDULE AND CIRCUITRY AS NECESSARY.
6. REFER TO EARTHWORKS NOTES ON C0.01 AND SOIL ENGINEER'S GEOTECHNICAL REPORT FOR SUB-BASE MATERIALS AND COMPACTION.
7. WHERE DIMENSIONS ARE CALLED AS "EQUAL", ALL REFERENCED ITEMS SHALL BE SPACED EQUALLY, MEASURED TO THEIR CENTERLINES.
8. ALL MEASUREMENTS ARE TO FACE OF WALL, CURB OR OTHER FIXED SITE IMPROVEMENT, UNLESS OTHERWISE NOTED. DIMENSIONS TO CENTERLINES AS INDICATED.
9. INSTALL ALL INTERSECTING ELEMENTS AT 90 DEGREES TO EACH OTHER UNLESS OTHERWISE NOTED.
10. ALL DRAINS / BASINS SHOULD HAVE ATRIUM TYPE GRATES WITHIN SHRUBS/ GROUNDCOVER AREAS AND FLAT TYPE GRATES IN TURF AREAS.

LANDSCAPE GRADING AND DRAINAGE NOTES

1. REFER TO CIVIL ENGINEER'S GRADING PLANS FOR SITE GRADING, DRAINAGE, AND UTILITY LOCATIONS. IF ACTUAL SITE CONDITIONS VARY FROM WHAT IS SHOWN ON THE LANDSCAPE ARCHITECT'S PLANS, THE CONTRACTOR SHALL CONTACT THE OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT FOR DIRECTION AS TO HOW TO PROCEED.
2. REFER TO CIVIL ENGINEER'S DRAWINGS FOR SUBDRAINAGE POINT OF CONNECTION TO STORM DRAIN.
3. THE CONTRACTOR SHALL REQUEST OBSERVATION AS REQUIRED 48 HOURS ADVANCE OF PERFORMING WORK.
4. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (USA 800/422-5133) 48 HOURS PRIOR TO ANY EXCAVATION.
5. FIELD VERIFY EXISTING UNDERGROUND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION AND ELEVATION IN THE FIELD PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION.
6. NO CHANGE IN CONTRACT PRICE WILL BE ALLOWED FOR ACTUAL OR CLAIMED DISCREPANCY BETWEEN EXISTING GRADE AND THOSE SHOWN ON PLANS AFTER CONTRACTOR HAS ACCEPTED EXISTING GRADES AND MOVED ONTO THE SITE.
7. ALL PROPOSED GRADES ARE TO MEET AND BLEND IN WITH EXISTING GRADING AT PROJECT LIMIT AND EXISTING SIDEWALK. PRECISE ELEVATIONS INDICATED ON PLANS TO BE VERIFIED IN FIELD TO AS-BUILT CONDITION.
8. THE DEBRIS CREATED BY LANDSCAPE GRADING OPERATIONS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE LEGALLY DISPOSED OF OFF-SITE.
9. FINAL LANDSCAPE GRADING SHALL BE REVIEWED BY THE LANDSCAPE ARCHITECT IN THE FIELD PRIOR TO INSTALLATION OF PLANTING.

GENERAL NOTES

1. BASE INFORMATION INCLUDING THE LOCATION OF PROPERTY LINES, EASEMENTS, BUILDINGS, ROADS AND CURBS HAVE BEEN TAKEN FROM THE CIVIL ENGINEER'S DRAWINGS. REFER TO CIVIL ENGINEERING DRAWINGS FOR ADDITIONAL INFORMATION.
2. REFER TO THE CIVIL ENGINEER'S DRAWINGS FOR UTILITY INFORMATION INCLUDING STORM DRAIN, SEWER, WATER, ELECTRICAL, GAS, TELEPHONE AND CABLE TV.
3. REFER TO CITY AND/OR COUNTY STANDARD PLANS AND SPECIFICATIONS WHERE APPLICABLE.
4. VERIFY SITE INFORMATION, INCLUDING PROPERTY LINES, TOP AND BOTTOMS OF SLOPES, ROADWAY CURB AND GUTTERS, UTILITIES AND OTHER INFORMATION AFFECTING THE SCOPE OF WORK INCLUDED ON THESE DRAWINGS. IF ACTUAL SITE CONDITIONS VARY FROM WHAT IS SHOWN ON THE LANDSCAPE ARCHITECT'S PLANS, THE CONTRACTOR SHALL CONTACT THE OWNER'S REPRESENTATIVE AND THE LANDSCAPE ARCHITECT FOR DIRECTION ON HOW TO PROCEED.
5. EXCAVATION IN THE VICINITY OF UTILITIES AND EXISTING MATERIALS SHALL BE UNDERTAKEN WITH CARE. THE CONTRACTOR BEARS FULL RESPONSIBILITY FOR THIS WORK. ANY DAMAGE CAUSED BY ANY PERSON, VEHICLE, EQUIPMENT, OR TOOL RELATED TO THE EXECUTION OF THE CONTRACT SHALL BE REPAIRED IMMEDIATELY AT NO EXPENSE TO THE OWNER.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COORDINATION REQUIRED TO ACCOMPLISH ALL CONSTRUCTION OPERATIONS. ALL PIPING, CONDUIT, SLEEVES, ETC., SHALL BE SET IN PLACE PRIOR TO INSTALLATION OF CONSTRUCTION ITEMS.
7. CONTRACTOR SHALL BE RESPONSIBLE TO CONSULT WITH SITE SUPERINTENDENT, APPROPRIATE AGENCIES AND PLANS, FOR THE LOCATIONS OF ALL UNDER-GROUND UTILITIES, PIPES AND STRUCTURES. CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR ANY COST INCURRED DUE TO DAMAGE OF SAID UTILITIES.
8. CONTRACTOR SHALL NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGNED WHEN IT IS OBVIOUS THAT UNKNOWN OBSTRUCTIONS, AREA DISCREPANCIES AND/OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN. SUCH CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER'S AUTHORIZED REPRESENTATIVE. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATIONS.
9. CONTRACTOR IS RESPONSIBLE FOR REPLACEMENT OF ANY EXISTING MATERIALS THAT ARE DAMAGED DURING CONSTRUCTION.
10. PRIOR TO INSTALLATION OF ANY CONSTRUCTION ITEM, FORMS WITH STEEL IN PLACE AND COMPACTED SUBGRADE COMPLETE, SHALL BE OBSERVED AND REVIEWED BY THE LANDSCAPE ARCHITECT.
11. ALL WALLS AND WALKS SHOULD HAVE SMOOTH, CONTINUOUS CURVES AS INDICATED ON PLANS.
12. ALL PROPERTY LINES, LOT LINES, AND TOP OF SLOPE LINES SHALL BE VERIFIED PRIOR TO COMMENCING WORK.
13. ALL ELECTRICAL JUNCTION BOXES FOR LIGHTS SHALL BE IN PLANTING AREAS AND LOCATION REVIEWED BY THE LANDSCAPE ARCHITECT. STAKE LOCATION PRIOR TO INSTALLATION.
14. SEE CIVIL ENGINEER'S DRAWINGS FOR CURBS AND A/C PAVING.
15. REFER TO GRADING PLANS FOR ELEVATIONS AND LOCATION OF DRAINAGE STRUCTURES PRIOR TO INSTALLATION OF WALKS, FOOTINGS, AND OTHER STRUCTURES.
16. RAISE ALL VAULTS & UTILITY BOXES TO GRADE WITHIN LIMIT OF WORK. FIELD VERIFY PRIOR TO BID.
17. REFER TO GEOTECHNICAL REPORTS FOR ADDITIONAL INFORMATION. IF NOTES ON THE PLANS DIFFER FROM THE GEOTECHNICAL REPORT, PROVIDE THE MOST STRINGENT REQUIREMENT.

SCOPE OF WORK

CONSTRUCTION OF NEW TENNIS COURTS WITH SPORTS LIGHTING. SCOPE INCLUDES CONSTRUCTION OF SEATING, RETAINING WALLS, CONCRETE PAVING, PLANTING AND IRRIGATION.

SHEET INDEX

KEYNOTES

KEY NOTE	DESCRIPTION	DET/ SHT	COLOR / FINISH
1	CONCRETE PAVING		INTEGRAL COLOR/ SANDBLASTED
02	POST-TENSIONED CONCRETE SLAB		NATURAL GRAY/ MEDIUM BROOM
03	CONCRETE POUR BACK STRIP		NATURAL GRAY/ MEDIUM BROOM
04	CONCRETE MOW CURB		NATURAL GRAY/ MATCH EXISTING
05	CONCRETE RETAINING WALL		NATURAL GRAY/ LIGHT SANDBLAST
06	CONCRETE STAIRS		NATURAL GRAY/ LIGHT SANDBLAST
07	CONC. TERRACED SEATING WITH WOOD PLANKS		NATURAL GRAY/LT. SANDBLAST W/ IPE PLANKS
08	CONCRETE SEATWALL WITH WOOD PLANKS		NATURAL GRAY/LT. SANDBLAST W/ IPE PLANKS
09	CONCRETE CANTILEVERED OVERLOOK		NATURAL GRAY/ LIGHT SANDBLAST
10	WOOD BENCH		IPE PLANKS WITH TUBE STEEL SUPPORTS ATTACHED TO WALL
11	HANDRAIL AT STAIRS		GALVANIZED AND PAINTED, COLOR TBD
12	HANDRAIL AT RAMP		GALVANIZED AND PAINTED, COLOR TBD
13	4' HT. CHAINLINK FENCE		BLACK VINYL COATED
14	12' HT. CHAINLINK FENCE		BLACK VINYL COATED
15	CHAINLINK FENCE AT RETAINING WALL		BLACK VINYL COATED
16	CHAINLINK SINGLE GATE		BLACK VINYL COATED
17	CHAINLINK DOUBLE GATE		BLACK VINYL COATED
18	TENNIS COURT NET POST AND NETTING		SEE PLAY EQUIPMENT LEGEND
19	TENNIS COURT STRIPING		WHITE
20	COURT SURFACING		LIGHT GREEN FIELD DARK GREEN COURT
21	DRINKING FOUNTAIN / BOTTLE FILLING STATION		COLOR TBD
22	6" WIDE TRENCH DRAIN		ANODIZED ALUMINUM

REFERENCE KEYNOTES

KEY NOTE	DESCRIPTION	DET REF	COMMENT
A	EXISTING PAVING		PROTECT IN PLACE
B	EXISTING CURB/GUTTER		PROTECT IN PLACE
C	EXISTING FENCING		PROTECT IN PLACE
D	EXISTING TRENCH DRAIN		PROTECT IN PLACE
F	EXISTING SPORTS FIELD		PROTECT IN PLACE
G	EXISTING RUNNING TRACK		PROTECT IN PLACE
H	ROLLED CURB / GUTTER		PER CIVIL
J	CURB / GUTTER		PER CIVIL
K	RELOCATED SCOREBOARD		
L	EXISTING WALL		PROTECT IN PLACE

SITE LIGHTING LEGEND

SYM.	DESCRIPTION	DET/ REF	COMMENTS
⊕	BOLLARD LIGHT		COLOR: MATCH EXISTING
⁄	SPORTS LIGHTING		GALVANIZED STEEL TO MATCH EXISTING

NOTE: SEE ELECTRICAL PLANS FOR FIXTURES, LAMPS, AND SPECS.

SPORTS EQUIPMENT LEGEND

SYM.	DESC.	MANUF.	MODEL #	COLOR	FINISH/PTRN.	QTY.	DET.
NOT SHOWN	TENNIS POSTS/ NETS	PORTER ATHLETIC	00885-000 (POSTS) 02237-000 (NETS)	DARK GREEN POSTS NYLON NETS	DK GRN POSTS NYLON NETS	6 PAIRS POSTS, 6 NETS	XX/ LX.X
NOT SHOWN	WINDSCREEN	WEST COAST NETTING (WCN)	VCP-90 (SEE PLAN & ELEVATION SHTS. FOR LOCATION)	DARK GREEN	90% OPACITY	AS REQ.	PER MANUF.

NOTES: 1. ALL EQUIPMENT IS TO BE PROVIDED BY THE CONTRACTOR.
2. QUANTITIES SHOWN IN PLAY EQUIPMENT LEGEND ARE TOTAL QUANTITIES.

SITE SYMBOLS LEGEND

SYM.	DESC.	SYM.	DESC.	DET.
(E) PA	EXISTING PLANTING AREA		CONSTRUCTION JOINT	XX/ LX.X
	EXISITNG CATCH BASIN	- - - - - - -	ISOLATION JOINT	XX/ LX.X
	CLEAN OUT	- - - - - -	LIMIT OF WORK	
	EXISTING POLE LIGHT	TOS	TOP OF SLOPE	
+	EXISTING TREE PROTECT IN PLACE	BOS	BOTTOM OF SLOPE	
PB	PULL BOX	PA	PLANTING AREA	
CB	CATCH BASIN		ALIGN	
EV	ELECTRICAL VAULT	E	ELECTRICAL EQUIPMENT	

NOTE: UTILITIES SHOWN ARE FOR REFERENCE ONLY. SEE CIVIL DWGS. FOR DETAILS AND EXACT LOCATIONS. FINAL LOCATIONS TO BE REVIEWED BY LANDSCAPE ARCHITECT.

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Sage Hill
Tennis Complex

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Developed for
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SCHEMATIC DESIGN	02.24.15

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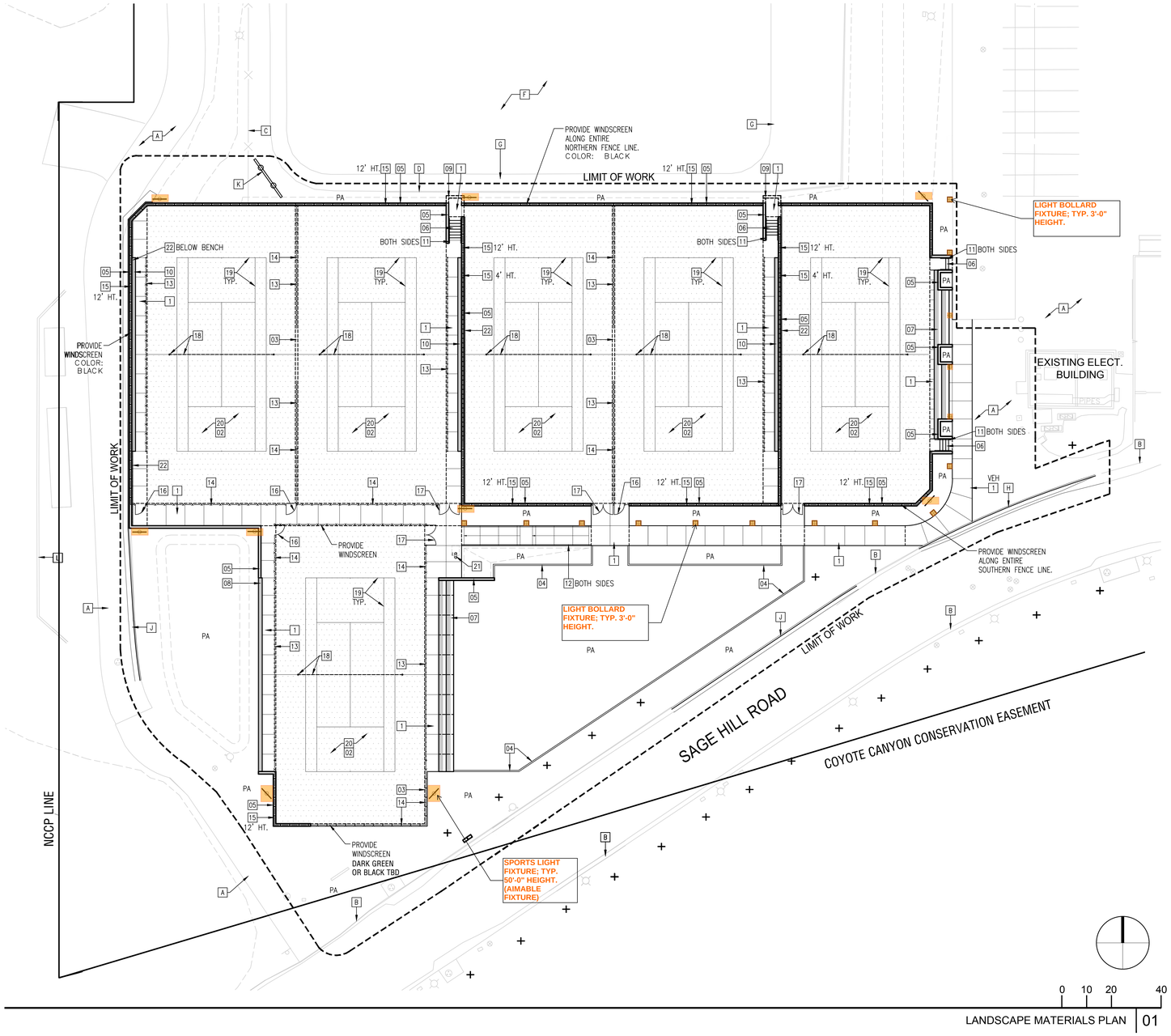
LANDSCAPE NOTES AND SCHEDULES

L0.1



LANDSCAPE MATERIALS PLAN 01

KEYNOTES

KEY NOTE	DESCRIPTION	DET/ SHT	COLOR / FINISH
1	CONCRETE PAVING		INTEGRAL COLOR/ SANBLASTED
02	POST-TENSIONED CONCRETE SLAB		NATURAL GRAY/ MEDIUM BROOM
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14	12' HT. CHAINLINK FENCE		BLACK VINYL COATED
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16	CHAINLINK SINGLE GATE		BLACK VINYL COATED
17	CHAINLINK DOUBLE GATE		BLACK VINYL COATED
18	TENNIS COURT NET POST AND NETTING		SEE PLAY EQUIPMENT LEGEND
19	TENNIS COURT STRIPING		WHITE
20	COURT SURFACING		LIGHT GREEN FIELD DARK GREEN COURT
21	DRINKING FOUNTAIN / BOTTLE FILLING STATION		COLOR TBD
22	6" WIDE TRENCH DRAIN		ANODIZED ALUMINUM

REFERENCE KEYNOTES

KEY NOTE	DESCRIPTION	DET REF	COMMENT
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F	EXISTING SPORTS FIELD		PROTECT IN PLACE
G	EXISTING RUNNING TRACK		PROTECT IN PLACE
H	ROLLED CURB / GUTTER		PER CIVIL
J	CURB / GUTTER		PER CIVIL
K	RELOCATED SCOREBOARD		
L	EXISTING WALL		PROTECT IN PLACE

SITE LIGHTING LEGEND

SYM.	DESCRIPTION	DET/ REF	COMMENTS
	BOLLARD LIGHT		COLOR: MATCH EXISTING GALVANIZED STEEL TO MATCH EXISTING
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NOTE: SEE ELECTRICAL PLANS FOR FIXTURES, LAMPS, AND SPECS.

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NOT SHOWN	WINDSCREEN	WEST COAST NETTING (WCN)	VCP-90 (SEE PLAN & ELEVATION SHTS. FOR LOCATION)	DARK GREEN	90% OPACITY	AS REQ.	PER MANUF.

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	EXISTING TREE PROTECT IN PLACE	BOS	BOTTOM OF SLOPE	
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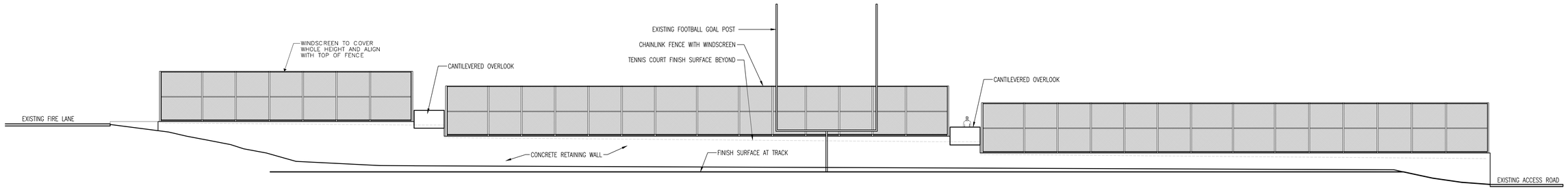
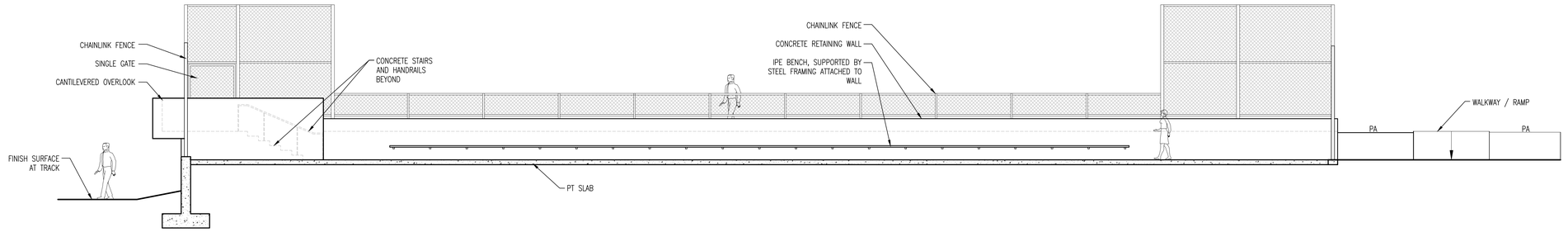
LANDSCAPE MATERIALS PLAN

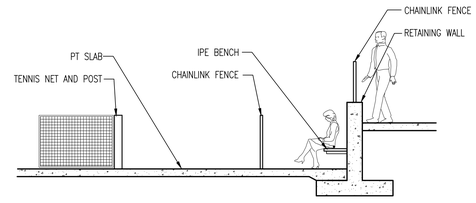
L1.1



ELEVATION - NORTH WALL | 1" = 10" | 01



ELEVATION - SEATING, WALL, AND OVERLOOK | 3/16" = 1'-0" | 02



SECTION - SEATING BETWEEN COURTS | 1/4" = 1'-0" | 03

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SITE SECTIONS / ELEVATIONS PLAN

L4.1

LANDSCAPE PLANTING PLAN 01

PLANTING LEGEND

TREE LIST (NCN.)– NO COMMON NAME (*)– UNLESS NOTED ON PLAN

REF.	SYM.	DESCRIPTION	SIZE/ SPACING
T1		SPECIMEN TREE TBD	36" BOX PER PLAN
T2		POPULUS FREMONTII	
T3		SPECIMEN TREE TBD	48" BOX PER PLAN
T4		FLOWERING SHADE TREE TBD	36" BOX PER PLAN
T5		CANOPY SHADE TREE	24" BOX PER PLAN
T5	+	EXISTING TREE PROTECT IN PLACE	

SHRUB / VINE LIST

S1 SHRUBS

25% 1 GALLON
60% 5 GALLON
15% 15 GALLON

AVERAGE SPACING IS 30" O.C.

NOTE:
ALL PLANTING TO RECIEVE 100% HEAD TO HEAD COVERAGE OF FULLY AUTOMATIC IRRIGATION SYSTEM WITH NEW CONTROLLER.

ADD TURF LIST

G1 SOD

21,031 SF OF NEW AND REHABILITATED LANDSCAPING (WILL COMPLY WITH CHAPTER 14.17 WATER-EFFICIENT LANDSCAPING AND AB1881)

LPA
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Sage Hill
Tennis Complex
20402 Newport Coast Drive
Newport Beach, CA 92657

Developed for
Sage Hill School

Revision	Date

Submittal	Date
SCHEMATIC DESIGN	2.24.15

Job. No.	14248.10
Date	2-24-15
Checked by	
Scale	1" = 20'

LANDSCAPE PLANTING PLAN

L7.1

A. GENERAL

1. Applicable Code: 2013 California Building Code (CBC). References to industry standards herein shall be latest edition as adopted by Applicable Code. References to ICC-ES Evaluation Reports for proprietary materials herein shall be latest edition as adopted by Governing Code Authority.
   a. Design Wind Speed: 110 mph, Exposure C.
   b. Seismic importance Factor I: 1.0

2. Governing Code Authority: Division of State Architect (DSA).

3. Field Verification: Field verify existing conditions and dimensions prior to construction. Promptly notify Architect (Structural Engineer) in case of discrepancies.

4. Design Intent: Contract Documents indicate design intent for structure in its completed state. They do not indicate method of construction. Promptly notify Architect (Structural Engineer), prior to proceeding with Work, if design intent requires further clarification.

5. Deviations, Modifications and Substitutions to Approved Structural Drawings: Must be accepted in writing by Architect (Structural Engineer) and approved by Governing Code Authority. No deviation, modification or substitution will be accepted via shop drawing review.

6. Procedures of Construction: Contractor is responsible for procedures of construction complying with national, state and local safety ordinances. Site visits (including Structural Observation) by Architect (Structural Engineer) do not constitute supervision of methods of construction.
   a. Protection of Utilities: Locate existing utilities, including those not shown on Contract Documents, and protect them from damage. Contractor bears expense of repair or replacement of utilities in conjunction with execution of Work.
   b. Excavations: Protect structure, adjacent structures, adjacent properties, streets, and utilities during excavation utilizing lagging, shoring, underpinning and related procedures as may be required. Provide necessary supports for soil at sides of excavations. Contractor and affected trades shall refer to Geotechnical Report for more information.
   c. Protection of Structure: Provide necessary measures to protect structure during execution of Work.
   d. Contractor Proposed Revisions: Where a revision of structural design or connection is proposed by Contractor to accommodate construction tolerances, construction sequence and/or dimension modifications, Contractor shall retain a structural engineer licensed in State of California to perform design. Submit stamped and signed design drawings and calculations to the Architect (Structural Engineer) for review and the Governing Code Authority for approval.
   e. Erection Plans: Determine phases of Work requiring erection plans according to applicable safety regulations. Maintain certified copies of erection plans at site during construction.
   f. Shoring, Bracing, and Other Temporary Supports: Design and erect shoring, bracing, and other temporary supports where structure has not attained design strength and as required for safe erection. Ensure floor, roof, and wall members are securely shored and braced during construction. Provide shoring at elevated beams and slabs supporting concrete or masonry walls during and after wall pour until wall attains design strength.
   g. Temporary Loading: Ensure construction loads do not exceed indicated design live load values. Notify affected sub-contractor trades of these design load limits.
   h. Fabrication, Shipment, and Erection of Structural Steel: Ensure stresses occurring during fabrication, shipment, and erection of structural steel are temporary and are less than design and allowable stress capacities of individual members. Do not impair full design and load carrying capacity of members due to fabrication, shipment, or erection. Contractor is responsible for controlling erection sequence, erection procedure, temperature differentials and weld shrinkage to minimize residue stresses. Provide additional materials for the erection of structural steel such as temporary bracing and guy cables as may be necessary at no additional cost. Remove these materials unless approved in writing by Owner. Do not tighten bolts in typical beam to column connections for erection purposes.
   i. Securing Reinforcing Steel, Dowels, Anchor Bolts and Embeds: Firmly support and accurately place complying with ACI standards prior to casting concrete or grout in masonry walls. Use ties and support bars in addition to reinforcing steel shown where necessary. No welding of reinforcing steel, including tack welding, is permitted unless otherwise accepted in writing by Architect (Structural Engineer). Provide plastic or plastic coated chairs and spacers when resting on exposed surfaces.

7. Coordination Responsibility: Contractor is responsible for coordination of Work including that of sub-contractor trades.

8. Submittals: Submit to Architect (Structural Engineer) as indicated on structural drawings and specifications. General Contractor shall review submittal for completeness and compliance with Contract Documents prior to submission.
   a. Request for Information (RFI) Submittals: Accompany RFI's with partial structural foundation or framing plans showing location in question and affected structural members. Copy partial plan from structural drawings and indicate grid line locations and floor level. Also provide properly drawn engineering sketches illustrating issues and Contractor's proposed solutions. Photographs are not acceptable substitutes to engineering sketches.
   b. Composite Slab Penetration Submittal: Submit to Architect (Structural Engineer) for each floor indicating size and location of each slab penetration and opening as necessary by all affected trades. Submit penetration plans together with corresponding metal decking or reinforcing steel shop drawings. Submit written statement from Special Inspector that no additional penetrations or openings were added to those shown in penetration submittal.
   c. Composite Concrete and Masonry Wall Penetration Submittal: Submit to Architect (Structural Engineer) for each wall indicating size and location of each wall penetration and opening as necessary by all affected trades. Submit penetration elevations together with corresponding reinforcing steel shop drawings. Submit written statement from Special Inspector that no additional penetrations or openings were added to those shown in penetration submittal.

9. Contract Documents Use: Review Contract Documents in their entirety before performing structural related Work and before developing shop drawings. Bring discrepancies to immediate attention of Architect (Structural Engineer) before starting Work.
   a. Scaling of Drawings: Not permitted.
   b. Additional Structural Requirements: See specifications.
   c. Building Geometry: See architectural drawings for building geometry including, but not limited to, top of floor and roof elevations; depressions; slopes; curbs; drains; trenches; slab and deck edge locations; wall overall dimensions; and size and locations of openings in floors, roof, and walls.
   d. Non-structural Items Requiring Special Provisions: See architectural, mechanical, plumbing, and electrical drawings for non-structural items requiring special provisions during construction. They include, but are not limited to, non-structural walls; size and locations of openings and sleeves penetrating structure; size and location of concrete curbs and pads; and size and location of piping, ductwork, and equipment anchorages mounted or suspended from structure. Verify exact size and location of equipment with equipment manufacturer.

10. Materials: Furnish and install in compliance with legally constituted public authorities having jurisdiction including county and local ordinances and safety orders of State Industrial Accident Commission, OHSA.

11. Penetrations, Embedments, and Openings in Structural Members: No penetration, embedment, opening, sleeve, pipe, or conduit shall occur in structural members including footings, slabs, walls, columns, and beams unless specifically shown or indicated on structural drawings.

12. Typical Details: Details on S1 series sheets are applicable throughout Project wherever the described condition occurs and may or may not be specifically referenced on structural drawings. Contractor is responsible for identifying these details and understanding extent of their application prior to performing Work.

B. QUALITY ASSURANCE (STRUCTURAL OBSERVATION, MATERIALS TESTING, and SPECIAL INSPECTION)

1. Structural Observation:
   a. Coordination Responsibilities of Contractor: Notify Architect (Structural Engineer) 48 hours in advance of critical stages of construction indicated below so visits may be scheduled by Structural Observer. Failure by Contractor to meet observation schedule may require removal of subsequent Work for observation. Contractor to bear costs of removal and replacement of finished Work or framing damaged by removal process or as required for corrective action.
   b. Pre-construction Meeting: Owner may coordinate and call for meeting between Architect (Structural Engineer) responsible for structural design, Structural Observer, Contractor, affected subcontractors and Special Inspector. structural observer will preside over this meeting. Purpose of meeting is to identify major structural elements and connections that affect vertical and lateral load resisting systems of structure and to review schedule of Structural Observation, Materials Testing, and Special Inspection of Project.
   c. Critical Stages of Construction Requiring Structural Observation:
   i. Casting Post tension slab.

2. Mill Test Reports Certifying Materials: Contractor to submit mill test reports certifying reinforcing steel, and structural steel are of identifiable tested stock to Owner, Special Inspector, Architect (Structural Engineer) and, upon request, to Governing Code Authority. Ensure materials are properly tagged for identification. If mill test reports cannot be made available or if material cannot be identified, Testing Laboratory will perform tests as directed by Architect (Structural Engineer). Contractor shall pay Testing Laboratory for costs related to tests and inspections of unidentifiable materials or materials furnished without mill test reports, materials found deficient after initial tests and inspections, or materials replacing deficient materials.
   i. Ultrasonic Examination of Heavy Rolled Shapes and Thick Plates at Proposed Welded Moment Connections: Where complete penetration groove welds occur at Groups 4 and 5 structural steel shapes, as defined in ASTM A6, and plates exceeding 2 inches thick, submit mill test reports to Architect (Structural Engineer) and, upon request, to Governing Code Authority. Mill test reports shall certify that Charpy V-notch testing was conducted in compliance with ASTM A6, Supplementary Requirement S5, including impact test complying with ASTM A673 at frequency P with minimum average value of 20 ft.-lbs. absorbed energy at 70 degreees Fahrenheit.

3. Special Inspection: Per DSA-103 for and chapter 17A of CBC.

C. EARTHWORK and FOUNDATIONS

1. Geotechnical Report: Perform soils work complying with foundation design based on recommendations in report no. 1588A76; prepared by MTGL.; dated January 31, 2014 and subsequent addenda letters. Maintain at site a copy of report and addenda.

   a. Allowable Foundation Design Values per Geotechnical Report:
   b. Bearing Capacity: 2,500 psf
   c. Passive Lateral Bearing Pressure: 300 psf/ft
   d. Coefficient of Friction: .35

3. Grading, Excavations, Backfill and Compaction of Backfill: Comply with Geotechnical Report and requirements of Governing Code Authority and performed only under Continuous Special Inspection of geotechnical engineer.

4. Preparation of Soil Under Slabs on Grade (Extending 3'-0" Beyond Footprint to a depth of 3'-0"):
   a. Excavation: Excavate existing fill, soils disturbed during demolition of existing improvements, and any unsuitably loose soil encountered. Depth of excavation shall be as recommended in geotechnical report.
   b. Scarification: Prior to re-compaction process, contact geotechnical engineer for scarification requirments in compliance with report.
   c. Compacted Fill: Excavated site soil or imported fill, both properly moisture conditioned, may be used for compacted fill subject to geotechnical engineer's approval. Place compacted fill in lifts not exceeding 8 inches. Bring moisture content of compacted fill to a minimum of 105 to 120 percent of optimum moisture content. Mechanically compact to at least 90 percent of the laboratory maximum dry density as determined by ASTM Test Method D1557. Soil within 2'-0" of finish grade shall consist of granular materials with very low expansion potential, Expansion index [EI] of 50 or less.

5. Foundation Excavations: Foundations are to bear on approved compacted fill as indicated in Geotechnical Report. Excavations are to be inspected by geotechnical engineer prior to placement of reinforcing steel and formwork. Ensure excavations are clean, dry and free of debris or loose soil. Slope sides of excavation not less than minimum slope indicated in Geotechnical Report. Cast concrete directly against excavated surfaces.

D. PROPRIETARY ANCHORAGES and FASTENERS

1. Anchorages:
   a. Drill and Epoxy Anchors into Concrete: Hilti HIT-RE 500-SD adhesive system using threaded steel rods conforming to ASTM F1554, grade 55, or reinforcing steel conforming to ASTM A615, grade 60, or ASTM A706, grade 60, complying with ICC-ESR Evaluation Report No. 2322. Installers to be certified by manufacturer. Substituting drill and epoxy anchors for cast-in-place reinforcing embedments will not be accepted.
   b. Drill and Epoxy Anchors into CMU: Hilti HY-150 MAX adhesive system complying with ICC-ESR Evaluation Report No. 1967

2. Installation: See manufacturer's written instructions, referenced ICC-ES evaluation report.
   a. Drilling Holes in Existing Concrete or Masonry for Anchorages: Use non-pneumatic, rotary hammer tools with ANSI compliant non-rebar cutting drill bits to drill holes of proper tolerances. Locate existing rebar including prestressing and post-tensioning tendons using non-hazardous, non-destructive methods with accurate location tolerances (plus or minus 1/4-inch) prior to drilling holes to avoid cutting or damaging. Holes shall be thoroughly cleaned per manufacturer's written recommendations prior to installation of anchorages.
   b. Deleterious Materials: Keep anchorages, including holes for drill and epoxy anchors and mechanical anchors, free of dust, grease, and other materials that impair bond.

4. Testing for Drill and Epoxy Anchors and Mechanical Anchors:
   a. Special Inspection: Special Inspector will perform Continuous Special Inspection during installation.
   b. Testing Setup: Testing Laboratory will perform tests using calibrated hydraulic hole jacks or dual jacks operating against suitable pulling fixture. Place jacks and fixture so they do not apply restraint to or confine concrete adjacent to hole. Test equipment, method and layout are subject to Architect (Structural Engineer's) acceptance.
   c. Qualification Testing: Required for Architect's (Structural Engineer's) acceptance prior to commencement of actual Work.
   i. Prepare and set 3 specimens for each size and type of drill and epoxy anchor and mechnical anchor in each kind of concrete under conditions representative of proposed use.
   ii. Test anchors to tension and torque values tabled below.
   iii. No loosening or movement of anchor nor cracking or spalling of concrete shall be observed.
   d. Proof Testing: Required throughout Work as anchors are set. Testing shall be representative of all anchors placed.
   i. Test 100% of installed anchors.
   ii. Test anchors to tension and torque values tabled below.
   iii. No loosening or movement of anchor nor cracking or spalling of concrete shall be observed.
   e. Drill and Epoxy Anchor Testing:
   i. Tension Test Values:

Anchor Dia. (in.) or Bar Size	Anchor Minimum Embedment (in.)	4000 psi Tension (lbs) *
3/8	3 1/2	3264
#4	4	6320
#5	5	8336
#6	7	14592
#7	7 1/2	13712

* Normal weight concrete

E. REINFORCING STEEL

1. Reinforcing Steel: All bars shall be deformed.
a. All bars unless indicated otherwise: ASTM A615, Grade 60
b. Bars to be welded: ASTM A706, Grade 60
c. Additional Requirements for Bars, Excluding Ties, in Ductile Moment Resisting Frames and Boundary Elements in Shear Walls: No additional requirements if ASTM A706, Grade 60 bars used. ASTM A615, Grade 60 bars are permitted provided actual yield strength based on mill tests does not exceed specified yield strength by more than 18,000 psi (retests shall not exceed this value by more than an additional 3,000 psi) and ratio of actual ultimate tensile stress to actual yield stress is not less than 1.25.

2. Wire and Spiral Reinforcing:
a. Smooth welded wire fabric (W.W.F.): ASTM A185, Fy =65 ksi, flat sheets only - do not use rolled mesh. Lap 1-1/2 wire spaces (1 foot minimum). Offset laps in adjacent sheets to avoid continuous laps.
c. Deformed wire stirrups (D4 and larger only): ASTM A497, Fy =65 ksi
d. Spiral reinforcing: ASTM A82, Grade 60.

3. Reinforcing shall be placed accordance with the American Concrete Institute Standard 318 (ACI 318) and Concrete Reinforcing steel institute's (CRSI) "Manuel of standard practice". Reinforcing shall be kept clean and free of rest.
4. Provide all accessories needed to support reinforcing in the positions shown in the drawings. Chairs and spacers for reinforcing shall be nonferrous of plastic coated when resting on exposed concrete surfaces.

5. Shop Drawings: ACI 315, Part B. Show reinforcing steel placement including sizes, quantities, spacing, clearances, splice locations, lap lengths, and concrete coverages and submit to Architect (Structural Engineer). Promptly notify Architect (Structural Engineer) prior to developing shop drawings if insufficient clear distances between reinforcing steel and other congestion is encountered. Notify Special Inspector of adjustments made from approved Contract Documents which are indicated on accepted shop drawings that facilitate field placement of reinforcing steel and concrete.

6. Lap Splices: Provide Class B splices unless indicated otherwise. Splice #5 bars and larger only at locations indicated. If additional splice locations are proposed, promptly notify Architect (Structural Engineer) prior to developing shop drawings.
   a. Splices in Walls: Locate splices in horizontal bars at well-staggered locations. Do not splice vertical bars except at horizontal supports such as floor and roof diaphragms.

7. Mechanical Splice: Mechanical couplers shall have current ICC report and shall shall have the capacity to devolp 180 percent of the yield strength of the spliced bars.

8. Minimum Clearances Between Parallel Reinforcing Steel Including Distance Between Sets of Spliced Bars: 1 inch or 1 bar diameter, whichever is greater. 1-1/2 inches or 1-1/2 bar diameters, whichever is greater, at columns, piers, and pilasters only. For bundled bars, minimum clear distances between units of bundled bars shall be same as single bars except bar diameter is derived from equivalent total area of bundle.

9. Minimum Concrete Coverage: Place bars as near to concrete surface as the following minimum coverages permit, unless noted otherwise:
   a. Slabs on Grade locate at center of slab
   b. Slabs Supporting Earth Above 1-1/2 inches from top
   c. Formed Concrete in Contact With Earth 2 inches
   d. Concrete Poured Against Earth (Unformed) 3 inches
   e. Walls Above Grade, Exposed to Weather 2 inches
   f. Walls Above Grade, Not Exposed to Weather 3/4 inch
   g. Columns (Clear to Face of Ties) 1-1/2 inches
   h. Beams (Clear to Face of Ties) 1-1/2 inches
   i. Structural Slabs (Top and Bottom) 1 inch

10. Dowels at Construction Joints: Provide dowels matching size and quantity of reinforcing steel interrupted at construction joints, unless detailed otherwise.

11. Dowels between footings and vertical wall & column bars shall match the size, grade and spacing of the column up wall vertical reinforcing and be lapped with a class B lap splice U.N.O.

12. Placement of Bars in Walls: Place vertical bars closest to wall surfaces at curtains containing vertical and horizontal bars of the same size. In curtains which vertical and horizontal bars are of different sizes or spacing, place layer with most steel area closest to near wall surface.

13. Bars Terminating at Walls, Columns, Beams, and Foundations: Extend bars to within 2 inches (3 inches at concrete poured against earth) of far face of wall, column, beam, or foundation and provide standard ACI 90-degree hook unless detailed otherwise.

14. Bars Interrupted by Structural Steel: Extend bars to within 2 inches of steel face and provide standard ACI 90-degree hook unless detailed otherwise.

15. Welding: AWS D1.4, except as modified by Applicable Code Standard 19-1.
   a. Acceptable Reinforcing Steel for Welding: ASTM A706. If welding of reinforcing steel other than A706 is desired, submit proposed procedure, indicating conformance to Applicable Code and requirements of Governing Code Authority, to Architect (Structural Engineer) for acceptance and to Governing Code Authority for approval prior to execution.
   b. Rebar to rebar weld not allowed except where specifically indicated on plans. Provide electrode E90XX (90 ksi) where permitted.
   c. Welder Certification: Governing Code Authority.

16. Bending: Bend cold unless otherwise accepted by Architect (Structural Engineer). Do not field-bend reinforcing steel bars embedded in concrete unless otherwise accepted in writing by Architect (Structural Engineer).

F. CAST-IN-PLACE CONCRETE

1. Applicable Standards: ACI 318 and ACI A301 except as amended in Applicable Code Chapter 19A and as modified by supplemental requirements herein.

2. Portland Cement: ASTM C150, type II
.

3. Aggregates:
   a. Normal Weight Concrete Aggregate: ASTM C33 for aggregates of natural sand and rock. Maximum aggregate size is 1-1/2 inches at foundations and slabs on grade and 1 inch elsewhere.
   b. Light Weight Aggregate for Structural Concrete: ASTM C330, expanded shale light weight aggregates of pea gravel size.

4. Minimum 28-Day Concrete Compressive Strengths and Types:

Location in Structure	Compressive Strength and Type of Concrete	Max. W/C Ratio
Post Tensioned Slab	4000 psi Type II	0.45
All other concrete	3000 psi Type II	0.45

5. Lean Concrete: Where specifically indicated, containing 2 sacks of cement per cubic yard of concrete.

6. Non-shrink Grout: ASTM C109, cementitious, non-metallic attaining a compressive strength of 6000 psi.

7. Concrete Mix Design Submittal: Prior to ordering concrete, submit for each compressive strength and type of concrete required designed, signed, and sealed by a registered Civil Engineer in State of California to Architect (Structural Engineer), Special Inspector and to Governing Code Authority complying with Applicable Code, Chapter 19A.

8. Construction Joint Submittal: Submit to Architect (Structural Engineer) at least 14 days prior to placing concrete indicating locations of construction joints and extent of pours. Place joints at locations to minimize effects of shrinkage as well as being placed at points which least impair strength of structure. Provide dowels as directed.

9. Embedments and Penetrations in Concrete: No penetration through structural concrete is permitted unless specifically acceptance in writing by Architect (Structural Engineer).

10. Chamfered Corners: Provide 3/4-inch chamfer at exposed corners of columns, beams and walls except where structural walls are laid flush with column or beam faces, unless detailed otherwise.

11. Construction Joints: Roughen surface to 1/4-inch amplitude. Clean, remove laitance, thoroughly wet and remove standing water before placing new concrete.

12. Curing: Maintain concrete above 50 degrees Fahrenheit and in a moist condition for a minimum of 7 days after placement unless otherwise accepted by Architect (Structural Engineer).

G. MASONRY

1. Specified Compressive Strength of Masonry (f'm): 1 500 psi typical unless noted otherwise.

2. Verifying Specified Compressive Strength of Masonry (f'm): Use masonry prism testing method unless otherwise acceptable to Architect (Structural Engineer). Full allowable stresses are used in design. Submit masonry prism data for each type and compressive strength of masonry required, with a professional engineer's signature and state of California seal, to Architect (Structural Engineer). Compliance with minimum required compressive strength shall be based on Applicable Code Section 2105A.2.

3. Concrete Block: ASTM C90, medium weight, Grade N-I and Applicable Code Standard 21-4 attaining a minimum compressive strength as required to meet specified compressive strength of masonry (f'm).

4. Face Brick: ASTM C216 and Applicable Code Standard 21-1.

5. Portland Cement for Mortar and Grout: ASTM C150, type I or II. Use of masonry cement or plastic cement is not permitted.

6. Aggregates for Mortar and Grout:
   a. Aggregates for Mortar: ASTM C144.
   b. Aggregates for Grout: C404, coarse type.

7. Mortar: ASTM C270, Type S. Mix in proportions according to Applicable Code Table 2103A.10, Type S., 2100 PSI MIN.

8. Grout: ASTM C476, coarse type, attaining a minimum compressive strength as required to meet specified compressive strength of masonry (f'm). However, in no case shall grout compressive strength be less than 2000 psi at 28 days.

9. Reinforcing Steel: Reinforcing steel section of general notes unless indicated otherwise.

10. Composite Masonry Wall Penetration Submittal: Submit for each wall indicating size and location of each wall penetration and opening as necessary by affected trades. Submit together with appropriate reinforcing steel shop drawings. Submit written statement from Special Inspector that no additional penetrations or openings were added to those shown in penetration submittal.

11. Reinforcing Steel Splices: Lap reinforcing steel at splices a minimum of 48 bar diameters, except dowels in footings at base of walls shall splice a minimum of 72 bar diameters, unless noted otherwise. Where minimum clear distance between bars at adjacent splices is 3 inches or less, increase lap length 30 percent unless splices are staggered at least 24 bar diameters.

12. Dowels for Walls, Columns, Pilasters, and Piers: Match size and spacing of vertical reinforcing steel, unless noted otherwise. Set dowels to align with cells containing reinforcing steel.

13. Minimum Reinforcing Steel Clearances:
   a. Minimum Clearances Between Reinforcing and Outside Face of Masonry: 2 inches except in no case shall clearance be less than 2-1/2 bar diameters
   b. Minimum Clearance Between Reinforcing and Inside Face of Grout Cell: 1/2 inch or 1 bar diameters (Max dimension)
   c. Minimum Clearance Distances Between Parallel Reinforcing: 1 inch or nominal bar diameter, whichever is less. Increase to 1-1/2 inches or 1-1/2 times nominal bar diameter, whichever is less, at columns, pilasters, and piers only.

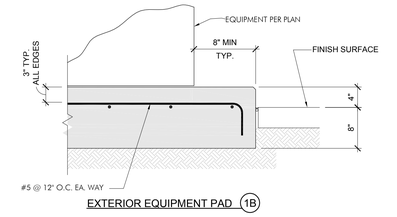
14. Placement: Set courses in running bond pattern unless indicated otherwise. Set cells in vertical alignment. Provide flush mortar joints at surfaces to receive waterproofing or damp-proofing.

15. Grouting: Grout solid all cells. Mechanically vibrate grout in cells.
   a. Grout Height Limits: Applicable Code Low Lift (2104A.6.1.1.2), High Lift (2104A.6.1.1.3)
   b. Horizontal Construction Joints: Hold grout 1 1/2 inches below top of masonry unit if work is stopped one hour or longer.
   b. Grout Cover Around Reinforcing Steel, Anchor Bolts and Inserts Penetrating Masonry Shell: 1 inch minimum.

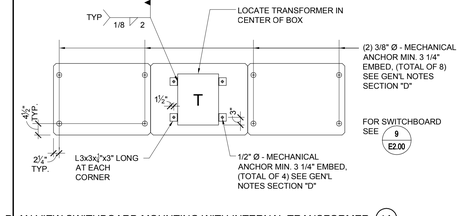
16. Horizontal Bars Terminating at Wall Ends and Opening Jambs: Extend bars to within 2 inches of end of wall and provide standard ACI 90-degree hook unless detailed otherwise.

H. POST-TENSION CONCRETE

1. One sample of prestressed wire on strand from each reel shall be tested and the results shall be submitted to the building department and the engineer for approval.
2. (2) #4 bar continuous shall be place behind all anchorages.
3. Field recordings of the elongations and forces shall not vary more than 5% from the required values. Prestressed inspector shall submit certified records to the engineer. Records shall be kept of the all jacking forces and elongations.
4. Whenever feasible, all inserts for suspended mechanical and architectural work shall be cast-in-place. When additional fasteners are required those that are anchored in drilled holes are preferred. Power driven fasteners will only be permitted where it can be shown that they will not penetrate more than ¾" into the concrete or are located so as to avoid tendons.
5. Provide adequate shores to carry all construction loads.
6. All pockets required for anchorages shall be adequately reinforced so as not to decrease the strength of the structure and shall be water-proofed so as to eliminate water leakage through the pocket.
7. Tendons shall not be curved with a radius of more than 10'-0".
8. Profiles and forces are based on ½" diameter strands. If however other tendons are used, adjustment of the profile and force must be made.
9. Manufacturer shall furnish the engineer and the building department with a guarantee of the ultimate strength of the tendons.
10. The top of the slab shall be true to indicated elevations. Variations shall not exceed ¼" in ten feet. Care must be exercised in finishing operations to obtain a true surface.
11. The slabs shall be furnished as noted in the architectural specifications.
12. Shop drawings for post-tensioning shall show the following:
    a. Tendon layouts and dimensions locating tendons in horizontal plane at all points. Horizontal curvature of tendons at blockouts and anchorages shall be detailed. All openings in slabs shall be shown on the shop drawings.
    b. Tendon profiles showing chair heights, location of any placement steel is required. It shall be the prestressing steel placers' responsibility to maintain alignment of the tendons before curing concrete placement. Shop drawings shall clearly show location of each tendon and method of tendon support.
    c. Detail of reinforcement around stressing pockets and closures.
    d. Required elongation of each tendon at back jacking point.
    e. Complete slab cross section details at sufficient scale to clearly show location of chairs, support steel and slab main direction cable and rebar.
13. Anchorages for post-tensioning tendons shall be designed in accordance with ASCE-ACI Committee 301 recommendations.
14. Chairs and spacers for reinforcing bars and prestressing tendons shall be hot-dipped galvanized when resting on exposed surface.
15. Unless noted otherwise on plans, the cover for tendons and anchorages shall be:
    (a) Slabs:
    Tendons 1"
    Anchorages 1"
16. Provide continuous inspections by a DSA certified deputy inspector during placing and stressing of the tendons.
17. Twisting or entwining of individual steel wires or strands within a bundle or beam shall not be permitted.
18. No splicing or coupling of tendons shall be permitted unless coupling devices are specifically approved for such use.
19. Minimum reinforcement at bearing plates in slabs shall consist of a minimum of two No. 4 bars directly under the anchor plate extending a minimum of six inches beyond the ends of the plate. The bars shall be as near the top and bottom corners of the bearing plate as possible.
20. Post-tension contractor to coordinate location of plumbing, electrical and mechanical penetrations prior to layout of strands and bring conflicts to the attention of the architect and engineer. The contractor is to account for all these penetrations in his/her bid.
21. Supplier for post-tension to be PTI member.
22. The required post-tension forces shown on the framing plans are effective forces only. The numbers and sizes of the tendon shall be determined by the post-tensioning contractor on the following basis and shall be subjected to the approval of the structural engineer.
    a. Post-tensioning tendons shall be plastic sheathed, greased, rust protected ½ inch diameter, 7-wire strands. Strands used in post-tensioning tendons shall conform to ASTM A416, latest revision, with a guaranteed minimum ultimate strength of 270,000 PSI.
    b. Tendons may be temporarily overstressed to a maximum of 0.8Fu and locked off at a maximum of 0.7Fu. However, do not exceed the manufacturer recommended values.
    c. The post-tension contractor shall submit post-tensioning calculations tendon mill certificates and anchorage test results to substantiate the method of tendon calculations.
    d. Frictional losses shall be based on experimentally determined wobble and curvature coefficients and shall be field verified during stressing operations. The calculated loss in post-tension due to elastic shortening, shrinkage and creep of concrete and relaxation of steel shall be submitted to the engineer for review and shall be at least a minimum of 25 KSI for stress relieved strands and 18 KSI for low relaxation strands.
23. The stressing of the slab tendons may commence when the concrete has obtained a compressive strength of 3,000 PSI. Post-tensioning of the slab tendons shall not be done within 96 hours after pouring of concrete. The general tendon stressing sequence shall be as follows:
    a. First: Uniform main tendons
    b. Second: Slab temperature tendons



EXTERIOR EQUIPMENT PAD (1B)



PLAN VIEW SWITHBOARD MOUNTING WITH INTERNAL TRANSFORMER (1A)

TYPICAL EQUIPMENT ANCHORAGE

1

LPA
5161 California Avenue, Suite 100
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Sage Hill
Tennis Complex

20402 Newport Coast Drive
Newport Beach, CA 92657

Developed for
Sage Hill School

Revision	Date

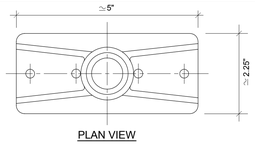
Submittal	Date
SCHEMATIC DESIGN	02/24/2015

Job. No. 14248.10
Date
Checked by
Scale

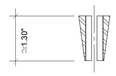
GENERAL NOTES

S0.1

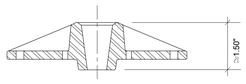
GENERAL NOTES



PLAN VIEW

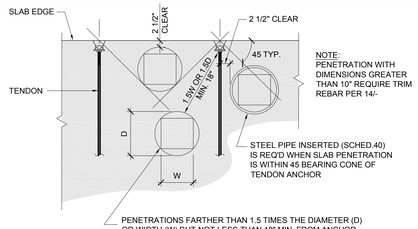


WEDGES



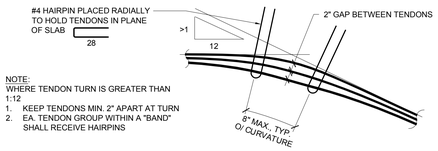
SECTION VIEW

GENERIC MONOSTRAND ANCHORAGE — 13



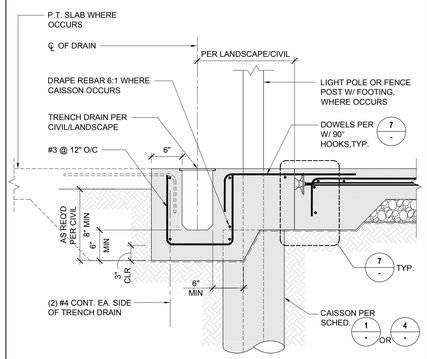
NOTE:
PENETRATION WITH DIMENSIONS GREATER THAN 10" REQUIRE TRIM REBAR PER 14/-

OPENING AT PT ANCHORAGE — 12

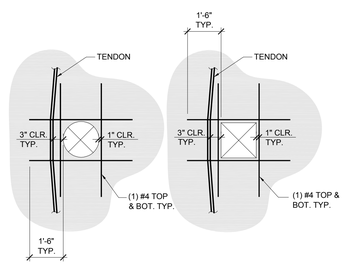


NOTE:
WHERE TENDON TURN IS GREATER THAN 1:12
1. KEEP TENDONS MIN. 2" APART AT TURN
2. EA. TENDON GROUP WITHIN A "BAND" SHALL RECEIVE HAIRPINS

TENDON PLACEMENT FOR TURNS > 1:12 — 11

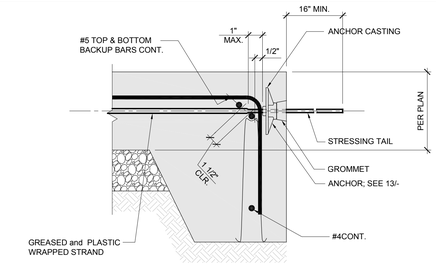


POUR STRIP AT TRENCH DRAIN — 15

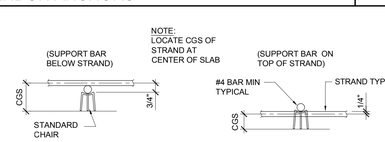


NOTE:
REINF'G FOR OPENINGS IN SLAB, 10"-24" SINGLE OPENINGS OF SMALLER DIMENSION DO NOT REQUIRE TRIM BARS.

TRIM BARS AT SLAB OPENINGS — 14

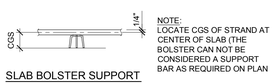


BACK-UP BARS @ DISTRIBUTED TENDON ANCHORS — 10



TYPICAL SUPPORT

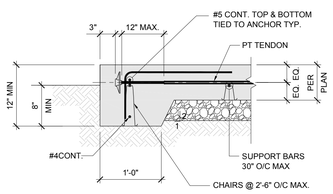
ALTERNATE SUPPORT



NOTE:
LOCATE CGS OF STRAND AT CENTER OF SLAB (THE BOLSTER CAN NOT BE CONSIDERED A SUPPORT BAR AS REQUIRED ON PLAN

SLAB BOLSTER SUPPORT

CHAIRS and SUPPORTS — 9



DEAD END @ DISTRIBUTED TENDONS — NO SCALE TYPICAL U.N.O. — 8

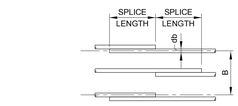


DIAGRAM at STAGGERED SPLICES

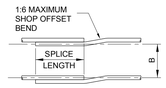
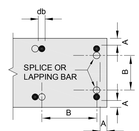


DIAGRAM at NON-STAGGERED SPLICES



BAR SPACING DIAGRAM

LEGEND

A	CLEAR EDGE DISTANCE
B	CENTER TO CENTER SPACING OF SPLICED OR LAPPED BARS (SEE GENERAL NOTES FOR MINIMUM CLEAR SPACING)
db	BAR DIAMETER
Ld	DEVELOPMENT LENGTH

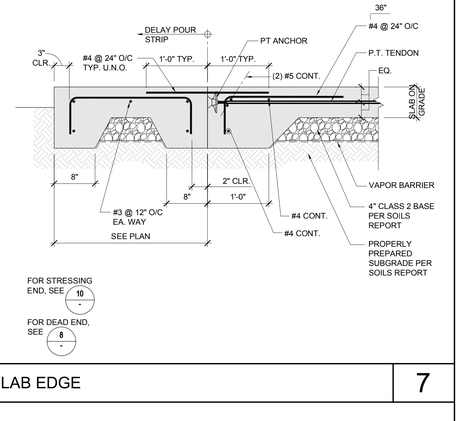
NOTES:
1. ALL SPLICES SHALL BE CLASS B SPLICES UNLESS INDICATED OTHERWISE. DEVELOPMENT Ld TO BE USED WHERE SPECIFICALLY INDICATED.
2. SCHEDULE APPLIES TO UNCOATED GRADE 60 BARS IN NORMAL WEIGHT CONCRETE.
3. TOP BARS (INDICATED "T" IN SCHEDULE) ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BARS.
4. BOTTOM BARS (INDICATED "B" IN SCHEDULE) ARE ALL VERTICAL BARS AND HORIZONTAL BARS WITH LESS THAN 12" OF CONCRETE CAST BELOW HORIZONTAL BARS.
5. FOR LIGHTWEIGHT CONCRETE MULTIPLY LENGTHS IN SCHEDULE BY 1.3.
6. FOR FOUR-BAR BUNDLES WHERE 2 BARS LAP WITH 2 OTHER BARS MULTIPLY LENGTHS IN SCHEDULE BY 1.33 (INDIVIDUAL BARS WITHIN A BUNDLE SHALL NOT OVERLAP).

SCHEDULE FOR DETERMINING CATEGORY	
I	II
1. A>db and B>2db and TIES THRUOUT Ld 2. A>db and B>3db	OTHER CASES

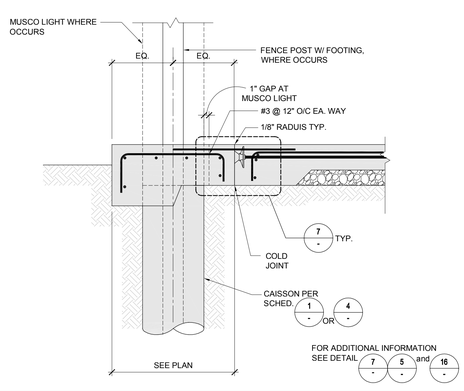
"CLASS B" TENSION LAP SPLICE SCHEDULE

CATEGORY	NORMAL WEIGHT CONCRETE f'c- PSI	SPLICE OR DEVELOPMENT LENGTH (INCHES)															
		0.375		0.500		0.625		0.750		0.875		1.000		1.125		1.250		1.375	
		#3		#4		#5		#6		#7		#8		#9		#10		#11	
		T	B	T	B	T	B	T	B	T	B	T	B	T	B	T	B	T	B
I	3000	28	23	38	29	47	37	56	43	82	63	94	72	106	81	117	90	128	99
	4000	25	20	33	25	41	32	49	38	71	55	81	63	91	71	102	78	111	86
II	3000	43	34	58	43	71	55	85	65	124	94	141	108	159	121	176	136	192	149
	4000	38	30	50	38	62	47	73	58	106	82	121	94	137	106	153	117	167	129
DEVELOPMENT "Ld" SCHEDULE																			
I	3000	22	17	29	22	36	28	43	33	63	48	72	55	81	62	90	69	98	76
	4000	19	15	25	19	31	24	37	29	54	42	62	48	70	54	78	60	85	66
II	3000	33	26	44	33	54	42	65	50	95	72	108	83	122	93	135	104	147	114
	4000	29	23	38	29	47	36	56	44	81	63	93	72	105	81	117	90	128	99

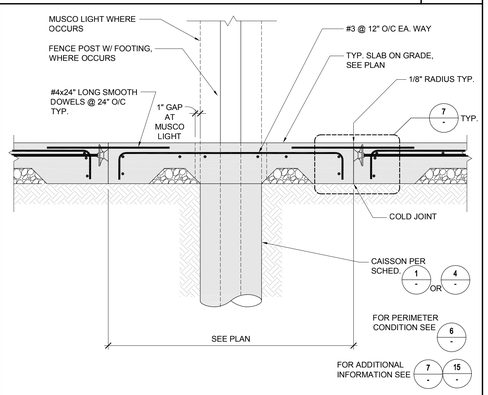
TYPICAL REBAR TENSION SPLICE and BAR DEVELOPMENT SCHEDULE — 3



SLAB EDGE — 7



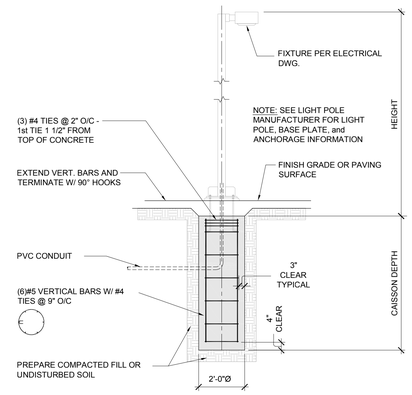
LIGHT OF FENCE POST @ PERIMETER POUR STRIP — 6



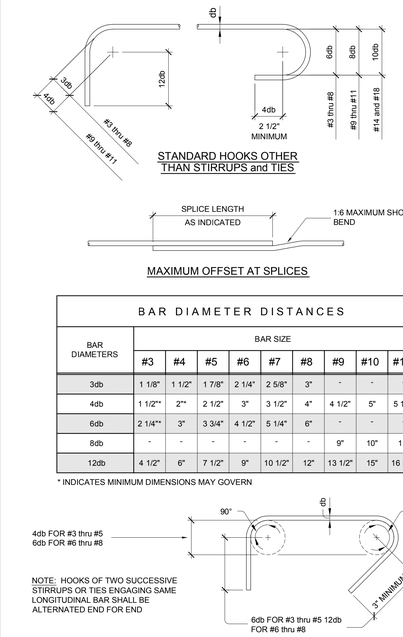
LIGHT OR FENCE POST @ INTERIOR POUR STRIP — 5

NOTES:
1. CONCRETE F'c = 2500 AT 28 DAYS.
2. USE NORMAL WEIGHT CONCRETE AGGREGATES (1-1/2" MAXIMUM SIZE).
3. PROVIDE REINFORCING STEEL CONFORMING TO ASTM A615, GRADE 60.

HEIGHT	CAISSON DEPTH
15'-0" MAX.	5'-0"
20'-0" MAX.	5'-6"
25'-0" MAX.	6'-6"



TYP. SITE LIGHT POLE DETAIL — 4



STANDARD HOOKS OTHER THAN STIRRUPS and TIES

MAXIMUM OFFSET AT SPLICES

BAR DIAMETER DISTANCES

BAR DIAMETERS	BAR SIZE								
	#3	#4	#5	#6	#7	#8	#9	#10	#11
3db	1 1/8"	1 1/2"	1 7/8"	2 1/4"	2 5/8"	3"	-	-	-
4db	1 1/2"*	2"*	2 1/2"	3"	3 1/2"	4"	4 1/2"	5"	5 1/2"
6db	2 1/4"*	3"	3 3/4"	4 1/2"	5 1/4"	6"	-	-	-
8db	-	-	-	-	-	-	9"	10"	11"
12db	4 1/2"	6"	7 1/2"	9"	10 1/2"	12"	13 1/2"	15"	16 1/2"

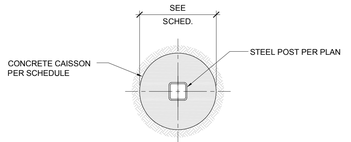
* INDICATES MINIMUM DIMENSIONS MAY GOVERN

STANDARD HOOKS FOR STIRRUPS and TIES

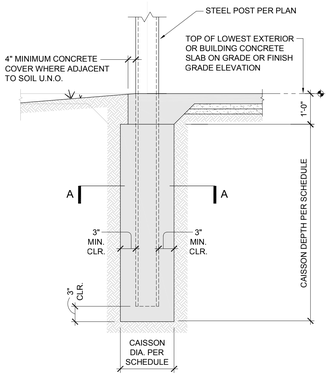
TYPICAL REINFORCING STEEL HOOKS, BENDS and OFFSETS AT SPLICES — 2

CAISSON SCHEDULE

DESIGNATION	POST PER LANDSCAPE	CAISSON DIA.	CAISSON DEPTH	LOCATION	REFERENCE
1A	CHAINLINK FENCE	1'-0" MIN	2'-0"	CHAINLINK FENCE H = 4'-0" MAX	SEE 03/L5.2
1B	CHAINLINK FENCE	1'-0" MIN	3'-0"	CHAINLINK FENCE H = 8'-0" MAX	SEE 02/L5.2
1C	CHAINLINK FENCE	1'-0" MIN	3'-6"	CHAINLINK FENCE W/O WINDSCREEN (H = 12'-0" MAX)	SEE 01/L5.2
1D	CHAINLINK FENCE	1'-0" MIN	4'-6"	CHAINLINK FENCE W/ WINDSCREEN (H = 12'-0" MAX)	SEE 01/L5.2
1E	NET POST	1'-6"	3'-0"	SEE PLAN	SEE 12/L5.2



SECTION A-A



CAISSON DETAIL

TYPICAL CAISSON SCHEDULE and DETAIL — NO SCALE TYPICAL U.N.O. — 1

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Sage Hill Tennis Complex
20402 Newport Coast Drive
Newport Beach, CA 92657

Developed for Sage Hill School

Revision	Date
	10-13-14

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SCHEMATIC DESIGN	07/24/2015

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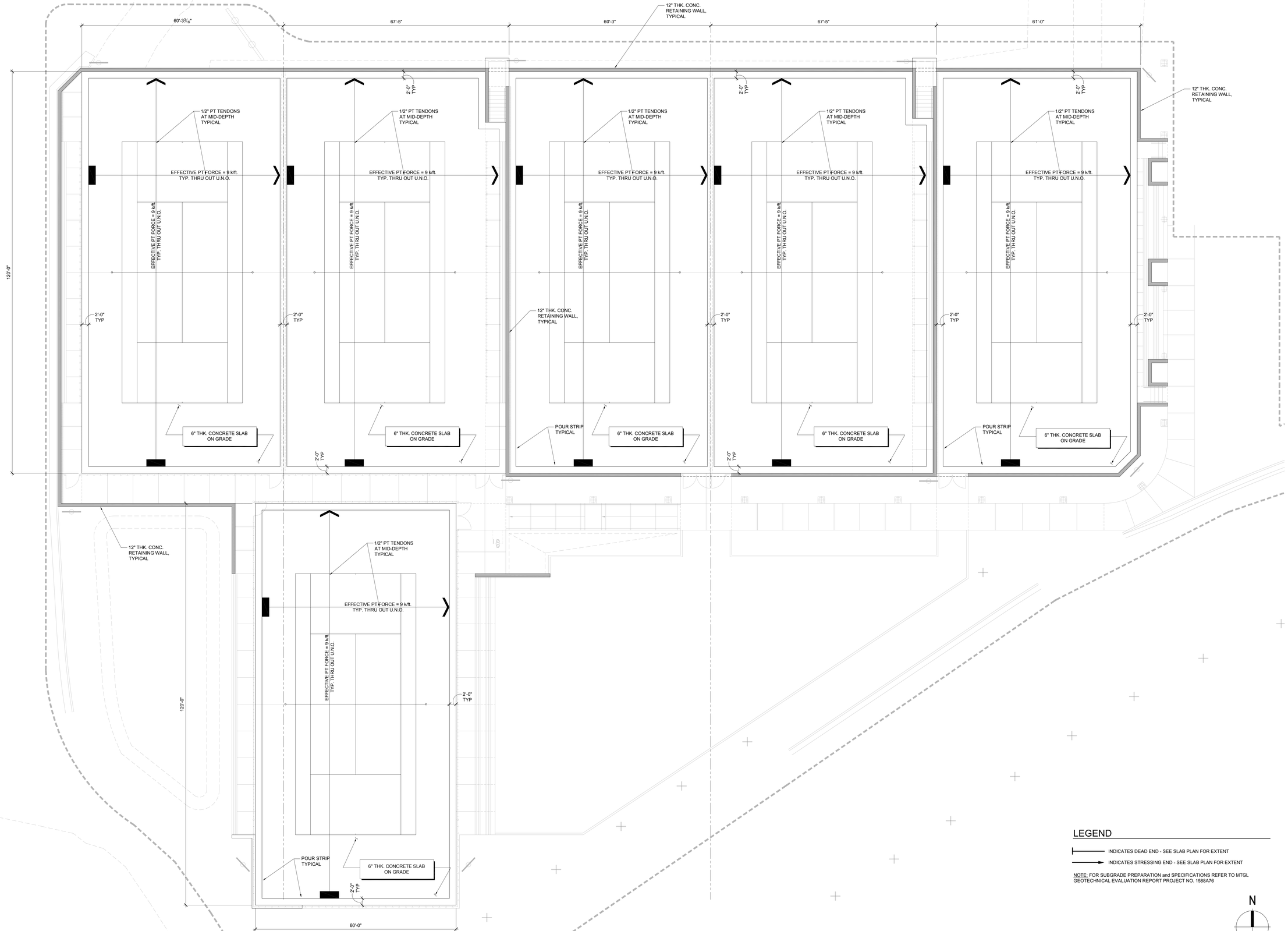
TYP. FOUNDATION, MISC. SITE and PT DETAILS

S1.1



TENNIS COURT P.T. SLAB PLAN

3/32"=1'-0" TYPICAL U.N.O.

A

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PT SLAB PLAN

S1.2

ABBREVIATIONS

4S/DP	4" SQUARE BY 2 1/8" DEEP BOX
ADA	AMERICAN WITH DISABILITIES ACT
A.F.F.	ABOVE FINISH FLOOR
A.F.G.	ABOVE FINISH GRADE
AWG	AMERICAN WIRE GAUGE
AMP, A	AMPERE
A.I.C.	AMPERES INTERRUPTING CAPACITY (SYMMETRICAL)
AF/AT	AMP FRAME, AMP TRIP
AHJ	AUTHORITY HAVING JURISDICTION
AS/AF	AMP SWITCH, AMP FUSE
ATS	AUTOMATIC TRANSFER SWITCH
AVG	AVERAGE
BDF	BUILDING DISTRIBUTION FRAME
BR	BRANCH
BLDG	BUILDING
CEC	CALIFORNIA ELECTRICAL CODE
CIRC., CKT.	CIRCUIT
CB	CIRCUIT BREAKER
CSFD	COMBINATION SMOKE FIRE DAMPER
C	CONDUIT
C.O.	CONDUIT ONLY, COMPLETE WITH PULLSTRING
CONN	CONNECTED
CPT	CONTROL POWER TRANSFORMER
CLCB	CURRENT LIMITING CIRCUIT BREAKER
CLF	CURRENT LIMITING FUSE
CT	CURRENT TRANSFORMER
DIA	DIAMETER
DISC	DISCONNECT
DIST	DISTRIBUTION
E	EXISTING EQUIP. TO REMAIN
E.C.	ELECTRICAL CONTRACTOR
EMS	ENERGY MANAGEMENT CONTROL SYSTEM
EMT	ELECTRICAL METALLIC TUBING
ENT	ELECTRICAL NON-METALLIC TUBING
EWC	ELECTRIC WATER COOLER
E.P.O.	EMERGENCY POWER OFF
E-O-L	END-OF-LINE CIRCUIT TERMINATOR.
EF	EXHAUST FAN
E/G	EQUIPMENT GROUND (GREEN)
EP	EXPLOSION PROOF
ER*	EXISTING EQUIP. TO BE REOLCATED (* CORRESPONDS TO NEW LOCATION)
ERT*	NEW LOCATION FOR REOLCATED EQUIP. (* CORRESPONDS TO PREVIOUS LOCATION)
FT or '	FEET
FA	FIRE ALARM
FLA	FULL LOAD AMPS
GRD	GROUND
GFCI	GROUND FAULT CIRCUIT INTERRUPTER.
GFP	GROUND FAULT PROTECTION
GEC	GROUNDING ELECTRODE CONDUCTOR
HACR	HEATING AIR CONDITIONING REFRIGERATION
HOA	HAND-OFF-AUTO
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
H.,W.,D.,L.	HEIGHT, WIDTH, DEPTH, LENGTH
HID	HIGH INTENSITY DISCHARGE
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
IN. or "	INCHES
I/G	ISOLATED GROUND
IDF	INTERMEDIATE DISTRIBUTION FRAME
JBOX	JUNCTION BOX
K	DEGREE KELVIN
KCMIL	THOUSAND CIRCULAR MILS
KVA	KILOVOLT AMPERES
KW	KILOWATT
KWH	KILOWATT HOUR
LCL	LONG CONTINUOUS LOAD
L.F.	LINEAR FEET
LTG, LTS	LIGHTING
LPS	LOW PRESSURE SODIUM
MAX.	MAXIMUM
MDF	MAIN DISTRIBUTION FRAME
MOCP	MAXIMUM OVERCURRENT PROTECTION
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUGS ONLY
M.C.	MECHANICAL CONTRACTOR
M	METER
M/M	METER MAIN
MV	MERCURY VAPOR
MH	METAL HALIDE
MIN.	MINIMUM
MCA	MINIMUM CIRCUIT AMPS
MCC	MOTOR CONTROL CENTER
MCM	THOUSAND CIRCULAR MILS
MCP	MOTOR CIRCUIT PROTECTOR
MFR.	MANUFACTURER
MTD	MOUNTED
MW	MICROWAVE
N	NEW EQUIP.
NATS	NON AUTOMATIC DISCONNECT
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS' ASSOCIATION
NC	NORMALLY CLOSED
NO	NORMALLY OPENED
NF	NON-FUSED
NIC	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
NL	NIGHT LIGHT
NO, or #	NUMBER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED.
%Z	PERCENT IMPEDANCE
PH, or ~	PHASE
PC	PHOTOCELL
P.C.	PLUMBING CONTRACTOR
P	POLE
PVC	POLY VINYL CHLORIDE
PDU	POWER DISTRIBUTION UNIT
PRIMARY	OVER 600 VOLTS
PROVIDE	FURNISH, INSTALL AND CONNECT.
PT	POTENTIAL TRANSFORMER
PA	PUBLIC ADDRESS
RECEPT	RECEPTACLE
REF	REFRIGERATOR
RGS	RIGID GALVANIZED STEEL
RMS	ROOT MEAN SQUARE
SCC	SHORT CIRCUIT CURRENT
SCS	STRUCTURED CABLING SYSTEM
SFD	SMOKE FIRE DAMPER
SECONDARY	600 VOLTS AND LESS
SMACNA	SHEET METAL & AIR COND. CONTRACTORS' NAT'L ASSOC.
SQ.	SQUARE
TC	TIMECLOCK
TEL/DATA	TELEPHONE AND DATA
TV	TELEVISION
T.V.S.S.	TRANSIENT VOLTAGE SURGE SUPPRESSION
TYP	TYPICAL
U.G.P.S.	UNDERGROUND PULL SECTION
U.O.N.	UNLESS OTHERWISE NOTED
U.P.S.	UNINTERRUPTABLE POWER SYSTEM
VAV	VARIABLE AIR VOLUME
V	VOLTS
VA	VOLT AMPERES
VD	VOLTAGE DROP
WP	WEATHERPROOF
W	WIRE
XFMR	TRANSFORMER
XX	EXISTING EQUIP. TO BE DEMO'D

LOW VOLTAGE SYSTEM SYMBOLS

NOTE: ELECTRICAL CONTRACTOR TO REFERENCE LOW VOLTAGE TELEPHONE/DATA, SECURITY, AND A/V PLAN FOR ADDITIONAL LOW VOLTAGE DEVICE LOCATIONS, ROUGH-IN REQUIRMENTS, CONDUIT/INFRASTRUCTURE REQUIREMENTS, AND ALL OTHER REQUIREMENTS FOR COMPLETE AND OPERTIONAL SYSTEM.

FLOOR BOX / SPECIALTY WALL BOX SYMBOLS

SINGLE SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE SPECIFICATIONS FOR MORE INFORMATION.

TWO SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE SPECIFICATIONS FOR MORE INFORMATION.

THREE SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE SPECIFICATIONS FOR MORE INFORMATION.

FOUR SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE SPECIFICATIONS FOR MORE INFORMATION.

SIX SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE SPECIFICATIONS FOR MORE INFORMATION.

ANNOTATIONS

EF / 2 — MECHANICAL EQUIPMENT CALLOUT, "AC" INDICATES UNIT TYPE AND "2" INDICATES UNIT NUMBER. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION AND ELECTRICAL REQUIREMENTS.

3 / E-1 — DETAIL CALLOUT, "3" INDICATES DETAIL NUMBER "E-1" INDICATES SHEET NUMBER.

FR1 — LIGHTING FIXTURE DESIGNATION

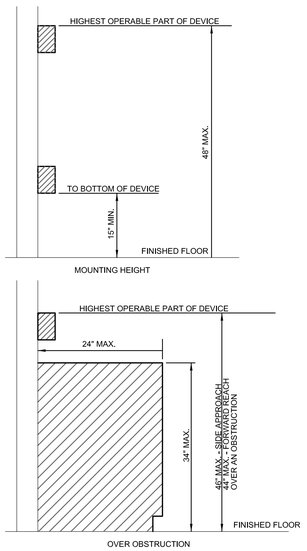
X — PLAN NOTE REFERENCE, REFER TO NOTES ON SHEET, OR AS DIRECTED.

1 — REVISION REFERENCE.

WYE CONFIGURATION — DELTA CONFIGURATION

GROUND

ADA DEVICE MOUNTING DETAIL



LIGHTING SYMBOLS

DECORATIVE PENDANT "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

SURFACE MOUNTED FLUORESCENT STRIP LIGHTING FIXTURE. "EM" AND/OR SHADED CONNECTION POINT INDICATES FIXTURE WITH EMERGENCY BATTERY PACK (MINIMUM 1100 LUMEN OUTPUT). "NL" INDICATES FIXTURE ON NIGHT LIGHT CIRCUIT. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

CHAIN HUNG FLUORESCENT STRIP LIGHTING FIXTURE. MOUNTING HEIGHT TO BE AS INDICATED ON FIXTURE SCHEDULE. "EM" AND/OR SHADED CONNECTION POINT INDICATES FIXTURE WITH EMERGENCY BATTERY PACK (MINIMUM 1100 LUMEN OUTPUT). "NL" INDICATES FIXTURE ON NIGHT LIGHT CIRCUIT. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

DECORATIVE SURFACE MOUNTED FLUORESCENT LIGHTING FIXTURE. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

SURFACE MOUNTED FLUORESCENT WRAPAROUND TYPE LIGHTING FIXTURE. "NL" INDICATES FIXTURE ON NIGHT LIGHT CIRCUIT. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

RECESSED FLUORESCENT LIGHTING FIXTURE. "NL" INDICATES FIXTURE ON NIGHT LIGHT CIRCUIT. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

RECESSED DIRECT/ INDIRECT LIGHT FIXTURE. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

RECESSED LINEAR LED/ FLUORESCENT LIGHTING FIXTURE. "NL" INDICATES FIXTURE ON NIGHT LIGHT CIRCUIT. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

PENDANT LINEAR LED/ FLUORESCENT LIGHTING FIXTURE. "NL" INDICATES FIXTURE ON NIGHT LIGHT CIRCUIT. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

RECESSED LINEAR LED/ FLUORESCENT ASYMMETRICAL LIGHTING FIXTURE. "NL" INDICATES FIXTURE ON NIGHT LIGHT CIRCUIT. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

RECESSED OR SURFACED MOUNTED DOWN LIGHTING FIXTURE. "NL" INDICATES FIXTURE ON NIGHT LIGHT CIRCUIT. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

RECESSED WALLWASHER LIGHTING FIXTURE. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

RECESSED ADJUSTABLE WALLWASHER LIGHTING FIXTURE. "A" INDICATES BALLAST APECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

SURFACE MOUNTED DOWNLIGHT. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

WALL MOUNTED LIGHTING FIXTURE. "A" INDICATES BALLAST SPECIFICATION, SEE BALLAST SCHEDULE ON SHEET E0.40

SINGLE OR TWO CKT. LIGHTING TRACK AS SPEC'D IN LTG. FIXTURE SCHEDULE. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

SURFACE MOUNTED ADJUSTABLE LINEAR WALLWASHER. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

CONCEALED LINEAR LIGHT STRIP. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

CONCEALED LIGHT STRIP, "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

RECESSED MULTI-LAMP ADJUSTABLE DOWNLIGHT. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

WALL STEP LIGHTING FIXTURE. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

BOLLARD TYPE LIGHTING FIXTURE. PROVIDE CONCRETE FOOTING PER MFGRS. REQUIREMENTS. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

LANDSCAPE FLOOD LIGHTING FIXTURE. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

POLE MOUNTED H.I.D. LIGHTING FIXTURE, "A" INDICATES BALLAST SPECIFICATION, SEE BALLAST SCHEDULE ON SHEET E0.40

ILLUMINATED EXIT SIGN WITH NUMBER OF FACES AND DIRECTION OF EGRESS ARROWS AS INDICATED.

LOW LEVEL EXIT SIGN AS SPECIFIED ON LIGHTING FIXTURE SCHEDULE.

EGRESS EMERGENCY BATTERY PACK LIGHT FIXTURE (BUGEYE).

"EM" AND/OR SHADED CONNECTION POINT INDICATES FIXTURE WITH EMERGENCY BATTERY PACK (MINIMUM 1100 LUMEN OUTPUT) OR FIXTURE ON EMERGENCY INVERTER.

OCCUPANCY SENSORS

IO — WALL MOUNTED INFRA-RED OCCUPANCY SENSOR. USE WATTSTOPPER "WI 200" FOR SINGLE SWITCH AND "WI 300" FOR "ab" SWITCHING OR EQUAL. MOUNTING HEIGHT PER ADA MOUNTING DETAIL THIS SHEET - UON OR REQUIRED.

DO — WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR, USE WATTSTOPPER "DT 200" WITH POWER PACK OR EQUAL. MOUNTING HEIGHT PER ADA MOUNTING DETAIL THIS SHEET - UON OR REQUIRED.

VS ab — VACANCY SENSOR (MANUAL ON), MOUNTING HEIGHT PER ADA MOUNTING DETAIL THIS SHEET - UON OR REQUIRED, LETTERS "ab" INDICATES DUAL RELAY SENSOR. BOTH SWITCH LEGS TO BE CONFIGURED IN A "MANUAL ON" CONFIGURATION.

UO ab — WALL MOUNTED ULTRASONIC OCCUPANCY SENSOR. LETTERS "ab" INDICATES DUAL RELAY SENSOR. MOUNTING HEIGHT PER ADA MOUNTING DETAIL THIS SHEET - UON OR REQUIRED.

CS m — CEILING MOUNTED OCCUPANCY SENSOR. "m" INDICATES WATTSTOPPER "DT" SENSOR (OR EQUAL) WITH POWER PACK AND HVAC CONTROL RELAY. "s" INDICATES SATELLITE SENSOR.

(50) D x — AUTOMATIC CONTINUOUS DIMMING DAYLIGHTING CONTROLLER USED TO DIM LIGHTS WHEN SUFFICIENT NATURAL LIGHT IS PRESENT. NUMBER IN PARENTHESIS INDICATES THE AVERAGE WORKPLANE "TARGET ILLUMINATION" SYMBOL VALUE. ADJACENT LOWER CASE LETTERS "x"" INDICATES SWITCH LEG(S) CONTROLLED.

LV — LOW VOLTAGE (LV) WIRING BETWEEN OCCUPANCY, DAYLIGHT SENSORS, AND/OR LV SWITCHES. QUANTITY AND SPECIFICATIONS OF WIRE PER MANUFACTURER REQUIREMENTS.

POWER SYMBOLS

DUPLEX RECEPTACLE - MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS OR AS NOTED.

DOUBLE DUPLEX RECEPTACLE, MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS OR AS NOTED.

DUPLEX, GFCI RECEPTACLE, MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS OR AS NOTED. WP INDICATES WEATHERPROOF, REFER TO THE GENERAL PRODUCT SPECIFICATIONS.

DOUBLE DUPLEX, GFCI RECEPTACLE, MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS OR AS NOTED. WP INDICATES WEATHERPROOF, REFER TO THE GENERAL PRODUCT SPECIFICATIONS.

DEDICATED 20A, DUPLEX RECEPTACLE, MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS OR AS NOTED.

DUPLEX RECEPTACLE WITH USB - MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS OR AS NOTED.

DOUBLE DUPLEX RECEPTACLE WITH USB - MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS OR AS NOTED.

SIMPLEX RECEPTACLE, MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS OR AS NOTED.

SPECIAL RECEPTACLE, MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS OR AS NOTED. REFER TO PLAN NOTES.

DUPLEX RECEPTACLE FLUSH IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.

DOUBLE DUPLEX RECEPTACLE FLUSH IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.

SIMPLEX RECEPTACLE FLUSH IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.

SPECIAL RECEPTACLE FLUSH IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.

DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER, MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS - UON OR REQUIRED.

DOUBLE DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER, MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS - UON OR REQUIRED.

DUPLEX, GFCI RECEPTACLE MOUNTED ABOVE COUNTER, MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS - UON OR REQUIRED, WP INDICATES WEATHERPROOF, REFER TO THE GENERAL PRODUCT SPECIFICATIONS.

DOUBLE DUPLEX, GFCI RECEPTACLE MOUNTED ABOVE COUNTER, MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS - UON OR REQUIRED. WP INDICATES WEATHERPROOF, REFER TO THE GENERAL PRODUCT SPECIFICATIONS.

SIMPLEX RECEPTACLE MOUNTED ABOVE COUNTER, MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS - UON OR REQUIRED.

SPECIAL RECEPTACLE MOUNTED ABOVE COUNTER, MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS - UON OR REQUIRED.

WALL MOUNTED JUNCTION BOX. MOUNTING HEIGHT AS NOTED. 4S/DP MINIMUM OR AS REQUIRED BY N.E.C..

JUNCTION BOX, MOUNTED IN ACCESSIBLE CEILING FOR APPLICATION DENOTED ON PLAN. 4S/DP MINIMUM OR AS REQUIRED BY N.E.C..

ELECTRICAL CONNECTION TO INTERACTIVE MARKER-BOARD. COORDINATE CONNECTION TYPE AND REQUIREMENTS WITH MANUFACTURER'S INSTALLATION GUIDES. VERIFY MOUNTING LOCATION AND HEIGHT WITH ARCHITECT AND DISTRICT EQUIPMENT INSTALLER PRIOR TO ROUGH-IN OF ELECTRICAL.

SURFACE MOUNTED MULTI-OUTLET ASSEMBLY. REFER TO GENERAL PRODUCT SPECIFICATIONS. PROVIDE ALL COMPONENTS NECESSARY FOR A COMPLETE INSTALLATION.

T — THERMOSTAT OUTLET BOX, PROVIDE 1/2"C.O. TO RESPECTIVE MECHANICAL UNIT.

EF — EXHAUST FAN, OR MOTOR LOAD. REFER TO MECHANICAL, PLUMBING OR KITCHEN DRAWINGS FOR SPECIFIC LOAD REQUIREMENTS OR AS NOTED.

FLUSH MOUNTED ELECTRICAL PANELBOARD OR LOAD CENTER. REFER TO PANEL SCHEDULE.

SURFACE MOUNTED ELECTRICAL PANELBOARD OR LOAD CENTER. REFER TO PANEL SCHEDULE.

DISTRIBUTION SWITCHBOARD. REFER TO SINGLE LINE DIAGRAM.

T — TRANSFORMER, REFER TO SINGLE LINE DIAGRAM.

F — FUSED DISCONNECT SWITCH, HP RATED, OR COMBINATION MOTOR STARTER/DISCONNECT SWITCH WITH FUSES PER EQUIPMENT MANUFACTURER AND WEATHERPROOF AS REQUIRED. PROVIDE FINAL CONNECTION TO UNIT EQUIPMENT. SEE MOTORIZED EQUIPMENT SCHEDULE FOR DISCONNECT AND STARTER SIZES.

MOTOR STARTER COMBINATION SWITCH WITH HOA SELECTOR SWITCH, ON "RUNNING LIGHT" RESET AND OVERLOAD PROTECTION.

NON-FUSED DISCONNECT SWITCH, HP RATED AND WEATHERPROOF AS REQUIRED. PROVIDE FINAL CONNECTION TO UNIT EQUIPMENT. SEE MOTORIZED EQUIPMENT SCHEDULE FOR DISCONNECT SIZES.

M / CT. — UTILITY COMPANY METER. PROVIDE "CTs" AND "PTs" AS REQUIRED, REFER TO SINGLE LINE DIAGRAM.

1 / 150AF 150AT 3P — CIRCUIT BREAKER, LINE 1 REPRESENTS FRAME SIZE/RATING; LINE 2 REPRESENTS TRIP SIZE/RATING; LINE 3 REPRESENTS NUMBER OF POLES AND LINE 4 REPRESENTS MISCELLANEOUS BREAKER INFO. (SEE BELOW):
SHUNT = PROVIDE SHUNT TRIP MECHANISM.
HACR = PROVIDE HACR-RATED BREAKER.
GFP = GROUND FAULT PROTECTION
CLCB = CURRENT LIMITING CIRCUIT BREAKER
SS = PROVIDE SOLID STATE CIRCUIT BREAKER

60AS 3P / 50AF CLASS J — FUSIBLE SWITCH: LINE 1 REPRESENTS SWITCH SIZE/RATING; LINE 2 REPRESENTS NUMBER OF POLES; LINE 3 REPRESENTS FUSE SIZE/RATING; LINE 4 REPRESENTS FUSE TYPE; LINE 5 REPRESENTS MISCELLANEOUS FUSE INFO. (SEE BELOW):
SHUNT= PROVIDE SHUNT TRIP MECHANISM.
GFP = GROUND FAULT PROTECTION
CLF = CURRENT LIMITING FUSE

GROUND CONNECTION, SIZE AS INDICATED OR AS REQUIRED.

3 / sdb — SINGLE POLE SWITCHES, MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS. SUBSCRIPTS AT SYMBOL INDICATE THE FOLLOWING:
2 - DOUBLE POLE — K - KEY OPERATED — R - REMOTE CONTROL
3 - THREE WAY — LV - LOW VOLTAGE
4 - FOUR WAY — M - MOTOR STARTING
D - LOW VOLTAGE DIMMER — P - PILOT LIGHT
NOTE: ALL WALL SWITCHES CONTROLLING EMERGENCY CIRCUITS SHALL BE ENGRAVED WITH "EMERGENCY"

PB OR P — PULLBOX, SIZED PER N.E.C. OR AS NOTED.

RECESSED COMBINATION POWER OUTLET FOR IN FLOOR BOX PER PLAN FOR FLEXIBLE CONNECTION TO FURNITURE SYSTEM. VERIFY CONNECTION REQUIREMENTS WITH MANUFACTURER PRIOR TO ROUGH-IN - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.

POWER OUTLET OUTLET, MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS. FOR FLEXIBLE CONNECTION TO FURNITURE SYSTEM PROVIDE THE FOLLOWING:

- IN A NON-RATED INSULATED WALL, OR NON-RATED UNINSULATED WALL, PROVIDE A 2-GANG MUD RING OR CADDY #RBS SERIES BOX MOUNTING BRACKET (EQUAL BY B-LINE OR RAYCO) WITH (2) 1-1/4"C.O. WITH PULL STRING TO ACCESSIBLE CEILING. PROVIDE 1-1/4" BUSHINGS AT CONDUIT ENDS. REFER TO ARCHITECTURAL PLANS FOR WALL CONSTRUCTION/TYPE AND CEILING CONDITIONS.
- IN A RATED WALL, PROVIDE (1) 4S/DP BOX WITH (2) 1-1/4"C.O. AND (1) 4S/DP BOX WITH (1) 1-¼"C.O. WITH PULL STRINGS IN EACH CONDUIT TO ACCESSIBLE CEILING. PROVIDE 1-1/4" BUSHINGS AT CONDUIT ENDS. UTILIZE CADDY #RBS SERIES BOX MOUNTING BRACKET TO MAINTAIN BOX ALIGNMENT. (EQUAL BY B-LINE OR RAYCO)UTLIZE FIRESTOPPING SYSTEM PADS RATED FOR USE ON THE INSIDE OR OUTSIDE OF THE BOX (STI OR EQUAL) AS REQUIRED TO MAINTAIN RATING OF WALL OR MEMBRANE. REFER TO ARCHITECTURAL PLANS FOR WALL CONSTRUCTION/TYPE AND CEILING CONDITIONS.

BRANCH CIRCUIT SYMBOLS

A-1,3,5 — HOME RUN TO PANEL, LETTER DESIGNATES PANEL, NUMBERS INDICATE CIRCUITS. HASH MARKS INDICATE NUMBER OF CONDUCTORS IN CONDUIT RUN, #12 AWG MINIMUM UNLESS OTHERWISE NOTED.

#12 UNDERGROUND CIRCUIT WIRE (HOT):
NUMBER OF HATCH MARKS INDICATE NUMBER OF #12 AWG CONDUCTORS.
#12 GROUNDED CIRCUIT WIRE (NEUTRAL)
#12 GROUND WIRE
#12 ISOLATED GROUND WIRE.
FOR CLARITY, I.G. MARKS ARE SHOWN ON THE HOME RUN ONLY. CONTRACTOR SHALL MAINTAIN THE ISOLATED GROUND CONDUCTOR TO THE FINAL CONNECTION OF ANY DEVICE SERVED.

CONCEALED CONDUIT OR BRANCH CIRCUIT UNLESS OTHERWISE NOTED. 1/2" CONDUIT MINIMUM, (2) #12 AWG CONDUCTORS MINIMUM

CONCEALED CONDUIT OR BRANCH CIRCUIT ROUTED IN FLOOR SLAB OR CONCRETE. COORDINATE INSTALLATION WITH GENERAL CONTRACTOR AND SUPPORT AS REQUIRED. 1/2" CONDUIT (2) #12 AWG CONDUCTORS MINIMUM.
CONDUIT OR BRANCH CIRCUIT CONCEALED BELOW GRADE, 3/4" CONDUIT MINIMUM WITH (2) 12 AWG CONDUCTORS MINIMUM AND A CODE SIZED EQUIPMENT GROUND.

SURFACE-MOUNTED CONDUIT OR BRANCH CIRCUIT UNLESS OTHERWISE NOTED. 1/2" CONDUIT MINIMUM, (2) #12 AWG CONDUCTORS MINIMUM. CONDUIT SHALL BE PAINT TO MATCH ADJUCENT SURFACE. COORDINATE COLOR WITH ARCHITECT/INTERIORS.

CONDUIT STUB OUT, CAP, MARK AND RECORD ON AS-BUILT DRAWINGS

CONDUIT CONTINUATION.

FLEXIBLE CONNECTION AS REQUIRED. NUMBER OF CONDUCTORS AS REQUIRED. VERIFY CONNECTION REQUIREMENTS WITH MANUFACTURER PRIOR TO ROUGH-IN.

CONDUIT/ BRANCH CIRCUIT/FEEDER CONTINUATION DOWN WALL TO FLOOR BELOW

CONDUIT/ BRANCH CIRCUIT/FEEDER CONTINUATION UP WALL TO FLOOR ABOVE

FLUSH MOUNTED, LOCKABLE TERMINAL CABINET WITH TERMINAL STRIPS AS REQUIRED.

SURFACE MOUNTED, LOCKABLE TERMINAL CABINET WITH TERMINAL STRIPS AS REQUIRED.

TELEPHONE TERMINAL BACKBOARD SIZED AS NOTED, REFER TO SYSTEM GROUND DETAIL.

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Sage Hill Tennis Complex
20402 Newport Coast Drive
Newport Beach, CA 92657
Developed for Sage Hill School

Revision	Date

Submittal	Date
SCHEMATIC DESIGN	02/24/2015

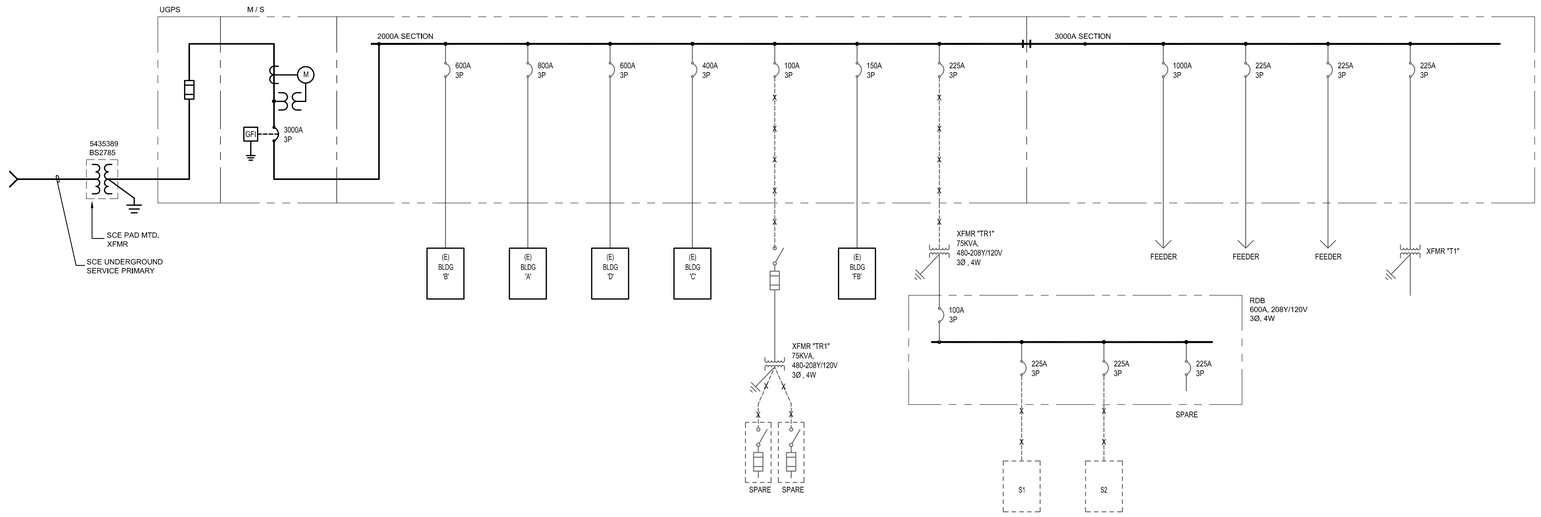
Job. No. 14248.10
Date
Checked by
Scale

SYMBOL LIST

E0.10

FEEDER SCHEDULE

FEEDER	CONDUIT AND CONDUCTORS	LOAD	DISTANCE	V.D.	A.I.C.	NOTES
MSB-1	(4) 4"C.-4#350MCM, 1#3/0 GRD. IN EACH	-	-	-	-	- -
MSB-2	(5) 4"C.-4#500MCM, 1#4/0 GRD. IN EACH	-	-	-	-	- -
MSB-3	(5) 4"C.-4#500MCM, 1#4/0 GRD. IN EACH	-	-	-	-	- -
MSB-4	(5) 4"C.-4#500MCM, 1#4/0 GRD. IN EACH	-	-	-	-	- -
MSB-5	(2) 3"C.-4#250MCM, 1#2 GRD. IN EACH	-	-	-	-	- -
MSB-6	(2) 3"C.-4#250MCM, 1#2 GRD. IN EACH	-	-	-	-	- -
MSB-7	(2) 3"C.-4#250MCM, 1#2 GRD. IN EACH	-	-	-	-	- -
-	-	-	-	-	-	- -



KEYNOTES

1. PROVIDE NEW PULLBOX, INTERCEPT EXISTING SERVICE DUCT BANK AND PULL IN NEW CONDUCTORS. TERMINATE AT NEW SWITCH AND EXISTING MSB-UGPS.
2. NEW DUCT BANK: 8 x (5"C, 4# 500 KCMIL) INTERCEPT EXISTING DUCT, TERMINATE NEW FEEDER CABLE AT BOTH ENDS. VERIFY EXISTING CONDUIT SIZE.
3. NEW DUCT BANK: 4 x (5"C, 4# 500 KCMIL) INTERCEPT EXISTING DUCT, TERMINATE NEW FEEDER CABLE AT BOTH ENDS. VERIFY EXISTING CONDUIT SIZE.
4. INTERCEPT EXISTING UNDER GROUND DUCT BANK AT ALTON BLVD. AND TIE IN NEW DUCT BANK. PULL IN NEW FEEDERS SPLICE TO EXISTING CABLE 5"C, 3# 3/0 + 1# 6 GND. FIELD VERIFY CONDUIT/WIRE SIZE.

SINGLE LINE DIAGRAM | 01

MAIN ELECTRICAL ROOM | 02

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Sage Hill
Tennis Complex

20402 Newport Coast Drive
Newport Beach, CA 92657

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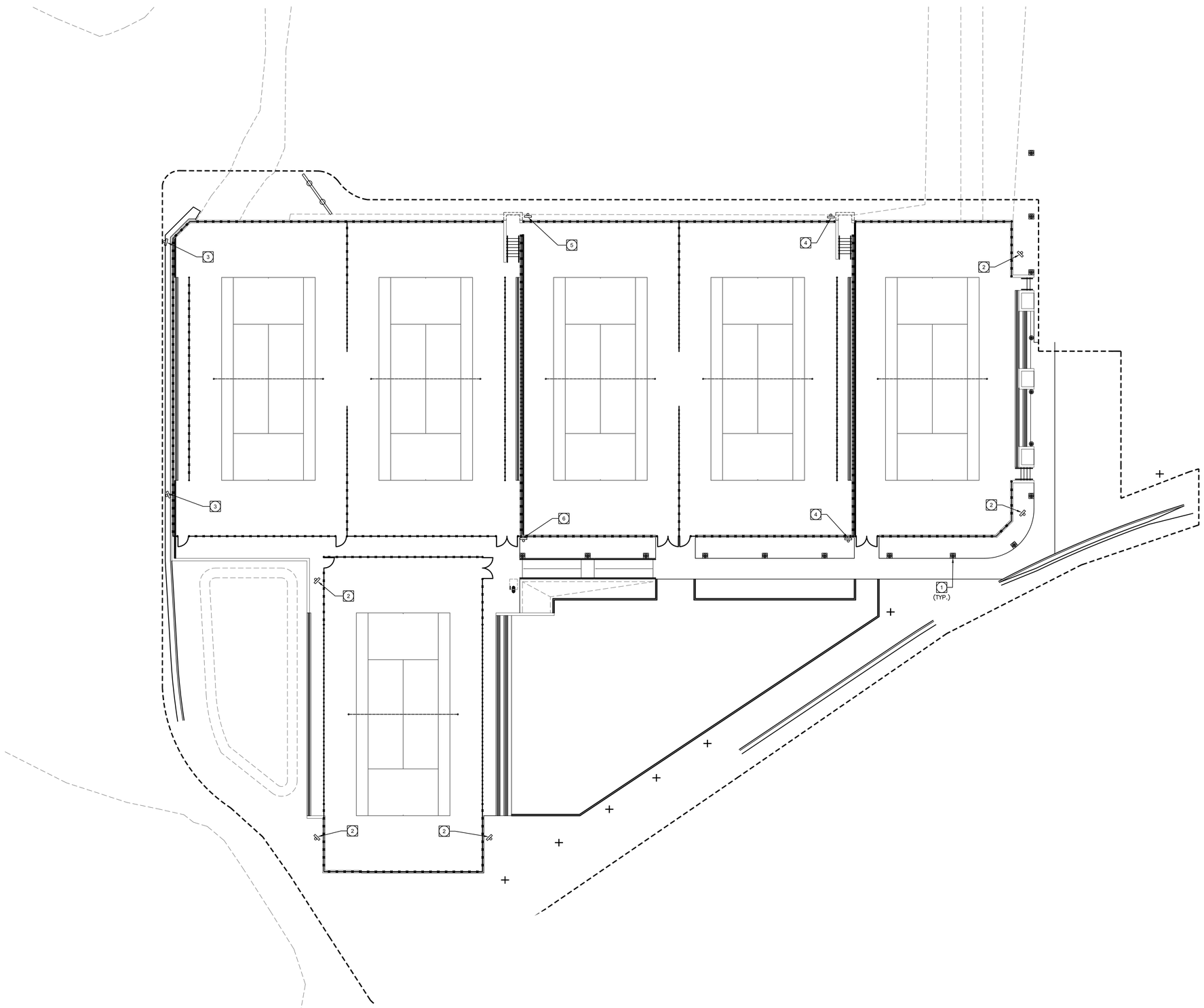
SINGLE LINE, LOAD SCHED. & FEEDER SCHED.

E0.20



KEYNOTES

1. BOLLARD LIGHT. SOURCE TO BE DETERMINED. 3 FEET HIGH.
2. 50' HIGH-MAST POLE WITH (2) 1000W LED HEADS.
3. 50' HIGH-MAST POLE WITH (3) 1000W LED HEADS.
4. 50' HIGH-MAST POLE WITH (4) 1000W LED HEADS.
5. 50' HIGH-MAST POLE WITH (6) 1000W LED HEADS.
6. 50' HIGH-MAST POLE WITH (7) 1000W LED HEADS.

NOTE:
ALL TENNIS COURT LIGHTS ARE AIMABLE AND INCLUDES LIGHT SHIELD ACCESSORIES TO NOT PRODUCE ANY GLARE AT SURROUNDING ADJACENT PROPERTIES.

SITE GENERAL NOTES

1. xx
2. x
3. x
4. x
5. x
6. x

N

KEYPLAN

TENNIS COURT LIGHTING PLAN | 01

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Sage Hill
Tennis Complex
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TENNIS COURT LIGHTING PLAN

E1.00

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SAGE HILL
Aquatic Complex

Newport Coast, CA 92657

Sage Hill School
SCHEMATIC DESIGN
Feburary 24, 2015

LPA 14248.10

SCHEMATIC DESIGN - Feburary 24, 2015

SAGE HILL SCHOOL

ABBREVIATIONS

&	AND
L	ANGLE
@	AT
℄	CENTERLINE
Ø	DIAMETER OR ROUND
#	POUND OR NUMBER
(E)	EXISTING
(N)	NEW
ACOUS.	ACOUSTICAL
A.D.	AREA DRAIN
ADMIN.	ADMINISTRATION
ADJ.	ADJUSTABLE
A.F.F.	ABOVE FINISH FLOOR
AGGR.	AGGREGATE
AL.	ALUMINUM
APPROX.	APPROXIMATE
ARCH.	ARCHITECTURAL
ASB.	ASBESTOS
ASPH.	ASPHALT
BD.	BOARD
BITUM.	BITUMINOUS
BLDG.	BUILDING
BLK.	BLOCK
BLKG.	BLOCKING
BM.	BEAM
B.O.	BOTTOM OF
BOT.	BOTTOM
CAB.	CABINET
C.B.	CATCH BASIN
CEM.	CEMENT
CER.	CERAMIC
C.I.	CAST IRON
C.I.P	CAST IN PLACE
C.G.	CORNER GUARD
CLG.	CEILING
CLKG.	CAULKING
CLO.	CLOSET
CLR.	CLEAR
C.O.	CASED OPENING
COL.	COLUMN
CONC.	CONCRETE
CONN.	CONNECTION
CONSTR.	CONSTRUCTION
CONT.	CONTINUOUS
CORR.	CORRIDOR
CR.	CLASSROOM
CTSK.	COUNTERSUNK
CNTR.	COUNTER
CTR.	CENTER
DBL.	DOUBLE
DEPT.	DEPARTMENT
D.F.	DRINKING FOUNTAIN
DET.	DETAIL
DIA.	DIAMETER
DIM.	DIMENSION
DISP.	DISPENSER
DN.	DOWN
D.O.	DOOR OPENING
DR.	DOOR
DWR.	DRAWER
D.S.	DOWNSPOUT
D.S.S.	DRY STANDPIPE
DWG.	DRAWING
E.	EAST
EA.	EACH
E.D.F.	ELECT. DRINKING FOUNTAIN
E.J.	EXPANSION JOINT
EL.	ELEVATION
ELEC.	ELECTRICAL
ELEV.	ELEVATOR
EMER.	EMERGENCY
ENCL.	ENCLOSURE
E.P.	ELECT. PANELBOARD
EQ.	EQUAL
EQPT.	EQUIPMENT
E.W.C.	ELECT. WATER COOLER
EXST.	EXISTING
EXPO.	EXPOSED
EXP.	EXPANSION
EXT.	EXTERIOR
F.A.	FIRE ALARM
F.B.	FLAT BAR
F.D.	FLOOR DRAIN
FDN.	FOUNDATION
F.E.	FIRE EXTINGUISHER
F.E.C.	FIRE EXTINGUISHER CABINET
F.H.C.	FIRE HOSE CABINET
FIN.	FINISH
FL.	FLOOR
FLASH.	FLASHING
FLUOR.	FLUORESCENT
F.O.C.	FACE OF CONCRETE
F.O.F.	FACE OF FINISH
F.O.M.	FACE OF MASONRY
F.O.S.	FACE OF STUD
FPRF.	FIREPROOF
F.S.	FINISH SURFACE
FT.	FOOT OR FEET
FTG.	FOOTING
FURR.	FURRING
FUT.	FUTURE
GA.	GAUGE
GALV.	GALVANIZED
G.B.	GRAB BAR
G.I..M.	GALV. IRON
GL.	GLASS
GND.	GROUND
GYP.	GYPSUM
H.B.	HOSE BIB
H.C.	HOLLOW CORE
HDWD.	HARDWOOD
H.M.	HOLLOW METAL
HORIZ.	HORIZONTAL
HR.	HOUR
HGT.	HEIGHT
I.D.	INSIDE DIAMETER
INSUL.	INSULATION
INT.	INTERIOR
JAN.	JANITOR
JT.	JOINT
KIT.	KITCHEN
LAB.	LABORATORY
LAM.	LAMINATE
LAV.	LAVATORY
LKR.	LOCKER
LS.	LUNCH SHELTER
LT.	LIGHT
MAX.	MAXIMUM
M.C.	MEDICINE CABINET
MECH.	MECHANICAL
MEMB.	MEMBRANE
MET.	METAL
MFR.	MANUFACTURER
MH.	MANHOLW
MIN.	MINIMUM
MIR.	MIRROR
MISC.	MISCELLANEOUS
M.O.	MASONRY OPENING
MPR.	MULTI-PURPOSE ROOM
MTD.	MOUNTED
MTL.	MATERIAL
MUL.	MULLION
N.	NORTH
N.I.C.	NOT IN CONTRACT
NO.	NUMBER
NOM.	NOMINAL
N.T.S.	NOT TO SCALE
O.A.	OVERALL
OBS.	OBSCURE
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
OFF.	OFFICE
OPNG.	OPENING
OPP.	OPPOSITE
PRCST.	PRE-CAST
PL.	PLATE
P.LAM.	PLASTIC LAMINATE
PLAS.	PLASTER
PLYWD.	PLYWOOD
PR.	PAIR
PT.	POINT
P.T.	PRESSURE TREATED
P.T.D	PAPER TOWEL DISPENSER
P.T.D./R	COMBINATION PAPER TOWEL DISPENSER & RECEPTACLE
PTN.	PARTITION
P..R.	PAPER TOWEL RECEPTACLE
Q.T.	QUARRY TILE
R.	RISER
RAD.	RADIUS
R.D.	ROOF DRAIN
REF.	REFERENCE
REFR.	REFRIDGERATOR
RGTR.	REGISTER
REINF.	REINFORCED
RELO.	RELOCATABLE
REQ.	REQUIRED
RESIL.	RESILENT
RM.	ROOM
R.O.	ROUGH OPENING
RWD.	REDWOOD
R.W.L.	RAIN WATER LEADER
S.	SOUTH
S.C.	SOLID CORE
S.C.D.	SEAT COVER DISPENSER
SCHED.	SCHEDULE
S.A.	SOAP DISPENSER
SECT.	SECTION
SH.	SHELL
SHR.	SHOWER
SHT.	SHEET
SIM.	SIMILAR
S.M.S.	SHEET METAL SCREW
S.N.D.	SANITARY NAPKIN DISPENSER
S.N.R.	SANITARY NAPKIN RECEPTACLE
SPEC.	SPECIFICATION
SQ.	SQUARE
S.ST.	STAINLESS STEEL
S.SK.	SERVICE SINK
STA.	STATION
STD.	STANDARD
STL.	STEEL
STOR.	STORAGE
T.	TEMPERED
TRD.	TREAD
T.B.	TOWEL BAR
T.C.	TOP OF CURB
TEL.	TELEPHONE
TER.	TERRAZZO
T.&G.	TONGUE AND GROOVE
THK.	THICK
T.O.	TOP OF
T.O.P.	TOP OF PARAPET
T.P.	TOP OF PAVEMENT
T.P.D.	TOILET PAPER DISPENSER
T.S.	TUBE STEEL
T.V.	TELEVISION
T.W.	TOP OF WALL
TYP.	TYPICAL
UNF.	UNFINISHED
U.O.N.	UNLESS OTHERWISE NOTED
UR.	URINAL
VERT.	VERTICAL
VEST.	VESTIBULE
V.I.F.	VERIFY IN FIELD
W.	WEST
W/	WITH
W.C.	WATER CLOSET
WD.	WOOD
W/O	WITHOUT
W.P.	WATERPROOF
WSCT.	WAINSCOAT
WT.	WEIGHT

SYMBOLS LEGEND

- COLUMN LINE
- SECTION (BUILDING) — 3 SECTION IDENTIFICATION; A3.1.01 SHEET WHERE SECTION IS DRAWN
- SECTION (WALL) — 3 SECTION IDENTIFICATION; A3.1.01 SHEET WHERE SECTION IS DRAWN
- ELEVATION — 3 ELEVATION IDENTIFICATION; A3.1.01 SHEET WHERE ELEVATION IS DRAWN
- DETAIL — 8 DETAIL IDENTIFICATION; A8.1.01 SHEET WHERE DETAIL IS DRAWN
- INTERIOR ELEVATIONS — 5 ELEVATION IDENTIFICATION; A5.1.01 SHEET WHERE ELEVATION IS DRAWN (A, B, C, D)
- ROOM NUMBER — CLASSROOM ROOM NAME; 1101 ROOM NUMBER
- REVISION — CLOUD AROUND REVISED AREA OPTIONAL
- MATCH LINE
- DATUM POINT
- KEYNOTE (1)
- DEMOLITION KEYNOTE (1)
- DOOR SYMBOL — 1101A DOOR DESIGNATION; ROOM NUMBER
- WINDOW TYPE (1A)

GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE AS SPECIFIED AND IN ACCORDANCE WITH ALL APPLICABLE CODES, ORDINANCES, LAWS, PERMITS, AND THE CONTRACT DOCUMENTS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCURATE PLACEMENT OF ALL NEW CONSTRUCTION ON THE SITE.
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS BEFORE STARTING WORK. SHOULD A DISCREPANCY APPEAR IN THE CONTRACT DOCUMENTS, OR BETWEEN THE CONTRACT DOCUMENTS AND EXISTING CONDITIONS, NOTIFY THE ARCHITECT AT ONCE FOR INSTRUCTION ON HOW TO PROCEED.
4. SHOULD A CONFLICT OCCUR IN OR BETWEEN DRAWINGS AND SPECIFICATIONS, THE SPECIFICATIONS SHALL TAKE PRECEDENCE, UNLESS A WRITTEN DECISION FROM THE ARCHITECT HAS BEEN OBTAINED WHICH DESCRIBES A CLARIFICATION OR ALTERNATE METHOD AND/OR MATERIALS.
5. THE CONTRACTOR SHALL CONFINE HIS OPERATIONS ON THE SITE TO AREAS PERMITTED BY THE OWNER.
6. THE JOB SITE SHALL BE MAINTAINED IN A CLEAN, ORDERLY CONDITION FREE OF DEBRIS AND LITTER, AND SHALL NOT BE UNREASONABLY ENCUMBERED WITH ANY MATERIALS OR EQUIPMENT. EACH SUBCONTRACTOR IMMEDIATELY UPON COMPLETION OF EACH PHASE OF HIS WORK SHALL REMOVE ALL TRASH AND DEBRIS AS A RESULT OF HIS OPERATION.
7. ALL MATERIAL STORED ON THE SITE SHALL BE PROPERLY STACKED AND PROTECTED TO PREVENT DAMAGE AND DETERIORATION. FAILURE TO PROTECT MATERIALS MAY CAUSE FOR REJECTION OF WORK.
8. THE CONTRACTOR SHALL DO ALL CUTTING, FITTING, OR PATCHING OF THIER WORK THAT MAY BE REQUIRED TO MAKE ITS SEVERAL PARTS FIT TOGETHER PROPERLY AND SHALL NOT ENDANGER ANY OTHER WORK BY CUTTING, EXCAVATING, OR OTHERWISE ALTERING THE TOTAL WORK OR ANY PART OF IT. ALL PATCHING, REPAIRING, AND REPLACING OF MATERIALS AND SURFACES, CUT OR DAMAGED IN EXECUTION OF WORK, SHALL BE DONE WITH APPLICABLE MATERIALS SO THAT SURFACES REPLACED WILL, UPON COMPLETION, MATCH SURROUNDING SIMILAR SURFACES.
9. NO PORTION OF THE WORK REQUIRING A SHOP DRAWING OR SAMPLE SUBMISSION SHALL BE COMMENCED UNTIL THE SUBMISSION HAS BEEN REVIEWED BY THE ARCHITECT. ALL SUCH PORTIONS OF THE WORK SHALL BE IN ACCORDANCE WITH CORRECTED SHOP DRAWINGS AND SAMPLES.
10. DIMENSIONS:
    A. ALL DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE.
    B. ALL DIMENSIONS ARE TO THE FINISH UNLESS OTHERWISE NOTED.
    C. CEILING HEIGHT DIMENSIONS ARE FROM FINISHED FLOOR SLAB TO FACE OF FINISH CEILING MATERIAL UNLESS OTHERWISE NOTED.
11. WHERE LARGER STUDS OR FURRING ARE REQUIRED TO COVER PIPING AND CONDUITS, THE LARGER STUD SIZE OR FURRING SHALL EXTEND THE FULL SURFACE OF THE WALL WIDTH AND LENGTH WHERE THE FURRING OCCURS.
12. PROVIDE ALL ACCESS PANELS AS REQUIRED BY GOVERNING CODES TO ALL CONCEALED SPACES, VOIDS, ATTICS, ETC. VERIFY TYPE REQUIRED WITH ARCHITECT PRIOR TO INSTALLATION. ACCESS PANELS SHALL BE FIRE RATED WHEN INSTALLED IN RATED CONSTRUCTION AND SHALL MEET OR EXCEED WALL, FLOOR, OR CEILING RATING
13. ALL GLASS AND GLAZING SHALL COMPLY WITH C.B.C. CHAPTER 24.
14. ALL WORK SHALL CONFORM TO TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).
15. CHANGES MADE TO THE APPROVED DRAWINGS SHALL BE MADE BY AN ADDENDA OR A CCD APPROVED BY THE DIV. OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR.
16. A PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR OF RECORD (I.O.R.) ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR; CLASS 1.
17. THE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS TO MODIFY THE FACILITY FOR ACCESSIBILITY IN ACCORDANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS. SHOULD ANY CONDITIONS DEVELOP NOT COVERED BY THE CONTRACT DOCUMENTS SUCH THAT THE FINISHED WORK WILL NOT COMPLY WITH SAID TITLE 24, CALIFORNIA CODE OF REGULATIONS, A CHANGE ORDER DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA-AC BEFORE PROCEEDING WITH THE WORK.
18. TITLE 24 PARTS 1-5 SHALL BE KEPT ON SITE DURING CONSTRUCTION.
19. AN INSPECTOR WHO IS SPECIALLY QUALIFIED IN MECHANICAL AND ELECTRICAL WORK WILL BE REQUIRED FOR THIS PROJECT.
20. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
21. ALL LEGAL EXIT DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT. EXIT SIGNS SHALL BE PROVIDED AT ALL EXITS AS REQUIRED BY THE C.B.C. SECTION 1011. ALL DOOR SWINGS SERVING AN OCCUPANT LOAD OF 50 OR GREATER SHALL SWING IN THE DIRECTION OF TRAVEL.
22. PROVIDE ALL NECESSARY BLOCKING, BACKING, AND FRAMING FOR LIGHT FIXTURES, ELECTRIC UNITS, A.C. EQUIPMENT, RECESSED ITEMS, AND ALL OTHER ITEMS AS REQUIRED.
23. PROVIDE FIRE EXTINGUISHERS PER THE REQUIREMENTS OF LOCAL GOVERNING AGENCIES.
24. PROVIDE ALL ACCESS PANELS AS REQUIRED BY GOVERNING CODES TO ALL CONCEALED SPACES, VOIDS, ATTICS, ETC. VERIFY TYPE REQUIRED WITH THE ARCHITECT PRIOR TO INSTALLATION.
25. PROVIDE EXIT ILLUMINATION PER THE REQUIREMENTS OF LOCAL GOVERNMENT AGENCIES.

HAZARDOUS MATERIAL DISCLAIMER

THESE DOCUMENTS HAVE BEEN PREPARED BASED ON INFORMATION PROVIDED BY OTHERS AND ARE A REPRESENTATION OF EXISTING CONDITIONS AT A DETAIL REQUIRED BY THE SCOPE OF THE ARCHITECT'S SERVICES. THE ARCHITECT HAS NOT VERIFIED THE ACCURACY OF THIS INFORMATION INCLUDING BORING OR CORING OF STRUCTURAL AND/OR NON-STRUCTURAL ELEMENTS, MEASUREMENTS, ETC. AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY BE INCORPORATED HEREIN AS A RESULT. THE ARCHITECT HAS NOT CONDUCTED ANY CODE COMPLIANCE ANALYSIS, STRUCTURAL ANALYSIS, ASBESTOS INVESTIGATIONS, LIFE SAFETY EVALUATION ENGINEERING STUDIES OF ANY KIND TO DETERMINE THE SUITABILITY OF THIS BUILDING FOR ITS INTENDED USE. SUBSEQUENTLY THE ARCHITECT DOES NOT REPRESENT THAT THESE DOCUMENTS ILLUSTRATE EXISTING CONDITIONS THAT COMPLY WITH ANY OR ALL APPLICABLE CODES. THE DISCOVERY OF ANY DEFICIENCY IN THE BUILDING AND/OR SITE, INCLUDING THE PRESENCE OF ASBESTOS, SHALL BE IMMEDIATELY REPORTED TO THE PROPERTY OWNER WHO SHALL BE RESPONSIBLE TO DIRECT HIS CONTRACTOR AND/OR CONSULTANTS IN THE APPROPRIATE MANNER.

GENERAL FIRE NOTES

1. PROVIDE A MINIMUM, UNOBSTRUCTED WIDTH OF 20 FEET, CLEAR TO SKY, VEHICULAR ACCESS TO WITHIN 150 FEET OF ALL PORTIONS OF THE BUILDING EXTERIOR WALLS. CALIFORNIA FIRE CODE SECTION 503.
2. VEHICULAR ACCESS MUST BE MAINTAINED SERVICEABLE THROUGHOUT CONSTRUCTION.
3. FIRE APPARATUS ACCESS ROADS SHALL NOT BE OBSTRUCTED IN ANY MANNER, INCLUDING PARKING OF VEHICLES. CALIFORNIA FIRE CODE, SECTION 503.4.
4. FIRE EXTINGUISHER REQUIREMENTS SHALL BE DETERMINED BY FIELD INSPECTOR AND PROVIDED PER 2013 CALIFORNIA FIRE CODE SECTION 906.
5. PROVIDE A KEY BOX LOCATION AT ALL GATED ENTRANCES AS REQUIRED BY CALIFORNIA FIRE CODE, SECTION 506. KEY BOX TO BE DESIGNED PER COUNTY OF EL CAJON FIRE DEPARTMENT REGULATIONS.
6. COMMERCIAL DUMPSTERS OR CONTAINERS WITH AN INDIVIDUAL CAPACITY OF 1.5 CUBIC YARDS OR GREATER SHALL NOT BE STORED OR PLACED WITHIN FIVE FEET OF COMBUSTIBLE WALLS, OPENINGS OR COMBUSTIBLE ROOF EAVE LINES UNLESS AREAS CONTAINING DUMPSTERS ARE PROTECTED BY AN APPROVED SPRINKLER SYSTEM PER CALIFORNIA FIRE CODE, SECTION 304.3.3.
7. ROADS MUST BE CONSTRUCTED OF A MATERIAL WHICH PROVIDES AN ALL WEATHER DRIVING SURFACE AND CAPABLE OF SUPPORTING THE 70,000 POUND IMPOSED LOAD FOR THE FIRE APPARATUS. CALCULATIONS STAMPED AND SIGNED BY A REGISTERED ENGINEER SHALL CERTIFY THAT THE PROPOSED SURFACE MEETS THE ABOVE CRITERIA. CALIFORNIA FIRE CODE, SECTION 503.2.3.
8. ALL EXIT DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT. EXIT SIGNS SHALL BE PROVIDED AT ALL EXITS AS REQUIRED BY CALIFORNIA BUILDING CODE, CHAPTER 10. ALL DOOR SWINGS SERVING AN OCCUPANT LOAD OF 50 OR GREATER SHALL SWING IN THE DIRECTION OF TRAVEL.
9. PROVIDE EXIT ILLUMINATION PER THE REQUIREMENTS OF C.B.C., CHAPTER 10.
10. PROVIDE INFORMATION INDICATING THAT VEHICULAR/PEDESTRIAN GATES ARE PROVIDED WITH EITHER A KNOX PADLOCK OR NON-CASE-HARDENED, FRANGIBLE PADLOCK/CHAIN THAT CAN BE CUT WITH BOLT CUTTERS. COORDINATE WITH LOCAL AHJ.
11. COMPLY WITH CFC CHAPTER 33 FOR FIRE SAFETY DURING DEMOLITION AND CONSTRUCTION.

ACCESSIBILITY GENERAL NOTES

1. SLOPE. THE RUNNING SLOP OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:20. THE CROSS SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:48. (CBC 11B-40.3.3)
2. LANDINGS. RAMPS SHALL HAVE LANDINGS AT THE TOP AND THE BOTTOM OF EACH RAMP RUN. (CBC 11B-405.7) CHANGE OF DIRECTION. RAMP THAT CHANGE DIRECTION BETWEEN RUNS AT LANDINGS SHALL HAVE A CLEAR LANDING 60 INCHES MINIMUM BY 72 INCHES MINIMUM IN THE DIRECTION OF DOWNWARD TRAVEL FROM THE UPPER RAMP RUN. (CBC 11B-405.7.4)
3. ALL BUILDING ENTRANCES THAT ARE ACCESSIBLE TO AND USEABLE BY PERSONS WITH DISABILITIES SHALL BE IDENTIFIED WITH AT LEAST ONE STANDARD SIGN DISPLAYING THE INTERNATIONAL SYMBOL OF ACCESSIBILITY AND WITH ADDITIONAL DIRECTIONAL SIGNS, AS REQUIRED, TO BE VISIBLE TO PERSONS ALONG APPROACHING PEDESTRIAN WAYS.
4. IF THE BUILDING INSPECTOR DETERMINES NONCOMPLIANCE WITH ANY ACCESSIBILITY PROVISIONS, HE/SHE SHALL REQUIRE COMPLETE DETAILED PLANS CLEARLY SHOWING ALL EXISTING NON-COMPLYING CONDITIONS AND THE PROPOSED MODIFICATIONS TO MEET CURRENT ACCESSIBILITY PROVISIONS AFFECTED BY THE REMODEL (INCLUDING SITE PLAN, FLOOR PLANS, DETAILS, ETC..) THE PLANS MUST BE STAMPED BY THE FIELD INSPECTOR AND RESUBMITTED TO THE BUILDING DEVELOPMENT REVIEW DIVISION.
5. WALKS, SIDEWALKS, AND PEDESTRIAN WAYS SHALL BE FREE OR GRATINGS WHEVER POSSIBLE. FOR GRATINGS LOCATED ON THE THE SURFACES OF ANY PEDESTRIAN WAY, IN THE PATH OF TRAVEL, GRID/OPENINGS SHALL BE LIMITED TO ½" MAXIMUM IN THE DIRECTION OF TRAVEL IF SUCH CONDITIONS OCCUR.
6. MINIMUM CLEAR WIDTH OF AN ACCESSIBLE ROUTE SHALL NOT BE LESS THAN 36", EXCEPT AT DOORS.
7. ABRUPT CHANGES IN LEVEL ALONG THE PATH OF TRAVEL SHALL NOT EXCEED ¼" LEVEL CHANGES BETWEEN ¼"-1/2" ARE BEVELED WITH A MAXIMUM GRADIENT OF 1-2 (50% SLOPE)
8. SIDEWALK AND WALK SLOPE IN THE DIRECTION OF TRAVEL SHALL NOT EXCEED 1.20 GRADIENT (5%) AND CROSS SLOPE SHALL NOT EXCEED 1:50 GRADIENT (2%)
9. DOORS THAT ENCROACH INTO WALKWAYS SHALL HAVE A MINIMUM 60"X60" LEVEL LANDING ARE WITH SLOPES NO LESS THAN 1:50 GRADIENT (2%) IN ANY DIRECTION/ LEVEL LANDING AREAS SHALL EXTEND A MINIMUM OF 24" BEYOND STRIKE EDGE OF DOOR. DOORS THAT SWING AWAY FROM WALK SHALL HAVE A LEVEL LANDING AREA A MINIMUM OF 48" WIDE X 44" DEEP WITH SLOPE LESS THAN 1:50 GRADIENT (2%) IN ANY DIRECTION.
10. ALL SIDEWALKS, WALKS, AND PEDESTRIAN WAYS SHALL BE AT LEAST AS SLIP RESISTANT AS THAT DESCRIBED AS A MEDIUM SALTED FINISH.

APPLICABLE CODES

BUILDING CODES:

APPLICABLE CODE AS OF JANUARY 1, 2014

Part 1 2013 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE, TITLE 24 C.C.R.
Part 2 2013 CALIFORNIA BUILDING CODE, TITLE 24 C.C.R. (2012 INTERNATIONAL BUILDING CODE OF THE INTERNATIONAL CODE COUNCIL, WITH CALIFORNIA 2013 AMENDMENTS)
Part 3 2013 CALIFORNIA ELECTRICAL CODE, TITLE 24 C.C.R. (2011 NATIONAL ELECTRICAL CODE OF THE NATIONAL FIRE PROTECTION ASSOCIATION, NFPA AND 2013 CALIFORNIA AMENDMENTS)
Part 4 2013 CALIFORNIA MECHANICAL CODE, TITLE 24 C.C.R. (2012 UNIFORM MECHANICAL CODE OF THE INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS, IAPMO AND 2013 CALIFORNIA AMENDMENTS)
Part 5 2013 CALIFORNIA PLUMBING CODE, TITLE 24 C.C.R. (2012 UNIFORM PLUMBING CODE OF THE INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS, IAPMO AND 2013 CALIFORNIA AMENDMENTS)
Part 6 2013 CALIFORNIA ENERGY CODE, TITLE 24 C.C.R.
Part 7 CURRENTLY VACANT
Part 8 2013 CALIFORNIA HISTORICAL BUILDING CODE, TITLE 24 C.C.R.
Part 9 2013 CALIFORNIA FIRE CODE, TITLE 24 C.C.R. (2012 INTERNATIONAL FIRE CODE OF THE INTERNATIONAL CODE COUNCIL)
Part 10 2013 CALIFORNIA EXISTING BUILDING CODE, TITLE 24 C.C.R. (2012 INTERNATIONAL EXISTING BUILDING CODE OF THE INTERNATIONAL CODE COUNCIL, WITH AMENDMENTS)
Part 11 2013 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN CODE), TITLE 24 C.C.R.
Part 12 2013 CALIFORNIA REFERENCE STANDARDS CODE, TITLE 24 C.C.R.

PARTIAL LIST OF APPLICABLE STANDARDS:

2013 CALIFORNIA BUILDING CODE (FOR SFM) REFERENCED STANDARDS CHAPTER 35

NFPA 13	AUTOMATIC SPRINKLER SYSTEMS (CALIFORNIA AMENDED)	2013 EDITION
NFPA 14	STANDPIPE SYSTEMS (CALIFORNIA AMENDED)	2013 EDITION
NFPA 17	DRY CHEMICAL EXTINGUISHING SYSTEMS	2013 EDITION
NFPA 17A	WET CHEMICAL EXTINGUISHING SYSTEMS	2013 EDITION
NFPA 20	STATIONARY PUMPS	2013 EDITION
NFPA 24	PRIVATE FIRE SERVICE MAINS (CALIFORNIA AMENDED)	2013 EDITION
NFPA 72	NATIONAL FIRE ALARM AND SIGNALING CODE(CALIFORNIA AMENDED) (NOTE: SEE UL STANDARD 1971 FOR "VISUAL DEVICES")	2013 EDITION
NFPA 80	FIRE DOOR AND OTHER OPENING PROTECTIVES	2013 EDITION
NFPA 253	CRITICAL RADIANT FLUX OF FLOOR COVERING SYSTEMS	2006 EDITION
NFPA 2001	CLEAN AGENT FIRE EXTINGUISHING SYSTEMS (CALIFORNIA AMENDED)	2012 EDITION

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SCOPE OF WORK

CONSTRUCTION OF NEW AQUATIC BUILDING, MECHANICAL/POOL BUILDING AND POOL. CONSTRUCTION OF NEW HARDSCAPE PAVING, SITE WALLS, DECORATIVE SITE FENCING, AND METAL PANEL FENCING/GATES. PLANTING AND IRRIGATION.

ADD'L ACCESSIBILITY NOTES

DOOR AND GATE HARDWARE: (ALL REQUIREMENTS BELOW SHALL APPLY TO GATES AS WELL)

- DOORS AND DOORWAYS THAT ARE PART OF AN ACCESSIBLE ROUTE SHALL COMPLY WITH CBC SECTIONS 11B-404.
- HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERABLE PARTS ON ACCESSIBLE DOORS SHALL COMPLY WITH CBC SECTION 11B-309.4 AND SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. OPERABLE PARTS OF SUCH HARDWARE SHALL BE 34" MINIMUM AND 44" MAXIMUM ABOVE FINISH FLOOR OR GROUND. WHERE SLIDING DOORS ARE IN THE FULLY OPEN POSITION, OPERATING HARDWARE SHALL BE EXPOSED AND USABLE FORM BOTH SIDE.
  CBC SECTION 11B-404.2.7
- DOOR CLOSING SPEED SHALL BE AS FOLLOWS: CBC SECTION 11B-404.2.8
  A. CLOSER SHALL BE ADJUSTED SO THAT THE REQUIRED TIME TO MOVE A DOOR FROM AN OPEN POSITION OF 90 DEGREES TO A POSITION OF 12 DEGREES FROM THE LATCH IS 5 SECONDS MINIMUM.
  B. SPRING HINGES SHALL BE ADJUSTED SO THAT THE REQUIRED TIME TO MOVE A DOOR FROM AN OPEN POSITION OF 70 DEGREES TO THE CLOSED POSITION IS 1.5 SECONDS MINIMUM.
- THRESHOLDS SHALL COMPLY WITH CBC SECTION 11B-404.2.5.

SIGNAGE AND GRAPHICS:
RAISED CHARACTERS SHALL COMPLY WITH CBC SECTION 11B-703.2:

- DEPTH: IT SHALL BE 1/32 INCH (0.8 MM) MINIMUM ABOVE THEIR BACKGROUND AND SHALL BE SANS SERIF UPPERCASE AND BE DUPLICATED IN BRAILLE.
- HEIGHT: IT SHALL BE 5/8 INCH (15.9 MM) MINIMUM AND 2 INCHES (51 MM) MAXIMUM BASED ON THE HEIGHT OF THE UPPERCASE LETTER "I". CBC SECTION 11B-703.2.5
- FINISH AND CONTRAST: CHARACTERS AND THEIR BACKGROUND SHALL HAVE A NON-GLARE FINISH. CHARACTER SHALL CONTRAST WITH THEIR BACKGROUND WITH EITHER LIGHT CHARACTERS ON A DARK BACKGROUND OR DARK CHARACTERS ON A LIGHT BACKGROUND. CBC SECTION 11B-703.5.1
- PROPORTIONS: IT SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 60 % MINIMUM AND 110 % MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I". STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 15 % MAXIMUM OF THE HEIGHT OF THE CHARACTER. CBC SECTIONS 11B-703.4 AND 11B-703.2.6
- BRAILLE: IT SHALL BE CONTRACTED (GRADE 2) AND SHALL COMPLY WITH CBC SECTIONS 11B-703.3 AND 11B-703.4. BRAILLE DOTS SHALL HAVE A DOMED AND ROUNDED SHAPE AND SHALL COMPLY WITH CBC TABLE AND FIGURE 11B-703.3.1.
- MOUNTING HEIGHT: A TACTILE SIGN SHALL BE LOCATED 48" MINIMUM TO THE BASELINE OF THE LOWEST BRAILLE CELLS AND 60" MAXIMUM TO THE BASELINE OF THE HIGHEST LINE OF RAISED CHARACTERS ABOVE THE FINISH FLOOR OR GROUND SURFACE.
- MOUNTING LOCATION: A TACTILE SIGN SHALL BE LOCATED ON THE APPROACH SIDE, AS ONE ENTERS OR EXITS ROOMS OR SPACE, AND BE REACHED WITHIN 0" OF THE REQUIRED CLEAR FLOOR SPACE PER CBC SECTION AND FIGURE 11B -703.4.2 AS FOLLOWS:
  A. A CLEAR FLOOR SPACE OF 18' X 18" MINIMUM, CENTERED ON THE TACTILE CHARACTERS, SHALL BE PROVIDED BEYOND THE ARC OF ANY DOOR SWINGS BETWEEN THE CLOSED POSITION AND 45 DEGREE OPEN POSITION.
  B. ON THE WALL AT THE LATCH SIDE OF A SINGLE DOOR.
  C. ON THE INACTIVE LEAF OF A DOUBLE DOOR WITH ONE ACTIVE LEAF.
  D. ON THE WALL AT THE RIGHT SIDE OF A DOUBLE DOOR WITH TWO ACTIVE LEAFS.
  E. ON THE NEAREST ADJACENT WALL WHERE THERE IS NO WALL SPACE AT THE LATCH SIDE OF A SINGLE DOOR OR NO SPACE AT THE RIGHT SIDE OF A DOUBLE DOOR WITH TWO ACTIVE LEAFS.

VISUAL CHARACTERS SHALL COMPLY WITH CBC SECTION 11B-703.5 AND SHALL BE 40" MINIMUM ABOVE FINISH FLOOR OR GROUND.
PICTOGRAMS SHALL COMPLY WITH CBC SECTION 11B-703.6.
SYMBOL OF ACCESSIBILITY SHALL COMPLY WITH CBC SECTION 11B-703.7.

ACCESSIBLE TOILET COMPARTMENTS:

- WHEELCHAIR ACCESSIBLE COMPARTMENT SHALL COMPLY WITH CBC SECTION 11B-604.8.1.
- TOE CLEARANCE FOR AT LEAST ONE SIDE PARTITION OF A WHEELCHAIR ACCESSIBLE COMPARTMENT SHALL COMPLY WITH CBC SECTION AND FIGURE 11B-604.8.1.4. IT SHALL BE 9" HIGH MINIMUM ABOVE THE FINISH FLOOR AND 6" DEEP MINIMUM BEYOND THE COMPARTMENT SIDE FACE OF THE PARTITION, EXCLUSIVE OF PARTITION SUPPORT MEMBERS. IT SHALL BE 12" HIGH MINIMUM ABOVE THE FINISH FLOOR FOR CHILDREN'S USE. PARTITION COMPONENTS AT TOE CLEARANCES SHALL BE SMOOTH WITHOUT SHARP EDGES OR ABRASIVE SURFACES. TOE CLEARANCE AT THE SIDE PARTITION IS NOT REQUIRED IN A COMPARTMENT GREATER THAN 66" WIDE.
- DOOR AND DOOR HARDWARE FOR ACCESSIBLE COMPARTMENTS SHALL BE SELF-CLOSING AND SHALL COMPLY WITH CBC SECTION 11B-404 EXCEPT FOR CLEARANCE BETWEEN THE DOOR SIDE OF THE AMBULATORY ACCESSIBLE COMPARTMENT AND ANY OBSTRUCTION SHALL BE 44" PER CBC FIGURE 11B-604.8.2.
- A DOOR PULL COMPLYING WITH CBC SECTION 11B-404.2.7 SHALL BE PLACED ON BOTH SIDES OF THE DOOR NEAR THE LATCH.

EXTERIOR IMPROVEMENTS

- FOR EVERY SIX OR FRACTION OF SIX ACCESSIBLE PARKING SPACES, AT LEAST ONE SHALL BE AN ACCESSIBLE VAN PARKING SPACE. CBC SECTION 11B-208.2.4
- MINIMUM NUMBER OF REQUIRED ACCESSIBLE PARKING SPACES SHALL BE PROVIDED IN ACCORDANCE WITH CBC TABLE 11B-208.2 FOR EACH PARKING FACILITY PROVIDED.

DETECTABLE WARNING SURFACES: POSSIBLY

- DETECTABLE WARNING SURFACES SHALL DIFFER FROM ADJOINING SURFACES IN RESILIENCY OR SOUND-ON-CANE CONTACT. CBC SECTION 11B-705.1.1.4.
- PROVIDE MINIMUM 5 YEAR WARRANTY PER DSA BULLETIN 10/31/02, REVISED 04/09/08.

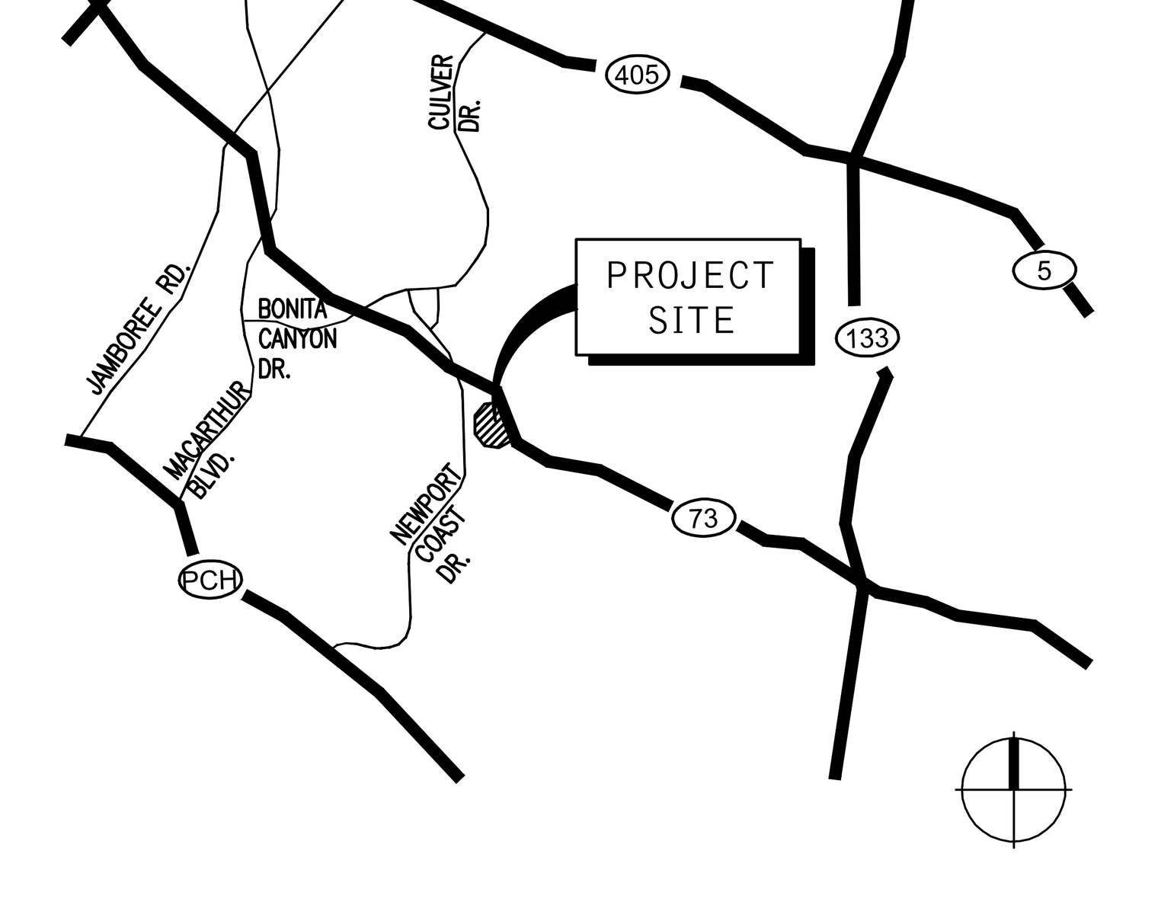
32 31 00 FENCES, GATES AND HARDWARE:

- GATES THAT ARE PART OF THE ACCESSIBLE ROUTE SHALL MEET ALL THE REQUIREMENTS OF AN ACCESSIBLE DOOR IN COMPLIANCE WITH CBC SECTION 11B-404.

SHEET INDEX

DATE ISSUED	DRAWING IN THIS ISSUE	REVISION NO.	SHEET	TITLE
				GENERAL
02/24/15			G-0.00	COVER SHEET
02/24/15			G-0.01	GENERAL PROJECT INFORMATION
02/24/15			G-0.02	OVERALL SITE PLAN
				CIVIL
02/24/15			C1.01	DEMOLITION PLAN
02/24/15			C2.01	GRADING PLAN
02/24/15			C3.01	UTILITY PLAN
				LANDSCAPE
02/24/15			L0.1	LANDSCAPE NOTES AND SCHEDULES
02/24/15			L1.1	MATERIALS PLAN
02/24/15			L4.1	SITE SECTIONS/ELEVATIONS PLAN
02/24/15			L7.1	LANDSCAPE PLANTING PLAN
				ARCHITECTURAL
02/24/15			A2.00	FLOOR & ROOF PLANS - POOL & MECHANICAL BUILDING
02/24/15			A2.10	CEILING & FINISH PLANS - POOL & MECHANICAL BUILDING
02/24/15			A3.00	EXTERIOR ELEVATIONS - POOL & MECHANICAL BUILDING
02/24/15			A3.10	BUILDING SECTIONS - POOL & MECHANICAL BUILDING
				STRUCTURAL
02/24/15			S0.01	GENERAL NOTES
02/24/15			S0.11	TYPICAL FOUNDATION AND SLAB ON GRADE DETAILS
02/24/15			S0.31	TYPICAL CMU WALL SCHEDULES AND DETAILS
02/24/15			S2.01	FOUNDATION AND FRAMING PLANS
				AQUATIC DESIGN GROUP - POOL
02/24/15			SP-1	SWIMMING POOL LAYOUT PLAN
02/24/15			SP-2	SWIMMING POOL SECTIONS
02/24/15			SP-5	DETAILS
02/24/15			SP-6	DETAILS
02/24/15			SP-7	DETAILS
02/24/15			SP-8	DETAILS
02/24/15			SP-9	DETAILS
02/24/15			SP-10	DETAILS
02/24/15			MR-1	MECHANICAL ROOM LAYOUT PLAN
02/24/15			MR-3	DETAILS
02/24/15			MR-4	DETAILS
02/24/15			MR-5	DETAILS
02/24/15			MR-6	DETAILS
02/24/15			MR-7	DETAILS
				ELECTRICAL
02/24/15			E0.10	SYMBOL LIST
02/24/15			E0.20	SINGLE LINE, LOAD SCHEDULE & FEEDER SCHEDULE
02/24/15			E1.00	POOL LIGHTING PLAN

VICINITY MAP



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Sage Hill
Aquatic Complex

20402 Newport Coast Drive
Newport Beach, CA 92657

Developed for
Sage Hill School

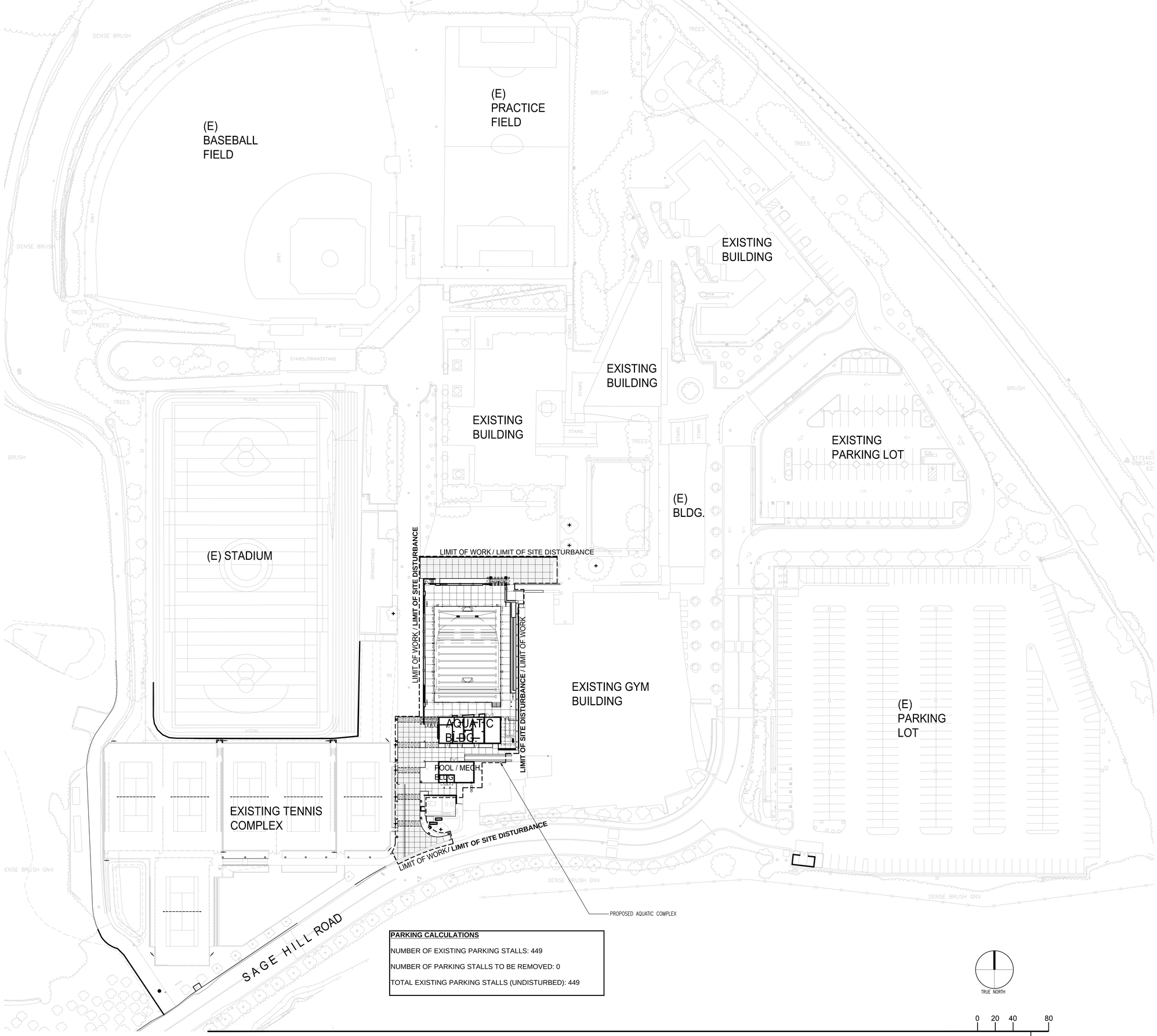
Revision	Date

Submittal	Date
Schematic Design	02/24/2015

Job. No.	14248.10
Date	02/24/2015
Checked by	TR, CA
Scale	

GENERAL PROJECT NOTES

G0.01



PARKING CALCULATIONS

NUMBER OF EXISTING PARKING STALLS: 449

NUMBER OF PARKING STALLS TO BE REMOVED: 0

TOTAL EXISTING PARKING STALLS (UNDISTURBED): 449

TRUE NORTH

0 20 40 80

OVERALL SITE PLAN 01

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Sage Hill School

Revision	Date

Submittal	Date
Schematic Design	02/24/2015

Job. No.	14248.10
Date	02/24/2015
Checked by	
Scale	1" = 40'

OVERALL
SITE PLAN

G0.02

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Developed for
Sage Hill School

Revision	Date

Submittal	Date
Schematic Design	02/24/2015
Design Development	05/21/2015

Job. No.	14248.10
Date	02/24/2015
Checked by	
Scale	1" = 60'

OVERALL
SITE PLAN

G0.02.1

(E) LIGHT TO REMAIN
5-(E) SEATWALL TO REMAIN, TYP
(E) LIGHT TO REMAIN
SAWCUT LINE
REMOVE (E) LIGHT, TYP
REMOVE (E) SEAT WALLS, TYP
(E) STAIR TO REMAIN
(E) RAMP & RETAINING WALL TO REMAIN
(E) VAULT TO REMAIN
REMOVE (E) SAND VOLLEYBALL COURT
REMOVE (E) 4" STORM DRAIN LATERAL
REMOVE (E) 6" FIRE WATER
REMOVE (E) 4" STORM DRAIN LATERAL
REMOVE (E) RETAINING WALL & PLANTING
REMOVE (E) 8" SEWER
REMOVE (E) 4" DOMESTIC WATER
REMOVE (E) 8" STORM DRAIN
REMOVE (E) 8" SEWER
REMOVE (E) 4" STORM DRAIN LATERAL
REMOVE (E) 4" STORM DRAIN LATERAL
REMOVE (E) GAS
REMOVE 2X(E) 6" FIRE WATER
SAWCUT LINE
REMOVE (E) 4" STORM DRAIN LATERAL
REMOVE (E) 8" SEWER
RELOCATE (E) BFP
PROTECT (E) WATER VALVE IN PLACE
(E) RAMP & RETAINING WALL TO REMAIN
(E) STAIR TO REMAIN
(E) WALL TO REMAIN
REMOVE (E) CMU WALL WITHIN LIMITS SHOWN
REMOVE (E) DRINKING FOUNTAIN & CONCRETE PAD
REMOVE (E) BOLLARDS
(E) WALL TO REMAIN
(E) BLDG TO REMAIN
GRANDSTANDS
CONC.
GOAL
ASPH.
DENSE BRUSH CNYY
E/T/TV
SS
DW
PIV
545
550
555
570

DEMOLITION LEGEND

LABEL	DESCRIPTION
03	REMOVE (E) CONCRETE PAVEMENT/SIDEWALK
04	REMOVE (E) AC PAVEMENT
	REMOVE (E) UTILITY, SEE DEMOLITION NOTES 2, 6, AND 7.
	REMOVE (E) TREE, SEE DEMOLITION NOTE 3.
	(E) TREE TO REMAIN AND BE PROTECTED, SEE DEMOLITION NOTE 3.
	APPROXIMATE LIMIT OF WORK LINE, SAWCUT (E) PAVEMENT AS NEEDED. SEE DEMOLITION NOTE 4

N

0 10 20 40

1" = 20'

01

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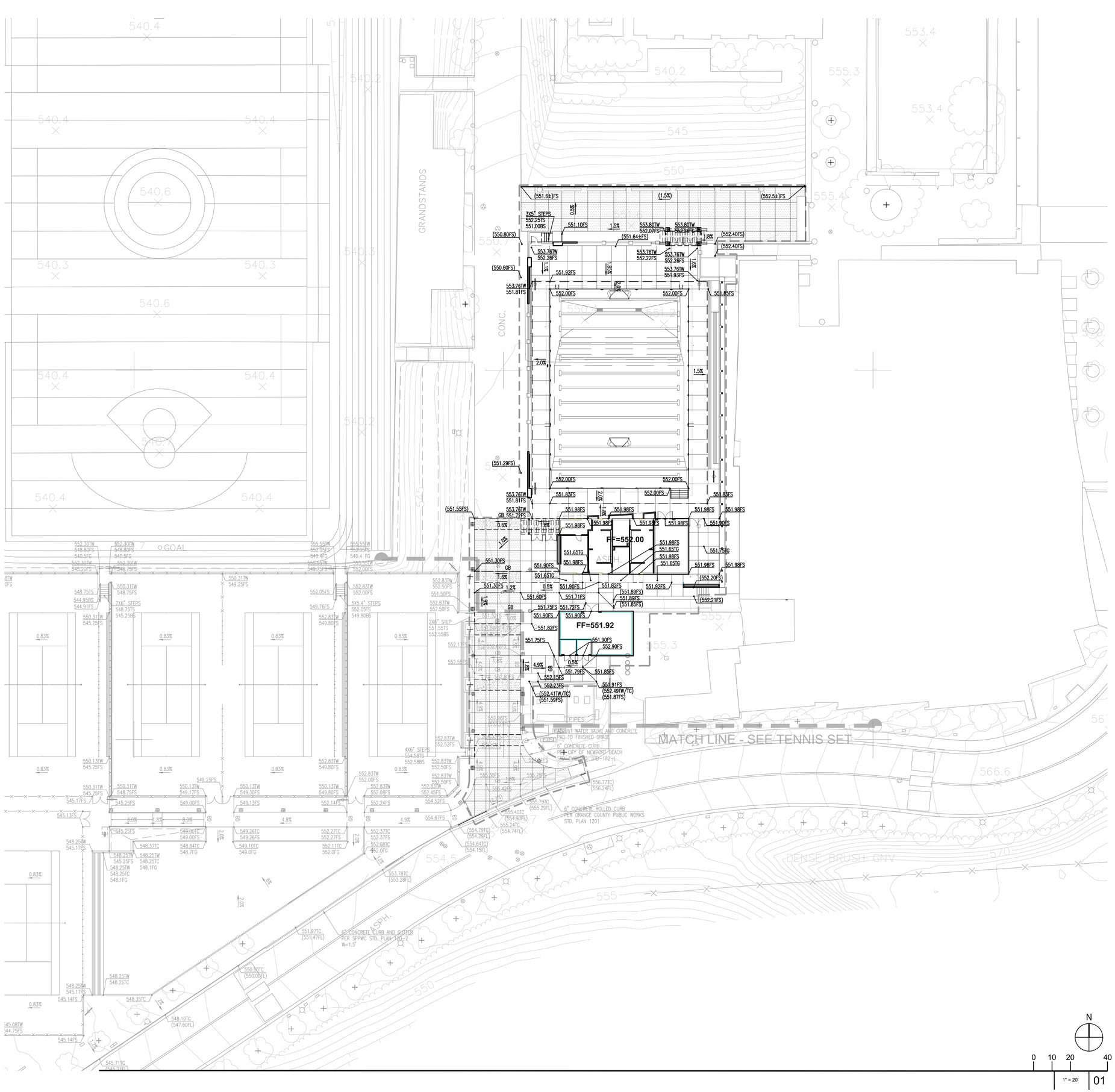
Date	02/23/15
Checked by	AC
Scale	1"=20'

DEMOLITION PLAN

C1.01



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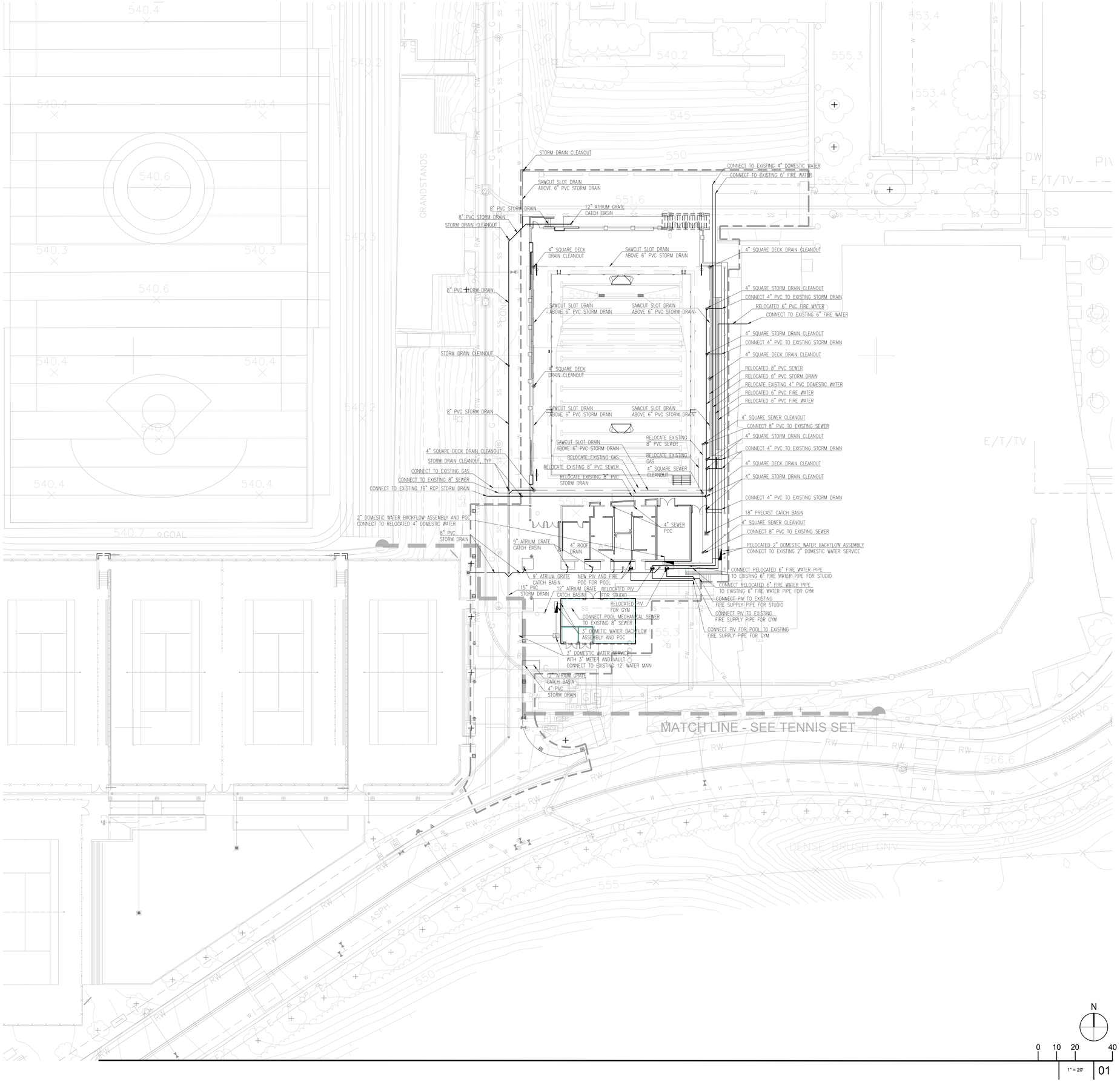
Checked by	AC
Scale	1"=20'

GRADING PLAN

C2.01



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ABBREVIATIONS

&	AND	HDR	HEADER
∠	ANGLE	HT.	HEIGHT
@	AT	LT.	LIGHT
℄	CENTERLINE		
ϕ	DIAMETER OR ROUND	MAX.	MAXIMUM
#	POUND OR NUMBER	MET.	METAL
ADJ.	ADJACENT	MFR.	MANUFACTURER
AGGR.	AGGREGATE	MIN.	MINIMUM
AL.	ALUMINUM	MTD.	MOUNTED
APPROX.	APPROXIMATE	MTL.	MATERIAL
ARCH.	ARCHITECTURAL	N.I.C.	NOT IN CONTRACT
A.C.	ASPHALT	N.T.S.	NOT TO SCALE
ACC.	ACCESSIBLE		
		O.C.	ON CENTER
B.C.R.	BEGINNING OF CURVE RADIUS	O.D.	OUTSIDE DIAMETER(DIM.)
B.O.C.	BACK OF CURB		
B.O.W.	BOTTOM OF WALL	PA	PLANTING AREA
B.O.S.	BOTTOM OF SLOPE	PED	PEDESTRIAN
BLDG.	BUILDING	PRCST.	PRECAST
BLK.	BLOCK	P.I.P.	POURED IN PLACE
		P.O.T.	POINT OF TANGENCY
C.E.	CIVIL ENGINEER	P.T.D.F.	PRESSURE TREATED DOUGLAS FIR
C.I.P.	CAST IN PLACE		
CLKG.	CAULKING		
CMU.	CONCRETE MASONRY UNIT	QTY	QUANTITY
CONC.	CONCRETE		
CONSTR.	CONSTRUCTION	R.	RISER
CONT.	CONTINUOUS	RAD.	RADIUS
CTR.	CENTER	REINF.	REINFORCED
		REQ.	REQUIRED
D.A.	DISABLED ACCESS		
DET.	DETAIL	SCHED.	SCHEDULE
DIA.	DIAMETER	SHT.	SHEET
DIM.	DIMENSION	SPEC.	SPECIFICATION
DN.	DOWN	S.S.	STAINLESS STEEL
DWGS	DRAWINGS	STD.	STANDARD
		STRL.	STRUCTURAL
E.J.	EXPANSION JOINT		
EL.	ELEVATION	T.	TREAD
ELEC.	ELECTRICAL	T.C.	TOP OF CURB
EQ.	EQUAL	T.O.S.	TOP OF SLOPE
EXP.	EXPANSION	T.O.W.	TOP OF WALL
EXT.	EXTERIOR	TYP.	TYPICAL
		TBS.	TO BE SELECTED
F.G.	FINISH GRADE		
F.S.	FINISH SURFACE	VEH	VEHICULAR
F.O.W.	FACE OF WALL	VERT.	VERTICAL
F.O.B.	FACE OF BUILDING	W/	WITH
F.O.C.	FACE OF CURB	W/O	WITHOUT
GA.	GAUGE	WD	WIDE
GALV.	GALVANIZED		
GND.	GROUND		
GR.	GRADE		

PLANTING NOTES

1. REFER TO CIVIL ENGINEER'S UTILITY AND GRADING PLANS FOR UTILITY LOCATIONS, TREE SUBDRAINAGE STUBOUTS (IF REQUIRED), AND FINAL GRADING. IF ACTUAL SITE CONDITIONS VARY FROM WHAT IS SHOWN ON THE LANDSCAPE ARCHITECT'S PLANS, THE CONTRACTOR SHALL CONTACT THE OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT FOR DIRECTION AS TO HOW TO PROCEED.

2. VERIFY LOCATIONS OF ALL PERTINENT SITE IMPROVEMENTS INSTALLED AS PART OTHER PLANS. IF ANY PART OF THIS PLAN CANNOT BE FOLLOWED DUE TO SITE CONDITIONS, CONTACT THE LANDSCAPE ARCHITECT FOR INSTRUCTION PRIOR TO COMMENCING WORK.

3. EXACT LOCATIONS OF PLANT MATERIALS SHALL BE REVIEWED BY THE LANDSCAPE ARCHITECT IN THE FIELD PRIOR TO INSTALLATION. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO ADJUST PLANTS TO EXACT LOCATION IN FIELD.

4. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL PLANT COUNTS AND SQUARE FOOTAGES. QUANTITIES SHOWN ON PLANS TAKE PRECEDENCE OVER WRITTEN QUANTITIES IN "PLANTING LEGEND."

5. PROVIDE MATCHING FORMS AND SIZES FOR ALL PLANT MATERIALS WITHIN EACH SPECIES AND SIZE DESIGNATED ON THE DRAWINGS.

6. ALL SHRUBS TO BE ALIGNED AND EQUALLY SPACED, IN ALL DIRECTIONS, AS DESIGNATED PER THESE NOTES AND DRAWINGS.

7. FINISH GRADES OF ALL TURF AREAS SHALL BE (1") BELOW ADJACENT CURB OR PAVEMENT. FINISH GRADES OF ALL SHRUB AREAS SHALL BE (1-1/2") BELOW ADJACENT CURB, PAVEMENT, OR HEADER.

8. CONTRACTOR SHALL SUBMIT FOR APPROVAL AREPRESENTATIVE PHOTO OF ALL SHRUBS, GROUNDCOVER AND VINES.
TREE PHOTOS SHOULD INCLUDE A PERSON FOR SCALE PURPOSES. ALL PLANT MATERIAL SHALL BE OF A QUALITY AS DETERMINED BY THE LANDSCAPE ARCHITECT. MATERIAL FOUND UNSUITABLE FOR THE DESIGN OR SPECIFICATION INTENT WILL BE REJECTED.

9. PROVIDE 6" CONCRETE MOW CURB AS DIVIDER BETWEEN ALL TURF AND SHRUB/GROUNDCOVER AREAS IN ADDITION TO AREAS INDICATED ON THE DRAWINGS.

10. PROVIDE A (2") LAYER OF WOOD MULCH AT TREE AND SHRUB PLANTING AREAS.

11. INSTALL JUTE MESH ON ALL SLOPES (3:1) OR GREATER. SEE SPECIFICATIONS FOR INSTALLATION METHOD AND ADDITIONAL INFORMATION.

12. CONTRACTOR SHALL CONDUCT AGRICULTURAL SUITABILITY AND FERTILITY SOILS TESTING PER SOIL PREPARATION SPECIFICATION. ANALYSIS SHALL INCLUDE RECOMMENDATIONS FOR SOIL PREPARATION AND BACKFILL MIX AS WELL AS RECOMMENDATIONS FOR POST MAINTENANCE FERTILIZATION. SUBMIT SOILS ANALYSES AND SAMPLES OF AMENDMENTS TO LANDSCAPE ARCHITECT FOR REVIEW PRIOR TO SOIL PREPARATION.

13. PROVIDE ROOT BARRIERS IN ADDITION TO THOSE INDICATED ON THE PLANS FOR ALL TREES WITHIN 5' OF ANY HARDSCAPE.

14. LANDSCAPE MAINTENANCE PERIOD IS 90 DAYS.

LAYOUT AND MATERIALS NOTES

1. THE CONTRACTOR SHALL LAYOUT AND FIELD VERIFY ALL DIMENSIONS OF DRIVEWAY, PLANTERS, WALKS, SLOPES, AND RELATED WORK PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNERS AUTHORIZED REP.

2. VERIFY LOCATIONS OF ALL SITE IMPROVEMENTS INSTALLED AS PART OF OTHER PLANS. IF ANY PART OF THIS PLAN CANNOT BE FOLLOWED DUE TO SITE CONDITIONS, CONTACT THE OWNERS AUTHORIZED REP. FOR INSTRUCTION PRIOR TO BEGINNING WORK.

3. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALING.

4. THIS DRAWING INCLUDES THE LOCATION OF AREA DRAINS FOR REFERENCE. REFER TO RELATED CIVIL ENGINEERING DRAWINGS FOR CONSTRUCTION DETAILS AND UTILITY CONNECTIONS.

5. REFER TO ELECTRICAL ENGINEER'S DRAWINGS FOR LIGHT FIXTURE SCHEDULE AND CIRCUITRY AS NECESSARY.

6. REFER TO EARTHWORKS NOTES ON C0.01 AND SOIL ENGINEER'S GEOTECHNICAL REPORT FOR SUB-BASE MATERIALS AND COMPACTION.

7. WHERE DIMENSIONS ARE CALLED AS "EQUAL", ALL REFERENCED ITEMS SHALL BE SPACED EQUALLY, MEASURED TO THEIR CENTERLINES.

8. ALL MEASUREMENTS ARE TO FACE OF WALL, CURB OR OTHER FIXED SITE IMPROVEMENT, UNLESS OTHERWISE NOTED. DIMENSIONS TO CENTERLINES AS INDICATED.

9. INSTALL ALL INTERSECTING ELEMENTS AT 90 DEGREES TO EACH OTHER UNLESS OTHERWISE NOTED.

10. ALL DRAINS / BASINS SHOULD HAVE ATRIUM TYPE GRATES WITHIN SHRUBS/ GROUNDCOVER AREAS AND FLAT TYPE GRATES IN TURF AREAS.

LANDSCAPE GRADING AND DRAINAGE NOTES

1. REFER TO CIVIL ENGINEER'S GRADING PLANS FOR SITE GRADING, DRAINAGE, AND UTILITY LOCATIONS. IF ACTUAL SITE CONDITIONS VARY FROM WHAT IS SHOWN ON THE LANDSCAPE ARCHITECT'S PLANS, THE CONTRACTOR SHALL CONTACT THE OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT FOR DIRECTION AS TO HOW TO PROCEED.

2. REFER TO CIVIL ENGINEER'S DRAWINGS FOR SUBDRAINAGE POINT OF CONNECTION TO STORM DRAIN.

3. THE CONTRACTOR SHALL REQUEST OBSERVATION AS REQUIRED 48 HOURS ADVANCE OF PERFORMING WORK.

4. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (USA 800/422-5133) 48 HOURS PRIOR TO ANY EXCAVATION.

5. FIELD VERIFY EXISTING UNDERGROUND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION AND ELEVATION IN THE FIELD PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION.

6. NO CHANGE IN CONTRACT PRICE WILL BE ALLOWED FOR ACTUAL OR CLAIMED DISCREPANCY BETWEEN EXISTING GRADE AND THOSE SHOWN ON PLANS AFTER CONTRACTOR HAS ACCEPTED EXISTING GRADES AND MOVED ONTO THE SITE.

7. ALL PROPOSED GRADES ARE TO MEET AND BLEND IN WITH EXISTING GRADING AT PROJECT LIMIT AND EXISTING SIDEWALK. PRECISE ELEVATIONS INDICATED ON PLANS TO BE VERIFIED IN FIELD TO AS-BUILT CONDITION.

8. THE DEBRIS CREATED BY LANDSCAPE GRADING OPERATIONS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE LEGALLY DISPOSED OF OFF-SITE.

9. FINAL LANDSCAPE GRADING SHALL BE REVIEWED BY THE LANDSCAPE ARCHITECT IN THE FIELD PRIOR TO INSTALLATION OF PLANTING.

GENERAL NOTES

1. BASE INFORMATION INCLUDING THE LOCATION OF PROPERTY LINES, EASEMENTS, BUILDINGS, ROADS AND CURBS HAVE BEEN TAKEN FROM THE CIVIL ENGINEER'S DRAWINGS. REFER TO CIVIL ENGINEERING DRAWINGS FOR ADDITIONAL INFORMATION.

2. REFER TO THE CIVIL ENGINEER'S DRAWINGS FOR UTILITY INFORMATION INCLUDING STORM DRAIN, SEWER, WATER, ELECTRICAL, GAS, TELEPHONE AND CABLE TV.

3. REFER TO CITY AND/OR COUNTY STANDARD PLANS AND SPECIFICATIONS WHERE APPLICABLE.

4. VERIFY SITE INFORMATION, INCLUDING PROPERTY LINES, TOP AND BOTTOMS OF SLOPES, ROADWAY CURB AND GUTTERS, UTILITIES AND OTHER INFORMATION AFFECTING THE SCOPE OF WORK INCLUDED ON THESE DRAWINGS. IF ACTUAL SITE CONDITIONS VARY FROM WHAT IS SHOWN ON THE LANDSCAPE ARCHITECT'S PLANS, THE CONTRACTOR SHALL CONTACT THE OWNER'S REPRESENTATIVE AND THE LANDSCAPE ARCHITECT FOR DIRECTION ON HOW TO PROCEED.

5. EXCAVATION IN THE VICINITY OF UTILITIES AND EXISTING MATERIALS SHALL BE UNDERTAKEN WITH CARE. THE CONTRACTOR BEARS FULL RESPONSIBILITY FOR THIS WORK. ANY DAMAGE CAUSED BY ANY PERSON, VEHICLE, EQUIPMENT, OR TOOL RELATED TO THE EXECUTION OF THE CONTRACT SHALL BE REPAIRED IMMEDIATELY AT NO EXPENSE TO THE OWNER.

6. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COORDINATION REQUIRED TO ACCOMPLISH ALL CONSTRUCTION OPERATIONS. ALL PIPING, CONDUIT, SLEEVES, ETC., SHALL BE SET IN PLACE PRIOR TO INSTALLATION OF CONSTRUCTION ITEMS.

7. CONTRACTOR SHALL BE RESPONSIBLE TO CONSULT WITH SITE SUPERINTENDENT, APPROPRIATE AGENCIES AND PLANS, FOR THE LOCATIONS OF ALL UNDER-GROUND UTILITIES, PIPES AND STRUCTURES. CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR ANY COST INCURRED DUE TO DAMAGE OF SAID UTILITIES.

8. CONTRACTOR SHALL NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGNED WHEN IT IS OBVIOUS THAT UNKNOWN OBSTRUCTIONS, AREA DISCREPANCIES AND/OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN. SUCH CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER'S AUTHORIZED REPRESENTATIVE. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATIONS.

9. CONTRACTOR IS RESPONSIBLE FOR REPLACEMENT OF ANY EXISTING MATERIALS THAT ARE DAMAGED DURING CONSTRUCTION.

10. PRIOR TO INSTALLATION OF ANY CONSTRUCTION ITEM, FORMS WITH STEEL IN PLACE AND COMPACTED SUBGRADE COMPLETE, SHALL BE OBSERVED AND REVIEWED BY THE LANDSCAPE ARCHITECT.

11. ALL WALLS AND WALKS SHOULD HAVE SMOOTH, CONTINUOUS CURVES AS INDICATED ON PLANS.

12. ALL PROPERTY LINES, LOT LINES, AND TOP OF SLOPE LINES SHALL BE VERIFIED PRIOR TO COMMENCING WORK.

13. ALL ELECTRICAL JUNCTION BOXES FOR LIGHTS SHALL BE IN PLANTING AREAS AND LOCATION REVIEWED BY THE LANDSCAPE ARCHITECT. STAKE LOCATION PRIOR TO INSTALLATION.

14. SEE CIVIL ENGINEER'S DRAWINGS FOR CURBS AND A/C PAVING.

15. REFER TO GRADING PLANS FOR ELEVATIONS AND LOCATION OF DRAINAGE STRUCTURES PRIOR TO INSTALLATION OF WALKS, FOOTINGS, AND OTHER STRUCTURES.

16. RAISE ALL VAULTS & UTILITY BOXES TO GRADE WITHIN LIMIT OF WORK. FIELD VERIFY PRIOR TO BID.

17. REFER TO GEOTECHNICAL REPORTS FOR ADDITIONAL INFORMATION. IF NOTES ON THE PLANS DIFFER FROM THE GEOTECHNICAL REPORT, PROVIDE THE MOST STRINGENT REQUIREMENT.

SCOPE OF WORK

CONSTRUCTION OF NEW AQUATIC BUILDING, MECHANICAL/POOL BUILDING AND POOL. CONSTRUCTION OF NEW HARDSCAPE PAVING, SITE WALLS, DECORATIVE SITE FENCING, AND METAL PANEL FENCING/GATES. PLANTING AND IRRIGATION.

SHEET INDEX

ALTERNATE LIST

ALTERNATE #1
REPLACE BLACK VINYL COATED CHAINLINK FENCING WITH METAL FENCING

ALTERNATE #2
REPLACE BLACK VINYL COATED CHAINLINK FENCING WITH GLASS PANEL FENCING

ALTERNATE #3
REPLACE METAL PANEL GATES WITH GLASS GATES

ALTERNATE #4
REPLACE METAL PANEL GATES AND FENCE WITH IPE CLAD GATES AND FENCE. OUTDOOR STORAGE LOCATION ONLY.

KEYNOTES

KEY NOTE	DESCRIPTION	DET/ SHT	COLOR / FINISH
1	CONCRETE PAVING – TYPE 1		INTEGRAL COLOR/ LT SANDBLAST FINISH
02	CONCRETE PAVING – TYPE 2		INTEGRAL COLOR/ HEAVY SANDBLAST FINISH
03	CONCRETE PAVING – TYPE 3 – POOL		NATURAL GRAY/ MED SANDBLAST FINISH
04	CONCRETE FREESTANDING WALL		NATURAL GRAY/ LT SANDBLAST FINISH
05	CONCRETE RETAINING WALL		NATURAL GRAY/ LT SANDBLAST FINISH
06	CONC. TERRACED SEATING WITH WOOD PLANKS		CONCRETE – IPE WOOD LT SANDBLAST FINISH
07	NOT USED		
08	CONCRETE STAIRS		
09	HANDRAIL AT STAIRS		STAINLESS STEEL
10	GUARDRAIL		STAINLESS STEEL
11	GLASS PANEL INFILL BETWEEN COLUMNS		
12	BLACK VINYL COATED CHAINLINK FENCING		6'-0" HT. ABOVE CONCRETE CONCRETE RETAINING WALL
13	METAL PANEL FENCE		CUSTOM COLOR/ HIGH PERFORMANCE PAINT
14	METAL PANEL – DOUBLE GATE W/ PANIC HARDWARE		CUSTOM COLOR/ HIGH PERFORMANCE PAINT
15	METAL PANEL – SINGLE GATE W/ PANIC HARDWARE		CUSTOM COLOR/ HIGH PERFORMANCE PAINT
16	SCOREBOARD		
17	POOLSIDE SHOWERS		STAINLESS STEEL
18	POOL		SEE AQUATIC DESIGN GROUP PLANS

REFERENCE KEYNOTES

KEY NOTE	DESCRIPTION	DET REF	COMMENT
A	EXISTING AC PAVING		PROTECT IN PLACE
B	EXISTING BUILDING / ENCLOSURE		PROTECT IN PLACE
C	EXISTING WALL		PROTECT IN PLACE
D	EXISTING PAVING		PROTECT IN PLACE
F	EXISTING RAMP/STAIRS		PROTECT IN PLACE
G	EXISTING CURB/GUTTER		PROTECT IN PLACE
H	EXISTING MOW CURB		PROTECT IN PLACE
J	EXISTING CANOPY		PROTECT IN PLACE
K	ARCHITECTUAL BUILDING/COLUMN		PER ARCH
L	ARCHITECTUAL OVERHANG / TRELLIS		PER ARCH
M	CURB AND GUTTER		PER CIVIL
N	CONCRETE CURB		PER CIVIL
O	AC PAVING		PER CIVIL
P	STORM DRAIN		PER CIVIL

NOTES:

A. THE CONTRACTOR MUST FAMILIARIZE HIMSELF WITH THE IRRIGATION, GRADING AND PLANTING ON SAGE HILL CAMPUS & ALL ADJACENT PROPERTIES. ANY DAMAGE TO OR ADJUSTMENTS REQUIRED INCLUDING REPLACING OR RELOCATING IRRIGATION LINES, HEADS, VALVES, OR ANY UTILITY THAT OCCURS ON ADJACENT PARCELS AND IN THE RIGHT OF WAY DUE TO THE GRADING AND CONSTRUCTION OF THIS PROJECT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER. THE OWNER'S REP. MUST REVIEW ANY REQUIRED MODIFICATIONS TO THESE AREAS PRIOR TO COMMENCING WORK. THE CONTRACTOR MUST NOTIFY THE OWNER'S AUTHORIZED REP. OF THESE CONDITIONS OR ANY DISCREPANCIES PRIOR TO COMMENCING WORK. TYP. ENTIRE SITE. ALL IMPROVEMENT/REPAIRS WITHIN RIGHT OF WAY AREA MUST MEET THE CITIES STANDARDS.

B. SEE SHEET L0.1 FOR ADDITIONAL LEGENDS AND SYMBOLS.

SITE LIGHTING LEGEND

SYM.	DESCRIPTION	DET/ REF	COMMENTS
▫	PEDESTRIAN BOLLARD LIGHT		COLOR: MATCH EXISTING
⁄	SPORTS LIGHTING		SEE SPORTS LIGHTING PLANS

NOTE: SEE ELECTRICAL PLANS FOR FIXTURES, LAMPS, AND SPECS.

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Sage Hill
Aquatic Complex
20402 Newport Coast Drive
Newport Beach, CA 92657

Developed for
Sage Hill School

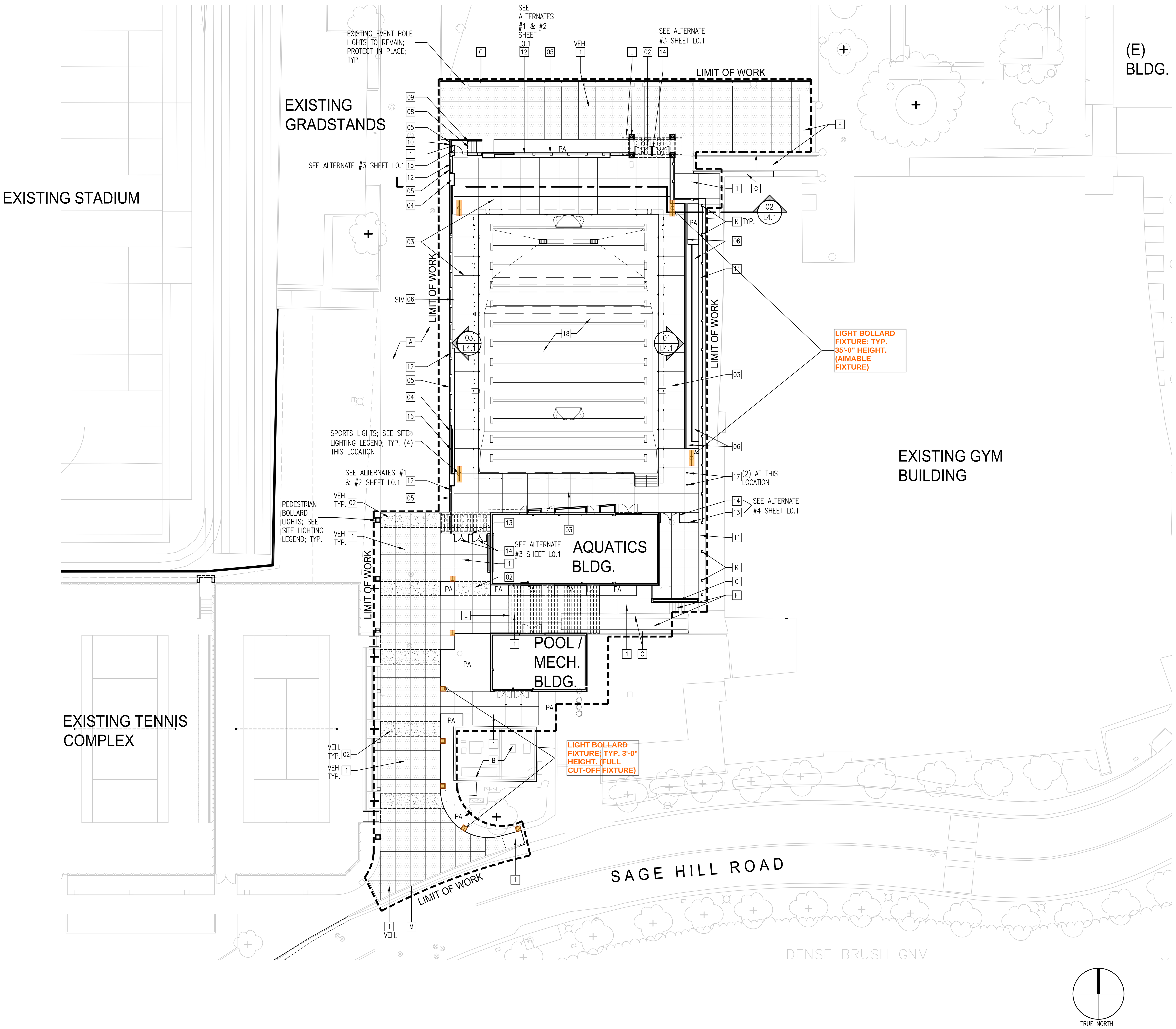
Revision	Date

Submittal	Date
Schematic Design	02/24/2015

Job. No.	14248.10
Date	02/24/2015
Checked by	
Scale	

LANDSCAPE NOTES AND SCHEDULES

L0.1



LANDSCAPE MATERIALS PLAN 01

KEYNOTES

KEY NOTE	DESCRIPTION	DET/ SHT	COLOR / FINISH
1	CONCRETE PAVING – TYPE 1		INTEGRAL COLOR/ LT SANDBLAST FINISH
02	CONCRETE PAVING – TYPE 2		INTEGRAL COLOR/ HEAVY SANDBLAST FINISH
03	CONCRETE PAVING – TYPE 3 – POOL		NATURAL GRAY/ MED SANDBLAST FINISH
04	CONCRETE FREESTANDING WALL		NATURAL GRAY/ LT SANDBLAST FINISH
05	CONCRETE RETAINING WALL		NATURAL GRAY/ LT SANDBLAST FINISH
06	CONC. TERRACED SEATING WITH WOOD PLANKS		CONCRETE – IPE WOOD LT SANDBLAST FINISH
07	NOT USED		
08	CONCRETE STAIRS		
09	HANDRAIL AT STAIRS		STAINLESS STEEL
10	GUARDRAIL		STAINLESS STEEL
11	GLASS PANEL INFILL BETWEEN COLUMNS		
12	BLACK VINYL COATED CHAINLINK FENCING		6'–0" HT. ABOVE CONCRETE CONCRETE RETAINING WALL
13	METAL PANEL FENCE		CUSTOM COLOR/ HIGH PERFORMANCE PAINT
14	METAL PANEL – DOUBLE GATE W/ PANIC HARDWARE		CUSTOM COLOR/ HIGH PERFORMANCE PAINT
15	METAL PANEL – SINGLE GATE W/ PANIC HARDWARE		CUSTOM COLOR/ HIGH PERFORMANCE PAINT
16	SCOREBOARD		
17	POOLSIDE SHOWERS		STAINLESS STEEL
18	POOL		SEE AQUATIC DESIGN GROUP PLANS

REFERENCE KEYNOTES

KEY NOTE	DESCRIPTION	DET REF	COMMENT
A	EXISTING AC PAVING		PROTECT IN PLACE
B	EXISTING BUILDING / ENCLOSURE		PROTECT IN PLACE
C	EXISTING WALL		PROTECT IN PLACE
D	EXISTING PAVING		PROTECT IN PLACE
F	EXISTING RAMP/STAIRS		PROTECT IN PLACE
G	EXISTING CURB/GUTTER		PROTECT IN PLACE
H	EXISTING MOW CURB		PROTECT IN PLACE
J	EXISTING CANOPY		PROTECT IN PLACE
K	ARCHITECTUAL BUILDING/COLUMN		PER ARCH
L	ARCHITECTUAL OVERHANG / TRELLIS		PER ARCH
M	CURB AND GUTTER		PER CIVIL
N	CONCRETE CURB		PER CIVIL
O	AC PAVING		PER CIVIL
P	STORM DRAIN		PER CIVIL

NOTES:

A. THE CONTRACTOR MUST FAMILIARIZE HIMSELF WITH THE IRRIGATION, GRADING AND PLANTING ON SAGE HILL CAMPUS & ALL ADJACENT PROPERTIES. ANY DAMAGE TO OR ADJUSTMENTS REQUIRED INCLUDING REPLACING OR RELOCATING IRRIGATION LINES, HEADS, VALVES, OR ANY UTILITY THAT OCCURS ON ADJACENT PARCELS AND IN THE RIGHT OF WAY DUE TO THE GRADING AND CONSTRUCTION OF THIS PROJECT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER. THE OWNER'S REP. MUST REVIEW ANY REQUIRED MODIFICATIONS TO THESE AREAS PRIOR TO COMMENCING WORK. THE CONTRACTOR MUST NOTIFY THE OWNER'S AUTHORIZED REP. OF THESE CONDITIONS OR ANY DISCREPANCIES PRIOR TO COMMENCING WORK. TYP. ENTIRE SITE. ALL IMPROVEMENT/REPAIRS WITHIN RIGHT OF WAY AREA MUST MEET THE CITIES STANDARDS.

B. SEE SHEET L0.1 FOR ADDITIONAL LEGENDS AND SYMBOLS.

SITE LIGHTING LEGEND

SYM.	DESCRIPTION	DET/ REF	COMMENTS
▣	PEDESTRIAN BOLLARD LIGHT		COLOR: MATCH EXISTING
⟋	SPORTS LIGHTING		SEE SPORTS LIGHTING PLANS

NOTE: SEE ELECTRICAL PLANS FOR FIXTURES, LAMPS, AND SPECS.

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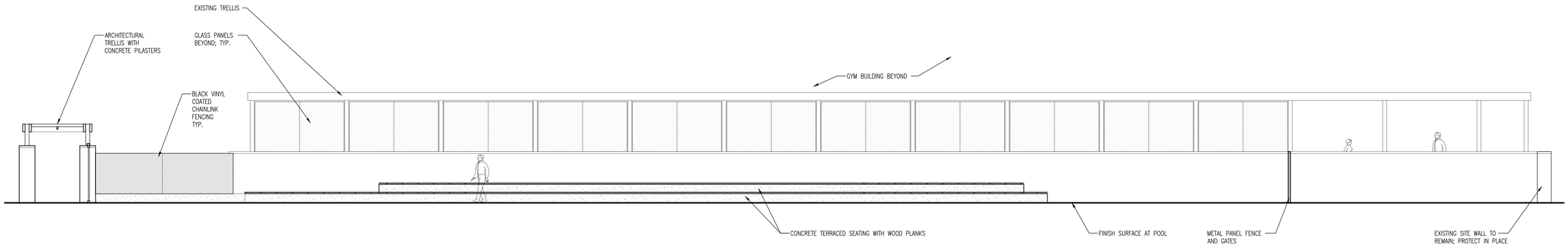
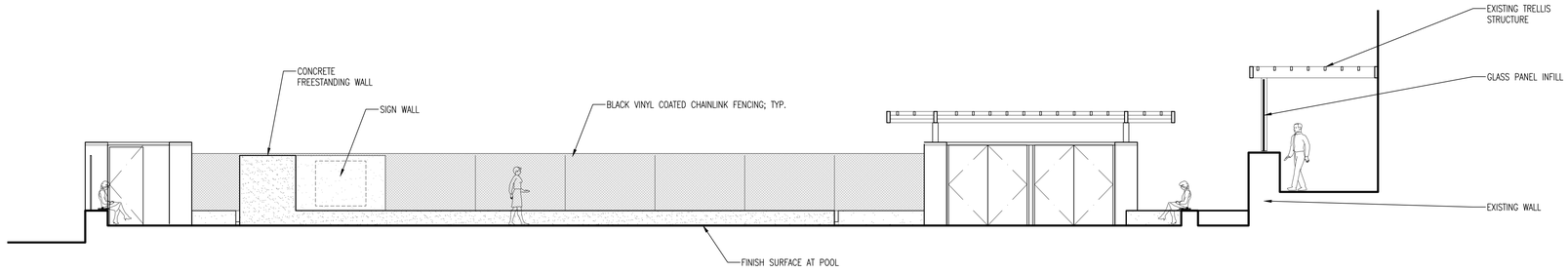
Scale	1" = 20'

LANDSCAPE MATERIALS PLAN

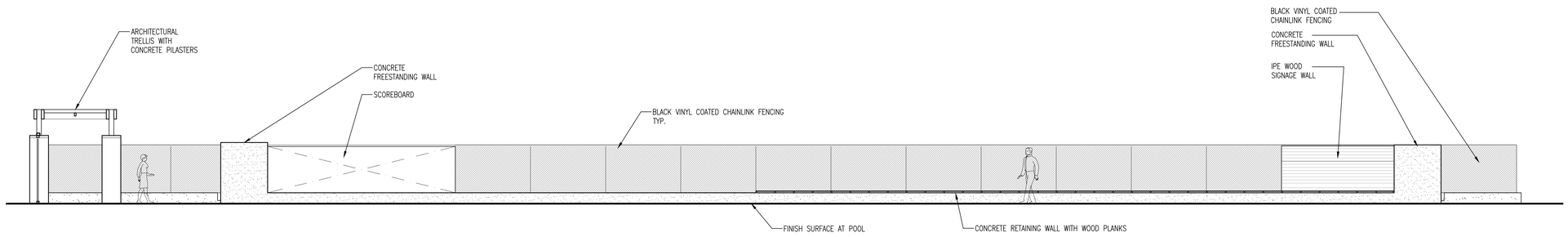
L1.1



EAST ELEVATION AT POOL | 3/16" = 1'-0" | 01



NORTH ELEVATION AT POOL | 3/16" = 1'-0" | 02



WEST ELEVATION AT POOL | 1/4" = 1'-0" | 03

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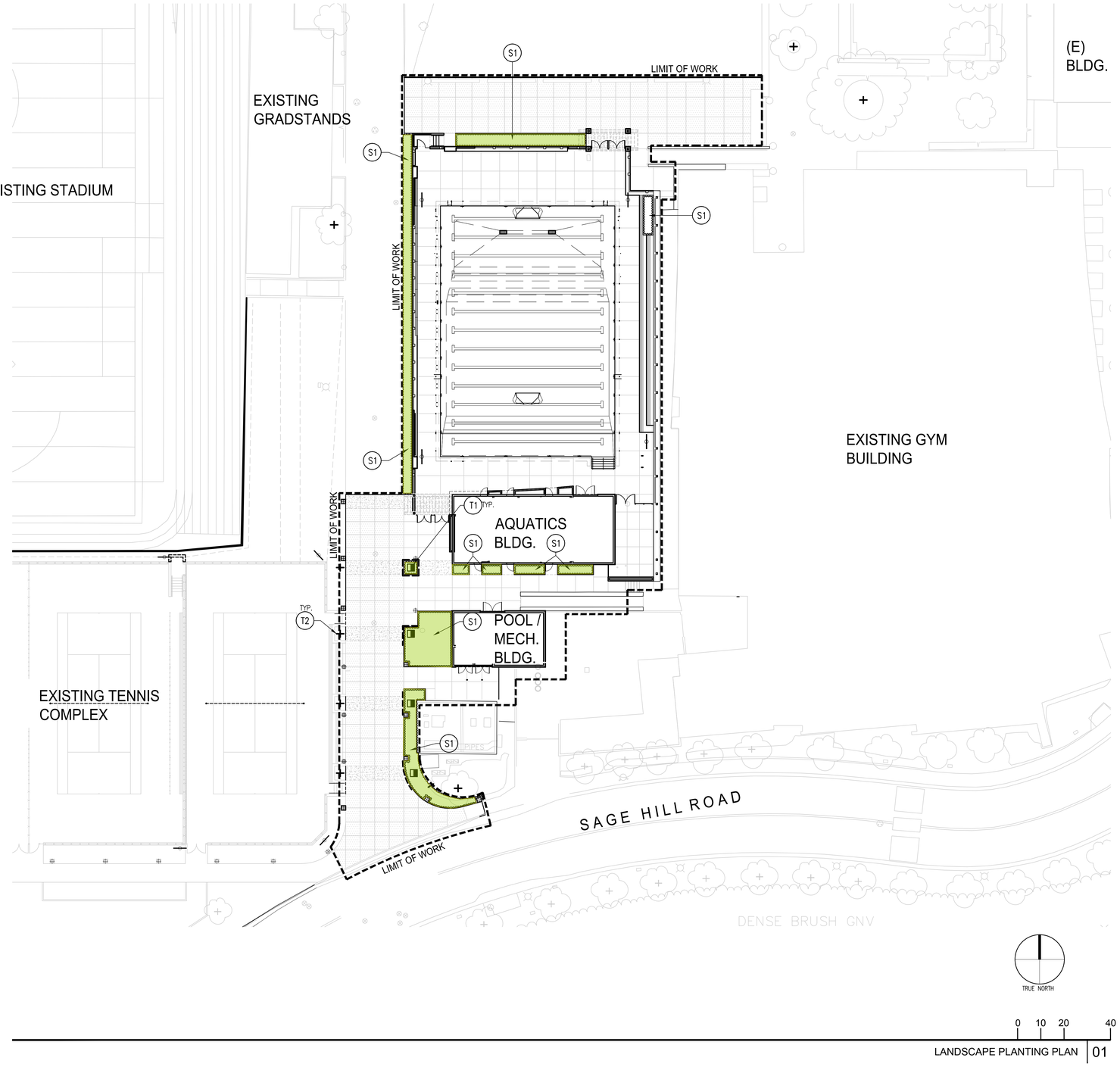
SITE SECTIONS / ELEVATIONS PLAN

L4.1



LANDSCAPE PLANTING PLAN 01

PLANTING LEGEND

TREE LIST (NCN.)– NO COMMON NAME (*)– UNLESS NOTED ON PLAN

REF.	QTY.	SYM.	DESCRIPTION	SIZE/ SPACING	
T1	4		SPECIMEN TREE TBD	36" BOX PER PLAN	MATCHED STND.
T2		+	EXISTING TREE TO REMAIN; PROTECT IN PLACE		

SHRUB / VINE LIST

S1 AS REQ'D SHRUBS

25% 1 GALLON
60% 5 GALLON
15% 15 GALLON

AVERAGE SPACING IS 30" O.C.

NOTE:
ALL PLANTING TO RECIEVE 100% HEAD TO HEAD COVERAGE OF FULLY AUTOMATIC IRRIGATION SYSTEM WITH NEW CONTROLLER.

MISCELLANEOUS SYMBOLS

----- ROOT BARRIER
PROVIDE AT ALL TREES

1,704 SF OF NEW AND REHABILITATED LANDSCAPING (CHAPTER 14.17 WATER-EFFICIENT LANDSCAPING N/A BUT WILL COMPLY AS REQUIRED)

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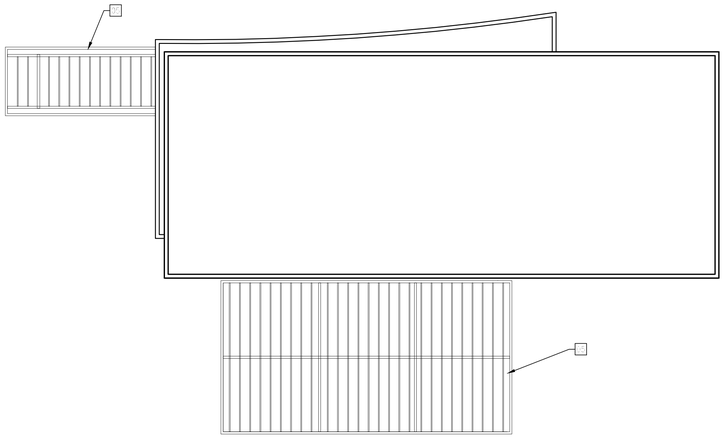
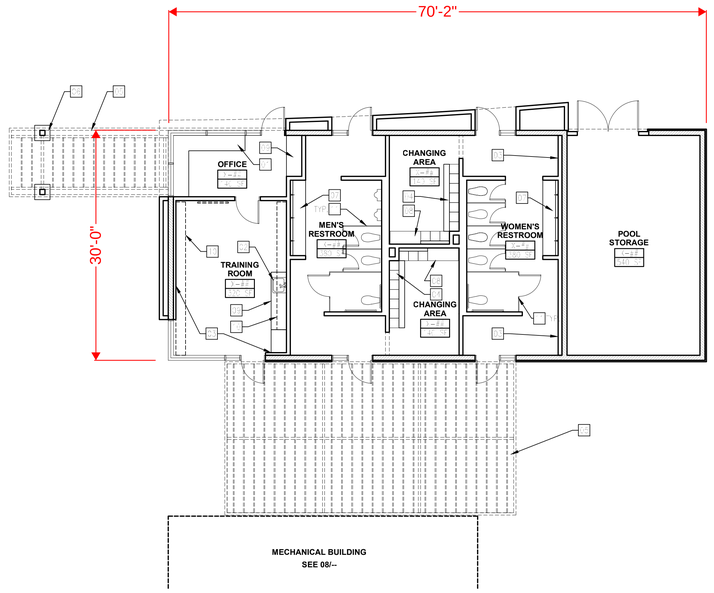
LANDSCAPE PLANTING PLAN

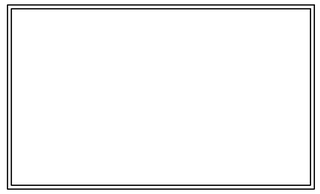
L7.1



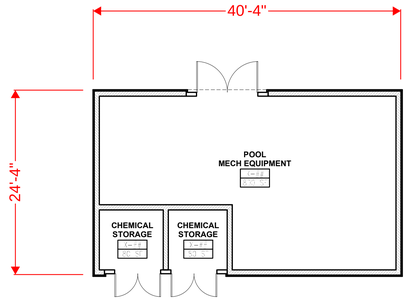
ROOF PLAN :: POOL BUILDING | 12



FLOOR PLAN :: POOL BUILDING | 06



ROOF PLAN :: MECHANICAL BUILDING | 14



FLOOR PLAN :: MECHANICAL BUILDING | 08

01 CUSTOM DESK W/ SOLID SURFACE COUNTERTOP
02 SINK
03 METAL STUD FURRING O/ CMU
04 2-TIER PHENOLIC LOCKERS WITH INTEGRAL BENCH, WHERE OCCURS
05 ALASKAN YELLOW CEDAR WOOD CANOPY ABOVE
06 COLUMN
07 TROUGH SINK W/ SOLID SURFACE COUNTERTOP
08 ACCESSIBLE BENCH
09 CASEWORK
10 BUILT-IN SHELVING ABOVE
11 STAINLESS STEEL TOILET PARTITION

KEYNOTES

CMU WALL
METAL STUD WALL
METAL STUD FURRING O/ CMU WALL
LINE ABOVE

LEGEND

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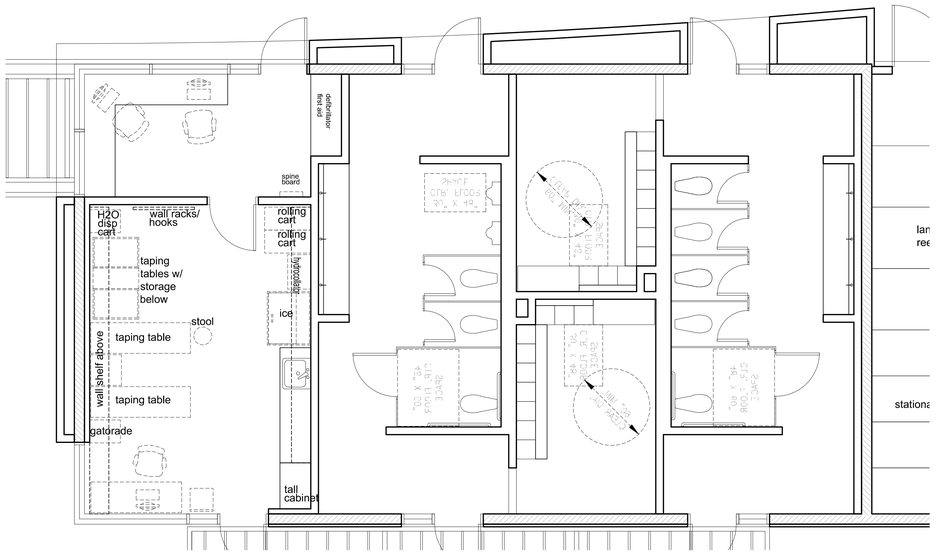
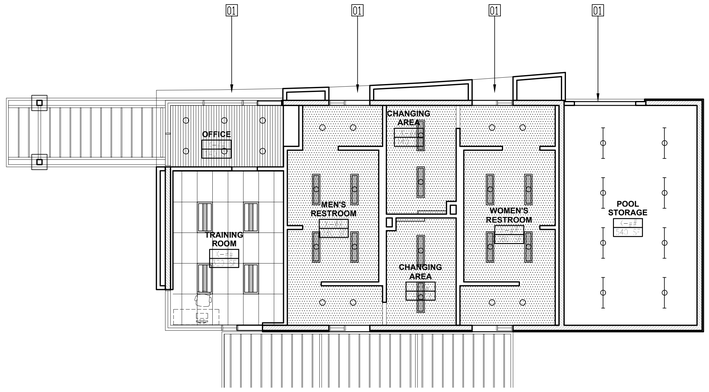
FLOOR & ROOF PLANS - POOL & MECH BLDGS

A2.00

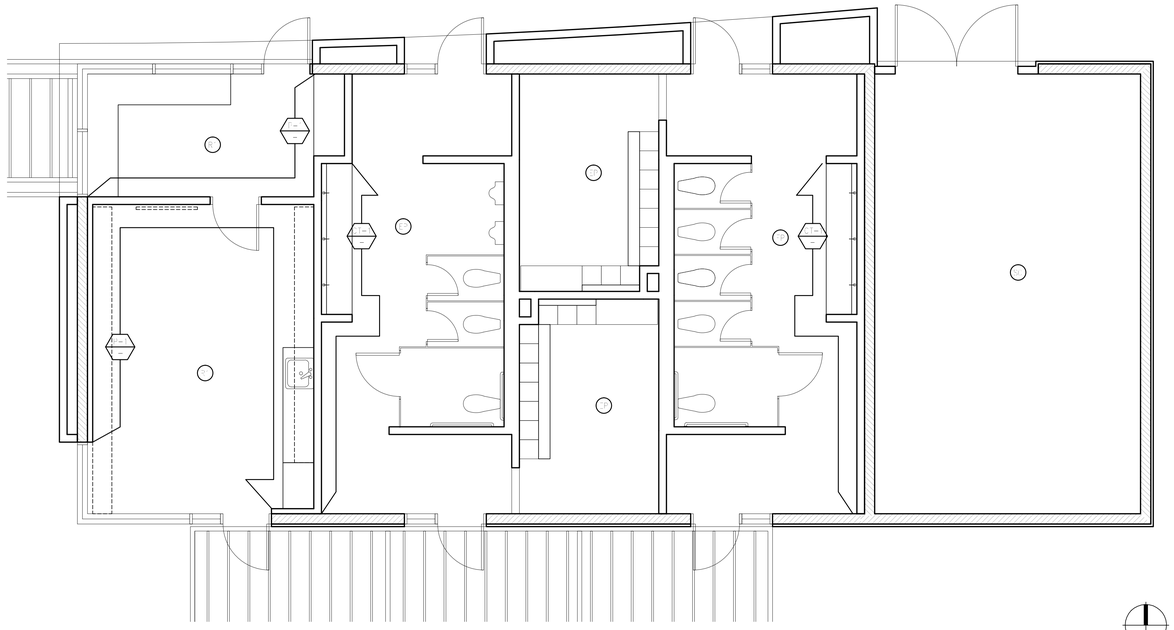


SCALE :: 1/4"=1'-0"

ENLARGED FLOOR PLAN :: POOL BUILDING | 12

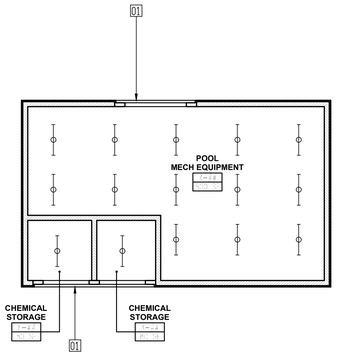


CEILING PLAN :: POOL BUILDING | 06



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

ENLARGED FINISH PLAN :: POOL BUILDING | 14



CEILING PLAN :: MECHANICAL BUILDING | 08

01 INTEGRAL COLOR EXTERIOR CEMENT PLASTER, PAINTED
02 WESTERN YELLOW CEDAR WOOD CANOPY
03 1/4" CONTROL JOINT

KEYNOTES

1. ALL INTERIOR WALL SURFACES TO BE PAINTED U.N.O.

GENERAL NOTES

C1 CARPET
R1 RESILIENT FLOORING
EP EPOXY SEALED CONCRETE FLOOR
SC SEALED CONCRETE
CT-1 12"X24" CERAMIC TILE (WALL)
P-1 PAINT

FINISH PLAN LEGEND

GYP BOARD CEILING
2'X4' ACOUSTICAL CEILING TILE
WOOD CEILING
2'x4" RECESSED FLUORESCENT INDIRECT / DIRECT LIGHT FIXTURE
1'X4" SURFACE MOUNTED LINEAR FLUORESCENT LIGHT FIXTURE
1'X4" SUSPENDED LINEAR FLUORESCENT LIGHT FIXTURE
RECESSED CAN LIGHT

CEILING PLAN LEGEND

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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICE
APPL. #: ------
AC._____ FLS._____ SS._____
DATE: _____
FILE NUMBER: ------

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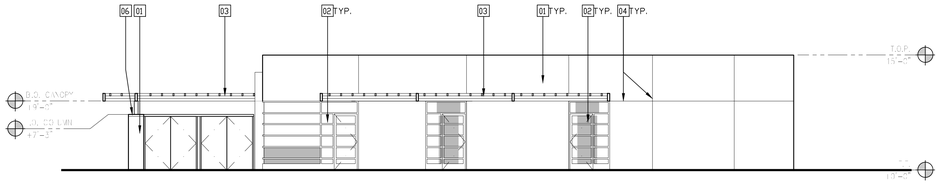
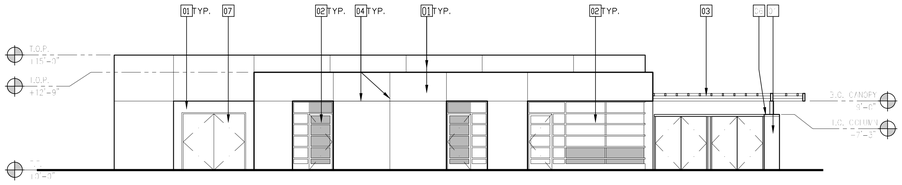
CEILING & FINISH PLANS - POOL & MECH BLDGS

A2.10



SOUTH :: C



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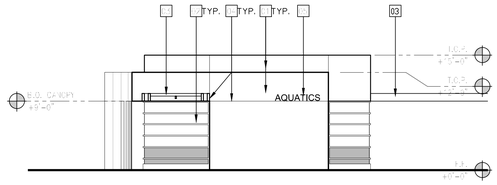
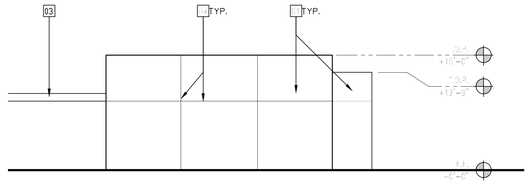
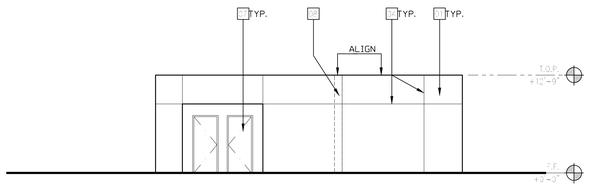


WEST :: D



EAST :: B



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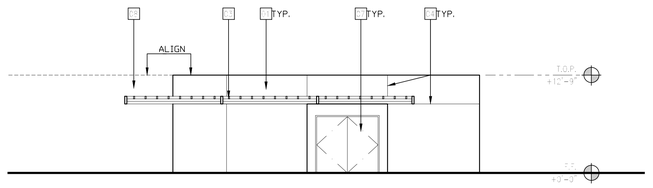

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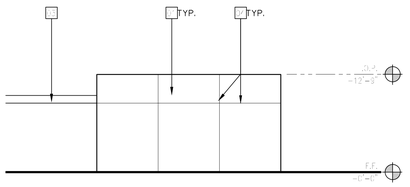

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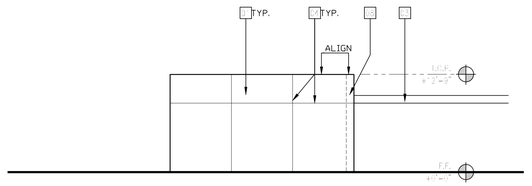

EAST :: B

01 INTEGRAL COLOR EXTERIOR CEMENT PLASTER, PAINTED
02 1" INSULATED GLAZING IN ALUMINUM FRAME
03 ALASKAN YELLOW CEDAR WOOD CANOPY
04 1/4" CONTROL JOINT
05 SIGNAGE, CAST METAL LETTERS
06 PRECAST CONCRETE CAP
07 HOLLOW METAL DOOR AND FRAME, PAINTED
08 (E) PLASTER O/ CMU WALL

KEYNOTES

TRANSLUCENT GLAZING

LEGEND

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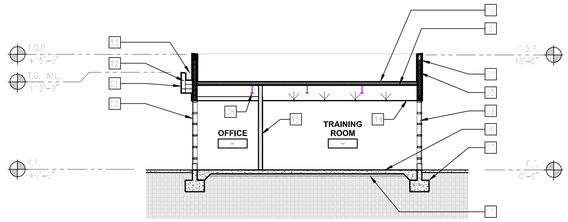
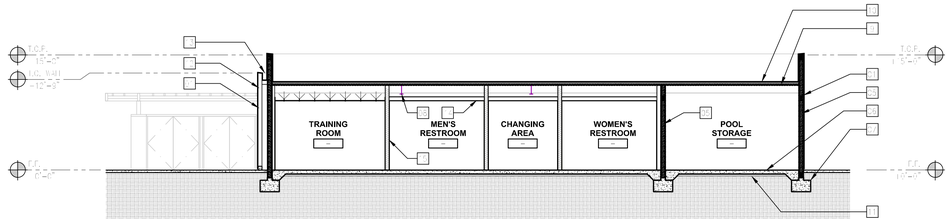
EXTERIOR ELEVATIONS POOL & MECH BLDGS

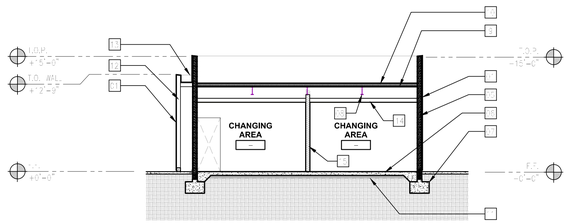
A3.00



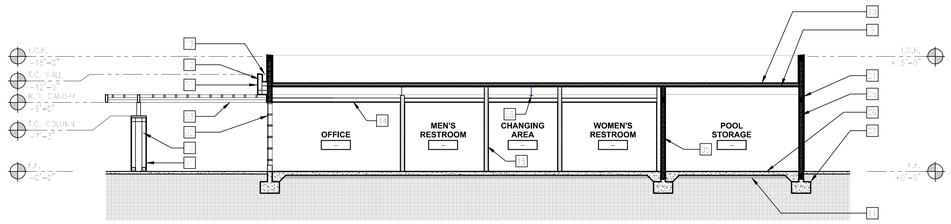
BUILDING SECTIONS :: POOL BUILDING | 11



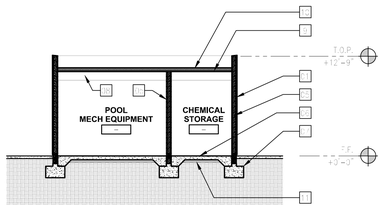
BUILDING SECTIONS :: POOL BUILDING | 05



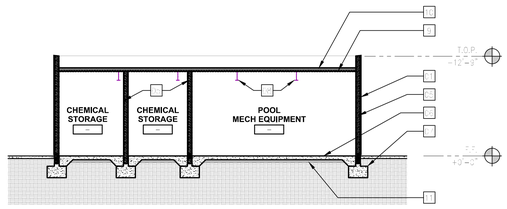
BUILDING SECTIONS :: POOL BUILDING | 12



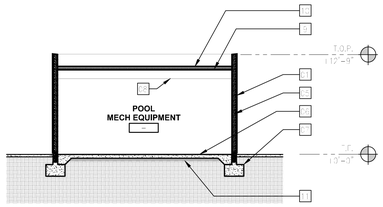
BUILDING SECTIONS :: POOL BUILDING | 06



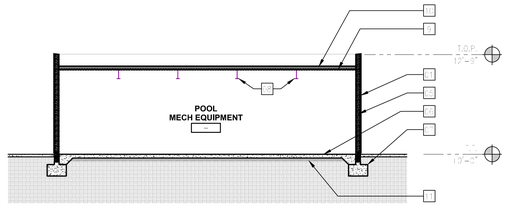
BUILDING SECTIONS :: MECHANICAL BUILDING | 13



BUILDING SECTIONS :: MECHANICAL BUILDING | 07



BUILDING SECTIONS :: MECHANICAL BUILDING | 14



BUILDING SECTIONS :: MECHANICAL BUILDING | 08

01 INTEGRAL COLOR EXTERIOR CEMENT PLASTER, PAINTED
02 1" INSULATED GLAZING IN ALUMINUM FRAME
03 WESTERN YELLOW CEDAR WOOD CANOPY
04 HOLLOW METAL DOOR AND FRAME, PAINTED
05 CONCRETE MASONRY WALL; PER STRUCTURAL
06 CONCRETE SLAB ON GRADE; PER STRUCTURAL
07 CONCRETE FOUNDATION; PER STRUCTURAL
08 STRUCTURAL STEEL FRAMING; PER STRUCTURAL
09 METAL DECK ROOF; PER STRUCTURAL
10 CLASS 'A' BUILT-UP ROOFING SYSTEM OVER RIGID INSULATION
11 METHANE MITIGATION SYSTEM; BELOW BUILDING SLAB ON GRADE, TYP.
12 EXTERIOR LIGHT GAUGE METAL FRAMED WALL
13 SHEET METAL GUTTER
14 CEILING; PER REFLECTED CEILING PLAN
15 INTERIOR LIGHT GAUGE METAL FRAMED PARTITION WALL; SOUND ATTENUATING BATT INSULATION & 5/8" GYP. BD. FINISH, TYP.

KEYNOTES

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BUILDING SECTIONS POOL & MECH BLDGS

A3.10

A. GENERAL

1. Applicable Code: 2010 California Building Code (CBC). References to industry standards herein shall be latest edition as adopted by Applicable Code. References to ICC-ES Evaluation Reports for proprietary materials herein shall be latest edition as adopted by Governing Code Authority.

a.	Design Wind Speed:	85 mph, Exposure C, Importance Factor = 1.15
b.	Seismic Importance Factor I:	1.25
c.	Spectral Acceleration (S_s, S_1):	1.65, 0.6 (respectively)
d.	Spectral Response Coefficient (S_{DS}, S_{D1}):	1.16, 0.78 (respectively)
e.	System Coefficient R:	5.0
f.	Site Coefficient (Fa, Fv):	0.9, 2.4 (respectively)
g.	Site Class:	D
h.	Occupancy Category:	Class III
i.	Seismic Design Category:	D
j.	Design Base Shear	160.7^k
k.	Seismic Response Coefficient Cs:	0.29
l.	Basic Seismic Force Resisting System:	Special Reinforced CMU Shear Wall
m.	Analysis Procedure:	Static

2. Governing Code Authority: Division of State Architect (DSA).

3. Field Verification: Field verify existing conditions and dimensions prior to construction. Promptly notify Architect (Structural Engineer) in case of discrepancies.

4. Design Intent: Contract Documents indicate design intent for structure in its completed state. They do not indicate method of construction. Promptly notify Architect (Structural Engineer), prior to proceeding with Work, if design intent requires further clarification.

5. Deviations, Modifications and Substitutions to Approved Structural Drawings: Must be accepted in writing by Architect (Structural Engineer) and approved by Governing Code Authority. No deviation, modification or substitution will be accepted via shop drawing review.

6. Procedures of Construction: Contractor is responsible for procedures of construction complying with national, state and local safety ordinances. Site visits (including Structural Observation) by Architect (Structural Engineer) do not constitute supervision of methods of construction.
   a. Protection of Utilities: Locate existing utilities, including those not shown on Contract Documents, and protect them from damage. Contractor bears expense of repair or replacement of utilities in conjunction with execution of Work.
   b. Excavations: Protect structure, adjacent structures, adjacent properties, streets, and utilities during excavation utilizing lagging, shoring, underpinning and related procedures as may be required. Provide necessary supports for soil at sides of excavations. Contractor and affected trades shall refer to Geotechnical Report for more information.
   c. Protection of Structure: Provide necessary measures to protect structure during execution of Work.
   d. Contractor Proposed Revisions: Where a revision of structural design or connection is proposed by Contractor to accommodate construction tolerances, construction sequence and/or dimension modifications, Contractor shall retain a structural engineer licensed in State of California to perform design. Submit stamped and signed design drawings and calculations to the Architect (Structural Engineer) for review and the Governing Code Authority for approval.
   e. Erection Plans: Determine phases of Work requiring erection plans according to applicable safety regulations. Maintain certified copies of erection plans at site during construction.
   f. Shoring, Bracing, and Other Temporary Supports: Design and erect shoring, bracing, and other temporary supports where structure has not attained design strength and as required for safe erection. Ensure floor, roof, and wall members are securely shored and braced during construction. Provide shoring at elevated beams and slabs supporting concrete or masonry walls during and after wall pour until wall attains design strength.
   g. Temporary Loading: Ensure construction loads do not exceed indicated design live load values. Notify affected sub-contractor trades of these design load limits.
   h. Fabrication, Shipment, and Erection of Structural Steel: Ensure stresses occurring during fabrication, shipment, and erection of structural steel are temporary and are less than design and allowable stress capacities of individual members. Do not impair full design and load carrying capacity of members due to fabrication, shipment, or erection. Contractor is responsible for controlling erection sequence, erection procedure, temperature differentials and weld shrinkage to minimize residue stresses. Provide additional materials for the erection of structural steel such as temporary bracing and guy cables as may be necessary at no additional cost. Remove these materials unless approved in writing by Owner. Do not tighten bolts in typical beam to column connections for erection purposes.
   i. Securing Reinforcing Steel, Dowels, Anchor Bolts and Embeds: Firmly support and accurately place complying with ACI standards prior to casting concrete or grout in masonry walls. Use ties and support bars in addition to reinforcing steel shown where necessary. No welding of reinforcing steel, including tack welding, is permitted unless otherwise accepted in writing by Architect (Structural Engineer). Provide plastic or plastic coated chairs and spacers when resting on exposed surfaces.

7. Coordination Responsibility: Contractor is responsible for coordination of Work including that of sub-contractor trades.

8. Submittals: Submit to Architect (Structural Engineer) as indicated on structural drawings and specifications. General Contractor shall review submittal for completeness and compliance with Contract Documents prior to submission.
   a. Request for Information (RFI) Submittals: Accompany RFI's with partial structural foundation or framing plans showing location in question and affected structural members. Copy partial plan from structural drawings and indicate grid line locations and floor level. Also provide properly drawn engineering sketches illustrating issues and Contractor's proposed solutions. Photographs are not acceptable substitutes to engineering sketches.
   b. Composite Slab Penetration Submittal: Submit to Architect (Structural Engineer) for each floor indicating size and location of each slab penetration and opening as necessary by all affected trades. Submit penetration plans together with corresponding metal decking or reinforcing steel shop drawings. Submit written statement from Special Inspector that no additional penetrations or openings were added to those shown in penetration submittal.
   c. Composite Concrete and Masonry Wall Penetration Submittal: Submit to Architect (Structural Engineer) for each wall indicating size and location of each wall penetration and opening as necessary by all affected trades. Submit penetration elevations together with corresponding reinforcing steel shop drawings. Submit written statement from Special Inspector that no additional penetrations or openings were added to those shown in penetration submittal.

9. Contract Documents Use: Review Contract Documents in their entirety before performing structural related Work and before developing shop drawings. Bring discrepancies to immediate attention of Architect (Structural Engineer) before starting Work.
   a. Scaling of Drawings: Not permitted.
   b. Additional Structural Requirements: See specifications.
   c. Building Geometry: See architectural drawings for building geometry including, but not limited to, top of floor and roof elevations; depressions; slopes; curbs; drains; trenches; slab and deck edge locations; wall overall dimensions; and size and locations of openings in floors, roof, and walls.
   d. Non-structural Items Requiring Special Provisions: See architectural, mechanical, plumbing, and electrical drawings for non-structural items requiring special provisions during construction. They include, but are not limited to, non-structural walls; size and locations of openings and sleeves penetrating structure; size and location of concrete curbs and pads; and size and location of piping, ductwork, and equipment anchorages mounted or suspended from structure. Verify exact size and location of equipment with equipment manufacturer.

10. Materials: Furnish and install in compliance with legally constituted public authorities having jurisdiction including county and local ordinances and safety orders of State Industrial Accident Commission, OHSA.

11. Penetrations, Embedments, and Openings in Structural Members: No penetration, embedment, opening, sleeve, pipe, or conduit shall occur in structural members including footings, slabs, walls, columns, and beams unless specifically shown or indicated on structural drawings.

12. Typical Details: Details on S1 series sheets are applicable throughout Project wherever the described condition occurs and may or may not be specifically referenced on structural drawings. Contractor is responsible for identifying these details and understanding extent of their application prior to performing Work.

C. QUALITY ASSURANCE (STRUCTURAL OBSERVATION, MATERIALS TESTING, and SPECIAL INSPECTION)

1. Structural Observation:
   a. Coordination Responsibilities of Contractor: Notify Architect (Structural Engineer) 48 hours in advance of critical stages of construction indicated below so visits may be scheduled by Structural Observer. Failure by Contractor to meet observation schedule may require removal of subsequent Work for observation. Contractor to bear costs of removal and replacement of finished Work or framing damaged by removal process or as required for corrective action.
   b. Pre-construction Meeting: Owner may coordinate and call for meeting between Architect (Structural Engineer) responsible for structural design, Structural Observer, Contractor, affected subcontractors and Special Inspector. structural observer will preside over this meeting. Purpose of meeting is to identify major structural elements and connections that affect vertical and lateral load resisting systems of structure and to review schedule of Structural Observation, Materials Testing, and Special Inspection of Project.
   c. Critical Stages of Construction Requiring Structural Observation:
   i. Casting of first concrete footing.
   ii. Erection of first structural steel framing member.
   iii. Erection of first structural steel roof framing member.

2. Mill Test Reports Certifying Materials: Contractor to submit mill test reports certifying reinforcing steel, and structural steel are of identifiable tested stock to Owner, Special Inspector, Architect (Structural Engineer) and, upon request, to Governing Code Authority. Ensure materials are properly tagged for identification. If mill test reports cannot be made available or if material cannot be identified, Testing Laboratory will perform tests as directed by Architect (Structural Engineer). Contractor shall pay Testing Laboratory for costs related to tests and inspections of unidentifiable materials or materials furnished without mill test reports, materials found deficient after initial tests and inspections, or materials replacing deficient materials.
   a. Ultrasonic Examination of Heavy Rolled Shapes and Thick Plates at Proposed Welded Moment Connections: Where complete penetration groove welds occur at Groups 4 and 5 structural steel shapes, as defined in ASTM A6, and plates exceeding 2 inches thick, submit mill test reports to Architect (Structural Engineer) and, upon request, to Governing Code Authority. Mill test reports shall certify that Charpy V-notch testing was conducted in compliance with ASTM A6, Supplementary Requirement S5, including impact test complying with ASTM A673 at frequency P with minimum average value of 20 ft.-lbs. absorbed energy at 70 degreees Fahrenheit.

3. Certificate of Compliance for Offsite Fabrication: Submit for structural steel in compliance with Applicable Code Section 1704A.2. Submit to Owner, Testing Laboratory, Architect (Structural Engineer) and Governing Code Authority.

4. Weld Testing and Inspection: Testing Laboratory will submit weld test results to Owner, Contractor, Architect (Structural Engineer) and to Governing Code Authority. See Specifications for testing requirements not indicated on structural drawings.
   a. Structural Steel Welding: Apart from visual inspection and review of fabrication and erection reports of fabricator/erector's own quality control testing and inspection, Owner's Testing Laboratory will perform indicated shop and field inspection and testing. Testing Laboratory will be AWS Q.C.-1 certified and will provide inspectors for continuous inspection of steel fabrication and erection and structural welding. Shop and field testing of materials and welding will be as follows:
   i. Ultrasonic testing is required for all (100%) partial and complete penetration welds. Test groove welding on continuity plates by ultrasonic testing after beam flange weld connection. Testing will be performed 24 hours or more after completion of welding. Weld backing removal areas and fillet welds will be subjected to magnetic particle examination.
   ii. Base metal thicker than 1-1/2 inches, subjected to through thickness weld shrinkage, will be ultrasonically tested directly behind such welds 48 hours or more after completion of welding.
   iii. Welds shall be visually inspected and periodically measured (15 percent minimum).
   iv. Check 10 percent of fillet welds by magnetic particle (ASTM 109 method). Check 25 percent of continuity plate fillet welds and beam fillet welds (100 percent in moment zones) by magnetic particle.
   v. Ultrasonically test column flanges located at proposed welded moment connections, continuity plates, doubler plates and base plates where column flange or plate thickness exceeds 1-1/2 inches. Test for evidence of laminations, inclusions or other discontinuities in accordance with ASTM A435, straight beam ultrasonic examination of steel plates, or ASTM A898, straight beam ultrasonic examination of rolled steel structural shapes, as applicable. Test zone to include area 6 inches above and below each beam flange connection. For plates, any discontinuity causing a total loss of back reflection not contained within 3-inch diameter circle, or one-half thickness of plate, whichever is greater, will be rejected. For rolled shapes, ASTM 898, Level I criteria applies. Testing will be performed on material prior to fabrication, after fabrication, and after final welding of beam.
   vi. Amperage, voltage, polarity and electrode stick out will be verified for compliance with electrode manufacturer's recommendations.

C. QUALITY ASSURANCE (STRUCTURAL OBSERVATION, MATERIALS TESTING, and SPECIAL INSPECTION) - CONTINUED

5. Continuous Special Inspection: Unless otherwise indicated, Continuous Special Inspection will be performed by Special Inspector complying with Applicable Code Section 1704A. Periodic Inspection is not permitted unless indicated below or otherwise accepted by Architect (Structural Engineer). See Specifications for additional Special Inspection requirements.

   Portions of Work Requiring Continuous Special Inspection:
   a. Soils Related Work to be Performed by Geotechnical Engineer of Record:
   i. Grading, excavations, backfill and compaction of backfill
   ii. Footing excavations prior to placement of reinforcing steel or concrete
   iii. Caisson drilling operations, excavations, and placement of concrete
   b. Reinforcing Steel:
   i. Verification of mill test report certifications and material identification
   ii. Placement of reinforcing steel (including dowels) where specified concrete compressive strength is greater than 2500 psi
   c. Concrete:
   i. Verification of mix designs before delivered concrete is placed
   ii. Concrete placement and sampling where specified concrete compressive strength is greater than 2500 psi
   iii. Placement of non-shrink grout
   d. Masonry:
   i. Placement of masonry units including rebar and grouting operations
   ii. Masonry prism testing for verifying compressive strength (f'm), mortar and grout sampling
   e. Anchors:
   i. Anchor bolts and other embeds in concrete and masonry
   ii. Proprietary anchorages (drill and epoxy and mechanical) in concrete and masonry
   f. Structural Steel:
   i. Verification of mill test report certifications and material identification
   ii. Sampling and testing of specimens
   g. Welding:
   i. Shop fabrication and welding
   ii. Field welding of structural steel, welded shear studs (inspection and field test), and reinforcing steel
   iii. Field welding of metal decking per ICBO Evaluation Report indicated herein
   h. Bolts:
   i. Slip critical high strength bolts (A325-SC and A490-SC) verified by calibrated torque wrench
   ii. Bearing high strength bolts (A325-N, A325-X, A490-N, and A490-X) verifying snug contact of plys
   i. Sprayed-on Fireproofing:
   i. Thickness, density and cohesion/adhesion per Applicable Code Section 1704A.10 and 714 in compliance to fireproofing indicated on architectural drawings

6. Testing and Inspection of mechanical and epoxy anchors shall be based on ICC-ESR or manufactures written instruction, acceptable by DSA.

D. EARTHWORK and FOUNDATIONS

1. Geotechnical Report: Perform soils work complying with foundation design based on recommendations in report no. 1822A27, prepared by MTGL, INC. dated Dec. 13, 2010 and subsequent addenda letters: log no. 11-295, January 28, 2011; log no. 11-386, March 16, 2011;log no. 11-475, April 05, 2011; log no. 11-554, April 26, 20; and log no. 11-716, May 06, 2011. Maintain at site a copy of report and addenda.

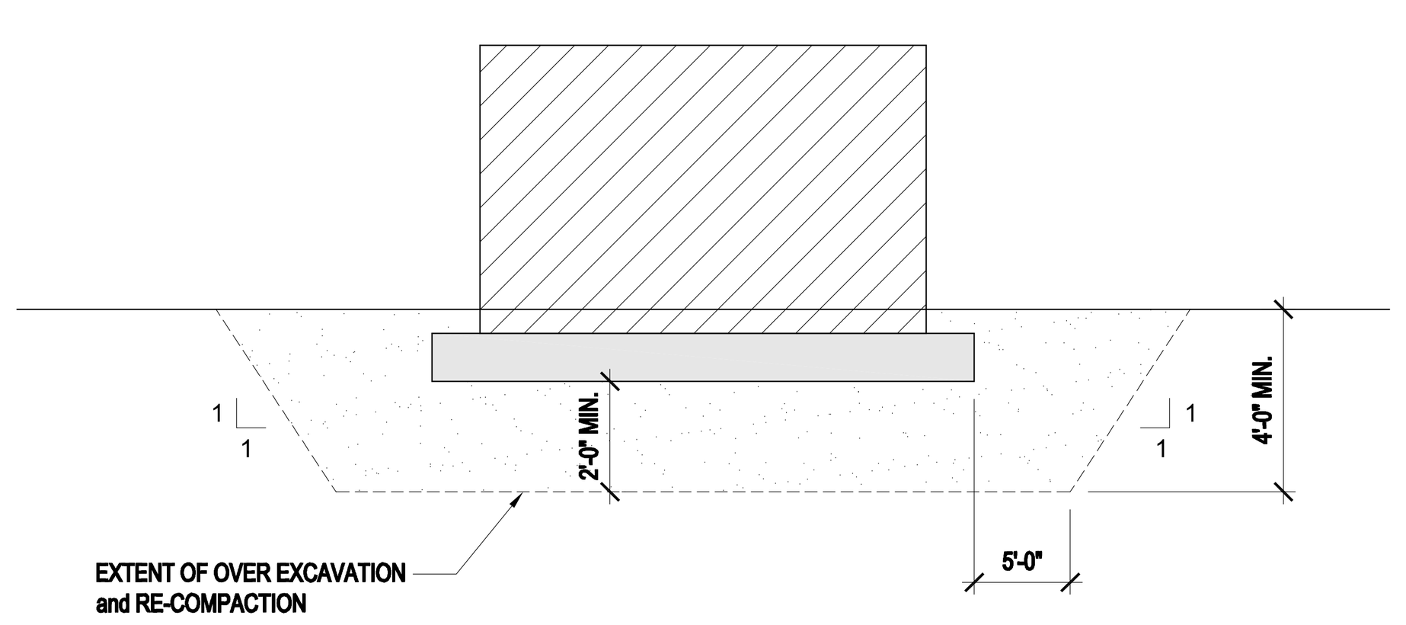
2. Allowable Foundation Design Values per Geotechnical Report. Values may be increase 33 percent for transient loading.
   a. Bearing Capacity: 2000 psf at footings (increase 33% when applying seismic or wind per CBC 2010 section 1605A.3.2 load combinations)
   b. Passive Lateral Bearing Pressure: 250 psf/ft
   c. Coefficient of Friction: 0.35

3. Grading, Excavations, Backfill and Compaction of Backfill: Comply with Geotechnical Report and requirements of Governing Code Authority and performed only under Continuous Special Inspection of geotechnical engineer.

4. Preparation of Soil Under Foundations, Retaining and other Site Walls and Building Slabs on Grade:
   a. Excavation: Excavate existing artificial fill, soils disturbed during demolition of existing improvements, and any unsuitably loose soil encountered. Approximate depth of excavation shall be 4 feet (depth of existing artificial fill) below existing grade or proposed finish grade and a min. 2 feet below footing, whichever is deeper, as recommended in geotechnical report.
   b. Scarification: Following geotechnical engineer's observation of excavation, scarify soil at excavation bottom to a depth of at least 6 inches, moisten to optimum moisture content, and recompact scarified soil to a minimum 90 percent of the laboratory maximum dry density as determined by ASTM Test Method D1557.
   c. Approved Compacted Fill: Excavated artificial fill from site or imported fill, both properly moisture conditioned, may be used for compacted fill subject to geotechnical engineer's approval. Place compacted fill in thin lifts as determined by geotechnical engineer. Compact to at least 90 percent of the laboratory maximum dry density as determined by ASTM Test Method D1557.

5. Foundation Excavations: Foundations are to bear on approved compacted fill as indicated in Geotechnical Report. Excavations are to be inspected by geotechnical engineer prior to placement of reinforcing steel and formwork. Ensure excavations are clean, dry and free of debris or loose soil. Slope sides of excavation not less than minimum slope indicated in Geotechnical Report. Cast concrete directly against excavated surfaces.

6. Backfilling of Retaining Walls: Place after completion and inspection of waterproofing. Adequately shore retaining walls during backfill operation. Unless adequately shored, do not place backfill behind building structure retaining walls (excluding site retaining walls) until concrete at elevated floor levels adjacent to walls are completely poured and have cured for at least 7 days.



E. REINFORCING STEEL

1. Reinforcing Steel:
   a. All bars unless indicated otherwise: ASTM A615, Grade 60
   b. Bars to be welded: ASTM A706, Grade 60

2. Wire and Spiral Reinforcing:
   a. Smooth welded wire fabric (W.W.F.): ASTM A185, Fy =65 ksi, flat sheets only - do not use rolled mesh. Lap 1-1/2 wire spaces (1 foot minimum). Offset laps in adjacent sheets to avoid continuous laps.
   b. Deformed wire stirrups (D4 and larger only): ASTM A497, Fy =65 ksi
   c. Spiral reinforcing: ASTM A82, Grade 60

3. Shop Drawings: ACI 315, Part B. Show reinforcing steel placement including sizes, quantities, spacing, clearances, splice locations, lap lengths, and concrete coverages and submit to Architect (Structural Engineer). Promptly notify Architect (Structural Engineer) prior to developing shop drawings if insufficient clear distances between reinforcing steel and other congestion is encountered. Notify Special Inspector of adjustments made from approved Contract Documents which are indicated on accepted shop drawings that facilitate field placement of reinforcing steel and concrete.

4. Lap Splices: Provide Class B splices unless indicated otherwise. Splice #5 bars and larger only at locations indicated. If additional splice locations are proposed, promptly notify Architect (Structural Engineer) prior to developing shop drawings.
   a. Splices in Walls: Locate splices in horizontal bars at well-staggered locations. Do not splice vertical bars except at horizontal supports such as floor and roof diaphragms. Stagger Lap Splices 4'-0" min.

5. Minimum Clearances Between Parallel Reinforcing Steel Including Distance Between Sets of Spliced Bars: 1 inch or 1 bar diameter, whichever is greater. 1-1/2 inches or 1-1/2 bar diameters, whichever is greater, at columns, piers, and pilasters only. For bundled bars, minimum clear distances between units of bundled bars shall be same as single bars except bar diameter is derived from equivalent total area of bundle.

6. Minimum Concrete Coverage: Place bars as near to concrete surface as the following minimum coverages permit, unless noted otherwise:
   a. Slabs on Grade locate at center of slab
   b. Slabs Supporting Earth Above 2 inches from top
   c. Formed Concrete in Contact With Earth 2 inches
   d. Concrete Poured Against Earth (Unformed) 3 inches
   e. Walls Above Grade, Exposed to Weather 2 inches
   f. Walls Above Grade, Not Exposed to Weather 3/4 inch
   g. Columns (Clear to Face of Ties) 1-1/2 inches
   h. Beams (Clear to Face of Ties) 1-1/2 inches
   i. Structural Slabs (Top and Bottom) 1 inch

7. Dowels at Construction Joints: Provide dowels matching size and quantity of reinforcing steel interrupted at construction joints, unless detailed otherwise.

8. Placement of Bars in Walls: Place vertical bars closest to wall surfaces at curtains containing vertical and horizontal bars of the same size. In curtains which vertical and horizontal bars are of different sizes or spacing, place layer with most steel area closest to near wall surface.

9. Bars Terminating at Walls, Columns, Beams, and Foundations: Extend bars to within 2 inches (3 inches at concrete poured against earth) of far face of wall, column, beam, or foundation and provide standard ACI 90-degree hook unless detailed otherwise.

10. Bars Interrupted by Structural Steel: Extend bars to within 2 inches of steel face and provide standard ACI 90-degree hook unless detailed otherwise.

11. Welding: AWS D1.4, Current Edition and Applicable Code Section 1903A.4.
   a. Acceptable Reinforcing Steel for Welding: ASTM A706. If welding of reinforcing steel other than A706 is desired, submit proposed procedure, indicating conformance to Applicable Code and requirements of Governing Code Authority, to Architect (Structural Engineer) for acceptance and to Governing Code Authority for approval prior to execution.
   b. Welder Certification: Governing Code Authority.
   c. Welding electrodes: E80XX (80 ksi)

12. Bending: Bend cold unless otherwise accepted by Architect (Structural Engineer). Do not field-bend reinforcing steel bars embedded in concrete unless otherwise accepted in writing by Architect (Structural Engineer).

13. Reinforcing Steel Allowance: In addition to reinforcing steel indicated in Contract Documents, allow for an additional 5 tons of reinforcing steel to be constructed under direction of Architect (Structural Engineer) during construction. Direction will be given during multiple occasions. Reinforcing steel under this allowance will be of any size, shape and grade. Quantity of pieces and location in Project will vary. Include in this allowance fabrication and erection and necessary construction services such as shop drawing preparation, and access for inspection. Submit expenditures in writing for any part of this allowance to Architect (Structural Engineer) prior to fabrication and erection.

F. PROPRIETARY ANCHORAGES and FASTENERS

1. Anchorages:
   a. Drill and Epoxy Anchors: Hilti RE500 SD adhesive system using threaded steel rods conforming to ASTM F1554, grade 55, or reinforcing steel conforming to ASTM A615, grade 60, or ASTM A706, grade 60, complying with ICC-ES Evaluation Report No. ESR-2322. Installers to be certified by manufacturer. Substituting drill and epoxy anchors for cast-in-place reinforcing embedments will not be accepted.
   b. Mechanical Anchors:
   i. To Concrete: Hilti Kwik Bolt TZ carbon steel expansion anchors complying with ICC-ES Evaluation Report No. 1917.
   ii. To Masonry: Hilti Kwik Bolt III carbon steel expansion anchors complying with ICC-ES Evaluation Report No. 1385
   c. Welded Shear Studs: Nelson 3SL flux filled, headed stud anchors, 60,000 psi minimum ultimate tensile strength, automatically end welded in field conforming to ASTM A108 and complying with ICC-ES Evaluation Report No. 2614.
   d. Welded Deformed Anchors: Nelson D2L, cold rolled, deformed steel reinforcing bars conforming to ASTM A496 and complying with ICC-ES Evaluation Report No. 5217.

2. Fasteners:
   a. Powder Actuated Fasteners: Hilti Low-velocity Powder Actuated Drive, 0.157" diameter (X-U), complying with ICC ES Report No. 2269. Provide appropriate washer between fastener head and light gauge metal or wood surface. (All shot pins shall be of this kind)
   b. Self-Drilling Metal Screws (Indicated "Screws" on Drawings): Hilti Self Drilling screws complying with ICC ES Evaluation Report ER-2196.
   c. Masonry screws: Hilti Hus-H complying with ICC ES evaluation report no. ESR-2369

3. Installation: See manufacturer's written instructions, referenced ICC-ES evaluation report.
   a. Drilling Holes in Existing Concrete or Masonry for Anchorages: Use non-pneumatic, rotary hammer tools with ANSI compliant non-rebar cutting drill bits to drill holes of proper tolerances. Locate existing rebar including prestressing and post-tensioning tendons using non-hazardous, non-destructive methods with accurate location tolerances (plus or minus 1/4-inch) prior to drilling holes to avoid cutting or damaging. Holes shall be thoroughly cleaned per manufacturer's written recommendations prior to installation of anchorages.
   b. Deleterious Materials: Keep anchorages, including holes for drill and epoxy anchors and mechanical anchors, free of dust, grease, and other materials that impair bond.

4. Testing for Drill and Epoxy Anchors and Mechanical Anchors:
   a. Special Inspection: Special Inspector will perform Continuous Special Inspection during installation.
   b. Testing Setup: Testing Laboratory will perform tests using calibrated hydraulic hole jacks or dual jacks operating against suitable pulling fixture. Place jacks and fixture so they do not apply restraint to or confine concrete adjacent to hole. Test equipment, method and layout are subject to Architect (Structural Engineer's) acceptance.
   c. Qualification Testing: Required for Architect's (Structural Engineer's) acceptance prior to commencement of actual Work.
   i. Prepare and set 3 specimens for each size and type of drill and epoxy anchor and mechnical anchor in each kind of concrete under conditions representative of proposed use.
   ii. Test anchors to tension and torque values tabled below.
   iii. No loosening or movement of anchor nor cracking or spalling of concrete shall be observed.
   d. Proof Testing: Required throughout Work as anchors are set. Testing shall be representative of all anchors placed.
   i. Test 100% of installed anchors.
   ii. Test anchors to tension and torque values tabled below.
   iii. No loosening or movement of anchor nor cracking or spalling of concrete shall be observed.
   e. Drill and Epoxy Anchor Testing:
   i. Tension Test Values:

Anchor Dia. (in.) or Bar Size	Anchor Minimum Embedment (in.)	4000 psi Tension (lbs) *
3/8	3 1/2	3264
#4	4	6320
#5	5	8336
#6	7	14592
#7	7 1/2	13712

   * Normal weight concrete

   f. Mechanical Anchor Testing:
   i. Tension and Torque Test Values:

Anchor Dia. (in.)	Anchor Min. Embed (in.)	3000 psi Tension *	4000 psi Tension *	Setting Torque (ft-lbs)
1/4	1 1/8	541	638	4
1/4	2	1070	1192	4
1/4	3	1142	1226	4
3/8	1 5/8	1354	1621	20
3/8	2 1/2	2278	2670	20
3/8	3 1/2	2496	2670	20
1/2	2 1/4	2054	2430	40
1/2	3 1/2	3277	3658	40
1/2	4 3/4	3531	3862	40
5/8	2 3/4	3037	3246	85
5/8	4	4488	5026	85
5/8	51/2	5539	6154	85
3/4	3 1/4	3568	4016	150
3/4	4 3/4	6330	7848	150
3/4	6 1/2	8590	10504	150
1	4 1/2	5840	7000	200
1	6	8496	10600	325
1	9	11280	12888	325

   * Normal weight concrete

G. CAST-IN-PLACE CONCRETE

1. Applicable Standards: ACI 318 and ACI A301 except as amended in Applicable Code Chapter 19A and as modified by supplemental requirements herein.

2. Portland Cement: ASTM C150, type II / V.

3. Aggregates:
   a. Normal Weight Concrete Aggregate: ASTM C33 for aggregates of natural sand and rock. Maximum aggregate size is 1-1/2 inches at foundations and slabs on grade and 1 inch elsewhere.
   b. Light Weight Aggregate for Structural Concrete: ASTM C330, expanded shale light weight aggregate of pea gravel size.

4. Minimum 28-Day Concrete Compressive Strengths and Types:

Location in Structure	Compressive Strength and Type of Concrete	Max. W/C Ratio
Concrete Unless Otherwise Indicated on Structural Drawings	4000 psi normal weight (145 pcf)	0.45
Footings and Grade Beams	4000 psi normal weight (145 pcf)	0.45
Concrete Slabs on Grade	3000 psi normal weight (145 pcf)	0.45

5. All concrete above grade, including slab on grade, elevated slab, deck fill, wall, column, topping slab, stair landing & tread, column cover and retaining walls shall have 1.6 pounds of 1 1/2" fiber ultranet per cubic yard of concrete.

6. Lean Concrete: Where specifically indicated, containing 2 sacks of cement per cubic yard of concrete.

7. Non-shrink Grout: ASTM C109, cementitious, non-metallic attaining a compressive strength of 6000 psi.

8. Concrete Mix Design Submittal: Prior to ordering concrete, submit for each compressive strength and type of concrete required designed, signed, and sealed by a registered Civil Engineer in State of California to Architect (Structural Engineer), Special Inspector and to Governing Code Authority complying with Applicable Code, Chapter 19A.

9. Construction Joint Submittal: Submit to Architect (Structural Engineer) at least 14 days prior to placing concrete indicating locations of construction joints and extent of pours. Place joints at locations to minimize effects of shrinkage as well as being placed at points which least impair strength of structure. Provide dowels as directed.

10. Embedments and Penetrations in Concrete: No penetration through structural concrete is permitted unless specifically acceptance in writing by Architect (Structural Engineer).
   a. Pipes, Sleeves, Conduits, and Ducts: Not permitted embedded or penetrating concrete spread footings, columns, walls or concrete cast over metal decking.
   b. Conduits Embedded in Structural Concrete Slabs: Not permitted unless limited to two layers of 1 inch outside diameter conduits and smaller spaced at least 3 inches center to center and within middle third of slab thickness. No conduit embedded in concrete cast over metal decking is permitted.

11. Chamfered Corners: Provide 3/4-inch chamfer at exposed corners of columns, beams and walls except where structural walls are laid flush with column or beam faces, unless detailed otherwise.

12. Construction Joints: Roughen surface to 1/4-inch amplitude. Clean, remove laitance, thoroughly wet and remove standing water before placing new concrete.

13. Curing: Maintain concrete above 50 degrees Fahrenheit and in a moist condition for a minimum of 7 days after placement unless otherwise accepted by Architect (Structural Engineer).

H. MASONRY

1. Specified Compressive Strength of Masonry (f'm): 1800 psi typical unless noted otherwise.

2. Verifying Specified Compressive Strength of Masonry (f'm): Use masonry prism testing method unless otherwise acceptable to Architect (Structural Engineer). Full allowable stresses are used in design. Submit masonry prism data for each type and compressive strength of masonry required, with a professional engineer's signature and state of California seal, to Architect (Structural Engineer). Compliance with minimum required compressive strength shall be based on Applicable Code Section 2105A.2.

3. Concrete Block: ASTM C90, medium weight and Applicable Code Table 2105A-1 attaining a minimum compressive strength as required to meet specified compressive strength of masonry (f'm).

4. Face Brick: ASTM C216.

5. Portland Cement for Mortar and Grout: ASTM C150, Type V. Use of masonry cement or plastic cement is not permitted.

6. Aggregates for Mortar and Grout:
   a. Aggregates for Mortar: ASTM C144.
   b. Aggregates for Grout: C404, coarse type.

7. Mortar: ASTM C270, Type S. Mix in proportions according to Applicable Cod per Table 2105A2.2.1.2, Type S, 2800 PSI min.

8. Grout: ASTM C476, coarse type, attaining a minimum compressive strength as required to meet specified compressive strength of masonry (f'm). However, in no case shall grout compressive strength be less than 2500 psi at 28 days.

9. Reinforcing Steel: Reinforcing steel section of general notes unless indicated otherwise.

10. Composite Masonry Wall Penetration Submittal: Submit for each wall indicating size and location of each wall penetration and opening as necessary by affected trades. Submit together with appropriate reinforcing steel shop drawings. Submit written statement from Special Inspector that no additional penetrations or openings were added to those shown in penetration submittal.

11. Reinforcing Steel Splices: Lap reinforcing steel at splices a minimum of 48 bar diameters, except dowels in footings at base of walls shall splice a minimum of 72 bar diameters, unless noted otherwise. Where minimum clear distance between bars at adjacent splices is 3 inches or less, increase lap length 30 percent unless splices are staggered at least 24 bar diameters.

12. Dowels for Walls, Columns, Pilasters, and Piers: Match size and spacing of vertical reinforcing steel, unless noted otherwise. Set dowels to align with cells containing reinforcing steel.

13. Minimum Reinforcing Steel Clearances:
   a. Minimum Clearances Between Reinforcing and Outside Face of Masonry: 2 inches except in no case shall clearance be less than 2-1/2 bar diameters
   b. Minimum Clearance Between Reinforcing and Inside Face of Grout Cell: 1/2 inch or 1 Bar diameter, whichever larger
   c. Minimum Clearance Distances Between Parallel Reinforcing: 1 inch or nominal bar diameter, whichever is less. Increase to 1-1/2 inches or 1-1/2 times nominal bar diameter, whichever is less, at columns, pilasters, and piers only.

14. Placement: Set courses in running bond pattern unless indicated otherwise. Set cells in vertical alignment. Provide flush mortar joints at surfaces to receive waterproofing or damp-proofing.

15. Grouting: Grout solid all cells. Mechanically vibrate grout in cells.
   a. Grout Height Limits: Applicable Code Section 2104A.5.1.2.3 High lift grout must be approved by DSA. See IR 21-2
   b. Horizontal Construction Joints: Hold grout 1 1/2 inches below top of masonry unit if work is stopped one hour or longer.
   b. Grout Cover Around Reinforcing Steel, Anchor Bolts and Inserts Penetrating Masonry Shell: 1 inch minimum.

16. Horizontal Bars Terminating at Wall Ends and Opening Jambs: Extend bars to within 2 inches of end of wall and provide standard ACI 90-degree hook unless detailed otherwise.

17. Provide 1" min. grout around bolts and other embedments.

I. STRUCTURAL STEEL

1. Detailing, Fabrication, and Erection: AISC 360-05 "Specification for Structural Steel Buildings "AISC" & 341-05 Seismic Provisions for Structural Steel Buildings" except as amended in Applicable Code Chapter 22A and as modified by supplemental requirements herein.

2. Structural Steel: Provide readily identifiable structural steel in compliance with Applicable Code Section 2203A. Furnish structural steel complying with the following ASTM standard specifications, unless noted otherwise:

a.	Structural Steel Unless Indicated Otherwise:	ASTM A992, Grade 50
b.	Angles and Channels:	ASTM A36
c.	Plates:	ASTM A572, Grade 50
d.	Pipes:	ASTM A53, Grade B (35 ksi)
e.	Tubes:	ASTM A500, Grade B (46 ksi)
f.	Anchor Bolts	ASTM F1554, grade 55

3. Holes for Bolted Connections and Anchor Bolts: AISC "standard" holes limited to 1/16-inch larger in diameter than nominal bolt diameter, unless noted otherwise.

4. High Strength Bolts, Nuts and Washers: AISC "Specification for Structural Joints Using ASTM A325 or A490 Bolts".
   a. Hardened Washers: ASTM F436, under nuts except where plate washers are used. Provide beveled washers where joint face slope is greater than 1:20.
   b. Tightening: Snug tight for all high strength bolts except tighten A325-SC and A490-SC bolts to at least the minimum proper tension according to AISC Specification.
   c. Anchor Bolts: ASTM F1554, grade 55, unless noted otherwise.
   d. Washers: ASTM A36, under nuts, 3-1/2-inch square washers of thickness 0.375 times nominal diameter of anchor bolts. Weld washers to base plate with 5/16-inch fillet weld all around.
   e. Nuts: ASTM A 563 Grade DH Hexagonal Nuts, Headed Type.

5. Welding:
   a. Applicable Welding Standard: Applicable Code and latest adopted edition of AWS D1.1 including, but not limited to, the following:

      i. Section 6.4 for qualified welders.
      ii. Section 4.2 and AISC 360-05 Specification Section J2-7 for jumbo sections for preheat and interpass temperature requirements.
      iii. Section 4, Parts 8c and 8d technique for arc welding.
      iv. Section 6 and Section 8, Part D, for inspection.

   b. Pre-qualified and Non Pre-qualified Welds: Welds shall be pre-qualified in compliance with Applicable Welding Standard. Where non pre-qualified welds are to be used, qualify by test and procedure qualification test record complying with Applicable Welding Standard.
   c. Work performed by Welders and Inspectors: Adhere to approved Welding Procedure Specification (WPS). Each welder and inspector shall retain a copy of WPS.
   d. Pre-construction Meeting: Conduct to include Architect (Structural Engineer), fabricator, erector, Contractor and inspectors to discuss Welding Procedure Specification (WPS).
   e. Welding Procedure Specification (WPS): Fabricator/erector to develop WPS in compliance with Applicable Welding Standard. Submit to Architect (Structural Engineer) for acceptance and Governing Code Authority for approval prior to fabrication. WPS submittal to include the following:
   i. Welding manufacturers' specifications.
   ii. Information required by Applicable Code, Contract Documents and any other information necessary to produce welds that are in compliance with Applicable Welding Standard.
   iii. Detailed sequence of weld sketches addressing effects of welding heat for welds at joints and within seismic frame assemblies as a whole. Plan sequence of erection and welding to minimize locked in stresses and distortion considering effects of welding heat. Procedures submitted shall result in completed connections which comply with design intent of structural drawings. No deviation from structural drawings is permitted unless otherwise accepted by Architect (Structural Engineer) and approved by Governing Code Authority.
   iv. Welding parameters recommended by electrode manufacturer.
   v. List of applicable base metal types and thicknesses.
   vi. Welding joint sketches including joint type, weld type, joint geometry, and applicable dimensions. Individual weld passes shall be identified in sketches and numbered to identify the sequence of their deposition. Sketches shall identify the maximum layer thicknesses and bead widths. In no case shall layer thickness exceed 1/4-inch, nor shall maximum bead width exceed 5/8-inch.
   vii. Applicable welding process.
   iix. Position of welding.
   ix. List of filler metal per Applicable Welding Standard and electrode specification and classification. Include details showing shielding material to be used.
   x. Minimum preheat requirements, interpass temperatures and post weld heat treatment. Minimum specified preheat shall meet requirements of AWS D1.1, table 4.3, and AISC 360-05 Section J2-7 requirements for jumbo sections.
   xi. List of applicable electrical characteristics for process employed. Clearly indicate specific values required for each welding pass. These electrical characteristics shall include at a minimum the following:

      1. Electrode diameter.
      2. Type of current and acceptable ranges of current measured in amperage. For wire feed processes, indicate manufacturers' recommended melt-off rate, deposition rate, and wire feed speed.
      3. Voltage (for all processes).
      4. Actual field condition travel speed and manufacture's data for travel speed.
      5. Electrode extension (stick out) for wire feed processes.
      6. Amperage, voltage and electrode extension (as applicable) shall be within filler metal manufacturer's recommendations (compare to AWS D1.1, Section 4.6.2).
      7. Electrode manufacturer's technical information, with identification number listed, and welding parameter recommendations.
      8. Welding Electrodes (Filler Metal): E70XX (70 ksi), unless indicated otherwise. Provide filler metal with Charpy V-notch toughness of 20 ft/lbs average at -20 degrees Fahrenheit at complete penetration groove welds. Use low-hydrogen electrodes only.
      9. Welding Toughness Requirements: Certify conformance to Charpy V-notch toughness requirements with tests by an independent testing laboratory for each AWS classification, manufacturer and trade name. Testing procedures shall be in accordance to Applicable Welding Standard and AISC 341-05 Seismic Provisions, Appendix X.
      10. Approved Fabricators: Perform shop welds by fabricators approved by Governing Code Authority.
      11. Welder Qualification: Welders, regardless if Work is performed in shop or in field, shall be qualified for the Work they will be doing and shall have certifications current and acceptable to Governing Code Authority.

I. STRUCTURAL STEEL - CONTINUED

   f. Welds Exposed to View:
      i. Faces of fillet welds exposed to view shall have as-welded surfaces that are reasonably smooth and uniform. No finishing or grinding shall be required, except where clearances or fit of other items may so necessitate.
      ii. Partial and full penetration welds exposed to view shall be ground smooth and flush with finish surface of steel. Remove backup bars and weld tabs. Fill holes with weld metal or body solder and smooth by grinding or filing.
   g. Groove Preparation: Clean groove preparation thermal cuts by grinding.
   h. Termination of Welds: Terminate at joint ends in a manner that ensures sound welds. Use extension bars and run-off tabs whenever necessary.
   i. Hand-held Calibrated Amp and Volt Meters: To be used by fabricator, erector and inspectors to assure proper amperage and voltage of welding process. Measure amperage and voltage at arc. Verify travel speed and electrode stick-out in compliance with electrode manufacturer's recommendations and with approved WPS.
   j. Storage of Electrodes: Adhere to Section 4.5.2 of AWS D1.1.
   k. Weld each flange of moment frame beam to column connections in one continuous process without cooling below pre-heat temperature.
   l. Welding of ASTM A913 Materials: Perform according to requirements of latest edition of AWS standard, structural drawings and specifications, whichever is more stringent.
   m. Minimum Fillet Weld Size: Where minimum fillet weld size, as stipulated by AISC Section J2 and Table J2.4, exceeds fillet weld size indicated on structural drawings, use AISC stipulated size.
   n. Minimum Groove or Butt Weld Size: Provide complete penetration unless indicated otherwise.
   o. Weld Length: Length of welds shown are net effective lengths. Where length of weld is not indicated, provide weld full length of joint.

6. Shop Drawings: Submit To Architect (Structural Engineer) for review and, upon request, to Governing Code Authority. Include sequence of erection procedures from approved WPS:

7. Fabrication:
   a. Moment Connections: Orient flange stiffener plates and cap plates used in moment connections so that rolling direction of plate is parallel with direction of principal stress.
   b. Horizontal Members: Place natural camber up.
   c. Filler Plates: Provide at splices of parts having more than 1/8-inch difference in thickness. Filler plates to match grade of material spliced.

8. Cleaning: After fabrication, clean steel surfaces free of rust, loose mill scale, and oil.

9. Oversized Holes for Anchor Bolts in Base Plates: Where oversized holes occur, provide 3-1/2-inch square plate washers under nuts. Thickness of plate washer shall be 0.375 times diameter of anchor bolt. Weld plate washer to base plate with 5/16-inch fillet weld all sides.

10. Exposure to Soil: Encase structural steel in lean concrete with 4-inches concrete cover where exposed to soil.

11. Structural Steel Allowance: In addition to the steel shown or implied in this document, allow for an additional 5 tons of structural steel to be constructed at the direction of the Structural Engineer during construction. The allowed steel may be of any shape or sizes, including plates, wide flanges, tubes, pipes, channels, angles, and/or any other structural shapes. The number of pieces may vary. The locations of applications may vary. Direction may be given in multiple occasions during construction. The allowance should include all fabrication and construction related services, such as shop drawings, shop preparation, field erection and coordination, bolted connections and field welding. Expenditure of any part of this allowance shall be approved in writing by the Structural Engineer prior to any fabrication and erection.

J. METAL DECKING

1. Metal Decking and Accessories: HSB, N24, and W decks to be by Verco Manufacturing Company, type and gauge as indicated on structural drawings, ASTM A653, Grade 33, G60 coating, unless heavier galvanized coating indicated in specifications, complying with ICC-ES Evaluation Report 1735P.

   Minimum vertical load carrying and diaphragm shear capacities corresponding to weld patterns shown on structural drawings are as indicated in ICC-ES evaluation reports. Run deck units continuous over three or more spans where possible.

2. Welded Shear Studs: See Proprietary Anchorages and Fasteners section of General Notes.

3. Deck Welding and Installation of Welded Shear Studs: AWS D1.3 using prequalified procedures.
   a. Qualification of Welders: Welders shall be experienced in welding light-gauge steel and using prequalified procedures. Erector shall establish welding procedure for arc spot welding of metal decking to structural steel, and installation of welded shear studs if applicable, for each gauge of decking to be used. Prior to deck erection, each welder shall be qualified using this procedure and witnessed by Special Inspector. See Applicable Code, Chapter 22A, for additional qualification requirements.

4. Shop Drawings: Submit to Architect (Structural Engineer) for review.

5. Limits to Non-Structural Items Suspended From Concrete Filled Metal Decking: Hangers supported by metal decking with structural concrete fill may be installed using ICC-ES approved anchorage systems. Limit hangers to supporting duct work 54 inches x 16 inches maximum, 4-inch diameter pipe maximum, and acoustical ceilings. Locate hangers two flutes apart on same deck span. Support larger duct work and piping by structural beams or columns as shown on mechanical drawings. Add structural steel beams as necessary, and submit design per section B of this sheet.

6. Pre-punched Holes in Metal Decking and Accessories: Metal deck welding and installation of welded shear studs are not permitted through single layer sheets greater than 16 gauge, nor through double layer sheets greater than 18 gauge, nor through sheets with total galvanized coating thickness greater than 1.25 ounces per square foot. Provide pre-punched holes as necessary.

7. Excess Structural Concrete: Concrete filled metal decking and framing will deflect during placement of concrete. These deflections will require placement of concrete in excess of amount based on nominal dimensions in order to bring slab within tolerances of a horizontal plane. Provide excess concrete at no cost to Owner.

K. STRUCTURAL SHEET INDEX

LPA
p. 949. 261.1001 f. 949. 260.1190
w. lpainc.com e. info@lpainc.com
5161 California Avenue, Suite 100
Irvine, California 92617

Sage Hill School
Aquatics Center

20402 Newport Coast Drive
Newport Beach, CA 92657

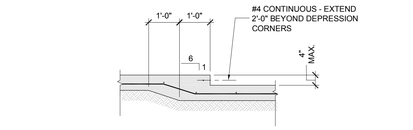
Developed for
Sage Hill School

Submittal	Date	Revision	Date

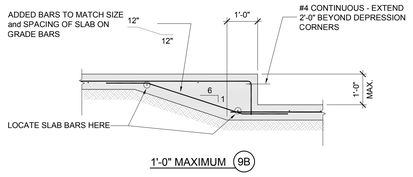
Job. No.	14248.10
Date	
Checked by	
Scale	

GENERAL NOTES

S0.01

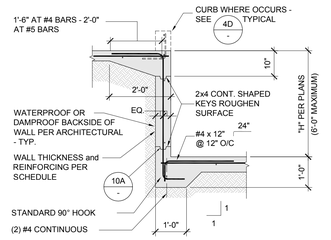


4" MAXIMUM (9C)



1'-0" MAXIMUM (9B)

TYPICAL SECTIONS AT CHANGE IN SLAB ON GRADE ELEVATION (6'-0" MAXIMUM) | 9



WALL SCHEDULE		
MAXIMUM HEIGHT "H"	WALL THK.	WALL REINFORCING EACH WAY
3'-9"	6"	#4 @ 12" O/C
6'-0"	10"	#5 @ 12" O/C

6'-0" MAXIMUM (9A)

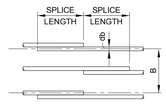


DIAGRAM at STAGGERED SPLICES

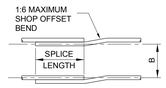
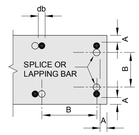


DIAGRAM at NON-STAGGERED SPLICES

NOTES:
1. ALL SPLICES SHALL BE CLASS B SPLICES UNLESS INDICATED OTHERWISE. DEVELOPMENT Ld TO BE USED WHERE SPECIFICALLY INDICATED.
2. SCHEDULE APPLIES TO UNCOATED GRADE 60 BARS IN NORMAL WEIGHT CONCRETE.
3. TOP BARS (INDICATED "T" IN SCHEDULE) ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BARS.
4. BOTTOM BARS (INDICATED "B" IN SCHEDULE) ARE ALL VERTICAL BARS AND HORIZONTAL BARS WITH LESS THAN 12" OF CONCRETE CAST BELOW HORIZONTAL BARS.
5. FOR LIGHTWEIGHT CONCRETE MULTIPLY LENGTHS IN SCHEDULE BY 1.3.
6. FOR FOUR BAR BUNDLES WHERE 2 BARS LAP WITH 2 OTHER BARS MULTIPLY LENGTHS IN SCHEDULE BY 1.33 (INDIVIDUAL BARS WITHIN A BUNDLE SHALL NOT OVERLAP).



BAR SPACING DIAGRAM

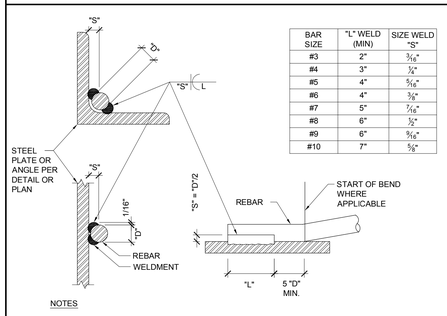
LEGEND

A	CLEAR EDGE DISTANCE
B	CENTER TO CENTER SPACING OF SPLICED OR LAPPED BARS (SEE GENERAL NOTES FOR MINIMUM CLEAR SPACING)
db	BAR DIAMETER
Ld	DEVELOPMENT LENGTH

SCHEDULE FOR DETERMINING CATEGORY	
I	II
1. A>db and B>2db and TIES THRUOUT Ld 2. A>db and B>3db	OTHER CASES

"CLASS B" TENSION LAP SPLICE SCHEDULE																			
CATEGORY	NORMAL WEIGHT CONCRETE f'c PSI	SPLICE OR DEVELOPMENT LENGTH (INCHES)																	
		0.375		0.500		0.625		0.750		0.875		1.000		1.125		1.250		1.375	
		#3		#4		#5		#6		#7		#8		#9		#10		#11	
		T	B	T	B	T	B	T	B	T	B	T	B	T	B	T	B	T	B
I	3000	28	23	38	29	47	37	56	43	82	63	94	72	106	81	117	90	128	99
	4000	25	20	33	25	41	32	49	38	71	55	81	63	91	71	102	78	111	86
II	3000	43	34	58	43	71	55	85	65	124	94	141	108	159	121	176	136	192	149
	4000	38	30	50	38	62	47	73	58	106	82	121	94	137	106	153	117	167	129
DEVELOPMENT "Ld" SCHEDULE																			
I	3000	22	17	29	22	36	28	43	33	63	48	72	55	81	62	90	69	98	76
	4000	19	15	25	19	31	24	37	29	54	42	62	48	70	54	78	60	85	66
II	3000	33	26	44	33	54	42	65	50	95	72	108	83	122	93	135	104	147	114
	4000	29	23	38	29	47	36	56	44	81	63	93	72	105	81	117	90	128	99

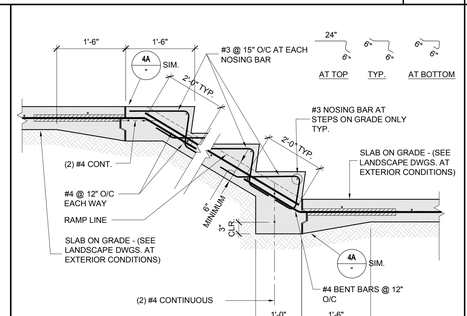
TYPICAL REBAR TENSION SPLICE and BAR DEVELOPMENT SCHEDULE | 3



BAR SIZE	"L" WELD (MIN)	SIZE WELD "S"
#3	2"	3/16"
#4	3"	1/4"
#5	4"	5/16"
#6	4"	3/8"
#7	5"	7/16"
#8	6"	1/2"
#9	6"	9/16"
#10	7"	5/8"

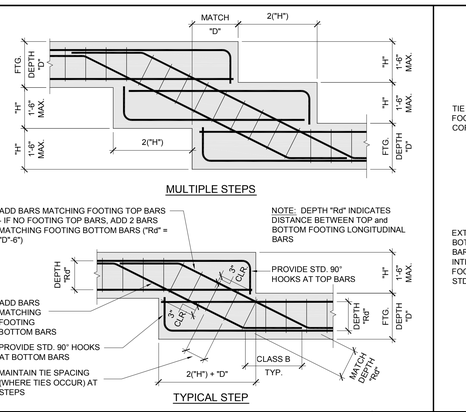
NOTES
1. ALL REINFORCING WELDING SHALL BE IN ACCORDANCE WITH A.W.S. CODE D1.4 CURRENT EDITION.
2. WELDED REINFORCING SHALL CONFORM TO ASTM A706.
3. ASTM A615 REINFORCING STEEL MAY BE WELDED PROVIDED A CHEMICAL ANALYSIS IS PERFORMED TO DETERMINE CARBON EQUIVALENCY, TO ESTABLISH MINIMUM PREHEATING REQUIREMENTS. HEAT STICKS SHALL BE USED 6" FROM WELD TO VERIFY PREHEAT TEMPERATURES. CHEMICAL ANALYSIS REPORTS SHALL BE PROVIDED TO ARCHITECT (STRUCTURAL ENGINEER) PRIOR TO WELDING.

TYPICAL REBAR WELDING | 12



NOTES:
1. ADD #4 x 12" 36" DOWELS @ 12" O/C WHERE SIDE WALLS OCCUR AT STAIRS OR RAMP U.N.O.
2. SEE ARCHITECTURAL OR LANDSCAPE FOR TREAD and RISER GEOMETRY and FINISHING

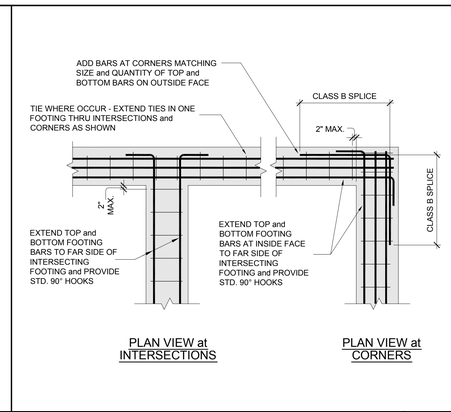
TYPICAL SECTION AT CONCRETE STEPS OR RAMP ON GRADE | 8



MULTIPLE STEPS

TYPICAL STEP

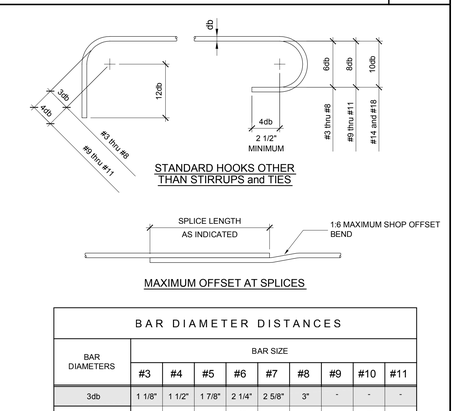
TYP. STEPPED FOOTING DETAIL | 6



PLAN VIEW at INTERSECTIONS

PLAN VIEW at CORNERS

TYPICAL FOOTING REINFORCING AT CORNERS and INTERSECTIONS | 5

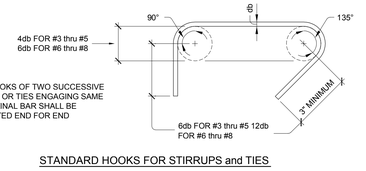


STANDARD HOOKS OTHER THAN STIRRUPS and TIES

MAXIMUM OFFSET AT SPLICES

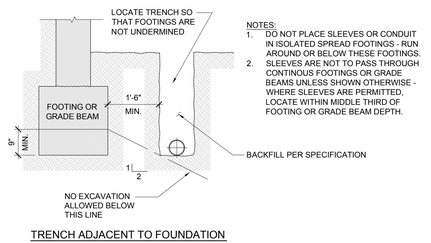
BAR DIAMETER DISTANCES									
BAR DIAMETERS	BAR SIZE								
	#3	#4	#5	#6	#7	#8	#9	#10	#11
3db	1 1/8"	1 1/2"	1 7/8"	2 1/4"	2 5/8"	3"	-	-	-
4db	1 1/2"*	2"*	2 1/2"	3"	3 1/2"	4"	4 1/2"	5"	5 1/2"
6db	2 1/4"*	3"	3 3/4"	4 1/2"	5 1/4"	6"	-	-	-
8db	-	-	-	-	-	-	9"	10"	11"
12db	4 1/2"	6"	7 1/2"	9"	10 1/2"	12"	13 1/2"	15"	16 1/2"

* INDICATES MINIMUM DIMENSIONS MAY GOVERN

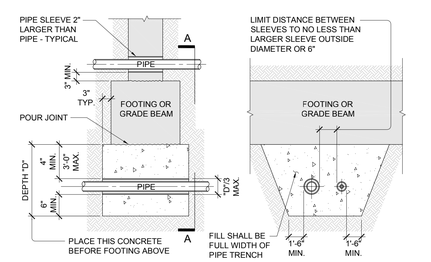


STANDARD HOOKS FOR STIRRUPS and TIES

TYPICAL REINFORCING STEEL HOOKS, BENDS and OFFSETS AT SPLICES | 2



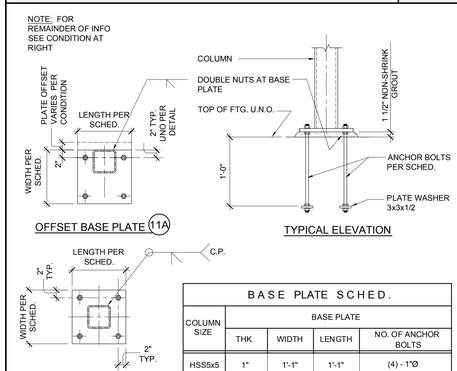
TRENCH ADJACENT to FOUNDATION



PIPES THRU OR BELOW FOUNDATION

ELEVATION A-A

TYP. PIPES thru or TRENCHES ADJACENT to FOUNDATIONS | NO SCALE TYPICAL U.N.O. | 1



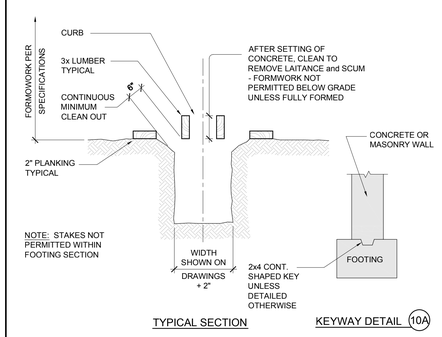
OFFSET BASE PLATE (11A)

TYPICAL ELEVATION

TYP. PLAN VIEW at HSS OR PIPE COLUMNS U.N.O.

BASE PLATE SCHED.				
COLUMN SIZE	BASE PLATE			
	THK.	WIDTH	LENGTH	NO. OF ANCHOR BOLTS
HSS5x5	1"	1'-1"	1'-1"	(4) - 1"Ø

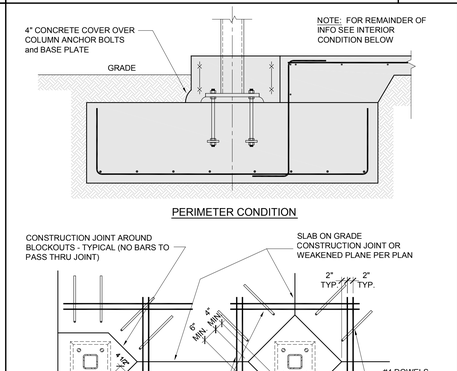
COLUMN BASE PLATE and SCHEDULE | 11



TYPICAL SECTION

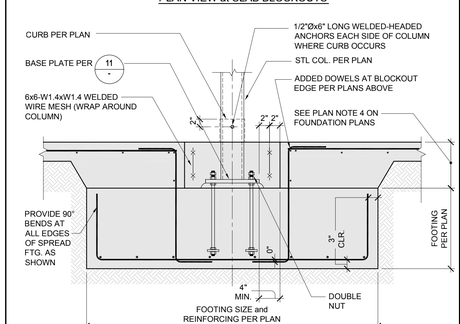
KEYWAY DETAIL (10A)

TYPICAL MANDATORY FOUNDATION FORWORK (UNLESS FULLY FORMED) | 10



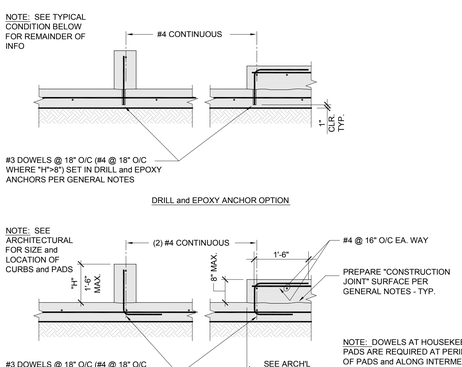
PERIMETER CONDITION

PLAN VIEW at SLAB BLOCKOUTS



INTERIOR CONDITION

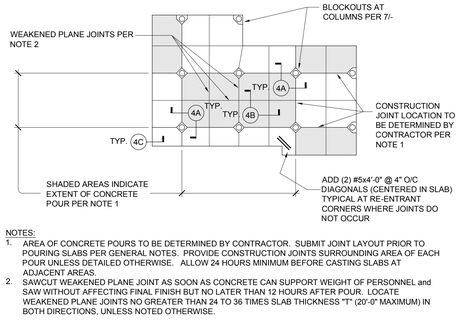
TYPICAL SPREAD FOOTING at STEEL COLUMN | 7



DRILL and EPOXY ANCHOR OPTION

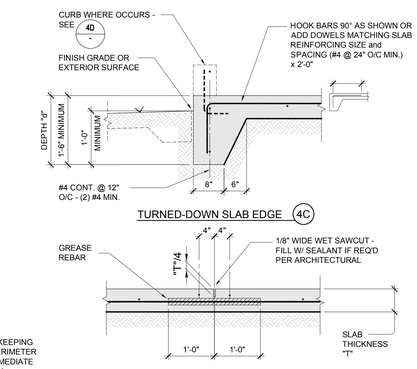
TYPICAL CONDITION

CONDITION AT CURB or HOUSEKEEPING PAD (4D)



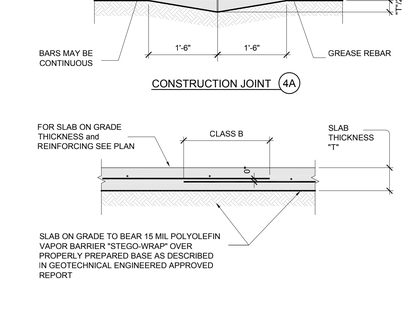
NOTES:
1. AREA OF CONCRETE POURS TO BE DETERMINED BY CONTRACTOR. SUBMIT JOINT LAYOUT PRIOR TO POURING SLABS PER GENERAL NOTES. PROVIDE CONSTRUCTION JOINTS SURROUNDING AREA OF EACH POUR UNLESS DETAILED OTHERWISE. ALLOW 24 HOURS MINIMUM BEFORE CASTING SLABS AT ADJACENT AREAS.
2. SAWCUT WEAKENED PLANE JOINT AS SOON AS CONCRETE CAN SUPPORT WEIGHT OF PERSONNEL and SAW WITHOUT AFFECTING FINAL FINISH BUT NO LATER THAN 12 HOURS AFTER POUR. LOCATE WEAKENED PLANE JOINTS NO GREATER THAN 24 TO 36 TIMES SLAB THICKNESS "T" (20'-0" MAXIMUM) IN BOTH DIRECTIONS, UNLESS NOTED OTHERWISE.

SLAB ON GRADE JOINT DIAGRAM (PLAN VIEW)



TURNED-DOWN SLAB EDGE (4C)

WEAKENED PLANE JOINT (4B)



CONSTRUCTION JOINT (4A)

TYPICAL SECTION AT SLAB ON GRADE

TYPICAL SLAB ON GRADE DETAILS | 4

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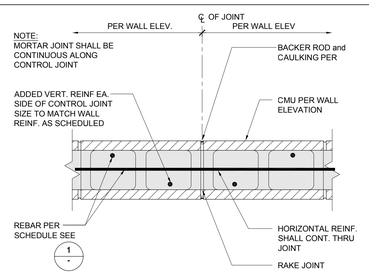
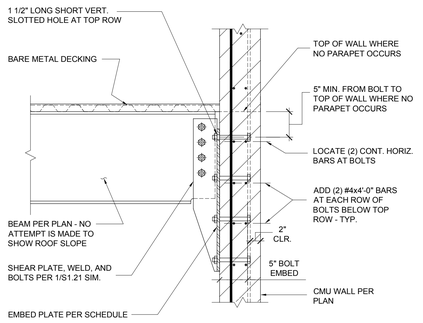
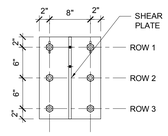
TYP. FOUNDATION and SLAB-ON-GRADE DETAILS

S0.11



CMU CONTROL JOINT | 10



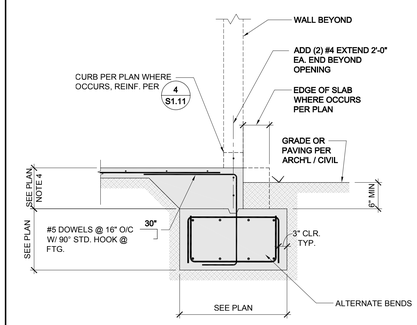


EMBED PLATE ELEV.

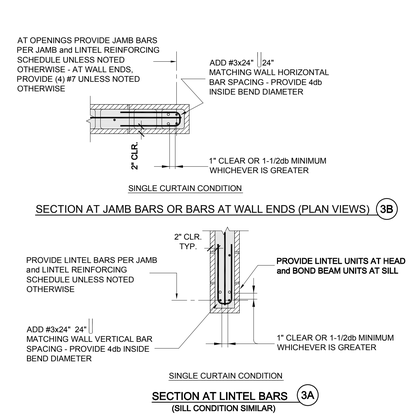
EMBED PLATE SCHEDULE				
BEAM SIZE	PLATE SIZE THK.	ANCHOR BOLTS ROWS	ANCHOR BOLTS NO. OF BOLTS PER ROW	REBAR
W12x,W14x	1/2	3	2	-

NOTE:
1. ANCHOR BOLTS TO BE 3/4"Ø A307 HEADED BOLTS.

TYPICAL BEAM CONNECTION to CMU WALL AT BARE METAL DECK | 6



TYPICAL OPENING AT PERIMETER CONTINUOUS FOOTING | 5

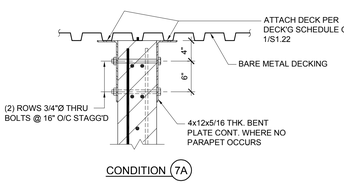


TYPICAL MASONRY ENDS CONSTRUCTION AT OPENINGS and WALL | 3

CONDUIT PENETRATIONS IN MASONRY | 8

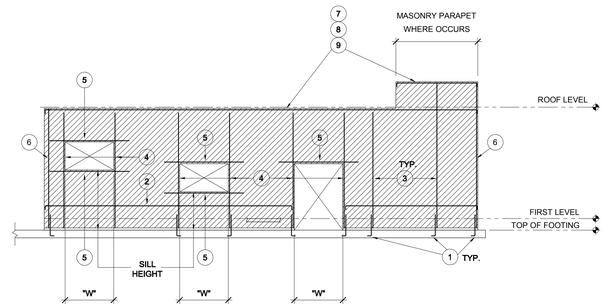
TYPICAL PERIMETER MASONRY WALL AT CONTINUOUS FOOTING | 4

TYP. MASONRY CONSTRUCTION AT CORNERS and INTERSECTIONS (PLAN VIEWS) | 2



KEY NOTES:

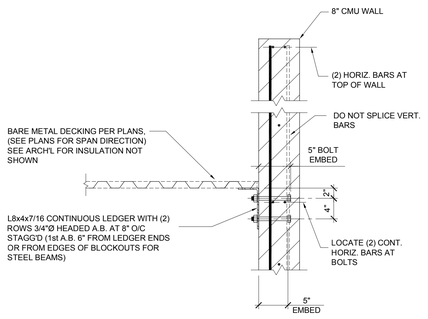
1. PROVIDE DOWELS AT BOTTOM OF WALL MATCHING SIZE and QUANTITY OF VERTICAL OR JAMB BARS INTO FOUNDATION W/ STD. 90° HOOKS AT BOTTOM OF FOOTING - LAP W/ VERTICAL OR JAMB BARS 72 BAR DIAMETERS (db)
2. TYPICAL HORIZONTAL WALL BARS PER PLANS - PLACE PER IY OR IZ/-. PROVIDE STD. 90° HOOKS AT WALL ENDS and OPENINGS - LAP HORIZONTAL BARS 48 db AT WELL STAGGERED LOCATIONS - NO ATTEMPT IS MADE TO LOCATE HORIZONTAL BAR SPLICE LOCATIONS
3. TYPICAL VERTICAL WALL BARS PER PLANS - PLACE PER IY OR IZ/-. ADD DOWELS AT CONCRETE SLAB ON GRADE PER DETAILS INDICATED
4. TYPICAL JAMB BARS - SEE JAMB and LINTEL REINFORCING SCHEDULE UNLESS SPECIFIC BOUNDARY ELEMENT REINFORCING SHOWN ON PLANS - EXTEND JAMB BARS 72 db ABOVE and BELOW OPENINGS UNLESS SHOWN OTHERWISE (ADD BARS WITH STD. 90° HOOK AT TOP OF WALL WHERE WALLS TERMINATE ABOVE OPENING) - FOR TYPICAL SECTION AT JAMB BARS SEE 3B/- UNLESS NOTED OTHERWISE
5. TYPICAL LINTEL BARS - SEE JAMB and LINTEL REINFORCING SCHEDULE UNLESS OTHERWISE INDICATED ON PLANS - SPLICES NOT PERMITTED - EXTEND LINTEL BARS 48 db BEYOND OPENINGS UNLESS SHOWN OTHERWISE (PROVIDE STD. 90° HOOK AT WALL ENDS IF EXTENSION LENGTH BEYOND OPENING CANNOT BE ATTAINED) - FOR TYPICAL SECTION AT LINTEL BARS INCLUDING CONFINING TIES SEE 3A/- UNLESS NOTED OTHERWISE
6. PROVIDE (2) #7 VERTICAL BARS AT WALL ENDS EXCEPT USE (2) #5 AT 8" NON-BEARING WALLS - FOR TYPICAL SECTION AT VERTICAL BARS AT WALL ENDS SEE 3B/- UNLESS NOTED OTHERWISE- PROVIDE ADDED BARS AT CORNERS and INTERSECTIONS PER 2/- U.N.O
7. IF WALL HEIGHT IS NON-MODULAR OR TOP OF WALL SLOPES, EITHER SAW TOP COURSE OR (IF NOT EXPOSED) FORM TOP COURSE and GROUT SOLIDLY
8. AT TOP OF WALL, PROVIDE (2) HORIZONTAL WALL BARS W/ STD. 90° HOOKS AT WALL ENDS



CONDITION 1C
WINDOW OPENING (SILL HEIGHT > 6'-0")
OR OPENING AT MISCELLANEOUS UTILITY PENETRATION

CONDITION 1B
WINDOW OPENING (SILL HEIGHT ≤ 6'-0")

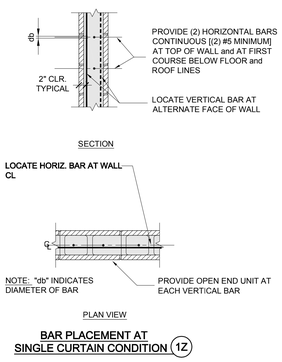
CONDITION 1A
WALL OR DOOR OPENING AT SLAB ON GRADE LEVEL



PERIMETER CMU WALL at BARE METAL DECKING | 7

JAMB and LINTEL REINFORCING SCHEDULE (UNLESS NOTED OTHERWISE ON PLANS OR WALL ELEVATIONS)		
MAXIMUM OPENING WIDTH "W"	REINFORCING	
	JAMB REINFORCING (VERTICAL)	LINTEL REINFORCING (HORIZONTAL)
2'-0"	(2) #5	(2) #5
4'-6"	(2) #7	(2) #7
6'-0"	(2) #7	(2) #7
8'-0"	(2) #7	(2) #7
10'-0"	(4) #7	(4) #7

WALL REINFORCING SCHEDULE (UNLESS NOTED OTHERWISE - SEE PLANS OR WALL ELEVATIONS FOR WALL THICKNESS)			
NOMINAL WALL THICKNESS	REINFORCING		REINFORCING PLACEMENT DETAIL
	VERTICAL REINFORCING	HORIZ. REINFORCING	
8"	SINGLE CURTAIN #5 @ 8" O/C - PLACE AT WALL CENTER LINE	SINGLE CURTAIN #5 @ 16" O/C - ALTERNATE EA SIDE OF VERT BARS	1Z -



BAR PLACEMENT AT SINGLE CURTAIN CONDITION 1Z

TYPICAL MASONRY WALL ELEVATION and REINFORCING SCHEDULES (APPLICABLE TO ALL MASONRY WALLS EXCEPT SITE RETAINING WALLS UNLESS NOTED OTHERWISE) | NO SCALE TYPICAL U.N.O. | 1

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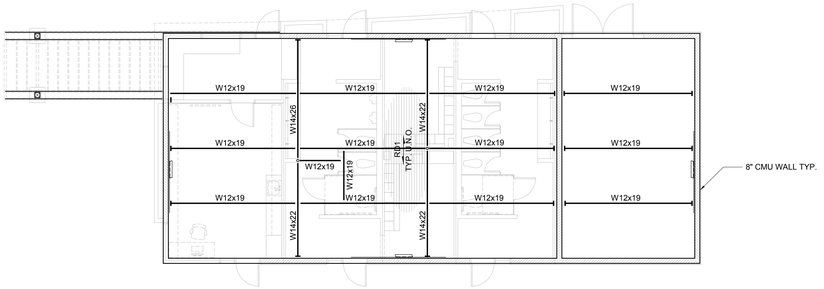
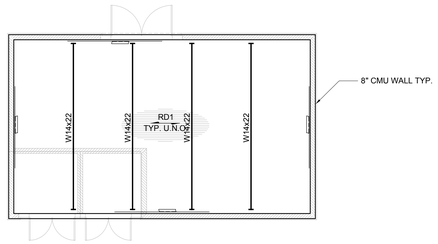
TYP. CMU WALL SCHEDULES and DETAILS

S0.31





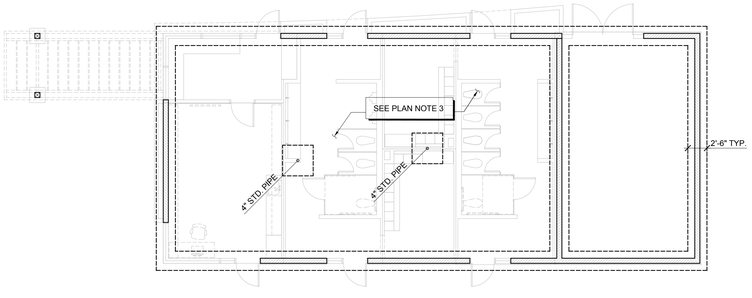
PLAN NOTES

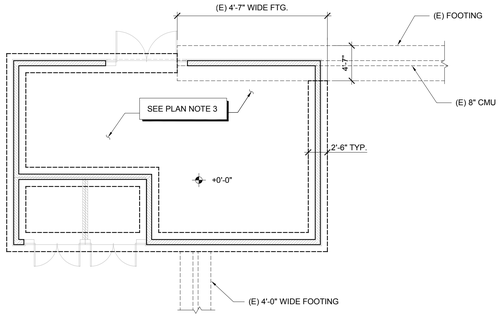
1. FOR GENERAL NOTES and TYPICAL DETAILS SEE S1 SERIES SHEETS.
2. SEE ARCHITECTURAL DRAWINGS FOR TOP OF STRUCTURAL STEEL PARAPET, and SCREENWALL ELEVATIONS; ROOF DEPRESSIONS, SLOPES, CURBS, DRAINS, DECK EDGE LOCATIONS; PARAPET and SCREENWALL OVERALL DIMENSIONS; and LOCATIONS OF OPENINGS NOT INDICATED ON STRUCTURAL DRAWINGS. INTERPOLATE AS NECESSARY TO DETERMINE TOP OF STRUCTURAL STEEL ELEVATIONS AT SLOPED MEMBERS BETWEEN POINTS INDICATED ON ARCHITECTURAL DRAWINGS.
3. CENTER COLUMNS AT GRID INTERSECTIONS UNLESS INDICATED OTHERWISE.
4. FOR OPENINGS IN ROOF UP TO 2'-0" SQUARE SEE 4/S1.22 and FOR OPENINGS UP TO 4'-0" MAXIMUM (PERPENDICULAR TO DECK SPAN) - SEE 5/S1.22.
5. NO PENETRATION THROUGH STRUCTURAL STEEL IS PERMITTED UNLESS SPECIFICALLY SHOWN ON STRUCTURAL DRAWINGS.
6. CONSTRUCT LIGHT GAUGE METAL INTERIOR and EXTERIOR STUD WALLS PER SHEET S1.91 UNLESS SPECIFICALLY DETAILED OTHERWISE.
7. SEE SCHEDULE ON S9 SERIES FOR EQUIPMENT ANCHORAGE DETAILS.
8. REFER TO S1.31 FOR TYPICAL CMU DETAILS.
9. ALL WELDABLE REBARS SHALL BE A706.

LEGEND

- INDICATES FRAME OR NON-FRAME COLUMN BELOW - SEE FOUNDATION PLAN OR FRAME ELEVATIONS FOR SIZE
- WXxXX / <X'> — INDICATES NON-FRAME STEEL BEAM - SEE 1A/S1.21 FOR TYPICAL BEAM TO GIRDER TWO-SIDED CONNECTIONS, 1B/S1.21 FOR TYPICAL BEAM TO GIRDER ONE-SIDED CONNECTIONS 3/S1.21 FOR BEAM TO WIDE FLANGE COLUMN CONNECTIONS.
  INDICATES UPWARD CAMBER (IN INCHES) AT MIDSPAN OF BEAM (IF BEAM CANTILEVERS, HOLD CANTILEVERED PORTION LEVEL) - IF NO CAMBER INDICATED, NO CAMBER REQUIRED
- INDICATES DRAG CONNECTION SYMBOL - SEE DETAIL 3/S1.21
- RDX — INDICATES ROOF CONSTRUCTION MARK - SEE SCHEDULE THIS SHEET AND DETAIL 1/S1.22 - PROVIDE CLOSURES OVER BEAMS AT DECKING CHANGE IN SPAN DIRECTION PER 1B/S1.22
- DENOTES 8" THICK CONCRETE BLOCK SHEAR WALL SOLID GROUTED - FOR REINFORCING SEE 1/S1.31.
- DENOTES 12" THICK CONCRETE BLOCK SHEAR WALL SOLID GROUTED - FOR REINFORCING SEE 1/S1.31.
- DENOTES CONCRETE BLOCK WALL OR LINTEL BELOW
- DENOTES DRAG BEAMS TO WALL CORNER CONNECTION PER 7/S1.32 SIM.

ROOF FRAMING PLAN — 1/8" = 1'-0" — B





PLAN NOTES

1. FOR GENERAL NOTES and TYPICAL DETAILS SEE S1 SERIES SHEETS.
2. SEE ARCHITECTURAL DRAWINGS FOR TOP OF CONCRETE SLAB ON GRADE ELEVATIONS, DEPRESSIONS, SLOPES, OPENINGS, CURBS, DRAINS, TRENCHES, PADS, and CURBS; SLAB EDGE LOCATIONS; WALL OVERALL DIMENSIONS; and LOCATIONS OF OPENINGS NOT INDICATED ON STRUCTURAL DRAWINGS.
3. BUILDING SLAB-ON-GRADE: 6" THICK W/ #5 @18" O/C EACH WAY at CENTER OF SLAB PER 4/S1.11. PROVIDE CONSTRUCTION JOINTS and WEAKENED PLANE JOINTS IN SLAB-ON-GRADE PER DETAIL 4/S1.11.
4. CENTER COLUMNS ON GRID LINE INTERSECTIONS U.N.O. ALIGN CMU WALL FACES WITH GRID LINES U.N.O. CENTER CONTINOUS FOOTINGS ON CMU WALLS U.N.O. CENTER SPREAD FOOTINGS ON COLUMNS U.N.O.
5. IN NO CASE SHALL PIPES, CONDUITS, OR SLEEVES BE EMBEDDED IN SPREAD FOOTINGS OR WITHIN TOP OR BOTTOM THIRD OF CONTINUOUS FOOTING UNLESS SPECIFICALLY DETAILED ON STRUCTURAL DRAWINGS.
6. CONSTRUCT CONTINUOUS FOOTINGS AT CORNERS and INTERSECTIONS PER 5/S1.11. WHERE CONTINUOUS FOOTINGS TERMINATE AT SIDES OF SPREAD FOOTINGS, EXTEND LONGITUDINAL BARS TO FAR SIDE OF GRADE BEAM OR SPREAD FOOTING and TERMINATE W/ STANDARD 90° HOOK.
7. SEE SCHEDULE ON S9 SERIES FOR EQUIPMENT ANCHORAGE DETAILS.
8. REFER TO S1.31 FOR TYPICAL CMU DETAILS.
9. LOCATE TOP OF CONTINUOUS FOOTING AT ELEVATION -1'-4" U.N.O.
10. ALL WELDABLE REBARS SHALL BE A706.

LEGEND

- T. WXxXX / B. RESXxXX — INDICATES NON-FRAME COLUMN ABOVE - FOR BASE PLATE INFO SEE 6/S1.21 U.N.O.
- DENOTES INTERIOR NON-BEARING METAL STUD WALL - CONSTRUCT PER 1/S1.91
- DENOTES PARTIAL HEIGHT 8" THICK CONCRETE BLOCK WALL SOLID GROUTED. TOP OF WALL = 12'-0" U.N.O.
- DENOTES 8" THICK CONCRETE BLOCK SHEAR WALL SOLID GROUTED - FOR REINFORCING SEE CMU WALL ELEVATIONS AND S1.31 U.N.O.
- DENOTES 12" THICK CONCRETE BLOCK SHEAR WALL SOLID GROUTED - FOR REINFORCING SEE CMU WALL ELEVATIONS AND S1.31 U.N.O.
- S- - - - - -S — INDICATES STEP IN CONTINUOUS FOOTING OR GRADE BEAM - SEE 6/S1.11
- INDICATES CHANGE IN ELEVATION AT SLAB ON GRADE - SEE DETAIL 9/S1.11 UNLESS DETAILED OTHERWISE
- +X'-X" — INDICATES ELEVATION OF TOP OF STRUCTURAL CONCRETE SLAB (TOC) - SEE ARCHITECTURAL FOR TOC IF NO ELEVATION INDICATED
- DENOTES ALIGN.
- T.O. FTG. — DENOTES TOP OF FOOTING ELEVATION RELATIVE TO FIRST FINISH FLOOR.

FOUNDATION PLAN — 1/8" = 1'-0" — A

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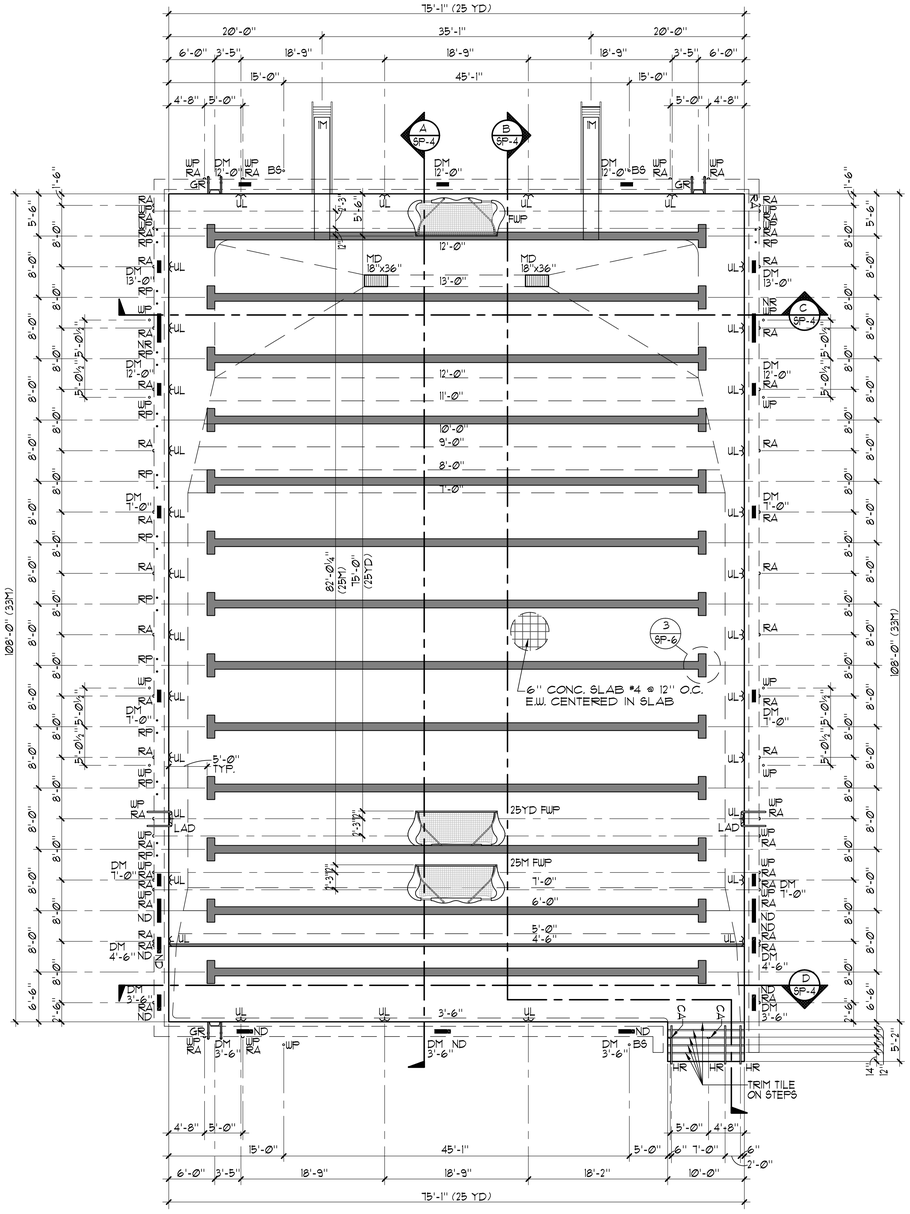
FOUNDATION and ROOF FRAMING PLANS

S2.01



SWIMMING POOL DATA

SURFACE AREA	=	8,178 SQ. FT.
PERIMETER	=	376 FT.
DEPTHS	=	3'-6" TO 12'-6"
VOLUME	=	492,676 GAL.
6 HR TURNOVER	=	1,369 GPM

LEGEND

MD	=	MAIN DRAIN	8 / SP-8
RA	=	ROPE ANCHOR	3 / SP-7
UL	=	UNDERWATER LIGHT	5 / SP-8
DM	=	DEPTH MARKER	4 / SP-6
NR	=	NO RUNNING	5 / SP-6
ND	=	NO DIVING	5 / SP-6, 6 / SP-6
GR	=	GRABRAIL	1 / SP-7
RP	=	RACING PLATFORM	6 / SP-7
BS	=	BACKSTROKE STANCHION	1 / SP-8
WP	=	WATERPOLO GOAL	2 / SP-8
FWP	=	FLOATING WATERPOLO	3 / SP-8
LAD	=	LADDER	2 / SP-8
AL	=	ACCESSIBLE LIFT	2 / SP-7
MGC	=	MOVEABLE GUARD CHAIR	4 / SP-8
HR	=	HANDRAIL	5 / SP-7
CA	=	CUP ANCHOR	4 / SP-7
SA	=	STANCHION ANCHOR	1 / SP-8
IM	=	ONE METER BOARD	2 / SP-7

CERTIFICATION REQUIREMENTS

* THE CONTRACTOR SHALL RETAIN AN INDEPENDENT LICENSED SURVEYOR TO PROVIDE PROOF OF COMPLIANCE FOR REQUIRED POOL LENGTHS AS FOLLOWS: (RECOMMEND PATRELL ENG. GROUP (626) 335-4362)

SHORT COURSE-25YDS: (ALLOWS FOR TOUCH PADS AT ONE END) 75'-0 5/16" MIN: 75'-1 3/16" MAX.

TOLERANCE AGAINST LENGTH SHALL EXTEND IN A VERTICAL PLANE Ø.3M (12") ABOVE AND Ø.8M, (2'-7½") BELOW THE SURFACE OF THE WATER AT ALL POINTS OF BOTH END WALLS TYP. OF ALL COURSES.

THE INDEPENDENT LICENSED SURVEYOR SHALL FILL OUT, NOTARIZE AND FILE OFFICIAL CERTIFICATION FORM 9.7 WITH USA SWIMMING.

NORTH

1 **SWIMMING POOL LAYOUT PLAN** 1/8" = 1'-0"

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LICENSED ARCHITECT
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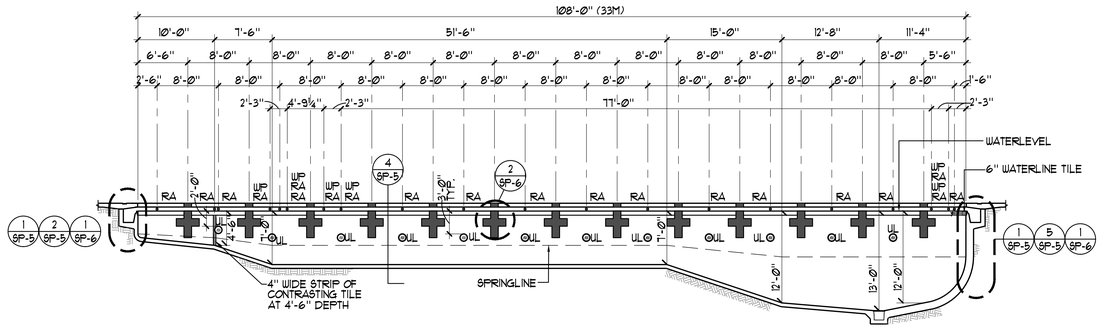
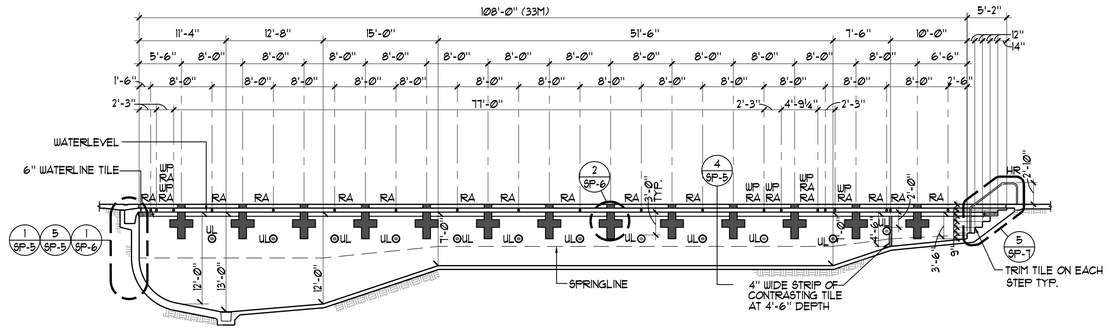
Scale	1/8" = 1'-0"

SWIMMING POOL LAYOUT PLAN

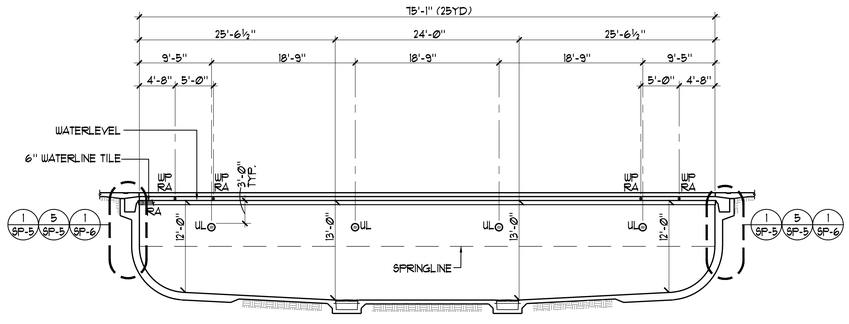
SP-1



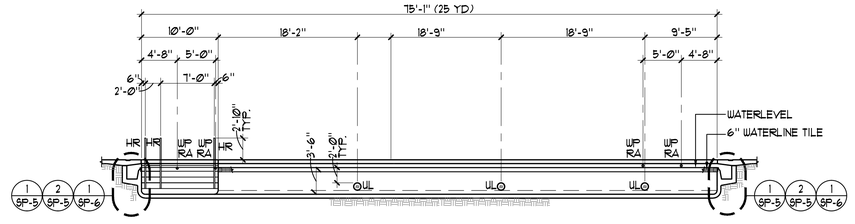
A **SWIMMING POOL SECTION** 1/8"=1'-0"



B **SWIMMING POOL SECTION** 1/8"=1'-0"



C **SWIMMING POOL SECTION** 1/8"=1'-0"



D **SWIMMING POOL SECTION** 1/8"=1'-0"

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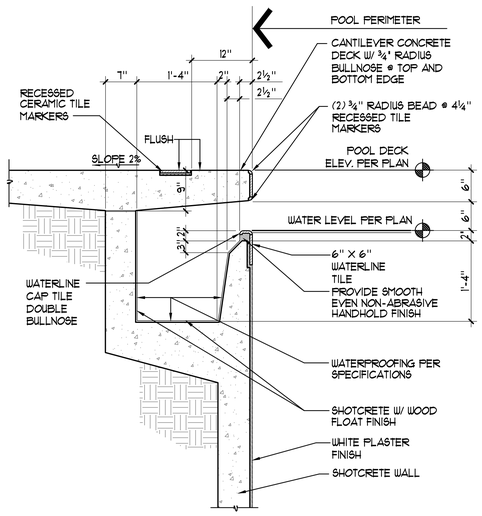
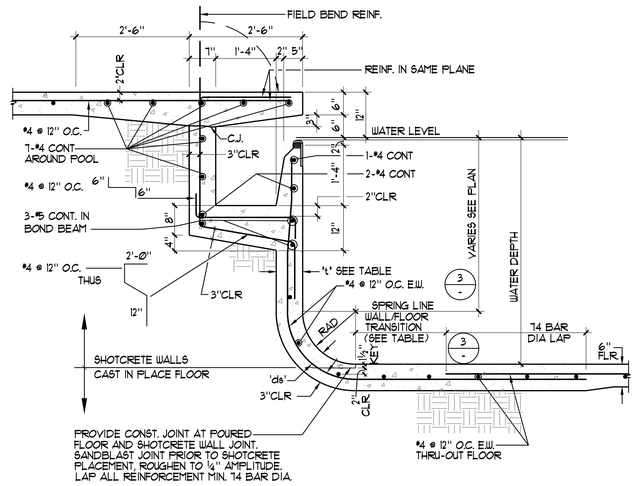
SWIMMING POOL SECTIONS

SP-4



1 **TYPICAL GUTTER DETAIL** 1"=1'-0"



2 **POOL WALL 3'-6" TO 5'-0"** ¾"=1'-0"

SWIMMING POOL REINFORCEMENT TABLE

WATER DEPTH	't'	'ds'	RADIUS	VERTICAL REINF.	HORIZONTAL REINF.	TRANSITION TO FLOOR REINF. BEYOND END RADIUS
3'-6"	6"	3"	6"	#4 @ 12" O.C.	#4 @ 12" O.C.	24"
3'-7" TO 5'-0"	7"	4"	6" TO 18"	#4 @ 12" O.C.	#4 @ 12" O.C.	24"
5'-1" TO 7'-0"	9	6"	18" TO 2'-6"	#4 @ 8" O.C.	#4 @ 8" O.C.	24"
7'-1" TO 10'-0"	11"	8"	2'-6" TO 5'-0"	#5 @ 6" O.C.	#4 @ 6" O.C.	24"
10'-1" TO 13'-0"	14"	11"	5'-0" TO 6'-0"	#5 @ 4" O.C. REAR FACE #4 @ 12" O.C. FRONT FACE	#4 @ 4" O.C. REAR FACE #4 @ 12" O.C. FRONT FACE	24"

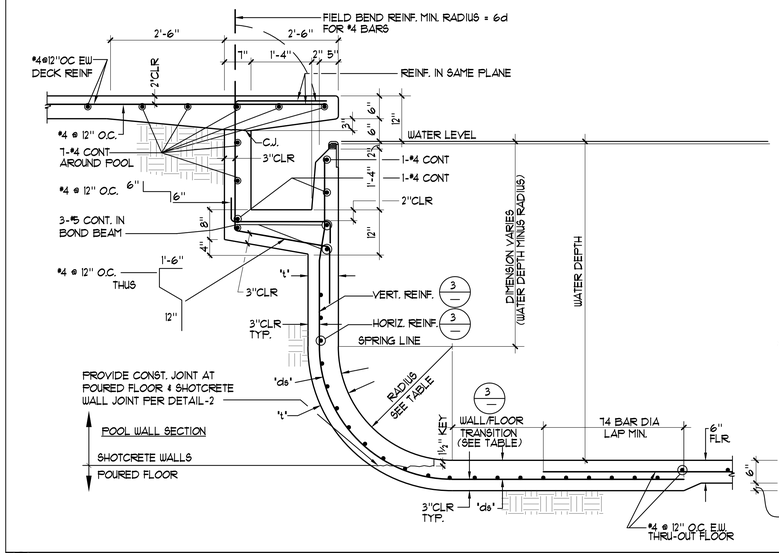
CONCRETE NOTES:

1. THE MINIMUM ULTIMATE COMPRESSIVE STRENGTH AT 28 DAYS
   POOL = 3000 PSI
   SLAB-ON-GRADE = 3000 PSI
2. CONTINUOUS INSPECTION BY A D.S.A. APPROVED INSPECTOR IS REQUIRED OF ALL CONCRETE PLACEMENT.
3. ALL CEMENT USED SHALL CONFORM TO A.S.T.M. C-150 TYPE II
4. FINE AND COARSE AGGREGATE SHALL CONFORM TO A.S.T.M. C-33. MAXIMUM SIZE OF AGGREGATE TO BE 1".
5. CONCRETE MIX DESIGNS SHALL BE BASED UPON CBC SECTION 1904A.2.
6. CONCRETE SHALL BE TESTED AND INSPECTED PER SECTION CBC 1705A.3 AND 1913A.1
7. REMOVAL OF FORMS SHALL COMPLY WITH ACI 318-11 SECTION 6.2
8. ALL REINFORCING SHALL BE ASTM A-615, GRADE 60, UNLESS OTHERWISE NOTED. LAPS SHALL BE 74 BAR DIA.

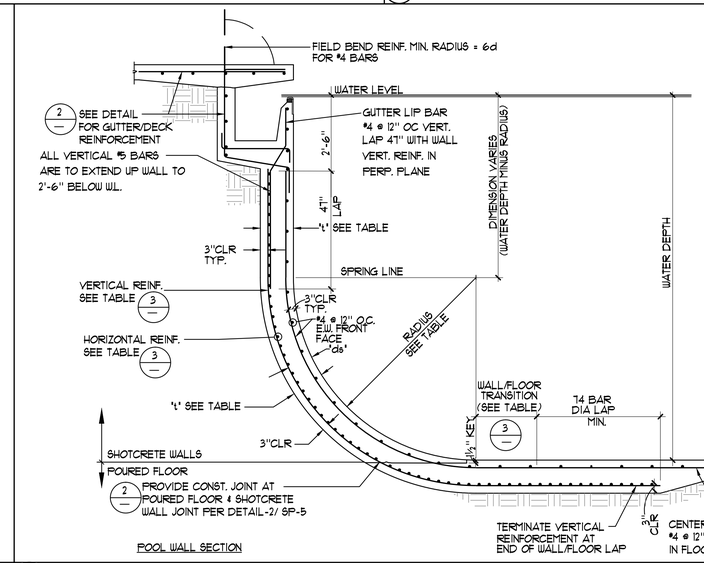
SHOTCRETE NOTES:

1. THE MINIMUM ULTIMATE COMPRESSIVE STRENGTH AT 28 DAYS POOL WALLS = 3000 PSI.
2. CONTINUOUS INSPECTION BY A D.S.A. APPROVED INSPECTOR IS REQUIRED OF ALL SHOTCRETE PLACEMENT.
3. ALL CEMENT USED SHALL CONFORM TO A.S.T.M. C-150 TYPE II
4. FINE AND COARSE AGGREGATE SHALL CONFORM TO A.S.T.M. C-33. MAXIMUM SIZE OF AGGREGATE TO BE ⅜".
5. SHOTCRETE MIX DESIGNS SHALL BE PER CBC SECTION 1910A.2
6. SHOTCRETE SHALL BE TESTED AND INSPECTED PER SECTION 1705A.3 AND 1913A.5
7. ANCHOR BOLTS, ANCHORS, DOWELS, INSERTS, ETC. SHALL BE SECURELY TIED IN PLACE PRIOR TO PLACING OF SHOTCRETE.
8. ALL REINFORCEMENT WITHIN SHOTCRETE SHALL MAINTAIN MINIMUM 2" CLEAR NON-CONTACT SPLICES.
9. THE FILM OF LAITANCE WHICH FORMS ON THE SURFACE OF THE SHOTCRETE SHALL BE REMOVED WITHIN APPROXIMATELY TWO HOURS AFTER APPLICATION BY BRUSHING WITH A STIFF BROOM. IF THIS IS NOT REMOVED WITHIN TWO HOURS, IT SHALL BE REMOVED BY THOROUGH WIRE BRUSHING OR SAND BLASTING. CONSTRUCTION JOINTS OVER EIGHT HOURS OLD SHALL BE THOROUGHLY CLEANED WITH AIR AND WATER PRIOR TO RECEIVING SHOTCRETE.
10. ALL REINFORCING SHALL BE ASTM A-615, GRADE 60, UNLESS OTHERWISE NOTED. LAPS SHALL BE 74 BAR DIA.

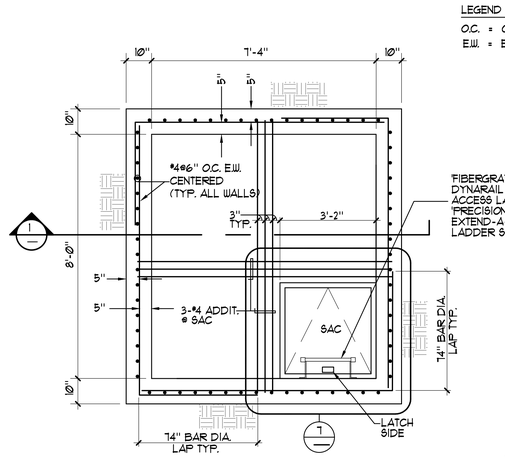
3 **REINFORCEMENT TABLE**

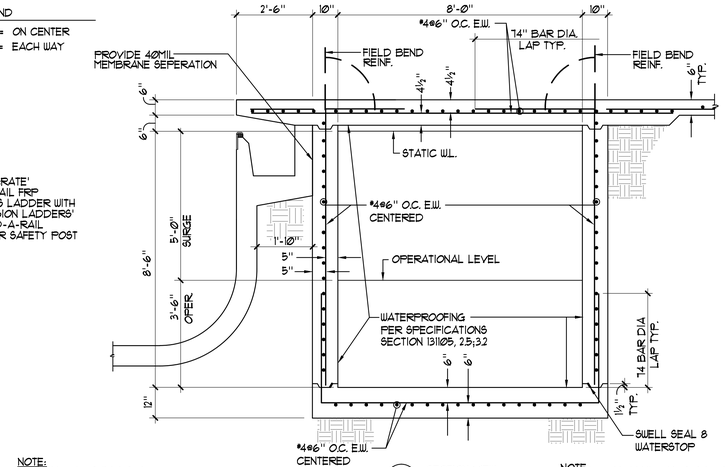


4 **POOL WALL 5'-1" TO 10'-0"** ¾"=1'-0"

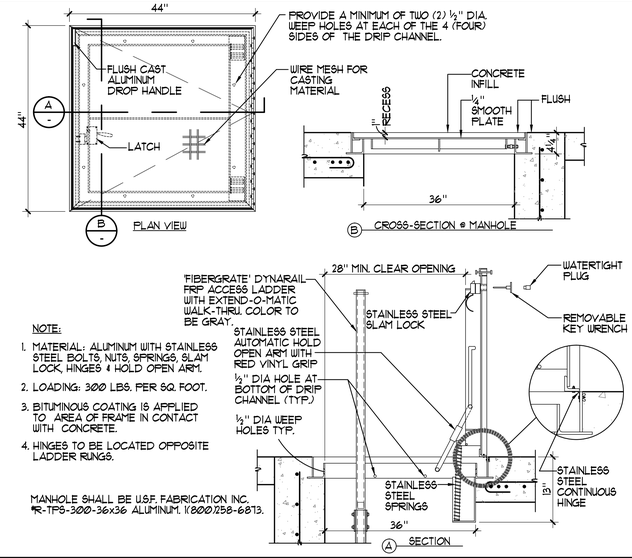


5 **POOL WALL 10'-1" TO 12'-6"** ½"=1'-0"





6 **SURGE CHAMBER** ½"=1'-0"



7 **SURGE CHAMBER ACCESS COVER** 1"=1'-0"

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Developed for Sage Hill School

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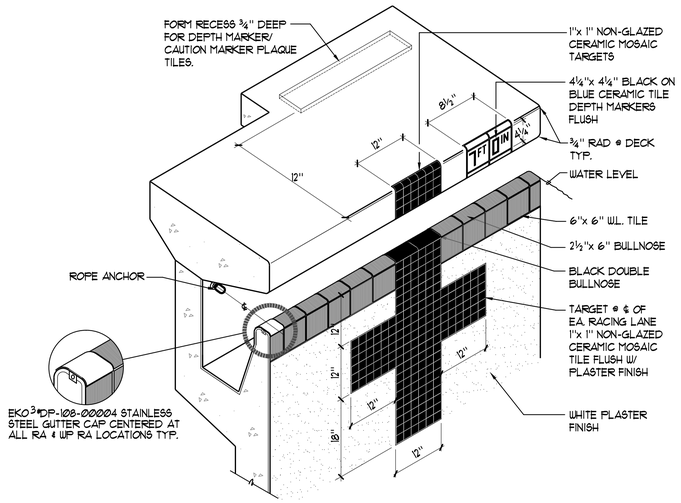
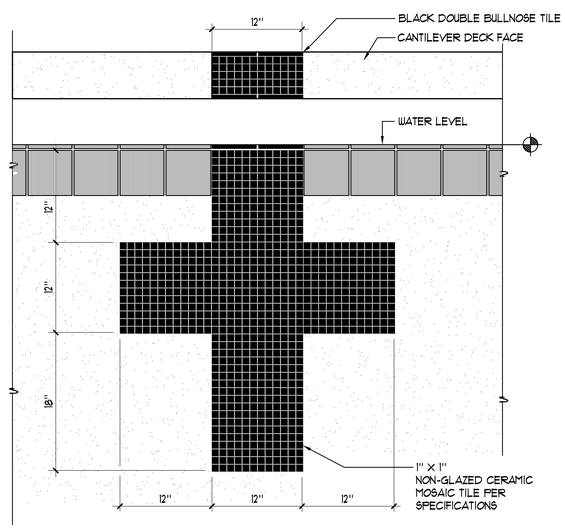
Scale	AS NOTED

DETAILS

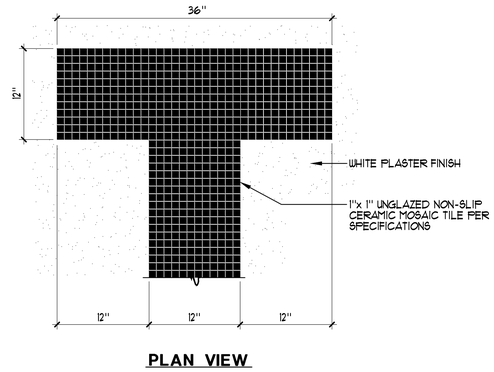
SP-5



1 **DEEP GUTTER PERSPECTIVE** NO SCALE

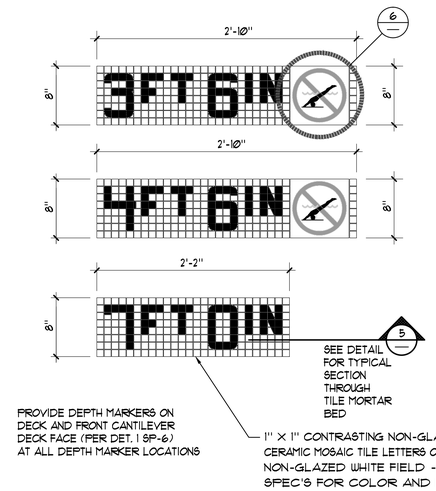


2 **END WALL TARGET** 1½" = 1'-Ø"

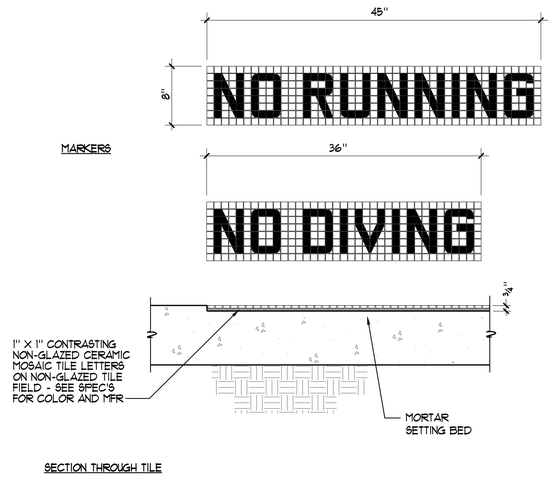


PLAN VIEW

3 **RACING LANE LINE** 1½"=1'-Ø"

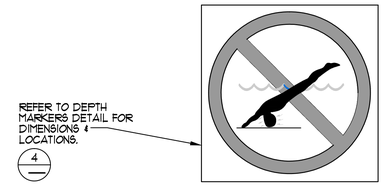


4 **DEPTH MARKERS** 1½" = 1'-Ø"



SECTION THROUGH TILE

5 **"NO RUNNING" / "NO DIVING" MARKERS** 1½" = 1'-Ø"

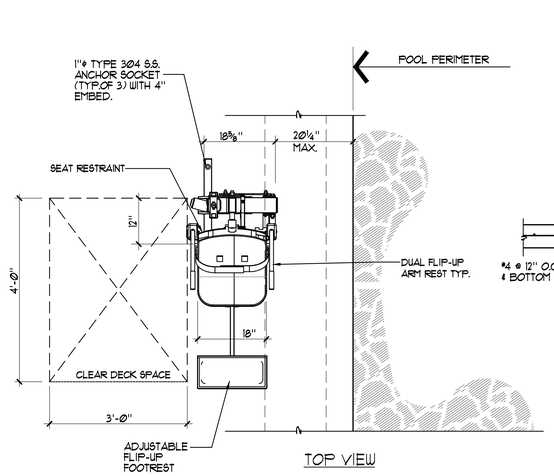


NOTE: PLACE IN DECK AT ALL DEPTH MARKER LOCATION OF 6'-Ø" OR LESS.

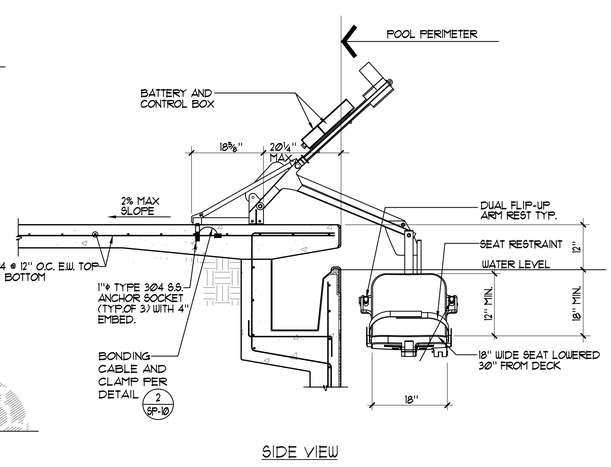
SILK SCREEN

1. INLAYS DOUBLE GLAZED WHITE SLIP RESISTANT TILE TYP. OF (1) PIECE OVER ¼" MORTAR BED WITH ⅛" GROUT JOINTS. SEE PLAN FOR LOCATION.
2. 1" WIDE RED CIRCLE WITH 1" WIDE RED DIAGONAL LINE.
3. ⅛" BLUE WATER.
4. ⅛" RED TICKS ABOUT THE HEAD.
5. TAN COLOR BODY WITH BLACK OUTLINE, HAIR AND TRUNKS.
6. ⅛" BLACK POOL FLOOR.

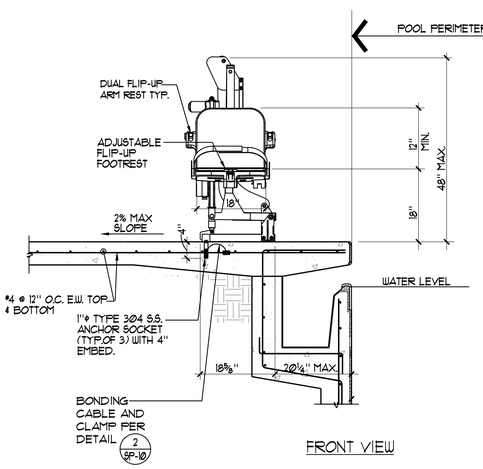
6 **INTERNATIONAL "NO DIVING" MARKER** 3"=1'-Ø"



TOP VIEW



SIDE VIEW



FRONT VIEW

NOTES:

1. 'AQUA CREEK PRODUCTS' F-004PLB-XR: PRO POOL-XR (350 lbs. MIN. LIVE LOAD CAPACITY)
2. ANCHORS AT BASE TO BE ATTACHED REQUIRING A TOOL FOR REMOVAL.
3. CONTRACTOR SHALL PROVIDE UPGRADE PACK INCLUDING COVER FOR LIFT, HEADREST, CHEST STRAP, EXTRA BATTERY PACK 'AQUA CREEK PRODUCTS' "F-004AB; AND TRANSPORTER CART 'AQUA CREEK PRODUCTS' "F-914STC.
4. REFER TO ARCH. PLANS FOR LOCATION OF ACCESSIBLE LIFT BATTERY CHARGE STATION.
5. POOL LIFT SHALL BE LOCATED WHERE THE WATER LEVEL IS AT LEAST 36" AND DOES NOT EXCEED 48" DEEP , UNLESS ENTIRE POOL IS GREATER THAT 48" DEEP. (CBC SECTION 11B-1009.2.1)
6. ON THE RAISED POSITION, THE CENTERLINE OF THE SEAT SHALL BE LOCATED OVER THE DECK AND 16" MINIMUM FROM THE EDGE OF THE POOL. THE DECK SURFACE BETWEEN THE CENTERLINE OF THE SEAT AND THE POOL EDGE SHALL HAVE A 2% MAX. SLOPE. (CBC SECTION 11B-1009.2.2)
7. CLEAR DECK SPACE SHALL BE PROVIDED ON SIDE OF SEAT OPPOSITE THE WATER PARALLEL TO THE WATER 36" WIDE x 48" MINIMUM FROM A LINE LOCATED 12" BEHIND THE REAR EDGE OF THE SEAT. THE CLEAR SPACE SHALL HAVE A 2% MAX. SLOPE. (CBC SECTION 11B-1009.2.3)
8. THE HEIGHT OF THE LIFT SEAT SHALL BE DESIGNED TO ALLOW A STOP AT 17" MIN. TO 19" MAX. MEASURED FROM THE DECK TO THE TOP OF THE SEAT SURFACE WHEN IN THE RAISED POSITION. (CBC SECTION 11B-1009.2.4)
9. THE SEAT SHALL BE RIGID AND 17" MIN. TO 19" MAX. WIDE. THE LIFT SEAT SHALL HAVE A BACK SUPPORT 12" MIN. TALL. (CBC SECTION 11B-1009.2.4)
10. FOOTRESTS SHALL BE PROVIDED, EXCEPT FOR SPA LIFTS, AND SHALL MOVE WITH THE SEAT. LIFT SHALL HAVE TWO ARMRESTS. THE ARMREST POSITIONED OPPOSITE THE WATER SHALL BE REMOVABLE OR SHALL FOLD CLEAR OF THE SEAT WHEN THE SEAT IS IN THE RAISED POSITION. (CBC SECTION 11B-1009.2.6)
11. THE LIFT SHALL BE CAPABLE OF UNASSISTED OPERATION FROM BOTH THE DECK AND WATER LEVELS. CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL BE UNOBSTRUCTED WHEN THE LIFT IS IN USE (CBC SECTION 11B-3209.4.) LIFT MUST BE STABLE AND NOT PERMIT UNINTENDED MOVEMENT WHEN A PERSON IS GETTING INTO OR OUT OF THE SEAT. (CBC SECTION 11B-1009.2.1)
12. THE LIFT SHALL BE DESIGNED SO THAT THE SEAT WILL SUBMERGE TO A WATER DEPTH OF 18" MIN. BELOW THE STATIONARY WATER LEVEL. (CBC SECTION 11B-1009.2.8)
13. LIFT SEAT MUST HAVE AN OCCUPANT RESTRAINT FOR USE BY THE OCCUPANT OF THE SEAT AND THE RESTRAINT MUST MEET THE STANDARDS FOR OPERABLE CONTROLS IN COMPLIANCE WITH CBC SECTION 11B-1009.2.4 AND SECTION 11B-309.

7 **ACCESSIBLE LIFT** ¾"=1'-Ø"

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Developer
Sage Hill School

Date	Revision

Date	Submittal

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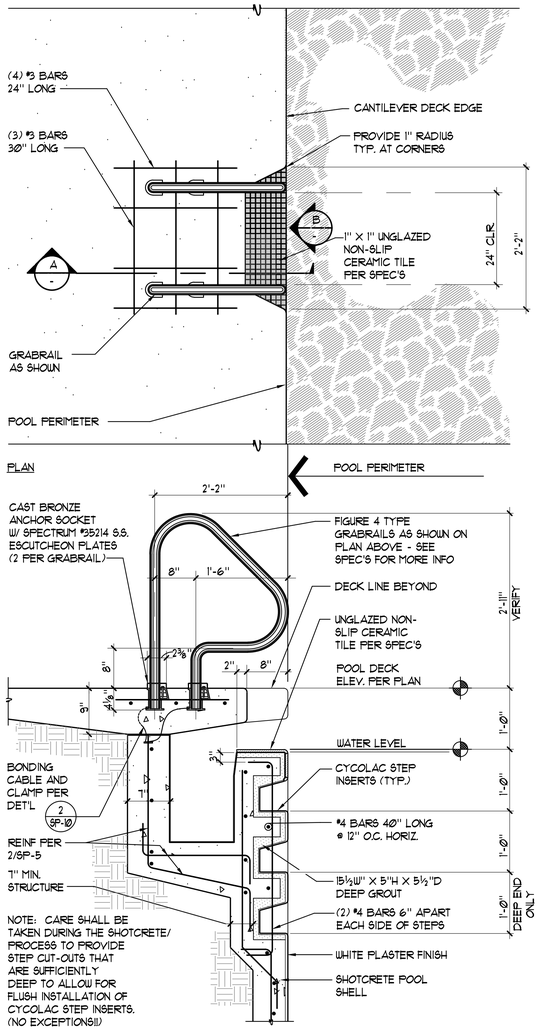
Date	SJF
Checked by	SJF
Scale	AS NOTED

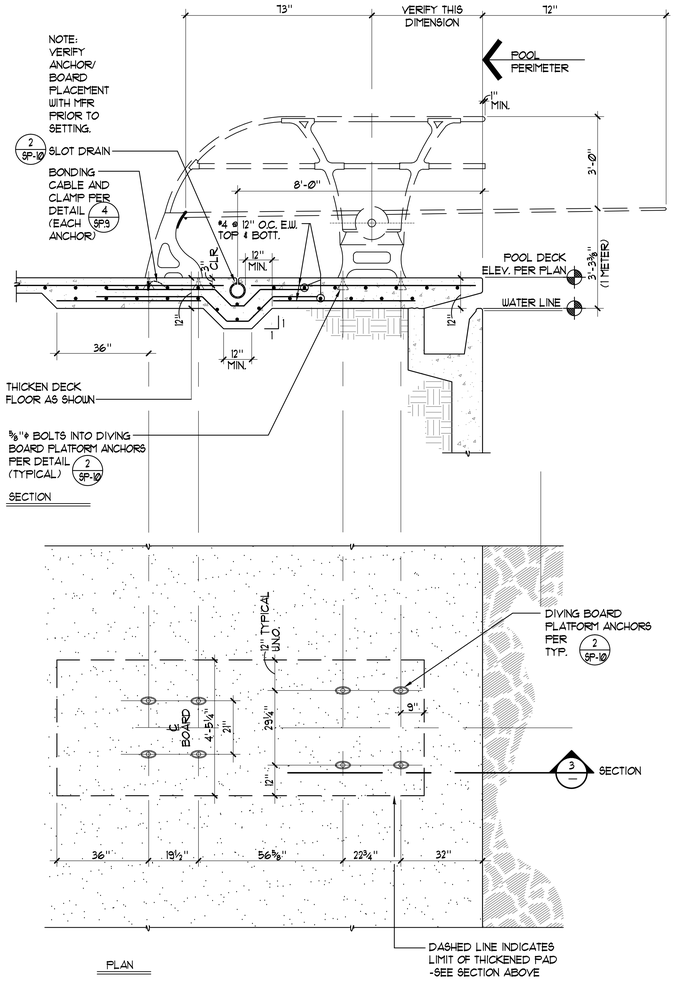
DETAILS

SP-6



1 GRABRAIL WITH STEPS

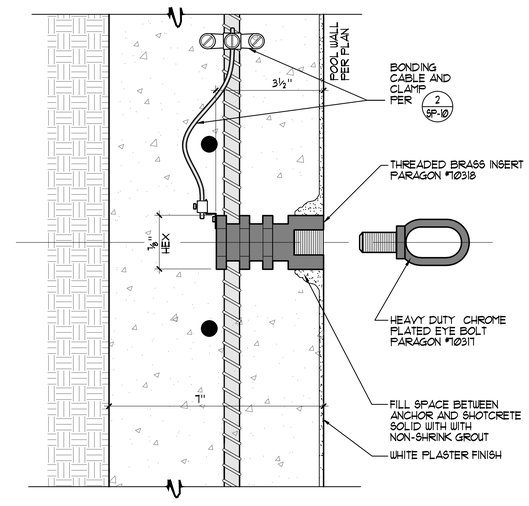
1"=1'-Ø"



NOTE: PROVIDE FOOTING AND ANCHORS ONLY FOR FUTURE 1M DIVE STAND. FILL ANCHORS FULL OF SAND AND CAULK LAST ½" FLUSH WITH DECK.

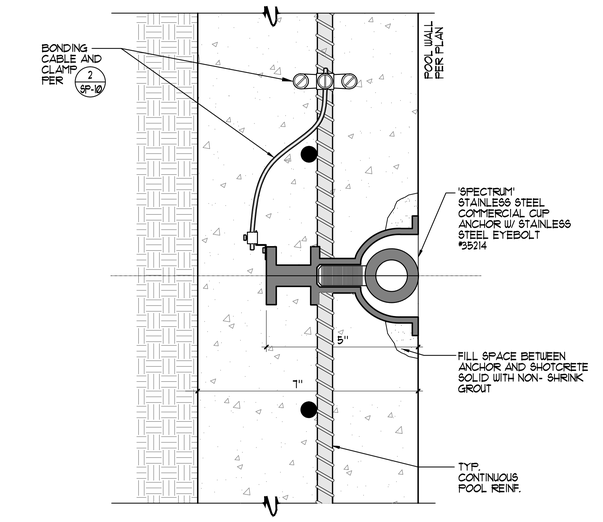
2 1 METER DIVE STAND

½"=1'-Ø"



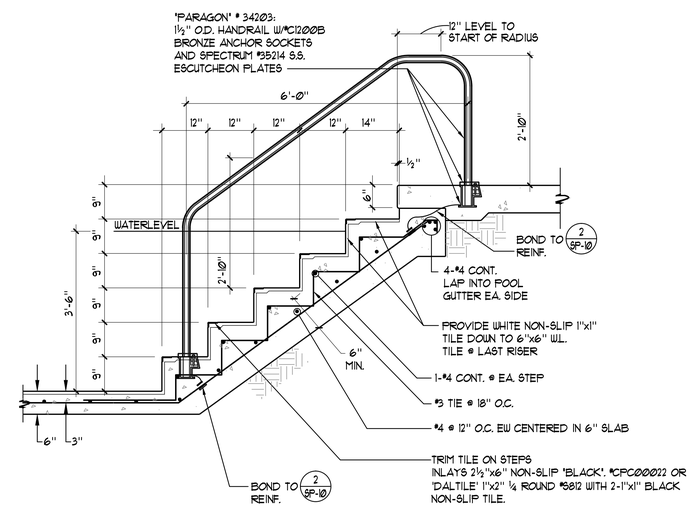
3 ROPE ANCHOR

½" = 1"



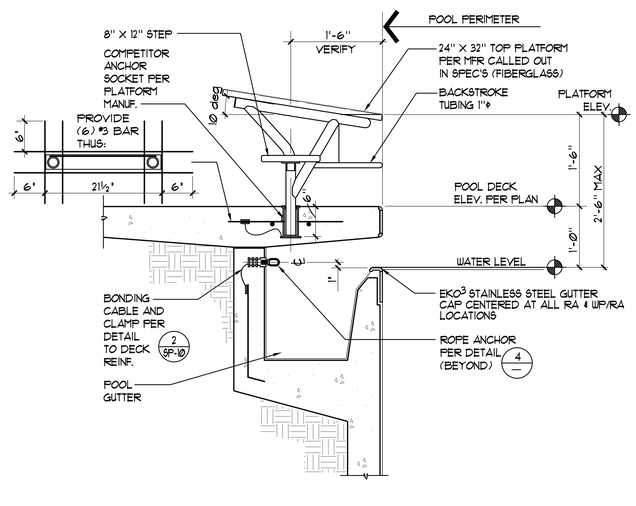
4 CUP ANCHOR

½" = 1"



5 HANDRAIL DETAIL

¾"=1'-Ø"



6 RACING PLATFORM

1"=1'-Ø"

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DETAILS

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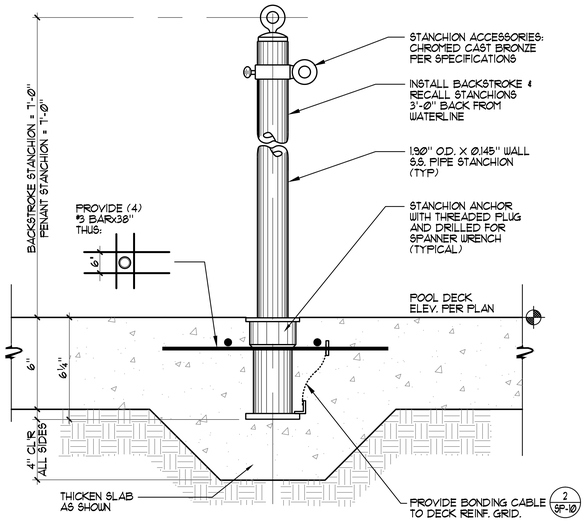
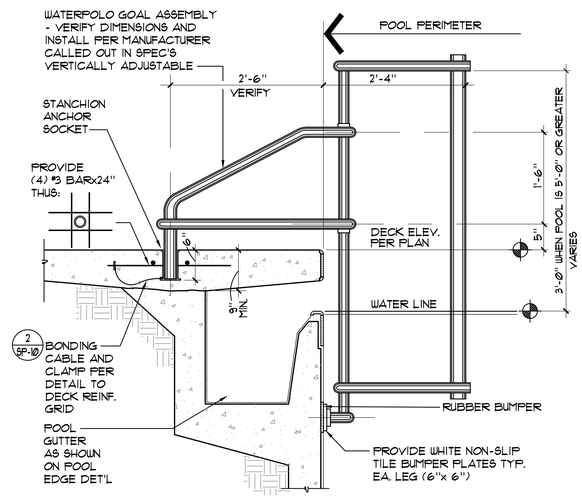
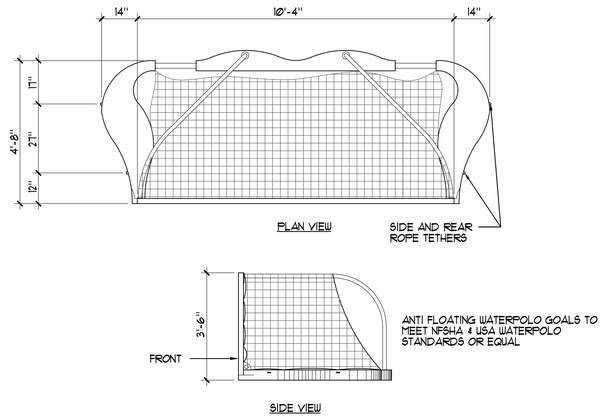


1 STANCHION POST/ANCHOR 3"=1'-0"



2 WATERPOLO GOAL 1"=1'-0"



3 FLOATING WATER POLO GOALS ½"=1'-0"

4 MOVEABLE LIFEGUARD CHAIR ¾"=1'-0"

5 POOL LADDER 1"=1'-0"

6 FLOOR INLET 3"=1'-0"

7 AIR VENT 1"=1'-0"

8 MAIN DRAIN 1"=1'-0"

9 WATER STOP DETAIL NO SCALE

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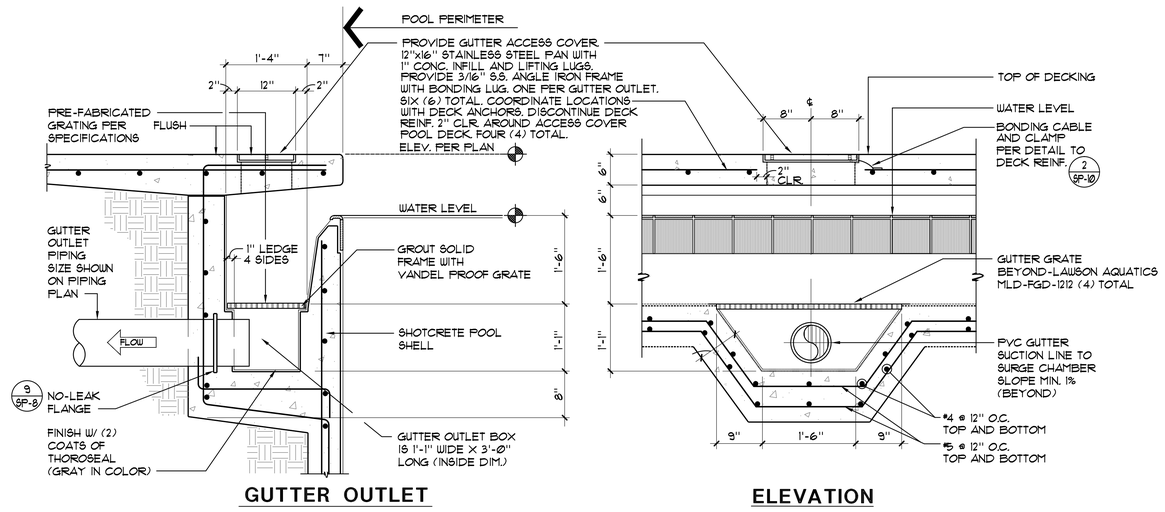
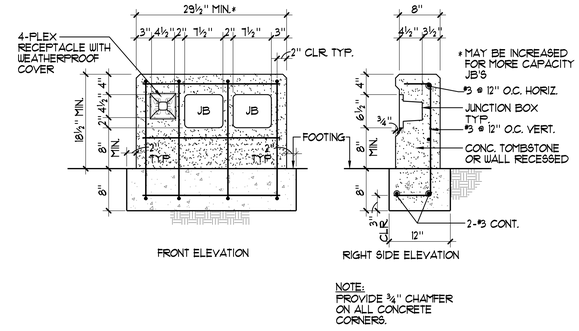
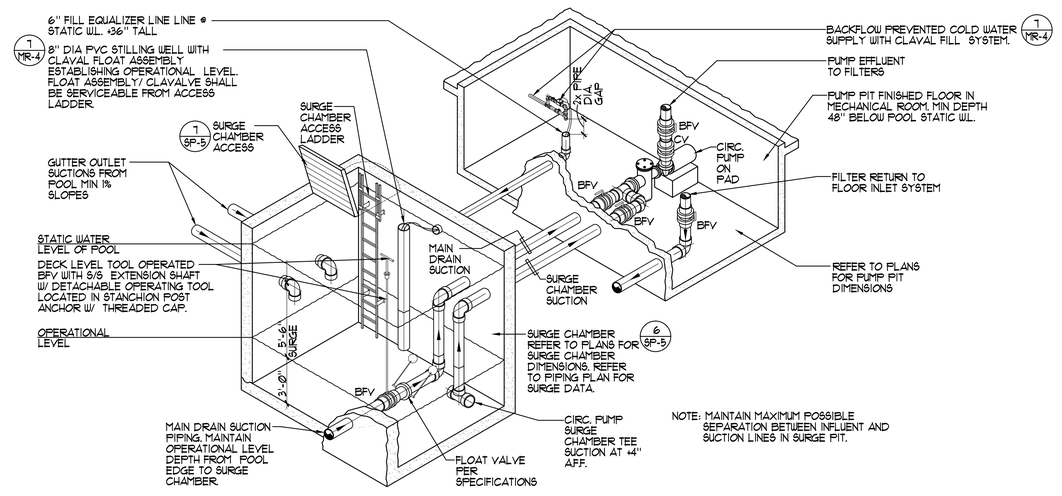
SP-8



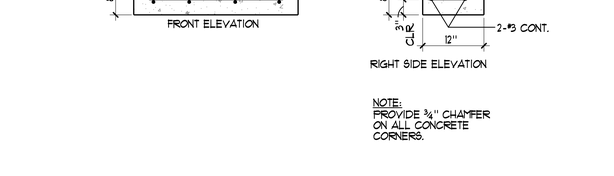
1 GUTTER OUTLET 1"=1'-0"



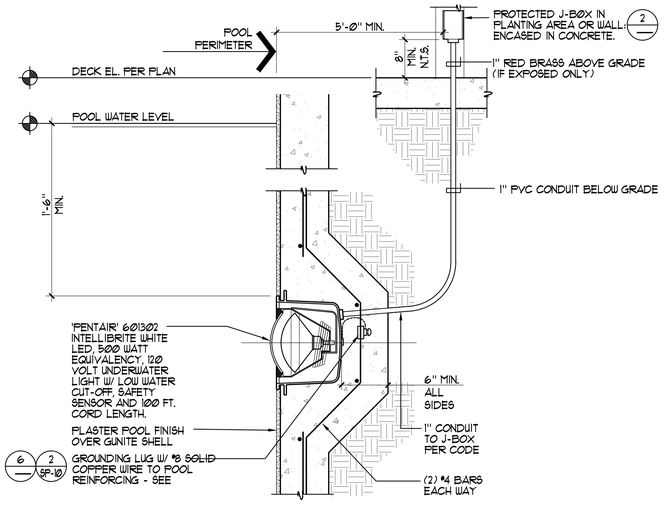
2 UNDERWATER LIGHT JUNCTION BOX CONCRETE SURROUND DETAIL 1"=1'-0"



3 SURGE CHAMBER PIPING SCHEMATIC NO SCALE



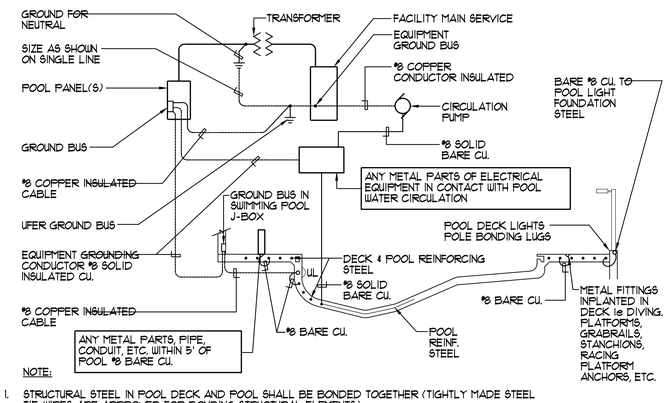
4 TIMING SYSTEM WALL PLATE CONCRETE SURROUND DETAIL 1"=1'-0"



5 UNDERWATER LED LIGHT 1½"=1'-0"

UNDERWATER LIGHT NOTES:

1. ALL CONDUITS IN POOL LIGHTING SYSTEM TO BE A MINIMUM OF 1"ø.
2. CONDUCTORS TO POOL, J-BOXES SHALL BE MINIMUM 2-#8 & 1#8 (SEE UNDERWATER LIGHT PLAN) SOLID UNBROKEN TO MAIN PANEL ISOLATED GROUND BUSS. THIS BUSS IS TO BE CONNECTED WITH SOLID INSULATED #8 COPPER WIRE TO UFER & COLDWATER GROUNDING LUG ON GROUNDING BUSS. UPSIZE CONDUCTORS AS REQUIRED FOR HOMERUNS EXCEEDING 100'.
3. ALL BRASS POOL J-BOXES SHALL BE FLUSH MOUNTED IN WALLS. IF FLUSH MOUNTING IS NOT POSSIBLE THEN MOUNTING SHALL BE SURFACE MOUNTED AND CONCRETE ENCASED.
4. CONDUITS WHERE ALLOWED BY CODE SHALL BE P.V.C. (POLYVINYL CHLORIDE) FROM WET NICHES TO BRASS J-BOXES TO LIGHTING PANEL. ALL CONDUITS IN FREE AIR SPACE AND ALL RISERS SHALL BE RED BRASS TYPICAL. PVC CONDUITS SHALL BE SOLVENT WELDED WITH PURPLE PRIMER AND GRAY 'HEAVY' BODIED GLUE.
5. LIGHTING CONTACTORS SHALL BE 'ALLEN-BRADLEY' #500 L± OR EQUAL MOUNTED IN A NEMA 12 HINGED COVER - LOCKABLE ENCLOSURE. CONTACTORS TO BE SWITCHED BY MOMENTARY SWITCH EQUAL TO 'HUBBELL' #557 MOUNTED IN J-BOX IN MECHANICAL EQUIPMENT ROOM. REFER TO ELECTRICAL PLANS FOR LOCATION OF OWNER COORDINATED REMOTE UNDERWATER LIGHT SWITCH.
6. BRASS POOL J-BOXES SHALL BE 'HYDREL' #719 ± W/ 1" HUBS OR EQUAL. (NO DIE CAST BOXES).
7. STRINGS SHALL BE PULLED IN ALL CONDUITS PRIOR TO PLACEMENT OF CONCRETE.
8. LOCAL, COUNTY OR CITY CODES SHALL BE ADHERED TO. SPECIFICATIONS TO BE IN ACCORDANCE WITH SECTION 680 OF LATEST N.E.C. BOOK.
9. PROVIDE PULL BOXES AS MAY BE REQUIRED FOR RUNS EXCEEDING 150 FT. OR DUE TO CHANGES IN GRADE OR DIRECTION.
10. CONTRACTOR SHALL TEST UNDERWATER POOL LIGHT GFIC CIRCUITS AND PROVIDE LETTER TO OWNER/DSA UPON SUCCESSFUL TEST.
11. SEAL CONDUIT OPENING IN LIGHT NICHE WITH SILICON CAULKING AFTER LIGHT IS INSTALLED.
12. PRIOR TO LIGHT INSTALLATION, PROVIDE MINIMUM 10 PSI PRESSURE TEST ON ALL POOL LIGHT CONDUITS FOR FOUR (4) HOURS OBSERVED BY INSPECTOR OF RECORD. MAINTAIN PRESSURE UNTIL ALL DECKS ARE POURED.



NOTE:

1. STRUCTURAL STEEL IN POOL DECK AND POOL SHALL BE BONDED TOGETHER (TIGHTLY MADE STEEL TIE-WIRES ARE APPROVED FOR BONDING STRUCTURAL ELEMENTS).
2. BONDING CONNECTOR TO COMMON GRID. (POOL STEEL MAY BE USED FOR THAT PURPOSE) SHALL BE MADE BY PRESSURE CONNECTORS OR CLAMPS OF BRASS, COPPER, OR COPPER ALLOY.
3. ALL GROUND BUSES SHALL BE SIZED FOR CONNECTION TO AWG SIZE 8 WIRE PROVIDING ONE SPARE TERMINAL.
4. GROUND AND BOND IN ACCORDANCE WITH ARTICLE 680 OF THE CALIFORNIA ELECTRICAL CODE. ie. LADDERS, FENCING, POLE LIGHTS, DIVING & STARTING STANCHIONS, DISABLED LIFT ETC.
5. PROVIDE BONDING OF AUTOMATIC POOL COVER MOTORS REGARDLESS OF PROXIMITY TO POOL.

6 TYPICAL POOL BONDING AND GROUND DETAIL NO SCALE

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Newport each, CA 92657

De eloped or
Sage Hill School

Date	
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Job No.	14248.10
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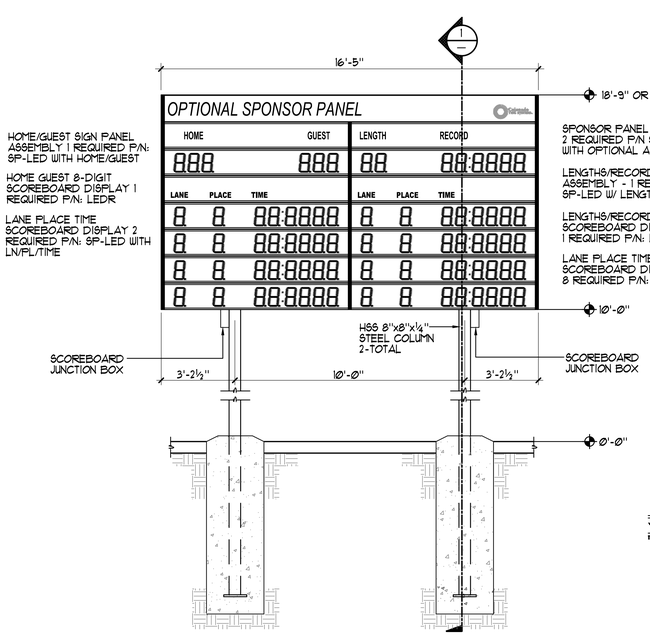
Scale	AS NOTED

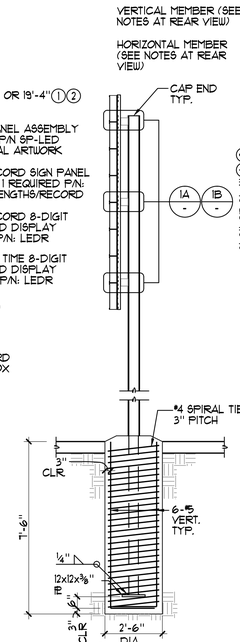
DETAILS

SP-9



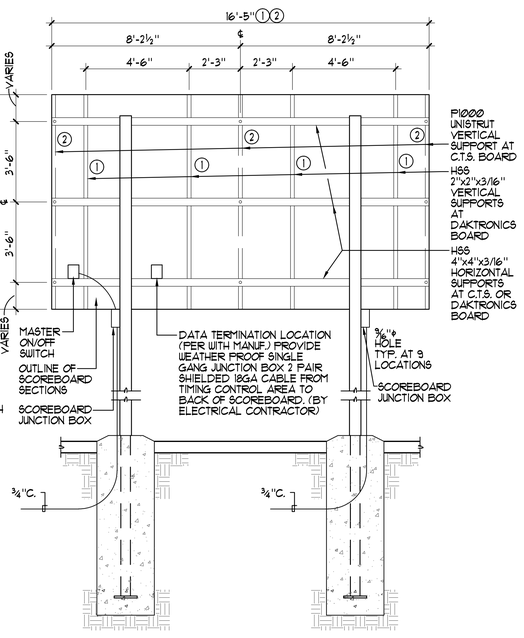
FRONT VIEW

3/8"=1'-0"



A SECTION

3/8"=1'-0"

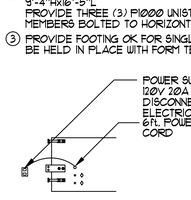


REAR VIEW

3/8"=1'-0"

NOTES:

1. 'DAKTRONICS' DIMENSIONS: 8'-9"Hx16'-5"L
   PROVIDE FOUR (4) HSS-2"x2"x3/16" VERTICAL MEMBERS WELDED TO HORIZONTAL MEMBERS.
2. C.T.S. 'COLORADO TIME SYSTEM' DIMENSIONS: 9'-4"Hx16'-5"L
   PROVIDE THREE (3) PIØØØ UNISTRUT VERTICAL MEMBERS BOLTED TO HORIZONTAL MEMBERS.
3. PROVIDE FOOTING OK FOR SINGLE POUR COLUMN TO BE HELD IN PLACE WITH FORM TEMPLATE.
4. VIBRATE CONCRETE FULL DEPTH.
5. PROVIDE PLYWOOD COLLAR AROUND OPENING.
6. CAP ALL TUBES
7. PROVIDE SHOP PRIME WITH ZINC ENRICHED PAINT.
8. PROVIDE FINISH EXTERIOR ACRYLIC PAINT. COLOR TO BE SELECTED BY OWNER/ARCHITECT.



ELECTRICAL HOOKUP DETAIL

SPECIFICATIONS:

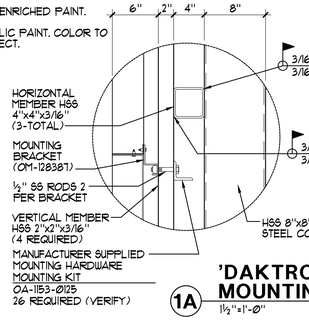
LED SCOREBOARD:
- DIGITS:
- DIGITS ARE 10" HIGH, 7 LED SEGMENTS EACH
- COLONS AND DECIMALS ARE VINYL
- CAPTIONS:
- ALL CAPTIONS ARE 5" HIGH, VINYL

IDENTIFICATION DISPLAY:
- LETTERS ARE 12" HIGH, VINYL
- DISPLAY FACE IS FINISHED ALUMINUM

GENERAL DISPLAY:
- SINGLE FACE
- ALL ALUMINUM CONSTRUCTION
- DISPLAY FINISH TO BE SPECIFIED
- DIMENSIONS ARE SUBJECT TO CHANGE DUE TO DETAILED DESIGN CONSIDERATIONS/ONLY APPROVED SHOP DRAWINGS SHOULD BE USED FOR CONSTRUCTION PURPOSES
- OUTDOOR MODELS MUST BE EARTH GROUNDED/NUMBER 4 LENGTHS OF RODS TO MEET LOCAL NATIONAL ELECTRIC CODE.

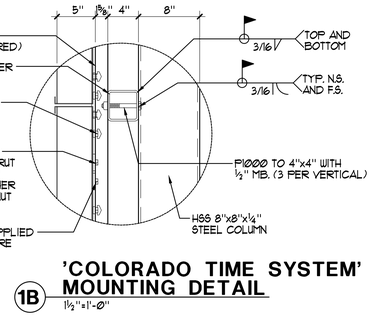
MAXIMUM POWER CONSUMPTION:
- 700 WATTS
  120V AC, 20 AMP CIRCUIT REQUIRED

TOTAL SYSTEM WEIGHT:
- APPROXIMATELY 500 LBS



1A 'DAKTRONICS' MOUNTING DETAIL

1½"=1'-0"

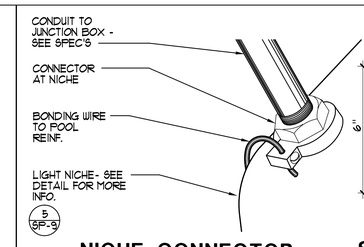


1B 'COLORADO TIME SYSTEM' MOUNTING DETAIL

1½"=1'-0"

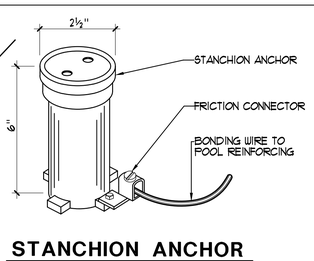
1 SCOREBOARD DETAILS

AS NOTED



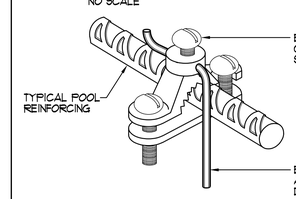
NICHE CONNECTOR

NO SCALE



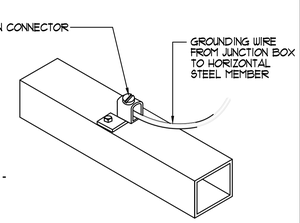
STANCHION ANCHOR

NO SCALE



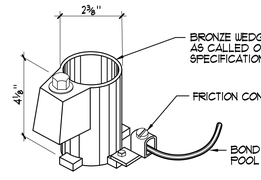
BONDING CLAMP

NO SCALE



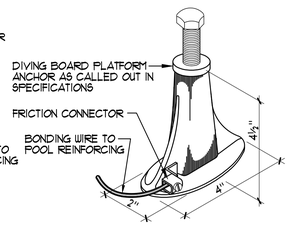
SCOREBOARD ELEC. GROUNDING

NO SCALE



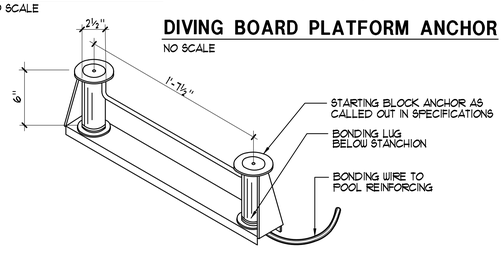
WEDGE ANCHOR

NO SCALE



DIVING BOARD PLATFORM ANCHOR

NO SCALE



STARTING BLOCK ANCHOR

NO SCALE

2 BONDING DETAILS

NO SCALE

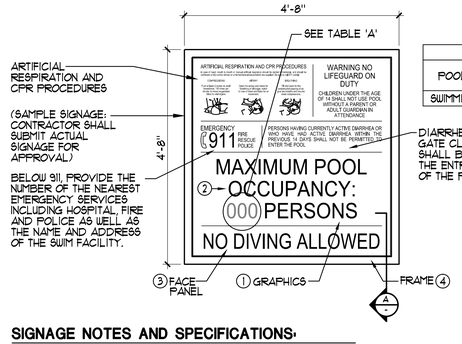
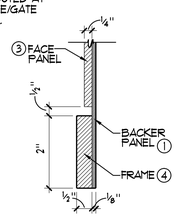


TABLE 'A'	
POOL TYPE	OCCUPANCY LOAD AT 1:20
SWIMMING POOL	409



A SECTION

6" = 1'-0"

SIGNAGE NOTES AND SPECIFICATIONS:

1. ⅛" THICK PAINTED ALUMINUM BACKER PANEL.
2. SILKSCREENED COPY/GRAPHICS WITH SATIN CLEAR COAT.
3. ¼" THICK PAINTED ALUMINUM FACE PANEL WITH SILKSCREENED COPY/GRAPHICS, ATTACH TO ⅛" THICK PAINTED ALUMINUM BACKER PANEL USING 'VHB' TAPE AND SILICONE ADHESIVE.
4. 2" WIDE x ½" THICK PAINTED ALUMINUM SIGN FRAME ADHERED TO ⅛" THICK PAINTED ALUMINUM BACKER USING 'LORD5' ADHESIVE AS REQUIRED. VERTICAL SECTIONS OF FRAME TO BE RECTANGULAR TUBE. FILL AND SAND SEAM ALONG EDGE AND FACE PRIOR TO PAINTING.

NOTES:

1. COORDINATE SIGNAGE PLACEMENT AND COLOR SCHEME WITH ARCHITECT/OWNER PRIOR TO INSTALLATION.
2. CONTRACTOR TO PROVIDE SHOP DRAWINGS OF PROPOSED SIGNAGE FOR REVIEW.

REQUIRED SIGNAGE:

1. ALL SIGNS SHALL HAVE CLEARLY LEGIBLE LETTERS OR NUMBERS NOT LESS THAN 4 INCHES HIGH, UNLESS OTHERWISE NOTED; AFFIXED TO A WALL, POLE, GATE, OR SIMILAR PERMANENT STRUCTURE IN A LOCATION VISIBLE TO ALL POOL USERS.
   A. POOL USER CAPACITY SIGN: A SIGN SHALL INDICATE THE MAXIMUM NUMBER OF POOL USERS PERMITTED FOR EACH POOL.
   B. NO DIVING SIGN: SIGNS SHALL BE POSTED IN CONSPICUOUS PLACES AND SHALL STATE 'NO DIVING' AT POOLS WITH A MAXIMUM WATER DEPTH OF 6 FEET OR LESS.
   C. NO LIFEGUARD SIGN: WHERE NO LIFEGUARD SERVICE IS PROVIDED, A WARNING SIGN SHALL BE POSTED STATING, "WARNING: NO LIFEGUARD ON DUTY." THE SIGN ALSO SHALL STATE IN LETTERS AT LEAST 1 INCH HIGH, "CHILDREN UNDER THE AGE OF 14 SHALL NOT USE POOL WITHOUT A PARENT OR ADULT GUARDIAN IN ATTENDANCE."
   D. ARTIFICIAL RESPIRATION AND CPR SIGN: AN ILLUSTRATED DIAGRAM WITH TEXT AT LEAST ¼ INCH HIGH OF ARTIFICIAL RESPIRATION AND CPR PROCEDURES SHALL BE POSTED.
   E. EMERGENCY SIGN: THE EMERGENCY TELEPHONE NUMBER 911, THE NUMBER OF THE NEAREST EMERGENCY SERVICES AND THE NAME AND STREET ADDRESS OF THE POOL FACILITY SHALL BE POSTED.
   F. KEEP CLOSED: A SIGN SHALL BE POSTED ON THE EXTERIOR SIDE OF GATES AND DOORS LEADING INTO THE POOL ENCLOSURE AREA STATING, "KEEP CLOSED."
   G. DIARRHEA: A SIGN IN LETTERS AT LEAST 1 INCH HIGH AND IN A LANGUAGE OR DIAGRAM THAT IS CLEARLY STATED SHALL BE POSTED AT THE ENTRANCE AREA OF A PUBLIC POOL WHICH STATES THAT PERSONS HAVING CURRENTLY ACTIVE DIARRHEA OR WHO HAVE HAD ACTIVE DIARRHEA WITHIN THE PREVIOUS 14 DAYS SHALL NOT BE ALLOWED TO ENTER THE POOL WATER.
2. DIRECTION OF FLOW SIGNAGE AND LABELS.
   A. THE DIRECTION OF FLOW FOR THE RECIRCULATION EQUIPMENT SHALL BE LABELED CLEARLY WITH DIRECTIONAL SYMBOLS SUCH AS ARROWS ON ALL PIPING IN THE EQUIPMENT AREA.
   B. WHERE THE RECIRCULATION EQUIPMENT FOR MORE THAN ONE POOL IS LOCATED ON SITE, THE EQUIPMENT SHALL BE MARKED AS TO WHICH POOL THE SYSTEM SERVES.
   C. VALVES AND PLUMBING LINES SHALL BE LABELED CLEARLY WITH THE SOURCE OR DESTINATION DESCRIPTIONS.

3 POOL SIGNAGE DETAIL

¾"=1'-0"

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Newport Beach, CA 92657

Developed for Sage Hill School

No.	Description	Date
	Addendum #1	

No.	Description	Date
	Submittal	

Job No.	14248.10
Date	SJF
Checked by	SJF
Scale	AS NOTED

DETAILS

SP-10

EQUIPMENT LIST

① SWIMMING POOL STRAINER: 'MER-MADE' F.D. SERIES FRP REDUCING BASKET STRAINER: ONE (1) 12"x8" STANDARD, WITH ACRYLIC LID AND TWO (2) STAINLESS STEEL STRAINERS EA. (150lbs.) TWO (2) TOTAL.

(3 MR-3) (5 MR-4) (3-1 MR-6) (1 MR-1) ② SWIMMING POOL CIRCULATION PUMP: 'PACO' #60IB-1, 6"x8"x15" TYPE 'LC' END SUCTION CENTRIFUGAL PUMP; 1150 RPM 460V, 3PH, 30HP; RATED AT 1550 GPM @ 60 FT. TDH; 81% EFFICIENT; PREMIUM EFFICIENCY TEFC MOTOR, EPOXY COAT ALL WET SURFACES, 'PACO', 'AURORA' OR EQUAL. (1460 lbs.) PROVIDE 'SPCS' SMART PUMP CONTROL SYSTEM VARIABLE SPEED DRIVE MODEL SPC530BC4 SYSTEM 36"x30"x12" DEEP. COORDINATE MOUNTING LOCATION TO MAINTAIN DESIRED CLEARANCES, 460V 3PH. (228 lbs.)

(1 MR-3) (5 MR-4) (2 MR-6) ③ SWIMMING POOL FILTERS: 'Eko3 SYSTEMS' #42-250-4 AUTOMATIC FILTER CONTROL (AFC) FULLY AUTOMATIC HI-RATE PERMANENT MEDIA FILTER WITH 90 SQ. FT. OF FILTER AREA RATED AT 1500 GPM AT 15 GPM/SQ. FT. COMPLETE WITH 12" FACE PIPING & 6" BACKWASH SEISMIC ANCHORAGE. PROVIDE ALL UTILITIES, PIPING, VALVING ETC. (6,560 lbs EACH TANK) 'Eko3 SYSTEMS' OR EQUAL. PROVIDE SIGNET MK-515 FLOSENSOR WITH DIGITAL READ-OUT. ONE (1) SYSTEMS TOTAL.

(2 MR-3) (5 MR-4) ④ SWIMMING POOL HEATER(S): INDIRECT FIRED POOL HEATING PACKAGE SYSTEM; 'AQUA6' WITH SMARTTOUCH CONTROL CONDENSING MODULATING BOILER, SALT WATER CUPRO NICKEL HEAT EXCHANGER WITH CPVC CONNECTIONS, FACTORY ASSEMBLED SKID MOUNTED PACKAGE, CALIFORNIA CODE CONTROLS, 1½" NATURAL GAS CONNECTION, 6" WATER CONNECTIONS, 6"Ø FLUE TO ATMOSPHERE, 1,256,560 BTU PER HOUR INPUT, 93% EFFICIENT, 'LOCHINVAR XFN1302', WEIGHT = 1,102 lbs. TWO (2) TOTAL.

(4 MR-3) (7 MR-3) (8 MR-3) (9 MR-3) (5 MR-4) ⑤ CHLORINE STORAGE/FEED SYSTEM: 'CHEM-TAINER' 500 GALLON #TC5971DC; DUAL STORAGE/CONTAINMENT TANK WITH LID SEISMICALLY RESTRAINED; OPERATING WEIGHT = (4,165lbs). COMPLIES WITH FED. REG #40CFR-264-193. NEW FEED PUMP SHALL BE 'SURE WATER TECHNOLOGIES' 'THE SOLUTION', 1,728 GPD MAX., ½HP PUMP, 'BERKELEY' #B3IXN, 115/230V, 1 PH MOTOR, TEFC, COMPLETE WITH PIPING,VALVING AND MOUNTING. ONE (1) TOTAL.

(5 MR-3) (6 MR-3) (7 MR-3) (8 MR-3) (9 MR-3) (5 MR-4) ⑥ ACID STORAGE/FEED SYSTEM: 'CHEM-TAINER' 150 GALLON #TC3448DC; DUAL STORAGE/CONTAINMENT TANK WITH LID SEISMICALLY RESTRAINED; OPERATING WEIGHT =(2,930lbs). COMPLIES WITH FED. REG #40CFR-264-163. PROVIDE A NEW COMPLETE 'PROMINENT' (AFS) ACID VAPOR RECOVERY SYSTEM. ONE (1) TOTAL.

(8 MR-3) (9 MR-3) (1 MR-4) (2 MR-4) (5 MR-4) ⑦ CARBON DIOXIDE STORAGE FEED SYSTEM: PROVIDE 'CARBO-MAX' 750 HIGH FLOW = 750lb. CRYOGENIC STORAGE TANK WITH REMOTE FILL PORT. FULL WEIGHT (1,219 lbs.) PROVIDE EKO FH-MTS CO2 HIGH EFFICIENCY FEED SYSTEM WITH ALKALINITY CONTROL, Ø TO 160 SCFH FEED CAPACITY BOOSTER PUMP, PIPING INJECTOR, FLOWMETER, RELAYS AND ACID FEED ALKALINITY CONTROL. ONE (1) SYSTEM TOTAL (92lbs.)

(4 MR-4) (5 MR-4) (1-4 MR-5) ⑧ WATER CHEMISTRY CONTROLLER: PROVIDE ETHERNET CONNECTION TO 'BECSYS' C3-BECSYS1-BP-E WATER CHEMISTRY CONTROLLER. PROVIDE COMPLETE SYSTEM CONTROL PACKAGE. 'BECSYS SYSTEM 7', 'IMPACT', 'WALLACE & TIERNAN' OR APPROVED EQUAL.

(5 MR-4) (8 MR-4) ⑨ ELECTRICAL: PROVIDE ALL ELECTRICAL WIRING, CONDUIT, PANEL(S), STARTER/DISCONNECT INTERCONNECT(S) ETC. AS REQUIRED FOR PROPER EQUIPMENT INSTALLATION PER MANUFACTURERS RECOMMENDATIONS AND SHOP DRAWINGS. COORDINATE ALL WORK WITH OTHER TRADES AS REQUIRED. REFER TO ELEC. PLANS FOR ALL ADDITIONAL INFO.

(7 MR-5) ⑩ BACKWASH PIT: 8'-Ø"x6'-Ø"x5'-Ø" DEEP WITH 6"Ø P-TRAP OUTLET TO SEWER. PROVIDE WATERPROOFING PER SPECIFICATIONS. COORDINATE WITH STRUCTURAL AND PLUMBING PLANS.

(6 MR-5) (7 MR-5) ⑪ PUMP PIT: 8'-Ø"x11'-Ø"x5'-Ø" DEEP. PROVIDE 1¼"Ø GALV. STEEL GUARDRAIL. PROVIDE FLOOR DRAIN TO WASTE. PROVIDE WATERPROOFING PER SPECIFICATIONS. ACCESS LADDER TO BE 'FIBERGRATE' DYNARAIL FRP OR EQUAL.

(1 MR-4) ⑫ FILL SYSTEM: 3" 'CLA-VAL' FILL SYSTEM TO INCLUDE 3" 'CLA-VAL' SOLENOID CONTROL VALVE #136-01BY, 3" DUCT IRON, EPOXY COATED BODY WITH CAST IRON DISC RETAINER AND DIAPHRAGM WASHER, BRONZE TRIM, FLANGED GLOBE PATTERN, 120V AT 60HZ. SOLENOID WIRING SHALL BE WIRED TO WATER CHEMISTRY CONTROLLER PROVIDE 6" AIR GAP AT FILL POINT .

(5 MR-5) ⑬ EYEWASH/SHOWER: HAWS MODEL #8309WC BARRIER FREE COMBINATION SHOWER AND EYE/FACE WASH WITH CORROSION RESISTANT PROTECTION. SEE MEP SHEETS FOR WATER SUPPLY PIPING. TWO (2) TOTAL.

(2 MR-1) ⑭ LIGHTING CONTACTOR PANEL: 'ALLEN BRADLEY' #500L; OR APPROVED EQUAL. PANEL SHALL BE MOUNTED IN A NEMA 12 HINGED COVER - LOCKABLE ENCLOSURE. CONTACTORS TO BE SWITCHED BY MOMENTARY SWITCH EQUAL TO 'HUBBELL' #5571 MOUNTED IN J-BOX IN MECHANICAL EQUIPMENT ROOM. REFER TO ELECTRICAL PLANS FOR LOCATION OF OWNER COORDINATED REMOTE UNDERWATER LIGHT SWITCH.

THREE PHASE MOTOR LOADS AT 460V

SWIMMING POOL CIRCULATION PUMP: 25 HP @ 460V. = 34 AMPS

MEP COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED, OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2013 CBC, SECTIONS 1616.A.1.8 THROUGH 1616.A.1.26 AND ASCE 7-10 CHAPTER 13, 26 AND 30.

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER.
3. MOVEABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.

THE ATTACHMENT OF THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT BE DETAILED ON PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED PIPING AND CONDUIT.

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM FROM A WALL.

FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-10 SECTION 13.3 AS DEFINED IN ASCE 7-10 SECTION 13.6.8, 13.6.7, 13.6.5.6, AND 2013 CBC, SECTIONS 1616.A.1.23, 1616.A.1.24, 1616.A.1.25 AND 1616.A.1.26

FOR THE MAXIMUM LOAD THE STRUCTURE CAN ACCOMODATE FOR HANGER AND BRACE LOADS, REFER TO DETAIL 3/MR.7.

HEATER/GAS PIPING INSTALLATION NOTE

GAS FIRED POOL HEATER(S) INSTALLED ON A GAS SUPPLY SYSTEM UTILIZING A 2 PSI OR 5 PSI SUPPLY. GAS PRESSURE SHALL REQUIRE A REGULATOR TO REDUCE THE SUPPLY PRESSURE. A PROPERLY SIZED AND INSTALLED LOCK-UP-TYPE HIGH GAS PRESSURE REGULATOR (HGPR) SHALL BE USED TO REDUCE THE GAS PRESSURE AT THE UNIT INLET TO A MAXIMUM OF 10.5" WATER COLUMN.

'LOCHINVAR' RECOMMENDS THAT ANY REQUIRED LINE LOCK-UP-TYPE HIGH GAS PRESSURE REGULATOR BE INSTALLED WITH A MINIMUM OF 8 FEET TO 10 FEET OF PIPE FROM ITS DISCHARGE TO THE UNIT'S GAS INLET. IF A STRAIGHT DISTANCE OF GAS PIPE IS NOT AVAILABLE THE ADDITION OF A VERTICAL 'U' IN THE GAS PIPING DOWN STREAM FROM THE 'HGPR' CAN BE USED TO ACHIEVE THE 8 FEET TO 10 FEET OF DISTANCE.

NOTE:

REFER TO MECHANICAL PLANS FOR HEATER VENTING, EXHAUST DUCTING, FLUE TERMINUS AND PENETRATION(S) THROUGH BUILDING STRUCTURE.

EQUIPMENT ANCHORS (THIS APPLIES TO EQUIPMENT SHOWN ON THIS PLAN)

1. EXPANSION OR WEDGE ANCHORS INTO CONCRETE: HILTI KB TZ (ICC ESR-1917) OR SIMPSON STRONG BOLT (ICC ESR-1771) TO BE INSTALLED IN ACCORDANCE WITH ICC REPORT AND MANUFACTURER'S RECOMMENDATIONS.
2. EXPANSION OR WEDGE ANCHORS INTO MASONRY: HILTI KB 3 (ICC ESR-1385) OR SIMPSON WEDGE-ALL (ICC ESR-1396) TO BE INSTALLED IN ACCORDANCE WITH ICC REPORT AND MANUFACTURER'S RECOMMENDATIONS.
3. FASTENERS SHALL BE STAINLESS STEEL FOR EXTERIOR USE OR WHEN EXPOSED TO WEATHER. PROVIDE GALVANIZED CARBON STEEL ANCHORS AT OTHER LOCATIONS, UNLESS OTHERWISE NOTED.
4. IF REINFORCEMENT IS ENCOUNTERED DURING DRILLING INTO CONCRETE OR CMU, ABANDON AND SHIFT THE HOLE LOCATION TO AVOID THE REINFORCEMENT. PROVIDE A MINIMUM OF 2 ANCHOR DIAMETERS OR 1 INCH, WHICHEVER IS LARGER, OF SOUND CONCRETE OR CMU BETWEEN THE DOWEL AND THE ABANDONED HOLE. FILL THE ABANDONED HOLE WITH NON-SHRINK GROUT. IF THE ANCHOR OR DOWEL MAY NOT BE SHIFTED AS NOTED ABOVE, THE STRUCTURAL ENGINEER WILL DETERMINE A NEW LOCATION. (CONCRETE OR CMU).
5. LOCATE REINFORCEMENT AND CONFIRM FINAL ANCHOR LOCATIONS PRIOR TO FABRICATING PLATES, MEMBERS, OR OTHER STEEL ASSEMBLIES ATTACHED WITH MECHANICAL ANCHORS.
6. ANCHORS SHALL BE PROOF-TESTED BY OWNER'S TESTING AND INSPECTION AGENCY.
7. TEST ANCHORS NO SOONER THAN 24 HOURS AFTER INSTALLATION.
8. TEST ACCEPTANCE CRITERIA SHALL BE PER CBC 1433.A.1.4 FOR POST INSTALLED ANCHORS. FIELD TEST SHALL SATISFY FOLLOWING MINIMUM REQUIREMENTS.

   A. HYDRAULIC RAM METHOD:

      ANCHORS TESTED WITH A HYDRAULIC JACK OR SPRING LOADED DEVICES SHALL MAINTAIN THE TEST LOAD FOR A MINIMUM OF 15 SECONDS AND SHALL EXHIBIT NO DISCERNIBLE MOVEMENT DURING THE TENSION TEST E.G., AS EVIDENCED BY LOOSENING OF THE WASHER UNDER THE NUT.

      FOR ADHESIVE ANCHORS, WHERE OTHER THAN BOND IS BEING TESTED, THE TESTING DEVICE SHALL NOT RESTRICT THE CONCRETE SHEAR CONE TYPE FAILURE MECHANISM FROM OCCURING.

   B. TORQUE WRENCH METHOD:

      ANCHORS TESTED WITH A CALIBRATED TORQUE WRENCH MUST ATTAIN THE SPECIFIED TORQUE WITHIN ½ TURN OF THE NUT.

9. WHEN POST-INSTALLED ANCHORS ARE USED FOR OTHER STRUCTURAL APPLICATIONS, ALL ANCHORS SHALL BE TESTED.

   WHEN POST-INSTALLED ANCHORS ARE USED FOR NON-STRUCTURAL APPLICATIONS SUCH AS EQUIPMENT ANCHORAGE, 50 PERCENT OR ALTERNATE BOLTS IN GROUP, INCLUDING AT LEAST ONE-HALF THE ANCHORS IN EACH GROUP, SHALL BE TESTED.

   THE TESTING OF THE POST-INSTALLED ANCHORS SHALL BE DONE IN THE PRESENCE OF THE SPECIAL INSPECTOR AND A REPORT OF THE TEST RESULTS SHALL BE SUBMITTED TO THE ENFORCEMENT AGENCY.

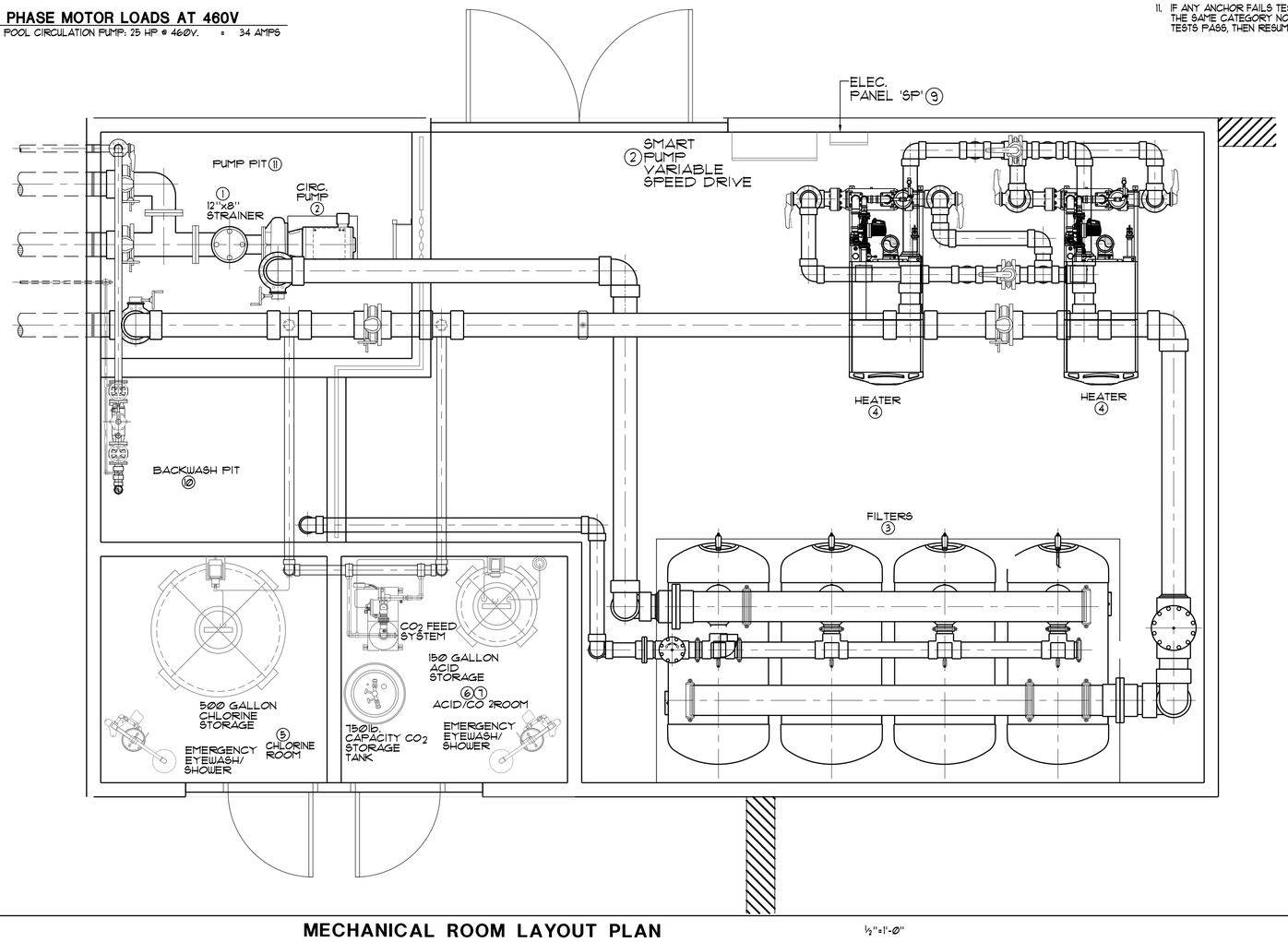
   EXCEPTIONS:

   B. WHERE THE FACTORED DESIGN TENSION ON ANCHORS IS LESS THAN 100 lbs. AND THOSE ANCHORS ARE CLEARLY NOTED ON THE APPROVED CONSTRUCTION DOCUMENTS, ONLY 10 PERCENT OF THOSE ANCHORS SHALL BE TESTED.

10. UNLESS OTHERWISE NOTED, PROVIDE MINIMUM EMBEDMENT OF ANCHORS AS SHOWN IN TABLES BELOW.
11. IF ANY ANCHOR FAILS TESTING, REPLACE ANCHOR AND TEST ALL ANCHORS OF THE SAME CATEGORY NOT PREVIOUSLY TESTED UNTIL TWENTY (20) CONSECUTIVE TESTS PASS, THEN RESUME INITIAL TESTING FREQUENCY.

LEGEND

BV	=	BALL VALVE
BFV	=	BUTTERFLY VALVE
CV	=	CHECK VALVE
FM	=	FLOWMETER
AI	=	ACID INJECTION
CI	=	CHLORINE INJECTION
PH	=	PIPE HANGER (3 MR-1)
FD	=	FLOOR DRAIN
FS	=	FLOOR SINK



(1) **MECHANICAL ROOM LAYOUT PLAN** ½"=1'-Ø"

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5161 California Avenue, Suite 100
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w. lpainc.com e. info@lpainc.com

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20402 Newport Coast Drive
Newport Beach, CA 92657

Developed for
Sage Hill School

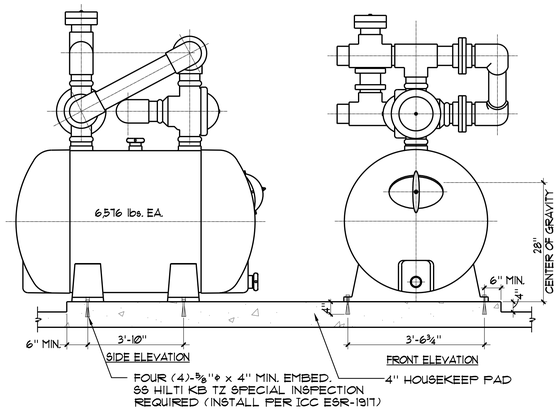
Revision	Date

Submittal	Date

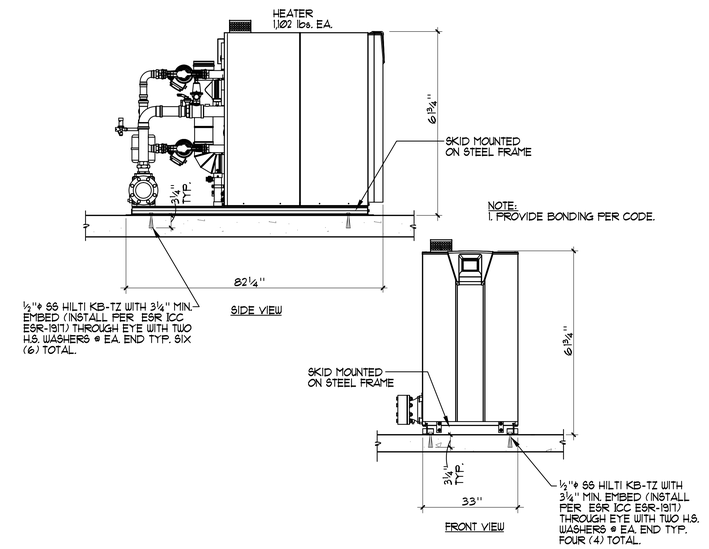
Job. No.	14248.10
Date	SJF
Checked by	SJF
Scale	1/2"=1'-0"

MECHANICAL ROOM LAYOUT PLAN

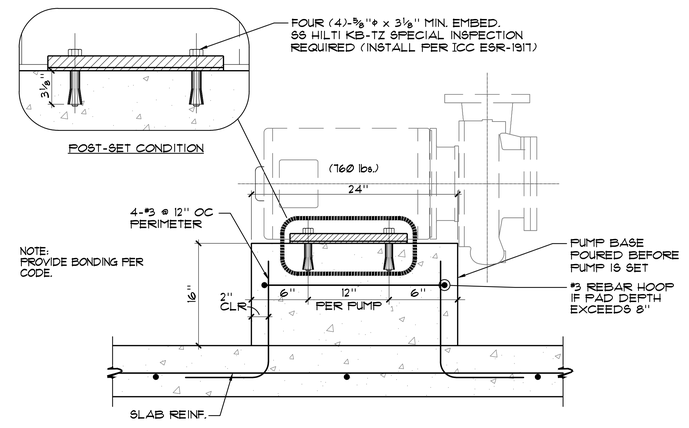
M□-1



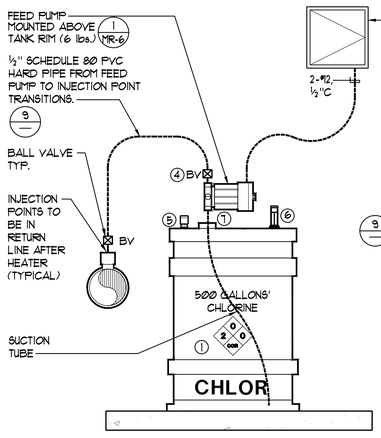
1 FILTER ANCHORAGE NO SCALE



2 HEATER ANCHORAGE NO SCALE



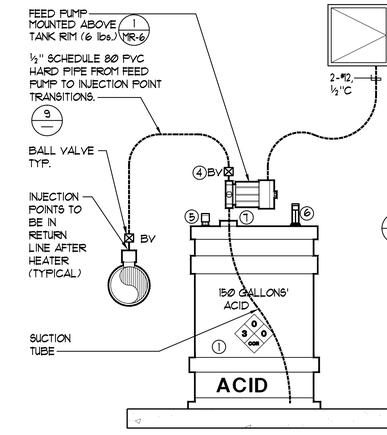
3 PUMP ANCHORAGE NO SCALE



NOTES:

1. ABOVEGROUND STATIONARY TANKS USED FOR THE STORAGE OF HAZARDOUS MATERIALS SHALL BE PLACARDED WITH HAZARD IDENTIFICATION SIGNS AS SPECIFIED IN C.F.C. STANDARD 79-3 FOR THE SPECIFIC MATERIAL CONTAINED. SIGNS SHALL BE DURABLE. THE SIZE, COLOR AND LETTERING SHALL BE IN ACCORDANCE WITH NATIONALLY RECOGNIZED STANDARDS.
2. PIPING, TUBING, VALVES AND RELATED COMPONENTS SHALL BE SEISMIC BRACED.
3. PIPING AND TUBING SHALL BE IDENTIFIED TO INDICATE THE MATERIAL CONVEYED.
4. EMERGENCY SHUTOFF VALVES SHALL BE IDENTIFIED AND THE LOCATION SHALL BE CLEARLY VISIBLE AND INDICATED BY MEANS OF A SIGN.
5. PROVIDE 2" 'CAMLOCK' FILL PORT PER VENDOR'S REQUIREMENTS.
6. 'AT-A-GLANCE' CHEMICAL GUAGE BY KRUEGER SENTRY GAUGE CO. INC.
7. PROVIDE VAPORLOC CAP @ TUBING ENTRANCE
8. PIPING, VALVING AND FITTINGS SHALL COMPLY WITH CFC 2Ø3Ø.2.2

4 SODIUM HYPOCHLORITE FEED SCHEMATIC NO SCALE



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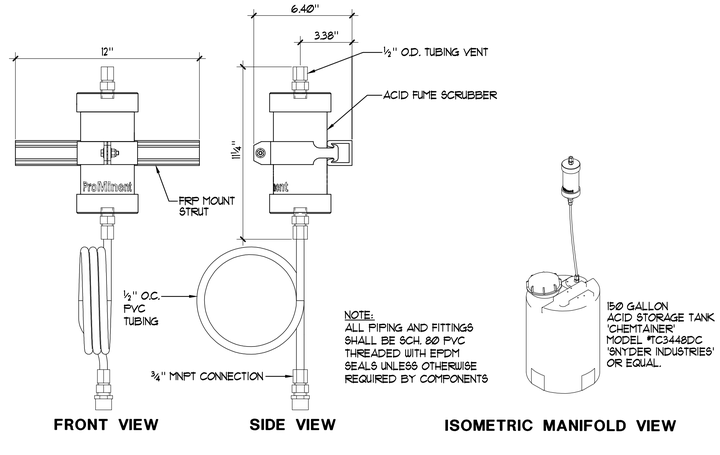
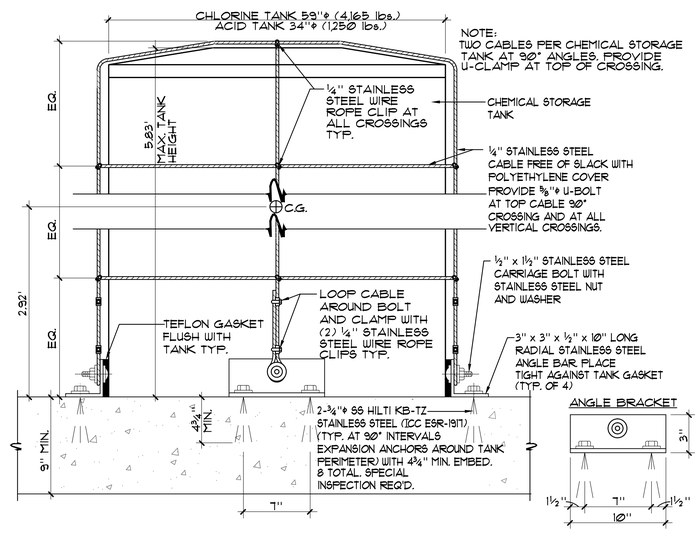
7. PROVIDE VAPORLOC CAP @ TUBING ENTRANCE
8. PIPING, VALVING AND FITTINGS SHALL COMPLY WITH CFC 2Ø3Ø.2.2

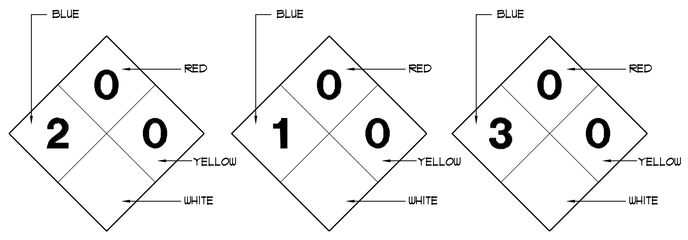
5 MURIATIC ACID FEED SCHEMATIC NO SCALE



6 ACID VAPOR SEPARATOR 3"=1'-Ø"

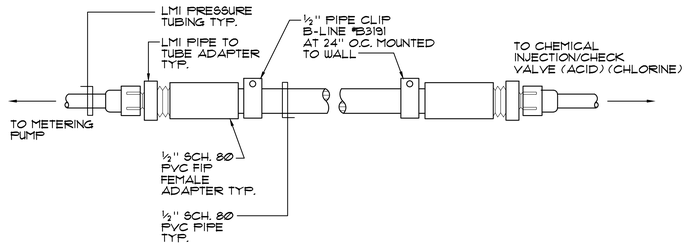


7 CHEMICAL TANK ANCHOR (TYP. 2 TANKS) NO SCALE



NOTE:
SIGNS SHALL BE SIZES AND COLORS PER CODE MOUNTED AT +60" A.F.F. ON DOORS AT CHEMICAL ROOMS.

8 HAZARDOUS INFORMATION SIGNAGE NO SCALE



9 CHEMICAL FEED PIPING DETAIL NO SCALE

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Sage Hill School

Date	
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Date	SJF
Chec: ed by	SJF
Scale	AS NOTED

DETAILS

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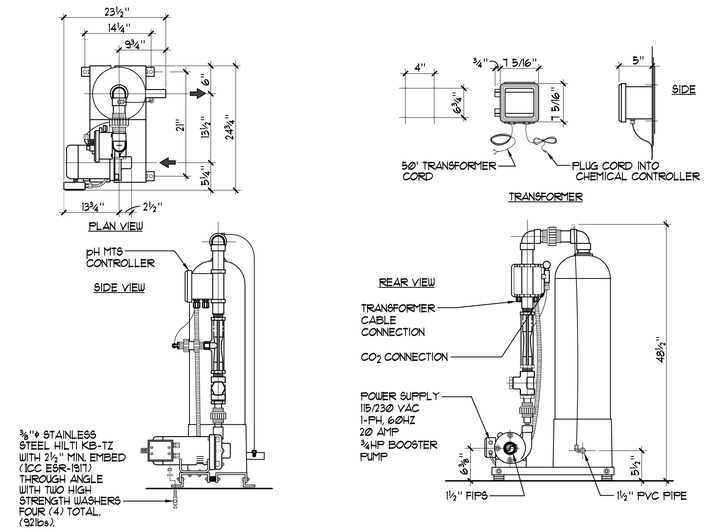
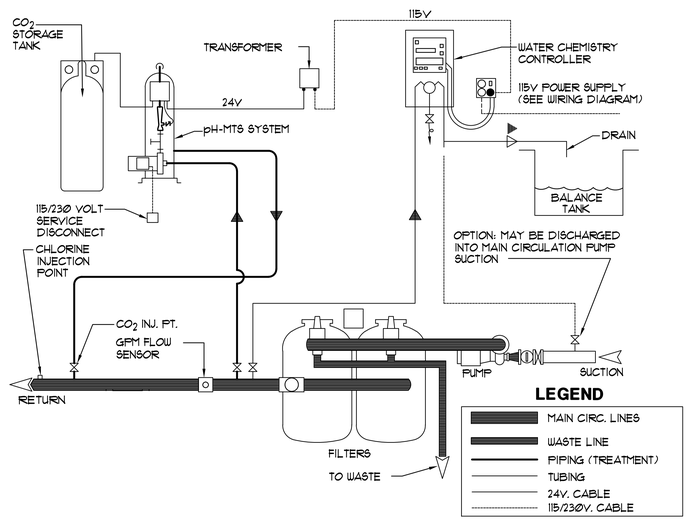


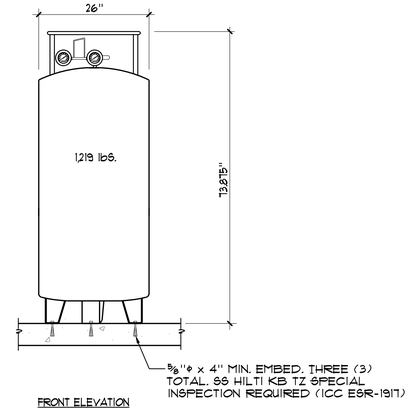
1 CARBON DIOXIDE pH MTS CONTROLLER

NO SCALE



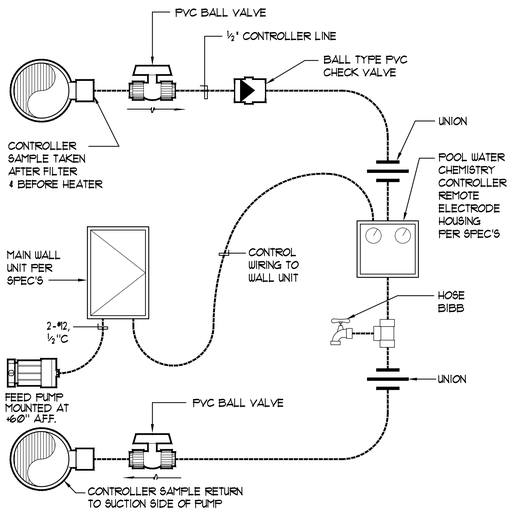
2 TYPICAL CARBON DIOXIDE pH-MTS INSTALLATION

NO SCALE



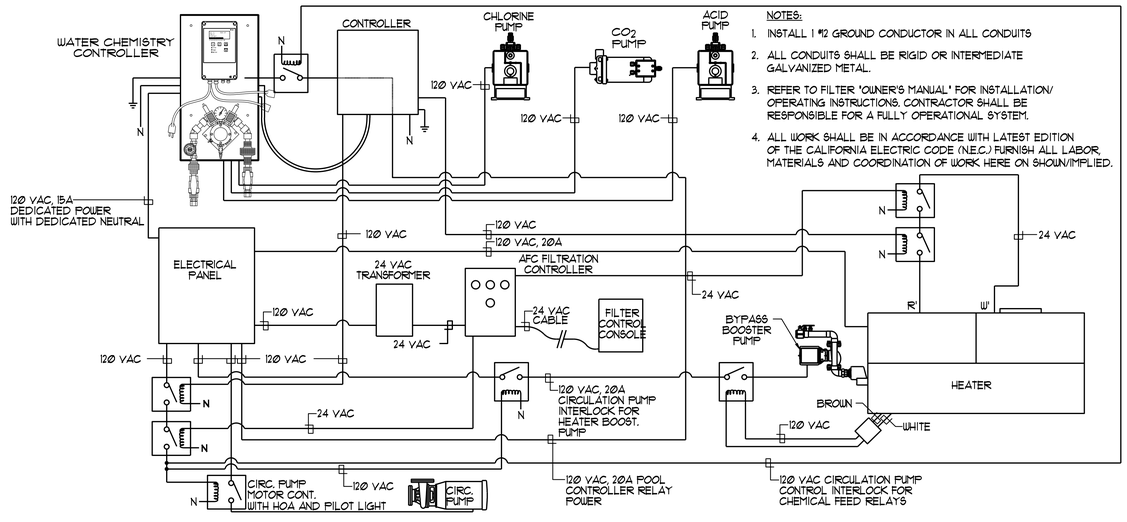
3 CO2 TANK ANCHORAGE DETAIL

AS NOTED



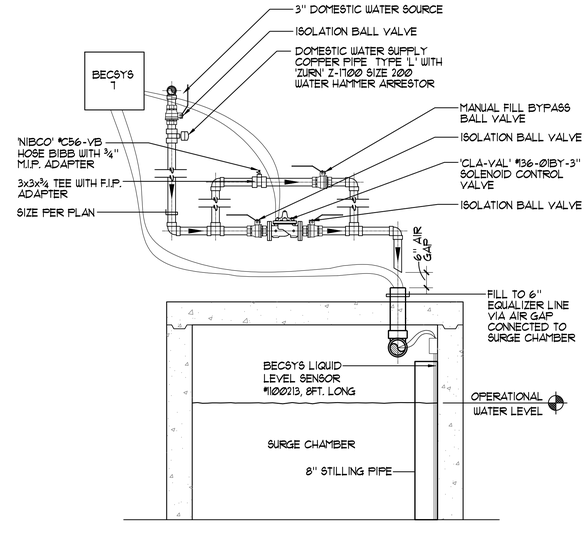
4 WATER CHEMISTRY CONTROLLER SCHEMATIC

NO SCALE



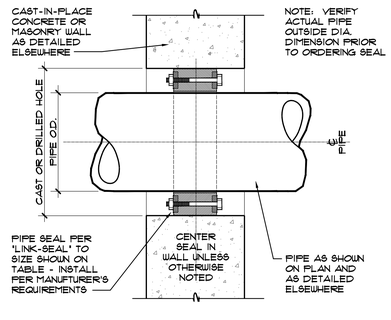
5 POOL MECHANICAL ELECTRICAL INTERCONNECTION DIAGRAM

NO SCALE



7 AUTOMATIC/MANUAL WATER MAKE-UP SCHEMATIC

NO SCALE



PIPE SIZE (NOMINAL)	OUTSIDE DIAMETER (PIPE OD)	CAST/DRILLED CONCRETE HOLE	LINK-SEAL SIZE NO.	NO. OF LINKS PER SEAL
½"	Ø.840	2Ø	LS-1Ø0	4
¾"	1.Ø5Ø	2.5	LS-2T5	5
1"	1.315	3Ø	LS-3Ø0	4
1¼"	1.66Ø	3Ø	LS-2T5	7
1½"	1.9ØØ	3.5	LS-3Ø0	5
2"	2.375	4Ø	LS-3Ø0	6
2½"	2.875	4Ø	LS-2Ø0	9
3"	3.5Ø	5Ø	LS-3Ø0	8
3½"	4.ØØ	6Ø	LS-325	5
4"	4.5Ø	6Ø	LS-3Ø0	1Ø
5"	5.563	8Ø	LS-475	6
6"	6.625	1ØØ	LS-475	1Ø
8"	8.625	12Ø	LS-475	12
1Ø"	1Ø.75	14Ø	LS-4ØØ	1Ø
12"	12.75	16Ø	LS-4ØØ	12
14"	14.ØØ	16Ø	LS-325	15
16"	16.ØØ	18Ø	LS-325	17
18"	18.ØØ	23Ø	LS-5ØØ	16
2Ø"	2Ø.ØØ	25Ø	LS-5ØØ	18
22"	22.ØØ	27Ø	LS-5ØØ	19
24"	24.ØØ	29Ø	LS-5ØØ	21
26"	26.ØØ	31Ø	LS-5ØØ	23
28"	28.ØØ	33Ø	LS-5ØØ	24
3Ø"	3Ø.ØØ	35Ø	LS-5ØØ	26
32"	32.ØØ	37Ø	LS-5ØØ	28
34"	34.ØØ	39Ø	LS-5ØØ	29
36"	36.ØØ	41Ø	LS-5ØØ	3Ø

8 PIPE SEAL TO WALL / FLOOR

NO SCALE

DESIGNATION: 'SP'

VOLTAGE: 120/208V 3PH 4W
100 AMP ☒MAIN BREAKER ☐MAIN LUG
☐RECESSED ☒SURFACE

LOCATION: MECHANICAL EQUIP. RM.
MINIMUM DEVICE ☒10,000 ☐14,000
A.I.C. RATING
PANELBOARD KEY NOTES
① ○ ○ ○

DESCRIPTION:	C/B	CIR NO.	ϕ A	ϕ B	ϕ C	CIR NO.	C/B	DESCRIPTION:
		1				2		
		3				4		
		5				6		
		7				8		
		9				10		
		11				12		
		13				14		
		15				16		
		17				18		
		19				20		
		21				22		
		23				24		
		25				26		
		27				28		
		29				30		
		31				32		
		33				34		
		35				36		
		37				38		
		39				40		
		41				42		
TOTAL PER PHASE						÷ 120v = AMPS		
+ 25% L.C.L.								
TOTAL								

① GFI CIRCUIT

NOTE: REFER TO ELECTRICAL SHEETS FOR ADDITIONAL INFORMATION.

9 PANEL SCHEDULE

NO SCALE

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Developer
Sage Hill School

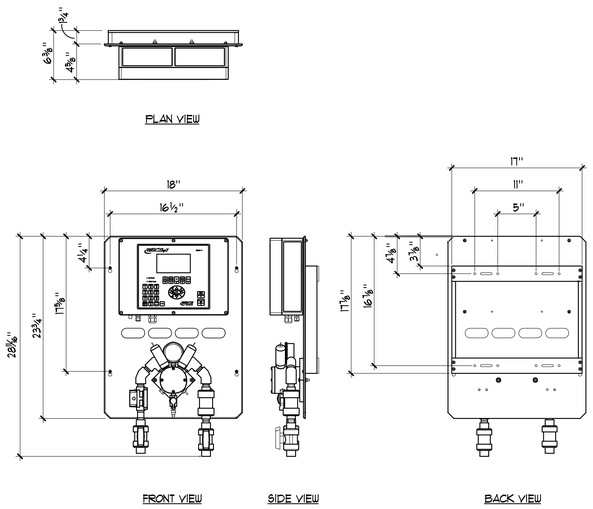
Date	Issue

Date	Submittal

Job. No.	14248.10
Date	SJF
Checked by	SJF
Scale	AS NOTED

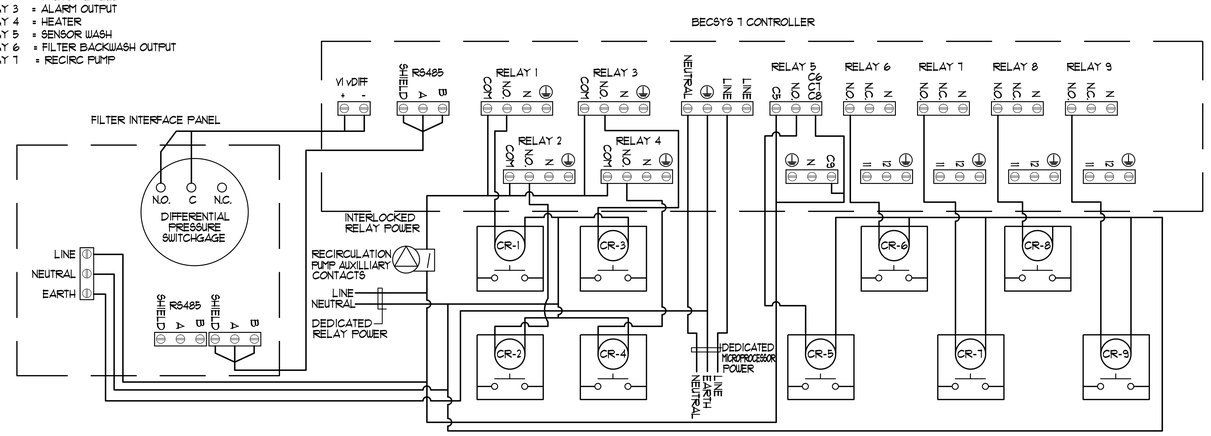
DETAILS

M□-4

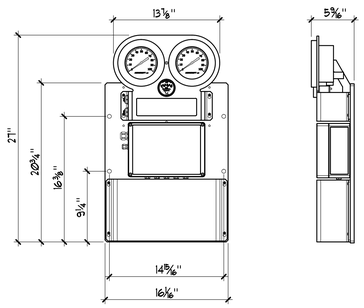


1 BECSYS 7 WATER CHEMISTRY CONTROLLER 1½"=1'-0"

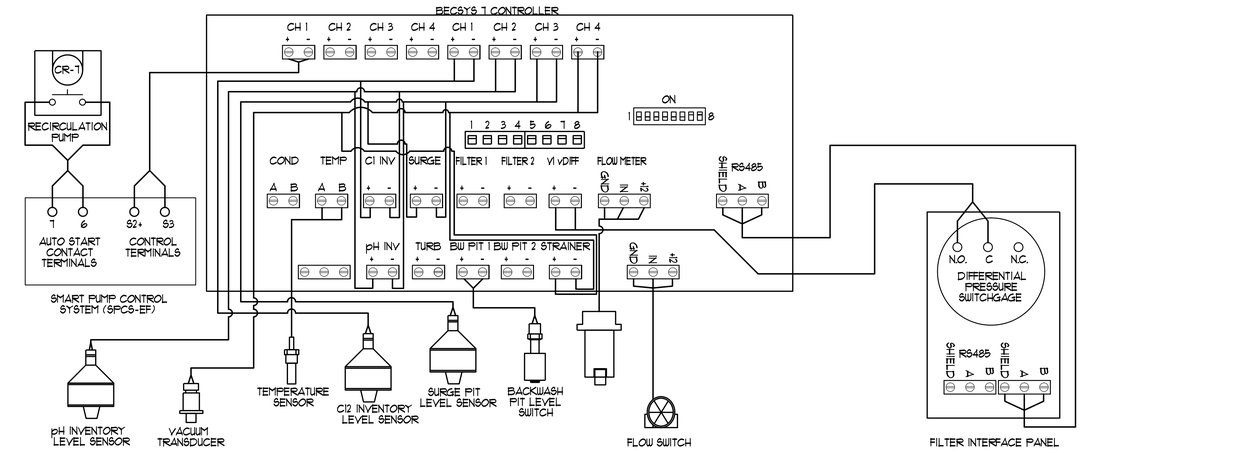
RELAY LEGEND
RELAY 1 = pH FEED
RELAY 2 = CHLORINE FEED
RELAY 3 = ALARM OUTPUT
RELAY 4 = HEATER
RELAY 5 = SENSOR WASH
RELAY 6 = FILTER BACKWASH OUTPUT
RELAY 7 = RECIRC PUMP



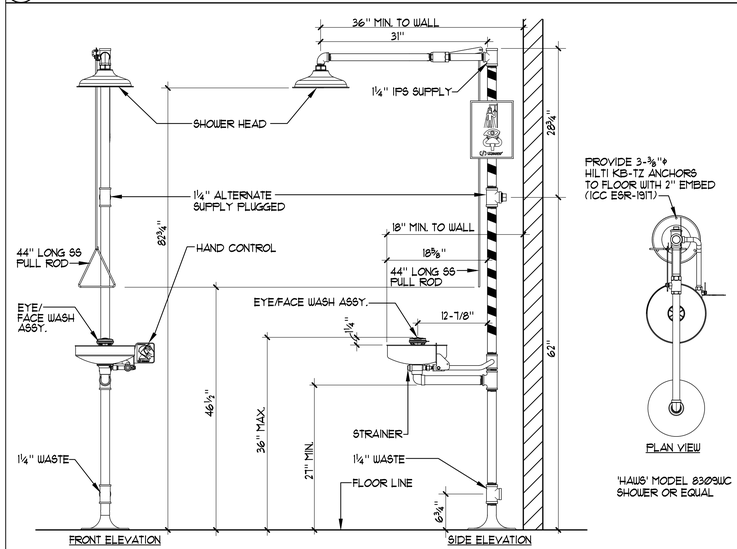
2 BECSYS 7 CONTROLLER NO SCALE



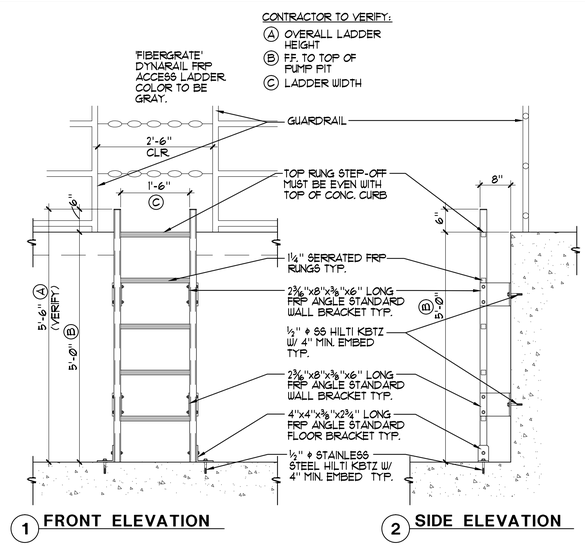
3 BECSYS FILTER INTERFACE SYSTEM 1½"=1'-0"



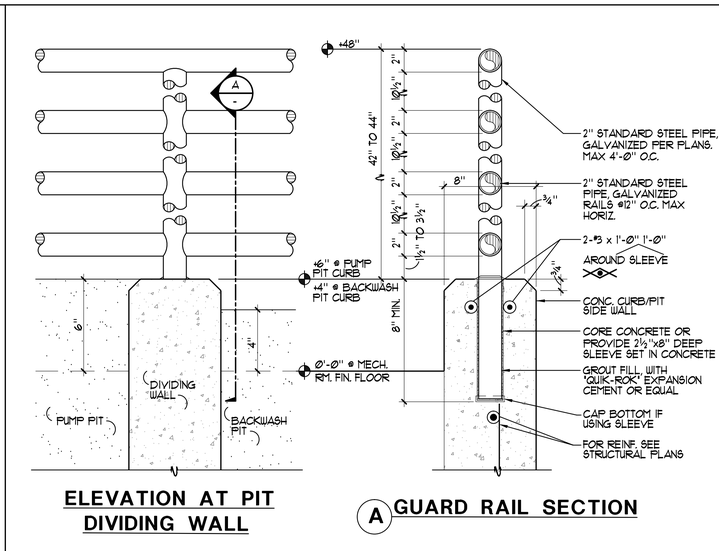
4 BECSYS 7 CONTROLLER NO SCALE



5 TYPICAL EYEWASH/SHOWER DETAIL NO SCALE



6 PUMP PIT ACCESS LADDER ¾"=1'-0"



7 PIT GUARD RAIL 3"=1'-Ø"

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w. lpainc.com e. info@lpainc.com

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Newport Beach, CA 92657

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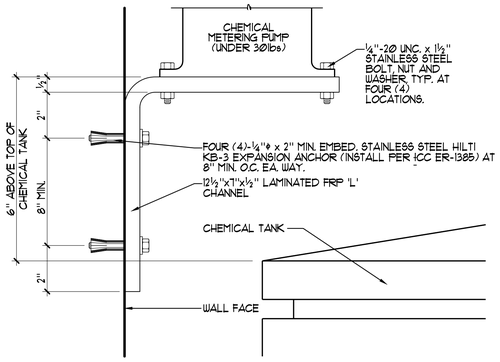
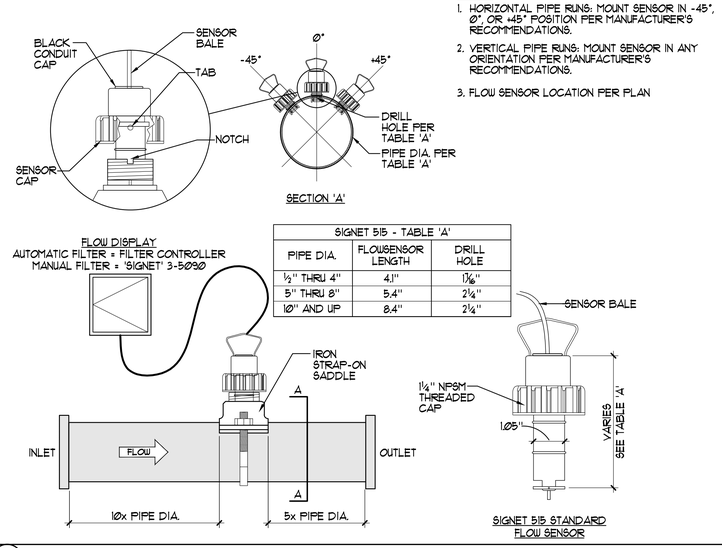
Date	SJF
Chec. ed by	SJF
Scale	AS NOTED

DETAILS

M□-5



1 CHEMICAL PUMP SHELF 6"=1'-0"

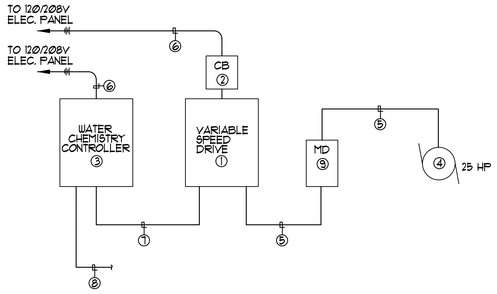


NOTES:
1. HORIZONTAL PIPE RUNS: MOUNT SENSOR IN -45°, Ø°, OR +45° POSITION PER MANUFACTURER'S RECOMMENDATIONS.
2. VERTICAL PIPE RUNS: MOUNT SENSOR IN ANY ORIENTATION PER MANUFACTURER'S RECOMMENDATIONS.
3. FLOW SENSOR LOCATION PER PLAN

SIGNET 515 - TABLE 'A'

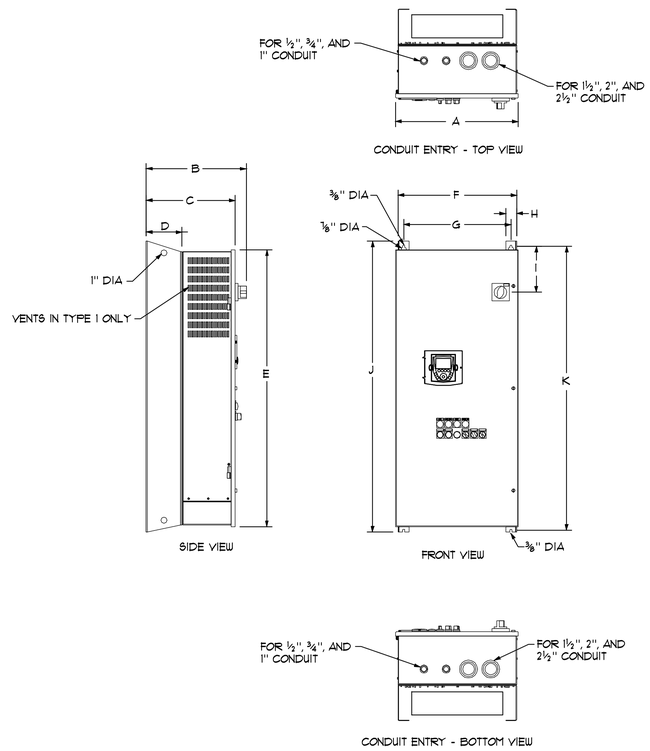
PIPE DIA.	FLOWSENSOR LENGTH	DRILL HOLE
½" THRU 4"	4.1"	1⅞"
5" THRU 8"	5.4"	2⅛"
10" AND UP	8.4"	2⅛"

2 SIGNET FLOWMETER NO SCALE



NOTES:
① VARIABLE SPEED DRIVE MOTOR CONTROL CABINET, SEE PLANS AND SPECIFICATIONS.
② ENCLOSED CIRCUIT BREAKER, SEE SINGLE LINE DIAGRAM.
③ WATER CHEMISTRY/FILTER CONTROL UNIT, SEE PLANS.
④ CONNECT TO CIRCULATION PUMP MOTOR, SEE PLANS.
⑤ MOTOR FEEDERS, SEESINGLE LINE DIAGRAM.
⑥ 120 VOLT BRANCH CIRCUITS, SEE PLANS.
⑦ ¾"C, (4) #12, (1) #12 GND. (120 VOLT CONTROL WIRING)
⑧ 24 VOLT SIGNAL AND SENSOR CABLING, SEE SPECIFICATIONS AND INSTALLATION INSTRUCTIONS FOR ADDITIONAL REQUIREMENTS.
⑨ MOTOR DISCONNECT, SEE PLANS.

3 TYPICAL WIRING SCHEMATIC AT SPCS UNIT NO SCALE

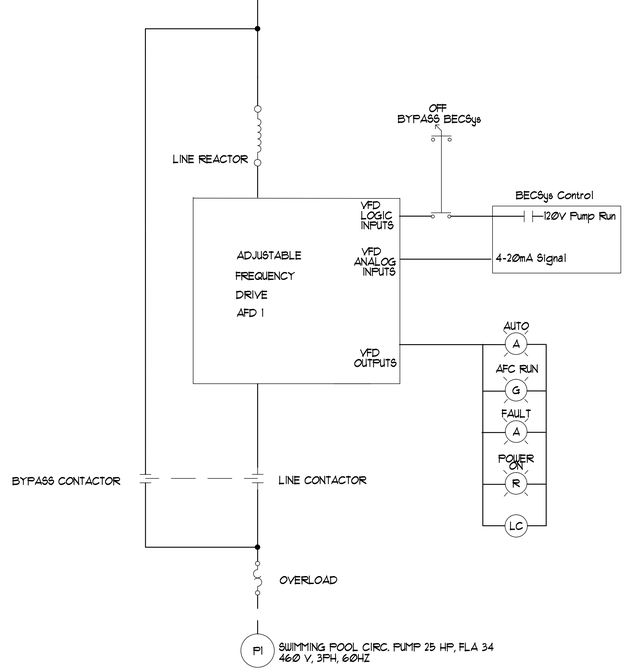


NOTE:
PROVIDE AT LEAST 3" OF MOUNTING CLEARANCE ON EACH SIDE OF THE DRIVE CONTROLLER.
PROVIDE AT LEAST 6" OF MOUNTING CLEARANCE ON EACH TOP AND BOTTOM OF THE DRIVE CONTROLLER

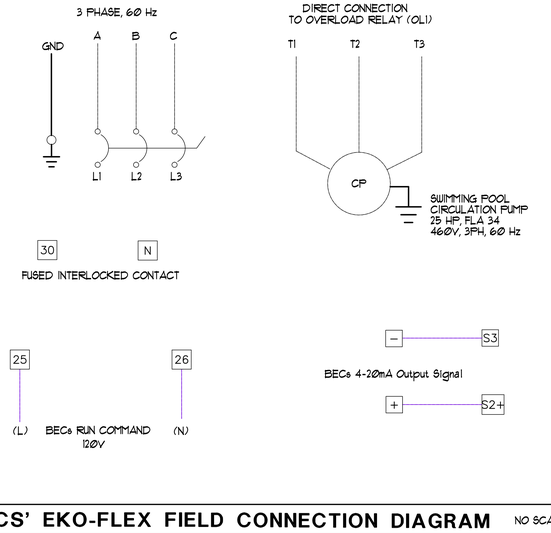
'SPCS' EKO-FLEX SIZING TABLE

HP	HP	WEIGHT	DIMENSIONS										
460V	208/230V	LBS	A	B	C	D	E	F	G	H	I	J	K
1 TO 7.5	1 TO 5	83	14.76"	13.93"	12.08"	3.01"	37.38"	14.25"	12.30"	1.86"	6.11"	35.00"	33.75"
10 TO 25	7.5 TO 10	126	20.00"	13.93"	12.08"	3.01"	38.38"	19.49"	17.54"	1.86"	7.65"	41.00"	39.75"
30 TO 50	15 TO 25	177	20.65"	16.83"	14.83"	6.00"	46.64"	20.00"	18.04"	1.86"	7.75"	49.02"	47.83"
60 TO 100	30 TO 50	211	25.65"	16.83"	14.98"	6.00"	60.38"	25.00"	23.04"	1.86"	15.52"	63.00"	61.81"

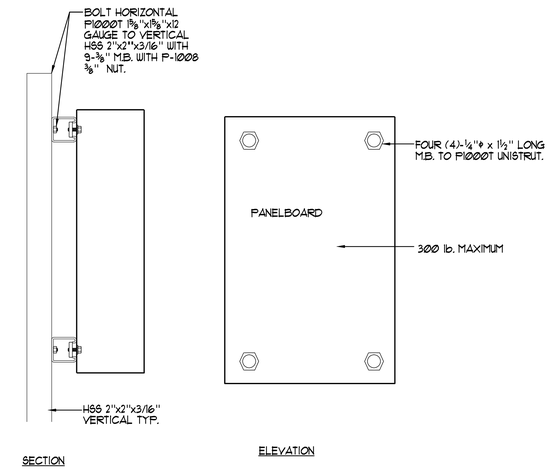
4 'SPCS' EKO-FLEX ENCLOSURE DIMENSIONS NO SCALE



5 'SPCS' EKO-FLEX SINGLE LINE DIAGRAM NO SCALE



6 'SPCS' EKO-FLEX FIELD CONNECTION DIAGRAM NO SCALE



7 VARIABLE FREQUENCY DRIVE PANEL MOUNTING DETAIL NO SCALE

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5161 California Avenue, Suite 100
Irvine, California 92617
p. 949.261.1001 f. 949.261.1190
w. lpainc.com e. info@lpainc.com

LICENSED ARCHITECT SCOTT J. FERRELL C-26222 REN. 12/31/15 STATE OF CALIFORNIA

AQUATIC DESIGN GROUP
2324 FARADAY AVE., CARLSBAD, CA 92008
Tel: 760.438.8400 Fax: 760.438.5251

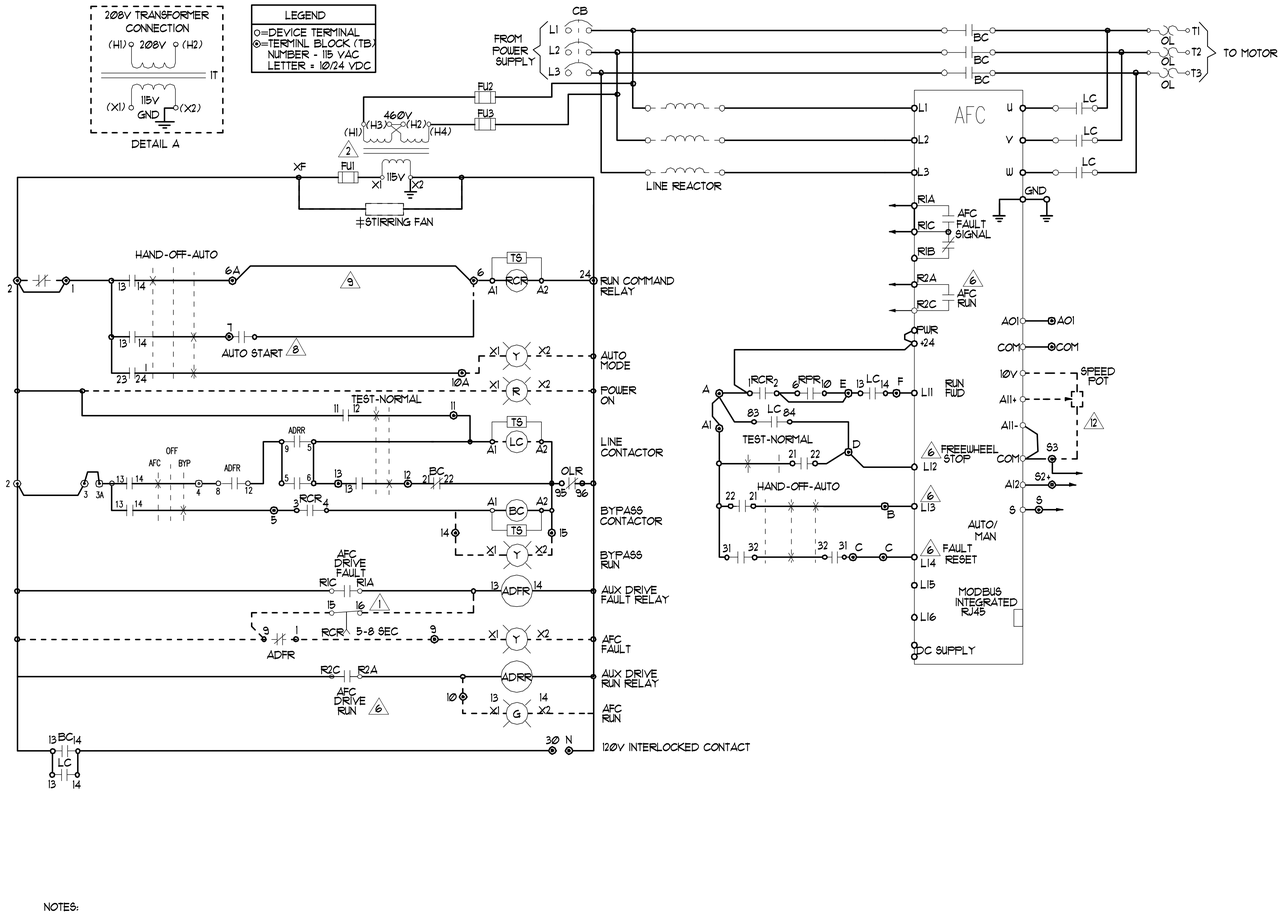
Sage Hill School
Aquatics Center
20402 Newport Coast Drive
Newport Beach, CA 92657

Developed for Sage Hill School

Job No.	14248.10
Date	SJF
Checked by	SJF
Scale	AS NOTED

DETAILS

M-6



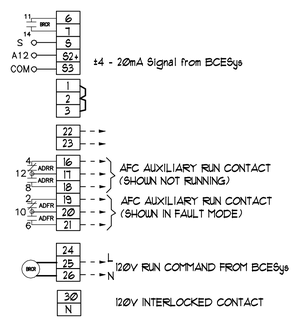
NOTES:

1. RCR TIMED CONTACT USED ONLY IF LINE CONTACTOR IS SUPPLIED
2. CONTROL TRANSFORMER SHOWN FOR 460V PRIMARY. FOR 230V PRIMARY, JUMPER H2-H3 IS REMOVED AND JUMPERS H1-H3, AND H2-H4 ARE INSTALLED. FOR 208V PRIMARY, REFER TO DETAIL A.
6. PROGRAMMED I/O SEE CONTROLLER FUNCTION CONFIGURATION TABLE.
8. BECs RUN COMMAND RELAY (BRCR)
9. JUMPER USED WHEN START-STOP PUSH BUTTONS NOT USED.

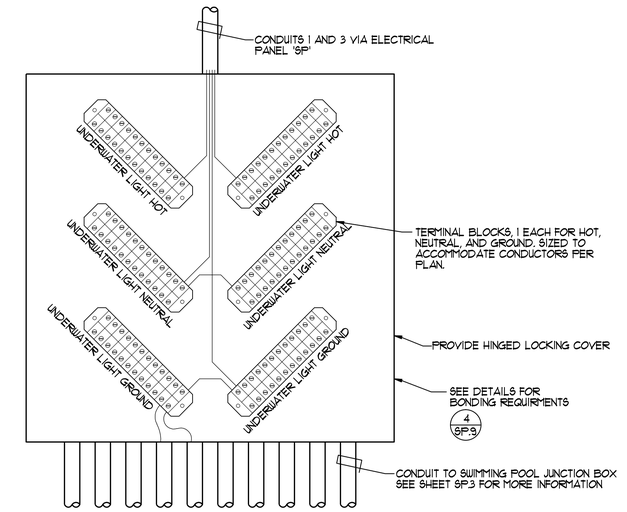
EKO-FLEX ATV61 FACTORY CONFIGURATION

MENU	No	SUB-MENU	DESCRIPTION	CODE	ADJ.
SIM	1.1	----	2/3 WIRE CONTROL	tCC	2C
SIM	1.1	----	PUMPS FANS	CFG	PnF
SIM	1.1	----	STANDARD MOT. FREQ (HZ)	bFr	60
SIM	1.1	----	ACCELERATION (SEC)	ACC	10
SIM	1.1	----	DECELERATION (SEC)	dEC	10
SIM	1.1	----	LOW SPEED (HZ)	LSP	3
SIM	1.3	----	SWITCHING FREQ. (HZ)	SCr	8
I - O	1.5	----	2 WIRE TYPE	tCt	LEL
I - O	1.5	AI2 CONFIG.	AI2 MIN. VALUE (mA)	CrI2	4
I - O	1.5	R2 CONFIG.	R2 ASSIGN - DRIVE RUNNING	r2C	rUn
CtL	1.6	----	REF. 1 CHAN	FRI	HMI
CtL	1.6	----		FRI	AI1
CtL	1.6	----	PROFILE	CHCF	SEP
FUn	1.7	STOP CONFIG.	FREEWHEEL STOP ASSIGN	nST	LI2
FUn	1.7	REFERENCE SWITCH	REF. 1B SWITCHING	rCb	LI3
FUn	1.7	REFERENCE SWITCH	REF. 1B CHAN	Frb	AI2
FLt	1.8	FAULT RESET	FAULT RESET	rSF	LI4
FLt	1.8	CATCH ON THE FLY	CATCH ON THE FLY	FLR	YES
FLt	1.8	OUTPUT PHASE LOSS	OUTPHASE LOSS	OPL	NO
COM	1.9	FORCED LOCAL	FORCED LOCAL ASSIGN.	FLt	LI4

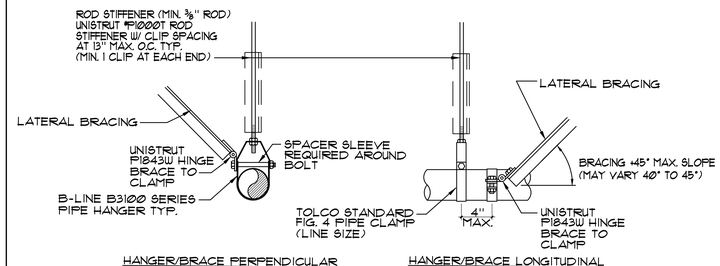
DESCRIPTION	TYPE 1	TYPE 12K	TYPE 3R
‡ STIRRING FANS	10-100 HP 460V, 7.5-50HP 208/230V	10-100 HP 460V, 7.5-50HP 208/230V	NA
‡ VENTILIATION FAN	NA	NA	ALL HP
‡ SPACE HEATER	NA	NA	ALL HP



1 'SPCS' EKO-FLEX VARIABLE FREQUENCY DRIVE SYSTEM SCHEMATIC NO SCALE



2 UNDERWATER LIGHT CONTACTOR PANEL NO SCALE



NOTE:
REFER TO STRUCTURAL DRAWINGS FOR RODS, STIFFENERS AND BRACING TO . ROOF STRUCTURAL SYSTEMS.

NOTES:

1. SIZE HANGER AND CLAMP TO ADEQUATELY SUPPORT LOAD
2. FOR COPPER TUBING USE COPPER PLATED OR PAINTED B3104CT, FELT LINED B3100F, OR PLASTIC COATED B3100C.
3. PROVIDE BRACING FOR EACH PIPE RUN IN TWO DIRECTIONS.

3 'UNISTRUT' PIPING HANGER/SUPPORT DETAILS NO SCALE

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Irvine, California 92617
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w. lpainc.com e. info@lpainc.com

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Developed for Sage Hill School

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DETAILS

M□-7

ABBREVIATIONS

4S/DP	4" SQUARE BY 2 1/8" DEEP BOX	LTG, LTS	LIGHTING
ADA	AMERICAN WITH DISABILITIES ACT	LPS	LOW PRESSURE SODIUM
A.F.F.	ABOVE FINISH FLOOR	MAX.	MAXIMUM
A.F.G.	ABOVE FINISH GRADE	MDF	MAIN DISTRIBUTION FRAME
AWG	AMERICAN WIRE GAUGE	MOCP	MAXIMUM OVERCURRENT PROTECTION
AMP, A	AMPERE	MCB	MAIN CIRCUIT BREAKER
A.I.C.	AMPERES INTERRUPTING CAPACITY (SYMMETRICAL)	MLO	MAIN LUGS ONLY
		M.C.	MECHANICAL CONTRACTOR
AF/AT	AMP FRAME, AMP TRIP	M	METER
AHJ	AUTHORITY HAVING JURISDICTION	M/M	METER MAIN
AS/AF	AMP SWITCH, AMP FUSE	MV	MERCURY VAPOR
ATS	AUTOMATIC TRANSFER SWITCH	MH	METAL HALIDE
AVG	AVERAGE	MIN.	MINIMUM
BDF	BUILDING DISTRIBUTION FRAME	MCA	MINIMUM CIRCUIT AMPS
BR	BRANCH	MCC	MOTOR CONTROL CENTER
BLDG	BUILDING	MCM	THOUSAND CIRCULAR MILS
CEC	CALIFORNIA ELECTRICAL CODE	MCP	MOTOR CIRCUIT PROTECTOR
CIRC., CKT.	CIRCUIT	MFR.	MANUFACTURER
CB	CIRCUIT BREAKER	MTD	MOUNTED
CSFD	COMBINATION SMOKE FIRE DAMPER	MW	MICROWAVE
C	CONDUIT	N	NEW EQUIP.
C.O.	CONDUIT ONLY, COMPLETE WITH PULLSTRING	NATS	NON AUTOMATIC DISCONNECT
		NEC	NATIONAL ELECTRICAL CODE
CONN	CONNECTED	NEMA	NATIONAL ELECTRICAL MANUFACTURERS' ASSOCIATION
CPT	CONTROL POWER TRANSFORMER		
CLCB	CURRENT LIMITING CIRCUIT BREAKER	NC	NORMALLY CLOSED
CLF	CURRENT LIMITING FUSE	NO	NORMALLY OPENED
CT	CURRENT TRANSFORMER	NF	NON-FUSED
DIA	DIAMETER	NIC	NOT IN CONTRACT
DISC	DISCONNECT	N.T.S.	NOT TO SCALE
DIST	DISTRIBUTION	NL	NIGHT LIGHT
E	EXISTING EQUIP. TO REMAIN	NO. or #	NUMBER
E.C.	ELECTRICAL CONTRACTOR	OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED.
EMS	ENERGY MANAGEMENT CONTROL SYSTEM	%Z	PERCENT IMPEDANCE
EMT	ELECTRICAL METALLIC TUBING	PH. or ~	PHASE
ENT	ELECTRICAL NON-METALLIC TUBING	PC	PHOTOCELL
EWC	ELECTRIC WATER COOLER	P.C.	PLUMBING CONTRACTOR
E.P.O.	EMERGENCY POWER OFF	P	POLE
E-O-L	END-OF-LINE CIRCUIT TERMINATOR.	PVC	POLY VINYL CHLORIDE
EF	EXHAUST FAN	PDU	POWER DISTRIBUTION UNIT
E/G	EQUIPMENT GROUND (GREEN)	PRIMARY	OVER 600 VOLTS
EP	EXPLOSION PROOF	PROVIDE	FURNISH, INSTALL AND CONNECT.
ER*	EXISTING EQUIP. TO BE REOLCATED (* CORRESPONDS TO NEW LOCATION)	PT	POTENTIAL TRANSFORMER
		PA	PUBLIC ADDRESS
ERT*	NEW LOCATION FOR REOLCATED EQUIP. (* CORRESPONDS TO PREVIOUS LOCATION)	REC, RECEPT	RECEPTACLE
		REF	REFRIGERATOR
FT or '	FEET	RGS	RIGID GALVANIZED STEEL
FA	FIRE ALARM	RMS	ROOT MEAN SQUARE
FLA	FULL LOAD AMPS	SCC	SHORT CIRCUIT CURRENT
GRD	GROUND	SCS	STRUCTURED CABLING SYSTEM
GFCI	GROUND FAULT CIRCUIT INTERRUPTER.	SFD	SMOKE FIRE DAMPER
GFP	GROUND FAULT PROTECTION	SECONDARY	600 VOLTS AND LESS
GEC	GROUNDING ELECTRODE CONDUCTOR	SMACNA	SHEET METAL & AIR COND. CONTRACTORS' NAT'L ASSOC.
HACR	HEATING AIR CONDITIONING REFRIGERATION	SQ.	SQUARE
HOA	HAND-OFF-AUTO	TC	TIMECLOCK
HVAC	HEATING, VENTILATING AND AIR CONDITIONING	TEL/DATA	TELEPHONE AND DATA
		TV	TELEVISION
H.,W.,D.,L.	HEIGHT, WIDTH, DEPTH, LENGTH	T.V.S.S.	TRANSIENT VOLTAGE SURGE SUPPRESSION
HID	HIGH INTENSITY DISCHARGE		
HP	HORSEPOWER	TYP	TYPICAL
HPS	HIGH PRESSURE SODIUM	U.G.P.S.	UNDERGROUND PULL SECTION
IN. or "	INCHES	U.O.N.	UNLESS OTHERWISE NOTED
I/G	ISOLATED GROUND	U.P.S.	UNINTERRUPTABLE POWER SYSTEM
IDF	INTERMEDIATE DISTRIBUTION FRAME	VAV	VARIABLE AIR VOLUME
JBOX	JUNCTION BOX	V	VOLTS
K	DEGREE KELVIN	VA	VOLT AMPERES
KCMIL	THOUSAND CIRCULAR MILS	VD	VOLTAGE DROP
KVA	KILOVOLT AMPERES	WP	WEATHERPROOF
KW	KILOWATT	W	WIRE
KWH	KILOWATT HOUR	XFMR	TRANSFORMER
LCL	LONG CONTINUOUS LOAD	XX	EXISTING EQUIP. TO BE DEMO'D
L.F.	LINEAR FEET		

LOW VOLTAGE SYSTEM SYMBOLS

NOTE: ELECTRICAL CONTRACTOR TO REFERENCE LOW VOLTAGE TELEPHONE/DATA, SECURITY, AND A/V PLAN FOR ADDITIONAL LOW VOLTAGE DEVICE LOCATIONS, ROUGH-IN REQUIRMENTS, CONDUIT/INFRASTRUCTURE REQUIREMENTS, AND ALL OTHER REQUIREMENTS FOR COMPLETE AND OPERTIONAL SYSTEM.

FLOOR BOX / SPECIALTY WALL BOX SYMBOLS

SINGLE SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE SPECIFICATIONS FOR MORE INFORMATION.

TWO SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE SPECIFICATIONS FOR MORE INFORMATION.

THREE SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE SPECIFICATIONS FOR MORE INFORMATION.

FOUR SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE SPECIFICATIONS FOR MORE INFORMATION.

SIX SERVICE IN FLOOR BOX. PROVIDE DEVICES PER PLAN. SEE SPECIFICATIONS FOR MORE INFORMATION.

ANNOTATIONS

EF / 2 — MECHANICAL EQUIPMENT CALLOUT, "AC" INDICATES UNIT TYPE AND "2" INDICATES UNIT NUMBER. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION AND ELECTRICAL REQUIREMENTS.

3 / E-1 — DETAIL CALLOUT, "3" INDICATES DETAIL NUMBER "E-1" INDICATES SHEET NUMBER.

FR1 — LIGHTING FIXTURE DESIGNATION

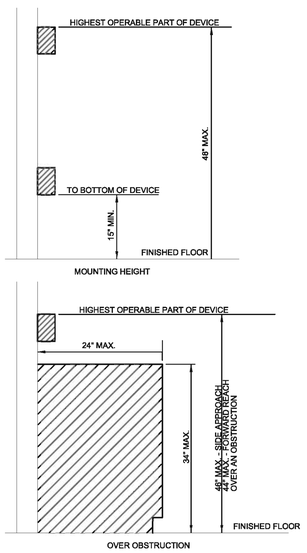
X — PLAN NOTE REFERENCE, REFER TO NOTES ON SHEET, OR AS DIRECTED.

1 — REVISION REFERENCE.

WYE CONFIGURATION — DELTA CONFIGURATION

GROUND

ADA DEVICE MOUNTING DETAIL



LIGHTING SYMBOLS

A — DECORATIVE PENDANT "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

A — SURFACE MOUNTED FLUORESCENT STRIP LIGHTING FIXTURE. "EM" AND/OR SHADED CONNECTION POINT INDICATES FIXTURE WITH EMERGENCY BATTERY PACK (MINIMUM 1100 LUMEN OUTPUT). "NL" INDICATES FIXTURE ON NIGHT LIGHT CIRCUIT. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

A — CHAIN HUNG FLUORESCENT STRIP LIGHTING FIXTURE. MOUNTING HEIGHT TO BE AS INDICATED ON FIXTURE SCHEDULE. "EM" AND/OR SHADED CONNECTION POINT INDICATES FIXTURE WITH EMERGENCY BATTERY PACK (MINIMUM 1100 LUMEN OUTPUT). "NL" INDICATES FIXTURE ON NIGHT LIGHT CIRCUIT. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

A — DECORATIVE SURFACE MOUNTED FLUORESCENT LIGHTING FIXTURE. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

A — SURFACE MOUNTED FLUORESCENT WRAPAROUND TYPE LIGHTING FIXTURE. "NL" INDICATES FIXTURE ON NIGHT LIGHT CIRCUIT. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

A A — RECESSED FLUORESCENT LIGHTING FIXTURE. "NL" INDICATES FIXTURE ON NIGHT LIGHT CIRCUIT. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

A A — RECESSED DIRECT/ INDIRECT LIGHT FIXTURE. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

A — RECESSED LINEAR LED/ FLUORESCENT LIGHTING FIXTURE. "NL" INDICATES FIXTURE ON NIGHT LIGHT CIRCUIT. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

A — PENDANT LINEAR LED/ FLUORESCENT LIGHTING FIXTURE. "NL" INDICATES FIXTURE ON NIGHT LIGHT CIRCUIT. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

A — RECESSED LINEAR LED/ FLUORESCENT ASYMMETRICAL LIGHTING FIXTURE. "NL" INDICATES FIXTURE ON NIGHT LIGHT CIRCUIT. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

A A A — RECESSED OR SURFACED MOUNTED DOWN LIGHTING FIXTURE. "NL" INDICATES FIXTURE ON NIGHT LIGHT CIRCUIT. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

A A A — RECESSED WALLWASHER LIGHTING FIXTURE. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

A A A — RECESSED ADJUSTABLE WALLWASHER LIGHTING FIXTURE. "A" INDICATES BALLAST APECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

A A A — SURFACE MOUNTED DOWNLIGHT. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

A A A — WALL MOUNTED LIGHTING FIXTURE. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

A — SINGLE OR TWO CKT. LIGHTING TRACK AS SPEC'D IN LTG. FIXTURE SCHEDULE. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

A — SURFACE MOUNTED ADJUSTABLE LINEAR WALLWASHER. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

A — CONCEALED LINEAR LIGHT STRIP. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

A — CONCEALED LIGHT STRIP. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

A — RECESSED MULTI-LAMP ADJUSTABLE DOWNLIGHT. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

A — WALL STEP LIGHTING FIXTURE. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

A A A — BOLLARD TYPE LIGHTING FIXTURE. PROVIDE CONCRETE FOOTING PER MFGRS. REQUIREMENTS. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

A — LANDSCAPE FLOOD LIGHTING FIXTURE. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

A — POLE MOUNTED H.I.D. LIGHTING FIXTURE. "A" INDICATES BALLAST SPECIFICATION. SEE BALLAST SCHEDULE ON SHEET E0.40

ILLUMINATED EXIT SIGN WITH NUMBER OF FACES AND DIRECTION OF EGRESS ARROWS AS INDICATED.

LOW LEVEL EXIT SIGN AS SPECIFIED ON LIGHTING FIXTURE SCHEDULE.

EGRESS EMERGENCY BATTERY PACK LIGHT FIXTURE (BUGEYE).

"EM" AND/OR SHADED CONNECTION POINT INDICATES FIXTURE WITH EMERGENCY BATTERY PACK (MINIMUM 1100 LUMEN OUTPUT) OR FIXTURE ON EMERGENCY INVERTER.

OCCUPANCY SENSORS

IO — WALL MOUNTED INFRA-RED OCCUPANCY SENSOR. USE WATTSTOPPER "WI 200" FOR SINGLE SWITCH AND "WI 300" FOR "ab" SWITCHING OR EQUAL. MOUNTING HEIGHT PER ADA MOUNTING DETAIL THIS SHEET - UON OR REQUIRED.

DO — WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR. USE WATTSTOPPER "DT 200" WITH POWER PACK OR EQUAL. MOUNTING HEIGHT PER ADA MOUNTING DETAIL THIS SHEET - UON OR REQUIRED.

IG ab — VACANCY SENSOR (MANUAL ON), MOUNTING HEIGHT PER ADA MOUNTING DETAIL THIS SHEET - UON OR REQUIRED. LETTERS "ab" INDICATES DUAL RELAY SENSOR. BOTH SWITCH LEGS TO BE CONFIGURED IN A "MANUAL ON" CONFIGURATION.

IUO ab — WALL MOUNTED ULTRASONIC OCCUPANCY SENSOR. LETTERS "ab" INDICATES DUAL RELAY SENSOR. MOUNTING HEIGHT PER ADA MOUNTING DETAIL THIS SHEET - UON OR REQUIRED.

OS m — CEILING MOUNTED OCCUPANCY SENSOR. "m" INDICATES WATTSTOPPER "DT" SENSOR (OR EQUAL) WITH POWER PACK AND HVAC CONTROL RELAY. "s" INDICATES SATELLITE SENSOR.

(50) D x* — AUTOMATIC CONTINUOUS DIMMING DAYLIGHTING CONTROLLER USED TO DIM LIGHTS WHEN SUFFICIENT NATURAL LIGHT IS PRESENT. NUMBER IN PARENTHESIS INDICATES THE AVERAGE WORKPLANE "TARGET ILLUMINATION" SYMBOL VALUE. ADJACENT LOWER CASE LETTERS "x*" INDICATES SWITCH LEG(S) CONTROLLED.

LV — LOW VOLTAGE (LV) WIRING BETWEEN OCCUPANCY, DAYLIGHT SENSORS, AND/OR LV SWITCHES. QUANTITY AND SPECIFICATIONS OF WIRE PER MANUFACTURER REQUIREMENTS.

POWER SYMBOLS

DUPLEX RECEPTACLE - MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS OR AS NOTED.

DOUBLE DUPLEX RECEPTACLE, MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS OR AS NOTED.

DUPLEX, GFCI RECEPTACLE, MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS OR AS NOTED. WP INDICATES WEATHERPROOF, REFER TO THE GENERAL PRODUCT SPECIFICATIONS.

DOUBLE DUPLEX, GFCI RECEPTACLE, MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS OR AS NOTED. WP INDICATES WEATHERPROOF, REFER TO THE GENERAL PRODUCT SPECIFICATIONS.

DEDICATED 20A, DUPLEX RECEPTACLE, MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS OR AS NOTED.

DUPLEX RECEPTACLE WITH USB - MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS OR AS NOTED.

DOUBLE DUPLEX RECEPTACLE WITH USB - MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS OR AS NOTED.

SIMPLEX RECEPTACLE, MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS OR AS NOTED.

SPECIAL RECEPTACLE, MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS OR AS NOTED. REFER TO PLAN NOTES.

DUPLEX RECEPTACLE FLUSH IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.

DOUBLE DUPLEX RECEPTACLE FLUSH IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.

SIMPLEX RECEPTACLE FLUSH IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.

SPECIAL RECEPTACLE FLUSH IN CEILING - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.

DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER, MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS - UON OR REQUIRED.

DOUBLE DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER, MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS - UON OR REQUIRED.

DUPLEX, GFCI RECEPTACLE MOUNTED ABOVE COUNTER, MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS - UON OR REQUIRED. WP INDICATES WEATHERPROOF, REFER TO THE GENERAL PRODUCT SPECIFICATIONS.

DOUBLE DUPLEX, GFCI RECEPTACLE MOUNTED ABOVE COUNTER, MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS - UON OR REQUIRED. WP INDICATES WEATHERPROOF, REFER TO THE GENERAL PRODUCT SPECIFICATIONS.

SIMPLEX RECEPTACLE MOUNTED ABOVE COUNTER, MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS - UON OR REQUIRED.

SPECIAL RECEPTACLE MOUNTED ABOVE COUNTER, MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS - UON OR REQUIRED.

WALL MOUNTED JUNCTION BOX. MOUNTING HEIGHT AS NOTED. 4S/DP MINIMUM OR AS REQUIRED BY N.E.C..

JUNCTION BOX, MOUNTED IN ACCESSIBLE CEILING FOR APPLICATION DENOTED ON PLAN. 4S/DP MINIMUM OR AS REQUIRED BY N.E.C..

W — ELECTRICAL CONNECTION TO INTERACTIVE MARKER-BOARD. COORDINATE CONNECTION TYPE AND REQUIREMENTS WITH MANUFACTURER'S INSTALLATION GUIDES. VERIFY MOUNTING LOCATION AND HEIGHT WITH ARCHITECT AND DISTRICT EQUIPMENT INSTALLER PRIOR TO ROUGH-IN OF ELECTRICAL.

SURFACE MOUNTED MULTI-OUTLET ASSEMBLY. REFER TO GENERAL PRODUCT SPECIFICATIONS. PROVIDE ALL COMPONENTS NECESSARY FOR A COMPLETE INSTALLATION.

T — THERMOSTAT OUTLET BOX, PROVIDE 1/2"C.O. TO RESPECTIVE MECHANICAL UNIT.

3 — EXHAUST FAN, OR MOTOR LOAD. REFER TO MECHANICAL, PLUMBING OR KITCHEN DRAWINGS FOR SPECIFIC LOAD REQUIREMENTS OR AS NOTED.

FLUSH MOUNTED ELECTRICAL PANELBOARD OR LOAD CENTER. REFER TO PANEL SCHEDULE.

SURFACE MOUNTED ELECTRICAL PANELBOARD OR LOAD CENTER. REFER TO PANEL SCHEDULE.

DISTRIBUTION SWITCHBOARD. REFER TO SINGLE LINE DIAGRAM.

T — TRANSFORMER, REFER TO SINGLE LINE DIAGRAM.

F — FUSED DISCONNECT SWITCH, HP RATED, OR COMBINATION MOTOR STARTER/DISCONNECT SWITCH WITH FUSES PER EQUIPMENT MANUFACTURER AND WEATHERPROOF AS REQUIRED. PROVIDE FINAL CONNECTION TO UNIT EQUIPMENT. SEE MOTORIZED EQUIPMENT SCHEDULE FOR DISCONNECT AND STARTER SIZES.

MOTOR STARTER COMBINATION SWITCH WITH HOA SELECTOR SWITCH, ON "RUNNING LIGHT" RESET AND OVERLOAD PROTECTION.

NON-FUSED DISCONNECT SWITCH, HP RATED AND WEATHERPROOF AS REQUIRED. PROVIDE FINAL CONNECTION TO UNIT EQUIPMENT. SEE MOTORIZED EQUIPMENT SCHEDULE FOR DISCONNECT SIZES.

M CT. — UTILITY COMPANY METER. PROVIDE "CTs" AND "PTs" AS REQUIRED, REFER TO SINGLE LINE DIAGRAM.

1 / 150AF 150AT 3P — CIRCUIT BREAKER, LINE 1 REPRESENTS FRAME SIZE/RATING; LINE 2 REPRESENTS TRIP SIZE/RATING; LINE 3 REPRESENTS NUMBER OF POLES AND LINE 4 REPRESENTS MISCELLANEOUS BREAKER INFO. (SEE BELOW):
SHUNT = PROVIDE SHUNT TRIP MECHANISM.
HACR = PROVIDE HACR-RATED BREAKER.
GFP = GROUND FAULT PROTECTION
CLCB = CURRENT LIMITING CIRCUIT BREAKER
SS = PROVIDE SOLID STATE CIRCUIT BREAKER

60AS 3P / 50AF CLASS J — FUSIBLE SWITCH: LINE 1 REPRESENTS SWITCH SIZE/RATING; LINE 2 REPRESENTS NUMBER OF POLES; LINE 3 REPRESENTS FUSE SIZE/RATING; LINE 4 REPRESENTS FUSE TYPE; LINE 5 REPRESENTS MISCELLANEOUS FUSE INFO. (SEE BELOW):
SHUNT= PROVIDE SHUNT TRIP MECHANISM.
GFP = GROUND FAULT PROTECTION
CLF = CURRENT LIMITING FUSE

GROUND CONNECTION, SIZE AS INDICATED OR AS REQUIRED.

3 / ab — SINGLE POLE SWITCHES, MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS. SUBSCRIPTS AT SYMBOL INDICATE THE FOLLOWING:
2 - DOUBLE POLE
3 - THREE WAY
4 - FOUR WAY
D - LOW VOLTAGE DIMMER
K - KEY OPERATED
LV - LOW VOLTAGE
M - MOTOR STARTING
P - PILOT LIGHT
R - REMOTE CONTROL

NOTE: ALL WALL SWITCHES CONTROLLING EMERGENCY CIRCUITS SHALL BE ENGRAVED WITH "EMERGENCY"

PB OR P — PULLBOX, SIZED PER N.E.C. OR AS NOTED.

RECESSED COMBINATION POWER OUTLET FOR IN FLOOR BOX PER PLAN FOR FLEXIBLE CONNECTION TO FURNITURE SYSTEM. VERIFY CONNECTION REQUIREMENTS WITH MANUFACTURER PRIOR TO ROUGH-IN - MOUNT FLUSH IN FLOOR WHEN INDICATED IN A FLOOR BOX SYMBOL.

POWER OUTLET OUTLET, MOUNTING HEIGHT PER ADA DEVICE MOUNTING REQUIREMENTS. FOR FLEXIBLE CONNECTION TO FURNITURE SYSTEM PROVIDE THE FOLLOWING:

- IN A NON-RATED INSULATED WALL, OR NON-RATED UNINSULATED WALL, PROVIDE A 2-GANG MUD RING OR CADDY #RBS SERIES BOX MOUNTING BRACKET (EQUAL BY B-LINE OR RAYCO) WITH (2) 1-1/4"C.O. WITH PULL STRING TO ACCESSIBLE CEILING. PROVIDE 1-1/4" BUSHINGS AT CONDUIT ENDS. REFER TO ARCHITECTURAL PLANS FOR WALL CONSTRUCTION/TYPE AND CEILING CONDITIONS.
- IN A RATED WALL, PROVIDE (1) 4S/DP BOX WITH (2) 1-1/4"C.O. AND (1) 4S/DP BOX WITH (1) 1-1"C.O. WITH PULL STRINGS IN EACH CONDUIT TO ACCESSIBLE CEILING. PROVIDE 1-1/4" BUSHINGS AT CONDUIT ENDS. UTILIZE CADDY #RBS SERIES BOX MOUNTING BRACKET TO MAINTAIN BOX ALIGNMENT. (EQUAL BY B-LINE OR RAYCO)UTILIZE FIRESTOPPING SYSTEM PADS RATED FOR USE ON THE INSIDE OR OUTSIDE OF THE BOX (STI OR EQUAL) AS REQUIRED TO MAINTAIN RATING OF WALL OR MEMBRANE. REFER TO ARCHITECTURAL PLANS FOR WALL CONSTRUCTION/TYPE AND CEILING CONDITIONS.

BRANCH CIRCUIT SYMBOLS

A-1,3,5 — HOME RUN TO PANEL. LETTER DESIGNATES PANEL, NUMBERS INDICATE CIRCUITS. HASH MARKS INDICATE NUMBER OF CONDUCTORS IN CONDUIT RUN, #12 AWG MINIMUM UNLESS OTHERWISE NOTED.

#12 UNDERGROUND CIRCUIT WIRE (HOT):
NUMBER OF HATCH MARKS INDICATE NUMBER OF #12 AWG CONDUCTORS.
#12 GROUNDED CIRCUIT WIRE (NEUTRAL)
#12 GROUND WIRE
#12 ISOLATED GROUND WIRE.
FOR CLARITY, I.G. MARKS ARE SHOWN ON THE HOME RUN ONLY. CONTRACTOR SHALL MAINTAIN THE ISOLATED GROUND CONDUCTOR TO THE FINAL CONNECTION OF ANY DEVICE SERVED.

CONCEALED CONDUIT OR BRANCH CIRCUIT UNLESS OTHERWISE NOTED. 1/2" CONDUIT MINIMUM, (2)#12 AWG CONDUCTORS MINIMUM

CONCEALED CONDUIT OR BRANCH CIRCUIT ROUTED IN FLOOR SLAB OR CONCRETE. COORDINATE INSTALLATION WITH GENERAL CONTRACTOR AND SUPPORT AS REQUIRED. 1/2" CONDUIT (2) #12 AWG CONDUCTORS MINIMUM.

CONDUIT OR BRANCH CIRCUIT CONCEALED BELOW GRADE, 3/4" CONDUIT MINIMUM WITH (2) 12 AWG CONDUCTORS MINIMUM AND A CODE SIZED EQUIPMENT GROUND.

SURFACE-MOUNTED CONDUIT OR BRANCH CIRCUIT UNLESS OTHERWISE NOTED. 1/2" CONDUIT MINIMUM, (2) #12 AWG CONDUCTORS MINIMUM. CONDUIT SHALL BE PAINT TO MATCH ADJUCENT SURFACE. COORDINATE COLOR WITH ARCHITECT/INTERIORS.

CONDUIT STUB OUT, CAP, MARK AND RECORD ON AS-BUILT DRAWINGS

CONDUIT CONTINUATION.

FLEXIBLE CONNECTION AS REQUIRED. NUMBER OF CONDUCTORS AS REQUIRED. VERIFY CONNECTION REQUIREMENTS WITH MANUFACTURER PRIOR TO ROUGH-IN.

CONDUIT/ BRANCH CIRCUIT/FEEDER CONTINUATION DOWN WALL TO FLOOR BELOW

CONDUIT/ BRANCH CIRCUIT/FEEDER CONTINUATION UP WALL TO FLOOR ABOVE

FLUSH MOUNTED, LOCKABLE TERMINAL CABINET WITH TERMINAL STRIPS AS REQUIRED.

SURFACE MOUNTED, LOCKABLE TERMINAL CABINET WITH TERMINAL STRIPS AS REQUIRED.

TELEPHONE TERMINAL BACKBOARD SIZED AS NOTED, REFER TO SYSTEM GROUND DETAIL.

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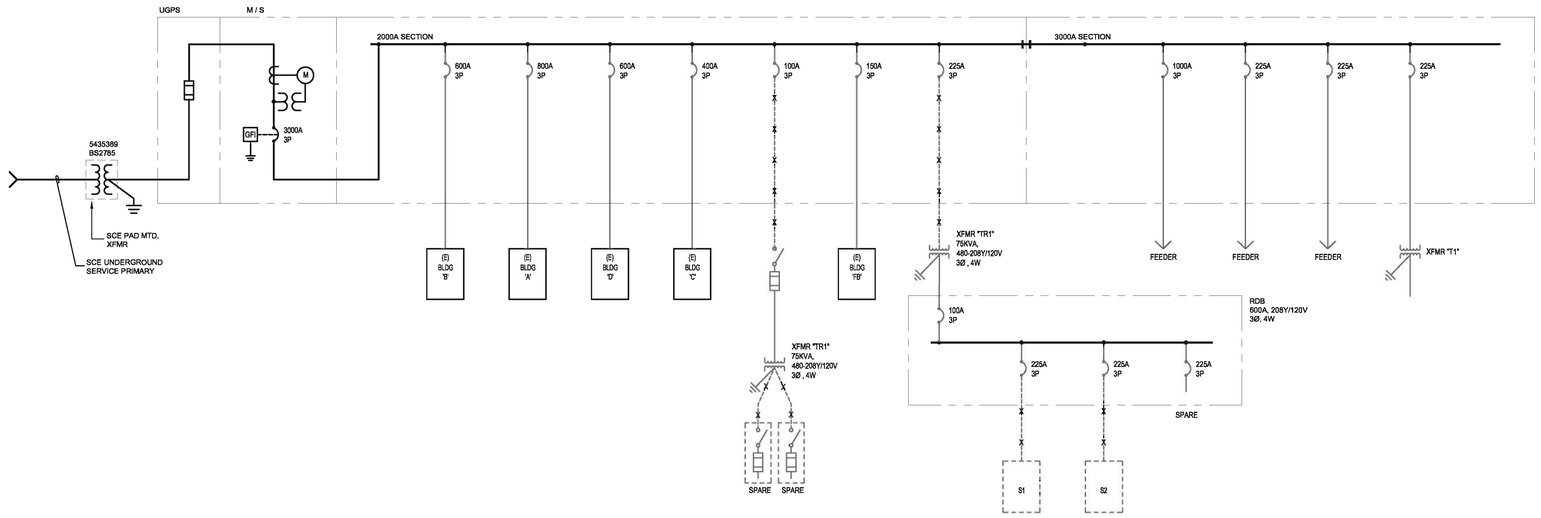
SYMBOL LIST

E0.10

FEEDER SCHEDULE

FEEDER	CONDUIT AND CONDUCTORS	LOAD	DISTANCE	V.D.	A.I.C.	NOTES
MSB-1	(4) 4"C.-4#350MCM, 1#3/0 GRD. IN EACH	-	-	-	-	- -
MSB-2	(5) 4"C.-4#500MCM, 1#4/0 GRD. IN EACH	-	-	-	-	- -
MSB-3	(5) 4"C.-4#500MCM, 1#4/0 GRD. IN EACH	-	-	-	-	- -
MSB-4	(5) 4"C.-4#500MCM, 1#4/0 GRD. IN EACH	-	-	-	-	- -
MSB-5	(2) 3"C.-4#250MCM, 1#2 GRD. IN EACH	-	-	-	-	- -
MSB-6	(2) 3"C.-4#250MCM, 1#2 GRD. IN EACH	-	-	-	-	- -
MSB-7	(2) 3"C.-4#250MCM, 1#2 GRD. IN EACH	-	-	-	-	- -
-	-	-	-	-	-	- -



KEYNOTES

1. PROVIDE NEW PULLBOX, INTERCEPT EXISTING SERVICE DUCT BANK AND PULL IN NEW CONDUCTORS. TERMINATE AT NEW SWITCH AND EXISTING MSB-UGPS.
2. NEW DUCT BANK: 8 x (5"C, 4# 500 KCMIL) INTERCEPT EXISTING DUCT, TERMINATE NEW FEEDER CABLE AT BOTH ENDS. VERIFY EXISTING CONDUIT SIZE.
3. NEW DUCT BANK: 4 x (5"C, 4# 500 KCMIL) INTERCEPT EXISTING DUCT, TERMINATE NEW FEEDER CABLE AT BOTH ENDS. VERIFY EXISTING CONDUIT SIZE.
4. INTERCEPT EXISTING UNDER GROUND DUCT BANK AT ALTON BLVD. AND TIE IN NEW DUCT BANK. PULL IN NEW FEEDERS SPLICE TO EXISTING CABLE 5"C, 3# 3/0 + 1# 6 GND. FIELD VERIFY CONDUIT/WIRE SIZE.

SINGLE LINE DIAGRAM | 01

MAIN ELECTRICAL ROOM | 02

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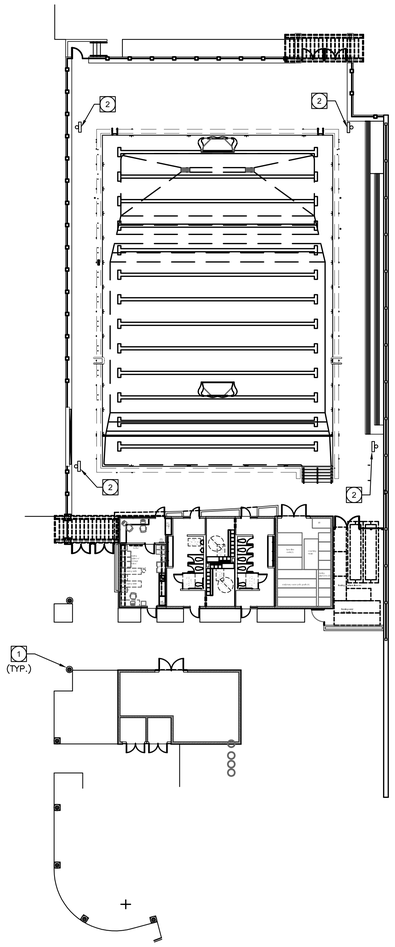
SINGLE LINE, LOAD SCHED. & FEEDER SCHED.

E0.20



SWIMMING POOL LIGHTING PLAN | 01

N

KEYNOTES

1. BOLLARD LIGHT. SOURCE TO BE DETERMINED. 3 FEET HIGH
2. 35' HIGH-MAST POLE WITH (3) 600W LED HEADS THAT ARE AIMABLE AND INCLUDES LIGHT SHIELD ACCESSORIES TO NOT PRODUCE ANY GLARE AT SURROUNDING ADJACENT PROPERTIES

SITE GENERAL NOTES

1. XX
2. XX
3. X
4. X
5. X
6. X

KEYPLAN

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POOL LIGHTING PLAN

E1.00