

# San Rafael City Schools

310 Nova Albion Way  
San Rafael, CA 94903



# Terra Linda High School MODERNIZATION

320 Nova Albion Way  
San Rafael, CA 94903

## DSA APPROVAL

05/08/2020



DSA A# 01-118754

2019-05785-000







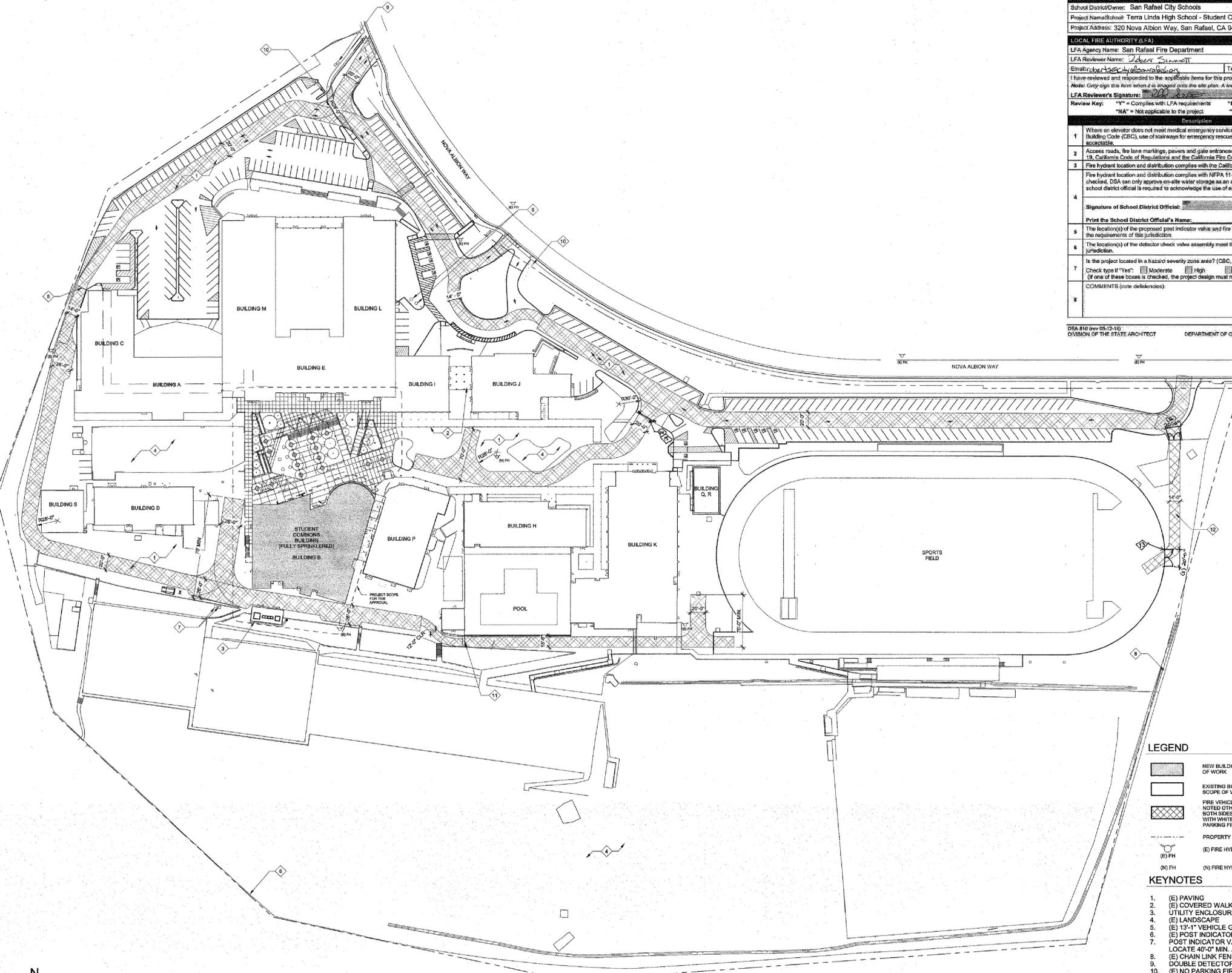






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RSN:\s6\hac-nob\1\K12\TLHS\2017-02608\_Student Commons\2017-02608\_Arch\_HED\_DM.dwg



N  
FIRE AUTHORITY SITE PLAN  
1" = 50'-0"

**DSA 810**  
**LOCAL FIRE AUTHORITY REVIEW**

To facilitate the Division of the State Architect's (DSA) approval of the Fire/Life Safety portion of a project, DSA requires Local Fire Authority (LFA) review of certain elements as identified in this form. Use of this form is mandatory for projects that add square footage to a campus or if any item on this form is relevant to the project. For additional information, see DSA #10 Instructions and DSA Policy 06-01.

**PROJECT INFORMATION**  
 School District/Owner: San Rafael City Schools  
 Project Name/School: Terra Linda High School - Student Commons  
 Project Address: 320 Nova Albion Way, San Rafael, CA 94903

**LOCAL FIRE AUTHORITY (LFA)**  
 LFA Agency Name: San Rafael Fire Department  
 LFA Reviewer Name: [Signature] Title: [Title]  
 Email: [Email] Telephone Number: 415-495-5267  
 I have reviewed and responded to the applicable items for this project as listed below.  
 Note: Only sign this form when it is stamped on the site plan. A loose form is not acceptable to DSA.  
 LFA Reviewer's Signature: [Signature] Date: 3-14-19  
 Review Key: "Y" = Complies with LFA requirements; "N" = Not approved (complete Section 8); "NA" = Not applicable to the project; "NR" = LFA elects not to review

Description	Y	N	NA	NR
1. Where an elevator does not meet medical emergency service cab size, per the California Building Code (CBC), use of stairways for emergency rescue and patient transport is acceptable.				
2. Access roads, fire lane markings, pavers and gate entrances are in accordance with Title 19, California Code of Regulations and the California Fire Code, Chapter 9.				
3. Fire hydrant location and distribution complies with the California Fire Code (or see #4).				
4. Fire hydrant location and distribution complies with NFPA 1142, "Alternate Means." If "NR" is checked, DSA can only approve on-site water storage as an alternate. The signature of the school district official is required to acknowledge the use of alternate means.				
Signature of School District Official: _____ Date: _____				
Print the School District Official's Name: _____				
5. The location(s) of the proposed post indicator valve and fire department connection meet the requirements of this jurisdiction.				
6. The location(s) of the detector check valve assembly meet the requirements of this jurisdiction.				
7. Is the project located in a hazard severity zone area? (CBC, Chapter 7A, Section 701A.) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
8. Check type if "Yes": Moderate <input type="checkbox"/> High <input type="checkbox"/> Very High <input type="checkbox"/> WFA (If one of these boxes is checked, the project design must meet the requirements of Chapter 7A.)				
COMMENTS (note deficiencies):				

DSA #10 (rev 05-15-16) DIVISION OF THE STATE ARCHITECT DEPARTMENT OF GENERAL SERVICES STATE OF CALIFORNIA Page 1 of 1

IDENTIFICATION STAMP  
 DIV. OF THE STATE ARCHITECT  
 APP: 01-118754 INC.  
 REVIEWED FOR: [Initials]  
 DATE: 06/03/2020



San Rafael City Schools

310 Nova Albion Way  
 San Rafael, CA 94903 415.492.3200

Terra Linda High School Student Commons

320 Nova Albion Way  
 San Rafael, CA 94903 415.462.3100

Date Issued For



Terra Linda High School Modernization

310 Nova Albion Way  
 San Rafael, CA 94903 415.492.3200

Date Issued For  
 1/17/2020 DSA Submittal  
 5/8/2020 DSA Approval

**LEGEND**

- [Hatched Box] NEW BUILDING INCLUDED IN SCOPE OF WORK
- [White Box] EXISTING BUILDING NOT INCLUDED IN SCOPE OF WORK
- [Dashed Line] FIRE VEHICLE ACCESS, 20'-0" UNLESS NOTED OTHERWISE, STRIPE OR CURB ON BOTH SIDES OF LANE TO BE PAINTED RED WITH WHITE LETTERING STATING "NO PARKING FIRE LANE"
- [Dotted Line] PROPERTY LINE
- (E) FH FIRE HYDRANT
- (N) FH FIRE HYDRANT

**KEYNOTES**

1. (E) PAVING
2. (E) COVERED WALKWAY
3. UTILITY ENCLOSURE, SEE 1/AS-521
4. (E) LANDSCAPE
5. (E) 15'-0" VEHICLE GATE WITH FIRE DEPARTMENT PADLOCK
6. (E) POST INDICATOR VALVE & FIRE DEPARTMENT CONNECTION
7. POST INDICATOR VALVE & FIRE DEPARTMENT CONNECTION, LOCATE 40'-0" MIN. AWAY FROM BUILDING.
8. (E) CHAIN LINK FENCE LINE
9. DOUBLE DETECTOR CHECK
10. (E) NO PARKING FIRE LANE SIGNAGE
11. (E) 15'-0" VEHICLE GATE WITH FIRE DEPARTMENT PADLOCK
12. EMERGENCY ONLY ACCESS FOR FIRE LANE
13. (E) VEHICULAR STRIPE
14. (N) VEHICLE LANE 20'-0" MIN WITH KNOCK DOWN
15. (N) NO PARKING FIRE LANE SIGN

FILER: 21-H1 PTFN: 65496-27  
 IDENTIFICATION STAMP  
 DIV. OF THE STATE ARCHITECT  
 OFFICE OF REGULATION SERVICES  
 APP#: 01-117738  
 AC [Initials] FLS [Initials] SS [Initials]  
 DATE: APR 18 2019



417 Montgomery Street  
 Suite 400  
 San Francisco, California 94104 USA  
 (415) 981-2345  
 WWW.HED.DESIGN



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 2017-02608-003

Fire Authority Site Plan

**G-012**



417 Montgomery Street  
 Suite 400  
 San Francisco, California 94104 USA  
 (415) 981-2345  
 WWW.HED.DESIGN



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FIRE AUTHORITY SITE PLAN (REFERENCE)

**G-013**

NO WORK ON THIS PAGE - FOR REFERENCE ONLY

1 REFERENCING SITE PLAN NTS







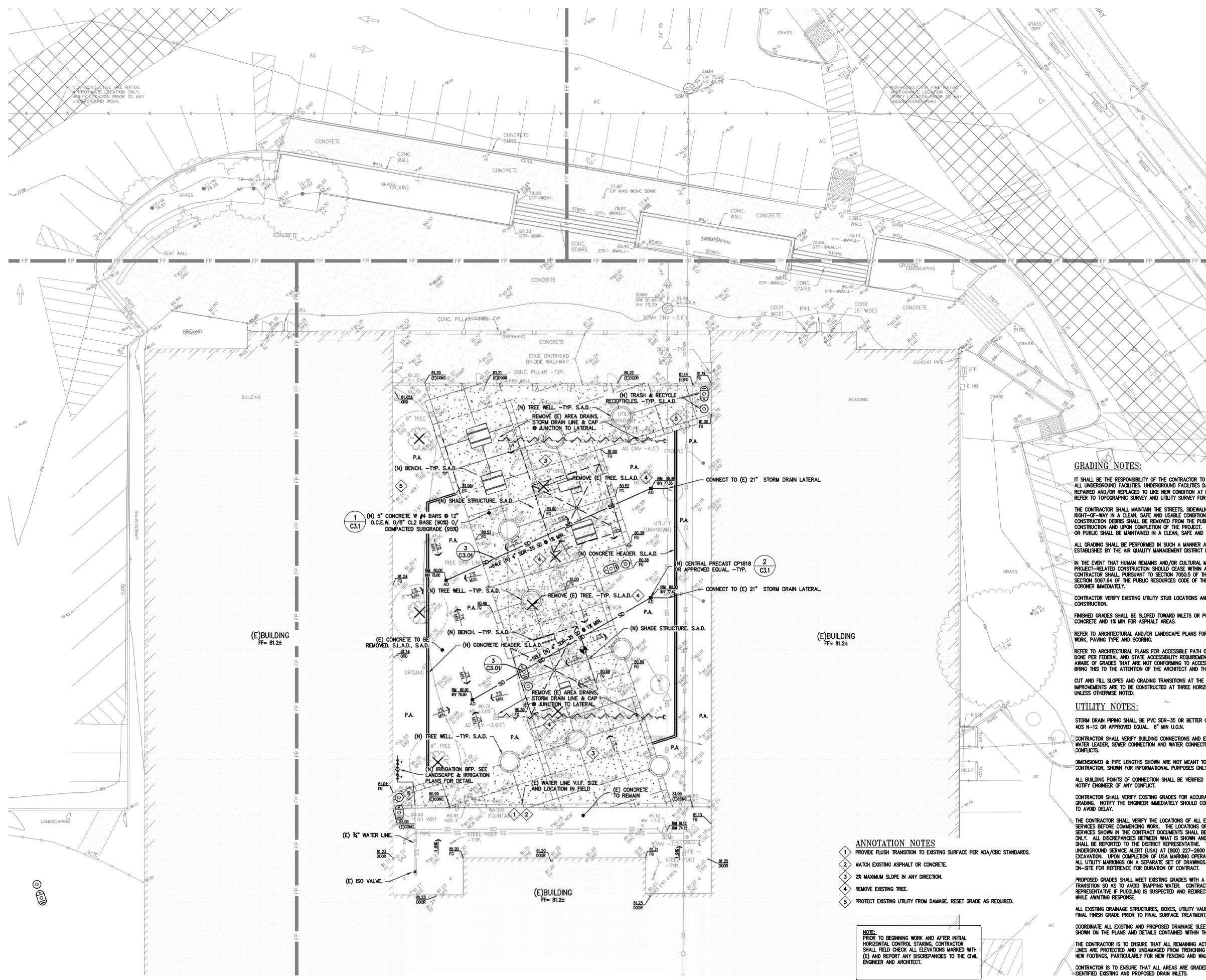
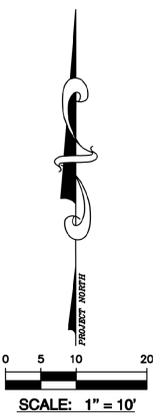


SAN RAFAEL  
 CITY SCHOOLS  
 310 Nova Albion Way  
 San Rafael, CA 94903 415.462.3200

Terra Linda High School  
 Modernization

310 Nova Albion Way  
 San Rafael, CA 94903 415.462.3200

Date	Issued For
1/17/2020	Design Development
5/7/2020	DSA RESUBMITTAL



**GRADING NOTES:**

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY, LOCATE AND PROTECT ALL UNDERGROUND FACILITIES. UNDERGROUND FACILITIES DAMAGED DURING GRADING SHALL BE REPAIRED AND/OR REPLACED TO LIKE NEW CONDITION AT NO ADDITIONAL COST TO CONTRACTOR. REFER TO TOPOGRAPHIC SURVEY AND UTILITY SURVEY FOR ADDITIONAL INFORMATION.

THE CONTRACTOR SHALL MAINTAIN THE STREETS, SIDEWALKS AND ALL OTHER PUBLIC RIGHT-OF-WAY IN A CLEAN, SAFE AND USABLE CONDITION. ALL SPILLS OF SOIL, ROCK OR CONSTRUCTION DEBRIS SHALL BE REMOVED FROM THE PUBLICLY OWNED PROPERTY DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT. ALL ADJACENT PROPERTY, PRIVATE OR PUBLIC SHALL BE MAINTAINED IN A CLEAN, SAFE AND USABLE CONDITION.

ALL GRADING SHALL BE PERFORMED IN SUCH A MANNER AS TO COMPLY WITH THE STANDARDS ESTABLISHED BY THE AIR QUALITY MANAGEMENT DISTRICT FOR AIRBORNE PARTICULATES.

IN THE EVENT THAT HUMAN REMAINS AND/OR CULTURAL MATERIALS ARE FOUND, ALL PROJECT-RELATED CONSTRUCTION SHOULD CEASE WITHIN A 100-FOOT RADIUS. THE CONTRACTOR SHALL PURSUANT TO SECTION 70525 OF THE HEALTH AND SAFETY CODE, AND SECTION 50979.4 OF THE PUBLIC RESOURCES CODE OF THE STATE OF CALIFORNIA, NOTIFY THE CORONER IMMEDIATELY.

CONTRACTOR VERIFY EXISTING UTILITY STUB LOCATIONS AND DEPTHS PRIOR TO COMMENCING CONSTRUCTION.

FINISHED GRADES SHALL BE SLOPED TOWARD INLETS OR POSITIVE RELEASE AT 0.5% MIN. FOR CONCRETE AND 1% MIN FOR ASPHALT AREAS.

REFER TO ARCHITECTURAL AND/OR LANDSCAPE PLANS FOR ADDITIONAL INFORMATION ON FLAT WORK, PAVING TYPE AND SCORING.

REFER TO ARCHITECTURAL PLANS FOR ACCESSIBLE PATH OF TRAVEL. GRADES SHALL BE DONE PER FEDERAL AND STATE ACCESSIBILITY REQUIREMENTS. IF CONTRACTOR BECOMES AWARE OF GRADES THAT DO NOT CONFORM TO ACCESSIBILITY REQUIREMENTS, HE SHALL BRING THIS TO THE ATTENTION OF THE ARCHITECT AND THE ENGINEER.

CUT AND FILL SLOPES AND GRADING TRANSITIONS AT THE OUTER EDGES OF THE PROPOSED IMPROVEMENTS ARE TO BE CONSTRUCTED AT THREE HORIZONTAL TO ONE VERTICAL (3:1) UNLESS OTHERWISE NOTED.

**UTILITY NOTES:**

STORM DRAIN PIPING SHALL BE PVC SDR-35 OR BETTER OR DOUBLE WALLED HDPE PIPING ADS N-12 OR APPROVED EQUAL. 6" MIN U.O.N.

CONTRACTOR SHALL VERIFY BUILDING CONNECTIONS AND ELEVATION. THIS INCLUDES RAIN WATER LEADER, SEWER CONNECTION AND WATER CONNECTION. NOTIFY ENGINEER OF ANY CONFLICTS.

DIMENSIONED & PIPE LENGTHS SHOWN ARE NOT MEANT TO PROVIDE BID QUANTITIES FOR CONTRACTOR, SHOWN FOR INFORMATIONAL PURPOSES ONLY.

ALL BUILDING POINTS OF CONNECTION SHALL BE VERIFIED WITH BUILDING PLUMBING DRAWING. NOTIFY ENGINEER OF ANY CONFLICT.

CONTRACTOR SHALL VERIFY EXISTING GRADES FOR ACCURACY PRIOR TO THE STARTING OF GRADING. NOTIFY THE ENGINEER IMMEDIATELY SHOULD CONFLICTS ARISE AND REDIRECT WORK TO AVOID DELAY.

- ANNOTATION NOTES**
- 1 PROVIDE FLUSH TRANSITION TO EXISTING SURFACE PER ADA/CBC STANDARDS.
  - 2 MATCH EXISTING ASPHALT OR CONCRETE.
  - 3 2% MAXIMUM SLOPE IN ANY DIRECTION.
  - 4 REMOVE EXISTING TREE.
  - 5 PROTECT EXISTING UTILITY FROM DAMAGE. RESET GRADE AS REQUIRED.

**NOTE:**  
 PRIOR TO BEGINNING WORK AND AFTER INITIAL HORIZONTAL CONTROL STAKING, CONTRACTOR SHALL FIELD CHECK ALL ELEVATIONS MARKED WITH (E) AND REPORT ANY DISCREPANCIES TO THE CIVIL ENGINEER AND ARCHITECT.

THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, STRUCTURES AND SERVICES SHOWN IN THE CONTRACT DOCUMENTS SHALL BE DEEMED TO BE APPROXIMATIONS ONLY. ALL DISCREPANCIES BETWEEN WHAT IS SHOWN AND THE ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE DISTRICT REPRESENTATIVE. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (USA) AT (800) 227-2600 PRIOR TO ANY DEMOLITION OR EXCAVATION. UPON COMPLETION OF USA MARKING OPERATIONS, CONTRACTOR SHALL RECORD ALL UTILITY MARKINGS ON A SEPARATE SET OF DRAWINGS. THIS SET SHALL BE KEPT ON-SITE FOR REFERENCE FOR DURATION OF CONTRACT.

PROPOSED GRADES SHALL MEET EXISTING GRADES WITH A SMOOTH AND CONTINUOUS TRANSITION SO AS TO AVOID TRAPPING WATER. CONTRACTOR SHALL NOTIFY DISTRICT REPRESENTATIVE IF PUDDING IS SUSPECTED AND REDIRECT WORK SO AS TO AVOID DELAY WHILE AWAITING RESPONSE.

ALL EXISTING DRAINAGE STRUCTURES, BOXES, UTILITY VAULTS ETC. SHALL BE BROUGHT TO FINAL FINISH GRADE PRIOR TO FINAL SURFACE TREATMENT, UNLESS NOTED OTHERWISE.

COORDINATE ALL EXISTING AND PROPOSED DRAINAGE SLEEVES, AND UTILITY LOCATIONS AS SHOWN ON THE PLANS AND DETAILS CONTAINED WITHIN THESE CONTRACT DOCUMENTS.

THE CONTRACTOR IS TO ENSURE THAT ALL REMAINING ACTIVE AND NEW DRAINAGE AND UTILITY LINES ARE PROTECTED AND UNHARMED FROM TRENCHING AND FOOTING EXCAVATIONS FOR NEW FOOTINGS, PARTICULARLY FOR NEW FENCING AND WALLS.

CONTRACTOR IS TO ENSURE THAT ALL AREAS ARE GRADED TO PROVIDE POSITIVE DRAINAGE TO IDENTIFIED EXISTING AND PROPOSED DRAIN INLETS.

AREAS OF TRENCHING SHALL BE PATCHED TO MATCH EXISTING CONDITIONS TO LIKE NEW CONDITIONS, INCLUDING BUT NOT LIMITED TO SOO, CONCRETE AND ASPHALT

**CIVIL ENGINEER**  
 CLARK CIVIL ENGINEERING  
 12700 HIGHWAY ONE,  
 POINT REYES STATION, CA 94956  
 TEL: (415) 295-4450  
 FAX: (510) 372-0258  
 CCE PROJECT NO. 217039



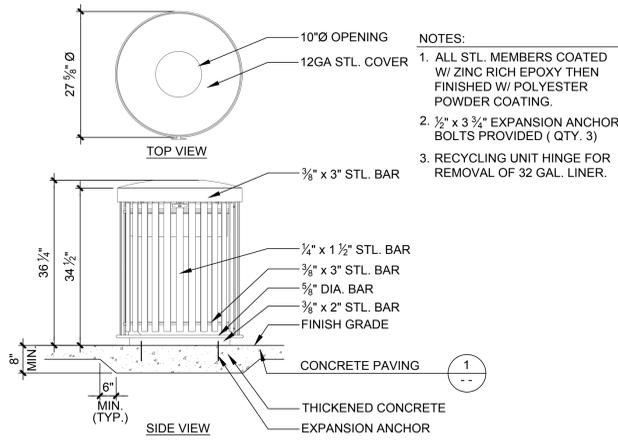
GRADING & DRAINAGE PLAN





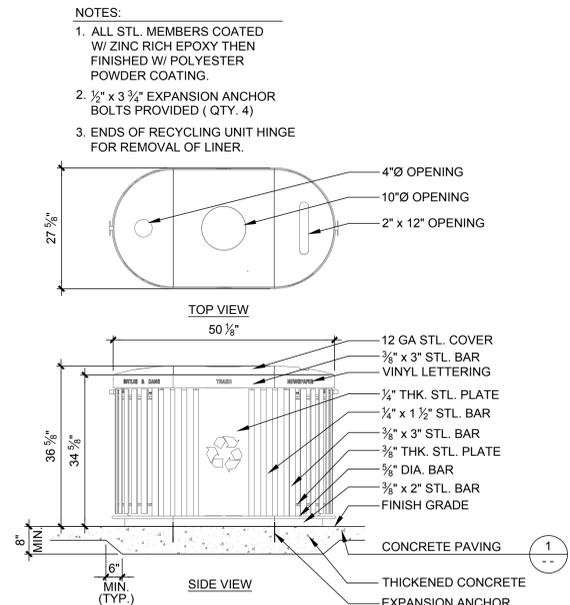






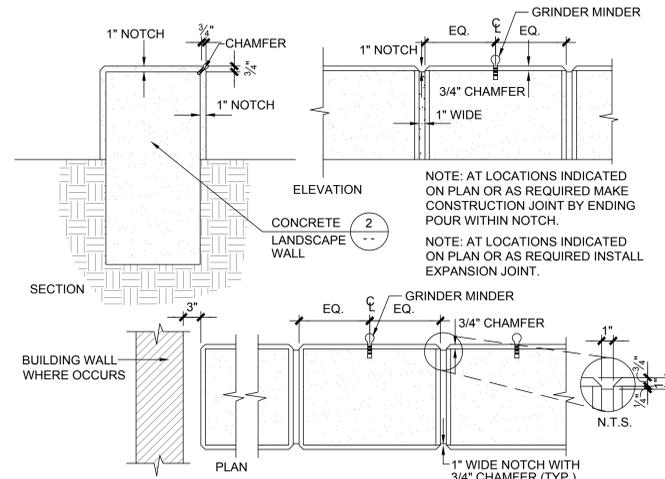
- NOTES:**
1. ALL STL. MEMBERS COATED W/ ZINC RICH EPOXY THEN FINISHED W/ POLYESTER POWDER COATING.
  2. 1/2" x 3 3/4" EXPANSION ANCHOR BOLTS PROVIDED ( QTY. 3)
  3. RECYCLING UNIT HINGE FOR REMOVAL OF 32 GAL. LINER.

**8 TRASH RECEPTACLE**  
NOT TO SCALE



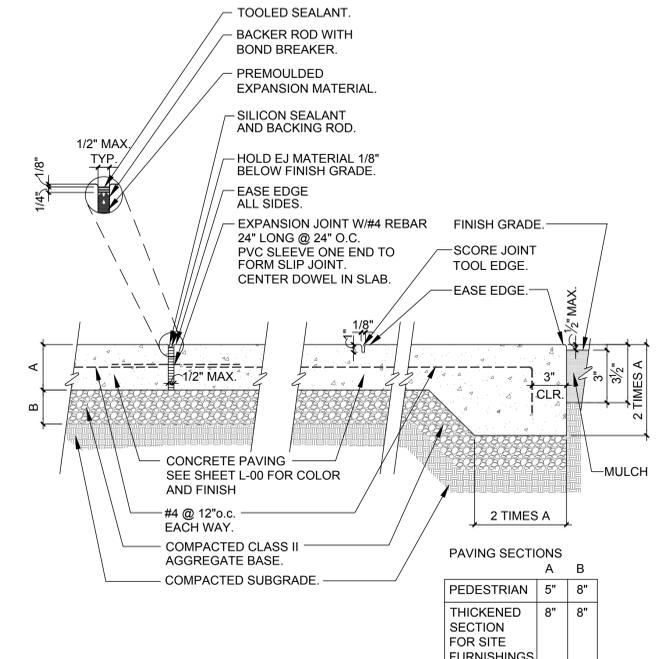
- NOTES:**
1. ALL STL. MEMBERS COATED W/ ZINC RICH EPOXY THEN FINISHED W/ POLYESTER POWDER COATING.
  2. 1/2" x 3 3/4" EXPANSION ANCHOR BOLTS PROVIDED ( QTY. 4)
  3. ENDS OF RECYCLING UNIT HINGE FOR REMOVAL OF LINER.

**7 RECYCLE RECEPTACLE**  
NOT TO SCALE

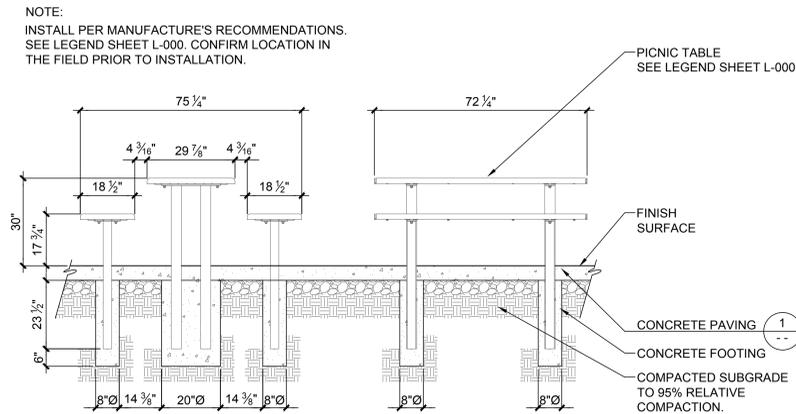


- NOTE:** AT LOCATIONS INDICATED ON PLAN OR AS REQUIRED MAKE CONSTRUCTION JOINT BY ENDING POUR WITHIN NOTCH.
- NOTE:** AT LOCATIONS INDICATED ON PLAN OR AS REQUIRED INSTALL EXPANSION JOINT.

**4 CONC. LANDSCAPE WALL - NOTCH DETAIL**  
SCALE: NOT TO SCALE

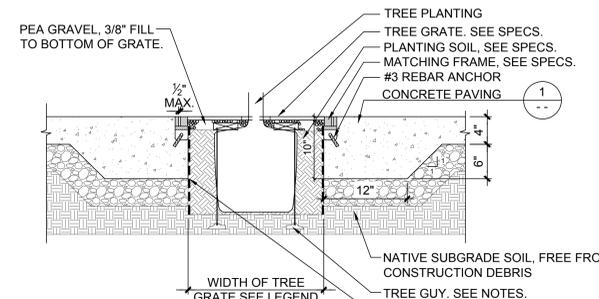


**1 CONCRETE PAVING**  
NOT TO SCALE



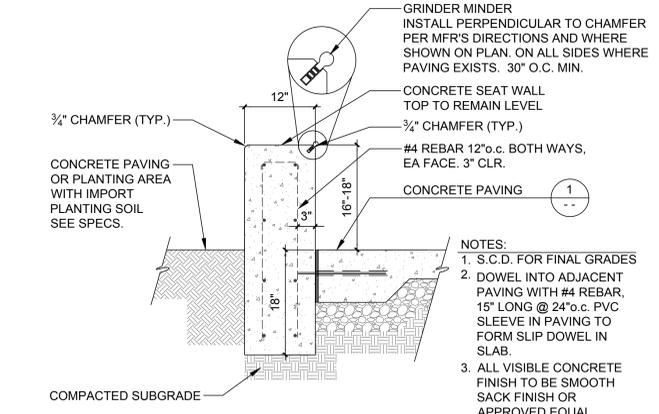
**NOTE:** INSTALL PER MANUFACTURE'S RECOMMENDATIONS. SEE LEGEND SHEET L-000. CONFIRM LOCATION IN THE FIELD PRIOR TO INSTALLATION.

**9 TABLE STANDARD AND (ADA SIM.)**  
NOT TO SCALE

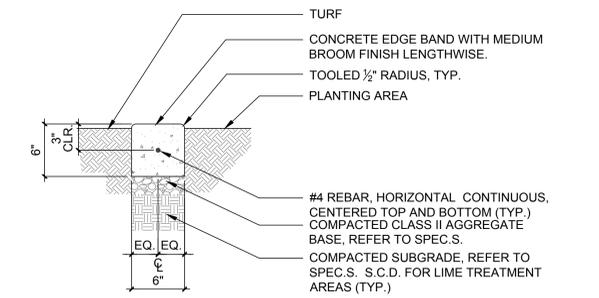


- NOTES:**
1. INSTALL GRATE AND FRAME PER MFR'S SPECIFICATIONS; GRATE AND FRAME SHALL BE FLUSH TO SURROUNDING PAVING.
  2. TREES IN GRATE SHALL BE GUYED USING DUCKBILL ROOTBALL SYSTEM OR FIXING KIT. SIZE AS REQUIRED. INSTALL PER MFR'S SPECIFICATIONS.
  3. ROUND GRATE - SQUARE OFF SIDES OF PLANT PIT TO THE WIDTH OF THE GRATE DIA. AND INSTALL BARRIER FLUSH WITH THE EDGE OF PLANT PIT. SEE TREE PLANTING DETAIL, 1/LI-503, SIM.

**5 TREE GRATE**  
NOT TO SCALE

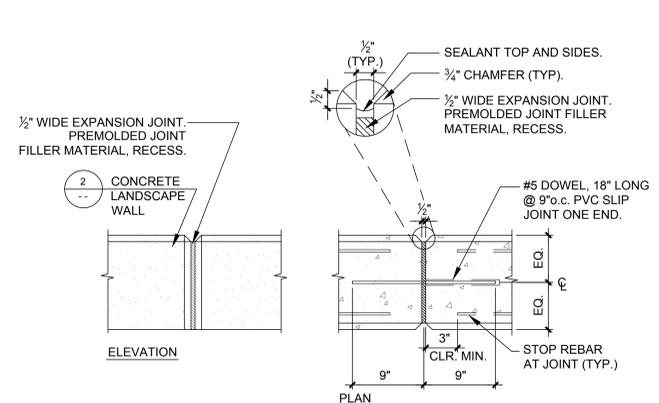


**2 CONCRETE LANDSCAPE WALL**  
SCALE: 1" = 1'-0"



- NOTES:**
1. INSTALL EXPANSION JOINTS AT ALL CORNERS, BEGINNINGS, AND ENDINGS OF RADII, AND AT ALL FENCE POSTS.
  2. INSTALL SCORE JOINTS AT 5'-0" O.C. EXPANSION JOINT EVERY 4TH SCORE.

**6 CONCRETE HEADER**  
SCALE: 1 1/2" = 1'-0"



**3 CONCRETE LANDSCAPE WALL EXPANSION JOINT DETAIL**  
SCALE: NOT TO SCALE

- NOTES:**
1. FOR CURBS USE TWO SLIP JOINTS 3" CLR. FROM EDGES (TYP.)
  2. EXPANSION JOINT WHERE PAVING MEETS WALLS AND BUILDING.
  3. S.C.D. FOR FINISH GRADE.
  4. WHERE NEW PAVEMENT MEETS EXISTING OR EARLIER POUR, DOWEL INTO CONCRETE 12" DEEP WITH 24" #4 REBAR @ 24" O.C. INSTALL EXPANSION JOINT AND POUR NEW.
  4. EXPANSION JOINTS TO RECEIVE SLIP DOWELS.

IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
APP: 01-118754 INC.  
REVIEWED FOR  
SS  FLS  ACS   
DATE: 06/03/2020



310 Nova Albion Way  
San Rafael, CA 94903 415.492.3200

Terra Linda High School  
Modernization

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Date	Issued For
12/11/2019	Schematic Design
01/22/2020	DSA Submittal
05/08/2020	DSA Backcheck

PAVING SECTIONS	A	B
PEDESTRIAN	5"	8"
THICKENED SECTION FOR SITE FURNISHINGS	8"	8"



WALLER DESIGN ASSOCIATES INC.  
LANDSCAPE ARCHITECTURE PLANNING DESIGN  
210 WASHINGTON AVENUE, SUITE G  
POINT RICHMOND, CA 94601  
TELEPHONE 910.237.7745 FACSIMILE 910.237.6751



417 Montgomery Street  
Suite 400  
San Francisco, California  
94104 USA  
(415) 981-2345  
WWW.HED.DESIGN

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Construction  
Details

LC-501



Terra Linda High School  
 Modernization

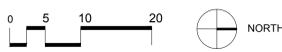
Date	Issued For
12/11/2019	Schematic Design
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05/08/2020	DSA Backcheck

IRRIGATION LEGEND:

- FEBCO 880V 3" REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER. LOCATE PER PLAN AND AS REQUIRED. INSTALL IN SINGLE SWING BACKFLOW PREVENTER ENCLOSURE BY V.I.T. STRONGBOX, MODEL SBBC-22SS.
- CONTROLLER: RAINMASTER EAGLE PLUS 16-STATION TWO WIRE CONTROLLER IN A SITEONE GREEN TECH STAINLESS STEEL WALL MOUNT ENCLOSURE. FOR ORDERING AND CERTIFICATION PLEASE CONTACT: NICK MANFRE AT 925-558-5965 SITE ONE GREEN TECH MODEL #EGP-TW-SRM
- TORO P-220S SERIES REMOTE CONTROL VALVE FOR BUBBLER ZONES (SIZE PER PLAN) FITTED WITH ONE TW-D-1 SINGLE STATION DECODER PER VALVE TO BE COMPATIBLE WITH 2-WIRE CONTROLLER SYSTEM. CONNECT TO CONTROLLER WITH RAINMASTER TW-CAB-14 TWO WIRE CABLE. INSTALL A TW-LA-1 LIGHTING ARRESTOR WITH 8'-0" CONTRACTOR SUPPLIED GROUND ROD ALONG 2-WIRE PATH EVERY 300-FOOT MAXIMUM SPACING. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A GROUND CONNECTION OF 10 ohms OR LESS RESISTANCE TO EARTH GROUND. CONNECT VALVES TO CONTROLLER USING 2-WIRE DIRECT BURY TW-CAB-14 2-WIRE CABLE. ANY SPLICES TO BE MADE SHALL BE SPLICED USING TW-SPLICE-14 WATER TIGHT CONNECTIONS, NO EQUAL. INSTALL IN PURPLE IRRIGATION BOX
- TORO DZK-700 SERIES REMOTE CONTROL VALVE WITH EFF-KIT-60HZ Reclaimed Water Solenoid Kit DRIPLINE ZONES (SIZE PER PLAN) FITTED WITH ONE TW-D-1 SINGLE STATION DECODER PER VALVE TO BE COMPATIBLE WITH 2-WIRE CONTROLLER SYSTEM. CONNECT TO CONTROLLER WITH RAINMASTER TW-CAB-14 TWO WIRE CABLE. INSTALL A TW-LA-1 LIGHTING ARRESTOR WITH 8'-0" CONTRACTOR SUPPLIED GROUND ROD ALONG 2-WIRE PATH EVERY 300-FOOT MAXIMUM SPACING. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A GROUND CONNECTION OF 10 ohms OR LESS RESISTANCE TO EARTH GROUND. CONNECT VALVES TO CONTROLLER USING 2-WIRE DIRECT BURY TW-CAB-14 2-WIRE CABLE. ANY SPLICES TO BE MADE SHALL BE SPLICED USING TW-SPLICE-14 WATER TIGHT CONNECTIONS, NO EQUAL. INSTALL IN PURPLE IRRIGATION BOX
- GATE VALVE, SIZE SAME AS LINE SIZE, LEECMCO LGT-SS, CLASS 125.T-113. SEE SPEC.S
- MAIN LINE: SCHEDULE 40 PVC WITH SCHEDULE 80 SOLVENT-WELD FITTINGS: ALL MAIN LINE 2" UNLESS NOTED ON PLAN.
- LATERAL LINE: SCHEDULE 40 PVC WITH SCHEDULE 80 SOLVENT-WELD FITTINGS: ALL LATERAL LINE 1" UNLESS NOTED ON PLAN.
- STATION NUMBER  
GPM  
VALVE SIZE
- IRRIGATION SLEEVE: SCHEDULE 40 PVC SLEEVE SIZE
- TORO 570S/FB-25-PC WITH RW60-KIT Purple Solenoid Assembly, 24 VAC- ONE PER SHRUB, INSTALL WITH PURPLE CAP
- TORO 570S/FB-50-PC WITH RW60-KIT Purple Solenoid Assembly, 24 VAC - THREE PER TREE, (2) IN TUBE AND (1) ON GRADE, INSTALL WITH PURPLE CAP
- HUNTER I-20-6P ADS ARC AND NOZZLE AS REQUIRED
- AREA OF SUBSURFACE DRIPLINE, TORO DL2000-E SERIES DRIPLINE, 12" EMITTER SPACING, 12" ON CENTER LINE SPACING. SEE DETAIL SHEET LI-502
- CHRISTY 36 UTILITY BOX WITH REINFORCED CONCRETE LID AND ASSOCIATED MATERIALS AT SLEEVE JUNCTION/CHANGES IN DIRECTIONS AND STUB OUT LOCATIONS (TYP.)
- QUICK COUPLING VALVE, RAINBIRD 44 NP WITH PURPLE LOCKING COVER INSTALL IN PURPLE BOX

IRRIGATION NOTES:

1. CONTACT LANDSCAPE ARCHITECT AND COORDINATE ALL REVIEWS PRIOR TO COMMENCEMENT OF WORK.
2. DUE TO THE SCALE OF THE DRAWINGS IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, SLEEVES, ETC. INVESTIGATE THE FINISHED CONDITIONS AFFECTING ALL OF IRRIGATION WORK AND PLAN THE WORK ACCORDINGLY, FURNISHING SUCH FITTINGS, ETC., AS MAY BE REQUIRED TO MEET SUCH CONDITIONS. DRAWINGS ARE GENERALLY DIAGRAMMATIC AND INDICATIVE OF THE WORK TO BE INSTALLED. INSTALL WORK IN SUCH A MANNER AS TO AVOID CONFLICTS BETWEEN IRRIGATION SYSTEM, PLANTING, AND ARCHITECTURAL FEATURES.
3. EXERCISE EXTREME CARE IN EXCAVATION AND WORKING NEAR EXISTING UTILITIES. VERIFY THE LOCATION AND CONDITION OF ALL UTILITIES. REPAIR ANY DAMAGE TO EXISTING UTILITIES OR ADJACENT PROPERTIES CAUSED BY OR DURING THE PERFORMANCE OF WORK AT NO ADDITIONAL COST TO THE CITY. FIELD ADJUST SPRINKLER LOCATIONS SO AS TO AVOID CONFLICTS WITH UTILITIES.
4. THE FINAL LOCATION AND EXACT POSITIONING OF THE AUTOMATIC CONTROLLER AND VALVES SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
5. DO NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT WIND CONDITIONS, OBSTRUCTIONS, GRADE DIFFERENCES OR DIFFERENCES IN THE AREA'S DIMENSIONS THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE DESIGN. BRING SUCH OBSTRUCTIONS OR DIFFERENCES TO THE ATTENTION OF THE LANDSCAPE ARCHITECT. IN THE EVENT THAT THIS NOTIFICATION IS NOT PERFORMED, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY AND COSTS FOR ALL NECESSARY REVISIONS.
6. THE IRRIGATION SYSTEM DESIGN IS BASED UPON 65 PSI THE MINIMUM WORKING WATER PRESSURE AT 40 GPM THE MAXIMUM GALLONS PER MINUTE. VERIFY THE MINIMUM WORKING WATER PRESSURE AT THE MAXIMUM GALLONS PER MINUTE PRIOR TO BEGINNING CONSTRUCTION. REPORT ANY DIFFERENCE BETWEEN THE MINIMUM WORKING WATER PRESSURE AND THE ACTUAL WORKING WATER PRESSURE AT THE MAXIMUM GALLONS PER MINUTE READING TAKEN AT THE IRRIGATION POINT OF CONNECTION, TO LANDSCAPE ARCHITECT, FOR APPROVAL PRIOR TO PROCEEDING WITH THE IRRIGATION INSTALLATION.
7. PLACE VALVE BOXES 12" FROM AND PARALLEL TO STRUCTURES OR HARDSCAPE. SPACE GROUPED VALVES EQUALLY. ONE VALVE PER BOX. INSTALL IN SHRUB AREAS EXCLUSIVELY. IF NOT POSSIBLE INSTALL IN HARDSCAPE SQUARE WITH SURROUNDING IMPROVEMENTS. USE EQUAL SIZE CHRISTY CONCRETE BOX IF INSTALLED IN HARDSCAPE. SEE SPECS.
8. CONTRACTOR IS RESPONSIBLE FOR COMPLETE COVERAGE. MOVE OR ADD BUBBLERS AND SPRAY HEADS TO INSURE COVERAGE. WHEN ADDING BUBBLERS OR SPRAY HEADS, VERIFY HYDRAULIC REQUIREMENTS.
9. WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES, CONTACT THE OWNER FOR APPROVAL TO BEGINNING WORK. DO NOT TRENCH WITHIN THE DRIP LINE OF TREES UNLESS APPROVED BY LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE. USE ALL POSSIBLE CARE TO AVOID INJURY TO TREES, AND TREE ROOTS. HAND DIG TRENCHES WHERE TWO INCH AND LARGER ROOTS OCCUR. CLOSE TRENCHES ADJACENT TO TREE WITHIN TWENTY-FOUR HOURS; AND WHEN THIS IS NOT POSSIBLE, KEEP THE SIDE OF THE TRENCH SHADED WITH BURLAP OR CANVASS.
10. SEE IRRIGATION SPECIFICATIONS FOR WATER CALCULATIONS AND IRRIGATION SCHEDULE.
11. MAINTAIN POTABLE WATER CONNECTION TO FLUSH PLANTING AREAS OF SOLUBLE SALTS, ETC. FROM SOIL CAUSED BY RECLAIMED WATER USE. TURF SHOULD BE DEEPLY IRRIGATED ONCE OR TWICE A YEAR WITH POTABLE WATER.



PIPE SIZING SCHEDULE 40 PVC:

1"	0-13 GPM
1 1/4"	13-23 GPM
1 1/2"	23-32 GPM
2"	32-51 GPM
2 1/2"	51-72 GPM
3"	72-111 GPM



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 LANDSCAPE ARCHITECTURE PLANNING DESIGN  
 210 WASHINGTON AVENUE, SUITE G  
 POINT RICHMOND, CA 94601  
 TELEPHONE 510.237.7745 FACSIMILE 510.237.5751



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**ACCESSIBLE PATH OF TRAVEL:**

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

BUILDING KEY							
BUILDING	DESCRIPTION	CONSTRUCTION TYPE	OCCUPANCY	NO. OF STORIES	AREA	APPLICATION #	DATE
BLDG A	CLASSROOMS	II 1 HR	E	2	17,100 SF	23360, 106489	4/1963
BLDG B	STUDENT COMMONS	II-B	A-1, A-2, A-3, E	2	32,071 SF	117738	4/2019
BLDG C	DISTRICT OFFICES	V-N	E	2	22,722 SF	23360, 24060	4/1963, 10/1963
BLDG D	CLASSROOMS	V-N	E	1	8,213 SF	18095, 106489	3/1959, 9/2009
BLDG E	CLASSROOMS	II 1 HR	E	2	10,986 SF	20750, 105956, 106489, 117586	2/1961, 6/2004, 9/2009, 12/2018
BLDG F	POOL EQUIPMENT	V-N	U	1	600 SF	20509	10/1960
BLDG H	CLASSROOMS	V-N	E	1	9,385 SF	21924, 106489	12/1961, 9/2009
BLDG I	ADMINISTRATION	II 1 HR	B	1	7,480 SF	22569, 106489	5/1962, 9/2009
BLDG J	CAFETERIA	V-N	A	1	9,280 SF	18095, 106489	3/1959, 9/2009
BLDG K	GYMNASIUM	II 1 HR	A	1	21,244 SF	18095, 106489	3/1959, 9/2009
BLDG L	CLASSROOMS	II 1 HR	E	2	31,243 SF	18095, 104196	3/1959, 4/2002
BLDG M	CLASSROOMS	II 1 HR	E	2	33,000 SF	20750, 105956	2/1961, 6/2004
BLDG P	PERFORMANCE HALL	V 1 HR	A	1	10,333 SF	106238	6/2004
BLDG Q/R	CLASSROOMS	V-N	E	1	960 SF	63517, 106228	6/1995, 4/2004
BLDG S	SHOP	V-N	S-1	1	3,193 SF	18095, 106489	3/1959, 9/2009

NOTES:  
 1. BUILDING WING 'A' IS SEPARATED FROM BUILDING WING 'C' BY AN EXISTING 2-HR AREA SEPARATION WALL FROM BUILDING WING 'M' BY ANOTHER EXISTING 2-HR AREA SEPARATION WALL.  
 2. BUILDING WINGS 'M/E' IS SEPARATED FROM BUILDING WING 'L' BY AN EXISTING 2-HR AREA SEPARATION WALL AND FROM BUILDING WING 'A' BY ANOTHER 2-HR SEPARTION WALL.

PLUMBING FIXTURE COUNTS					
	CAMPUS OCCUPANTS (1155 STUDENTS, 85 STAFF = 1240 TOTAL)	MALE FIXTURES REQUIRED	MALE FIXTURES PROVIDED	FEMALE FIXTURES REQUIRED	FEMALE FIXTURES PROVIDED
WATER CLOSETS (MALE 1:50, FEMALE 1:30)	620 MALE, 620 FEMALE		13	35	21
URINALS (MALE 1:100)	620 MALE		7	32	X
LAVATORIES (MALE 1:40, FEMALE 1:40)	620 MALE, 620 FEMALE		16	40	16
DRINKING FOUNTAINS (1:150)	1240 OCCUPANTS		9	13	

SHADE STRUCTURE FACTS		CBC	CBC REFERENCE
BUILDING USE GROUP		A-3	Chapter 3
TYPE OF CONSTRUCTION		V-B	T 602
FIRE SUPPRESSION SYSTEM		NO	S 903
ACTUAL FLOOR AREA (gross floor area / floor)		390 SF	
MAX ALLOWABLE # OF STORIES		1	T 504.4
"Tabular Height" MAX		40'	T 504.3
"Tabular Area" MAX Area/Floor		6,000 SQ FT	T 506.2

**LEGEND**

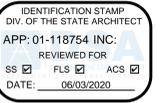
- EXISTING BUILDING INCLUDED IN SCOPE OF WORK
- EXISTING BUILDING NOT INCLUDED IN SCOPE OF WORK
- NEW CONCRETE PAVING, S.C.D.
- PROPERTY LINE
- SAFE DISPERSAL PATH
- ACCESSIBLE ROUTE PATH OF TRAVEL

DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT:  
 THE POT IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS MEETS THE REQUIREMENTS OF THE CURRENT APPLICABLE CALIFORNIA BUILDING CODE (CBC) ACCESSIBILITY PROVISIONS FOR PATH OF TRAVEL REQUIREMENTS FOR ALTERATIONS, ADDITIONS AND STRUCTURAL REPAIRS. AS PART OF THE DESIGN OF THIS PROJECT, THE POT WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WERE DETERMINED TO BE NONCOMPLIANT WITH THE CBC HAVE BEEN IDENTIFIED AND THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WITHIN THE SCOPE OF THIS PROJECT'S WORK THROUGH DETAILS, DRAWINGS AND SPECIFICATIONS INCORPORATED INTO THESE CONSTRUCTION DOCUMENTS. ANY NONCOMPLIANT ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED ON VALUATION THRESHOLD LIMITATIONS OR A FINDING OF UNREASONABLE HARSHNESS ARE INDICATED IN THESE CONSTRUCTION DOCUMENTS. DURING CONSTRUCTION, IF POT ITEMS WITHIN THE SCOPE OF THE PROJECT REPRESENTED AS CBC COMPLIANT ARE FOUND TO BE NONCOMPLYING BEYOND REASONABLE CONSTRUCTION TOLERANCES, THE ITEMS SHALL BE BROUGHT INTO COMPLIANCE WITH THE CBC AS A PART OF THIS PROJECT BY MEANS OF A CONSTRUCTION CHANGE DOCUMENT.

- DRINKING FOUNTAIN
- STAFF RESTROOM
- MENS RESTROOM
- WOMENS RESTROOM

**KEYNOTES**

1. (E) AC PAVING
2. (E) CONCRETE PAVING
3. (E) 48" MAX HEIGHT LOCK AT VEHICLE GATE
4. (E) COVERED WALKWAY
5. (E) UTILITY ENCLOSURE
6. (E) OVERHEAD SCHOOL ENTRANCE STRUCTURE
7. (E) LANDSCAPE
8. (E) TOW-AWAY SIGN PER DETAIL S/A-004
9. CONCRETE PAVING, SEE CIVIL DWGS
10. (E) BIKE RACKS
11. ACCESSIBLE DROP-OFF AREA PER A#01-117586
12. (E) ELEVATOR PER A#01-100263
13. SHADE STRUCTURE
14. (E) FIRE HYDRANT, TYP.

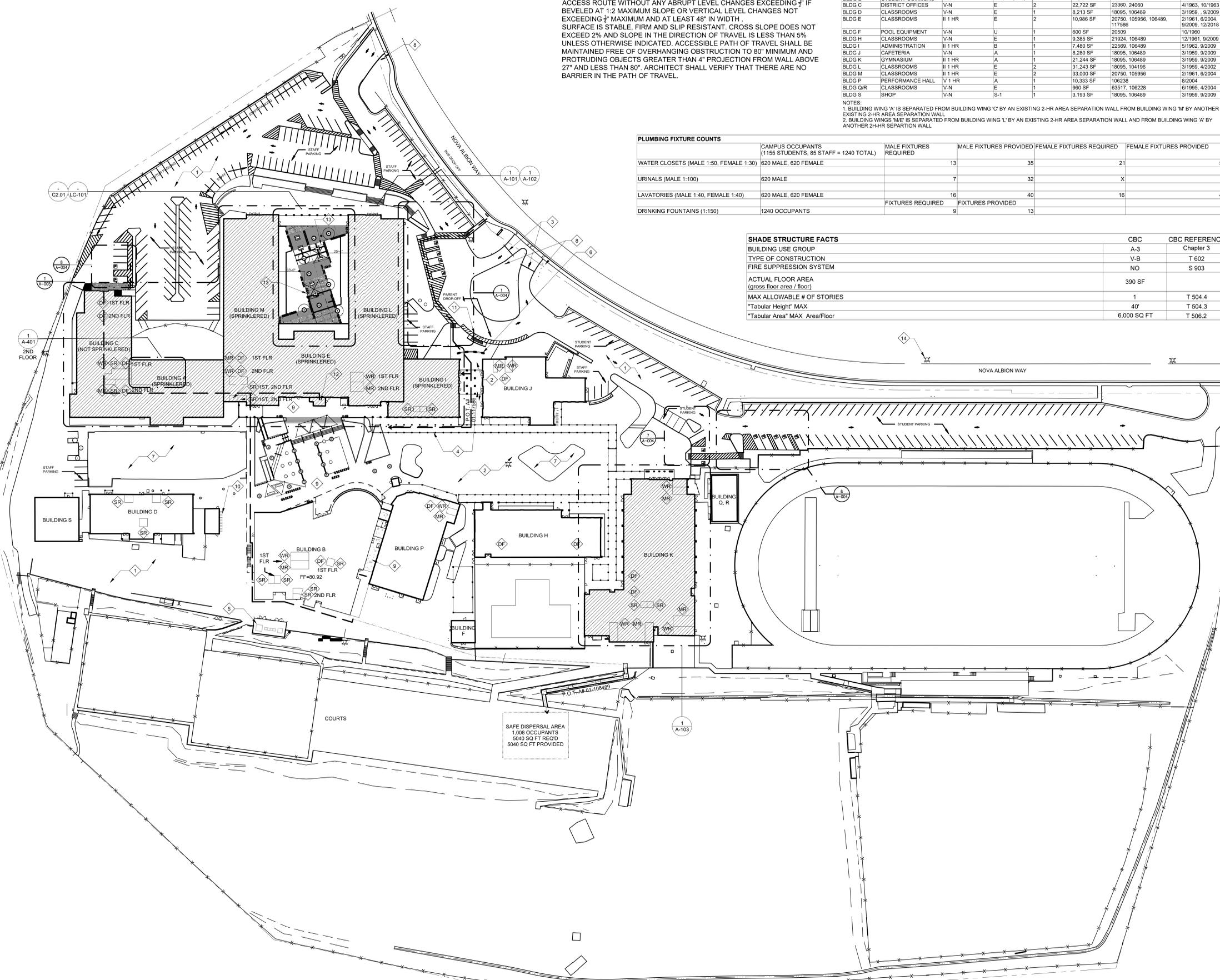


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**STUDENT ACCESSIBLE PARKING SPACES**

NUMBER OF PARKING SPACES: 111  
 NUMBER OF REQUIRED ACCESSIBLE PARKING SPACES: 5 PROVIDED: 7  
 VAN ACCESSIBLE SPACES REQUIRED: 2 PROVIDED: 2

**STAFF ACCESSIBLE PARKING SPACES**

NUMBER OF PARKING SPACES: 137  
 NUMBER OF REQUIRED ACCESSIBLE PARKING SPACES: 5 PROVIDED: 6  
 VAN ACCESSIBLE SPACES REQUIRED: 2 PROVIDED: 2

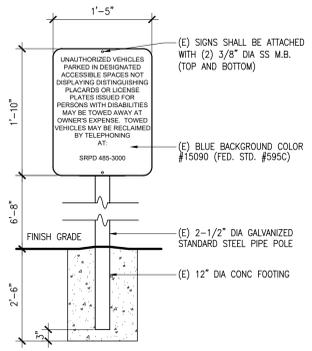


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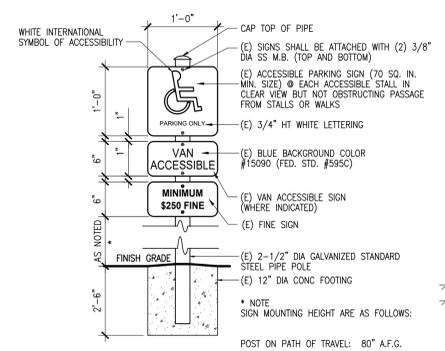
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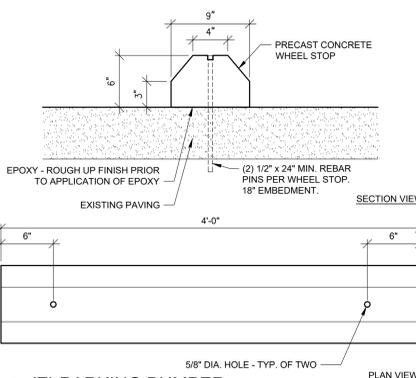
SITE PLAN AND  
 CODE ANALYSIS



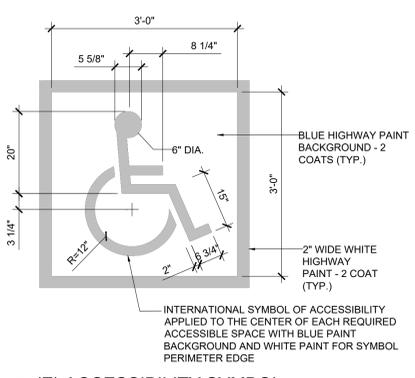
5 (E) TOW-AWAY SIGN  
1" = 1'-0"



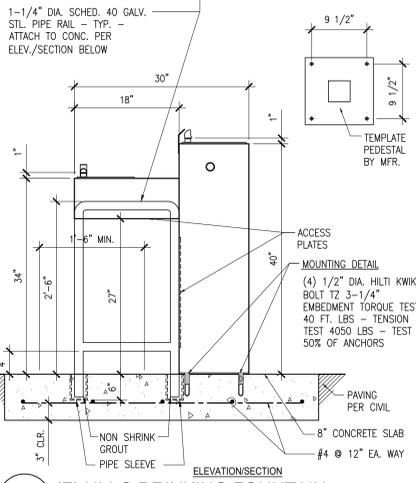
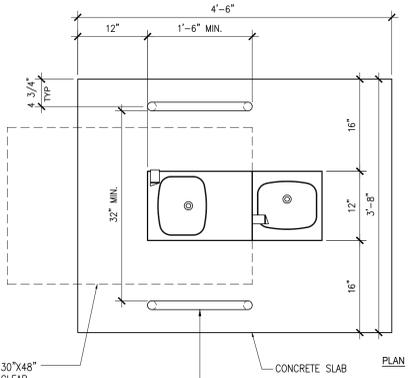
4 (E) ACCESSIBLE PARKING SIGN  
1" = 1'-0"



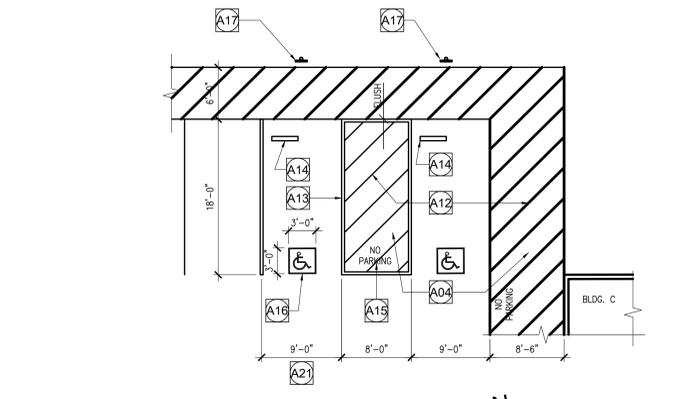
3 (E) PARKING BUMPER  
1-1/2" = 1'-0"



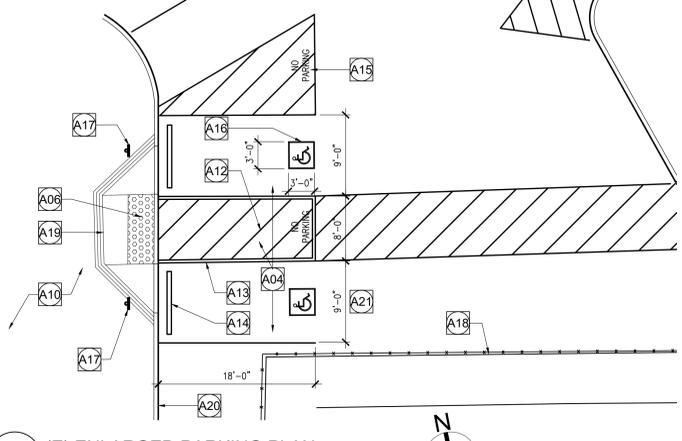
2 (E) ACCESSIBILITY SYMBOL  
1" = 1'-0"



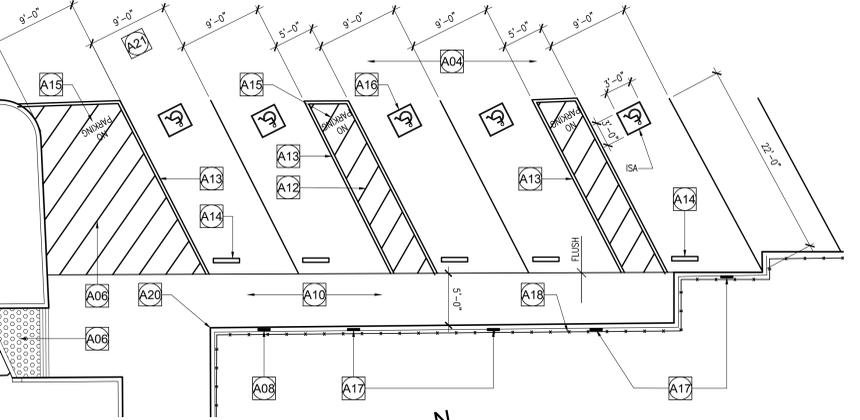
14 (E) HI-LO DRINKING FOUNTAIN  
1" = 1'-0"



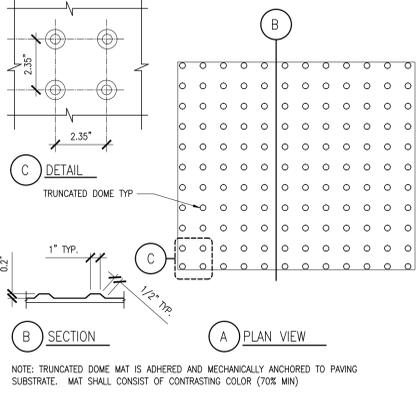
8 (E) ENLARGED PARKING PLAN (A# 01-117586)  
1/8" = 1'-0"



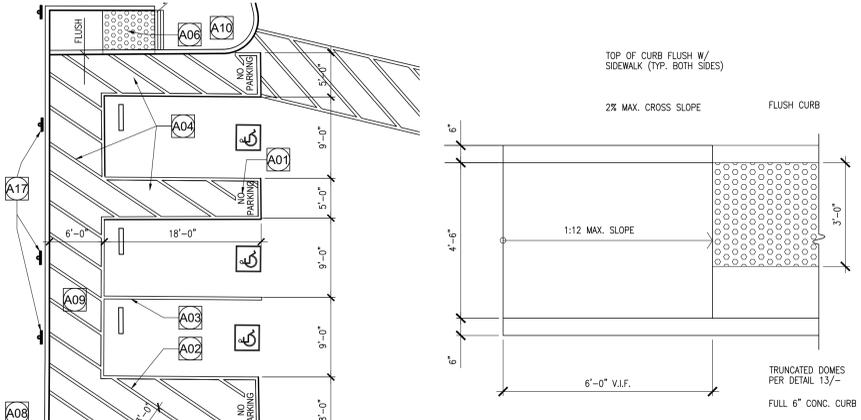
7 (E) ENLARGED PARKING PLAN  
1/8" = 1'-0"



6 (E) ENLARGED PARKING PLAN  
1/8" = 1'-0"



13 (E) TRUNCATED DOMES  
1-1/2" = 1'-0"



17 (E) ACCESSIBLE CURB RAMP  
1/2" = 1'-0"

1 (E) ENLARGED SITE PLAN (A# 01-117586)  
1/8" = 1'-0"

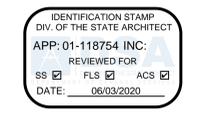
FOR REFERENCE ONLY - NO SCOPE IN THIS AREA

GENERAL NOTES

- NO NEW SCOPE ON THIS SHEET. EXISTING ACCESSIBLE PARKING PER APP. NO. 01-106489 AND 01-117586

KEYNOTES

- A01 12" HIGH LETTERS "NO PARKING" PAINTED WHITE
- A02 4" WIDE WHITE STRIPING @ 36" O.C. TYP.
- A03 4" WIDE BLUE STRIPING, TYP. AT OUTLINE OF ACCESSIBLE PARKING STALLS
- A04 (E) 2% MAX SLOPE IN ALL DIRECTIONS
- A05 ACCESSIBILITY SYMBOL PER DETAIL 2
- A06 12" TRUNCATED DOMES TO REMAIN, PROTECT
- A07 PARKING BUMPER PER DETAIL 3
- A08 STANDARD ACCESSIBLE PARKING SIGN PER DETAIL 4
- A09 (E) ASPHALT PAVEMENT
- A10 (E) CONC. SIDEWALK, PROTECT
- A11 PROVIDE "\$250 FINE SIGN" PER DETAIL 4
- A12 (E) 4" WIDE WHITE STRIPING, PROTECT
- A13 (E) 4" WIDE BLUE BORDER, PROTECT
- A14 (E) CONC. WHEELSTOP, PROTECT
- A15 (E) 12" HIGH LETTERS "NO PARKING" PAINTED WHITE, PROTECT
- A16 (E) INTERNATIONAL SYMBOL OF ACCESSIBILITY, PROTECT
- A17 (E) STANDARD PARKING SIGN PER DETAIL 4
- A18 (E) CHAIN LINK FENCE, PROTECT
- A19 (E) CONC. CURB RAMP, PROTECT
- A20 (E) CONC. CURB, PROTECT
- A21 (E) VAN STALL, PROTECT
- A22 CONC. CURB RAMP W/ 8.33% MAX. SLOPE.
- A23 6" THK. CONC. SIDEWALK W/ 2% MAX. SLOPE IN ALL DIRECTIONS.
- A24 (E) 6" CONC. CURB.
- A25 TRUNCATED DOMES PER DETAIL 13
- A26 12" LETTERS "LOADING ZONE" PAINTED WHITE
- A27 5% MAX. RUNNING SLOPE AND 2% MAX CROSS SLOPE.



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Enlarged Site Plan and Site Details

A-004

**LEGEND**

DOOR TAG  
E05B

RESTROOM  
E01-R4

NEW OPENING (TAG). DEMOLISH EXISTING WINDOW. SEE OPENING SCHEDULES ON A-601.

PROPERTY LINE

**KEYNOTES**

1. DEMOLISH PORTION OF WALL PRIOR TO INSTALLATION OF NEW CURTAIN WALL

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SS  FLS  ACS   
DATE: 06/03/2020

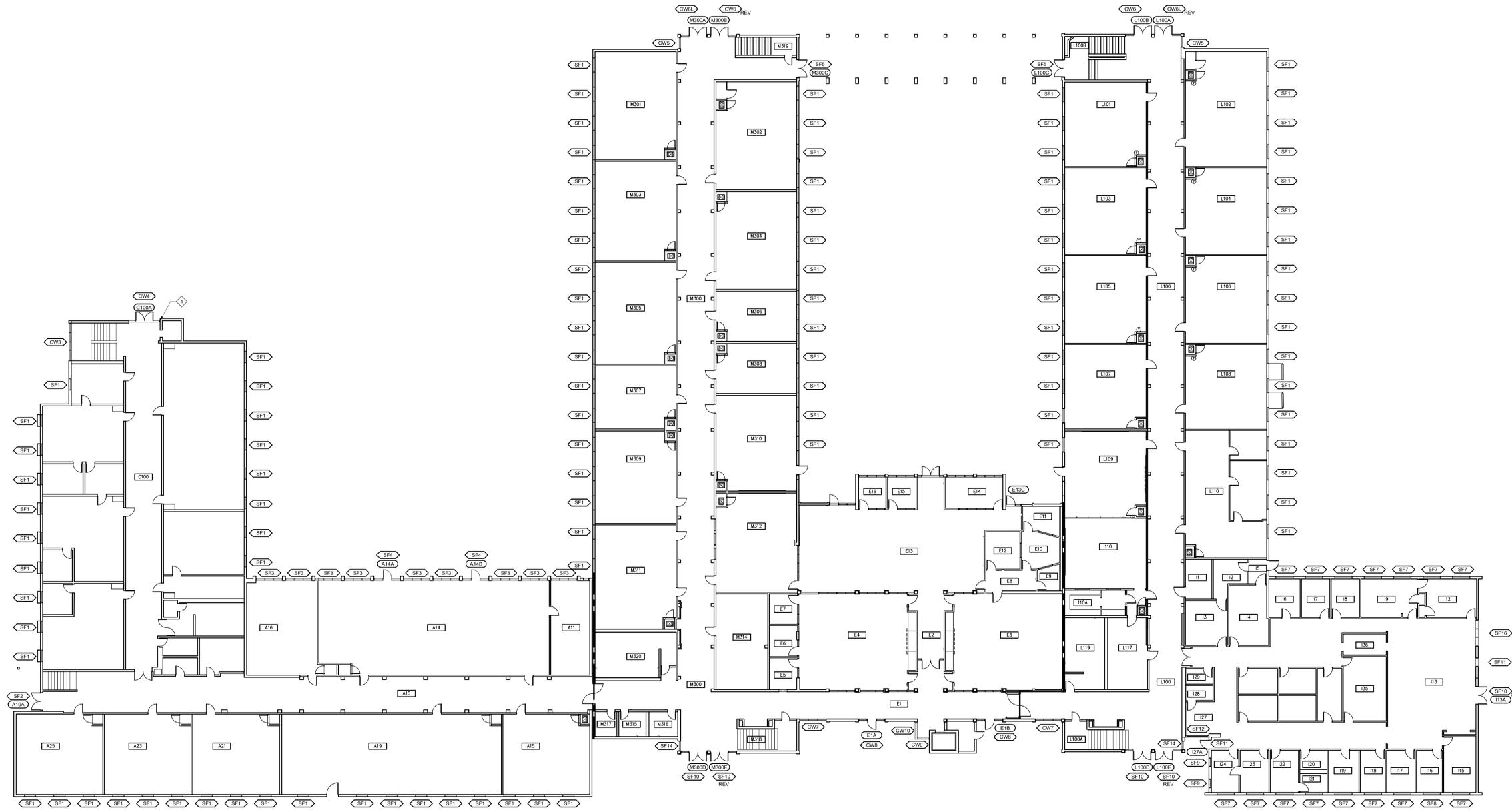


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1 FIRST FLOOR PLAN  
1/16" = 1'-0"



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FIRST FLOOR  
PLAN -  
MAIN BUILDING

A-101



NOTES (TYPICAL, U.O.N.)

- EXISTING BLEACHERS TO BE DEMOLISHED
- NEW BLEACHERS, DEFERRED SUBMITTAL
- NEW CEILING TILE IN EXISTING CEILING GRID
- EXISTING FLOORING TO BE REFINISHED PER FINISH SCHEDULE
- NEW STRIPING PER DETAIL 9/A-591
- EXISTING LIGHTING AND DEVICES TO REMAIN PROTECT IN PLACE. REINSTALL DEVICES AS REQUIRED.
- NEW BACKBOARD PADDING
- WALLS AND CEILING TO BE PAINTED (INCLUDING EXISTING TECTUM PANELING)



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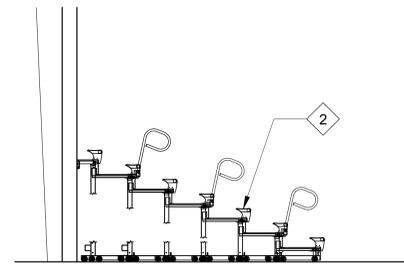


RESTROOM  
E01-RT ROOM NAME & NUMBER (TAG)

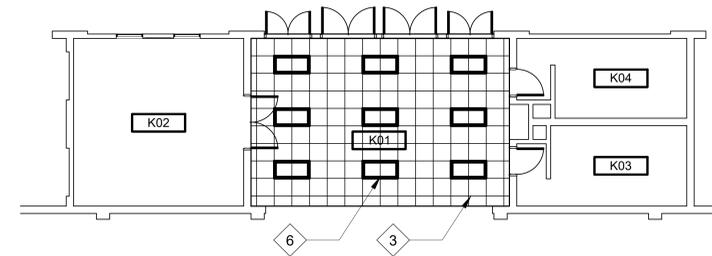
PROPERTY LINE

GENERAL NOTES

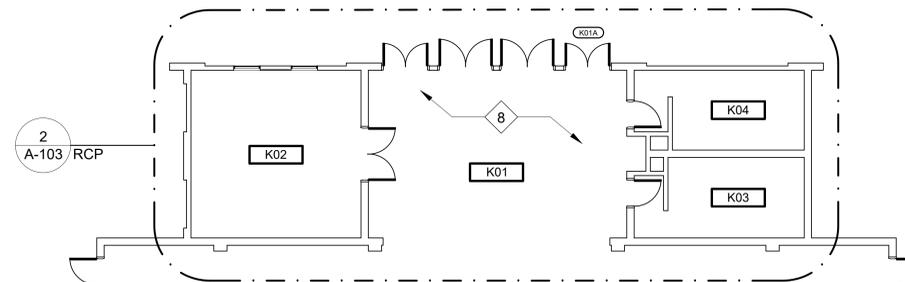
- SEE G-012 FOR SEAT COUNT



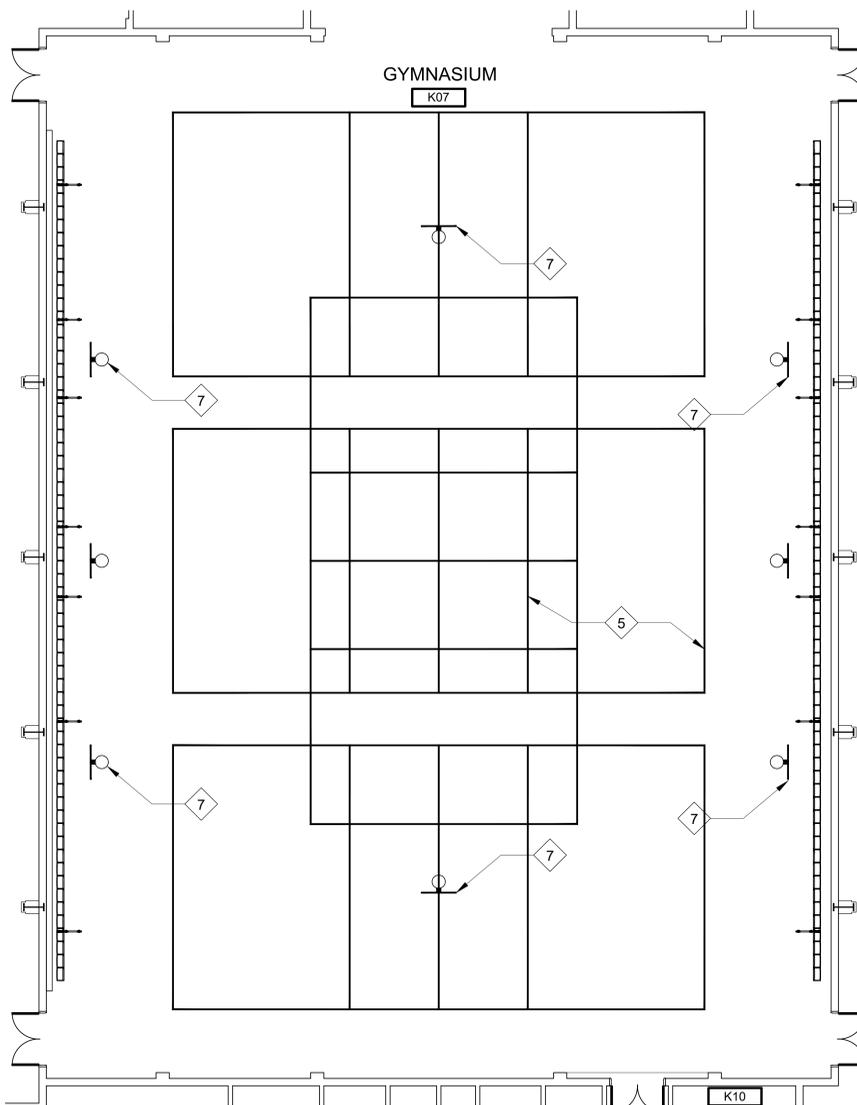
3 SECTION  
1/4" = 1'-0"



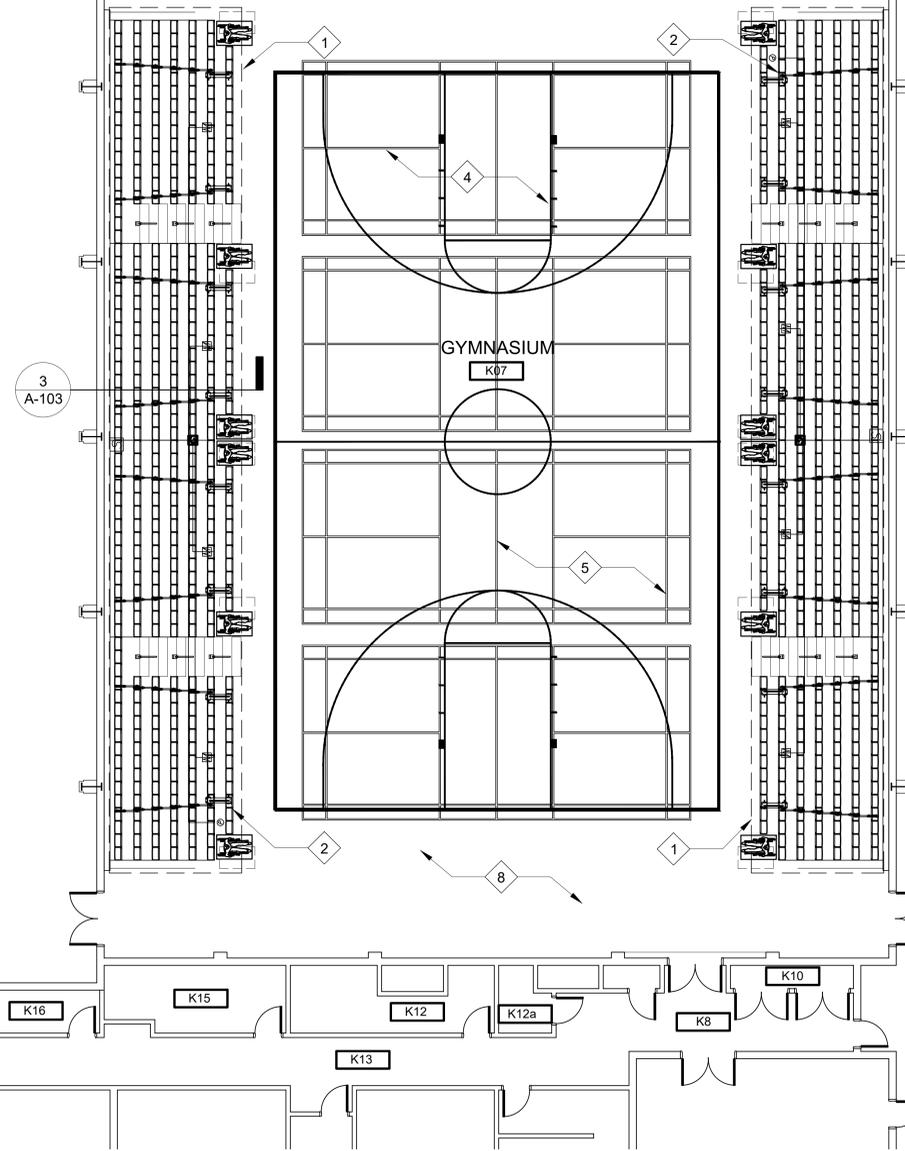
2 FIRST FLOOR REFLECTED CEILING PLAN  
1/8" = 1'-0"



2  
A-103 RCP



4 ADDITIONAL STRIPING AND BACKBOARD FIRST FLOOR PLAN  
1/8" = 1'-0"



1 FIRST FLOOR PLAN  
1/8" = 1'-0"



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FIRST FLOOR  
PLAN & RCP -  
GYM

A-103







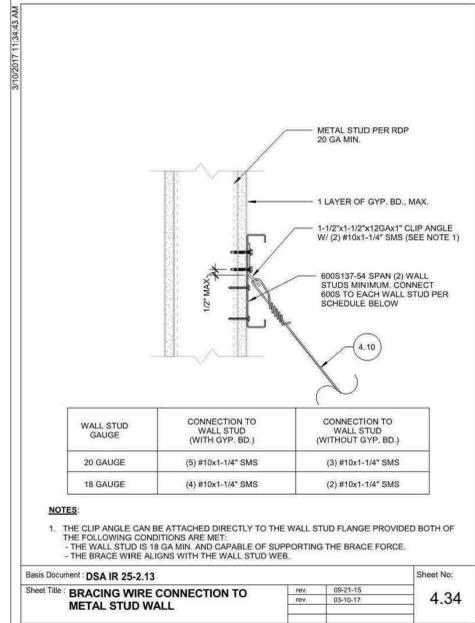






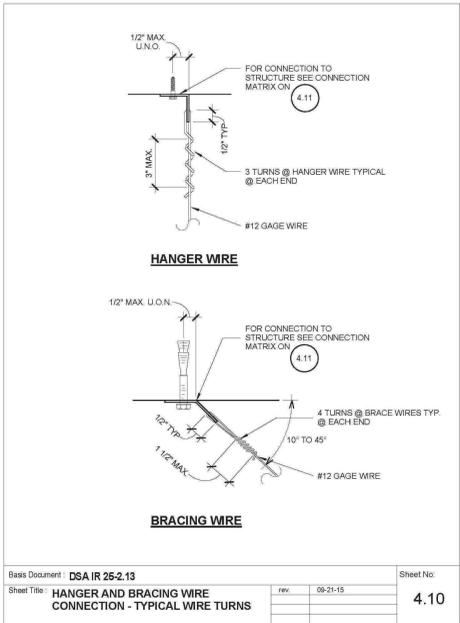




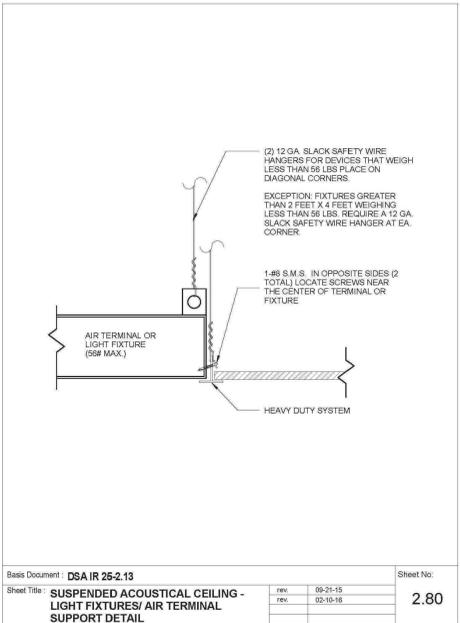


Notes: 1. THE CLIP ANGLE CAN BE ATTACHED DIRECTLY TO THE WALL STUD FLANGE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET:  
 - THE WALL STUD IS 18 GA MIN. AND CAPABLE OF SUPPORTING THE BRACE FORCE.  
 - THE BRACE WIRE ALONG WITH THE WALL STUD WEB.

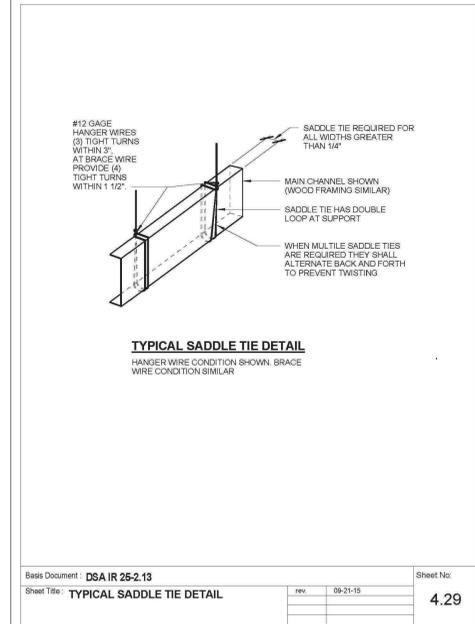
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	rev. 03-10-17	



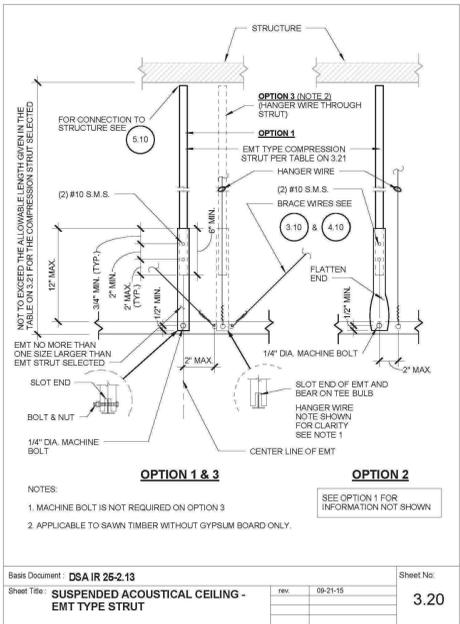
Sheet Title: HANGER AND BRACING WIRE CONNECTION - TYPICAL WIRE TURNS	rev. 09-21-15	Sheet No: 4.10
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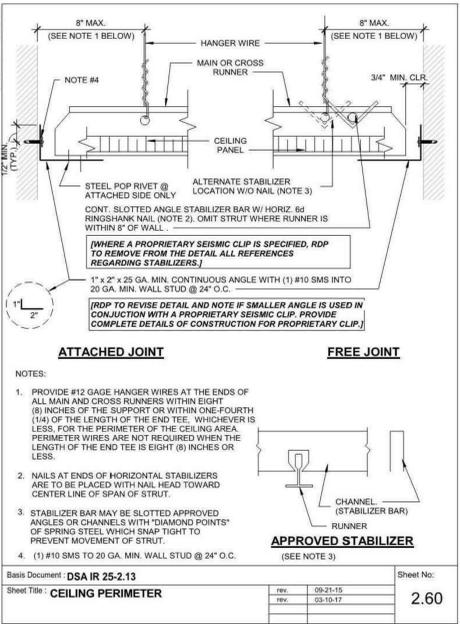
Sheet Title: SUSPENDED ACOUSTICAL CEILING - LIGHT FIXTURES/AIR TERMINAL SUPPORT DETAIL	rev. 09-21-15	Sheet No: 2.80
	rev. 02-10-18	



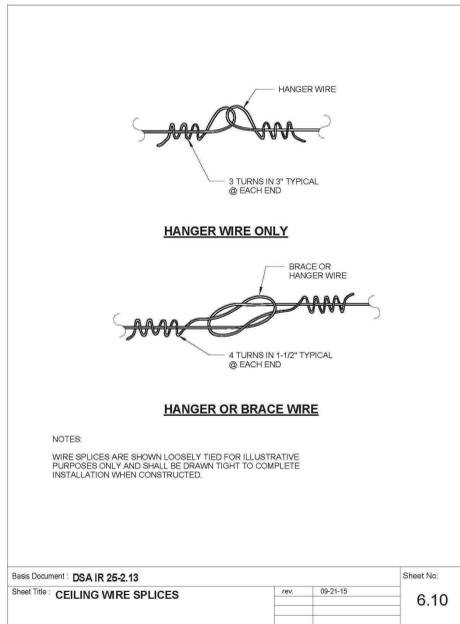
Sheet Title: TYPICAL SADDLE TIE DETAIL	rev. 09-21-15	Sheet No: 4.29
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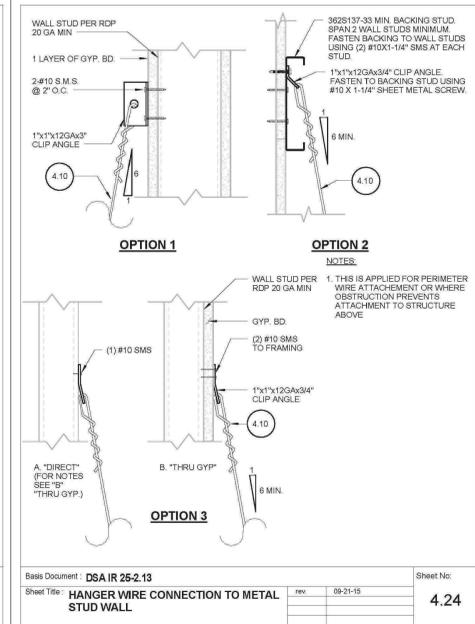
Sheet Title: SUSPENDED ACOUSTICAL CEILING - EMT TYPE STRUT	rev. 09-21-15	Sheet No: 3.20
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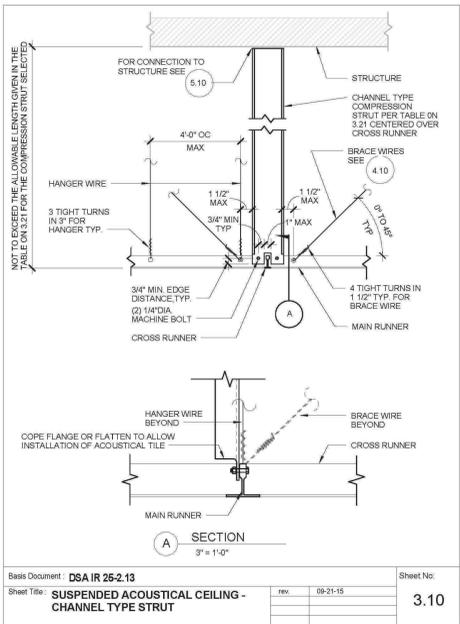
Sheet Title: CEILING PERIMETER	rev. 09-21-15	Sheet No: 2.60
	rev. 03-10-17	



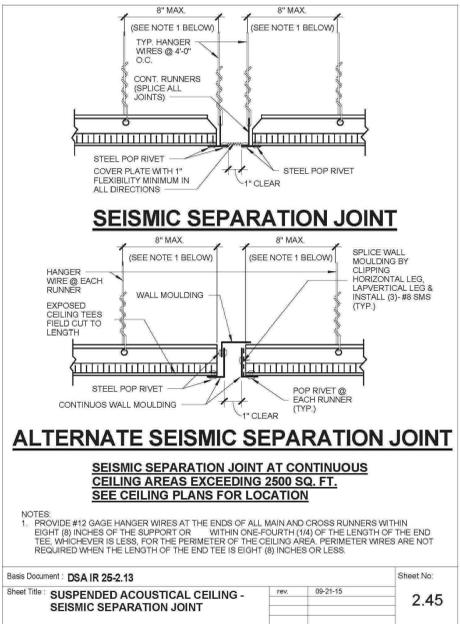
Sheet Title: CEILING WIRE SPLICES	rev. 09-21-15	Sheet No: 6.10
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Sheet Title: HANGER WIRE CONNECTION TO METAL STUD WALL	rev. 09-21-15	Sheet No: 4.24
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Sheet Title: SUSPENDED ACOUSTICAL CEILING - CHANNEL TYPE STRUT	rev. 09-21-15	Sheet No: 3.10
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Sheet Title: SUSPENDED ACOUSTICAL CEILING - SEISMIC SEPARATION JOINT	rev. 09-21-15	Sheet No: 2.45
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SHEET NOTES

1. ALL NOTES AND DRAWINGS ARE PER DSA IR 25-2.13.

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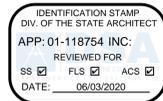


Details Suspended  
 Ceiling Assembly  
 Typical - Part B

A-572

**SHEET NOTES**

- ALL NOTES AND DRAWINGS ARE PER DSA IR 25-2.13.

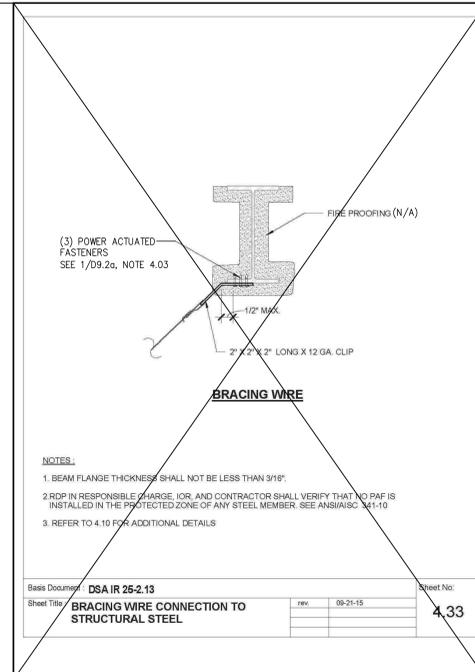


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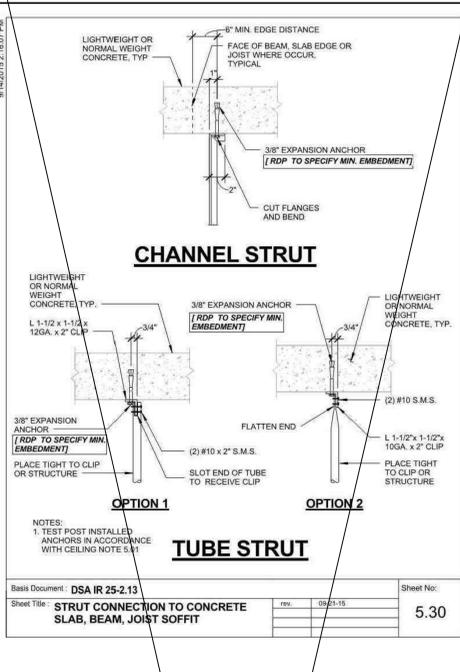
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Modernization

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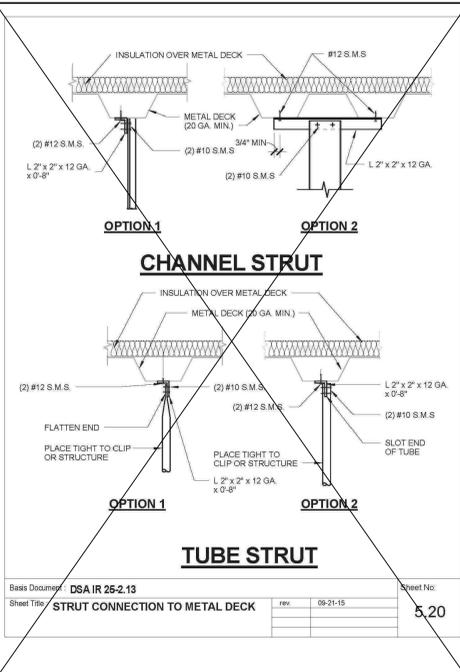
Date	Issued For
1/17/2020	DSA Submittal
5/8/2020	DSA Approval



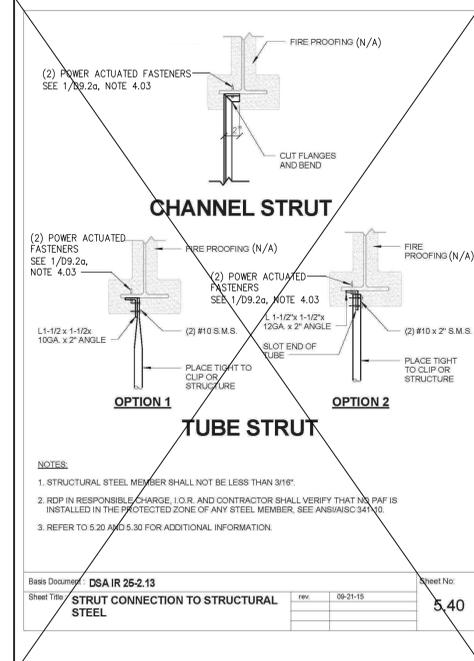
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Sheet Title: **BRACING WIRE CONNECTION TO STRUCTURAL STEEL**



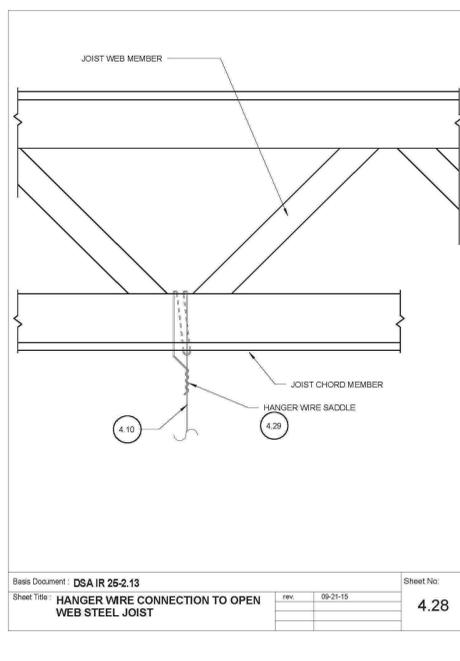
Basis Document: **DSA IR 25-2.13** Sheet No: **5.30**  
Sheet Title: **STRUT CONNECTION TO CONCRETE SLAB, BEAM, JOIST SOFFIT**



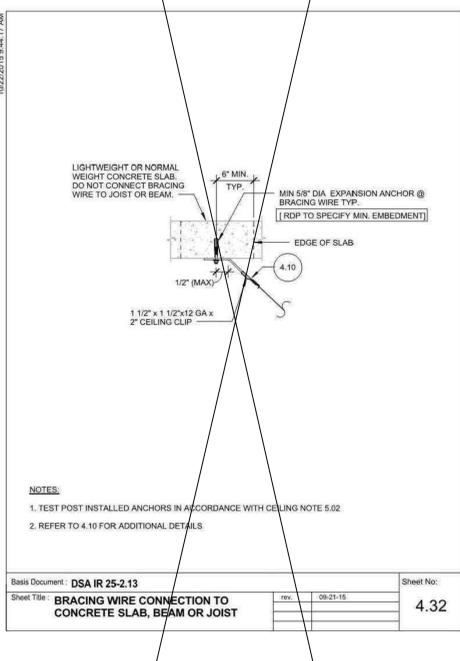
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Sheet Title: **STRUT CONNECTION TO METAL DECK**



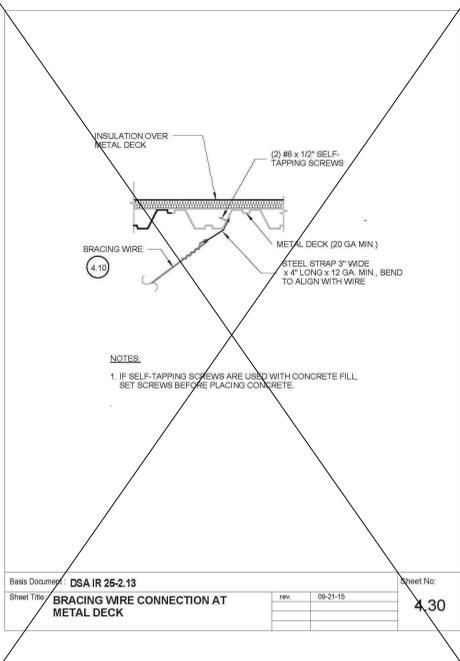
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Sheet Title: **STRUT CONNECTION TO STRUCTURAL STEEL**



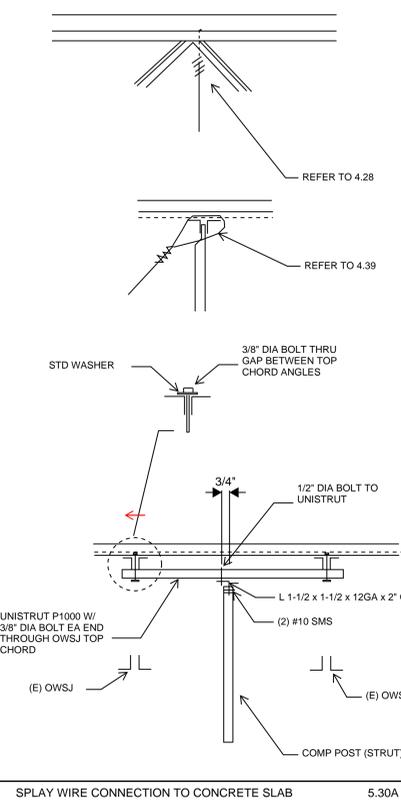
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Sheet Title: **HANGER WIRE CONNECTION TO OPEN WEB STEEL JOIST**



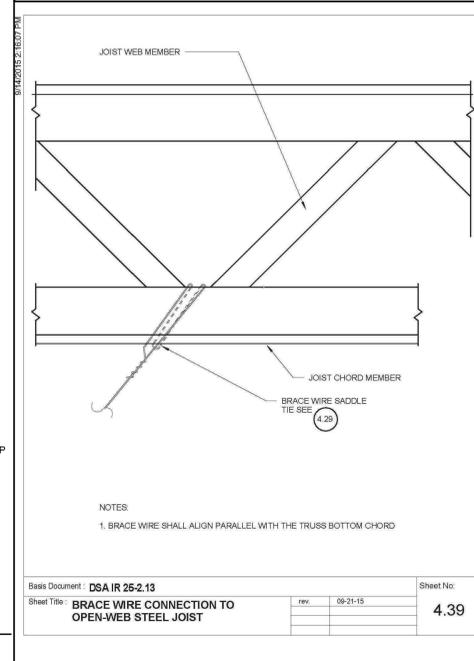
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Sheet Title: **BRACING WIRE CONNECTION TO CONCRETE SLAB, BEAM OR JOIST**



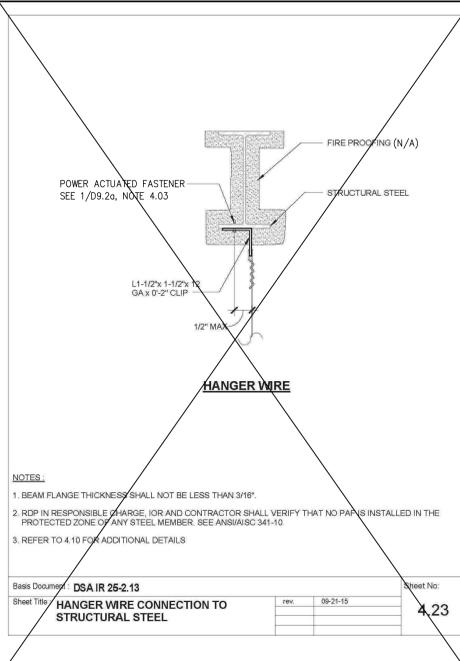
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Sheet Title: **BRACING WIRE CONNECTION AT METAL DECK**



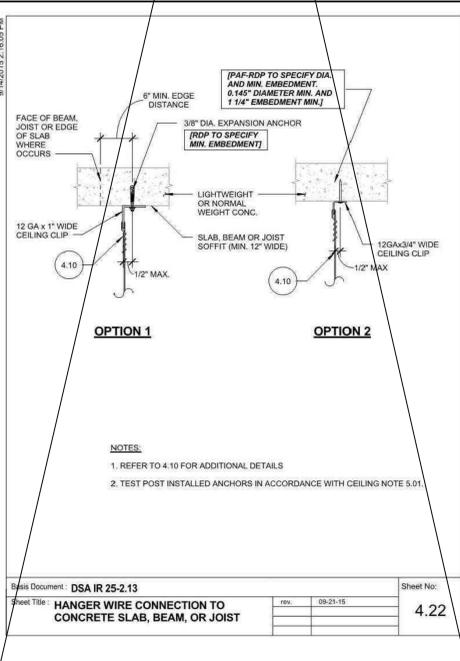
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Sheet Title: **SPLAY WIRE CONNECTION TO CONCRETE SLAB**



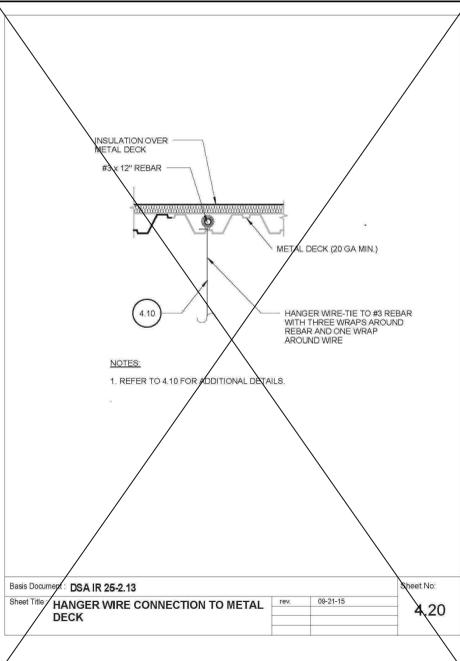
Basis Document: **DSA IR 25-2.13** Sheet No: **4.39**  
Sheet Title: **BRACE WIRE CONNECTION TO OPEN-WEB STEEL JOIST**



Basis Document: **DSA IR 25-2.13** Sheet No: **4.23**  
Sheet Title: **HANGER WIRE CONNECTION TO STRUCTURAL STEEL**



Basis Document: **DSA IR 25-2.13** Sheet No: **4.22**  
Sheet Title: **HANGER WIRE CONNECTION TO CONCRETE SLAB, BEAM, OR JOIST**



Basis Document: **DSA IR 25-2.13** Sheet No: **4.20**  
Sheet Title: **HANGER WIRE CONNECTION TO METAL DECK**



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Details Suspended  
Ceiling Assembly  
Metal Deck, Steel,  
Comp Deck  
**A-573**







































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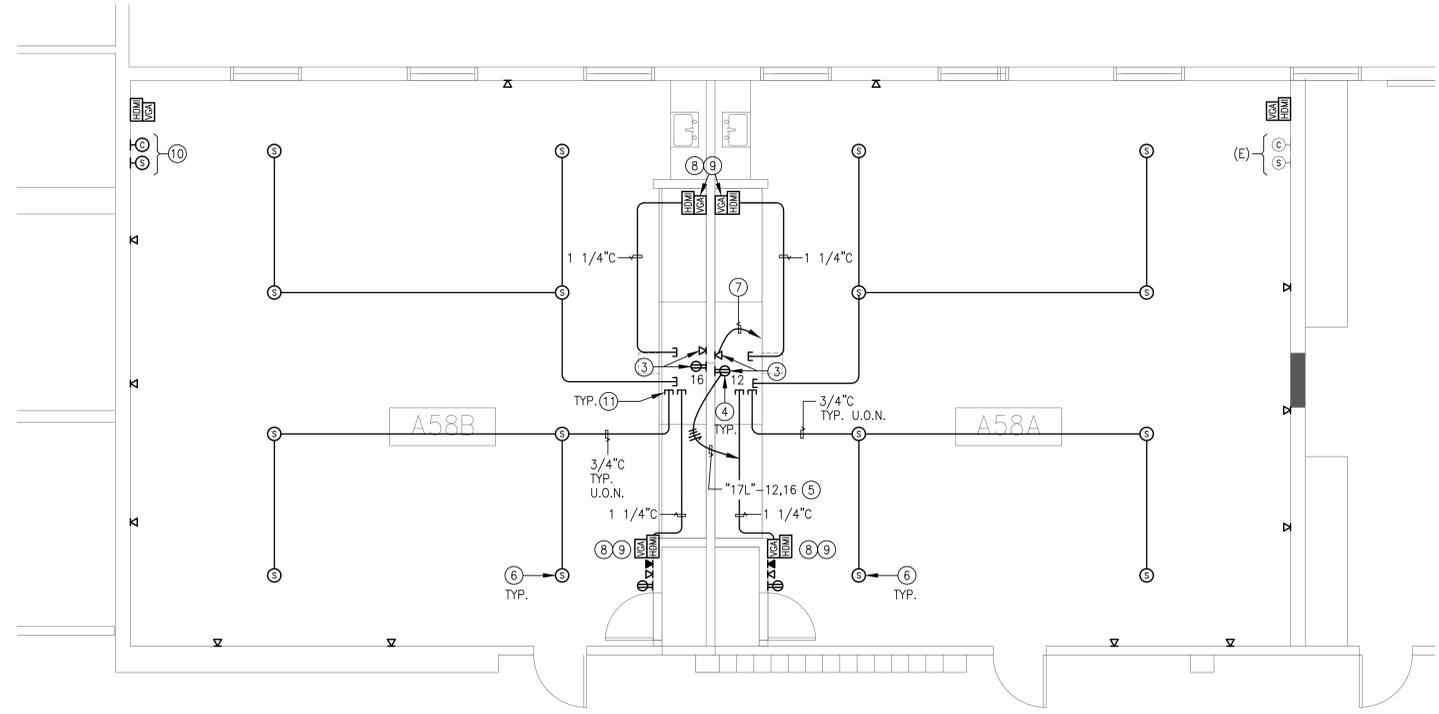
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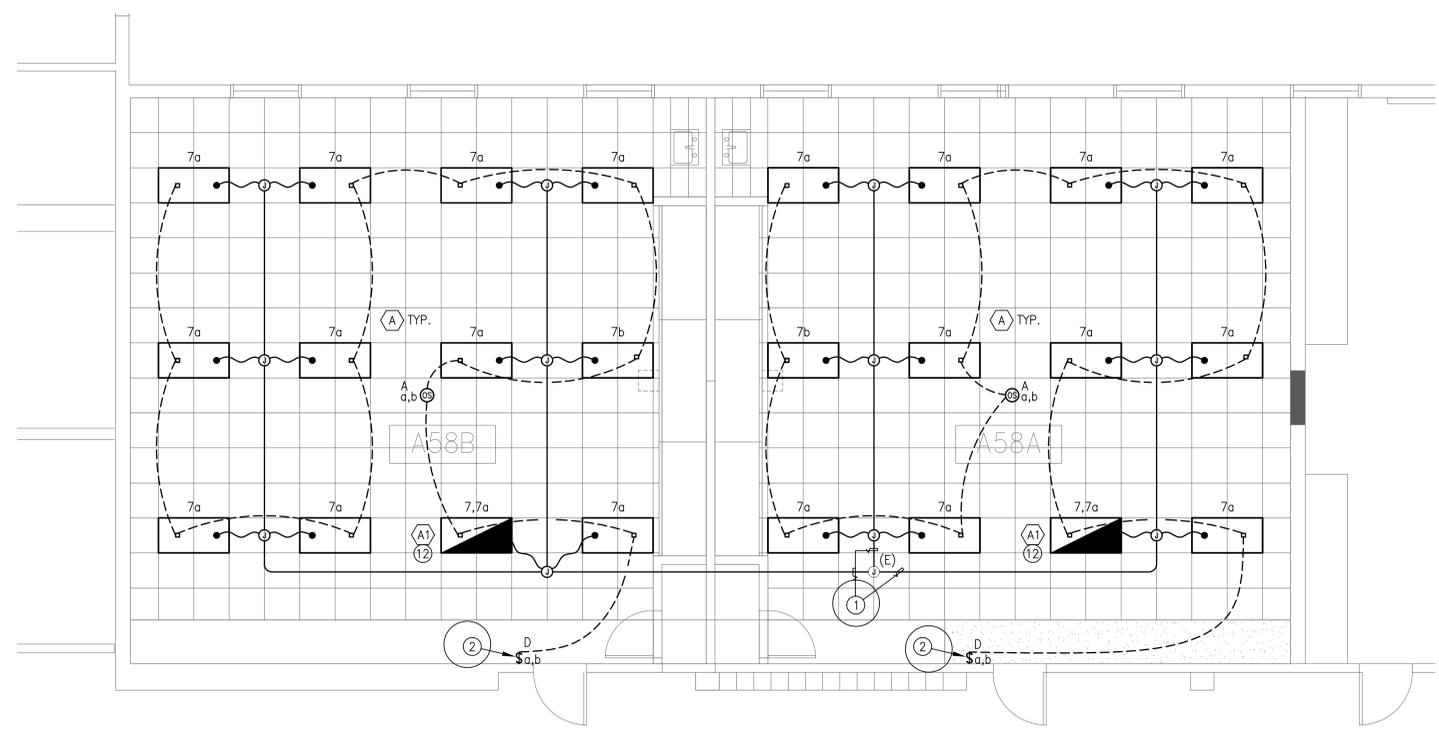
Date	Issued For
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5/07/2020	DSA Back Check

**SHEET NOTES:**

- ① INTERCEPT (E) CIRCUIT "DH5"-7 AND EXTEND (N) CONDUIT AND WIRES TO (N) LIGHT FIXTURES AS SHOWN.
- ② SWITCH SHALL BE PROGRAMMED TO ACHIEVE SWITCHING ARRANGEMENT SHOWN.
- ③ MOUNT DEVICES ±7"-6" A.F.F. NEXT TO PROJECTOR.
- ④ 120V POWER CONNECTION FOR PROJECTOR
- ⑤ UTILIZE (E) SPARE CIRCUIT BREAKER, REFER TO DWG. E1.1 FOR THE LOCATION OF (E) ELECTRICAL PANELBOARD.
- ⑥ CEILING MOUNTED SPEAKER CONNECTED TO PROJECTOR/MONITOR.
- ⑦ HOMERUN (2) CAT 6A CABLE TO (E) IDF LOCATED IN ROOM A53, REFER TO DWG. E1.1.
- ⑧ (1) HDMI & (1) VGA INPUT FOR MONITOR.
- ⑨ (1) HDMI & (1) VGA INPUT FOR PROJECTOR.
- ⑩ PROVIDE (N) CLOCK/SPEAKER TO MATCH (E), REFER TO RISER DIAGRAM FOR WIRING CONNECTION.
- ⑪ STUB-DOWN CONDUIT FROM ABOVE CEILING NEXT TO PROJECTOR.
- ⑫ PROVIDE UNSWITCHED HOT WIRED TO EMERGENCY BALLAST.



**1 ELECTRICAL PLAN**  
 E2.2 SCALE: 1/4" = 1'-0"



**2 LIGHTING PLAN**  
 E2.2 SCALE: 1/4" = 1'-0"



**HED**  
 Alliance Engineering Consultants, Inc.  
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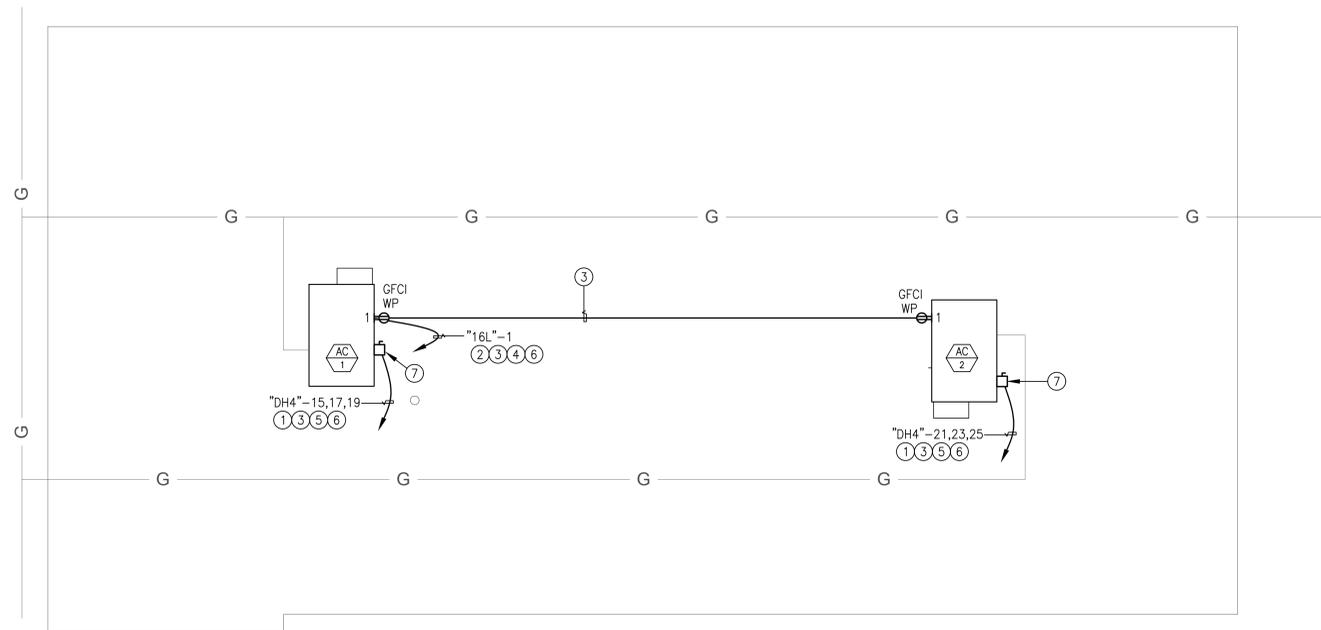
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**SHEET NOTES:**

- ① 3/4"C, 3 #12 & 1 #12 GND.
- ② 3/4"C, 2 #12 & 1 #12 GND.
- ③ ROUTE CONDUIT ON THE ROOF AND PROVIDE CONDUIT SUPPORT AT 10FT. INTERVAL MAX.
- ④ UTILIZE (E) 20A, 120V SPARE CIRCUIT BREAKER.
- ⑤ PROVIDE (N) 15A/3P, 600VAC MAX CIRCUIT BREAKER IN (E) SPACES OF (E) PANEL "DH4". (N) CIRCUIT BREAKER TYPE AND INTERRUPTING SHALL MATCH (E).
- ⑥ (E) PANEL IS LOCATED IN THE FIRST FLOOR STORAGE RM #A13 APPROXIMATELY 200FT IN DISTANCE.
- ⑦ PROVIDE (N) 30A/3P, 600VAC MAX. FUSIBLE DISCONNECT SWITCH IN NEMA 3R ENCLOSURE WITH (3) 15A DUAL ELEMENT TIME DELAY FUSES.



① ELECTRICAL PLAN - ROOF  
 SCALE: 1/4" = 1'-0"



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 PROJECT NO. 101-20-02

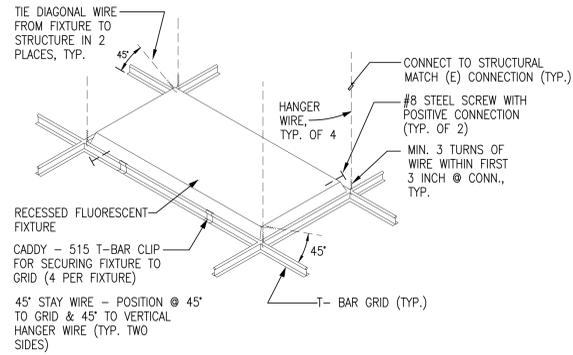


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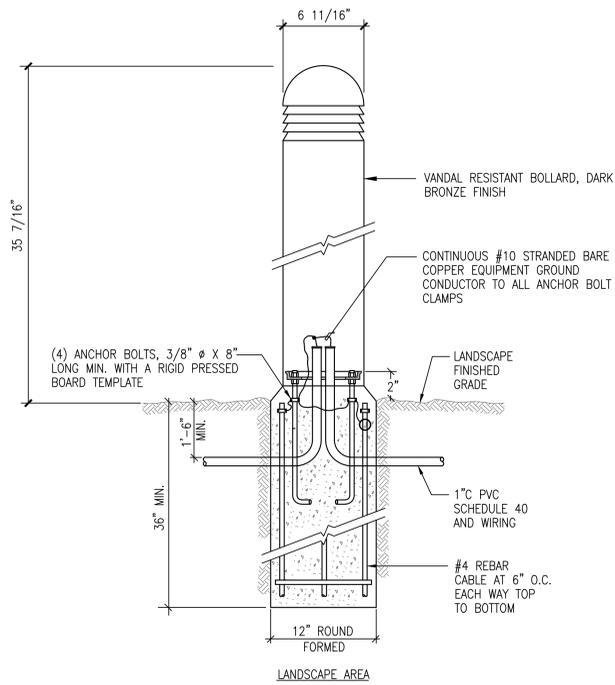
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ELECTRICAL  
 PLAN - ROOF

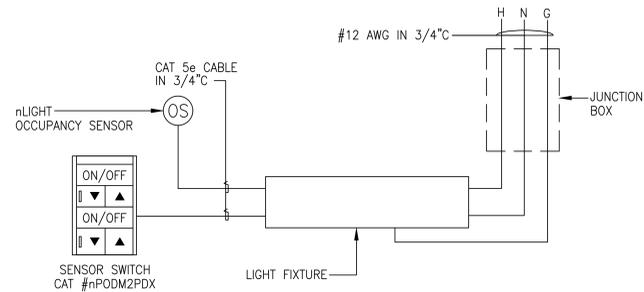
E2.4



1 TYPICAL SUPPORT REQUIREMENTS FOR RECESSED LIGHT FIXTURES  
NOT TO SCALE



2 BOLLARD FIXTURE MOUNTING DETAIL  
NOT TO SCALE

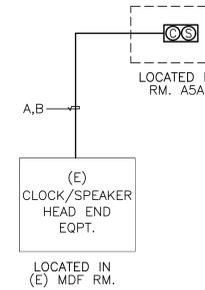


3 LIGHTING CONTROL WIRING DIAGRAM

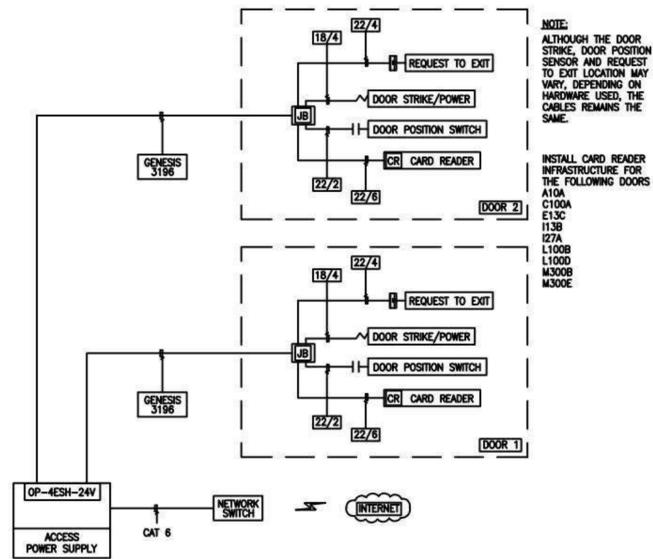
MARK	MANUFACTURERS MODEL NO.	LAMPS		TOTAL WATTS	VOLTS	MOUNTING	DESCRIPTION AND REMARKS	TOTAL WEIGHT	MTG. DETAIL
		QTY.	TYPE						
A	LITHONIA LIGHTING CAT #2TL446L-FWA12 D50-LP835 N80	-	LED	50	277	RECESSED LAY-IN	2'x4' LED LIGHT FIXTURE WITH PRISMATIC ACRYLIC LENS, 0-10V DRIVER.	10LBS	1/E3.1
A1	LITHONIA LIGHTING CAT #2TL446L-FWA12 D50-LP835 N80 EL14L	-	LED	50	277	RECESSED LAY-IN	SAME AS TYPE "A" LIGHT FIXTURE EXCEPT WITH EMERGENCY BATTERY PACK.	10LBS	1/E3.1
B	ERCO LIGHTING CAT #33944023	-	LED	29	277	GROUND MOUNTED	35 7/16" x 6 11/16" LED BOLLARD LUMINAIRE WITH CORROSION RESISTANT CAST ALUMINUM HOUSING. SUITABLE FOR OUTDOOR APPLICATION.	15LBS	2/E3.1

CLOCK/SPEAKER MATERIAL LIST	
CLOCK	SHALL MATCH EXISTING
SPEAKER	SHALL MATCH EXISTING

CLOCK/SPEAKER CABLE SCHEDULE	
TYPE	DESCRIPTION
A	4 PAIRS CAT 6 (SPEAKER)
B	WEST PENN 238 (CLOCK)



4 CLOCK/SPEAKER RISER DIAGRAM



CARD READER RISER DIAGRAM



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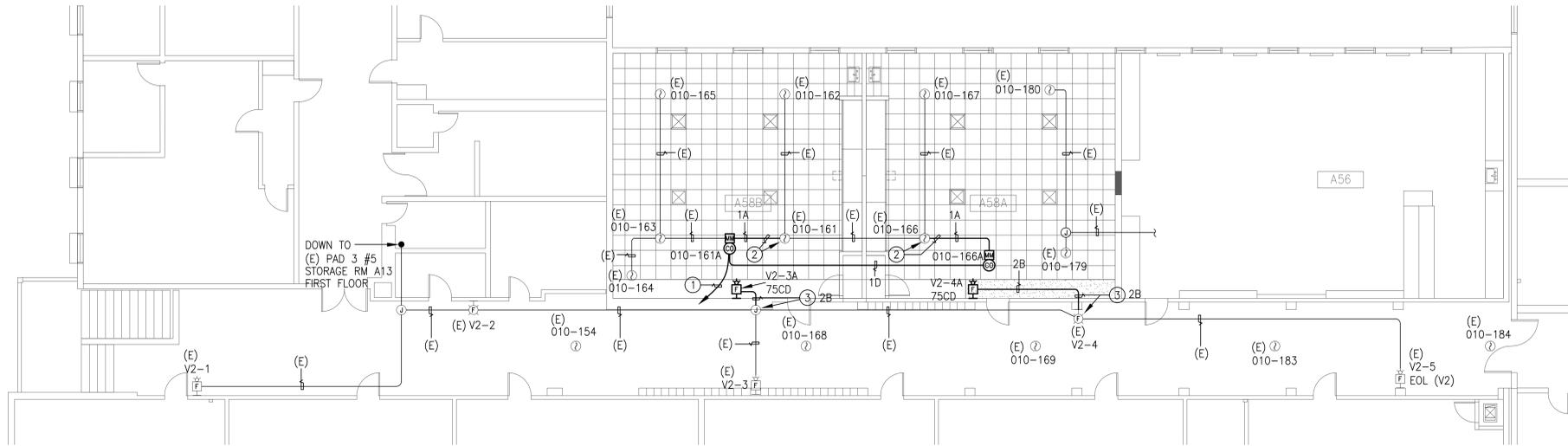


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**SHEET NOTES:**

- HOME RUN TO PAD3 #6 LOCATED IN STORAGE RM. A13, FIRST FLOOR, BUILDING "A", APPROXIMATELY 100 FT IN DISTANCE.
- INTERCEPT (E) INITIATING CIRCUIT AND EXTEND (N) CONDUIT AND WIRES TO (N) MONITOR MODULE AS SHOWN.
- INTERCEPT (E) NOTIFICATION CIRCUIT AND EXTEND (N) CONDUIT AND WIRES TO (N) HORNS/TROBE AS SHOWN.

**1 FIRE ALARM PLAN**  
 SCALE: 1/8" = 1'-0"

(E) PAD-3 #5 Battery Calculation Work Sheet			
	Standby Current (A)	Alarm Current (A)	
FARP Distributed	0.035	0.140	A
DIP Switch SW 1-4 off			
DIP Switch SW 1-4 off			
Auxiliary Devices			
Catalog Number	Qty	Standby	Alarm
	x	A	0.000
Door Holders			
Catalog Number	Qty	Standby	Alarm
	x	A	0.000
Notification Appliances			
Catalog Number	Qty	Standby	Alarm
(V1) U-MCS-75cd Strobe (E)	2 x	0.143	0.286
(V1) U-MHU-MCS-75cd Strobe (E)	3 x	0.168	0.504
(V2) U-MCS-75cd Strobe (E)	2 x	0.143	0.286
(V2) U-MHU-MCS-75cd Strobe (E)	3 x	0.168	0.504
ZH-MC-R-15cd Horn/Strobe	0 x	0.078	0.000
ZH-MC-R-30cd Horn/Strobe	0 x	0.113	0.000
(V2) ZH-MC-R-75cd Horn/Strobe (N)	2 x	0.195	0.390
ZH-MC-R-110cd Horn/Strobe	0 x	0.259	0.000
<b>Total Standby Current</b>		<b>0.0350</b>	<b>A</b>
<b>Total Alarm Current</b>		<b>2.110</b>	<b>A</b>
Hours of Standby required by NFPA 72 Standards, (4,24 or 60)	X	24	HOURS
<b>Total A.H required for standby:</b>		<b>0.84</b>	<b>AH</b>
5 Minute of Alarm operation per NFPA 72 Standards	X	5min.	(0.08333 Hours)
<b>Total A.H required for Alarm:</b>		<b>0.53</b>	<b>AH</b>
Add total standby current and alarm current:			<b>1.37 AH</b>
De-rating factor (20% extra insurance to meet desired performance)	X		<b>1.20%</b>
<b>Total A.H required for battery back-up</b>			<b>1.64 AH</b>

Notes:  
 1 The alarm current must never exceed 6.14 Amps  
 2 Supplied Battery Set 7.0amp

VOLTAGE DROP (VD) CALCULATION

PROJ. NAME Terra Linda H.S. - Modernization

SIG CKT # V2

DEVICE #	1st	2nd	3rd	3Ath	4th	4Ath	5th
GAUGE WIRE	14	14	14	14	14	14	14
DISTANCE (FT)	60	55	55	20	55	25	70
AMPS @ DEVICE	0.168	0.143	0.168	0.195	0.143	0.195	0.168
AMPS DEVELOPED	1.180	1.012	0.869	0.701	0.506	0.363	0.168
VOLT. DROP	0.43471	0.34175	0.29346	0.08608	0.17088	0.05572	0.07221

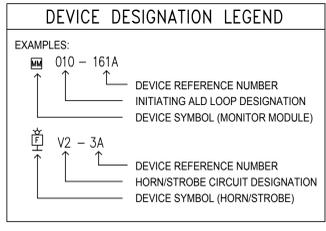
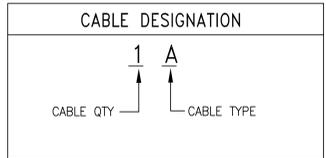
TOTAL CKT V.D.= 1.45481  
 CKT VOLTAGE= 20.4  
 VOLT. @ LAST DEVICE 18.94519  
 % VOLTAGE DROP= 7.13143

**FIRE ALARM OPERATION MATRIX**

DEVICE TYPE	ACTIVATE COMMON ALARM SIGNAL INDICATOR OF FACP	ANNUNCIATE ALARM @ SYSTEM STATUS DISPLAY	ACTIVATE NOTIFICATION DEVICE	ANNUNCIATE ALARM, TROUBLE AND SUPERVISORY TO REMOTE CENTRAL STATION	CLOSE ASSOCIATED FIRE SMOKE DAMPER	DOOR HOLDER RELEASE	ACTUATE COMMON SUPERVISORY SIGNAL INDICATOR	TRANSMIT SUPERVISORY SIGNAL TO SUPERVISING STATION	TRANSMIT LOCAL ALARM (TEMPORAL 4) AND THIS WILL ONLY TRIGGER CARBON MONOXIDE DETECTOR
MANUAL PULL STATION	X	X	X	X		X			
SMOKE DETECTOR	X	X	X	X		X			
FSD SMOKE DETECTOR	X	X	X	X	X	X			
HEAT DETECTOR	X	X	X	X		X			
FLOW AND TAMPER	X	X	X	X	X	X			
CARBON MONOXIDE DETECTOR							X	X	X

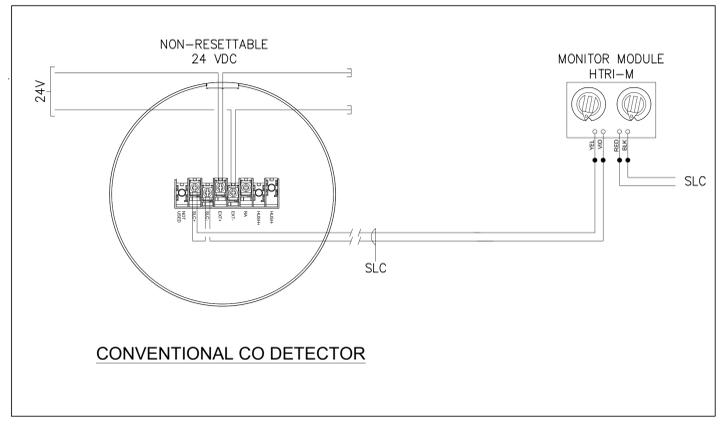
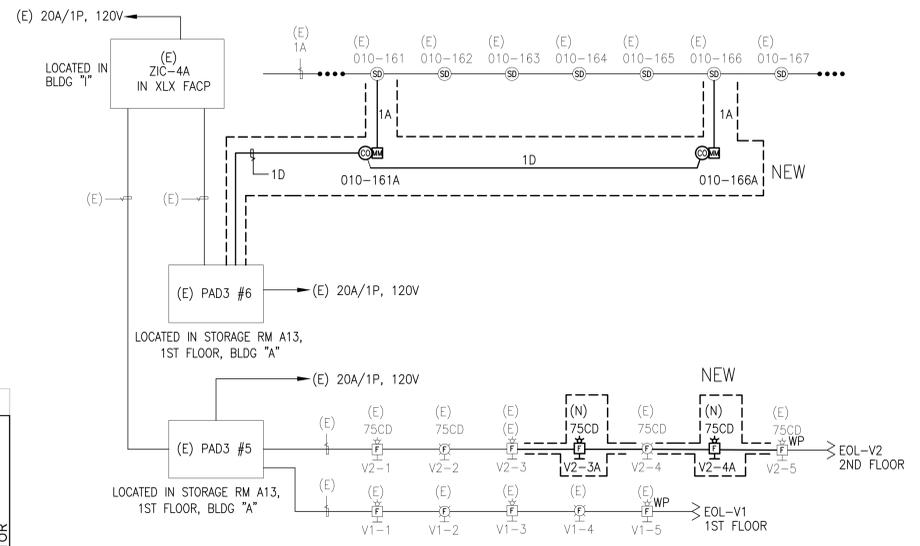
**FIRE ALARM EQUIPMENT LIST**

SYMBOL	DESCRIPTION	MODEL	MANUFACT.	CSFM #
MAIN ELECTRICAL EQUIPMENT				
FACP	(E) FIRE ALARM CONTROL PANEL	XLX	SIEMENS	7165-0067:0222
PAD3	(E) REMOTE NOTIFICATION POWER SUPPLY	PAD3	SIEMENS	7300-0067:0218
INITIATING DEVICES				
CO	CARBON MONOXIDE DETECTOR	FDOOTC441	SIEMENS	7272-0067:0260
	DETECTOR BASE	DB-11	SIEMENS	7300-0067:0134
MM	MONITOR MODULE	HTRI-M	SIEMENS	7165-0067:0222
NOTIFICATION DEVICES				
H	24V HORN/TROBE (RED) SET AT 75CD	ZH-MC-R	SIEMENS	7125-0067:0254
FA WIRING CABLES				
	#16 AWG, TWISTED PAIR CABLE	D990	WEST PENN	7161-0859:0101



**FIRE ALARM WIRING LEGEND**

SYMBOL	WIRE TYPE	USED ON
A	2-CONDUCTOR, #16 AWG SOLID BARE COPPER UNSHIELDED (BLACK/RED) (D990)	ADDRESSABLE ALARM INITIATING DEVICES: - SMOKE & HEAT DETECTORS - INTERFACE MODULES
D	2-CONDUCTOR, #12 AWG SOLID OR STRANDED	24 VDC POWER TO: - FA PANEL - DOOR HOLDER - CARBON MONOXIDE



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# SHADE STRUCTURE

## DSA P.C. 04-118151

### (REVISIONS TO 04-117219)

THESE PLANS AND SPECIFICATIONS ARE THE PROPERTY OF USA SHADE AND FABRIC STRUCTURES AND SHALL NOT BE REPRODUCED WITHOUT THEIR WRITTEN PERMISSION.

**USASHADE & Fabric Structures**

**CORPORATE HEADQUARTERS**  
 8505-A CHANCELLOR ROW  
 DALLAS, TX, 75247  
 800-966-5005

**CERTIFICATIONS:**  
 IAS CERTIFICATION No: FA-428  
 CLARK COUNTY MANUFACTURER  
 CERTIFICATION NUMBER (NEVADA): 355

**CUSTOMER:**  
 San Rafael City Schools

**PROJECT NAME:**  
 Terra Linda High School

**LOCATION:**  
 320 Nova Albion Way  
 San Rafael, CA 94903

**MODEL NUMBER:** SEE SELECTION

**SITE SPECIFIC APPLICATION TITLE SHEET SHALL INCLUDE:**

- APPLICABLE CODES**
- 2019 CALIFORNIA ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R.
  - 2016 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R. (2015 INTERNATIONAL BUILDING CODE VOLUMES 1-2 AND 2016 CALIFORNIA AMENDMENTS)
  - 2016 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R. (2015 UNIFORM MECHANICAL CODE AND 2016 CALIFORNIA AMENDMENTS)
  - 2016 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R. (2014 NATIONAL ELECTRICAL CODE AND 2016 CALIFORNIA AMENDMENTS)
  - 2016 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R. (2015 UNIFORM PLUMBING CODE AND 2016 CALIFORNIA AMENDMENTS)
  - 2016 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 C.C.R. (2015 CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R. (2015 UNIFORM FIRE CODE AND 2016 CALIFORNIA AMENDMENTS)
  - 2016 CALIFORNIA GREEN BUILDING STANDARDS CODE, PART 11, TITLE 24 C.C.R. (2015 INTERNATIONAL GREEN BUILDING STANDARDS CODE, PART 11, TITLE 24 C.C.R.)
  - 2016 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 C.C.R.
  - TITLE 19 C.C.R. - PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS
  - 2013 ASME A17.1 SAFETY CODE FOR ELEVATORS AND ESCALATORS
- PARTIAL LIST OF APPLICABLE STANDARDS**
- |           |   |              |
|-----------|---|--------------|
| NFPA 13   | AUTOMATIC FIRE SPRINKLER SYSTEMS  | 2016 EDITION |
| NFPA 14   | STANDPIPE AND HOSE SYSTEMS  | 2013 EDITION |
| NFPA 17   | DRY CHEMICAL EXTINGUISHING SYSTEMS  | 2013 EDITION |
| NFPA 17A  | WET CHEMICAL EXTINGUISHING SYSTEMS  | 2013 EDITION |
| NFPA 20   | STATIONARY PUMPS FOR FIRE PROTECTION  | 2016 EDITION |
| NFPA 22   | WATER TANKS FOR PRIVATE FIRE PROTECTION   | 2013 EDITION |
| NFPA 24   | PRIVATE FIRE MAINS & THEIR APPURTENANCES  | 2016 EDITION |
| NFPA 25   | STANDARD FOR INSPECTION, TESTING AND MAINTENANCE OF WATER-BASED FIRE PROTECTION SYSTEMS | 2013 EDITION |
| NFPA 72   | NATIONAL FIRE ALARM & SIGNALING CODE  | 2016 EDITION |
| NFPA 80   | FIRE DOORS AND OTHER OPENING PROTECTIVES  | 2016 EDITION |
| NFPA 92   | STANDARD FOR SMOKE CONTROL SYSTEMS  | 2015 EDITION |
| NFPA 253  | CRITICAL RADIANT FLUX OF FLOOR COVERING SYSTEMS   | 2015 EDITION |
| NFPA 2001 | CLEAN AGENT FIRE EXTINGUISHING SYSTEMS  | 2015 EDITION |
| ICC 300   | CLEAR STANDARDS ON BLEACHERS, FOLDING AND TELESOPING SEATING, AND GRAND STANDS          | 2012 EDITION |
| UL 300    | FIRE TESTING OF FIRE EXTINGUISHING SYSTEMS FOR PROTECTION OF RESTAURANT COOKING AREAS   | 2005 EDITION |
| UL 464    | AUDIBLE SIGNAL APPLIANCES   | 2003 EDITION |
| UL521     | HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS                                    | 1999 EDITION |
- REFERENCE CODE SECTION FOR NFPA STANDARDS-2016 CBC (SFM) CHAPTER 35. SEE CHAPTER 35 FOR STATE OF CALIFORNIA AMENDMENTS TO NFPA STANDARDS.

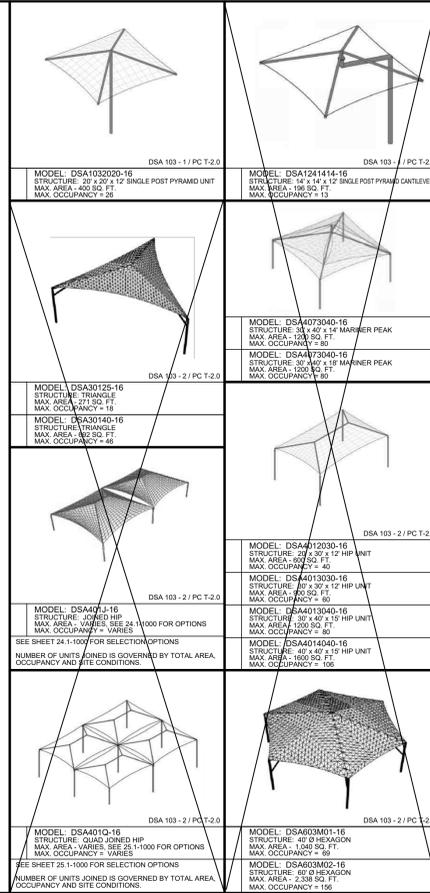
SEE INDIVIDUAL STRUCTURAL DRAWINGS FOR SPECIFIC DESIGN NOTES AND LOADING.

ALL WORK SHALL CONFORM TO 2016 EDITION TITLE 24, CALIFORNIA CODE OF REGULATIONS (C.C.R.).

ALL WORK SHALL BE IN COMPLIANCE WITH CFC CHAPTER 33 - FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION.

**SITE SPECIFIC APPLICATION SITE PLAN SHALL INCLUDE:**

- ACTUAL DIMENSIONS OF SHADE STRUCTURES.
- DIMENSIONS FROM ADJACENT STRUCTURES AND PROXIMITY OF ASSUMED OR ACTUAL PROPERTY LINES.
- PROVIDE CODE ANALYSIS INCLUDING ACTUAL SHADE STRUCTURE AREA (SQ. FT.), OCCUPANCY TYPE (A-3), AND TYPE OF CONSTRUCTION (V-8). INDICATE OCCUPANT LOAD FACTOR per 2016 CBC, SECTION 1004.
- INDICATE LOCATIONS OF FIRE EXTINGUISHER WITHIN 75 FEET.
- SHOW LOCATIONS OF AUDIBLE FIRE ALARM.
- INDICATE DIMENSIONS FROM THE ROOF TO THE HIGHER STRUCTURE OR TERRAIN FEATURE. MINIMUM DIMENSION OF 20' FOR SNOW LOAD MODEL (ASCE 7-10).
- ACTUAL SITE ELEVATION (FT.) TO DETERMINE SITE OCCURS AT OR BELOW THE UPPER ELEVATION LIMIT FOR THE GROUND SNOW LOAD SHOWN IN ASCE 7-10 (FOR SNOW LOAD MODEL).
- FOR RECESSED BASE PLATE (RBP) OPTION: ARCHITECT/ENGINEER OF RECORD TO SPECIFY THE LOWEST ANTICIPATED SERVICE TEMPERATURE (LAST), AS DEFINED IN ALSO 241-10 SECTION A.3.4b, A.4.1 AND A.4.2 PER NOTE ON EACH INDIVIDUAL MODEL ENGINEERING DRAWING WHICH RELATES TO DEMAND CRITICAL WELD AND "L.A.S.T." TEMPERATURE (EITHER STRUCTURAL STEEL NOTE #14).
- COMPLETE SCOPE OF WORK INCLUDING THE SHADE STRUCTURE MODEL NUMBER, P.C. NUMBER, AND SPECIFIC SIZE OF SHADE STRUCTURE.
- ALL SADDLES, CLAMPS AND FITTINGS SHALL CONFORM TO THE GUIDELINES AS SPECIFIED IN APPENDICES "A, B & C" RESPECTIVELY IN ASCE 19-10, "STRUCTURAL APPLICATIONS OF STEEL CABLES FOR BUILDINGS."
- ARCHITECTS OF RECORD TO DETERMINE IF SPECIFIC SITE IS IN MAPPED GEOLOGIC HAZARD ZONE. GEOHAZARD REPORT REQUIREMENTS PER DSA IR A-4.
- ARCHITECTS OF RECORD TO DETERMINE IF SPECIFIC SITE IS IN A MAPPED FIRE HAZARD SEVERITY ZONE OR WILDLAND INTERFACE AREA.
- PROVIDE COPY OF CURRENT REGISTERED FLAME RESISTANT PRODUCT LETTER ON SPECIFIC SITE PLAN.



DRAWING NUMBER	DRAWING DESCRIPTION	STRUCTURE TYPE	MAX SIZE	MODEL NUMBER
P.C. T-1.0	P.C. TITLE SHEET			
P.C. T-2.0	DSA 103 FORMS			
16.1-1000	PRODUCT INFORMATION	SINGLE POST PYRAMID	20 X 20	DSA1032020-16
16.2-2000	REACTIONS	SINGLE POST PYRAMID	20 X 20	DSA1032020-16
17-1-1000	PRODUCT INFORMATION	SINGLE POST PYRAMID CANTILEVER	14 X 14	DSA1241414-16
17-2-2000	REACTIONS	SINGLE POST PYRAMID CANTILEVER	14 X 14	DSA1241414-16
18-1-1000	PRODUCT INFORMATION	TRIANGLE	25 X 25	DSA30125-16
18-2-2000	REACTIONS	TRIANGLE	25 X 25	DSA30125-16
19-1-1000	PRODUCT INFORMATION	TRIANGLE	40 X 40	DSA30140-16
19-2-2000	REACTIONS	TRIANGLE	40 X 40	DSA30140-16
20-1-1000	PRODUCT INFORMATION	HIP	20 X 30	DSA401203012-16
20-2-2000	REACTIONS	HIP	20 X 30	DSA401203012-16
21-1-1000	PRODUCT INFORMATION	HIP	30 X 30	DSA401303012-16
21-2-2000	REACTIONS	HIP	30 X 30	DSA401303012-16
22-1-1000	PRODUCT INFORMATION	HIP	30 X 40	DSA401304012-16
22-2-2000	REACTIONS	HIP	30 X 40	DSA401304012-16
23-1-1000	PRODUCT INFORMATION	HIP	40 X 40	DSA4014040-16
23-2-2000	REACTIONS	HIP	40 X 40	DSA4014040-16
24-1-1000	PRODUCT INFORMATION	JOINED HIPS	VARIES	DSA401J-16
24-2-1001	DETAILS	JOINED HIPS	VARIES	DSA401J-16
24-3-2000	REACTIONS	JOINED HIPS	VARIES	DSA401J-16
25-1-1000	PRODUCT INFORMATION	QUAD JOINED HIPS	VARIES	DSA401Q-16
25-2-1001	DETAILS	QUAD JOINED HIPS	VARIES	DSA401Q-16
25-3-2000	REACTIONS	QUAD JOINED HIPS	VARIES	DSA401Q-16
26-1-1000	PRODUCT INFORMATION	HEXAGON	40 Ø	DSA60340-16
26-2-1000	REACTIONS	HEXAGON	40 Ø	DSA60340-16
27-1-1000	PRODUCT INFORMATION	HEXAGON	60 Ø	DSA60360-16
27-2-1000	REACTIONS	HEXAGON	60 Ø	DSA60360-16
28-1-1000	PRODUCT INFORMATION	MARINER PEAK	30 X 40	DSA4073040-16
28-2-2000	REACTIONS	MARINER PEAK	30 X 40	DSA4073040-16

TOTAL SHEET COUNT: 30 SHEETS

DSA PRE-CHECK  
 SHADE  
 STRUCTURES  
 P.C. 04-118151  
 (REVISIONS TO 04-117219)

**PRE-CHECK (PC) DOCUMENT**  
 Code: 2016 CBC  
 A separate project application for construction is required.

Eng. By :	DWH	05/22/19
Design By :	DWH	05/22/19
Approved By :	DWH	05/22/19

**DRAWING DESCRIPTION:**  
 P.C. TITLE SHEET

**SHEET**  
 P.C. T-1.0

CODE DATA

GENERAL NOTES

UNIT SELECTION AND DESCRIPTION

ARCHITECT

ENGINEER

**HA HIGGINSON ARCHITECTS INCORPORATED**

707 Brookside Avenue  
 Redlands, CA 92373  
 (909) 375-3030  
 www.haarchinc.com

REGISTERED ARCHITECT  
 NO. C19168  
 Exp. 02-19  
 STATE OF CALIFORNIA

Mark Lowe, S.E.  
 Structural Engineer

19471 Misty Ridge Lane  
 Trabuco Canyon, California 92367  
 ph. 949-400-1265  
 malowe@me.com

REGISTERED PROFESSIONAL ENGINEER  
 No. 3993  
 STATE OF CALIFORNIA

5/21/19

Page 1 of 3

**DSA-103** List of Required Structural Tests & Special Inspections - 2016 CBC

Application No. \_\_\_\_\_ Date Submitted \_\_\_\_\_

**SECTION 1. GENERAL**

1.1. Identify specific test and inspection items. Test Item: STEEL FABRIC MATERIAL CERT. Test: STEEL FABRIC MATERIAL CERT. (2016 CBC SECTION 19.03.01)

**SECTION 2. SOILS**

2.1. GENERAL

2.1.1. Identify specific test and inspection items. Test Item: SOILS Test: SOILS (2016 CBC SECTION 19.03.02)

**SECTION 3. CAST-IN-PLACE CONCRETE FOUNDATIONS (PIERS)**

3.1. GENERAL

3.1.1. Identify specific test and inspection items. Test Item: CAST-IN-PLACE CONCRETE FOUNDATIONS (PIERS) Test: CAST-IN-PLACE CONCRETE FOUNDATIONS (PIERS) (2016 CBC SECTION 19.03.03)

**SECTION 4. CONCRETE**

4.1. GENERAL

4.1.1. Identify specific test and inspection items. Test Item: CONCRETE Test: CONCRETE (2016 CBC SECTION 19.03.04)

**SECTION 5. CAST-IN-PLACE CONCRETE**

5.1. GENERAL

5.1.1. Identify specific test and inspection items. Test Item: CAST-IN-PLACE CONCRETE Test: CAST-IN-PLACE CONCRETE (2016 CBC SECTION 19.03.05)

Page 2 of 3

**DSA-103** List of Required Structural Tests & Special Inspections - 2016 CBC

Application No. \_\_\_\_\_ Date Submitted \_\_\_\_\_

**SECTION 6. STEEL, ALUMINUM**

6.1. GENERAL

6.1.1. Identify specific test and inspection items. Test Item: STEEL, ALUMINUM Test: STEEL, ALUMINUM (2016 CBC SECTION 19.03.06)

**SECTION 7. WELDING**

7.1. GENERAL

7.1.1. Identify specific test and inspection items. Test Item: WELDING Test: WELDING (2016 CBC SECTION 19.03.07)

**SECTION 8. WOOD**

8.1. GENERAL

8.1.1. Identify specific test and inspection items. Test Item: WOOD Test: WOOD (2016 CBC SECTION 19.03.08)

**SECTION 9. OTHER**

9.1. GENERAL

9.1.1. Identify specific test and inspection items. Test Item: OTHER Test: OTHER (2016 CBC SECTION 19.03.09)

Page 3 of 3

**DSA-103** List of Required Structural Tests & Special Inspections - 2016 CBC

Application No. \_\_\_\_\_ Date Submitted \_\_\_\_\_

**ADDITIONAL TESTING AND INSPECTION NOTES:**

1. THE PROJECT INSPECTOR AND TESTING AGENCY SHALL BE SELECTED BY THE SCHOOL DISTRICT AND APPROVED BY DSA AND THE ARCHITECT OF RECORD.
2. THE SITE PROJECT INSPECTOR SHALL BE CLASS 2/ CLASS 3 MAY BE SELECTED FOR STRUCTURES OF DECEASED AREAS LESS THAN 200 SQUARE FEET.
3. THE COSTS OF THE PROJECT INSPECTOR AND TESTING AGENCY SHALL BE BORN BY THE SCHOOL DISTRICT, THE CONTRACTOR, AND THE PROJECT INSPECTOR.
4. COPIES OF VERIFIED REPORTS SHALL BE SENT TO DSA, THE ARCHITECT, THE SCHOOL DISTRICT, THE CONTRACTOR, AND THE PROJECT INSPECTOR.
5. THE IN PLANT INSPECTOR SHALL BE WELDING SPECIAL INSPECTOR FOR MATERIAL VERIFICATION AND WELDING. PER 2016 CBC SECTION 1705A.3.3.2 & 1705A.3.3.1, BATCH PLANT INSPECTION MAY BE WAIVED WHEN THE FOLLOWING REQUIREMENTS ARE MET:
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Page 4 of 3

**DSA-103** List of Required Structural Tests & Special Inspections - 2016 CBC

Application No. \_\_\_\_\_ Date Submitted \_\_\_\_\_

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Page 1 of 3

**DSA-103** List of Required Structural Tests & Special Inspections - 2016 CBC

Application No. \_\_\_\_\_ Date Submitted \_\_\_\_\_

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Page 2 of 3

**DSA-103** List of Required Structural Tests & Special Inspections - 2016 CBC

Application No. \_\_\_\_\_ Date Submitted \_\_\_\_\_

**ADDITIONAL TESTING AND INSPECTION NOTES:**

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Page 3 of 3

**DSA-103** List of Required Structural Tests & Special Inspections - 2016 CBC

Application No. \_\_\_\_\_ Date Submitted \_\_\_\_\_

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Page 4 of 3

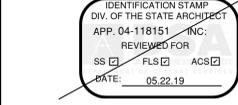
**DSA-103** List of Required Structural Tests & Special Inspections - 2016 CBC

Application No. \_\_\_\_\_ Date Submitted \_\_\_\_\_

**ADDITIONAL TESTING AND INSPECTION NOTES:**

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THESE PLANS AND SPECIFICATIONS ARE THE PROPERTY OF USA SHADE AND FABRIC STRUCTURES AND SHALL NOT BE REPRODUCED WITHOUT THEIR WRITTEN PERMISSION.



**CORPORATE HEADQUARTERS**  
8505-A CHANCELLOR ROW  
DALLAS, TX, 75247  
800-966-5005

**CERTIFICATIONS:**  
IAS CERTIFICATION No. FA-428  
CLARK COUNTY MANUFACTURER  
CERTIFICATION NUMBER (NEVADA): 355

**CUSTOMER:**  
San Rafael City Schools

**PROJECT NAME:**  
Terra Linda High School

**LOCATION:**  
320 Nova Albion Way  
San Rafael, CA 94903

**MODEL NUMBER:** SEE SELECTION

SAMPLE DSA 103 STATEMENT OF STRUCTURAL TESTS AND INSPECTION FORMS FOR CANTILEVER AND SINGLE POST UNITS --- 1

Page 1 of 3

**DSA-103** List of Required Structural Tests & Special Inspections - 2016 CBC

Application No. \_\_\_\_\_ Date Submitted \_\_\_\_\_

**SECTION 1. GENERAL**

1.1. Identify specific test and inspection items. Test Item: STEEL FABRIC MATERIAL CERT. Test: STEEL FABRIC MATERIAL CERT. (2016 CBC SECTION 19.03.01)

**SECTION 2. SOILS**

2.1. GENERAL

2.1.1. Identify specific test and inspection items. Test Item: SOILS Test: SOILS (2016 CBC SECTION 19.03.02)

**SECTION 3. CAST-IN-PLACE CONCRETE FOUNDATIONS (PIERS)**

3.1. GENERAL

3.1.1. Identify specific test and inspection items. Test Item: CAST-IN-PLACE CONCRETE FOUNDATIONS (PIERS) Test: CAST-IN-PLACE CONCRETE FOUNDATIONS (PIERS) (2016 CBC SECTION 19.03.03)

**SECTION 4. CONCRETE**

4.1. GENERAL

4.1.1. Identify specific test and inspection items. Test Item: CONCRETE Test: CONCRETE (2016 CBC SECTION 19.03.04)

**SECTION 5. CAST-IN-PLACE CONCRETE**

5.1. GENERAL

5.1.1. Identify specific test and inspection items. Test Item: CAST-IN-PLACE CONCRETE Test: CAST-IN-PLACE CONCRETE (2016 CBC SECTION 19.03.05)

Page 2 of 3

**DSA-103** List of Required Structural Tests & Special Inspections - 2016 CBC

Application No. \_\_\_\_\_ Date Submitted \_\_\_\_\_

**SECTION 6. STEEL, ALUMINUM**

6.1. GENERAL

6.1.1. Identify specific test and inspection items. Test Item: STEEL, ALUMINUM Test: STEEL, ALUMINUM (2016 CBC SECTION 19.03.06)

**SECTION 7. WELDING**

7.1. GENERAL

7.1.1. Identify specific test and inspection items. Test Item: WELDING Test: WELDING (2016 CBC SECTION 19.03.07)

**SECTION 8. WOOD**

8.1. GENERAL

8.1.1. Identify specific test and inspection items. Test Item: WOOD Test: WOOD (2016 CBC SECTION 19.03.08)

**SECTION 9. OTHER**

9.1. GENERAL

9.1.1. Identify specific test and inspection items. Test Item: OTHER Test: OTHER (2016 CBC SECTION 19.03.09)

Page 3 of 3

**DSA-103** List of Required Structural Tests & Special Inspections - 2016 CBC

Application No. \_\_\_\_\_ Date Submitted \_\_\_\_\_

**ADDITIONAL TESTING AND INSPECTION NOTES:**

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707 Brookside Avenue  
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(909)375-3030  
www.haarchinc.com

**ARCHITECT**



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**ENGINEER**

**DSA PRE-CHECK SHADE STRUCTURES**

**P.C. 04-118751**  
(REVISIONS TO 04-117219)

**PRE-CHECK (PC) DOCUMENT**  
Code: 2016 CBC  
A separate project application for construction is required.

Eng. By: **DWH** 05/22/19  
Design By: **DWH** 05/22/19  
Approved By: **DWH** 05/22/19

**DRAWING DESCRIPTION:**  
**DSA 103 FORMS**

**SHEET**  
**P.C. T-2.0**

SAMPLE DSA 103 STATEMENT OF STRUCTURAL TESTS AND INSPECTION FORMS FOR ALL UNITS EXCEPT CANTILEVER AND SINGLE POST --- 2

**GENERAL NOTES**

**DESIGN LOADS**

BUILDING CODE CBC 2016 (BASED ON IBC 2015)  
 LIVE LOADS 5 PSF  
 SNOW LOAD 5 PSF  
 WIND LOADS 115 MPH (3-Sec. Gust); EXPOSURE C; TOPOGRAPHIC FACTOR,  $K_{zt} = 1.0$

1- SPECIAL INSPECTION REQUIREMENTS SHALL FOLLOW THE ATTACHED SAMPLE TEST AND INSPECTION LIST (T & I LIST) APPROVED BY DSA. THE SHOP WELDING INSPECTION SHALL INCLUDE WELDING OF ALL STEEL MEMBERS AND IDENTIFICATION OF STEEL THROUGH MILL CERTIFICATE OR MATERIAL TESTING. UNCERTIFIED STEEL SHALL BE TESTED TO THE REQUIREMENTS OF CBC 2016 CHAPTER 17A. THE FIELD SPECIAL INSPECTION SHALL INCLUDE COMPRESSION CYLINDER TESTS FOR THE CONCRETE FOUNDATION.

2- STRUCTURE SHALL BE IN THE LOCATION SHOWN ON THE SITE SPECIFIC DSA APPLICATION DRAWING.

3- FOUNDATION DESIGN BASED ON CBC 2016, TABLE 1806A.2, SOIL CLASS 5 (ALLOWABLE FOUNDATION PRESSURE 1500 PSF)

4- DESIGN PER FOLLOWING CODES: CBC 2016, ASCE 7-10, AISI 360-10, AISI 341-10, ACI 318-14, ASCE 55-10 & ASCE 19-10

**STRUCTURAL STEEL**

1- FABRICATION OF THE STEEL STRUCTURES SHALL BE PERFORMED BY USA SHADE OR AN AUTHORIZED LICENSEE. MATERIAL TESTING (MILL CERTIFICATES) AND INSPECTION OF WELDING SHALL BE CONDUCTED PER CBC 2016 SECTIONS 1704A, 1705A, 1705A.2, AND TABLE 1705A.2.1.

2- ONLY CALIFORNIA LICENSED CONTRACTORS AUTHORIZED BY USA SHADE SHALL INSTALL THE SHADE STRUCTURES.

3- ALL WORK SHALL CONFORM TO CBC 2016 EDITION, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).

4- ALL GALVANIZED STEEL TUBE PRODUCTS MANUFACTURED BY ALLIED TUBE & CONDUIT FOR THIS STRUCTURE SHALL BE, AND CONFORM TO ASTM A500-10, GRADE "B", IN ITS ENTIRETY. TYPICAL MECHANICAL PROPERTIES ARE:

ROUND TUBE 42,000 PSI YIELD STRESS / 58,000 PSI TENSILE STRESS

5- ALL STRUCTURAL SHAPES SHALL BE COLD FORMED HSS ASTM A500 GRADE B, UNLESS OTHERWISE NOTED. TYPICAL MECHANICAL PROPERTIES ACHIEVED FOR HSS PRODUCTS:

SQUARE AND RECTANGULAR 46,000 PSI YIELD STRESS / 58,000 PSI TENSILE STRESS  
 ROUND PIPE 42,000 PSI YIELD STRESS / 58,000 PSI TENSILE STRESS

6- ALL PLATES PRODUCTS SHALL COMPLY WITH ASTM A572 GRADE 50.

7- STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH A.I.S.C. SPECIFICATIONS.

8- ALL WELDING TO CONFORM WITH AMERICAN WELDING SOCIETY STANDARDS AND SHALL BE INSPECTED BY AN AWS/CWII INSPECTOR. AWS D1.1 FOR HOT ROLLED. AWS D1.3 FOR SHEET/COLD FORMED. AWS D1.8 SEISMIC SUPPLEMENT.

9- ALL FULL PENETRATION WELD SHALL BE CONTINUOUSLY INSPECTED PER AWS D1.1 & D1.8.

10- SHOP CONNECTIONS SHALL BE WELDED UNLESS NOTED OTHERWISE. FIELD CONNECTIONS SHALL BE AS INDICATED ON THE DRAWINGS (IF REQUIRED). ALL FILLET WELDS SHALL BE A MINIMUM OF 3/16" ERTOSH ELECTRODES UNLESS OTHERWISE NOTED, EITHER SMAW OR GMAW IS ACCEPTABLE.

11- ALL STAINLESS STEEL BOLTS SHALL COMPLY WITH ASTM F-593, FYS = 60 KSI, FYS = 95KSI ALLOY GROUP 1 OR 2 ALL NUTS SHALL COMPLY WITH ASTM F-594 ALLOY GROUP 1 OR 2, REFERRING TO RCSC, ASTM F-593 IS NOT CONSIDERED AS HIGH STRENGTH BOLTS.

12- ALL HIGH STRENGTH BOLTS SHALL COMPLY WITH ASTM A325 N (GALVANIZED); ALL NUTS SHALL COMPLY WITH ASTM A563HD, AND WASHERS SHALL COMPLY WITH ASTM F436.

13- HIGH STRENGTH BOLTS ITEM 11 SHALL BE TIGHTENED TO A SNUG TIGHT CONDITION.

14- HIGH STRENGTH BOLTS ITEM 7 SHALL BE TIGHTENED TO A PRE-TENSIONED (PT) CONDITION. PER TABLE 4.1 OF SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS (RCSC 2010), ITEM 7 SHALL BE INSTALLED PER SECTION 8.2 AND INSPECTED PER SECTION 9.2. FAYING SURFACE CLASS A OR B IS NOT REQUIRED. SPECIFIED MINIMUM PRE-TENSION IS 51 KIIPS. TESTING AND INSPECTION IS REQUIRED PER DSA-103 180 PT-FULLY PRE-TENSIONED CONNECTIONS.

15- ALL STRUCTURAL STEEL (ITEMS FROM NOTE 5) SHALL BE PAINTED WITH ONE SHOP COAT (2.5 TO 3.5 MILS THICK MIN) OF ZINC-RICH PRIMER, UNDERCOAT, AND FINISH COAT, OR EQUIVALENT PAINT SYSTEM. THIS COAT IS A WEATHER RESISTANT POWDER COATING BASED ON POLYESTER TGIC (MANUFACTURED BY SHERWIN WILLIAMS OR TIGER DRYLAC), TO ACHIEVE OPTIMUM ADHESION. IT IS RECOMMENDED THAT THE PROPER TREATMENT AND DRYING TAKE PLACE BEFORE COATING. POLYESTER POWDER (TPOC) SPECIFICATIONS SHALL BE AS FOLLOWS: - PENCIL HARDNESS (ASTM D-3363), - HUMIDITY (ASTM D-2247), - SOLVENT RESISTANCE (PCI METHOD), - 50 DBL RUBS SL SOFTNESS.

16- ALL STEEL ROUND TUBING (ITEMS FROM NOTE 4) SHALL BE TRIPLE COATED FOR RUST PROTECTION USING THE IN-LINE ELECTROPLATING COAT PROCESS. TUBING SHALL BE INTERNALLY COATED WITH ZINC AND ORGANIC COATINGS TO PREVENT CORROSION AS MANUFACTURED BY ALLIED TUBE & CONDUIT.

17- COLD-FORMED STEEL MEMBERS SHALL BE 55% ALUMINUM ZINC ALLOY COATED PER ASTM A792/A792M STANDARD IN ACCORDANCE TO AISI 5200 TABLE 44-1, OF 90 COATING DESIGNATION. ALL EXPOSED STEEL FASTENERS, INCLUDING CAST-IN-PLACE ANCHOR BOLTS/RODS, SHALL BE STAINLESS STEEL (TYPE 304 MINIMUM), HOT DIP GALVANIZED (ASTM A153, CLASS D MINIMUM OR ASTM F2329), OR PROTECTED WITH CORROSION PREVENTIVE COATING THAT DEMONSTRATED NO MORE THAN 2% OF RED RUST IN MINIMUM 1,000 HOURS OF EXPOSURE IN SALT SPRAY TEST PER ASTM B117. ZINC-PLATED FASTENERS DO NOT COMPLY WITH THIS REQUIREMENT.

**CONCRETE SPECIFICATION**

1- CONCRETE SHALL BE TESTED PER CBC 2016 SECTION 1903A & SHALL BE INSPECTED PER SECTION 1903A.

2- CONCRETE TO BE  $F_c = 4500$  PSI, TYPE V CEMENT, WATER/CEMENT RATIO OF 0.45, PER ACI 318-14 CHAPTER 5. REINFORCING STEEL TO BE  $F_y = 60000$  PSI, MIN. GR. 60

3- ALL ANCHOR BOLTS SET IN NEW CONCRETE (WHEN APPLICABLE) SHALL COMPLY WITH ASTM F-1554 GRADE 55 (GALVANIZED). ANCHOR BOLTS EMBEDMENT NEEDS TO BE AS FOLLOWS:  
 A) ANCHOR BOLT  $\phi 1 \frac{1}{4}$ "

4- CERTIFIED MILL TEST REPORTS ARE TO BE PROVIDED FOR EACH SHIPMENT OF REINFORCEMENT.

5- ALL NON-SHRINK GROUT SHALL HAVE A MINIMUM 28 DAYS COMPRESSIVE STRENGTH OF 5000 PSI, AND SHALL COMPLY THE REQUIREMENTS OF ASTM C109, ASTM C939, ASTM C1090, ASTM C1107, WHEN APPLICABLE.

**FABRIC SPECIFICATION**

1- FABRIC SHALL BE MANUFACTURED BY MULTIKINT LTD. OR OTHER COMPANY WHO CAN MANUFACTURE FABRIC, WHICH MEETS THE SPECIFICATIONS LISTED ON PAGE 2000, AND SHALL BE FABRICATED FROM POLYETHYLENE MATERIALS.

2- THE FABRIC SHALL RETAIN 80% OF ITS TENSILE AND TEARING STRENGTH AFTER ULTRAVIOLET EXPOSURE PER ASTM G53 USING A 313 NM LIGHT SOURCE FOR 500 HOURS WHILE MOISTENED FOR 1 HOUR EVERY 12 HOURS.

3- PROVIDE CERTIFICATION BY MANUFACTURER AND STATE FIRE MARSHAL TO DSA AT SITE SPECIFIC INSTALLATION.

4- FABRIC SHALL REQUIRE ANNUAL INSPECTION AND MAINTENANCE BY THE DISTRICT. FABRICS SAMPLES OF THE SAME MATERIAL WHICH ARE MAINTAINED AT THE PROJECTS SITE SHALL BE TESTED TO BE IN COMPLIANCE WITH ASTM D5034 AND D2261. THE ANNUAL TESTING ON THE APPROVED PLANS SHALL BE COMPARED TO THE FABRIC SPECIFICATIONS INDICATED IN NOTE 1 OF "FABRIC SPECIFICATION" ON THE APPROVED PLANS. THE FABRIC SHALL BE REPLACED WHEN THE TEST RESULTS RETURN LESS THAN 50% OF THE ULTIMATE VALUES IN NOTE 1 OF "FABRIC SPECIFICATION".

5- FABRIC TOP NEEDS TO BE REMOVED IF SNOW, EXCEEDING 5 PSF ARE ANTICIPATED, FABRIC TOP NEEDS TO BE REMOVED IF WINDS EXCEEDING 115 MPH ARE ANTICIPATED.

6- A VISUAL INSPECTION LOOKING FOR TEAR AND ABNORMAL WEAR IN FABRIC MATERIAL AND THREAD IS REQUIRED PRIOR TO RE-INSTALLATION. SHADE STRUCTURE SHALL BE NOTIFIED IF SIGNIFICANT DAMAGE IS PRESENT BEFORE RE-INSTALLATION.

**AIRCRAFT CABLE**

1- FOR FABRIC ATTACHMENT USE  $\frac{1}{4}$ " 7x19 GALV. CABLE PER ASTM A1023A, ASTM 1023M-02, WITH A BREAKING STRENGTH VALUE OF 7,000 LBS. CABLE SHALL BE TENSIONED TO 250 LBS MINIMUM. THE MAXIMUM CALCULATED CABLE TENSION IS 1321 LB.

2- CABLES SHALL BE FED THROUGH THE FABRIC SLEEVES AROUND THE PERIMETER OF THE CANOPY AND TENSIONED UNTIL THE FABRIC PANELS (DESIGNED PURPOSELY UNDERSIZED) REACH A TAUT APPEARANCE. ANY LONG TERM CABLE SAG SHALL BE MINIMIZED DURING THE MAINTENANCE RE-TIGHTENING VISITS AS REQUIRED.

**2016 CBC PC DESIGN NOTES**

FLOOR LIVE LOAD N/A  
 ROOF LIVE LOAD RLL 5 PSF

ALLOWABLE SOIL PRESSURE:  
 DL + LL (CONC FTG) 1500 PSF  
 DL + LL + SEISMIC (CONC FTG) 150 PSF  
 LATERAL BEARING DESIGN VALUE 100 PSF/FT BELOW NATURAL GRADE, PER TABLE 1806A.2

PER CBC SECTION 1903A.3.4  
 ALLOWABLE PIER FRICTIONAL RESISTANCE 250 PSF MAXIMUM BASED ON SECTION 1810A.3.3.1.4 (ONE-SIXTH OF THE BEARING VALUE). UPLIFT FRICTIONAL RESISTANCE HAVE A SAFETY FACTOR OF 3.

ROOF SNOW LOAD 5 PSF

FLOOD HAZARD AREA NO  
 WHEN A SITE SPECIFIC PROJECT IS LOCATED IN A FLOOD ZONE OTHER THAN ZONE X, A LETTER STAMPED AND SIGNED FROM A SOILS ENGINEER IS NEEDED TO VALIDATE THE ALLOWABLE SOIL VALUES SPECIFIED IN THE PC ARE STILL APPLICABLE.

WIND DESIGN DIRECTIONAL PROCEDURE: ASCE 7-10, SECTION 27.4.3  
 -ULTIMATE DESIGN WIND SPEED (3 SEC GUST) V 115 MPH  
 -WIND EXPOSURE FACTOR Kz 1  
 -TOPOGRAPHIC FACTOR Kzt 1  
 -RISK CATEGORY II  
 -VELOCITY PRESSURE EXPOSURE COEFFICIENT Kz 0.85  
 -LOCALITY PRESSURE Qz 24.46 PSF

SEISMIC DESIGN:  
 -SITE CLASS D  
 Ss 3.00g  
 S1 1.389g  
 S1S 2.00  
 SD1 1.39

-SPECTRAL RESPONSE COEFFICIENTS SD1 1.39

-LATERAL FORCE RESISTING SYSTEM G.2 ORDINARY CANTILEVERED COLUMN SYSTEM.

-SEISMIC IMPORTANCE FACTOR I 1.0  
 -DESIGN BASE SHEAR V 2133 LB  
 -SEISMIC RESPONSE COEFFICIENTS Cs 1.6  
 -RESPONSE MODIFICATION FACTOR R 1.25  
 -ANALYSIS PROCEDURE EQUIVALENT LATERAL FORCE  
 -RISK CATEGORY II  
 -SEISMIC DESIGN CATEGORY E  
 -SITE COEFFICIENT CATEGORY Fv=1.5

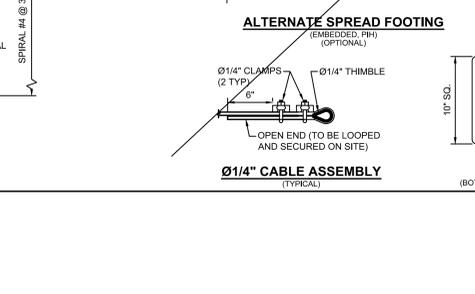
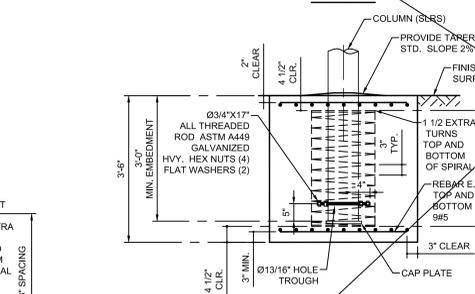
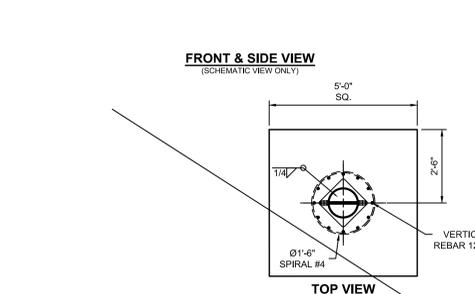
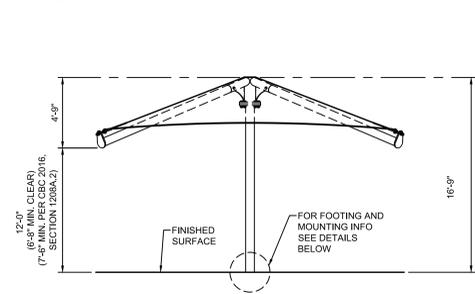
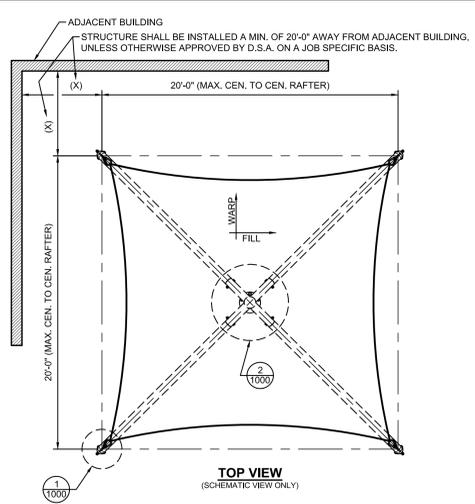
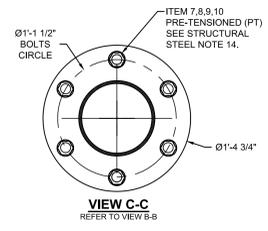
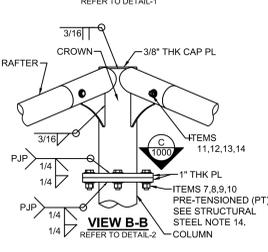
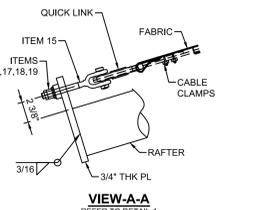
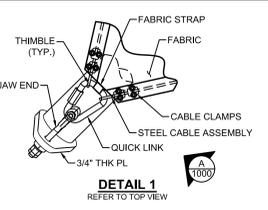
GEOHAZARD REPORT IS NOT REQUIRED FOR OPEN FABRIC STRUCTURES 1,600 SQ FT OR LESS COMPLYING WITH THE REQUIREMENTS OF IR A-4 SECTION 3.1.1. OPEN FABRIC SHADE STRUCTURES GREATER THAN 1,600 SQUARE FEET UP TO A MAXIMUM OF 4,000 SQUARE FEET AND COMPLYING WITH THE REQUIREMENTS NOTED IN IR A-4 SECTION 3.1.1 DO NOT REQUIRE A GEOHAZARD REPORT PROVIDED A GEOTECHNICAL REPORT INDICATES THAT NO LIQUEFACTION POTENTIAL EXISTS.

ARCHITECT OF RECORD TO DETERMINE IF SPECIFIC SITE IS IN GEOLOGIC HAZARD ZONE. GEOHAZARD REPORT REQUIREMENTS PER DSA IR-A-4.

PC OPTIONS SHALL NOT INCLUDE LIQUEFIABLE SOIL (EXCEPTION: OPEN FABRIC SHADE STRUCTURES 1,600 SQUARE FEET OR LESS COMPLYING WITH REQUIREMENTS OF IR A-4 SECTION 3.1.1). IF STRUCTURE IS LOCATED IN AN AREA WITH LIQUEFIABLE SOIL OR SITE CLASS F, OVER-THE-COUNTER SUBMITTAL IS NOT ALLOWED AND REGULAR PROJECT SUBMITTAL IS REQUIRED. IF SITE IS NOT IN A MAPPED LIQUEFACTION HAZARD ZONE, IT MAY BE PRESUMED THAT NO LIQUEFACTION HAZARD EXISTS ON THAT SITE UNLESS A SITE-SPECIFIC GEOTECHNICAL REPORT IDENTIFIES SUCH HAZARD.

MINIMUM FOUNDATION SETBACK LIMIT IN ADJACENT SLOPE, THE DEPTH OF REQUIRED PIER EMBEDMENT SHALL START FROM AN ELEVATION THAT CORRESPONDS WITH A HORIZONTAL CLEAR DISTANCE OF 14 FEET THAT INTERSECT WITH THE SLOPE (DAYLIGHTING). IF SETBACK LIMITS ARE SMALLER THAN CBC REQUIRES, A SITE-SPECIFIC SOILS REPORT IS REQUIRED.

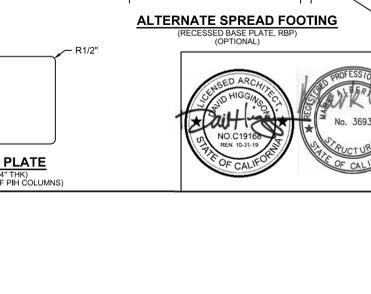
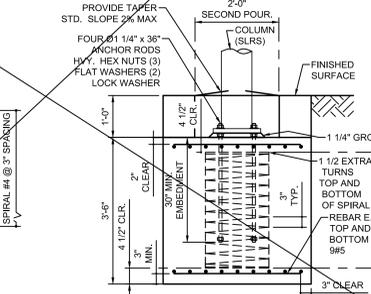
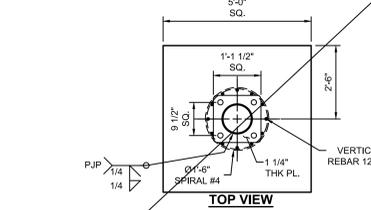
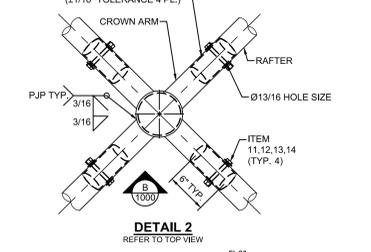
MINIMUM CLASS 2 PROJECT INSPECTOR REQUIRED.



LIST OF MATERIALS			
ITEM	QTY	DESCRIPTION	MATERIAL
1	1	COLUMN	HSS 8.625x0.322
2	1	CROWN	HSS 8.625x0.322
3	4	RAFTER	HSS 5.563x0.258
4	1	FABRIC TOP	FR COLOURSHADE Z25
5	4	$\phi 1 \frac{1}{4}$ " CABLE	GALVANIZED STEEL
6	16	$\phi 1 \frac{1}{4}$ " CABLE CLAMP	GALVANIZED
7	6	$\phi 1 \frac{1}{8}$ "-NC x 4" HEX BOLT	ASTM A325 GALVANIZED
8	6	$\phi 1 \frac{1}{8}$ "-NC HEX NUT	ASTM A563 GALVANIZED
9	6	$\phi 1 \frac{1}{8}$ " SPLIT LOCK WASHER	ASTM F436 GALVANIZED
10	12	$\phi 1 \frac{1}{8}$ " FLAT WASHER	ASTM F436 GALVANIZED
11	4	$\phi 3 \frac{3}{4}$ "-10NC x 7" HEX BOLT	ASTM A325 GALVANIZED
12	4	$\phi 3 \frac{3}{4}$ "-10NC HEX NUT	ASTM A563 GALVANIZED
13	4	$\phi 3 \frac{3}{4}$ " SPLIT LOCK WASHER	ASTM F436 GALVANIZED
14	8	$\phi 3 \frac{3}{4}$ " FLAT WASHER	ASTM F436 GALVANIZED
15	4	$\frac{3}{4}$ " x 6" JAW END	GALVANIZED
16	4	$\frac{3}{4}$ " FLAT WASHER	GALVANIZED
17	4	$\frac{3}{4}$ "-10NC HEX NUT	GALVANIZED
18	4	$\frac{3}{4}$ "-10NC JAW NUT	GALVANIZED
19	4	$\frac{3}{4}$ " SPHERICAL WASHER-CUP	GALVANIZED
20	4	5/8" QUICK LINK	ZINC PLATED
21	8	$\phi 1 \frac{1}{4}$ " THIMBLE	GALVANIZED

CODE ANALYSIS					
BUILDING	OCCUPANCY	CONST. TYPE	AREA (SQ. FT.)	OCCUPANT LOAD FACTOR	OCCUPANT LOAD
SHADE STRUCTURE					

MAXIMUM OCCUPANT LOAD (PER CBC 2016 TABLE 1604A.5)  
 -K-12: 250 PERSONS  
 -PUBLIC ASSEMBLY: 300 PERSONS  
 -EDUCATIONAL OCCUPANCIES ABOVE 12TH GRADE: 500 PERSONS



THESE PLANS AND SPECIFICATIONS ARE THE PROPERTY OF USA SHADE AND FABRIC STRUCTURES AND SHALL NOT BE REPRODUCED WITHOUT THEIR WRITTEN PERMISSION.



CORPORATE HEADQUARTERS  
 23805 GY GRENDEL GORRADO  
 DFW DALLAS, TX 75242-261  
 800-966-5005

CERTIFICATIONS:  
 IAS CERTIFICATION No: FA-428  
 CLARK COUNTY MANUFACTURER CERTIFICATION NUMBER (NEVADA): 355

CUSTOMER:  
 San Rafael City Schools

PROJECT NAME:  
 Terra Linda High School

LOCATION:  
 320 Nova Albion Way  
 San Rafael, CA 94903

MODEL NUMBER:  
 DSA1032020-16

STRUCTURE TYPE:  
 SINGLE POST PYRAMID DSA

SIZE: MAXIMUM  
 20' x 20' x 12'e MAX.

SCALE: NONE

DRAWING SIZE: D

PRE-CHECK (PC) DOCUMENT  
 Code: 2016 CBC  
 A separate project application for construction is required.

Eng. By: JO 03/12/18

Design By: MP 03/12/18

Approved By: JO 03/12/18

DRAWING DESCRIPTION:  
 PRODUCT INFORMATION  
 DWG. DSA1032020-16

SHEET 16.1-1000

REV. NC



5/21/19

**ENVELOPE JOINT REACTIONS**

Shear resultant =  $\sqrt{Px^2 + Py^2 + Pz^2}$       Moment resultant =  $\sqrt{Mx^2 + My^2 + Mz^2}$

ASD REACTIONS										
Node No.	Support Forces (kip)			Support Moments (kipft)			Support Forces (kip)	Support Moments (kipft)	Support Forces (kip)	Support Forces (kip)
	P <sub>x</sub>	P <sub>y</sub>	P <sub>z</sub>	M <sub>x</sub>	M <sub>y</sub>	M <sub>z</sub>	Shear Resultant	Moment Resultant	Uplift	Axial
<b>MAXIMUM REACTIONS</b>										
							1.955	25.166	0.855	-3.862
Node No.	Support Forces (kip)			Support Moments (kipft)						
	P <sub>x</sub>	P <sub>y</sub>	P <sub>z</sub>	M <sub>x</sub>	M <sub>y</sub>	M <sub>z</sub>				
137	Max	1.955	1.955	0.855	0.130	25.166	0.002			
	Min	-0.010	0.000	-3.862	-25.166	-0.141	-0.078			
	Max P <sub>x</sub>	1.955	0.000	-0.430	0.000	25.033	0.000	CO 18	1.955	25.033
	Min P <sub>x</sub>	-0.010	0.803	-2.454	-5.062	-0.141	-0.078	CO 32	0.803	5.064
	Max P <sub>y</sub>	0.000	1.955	-0.430	-25.033	0.000	0.000	CO 19	1.955	25.033
	Min P <sub>y</sub>	1.504	0.000	-1.343	0.000	19.329	0.000	CO 25	1.504	19.329
	Max P <sub>z</sub>	-0.001	0.613	0.855	-3.760	-0.009	0.002	CO 34	0.613	3.760
	Min P <sub>z</sub>	-0.004	0.547	-3.862	-3.189	-0.072	-0.037	CO 11	0.547	3.190
	Max M <sub>x</sub>	0.000	0.253	-1.485	0.130	-0.007	-0.002	CO 13	0.253	0.130
	Min M <sub>x</sub>	0.000	1.955	-1.719	-25.166	0.000	0.000	CO 17	1.955	25.166
	Max M <sub>y</sub>	1.955	0.000	-1.719	0.000	25.166	0.000	CO 16	1.955	25.166
	Min M <sub>y</sub>	-0.010	0.803	-2.454	-5.062	-0.141	-0.078	CO 32	0.803	5.064
	Max M <sub>z</sub>	-0.001	0.613	0.855	-3.760	-0.009	0.002	CO 34	0.613	3.760
	Min M <sub>z</sub>	-0.010	0.803	-2.454	-5.062	-0.141	-0.078	CO 32	0.803	5.064

**Forged Single-Saddle Wire Rope Clamps—Not for Lifting**

A forged fabrication allows these to be used in critical applications such as tie-downs and support lines. They must be oriented with the saddle on the long (live) end and U-bolt on the short (dead) end. Also known as wire rope clips.

**Galvanized steel clamps have a thick coating for corrosion resistance.**

**316 stainless steel clamps are the most corrosion resistant fittings we offer. They provide excellent resistance to salt water and chemicals.**

Warning: Test all assemblies for required strength before use. Do not use with coated rope unless the coating is removed.

For Rope Dia.	No. of Clamps	Rope Dia. Required	Torque, Ft.-lbs.	HT.	Clamp		Capacity	Specifications Met
					Wid.	Thick.		
1/8"	2	3/16"	4.5	1 1/8"	1"	1/8"	80% of the Rope's Capacity	—
3/16"	2	3/8"	7.5	1 1/2"	1 1/4"	1"	80% of the Rope's Capacity	—
1/4"	2	1/2"	15	1 3/4"	1 3/4"	1 1/4"	80% of the Rope's Capacity	Fed. Spec. FF-C-450
5/16"	2	5/8"	21	1 7/8"	1 7/8"	1 1/2"	80% of the Rope's Capacity	Fed. Spec. FF-C-450
3/8"	2	3/4"	30	2"	2"	1 3/4"	80% of the Rope's Capacity	Fed. Spec. FF-C-450
7/16"	2	7/8"	35	2 1/8"	2 1/8"	1 7/8"	80% of the Rope's Capacity	Fed. Spec. FF-C-450
1/2"	3	1"	45	2 1/4"	2 1/4"	2"	80% of the Rope's Capacity	Fed. Spec. FF-C-450
9/16"	3	1 1/8"	55	2 3/8"	2 3/8"	2 1/8"	80% of the Rope's Capacity	Fed. Spec. FF-C-450
5/8"	3	1 1/4"	65	2 3/4"	2 3/4"	2 1/4"	80% of the Rope's Capacity	Fed. Spec. FF-C-450
3/4"	4	1 1/2"	80	2 7/8"	2 7/8"	2 1/2"	80% of the Rope's Capacity	Fed. Spec. FF-C-450
7/8"	4	1 3/4"	95	3"	3"	2 3/4"	80% of the Rope's Capacity	Fed. Spec. FF-C-450
1"	5	2"	110	3 1/8"	3 1/8"	2 7/8"	80% of the Rope's Capacity	Fed. Spec. FF-C-450
1 1/8"	6	2 1/4"	130	3 1/4"	3 1/4"	3"	80% of the Rope's Capacity	Fed. Spec. FF-C-450
1 1/4"	7	2 1/2"	150	3 1/2"	3 1/2"	3 1/4"	80% of the Rope's Capacity	Fed. Spec. FF-C-450
1 1/2"	8	2 3/4"	175	3 3/4"	3 3/4"	3 1/2"	80% of the Rope's Capacity	Fed. Spec. FF-C-450

**Aircraft Cable**

Preformed, made in accordance with commercial specifications military and federal specifications are available.

**Carbon Steel (Aircraft Cable) - Galvanized cable has the highest strength and greatest fatigue life of the materials offered. It has good to fair corrosion resistance in rural to industrial atmosphere environments. This material is most widely used for small diameter cables. Tin over galvanized cable offers greater corrosion resistance and reduced friction over pulleys.**

Dia. (in.)	7 x 19		Galvanized Min. Breaking Strengths (lbs)
	Approx. Wt 1000 Ft/lbs	Approx. Wt 1000 Ft/lbs	
3/32	17	29	1,000
1/8	29	45	2,000
5/32	45	70	2,800
3/16	65	100	4,200
7/32	85	130	5,600
1/4	110	170	7,000
9/32	130	200	8,000
5/16	170	260	9,800
3/8	240	350	14,400

THESE PLANS AND SPECIFICATIONS ARE THE PROPERTY OF USA SHADE AND FABRIC STRUCTURES AND SHALL NOT BE REPRODUCED WITHOUT THEIR WRITTEN PERMISSION.

**USASHADE & Fabric Structures**  
CORPORATE HEADQUARTERS  
8505-A CHANCELLOR ROW  
DALLAS, TX, 75247  
800-966-5005

**CERTIFICATIONS:**  
IAS CERTIFICATION No: FA-428  
CLARK COUNTY MANUFACTURER CERTIFICATION NUMBER (NEVADA): 355

**CUSTOMER:**  
San Rafael City Schools

**PROJECT NAME:**  
Terra Linda High School

**LOCATION:**  
320 Nova Albion Way  
San Rafael, CA 94903

**MODEL NUMBER:**  
DSA1032020-16



**190/F5 Fire rated specifications**

Standard range

Colour	Shade %	UV Block %	Average GSM	Average Warp break strength lbs	Average Elongation %	Average Weft break strength lbs	Average Elongation %	Average Tensile Kpa	Average Burst Kpa	Average Tear Kpa	Average Mass ratio
Desert Sand	80	92	185	50	40	72	73	156	0.84	0.84	
Blue	80	85	185	50	40	72	73	156	0.84	0.84	
Brown	85	185	50	40	72	73	156	0.84	0.84	0.84	
Green	80	85	185	50	40	72	73	156	0.84	0.84	
Red	80	86	185	50	40	72	73	156	0.84	0.84	
Silver	80	81	185	50	40	72	73	156	0.84	0.84	
Terracotta	75	82	185	50	40	72	73	156	0.84	0.84	
Yellow	80	89	185	50	40	72	73	156	0.84	0.84	

**CONVERSION TO IMPERIAL UNITS:**  
185 GSM = 0378 pcf  
50 KGS = 110 lb  
72 KGS = 159 lb  
156 Kpa = 3258 psf

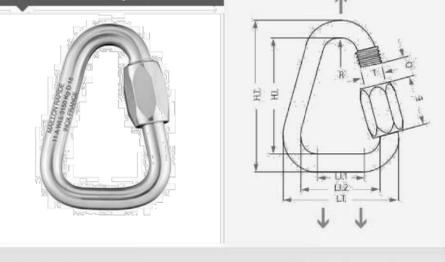
Notes: 190/F5 conforms to The California State Fire Marshal Title 19 Test for Small Scale Fabrics  
Tear tests are done using a 50mm wide strip and a cross head speed of 500mm/min

The report has been compiled using the test results from all tests conducted on the given sample by our Quality Control Laboratory. The information provided is considered to be a good reflection of the general properties of the fabric tested. These results must only be used as an indication of the quality and characteristics of the fabric tested.

Deen Joubert  
General Manager - Multiknit (Pty) Ltd

Tommy Rogers  
Managing Director - Multiknit (Pty) Ltd

**Delta Maillon rapide**



Delta shape: developed after the ever-increasing development of webbing-fitted systems; perfect for webbing uphold onto its lower flat part.

Reference	Diameter	Dimensions - mm											Weight	WLL	BL	QL	Quote		
		mm	inches	L1	L2	L3	L4	H1	H2	O	E	R						T	
MRDZ02.5	2.5	3/32"	22	30	17	27	22	32	3.5	8	3.5	3.5	3	3	25	125			
MRDZ03.0	3	1/8"	27	35	21	30	24	4	9	4.25	4	6	40	200					
MRDZ03.5	3.5	1/8"	31	34	24	36	29	5	11	5	5	9	70	350					
MRDZ04.0	4	5/32"	35.5	36	27.5	40	32	5.5	12.5	5.75	6	14	100	500					
MRDZ06.0	5	3/16"	40	37	30	48	38	6.5	16	6.5	7	23	150	750					
MRDZ06.0	6	1/4"	47	40.5	35	56	44	7.5	19	7.25	9	29	250	1250					
MRDZ07.0	7	9/32"	51	41	37	63	48	8.5	21.5	8	10	36	400	2000					
MRDZ08.0	8	5/16"	56	42.5	40	73	57	10	24	8.85	11	44	550	2750					
MRDZ09.0	9	3/8"	60	43	42	78	60	11	26	9.5	12	50	700	3500					
MRDZ10.0	10	7/16"	66	45.5	46	87	67	12	29	10.25	13	58	900	4500					
MRDZ12.0	12	1/2"	75	47.5	51	104	80	15	33	11.75	15	70	1100	5500					
MRDZ14.0	14	9/16"	85	50.5	57	123	95	17	38.5	13.25	17	80	1300	6500					
MRDZ16.0	16	5/8"	93	53.5	61	138	106	19	45	14.75	19	92	1500	7500					
MRDZ18.0	18	11/16"	102	56.5	68	156	119	23	52	16.25	22	104	1700	8500					
MRDZ20.0	20	3/4"	112	61.5	72	176	136	24	60	17.75	24	118	2000	10000					

**5/8" QUICK LINK UNITS CONVERSION**

LT	L1	L2	HT	HI	O	E	R	T	WEIGHT	WORKING LOAD	BREAKING G LOAD
3.661	1.240	2.402	5.433	4.173	0.748	1.772	0.581	0.748	1.35	4850	24250

**BASIC LOAD CASES**

DEAD LOAD: 0.0378 PSF (FABRIC)

FLOOR LIVE LOAD: N/A

ROOF LIVE LOAD: 5 PSF

ROOF SNOW LOAD: 5 PSF

SUPERIMPOSED LOADS: N/A

WIND LOAD: ULTIMATE DESIGN WIND SPEED (3 SEC GUST) 115 MPH

VELOCITY PRESSURE: 24.46 PSF

COMPONENT AND CLADDING qz: 24.46 PSF

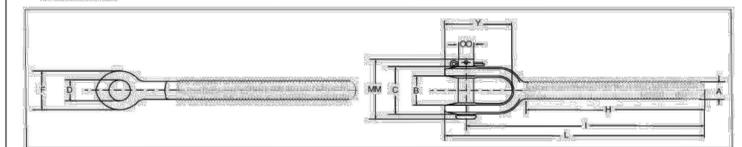
(CABLE AND CABLE HARDWARE ONLY)

SEISMIC LOAD: SEISMIC RESPONSE COEFFICIENTS Cs: 1.8

DESIGN BASE SHEAR: 2130 LB

**Jaw End Fittings**

- Quenched and Tempered or Normalized.
- Hot dip galvanized steel.
- Forged jaw ends are fitted with bolts and nuts on sizes 1/4" through 5/8", and pins and collars on sizes 3/4" through 2-3/4".
- Modified UNJ thread for improved fatigue properties.
- Fatigue Rated.



**Jaw End Fittings**

Shank Dia. & Take Up (in.)	RH Jaw Stock No.	LH Jaw Stock No.	Working Load Limit (lbs.)	Weight Each (lbs.)	Dimensions (in.)											OO Bolt Pin
					A	B	C	D	F	H	I	L	Nom. Min.	Nom. Min.	Y	
1/4 x 4	1072298	1072311	500	11	25	45	31	30	63	2.59	3.72	4.09	1.13	1.41	25	
5/16 x 4 1/2	1072314	1072330	900	17	31	50	37	39	102	3.00	4.41	4.81	1.59	1.41	25	
3/8 x 6	1072332	1072957	1200	28	38	53	41	42	115	3.6	5.28	5.75	1.47	1.58	31	
1/2 x 6	1072350	1072975	2200	56	60	64	46	48	142	4.00	4.19	6.51	1.81	1.87	37	
1/2 x 9	1072378	1072993	2200	63	60	64	46	48	142	4.00	5.89	8.01	1.81	1.87	37	
1/2 x 12	1072396	1073019	2200	72	60	64	46	48	142	4.00	7.19	9.51	1.81	1.87	37	
5/8 x 6	1072412	1073037	3500	105	63	79	47	48	151	4.31	7.32	7.91	2.36	2.44	50	
5/8 x 9	1072430	1073055	3500													