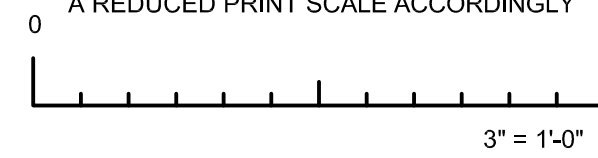
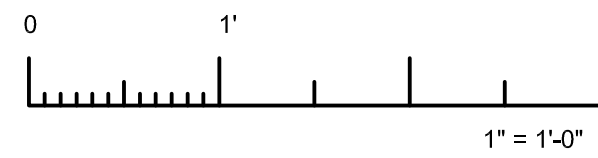
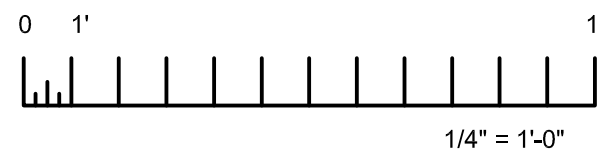
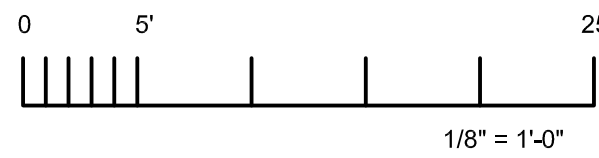


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IF THIS SHEET IS NOT 30"x42", IT IS  
A REDUCED PRINT SCALE ACCORDINGLY

Owner

# SAN RAFAEL HIGH SCHOOL

## STORM DRAIN IMPROVEMENTS

150 3RD STREET SAN RAFAEL, CA 94901

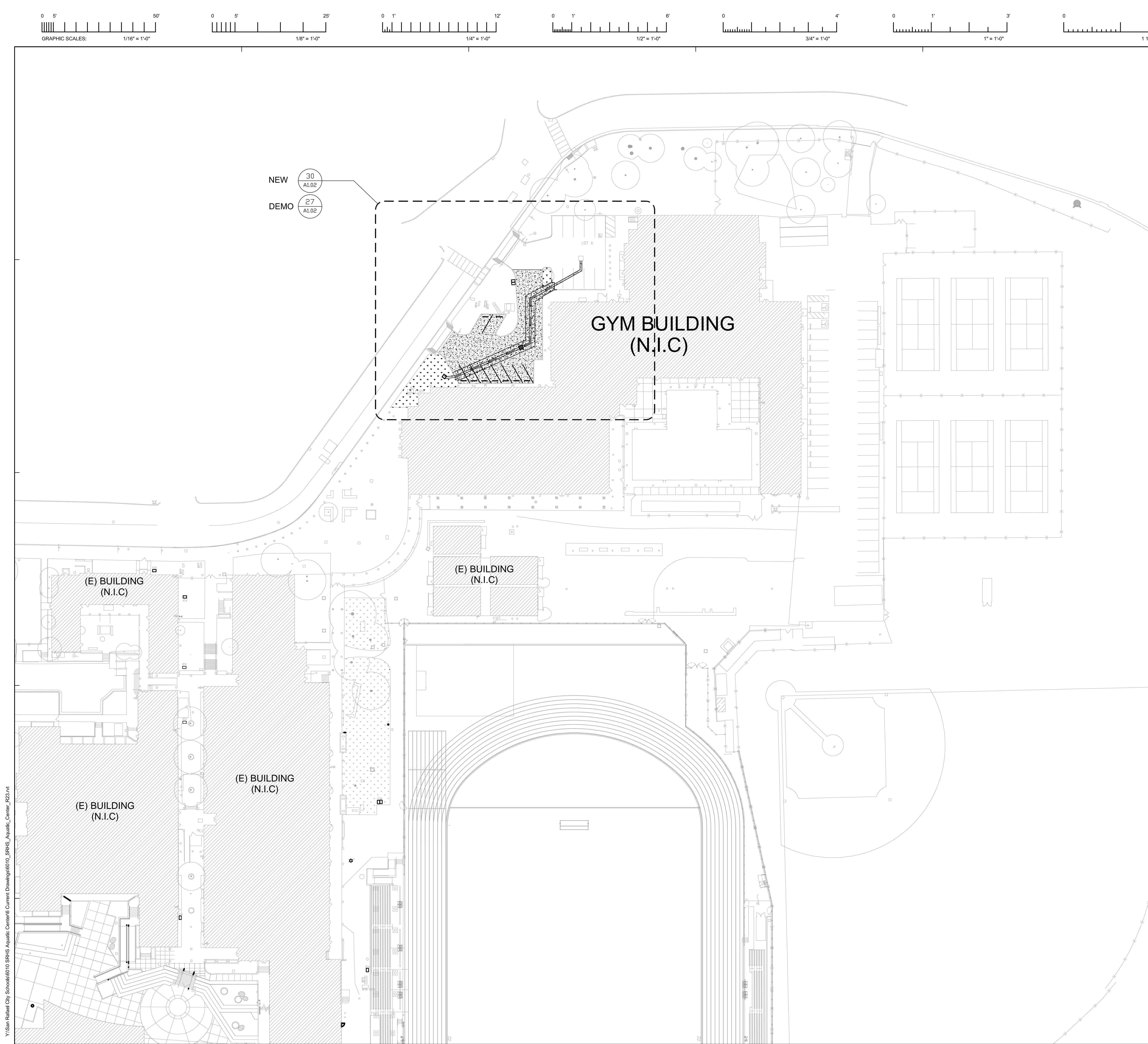


310 NOVA ALBION WAY  
SAN RAFAEL, CA 94903  
TEL: 415.492.3200 FAX: 415.492.3229

GENERAL NOTES	ABBREVIATIONS	APPLICABLE CODES	OWNER	INDEX OF DRAWINGS
<p>1. ALL WORK SHALL BE IN ACCORDANCE WITH REQUIREMENTS OF GOVERNING CODES LISTED IN "APPLICABLE CODES" AND ALL GOVERNING LOCAL CODES AND REGULATIONS.</p> <p>2. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO FURNISH AND INSTALL ALL MATERIALS AND WORK DESCRIBED, DEPICTED OR DETAILED WITHIN THESE DOCUMENTS REGARDLESS OF THE LOCATION OF THAT MATERIAL, OR WORK WITHIN THE DOCUMENTS OR OMISSION (WHETHER DELIBERATE OR ACCIDENTAL) OF THAT MATERIAL OR WORK BY A SUBCONTRACTOR OR HIS/HER BID.</p> <p>3. THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL CONSIDER THESE DOCUMENTS IN THEIR ENTIRETY. DISCREPANCIES OR CONTRADICTIONS BETWEEN PORTIONS OF THESE DOCUMENTS MUST BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AT LEAST 72 HOURS PRIOR TO BID OPENING FOR CLARIFICATION, OTHERWISE, THE MOST RESTRICTIVE REQUIREMENT SHALL BE IN FORCE AT NO ADDITIONAL COST TO THE OWNER.</p> <p>4. THE CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR THE SAFETY OF ALL PERSONS ON OR ABOUT THE CONSTRUCTION SITE, IN ACCORDANCE WITH APPLICABLE LAWS AND CODES. CONTRACTOR ESTABLISH PROCEDURES TO ASSURE ALL PERSONS ENTERING A POSSIBLY HAZARDOUS AREA, INCLUDING WORKERS, SUBCONTRACTORS, OTHER CONTRACTORS, VISITORS, AND OTHERS ARE AWARE OF APPROPRIATE / REQUIRED SAFETY PROCEDURES. COMPLY WITH LOCAL, STATE, AND FEDERAL SAFETY STANDARDS, INCLUDING OSHA REQUIREMENTS AND WITH THE SAFETY PROVISIONS OF THE LATEST SAFETY MANUAL OF ACCIDENT PREVENTION PUBLISHED BY THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA.</p> <p>5. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING TEMPORARY FENCING AND GATES, SIGNAGE, SECURITY LIGHTING OR OTHER SECURITY AND CONTROL MEASURES NECESSARY TO PROVIDE FOR THE SAFETY OF THE PUBLIC AND FACILITY USERS UNTIL THE COMPLETION OF THE PROJECT.</p> <p>6. THE CONTRACTOR IS RESPONSIBLE TO FOR PROTECTION OF ADJACENT PROPERTY AND SHALL REPAIR AND / OR REPLACE ALL PROPERTY DAMAGED DURING THE COURSE OF THE WORK.</p> <p>7. THE CONTRACTOR SHALL LIMIT HIS / HER ACTIVITY TO THE AREA DESCRIBED WITHIN THE DOCUMENTS UNLESS OTHERWISE PERMITTED BY THE OWNER'S REPRESENTATIVE.</p> <p>8. THE CONTRACTOR IS RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF ANY ITEMS DAMAGED OR DISTURBED DURING THE COURSE OF THE WORK. INSTALLATION SHALL MATCH EXISTING IN KIND, QUALITY, AND PERFORMANCE.</p> <p>9. WHERE EXISTING CONSTRUCTION AND FINISHES ARE CUT, DAMAGED, OR REMODELED, PATCH WITH MATERIALS TO MATCH IN KIND, QUALITY, PERFORMANCE CHARACTERISTICS, AND APPEARANCE.</p> <p>10. VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS. NOTIFY ARCHITECT OF ANY DISCREPANCIES FOUND. VERIFY DIMENSIONS OF ALL OWNER-FURNISHED ITEMS, INCLUDING FURNITURE AND EQUIPMENT, TO ENSURE PROPER COORDINATION WITH CONSTRUCTION.</p> <p>11. ALL ITEMS IN THESE DRAWINGS ARE NEW UNLESS OTHERWISE NOTED.</p> <p>12. ALL UTILITIES REQUIRED FOR THE CONTINUOUS OPERATION OF ALL OCCUPIED EXISTING FACILITIES SHALL BE MAINTAINED IN SERVICE AT ALL TIMES. ANY SHUT DOWNS FOR NEW CONNECTIONS MUST BE COORDINATED WITH THE OWNER'S REPRESENTATIVE TWO WEEKS PRIOR TO THE REQUESTED SHUT DOWN.</p> <p>13. COORDINATION WITH OTHER CONTRACTS: IF ANY PART OF THIS CONTRACTOR'S WORK DEPENDS UPON THE WORK OF A SEPARATE CONTRACTOR, THIS CONTRACTOR SHALL INSPECT SUCH OTHER WORK AND PROMPTLY REPORT IN WRITING TO THE OWNER'S REPRESENTATIVE ANY DEFECTS IN SUCH OTHER WORK THAT RENDER IT UNSUITABLE TO RECEIVE THE WORK OF THIS CONTRACTOR. FAILURE OF THIS CONTRACTOR TO SO INSPECT AND REPORT SHALL CONSTITUTE AN ACCEPTANCE OF THE OTHER CONTRACTOR'S WORK, EXCEPT AS TO DEFECTS WHICH MAY DEVELOP IN OTHER CONTRACTOR'S WORK AFTER EXECUTION OF THIS CONTRACTOR'S WORK.</p> <p>14. COORDINATION OF SCHEDULE: PORTIONS OF THIS WORK MAY BE REQUIRED TO BE COMPLETED ON SCHEDULE IN ORDER TO AVOID DELAY TO OTHER CONTRACTORS OR OWNERS OPERATIONS. CONTRACTOR SHALL STRICTLY ADHER TO ESTABLISHED COMPLETION DATES AS DESIGNATED IN THE SPECIFICATIONS AND COORDINATE WORK SCHEDULE WITH THE OWNER'S REPRESENTATIVE AND OTHER CONTRACTORS. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND LIQUIDATED DAMAGES.</p> <p>15. SCHEDULE ALL WORK WITH THE OWNER'S REPRESENTATIVE, INCLUDING CONSTRUCTION ACCESS AND STORAGE, AND WORK OUTSIDE THE "EXTENT OF WORK" SET FORTH IN THESE DOCUMENTS. THE CONSTRUCTION SCHEDULE SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO THE START OF CONSTRUCTION.</p> <p>16. CONSTRUCTION PROCEDURES SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO THE START OF CONSTRUCTION.</p> <p>17. DEMOLITION IS NOT NECESSARILY LIMITED TO ONLY WHAT IS SHOWN ON THIS OR OTHER DRAWINGS OR AS OUTLINED IN THE SPECIFICATIONS. THE INTENT IS TO IDENTIFY GENERAL SCOPE OF DEMOLITION REQUIRED. CONTRACTOR SHALL INCLUDE ALL MISCELLANEOUS DEMOLITION, CUTTING AND PATCHING REQUIRED TO COMPLETE THE PROJECT IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.</p> <p>18. ALL ITEMS IDENTIFIED TO BE SALVAGED SHALL BE DELIVERED IN GOOD CONDITION TO A PLACE OF STORAGE AS DIRECTED BY THE OWNER'S REPRESENTATIVE. ALL OTHER ITEMS MUST BE DISPOSED OF OFF-SITE IN A LEGAL MANNER.</p> <p>19. ARCHITECT IS NOT RESPONSIBLE FOR THE DISCOVERY, PRESENCE, HANDLING, REMOVAL OR DISPOSAL OF, OR EXPOSURE OF PERSONS TO, HAZARDOUS MATERIALS OR TOXIC SUBSTANCES IN ANY FORM AT THE PROJECT SITE, TO THE EXTENT THESE DOCUMENTS RELATE TO SUCH ISSUES. ARCHITECT'S PARTICIPATION IS SOLELY ADMINISTRATIVE WITHOUT ANY RESPONSIBILITY FOR THE CONTENT OR EXECUTION OF SUCH DOCUMENTS.</p> <p>20. CONTRACTOR TO MAINTAIN CONTEMPORANEOUSLY RECORDED "AS-BUILT" INFORMATION OF ALL WORK, WHICH SHALL BE MARKED IN COLOR ON THE DRAWINGS AND SPECIFICATIONS. A SCANNED PDF OF THE "AS-BUILT" DRAWINGS AND SPECIFICATIONS SHALL BE TURNED OVER TO THE OWNERS REPRESENTATIVE PRIOR TO FINAL APPLICATION FOR PAYMENT. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.</p> <p>21. CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION AND DUST COVERS ADJACENT TO OCCUPIED AREAS AS REQUIRED TO CONTAIN DUST AND DEBRIS WITHIN CONSTRUCTION AREA. BROOM CLEAN ALL AREAS, INCLUDING SIDEWALKS AND DRIVEWAYS EACH DAY. KEEP DIRT AND DUST TO A MINIMUM.</p> <p>22. WORK SHALL BE EXECUTED IN A CAREFUL AND ORDERLY MANNER WITH THE LEAST POSSIBLE DISTURBANCE TO PUBLIC AND TO OCCUPANTS OF EXISTING BUILDING.</p> <p>23. CLEAN ALL EXPOSED SURFACES AND NEW EQUIPMENT AFTER COMPLETION.</p>	<p><b>R &amp; Z</b> R Z @ J O P # //</p> <p>Property Line And Angle Centerline Diameter or Round Perpendicular Pound or Number Parallel</p> <p>ABV. ACC. ACOUS. ACP ACT A.D. ADJ. A.F.F. AGGR. AL/ALUM. ANOD. APPROX. A.P. ARCH. ASB. ASPH. A.C.</p> <p>Above Accessible Acoustical Suspended Acoustic Panel Ceiling Acoustical Ceiling Tile Area Drain Additional Adjustable Above Finished Floor Aggregate Aluminum Anodized Access Panel Approximate Architectural Asbestos Asphalt Asphaltic Concrete</p> <p>BAL. BAS./BSMT. BTWN. BD. BITUM. BLDG. BLK. BLKD. BM. BOT. BO. B.U.R.</p> <p>Balance Basement Between Board Bituminous Building Block Blocking Beam Bottom Both Built-up Roofing</p> <p>CAB. C.B. CB CEM. CER. C.F. C.G. C.I. C.J. C.L. C.L.G. CLO. C.L.R. CLRM. C.M. CMU C.O. C.O. COMPT. CONN. CONC. CONT. CONT. C.TSK. C.NTR. CNTRTOP CNR</p> <p>Cabinet Catch Basin Cementitious Backer Board Cement Ceramic Contractor Furnish Contractor install Corner Guard Cast Iron Control Joint Ceiling Caulking Clear Closet Clear Classroom Exterior Cement Plaster Concrete Masonry Unit Pier Column Compactor Concrete Connection Concrete Continuous Conductor Countersunk Counter Counter Top Center</p> <p>DBL. DEFLECT. DEM. DEPT. DET. DET./DTL. DIA. DIM. DISP. DL. D.O. DR. DWR. DS. D.S.P. DWG.</p> <p>Double Deflection Demolition Department Detail Detail Drain Inlet Diameter Dimension Dispenser Down Door Opening Down Drawer Downspout Dry Stand Pipe Drawing</p> <p>(E)/EXIST. E E.A. E.F. E.J. EL. ELEC. ELEV. EMER. ENCLOSURE E.P. EQUIP. EPT. EXP. EXP.D F.V.D.</p> <p>Existing East Exhaust Fan Expansion Joint Elevation Electrical Elevation Emergency Enclosure Equipment Electrical Water Cooler Exposed Exposed Structure Expansion Exterior Extrusion</p> <p>F.B. F.BKT. F.D. F.D.N. F.E. F.E.C. F.H.C. FIN. FIN. FLASH. FLUOR. F.O.C. F.O.F. F.O.S. FRP. FRP FRZ. F.S. F.S. F.T. FURR. FUT. F.V.</p> <p>Fire Alarm Flat Bar Fire Blanket Floor Drain Foundation Fire Extinguisher Fire Extinguisher Cab. Fire Hose Cabinet Finish Finish Flash Floor Flashing Fluorescent Face of Concrete Face of Finish Face of Studs Fireproof Fire Retardant Fiberglass Reinforced Panel Friser Full Size Foot or Feet Footing Furring Furring Field Verify</p> <p>Gauge Galvanized Grab Bar Glass Ground Grade Galvanized Sheet Metal Gypsum</p> <p>H.B. H.R. H.D. HDWD.</p> <p>Hose Bibb Hand Rail Head Hardware High Impact Gypsum Board Hollow Metal Horizontal Hot Water Dispenser Hour Height Hanger Strip</p> <p>ICB ICP INFO. INSUL. INT.</p> <p>Integral Cove Base Interior Cement Plaster Inside Diameter (Dim.) Information Insulation Interior</p> <p>JAN. JT.</p> <p>Janitor Joint</p> <p>KIT. K.S.</p> <p>Kitchen Knee Space</p> <p>LAB. LAM. LANDG. LAV. LIN. Locker L.P. L.T. LTC</p> <p>Laboratory Laminite Landscaping Lavatory Linoleum Light Low Partition Light Light Weight Concrete over Plywood Subfloor or Metal Deck</p> <p>M.D.F. MAT. MAXIMUM M.B. M.C. MECH. MEMB. MET. MFR. MH. Manufacturer Manhole Minimum Mirror Miscellaneous Masonry Opening Machine Screw Mounted Mounting MTG. MUL. MOD.</p> <p>Medium Density Fiberboard Material Maximum Machine Bolt Medicine Cabinet Mechanical Membrane Metal Manufacturer Manhole Minimum Mirror Miscellaneous Masonry Opening Machine Screw Mounted Mounting Mulch Modular</p> <p>(N) North N Not In Contract NO. or # Nominal N.T.S.</p> <p>New North Not In Contract Number Nominal Not To Scale</p> <p>O.A. OBS. O.C. O.D. O.F.S. OFCI</p> <p>Overall Obscure On Center Outside Diameter (Dim.) Owner Furnish Contractor Install Office Opposite Hand Opening Opposite Outside Face of Stud Owner Furnished Installed</p> <p>OFF. O.H. OPNG. OPP. O.F.S. OFCI</p> <p>Off Opposite Hand Opening Opposite Outside Face of Stud Owner Furnished Installed</p> <p>PRCST. PL. PLAN. P.LAM. PLAS. PLYWD. POR. PCL PT. P.T.D. P.T.D./R</p> <p>Pre-Cast Plate Plan Plastic Laminite Plaster Plywood Porcelain Tile Pier Point Paper Towel Dispenser Combination Paper Towel Dispenser &amp; Receptacle Pneumatic Tube System Poured in Place</p> <p>PTN. P.T.R. P.T.S. P.L.P.</p> <p>Quarry Tile</p> <p>Q.T.</p> <p>(RE) RAD. RB R.D. REF. REFL. REFR. REGTR. REINFC. REQ. RESIL. RM. Rough Opening RST RWD. R.W.L. R.H. RCP</p> <p>Relocated Existing Radius Resilient Base Roof Drain Reference Reflected Refrigerator Register Reinforced Required Resilient Room Rough Opening Rubber Slat Tread Retrowood Rain Water Leader Robe Hook Reflected Ceiling Plan</p> <p>S Solid Core See Civil Dwg. Schedule SCHEDED. SCONC SCORN. S.D. SOAP Dispenser SECT. See Electrical Drawings See Fire Protection Drawing SH Shelf SHR. SHT. Similar S.I.D. See Landscape Drawings See Mechanical Drawings S.M.D. Sheet Metal Screw S.N.D. Sanitary Napkin Dispenser Sanitary Napkin Receptacle Specifications Seat Cover Dispenser See Plumbing Drawings Square See Structural Drawings SST. Station STD. Standard STL. Steel Storage STRUT. Structural SUSP. Suspended Symmetrical</p> <p>T.O. Top of Curb T.O.P. Top of Pavement T.O.S. Top of Slab T.O.W. Top of Wall TOIL. Toilet Tread Threshold Telephone Terrazzo Tongue and Groove Thick Toilet Paper Dispenser Television TYP. Temporary Tackable Wall Board Panel</p> <p>TEL. TER. T.G. THK. T.P.D. T.V. TYP. TEMP. TW</p> <p>Unfinished Unless Otherwise Noted Urinal</p> <p>VERT. Vertical or Vertically VEST. Vestibule VGB Vent Through Roof</p> <p>W. West or Wire Water Closet Wood Wood Veneer Panel Window Work Where Occurs Without Waterproof Working Point W.R. Water Resistant Wainscot Weight Water Heater With</p>	<p>ALL WORK PERFORMED UNDER THIS CONTRACT IS TO CONFORM TO THE FOLLOWING CODES AND REGULATIONS:</p> <p>2022 CALIFORNIA ADMINISTRATIVE CODE PART 1, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)</p> <p>2019 CALIFORNIA BUILDING CODE (CBC) PART 2, TITLE 24, CCR BASED ON THE 2018 INTERNATIONAL BUILDING CODE (IBC) WITH 2016 CALIFORNIA AMENDMENTS)</p> <p>2019 CALIFORNIA ELECTRICAL CODE (CEC) PART 3, TITLE 24, CCR BASED ON THE 2020 NATIONAL ELECTRICAL CODE (NEC) WITH 2019 CALIFORNIA AMENDMENTS)</p> <p>2019 CALIFORNIA MECHANICAL CODE (CMC) PART 4, TITLE 24, CCR BASED ON THE 2018 INTERNATIONAL MECHANICAL CODE (IMC) WITH 2019 CALIFORNIA AMENDMENTS)</p> <p>2019 CALIFORNIA PLUMBING CODE (CPC) PART 5, TITLE 24, CCR BASED ON THE 2018 INTERNATIONAL PLUMBING CODE (IPC) WITH 2019 CALIFORNIA AMENDMENTS)</p> <p>2019 CALIFORNIA ENERGY CODE PART 6, TITLE 24 CCR</p> <p>2016 SAFETY CODE FOR ELEVATORS AND ESCALATORS (ASME A17.1-2015)</p> <p>2019 CALIFORNIA FIRE CODE (CFC) PART 9, TITLE 24, CCR BASED ON THE 2015 INTERNATIONAL FIRE CODE (IFC) WITH 2016 CALIFORNIA AMENDMENTS)</p> <p>2019 CALIFORNIA EXISTING BUILDING CODE PART 10, TITLE 24 CCR (2015 IEB CODE AND CALIFORNIA AMENDMENTS)</p> <p>2019 CALIFORNIA GREEN BUILDING CODE (CALGreen) PART 11, TITLE 24, CCR</p> <p>2019 CALIFORNIA REFERENCED STANDARDS PART 12, TITLE 24 CCR</p> <p>TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS (2015 IEB CODE AND CALIFORNIA AMENDMENTS)</p> <p>2010 ADA STANDARDS FOR ACCESSIBLE DESIGN</p> <p>NFPA 13 INSTALLATION OF SPRINKLER SYSTEMS 2016 EDITION NFPA 14 INSTALLATION OF STANDPIPE SYSTEMS 2019 EDITION NFPA 17 STANDARD FOR DRY CHEMICAL EXTINGUISHING SYS. 2017 EDITION NFPA 17A STANDARD FOR WET CHEMICAL SYS. 2017 EDITION NFPA 20 INSTALLATION OF STATIONARY PUMPS 2019 EDITION NFPA 24 INSTALLATION OF PRIVATE FIRE MAINS 2019 EDITION NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE 2016 EDITION NFPA 80 FIRE DOORS AND OTHER OPENING PROTECTIVES 2019 EDITION NFPA 92 STANDARD FOR SMOKE CONTROL SYSTEMS 2018 EDITION NFPA 253 CRITICAL RADIANT FLUX OF FLOOR COVERING SYSTEM 2018 EDITION NFPA 2001 CLEAN AGENT FIRE EXTINGUISHING SYSTEM 2018 EDITION</p> <p>REFERENCE CODE SECTIONS FOR APPLICABLE STANDARDS - 2019 CBC CHAPTER 35 AND 2019 CFC CHAPTER 45</p>	<p>SAN RAFAEL CITY SCHOOLS</p> <p>310 NOVA ALBION WAY SAN RAFAEL, CA 94903 DIRECTOR OF CAPITAL FACILITIES: DAN ZAICH</p> <p>TEL (415) 492-3285 FAX (415) 492-3229</p> <p>SAN RAFAEL HIGH SCHOOL</p> <p>150 THIRD STREET SAN RAFAEL, CA 94901 PRINCIPAL: GLEN DENNIS</p> <p>TEL (415) 485-2330</p> <p>PROGRAM MANAGER</p> <p>VAN PELT CONSTRUCTION SERVICES 8030 BUSINESS CENTER DRIVE, STE 240 FAIRFIELD, CA 94534 CONTACT: SONJI WHITE</p> <p>TEL (707) 438-3790 FAX (707) 438-3793</p> <p>CONSTRUCTION MANAGER</p> <p>WILL McMANUS GREYSTONE WEST COMPANY MAIN OFFICE: 621 WEST SPAIN STREET, SONOMA, CA 95476</p> <p>TEL (707) 933-0624 FAX (707) 998-8390</p>	<p>ARCHITECTURAL</p> <p>A0.01 TITLE SHEET A1.01 OVERALL SITE PLAN A1.02 ENLARGED SITE PLANS</p> <p>CIVIL</p> <p>C1.0 DEMOLITION PLAN C2.0 GRADING AND DRAINAGE PLAN, PROFILE AND DETAIL C2.1 STORM DRAIN IMPROVEMENTS C3.0 STRIPING PLAN C4.0 EROSION CONTROL PLAN AND DETAILS C4.1 BEST MANAGEMENT PRACTICES</p> <p>LANDSCAPE</p> <p>L1.1 PLANTING PLAN L2.1 IRRIGATION PLAN L2.2 IRRIGATION LEGEND AND DETAILS L3.1 CONSTRUCTION DETAILS</p>
			<p>CONSULTANTS</p> <p>ARCHITECT</p> <p>HIBSER YAMAUCHI ARCHITECTS, INC. 300 27TH STREET, 2ND FLOOR OAKLAND, CA 94612 CONTACT: JENAN ABDUNNUR</p> <p>TEL (510) 446-2222 FAX (510) 446-2211</p> <p>LANDSCAPE</p> <p>GATES + ASSOCIATES 1655 N. MAIN STREET SUITE 365 WALNUT CREEK, CA 94596 CONTACT: DANIEL SHAFIR-SCHORR</p> <p>TEL (925) 736-8176 FAX (925) 838-8901</p> <p>CIVIL</p> <p>OBERKAMPER &amp; ASSOCIATES CIVIL ENGINEERS 7200 REDWOOD BLVD, SUITE 308 NOVATO, CA 94945 CONTACT: JAMES CLARK, P.E.</p> <p>TEL (415) 599-2645</p>	
			<p>BID SET NOT FOR CONSTRUCTION</p> <p>This document is the property of the Owner and is not to be used without his written permission</p> <p>Architect/Engineer Of Record:</p> <p>HY HIBSER YAMAUCHI Architects, Inc. 300 - 27th Street Oakland, CA 94612 510.446.2222 tel / 510.446.2211 fax</p> <p>HY Architects Project number: 6005</p> <p>Facility</p> <p>SAN RAFAEL HIGH SCHOOL 150 3RD STREET SAN RAFAEL, CA 94901</p> <p>Project</p> <p>STORM DRAIN IMPROVEMENTS</p> <p>Sheet Title</p> <p>TITLE SHEET</p> <p>Client Project Number: Client Proj. #</p> <p>Scale: NOT TO SCALE</p> <p>Sheet</p> <p>Drawn By: BG</p> <p>Checked By: JA</p> <p>Issue Date: 5/12/2023</p> <p>Revit Version: 2023</p> <p>Sheet 1 of</p>	
<p>ADMINISTRATIVE NOTES</p> <p>1. A COPY OF PARTS 1 AND 2, TITLE 24 C.C.R. SHALL BE KEPT ON THE JOB SITE AT ALL TIMES DURING CONSTRUCTION.</p> <p>2. ALL CONSTRUCTION CHANGE DOCUMENT AND ADDENDA TO BE SIGNED BY THE ARCHITECT AND THE OWNER.</p> <p>3. ALL TESTS TO CONFORM TO THE REQUIREMENTS OF SECTION 4-335, PART 1, TITLE 24.</p> <p>4. TESTS OF MATERIALS AND TESTING LABORATORY SHALL BE IN ACCORDANCE WITH SECTION 4-335 OF PART 1, TITLE 24 AND THE DISTRICT SHALL EMPLOY AND PAY THE LABORATORY. COSTS OF RE-TEST MAY BE BACK CHARGED TO THE CONTRACTOR.</p> <p>5. THE CONTRACTOR SHALL PERFORM HIS DUTIES IN ACCORDANCE WITH SECTION 4-343, PART 1, TITLE 24.</p>	<p>GA. GALV. GND. GR.</p> <p>Gauge Galvanized Grab Bar Glass Ground Grade Galvanized Sheet Metal Gypsum</p> <p>H.B. H.R. H.D. HDWD.</p> <p>Hose Bibb Hand Rail Head Hardware High Impact Gypsum Board Hollow Metal Horizontal Hot Water Dispenser Hour Height Hanger Strip</p> <p>ICB ICP INFO. INSUL. INT.</p> <p>Integral Cove Base Interior Cement Plaster Inside Diameter (Dim.) Information Insulation Interior</p> <p>JAN. JT.</p> <p>Janitor Joint</p> <p>KIT. K.S.</p> <p>Kitchen Knee Space</p> <p>LAB. LAM. LANDG. LAV. LIN. Locker L.P. L.T. LTC</p> <p>Laboratory Laminite Landscaping Lavatory Linoleum Light Low Partition Light Light Weight Concrete over Plywood Subfloor or Metal Deck</p> <p>M.D.F. MAT. MAXIMUM M.B. M.C. MECH. MEMB. MET. MFR. MH. Manufacturer Manhole Minimum Mirror Miscellaneous Masonry Opening Machine Screw Mounted Mounting MTG. MUL. MOD.</p> <p>Medium Density Fiberboard Material Maximum Machine Bolt Medicine Cabinet Mechanical Membrane Metal Manufacturer Manhole Minimum Mirror Miscellaneous Masonry Opening Machine Screw Mounted Mounting Mulch Modular</p> <p>(N) North N Not In Contract NO. or # Nominal N.T.S.</p> <p>New North Not In Contract Number Nominal Not To Scale</p> <p>O.A. OBS. O.C. O.D. O.F.S. OFCI</p> <p>Overall Obscure On Center Outside Diameter (Dim.) Owner Furnish Contractor Install Office Opposite Hand Opening Opposite Outside Face of Stud Owner Furnished Installed</p> <p>OFF. O.H. OPNG. OPP. O.F.S. OFCI</p> <p>Off Opposite Hand Opening Opposite Outside Face of Stud Owner Furnished Installed</p> <p>PRCST. PL. PLAN. P.LAM. PLAS. PLYWD. POR. PCL PT. P.T.D. P.T.D./R</p> <p>Pre-Cast Plate Plan Plastic Laminite Plaster Plywood Porcelain Tile Pier Point Paper Towel Dispenser Combination Paper Towel Dispenser &amp; Receptacle Pneumatic Tube System Poured in Place</p> <p>PTN. P.T.R. P.T.S. P.L.P.</p> <p>Quarry Tile</p> <p>Q.T.</p> <p>(RE) RAD. RB R.D. REF. REFL. REFR. REGTR. REINFC. REQ. RESIL. RM. Rough Opening RST RWD. R.W.L. R.H. RCP</p> <p>Relocated Existing Radius Resilient Base Roof Drain Reference Reflected Refrigerator Register Reinforced Required Resilient Room Rough Opening Rubber Slat Tread Retrowood Rain Water Leader Robe Hook Reflected Ceiling Plan</p> <p>S Solid Core See Civil Dwg. Schedule SCHEDED. SCONC SCORN. S.D. SOAP Dispenser SECT. See Electrical Drawings See Fire Protection Drawing SH Shelf SHR. SHT. Similar S.I.D. See Landscape Drawings See Mechanical Drawings S.M.D. Sheet Metal Screw S.N.D. Sanitary Napkin Dispenser Sanitary Napkin Receptacle Specifications Seat Cover Dispenser See Plumbing Drawings Square See Structural Drawings SST. Station STD. Standard STL. Steel Storage STRUT. Structural SUSP. Suspended Symmetrical</p> <p>T.O. Top of Curb T.O.P. Top of Pavement T.O.S. Top of Slab T.O.W. Top of Wall TOIL. Toilet Tread Threshold Telephone Terrazzo Tongue and Groove Thick Toilet Paper Dispenser Television TYP. Temporary Tackable Wall Board Panel</p> <p>TEL. TER. T.G. THK. T.P.D. T.V. TYP. TEMP. TW</p> <p>Unfinished Unless Otherwise Noted Urinal</p> <p>VERT. Vertical or Vertically VEST. Vestibule VGB Vent Through Roof</p> <p>W. West or Wire Water Closet Wood Wood Veneer Panel Window Work Where Occurs Without Waterproof Working Point W.R. Water Resistant Wainscot Weight Water Heater With</p>		<p>VICINITY MAP</p> <p>NO SCALE</p> <p>PROJECT LOCATION</p>	<p>SCOPE OF WORK</p> <p>STORM DRAIN IMPROVEMENTS ON THE NORTH SIDE OF THE CAMPUS INCLUDE:</p> <p>1. UNDERGROUND UTILITY AND INLET REPLACEMENT.</p> <p>2. CONCRETE CHANNEL AND PARKING LOT REGRADING AND STRIPING</p> <p>3. LANDSCAPE MODIFICATIONS</p>



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**30 SITE PLAN**  
1" = 3/8"

**GENERAL NOTES**

1. SEE CIVIL DRAWINGS FOR (E) & (N) UNDERGROUND UTILITIES, CONCRETE FLATWORK, SITE PAVING AND WORK IN PUBLIC WAY
2. SEE LANDSCAPE DRAWINGS FOR IRRIGATION, SITE FURNITURE, AND ADDITIONAL HARDSCAPE, SITE WALL, AND PLANTING INFORMATION
3. WHERE (E) SIDEWALK IS TO BE REPLACED, SAWCUT AT BACK OF (E) CURB TO REPLACE SIDEWALK, U.O.N. S.C.D
4. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF (E) BUILDING DURING CONSTRUCTION

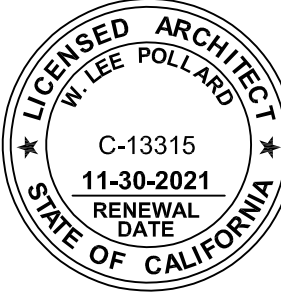


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Revisions			
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HY Architects Project number: 6005  
Facility  
SAN RAFAEL HIGH SCHOOL  
150 3RD STREET SAN RAFAEL, CA 94901

Project  
**STORM DRAIN  
IMPROVEMENTS**

Sheet Title  
**OVERALL  
SITE PLAN**

Client Project Number: Client Proj. #

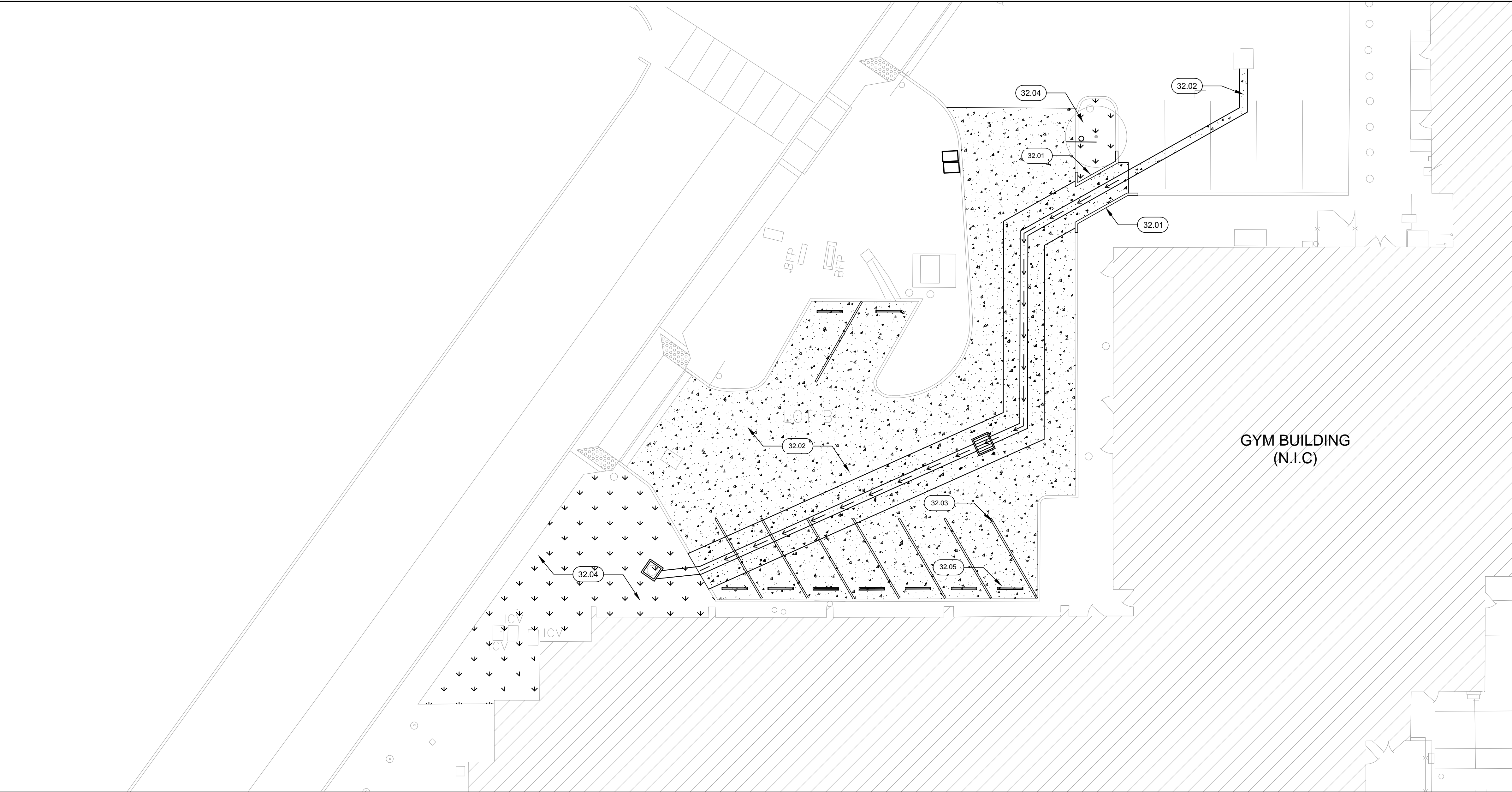
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Drawn By: AA  
Checked By: LP  
Issue Date: Issue Date  
Revit Version: 2023 Sheet 4 of 26  
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27 DEMO SITE PLAN



30 SITE PLAN

### GENERAL NOTES

1. SEE CIVIL DRAWINGS FOR (E) & (N) UNDERGROUND UTILITIES, CONCRETE FLATWORK, SITE PAVING AND WORK IN PUBLIC WAY
2. SEE LANDSCAPE DRAWINGS FOR IRRIGATION, SITE FURNITURE, AND ADDITIONAL HARDSCAPE, SITE WALL, AND PLANTING INFORMATION
3. WHERE (E) SIDEWALK IS TO BE REPLACED, SAWCUT AT BACK OF (E) CURB TO REPLACE SIDEWALK, U.O.N, S.C.D
4. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF (E) BUILDING DURING CONSTRUCTION

### KEY NOTES

- 02.01 (E) SIGN TO REMAIN, PROTECT IN PLACE
- 02.02 (E) TREE/ SHRUB TO REMAIN, S.L.D
- 02.03 (E) CURB TO REMAIN, U.O.N
- 02.05 (E) UTILITY BOX TO REMAIN, PROTECT IN PLACE
- 02.06 (E) GRADE TO REMAIN, S.C.D
- 02.08 DEMO (E) SIDEWALK. SAWCUT AT BACK OF (E) CURB TO REPLACE SIDEWALK, S.C.D
- 02.09 AC/ CONCRETE PAVING TO BE DEMOLISHED AND REGRADE, S.C.D
- 02.10 REMOVE (E) STRIPING
- 02.11 (E) AC/ CONCRETE/TURF/ PLANTING TO BE REMOVED FOR U/G UTILITY TRENCHING, S.C.D
- 02.12 (E) WHEEL STOP TO BE REMOVED
- 02.13 REMOVE AND RELOCATE (E) SIGN WITHIN SAME LANDSCAPE AREA
- 32.01 CONCRETE CURB, S.C.D
- 32.02 CONCRETE PAVING, S.C.D
- 32.03 4" STRIPING, PAINT WHITE, TYP
- 32.04 LANDSCAPE FURNISHINGS TYP, S.L.P
- 32.05 NEW CONCRETE WHEEL STOP (9 TOTAL)

### WALL LEGEND

- AREA OF AC PAVING DEMOLITION, SEE CIVIL DRAWINGS FOR COMPLETE AREA OF WORK.
- AREA CONCRETE SIDEWALK DEMOLITION, SEE CIVIL DRAWINGS FOR COMPLETE AREA OF WORK.
- AREA LANDSCAPE DEMOLITION, SEE LANDSCAPE DRAWINGS FOR COMPLETE AREA OF WORK.
- (N) CONCRETE PAVING, SCD
- (N) LANDSCAPE AREA, SLD

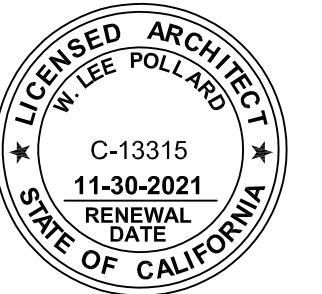


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Project  
**STORM DRAIN  
IMPROVEMENTS**

Sheet Title  
**ENLARGED SITE  
PLANS**

Client Project Number: Client Proj. #

Scale: As Indicated Sheet

Drawn By: BG

Checked By: JA

Issue Date: 5/12/2023

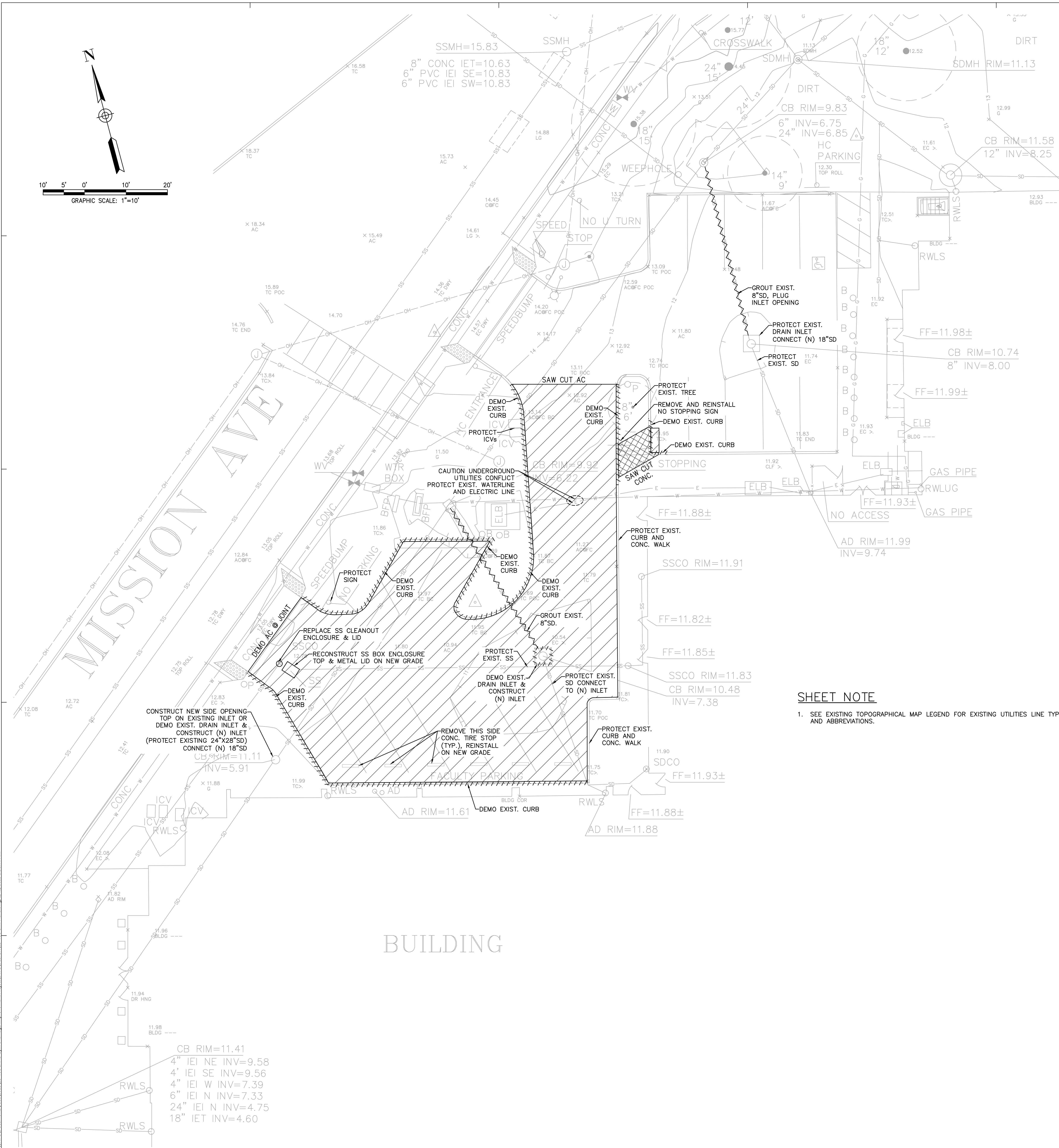
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Sheet 4 of 26



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#### GENERAL NOTES:

1. AN ENCROACHMENT PERMIT WILL BE REQUIRED FOR ANY WORK IN THE CITY RIGHT OF WAY. NO WORK SHALL START UNTIL NECESSARY PERMITS ARE OBTAINED FROM THE CITY OF SAN RAFAEL.
2. THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. IN THE EVENT OF A DISCREPANCY OR CONFLICT WITH INFORMATION SHOWN ON THESE PLANS IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER IMMEDIATELY.
3. CONTRACTORS SHALL CALL "UNDERGROUND SERVICE ALERT" AT 811 AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION FOR LOCATING UNDERGROUND UTILITIES.
4. THE LOCATIONS OF UNDERGROUND IMPROVEMENTS SHOWN ON THE PLANS ARE APPROXIMATE ONLY AND SHOULD NOT BE TAKEN AS FINAL OR ALL INCLUSIVE. THE CONTRACTOR IS CAUTIONED THAT THE PLANS MAY NOT INCLUDE ALL EXISTING UTILITIES AND THAT THE OWNER AND ENGINEER ASSUME NO RESPONSIBILITY FOR OBSTRUCTIONS THAT MAY BE ENCOUNTERED.
5. PROTECT THE PUBLIC FROM OPEN EXCAVATIONS AND TRENCHES. AT NO TIME SHALL AN EXCAVATION OR TRENCH BE UNATTENDED WITHOUT PROPER PLATING OR SAFETY FENCING BARRICADES IN PLACE. AT THE END OF THE WORK DAY, INSPECT ALL EXCAVATION AND TRENCH PLATING AND SAFETY FENCING/BARRICADES TO ENSURE THEY ARE PROPERLY FUNCTIONING.
6. CONTRACTOR SHALL HOLD HARMLESS THE SCHOOL DISTRICT, HIS AUTHORIZED REPRESENTATIVES AND THE CITY FROM ALL LIABILITIES AND DAMAGES RESULTING FROM HIS CONSTRUCTION OPERATIONS.
7. ALL THE IMPROVEMENTS SHALL BE CONSTRUCTED TO THE LINES AND GRADES SHOWN ON THE APPROVED PLANS.
8. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR FINAL GRADE OF CONCRETE UNLESS THEY HAVE CHECKED FORMS PRIOR TO POURING.
9. CONTRACTOR SHALL NOTIFY ENGINEER 72 HOURS PRIOR TO ANY NEED FOR CONSTRUCTION STAKING.
10. THE REMOVAL OF OBSTRUCTIONS (TREES, SIGNS, ETC.) SHALL BE AT THE CONTRACTOR'S EXPENSE.
11. MATERIAL SPILLS ON PUBLIC STREETS AND SILTATION OF DOWN STREAM STORM DRAIN FACILITIES DUE TO THIS PROJECT SHALL BE REMOVED BY THE CONTRACTOR.
12. ALL CONSTRUCTION OR RELATED PROJECT MATERIAL AND FLUID SHALL BE CAREFULLY STORED OR REMOVED OFF SITE TO PREVENT DAMAGE TO NATIVE VEGETATION AND ASSOCIATED WILDLIFE.
13. ALL EXCAVATIONS SHALL BE SHORED AND BRACED ACCORDING TO OSHA REGULATIONS.
14. SITE STORM DRAIN PIPE SHALL BE DUAL WALL HDPE PIPE AND CONNECTED WATERTIGHT AS PER MANUFACTURER'S RECOMMENDATIONS. FLEXIBLE PIPE IS NOT PERMITTED.
15. COMPACTION TESTING IS TO BE PROVIDED BY THE GEOTECHNICAL ENGINEER AS NECESSARY.

#### LEGEND

- EXISTING CONTOURS
- DEMOLISH EXISTING CURB
- GROUT EXISTING STORM DRAIN PIPE
- GRIND EXISTING AC PAVEMENT TO PREPARE SURFACE FOR NEW AC OVERLAY
- DEMOLISH EXISTING CONC. SIDEWALK AND CLEAR LANDSCAPE AREA

#### SHEET NOTE

1. SEE EXISTING TOPOGRAPHICAL MAP LEGEND FOR EXISTING UTILITIES LINE TYPE AND ABBREVIATIONS.



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Project  
STORM DRAIN  
IMPROVEMENTS

Sheet Title  
DEMOLITION PLAN

Client Project Number: 23-108

Scale: As indicated  
Drawn By: BM  
Checked By: JDC  
Issue Date: 5/12/2023  
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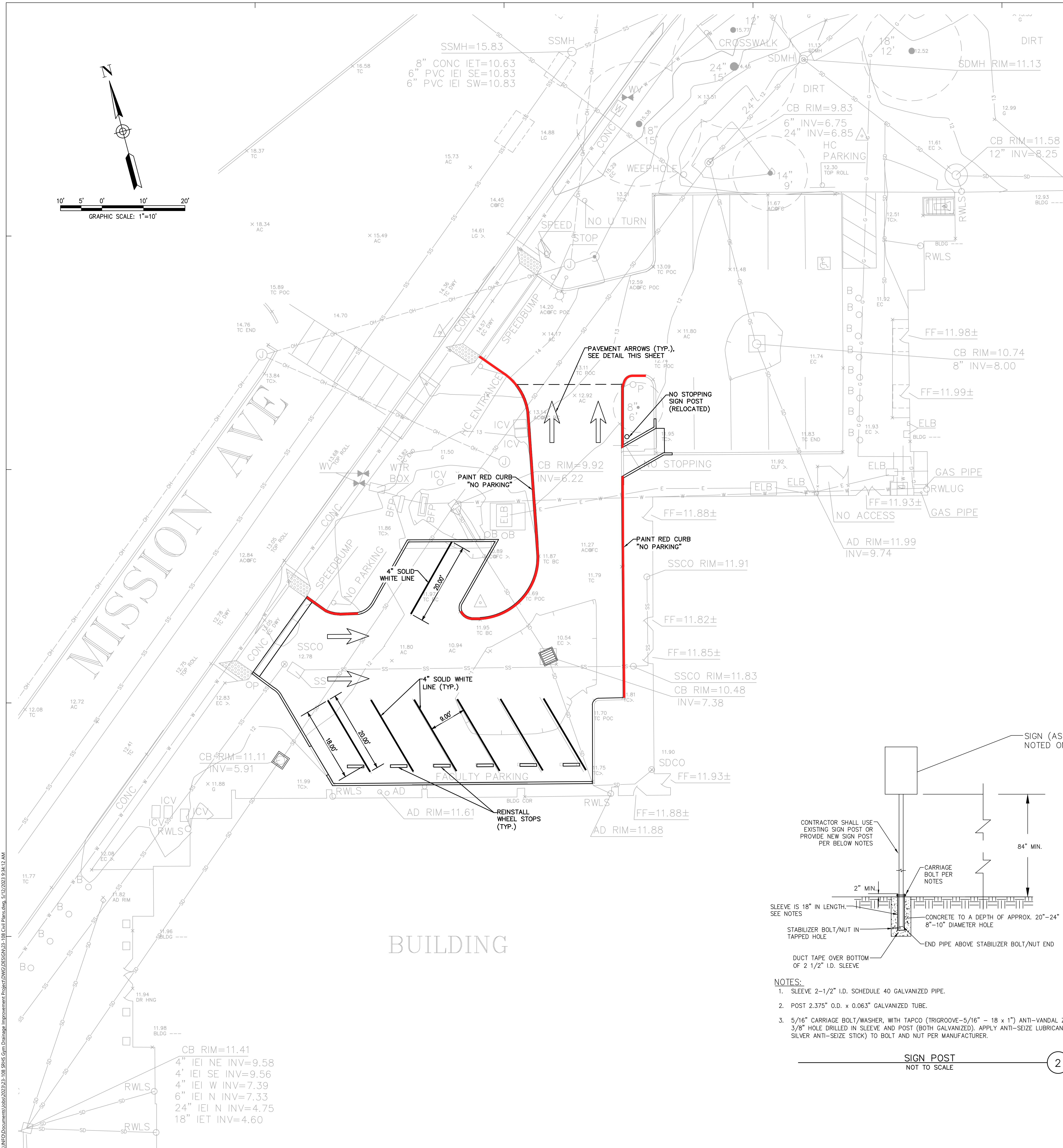
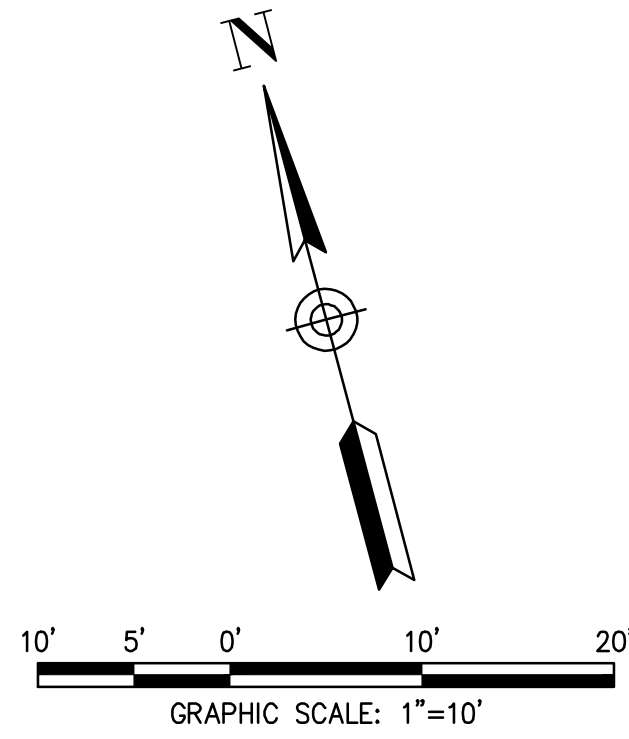






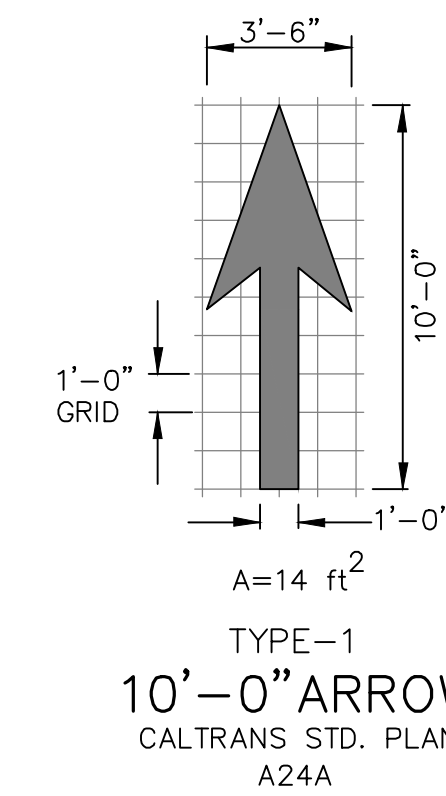




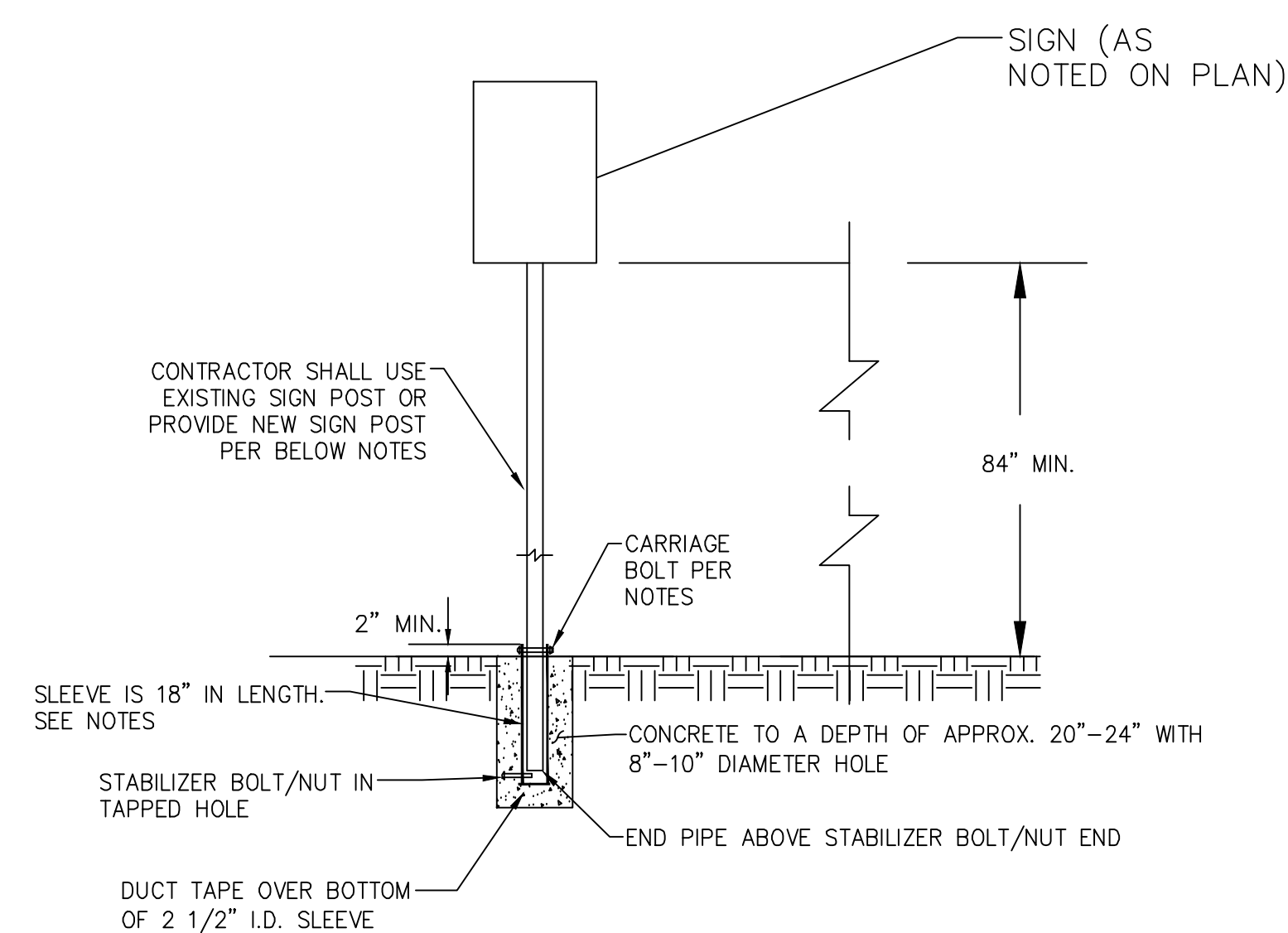


## STRIPING NOTES

1. PARKING STALL AISLES TO BE STRIPED WITH FOUR (4) INCH WIDE WHITE STRIPES, TYPICAL.
2. ALL PARKING STALL STRIPING IS TO BE NINE (9) FEET WIDE CENTER-TO-CENTER.
3. THE COMPLETED PAVEMENT MARKINGS SHALL HAVE CLEAN AND WELL-DEFINED EDGES WITHOUT RUNNING OR DEFORMATION AND SHALL CONFORM TO THE DIMENSIONS SPECIFIED, EXCEPT THAT MINOR VARIATIONS MAY BE ACCEPTED BY THE ENGINEER.
4. CONTRACTOR TO PROVIDE CONTRACTOR GRADE ACRYLIC, STRIPING PAINT FOR NEW ASPHALT OR COATED ASPHALT.
5. CONTRACTOR SHALL APPLY MARKING PAINT IN DRY WEATHER WHEN PAVEMENT AND ATMOSPHERIC TEMPERATURES ARE FIFTY (50) DEGREES F. OR ABOVE (OR MFG. SPECIFICATION) AND ARE ANTICIPATED TO REMAIN ABOVE FIFTY (50) DEGREES F. FOR FOUR (4) HOURS AFTER COMPLETING APPLICATION.
6. CONTRACTOR SHALL USE EITHER A COMMERCIAL COMPRESSED AIR SPRAY STRIPING MACHINE CAPABLE OF APPLYING AN EVEN COATING AT THE MANUFACTURER'S RECOMMENDED THICKNESS IN AN EVEN WIDTH ACROSS THE STRIPE OR A COMMERCIAL AIRLESS SPRAY STRIPING MACHINE CAPABLE OF APPLYING AN EVEN COATING AT THE MANUFACTURER'S RECOMMENDED THICKNESS IN AN EVEN WIDTH ACROSS THE STRIPE.
7. CONTRACTOR TO PROVIDE QUALIFIED TECHNICIAN TO SUPERVISE EQUIPMENT AND APPLICATION OF MARKING. LAYOUT MARKINGS USING GUIDE LINES, TEMPLATES AND FORMS. STENCILS AND TEMPLATES SHALL BE PROFESSIONALLY MADE TO INDUSTRY STANDARDS. "FREE HAND" PAINTING OF ARROWS, SYMBOLS, OR WORDING SHALL NOT BE ALLOWED.
8. CONTRACTOR TO PROTECT ADJACENT CURBS, WALKS, FENCES, AND OTHER ITEMS FROM RECEIVING PAINT.
9. CONTRACTOR TO VERIFY THAT ANY NEW PAVEMENT COATING HAS BEEN ACCEPTED BY OWNER'S REPRESENTATIVE AND HAS CURED A MINIMUM OF TWENTY FOUR (24) HOURS UNDER GOOD DRYING CONDITIONS.
10. CONTRACTOR SHALL APPLY MARKING PAINT AT A RATE OF ONE (1) GALLON PER THREE TO FOUR HUNDRED (300-400) LINEAL FEET OF FOUR (4) INCH WIDE STRIPES. (OR TO MFG. SPECIFICATION)
11. BARRICADE MARKED AREAS DURING INSTALLATION AND UNTIL THE MARKING PAINT IS DRIED AND READY FOR TRAFFIC.



PAVEMENT ARROW  
NOT TO SCALE



### NOTES:

1. SLEEVE 2-1/2" I.D. SCHEDULE 40 GALVANIZED PIPE.
2. POST 2.375" O.D. x 0.063" GALVANIZED TUBE.
3. 5/16" CARRIAGE BOLT/WASHER, WITH TAPCO (TRIGROOVE-5/16" - 18 x 1") ANTI-VANDAL ZINC NUT, THROUGH 3/8" HOLE DRILLED IN SLEEVE AND POST (BOTH GALVANIZED). APPLY ANTI-SEIZE LUBRICANT (LOCTITE 37230 SILVER ANTI-SEIZE STICK) TO BOLT AND NUT PER MANUFACTURER.

SIGN POST  
NOT TO SCALE



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HY Architects Project number: 6005

Facility  
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Project  
STORM DRAIN  
IMPROVEMENTS

Sheet Title  
STRIPING PLAN

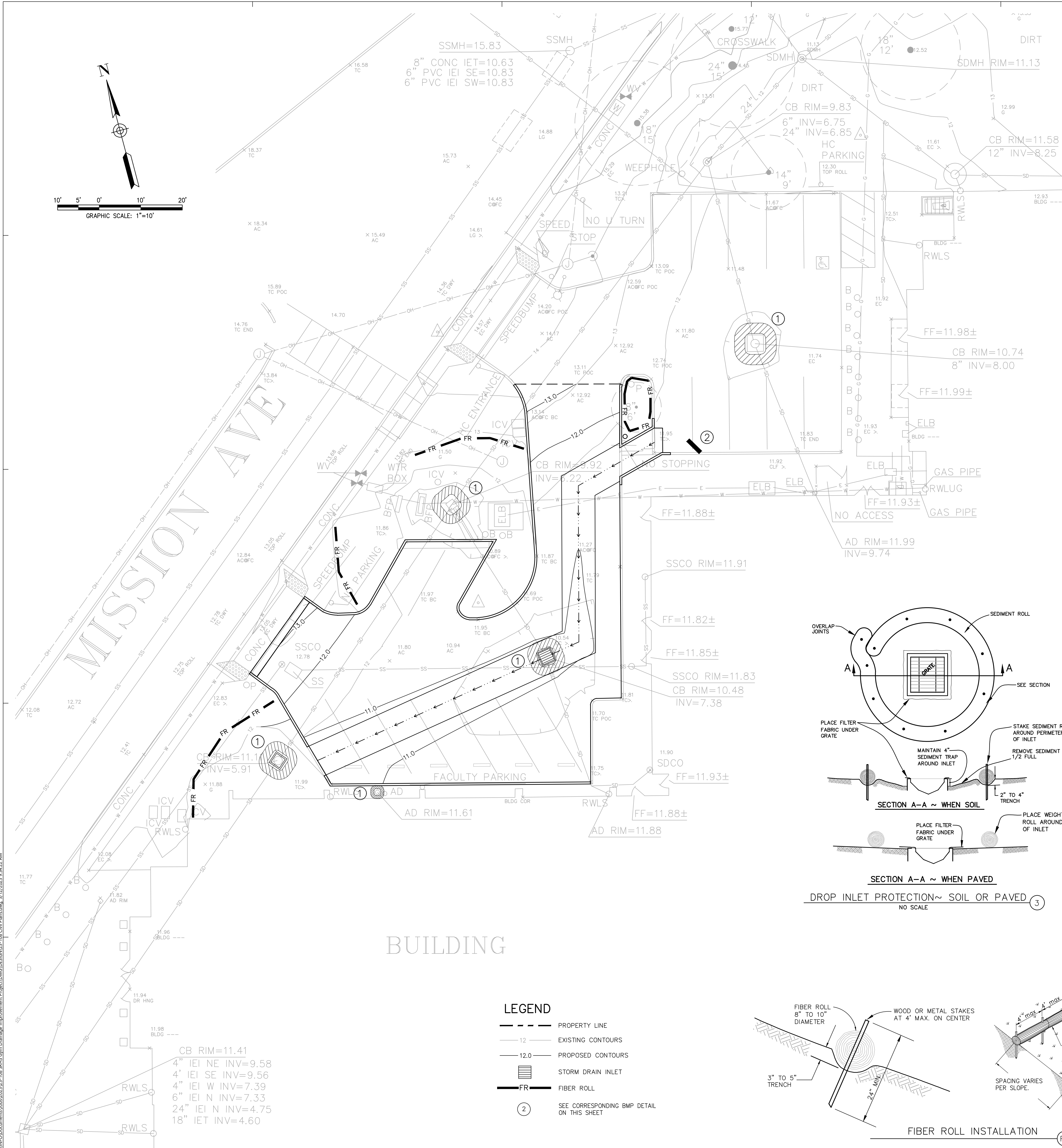
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Civil3D Version: 2022

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4 of 6

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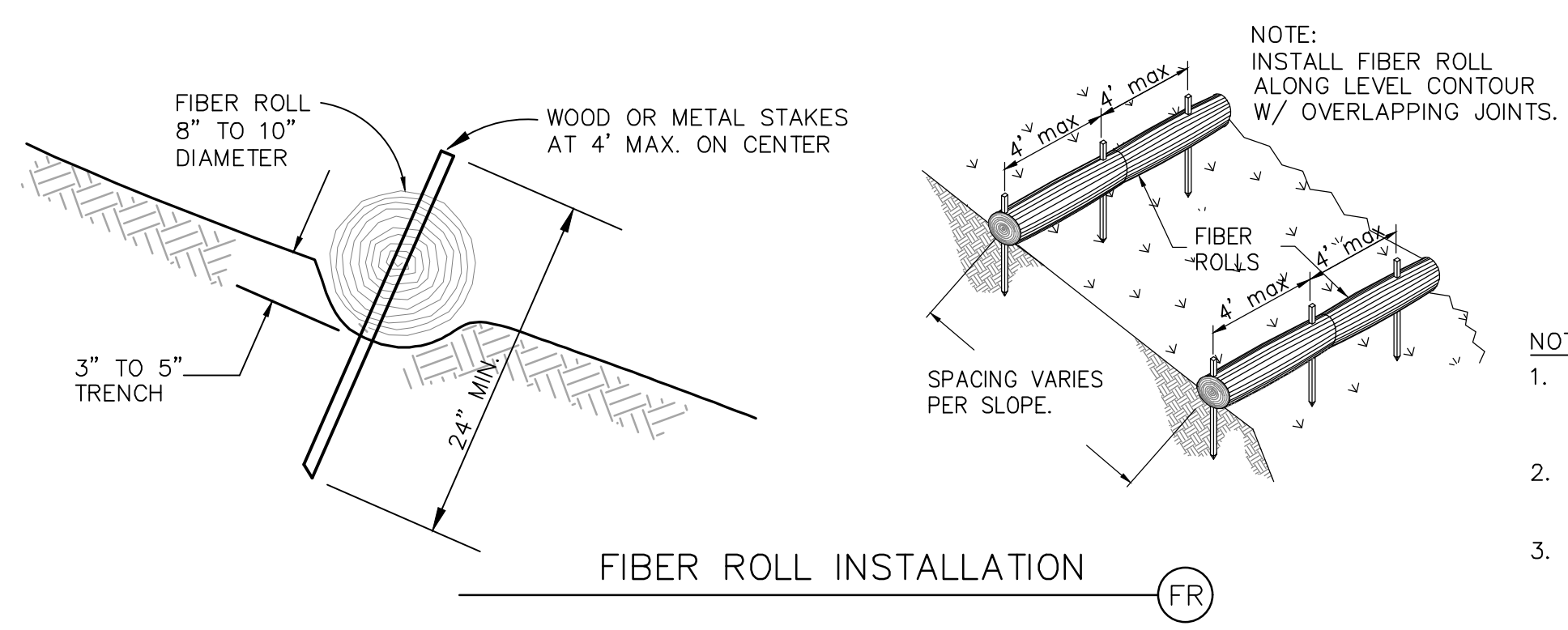
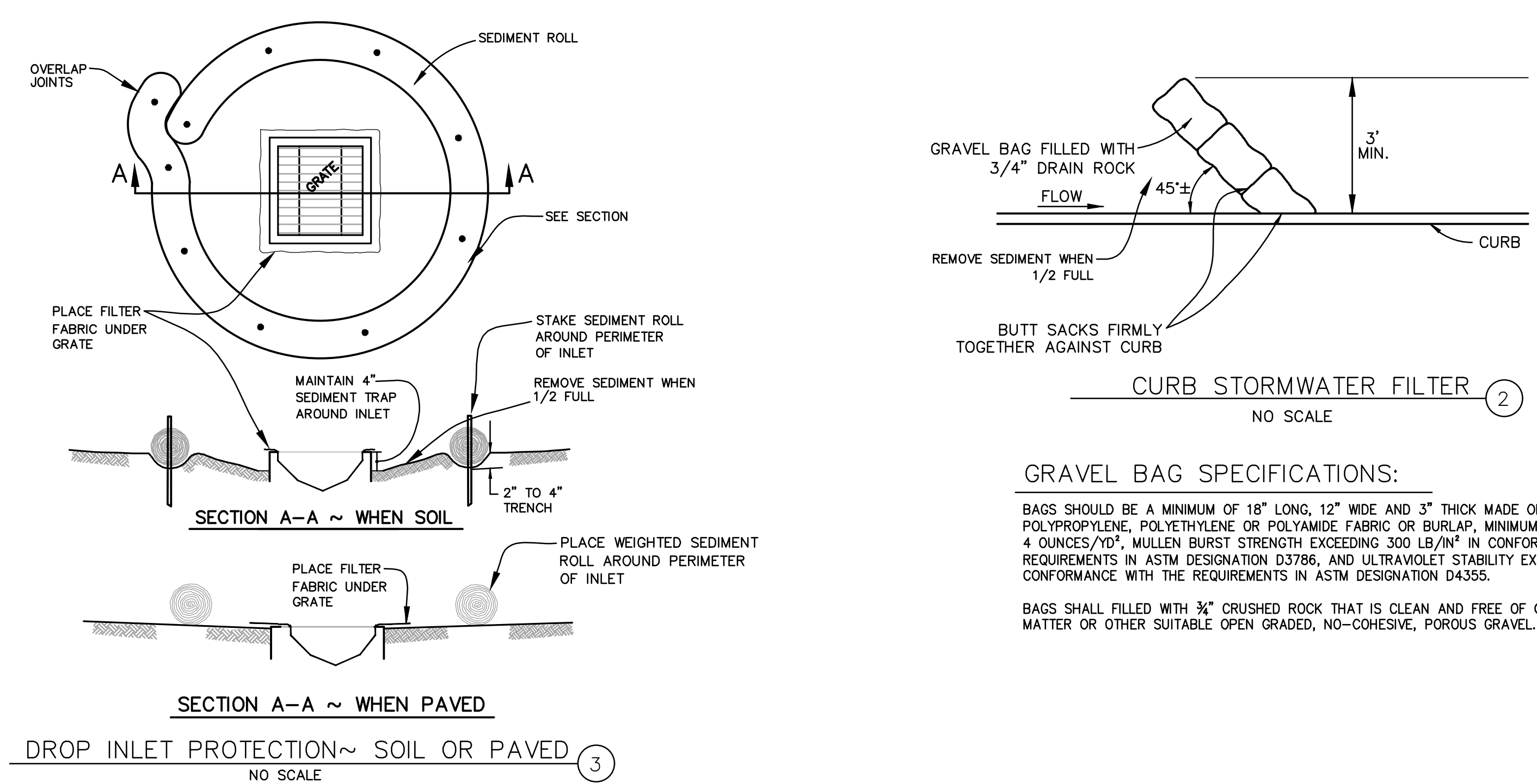


EROSION & SEDIMENT CONTROL NOTES

- THIS PLAN IS INTENDED TO SERVE AS A CONCEPTUAL GUIDE FOR THE INSTALLATION OF EFFECTIVE SITE EROSION AND SEDIMENTATION CONTROL MEASURES. THE EROSION AND SEDIMENTATION CONTROL MEASURES SHOWN SHALL BE MOVED, REVISED AND UPDATED AS THE SITE GRADING PROGRESSES IN ORDER TO PROVIDE THE MOST EFFECTIVE SITE PROTECTION. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE REGIONAL WATER QUALITY CONTROL BOARD'S BEST MANAGEMENT PRACTICES(BMP).
- THE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED BY OCTOBER 15 AND MAINTAINED BY THE CONTRACTOR DURING ALL PHASES OF CONSTRUCTION, TO THE SATISFACTION OF THE ENGINEER AND THE LOCAL AGENCY. REPAIRS TO THE EROSION AND SEDIMENTATION CONTROL FACILITIES SHOULD BE MADE AS REQUIRED.
- CONTRACTOR SHALL SCHEDULE CONSTRUCTION WORK TO AVOID EXCESS EXPOSURE DURING RAIN EVENTS.
- FIBER ROLLS AND/OR SILT FENCES SHALL BE INSTALLED BELOW ALL BARE SOIL AREAS TO PROTECT SEDIMENT FROM LEAVING THE WORK ZONE.
- ALL SILT CONTAINMENT FEATURES SHALL BE CLEANED AND READY TO FUNCTION AT THE START OF THE RAINY SEASON. INSPECT AFTER EACH SIGNIFICANT RAINFALL EVENT AND DAILY DURING PROLONGED STORM EVENTS. REMOVE SEDIMENT WHEN ACCUMULATIONS REACH ONE THIRD OF THE HEIGHT OF THE BARRIER.
- ALL VEHICLES ENTERING ONTO A PUBLIC ROADWAY FROM THIS SITE SHALL HAVE CLEAN TIRES. WHEN A WASHING OF TIRES IS REQUIRED, IT SHALL BE DONE IN AN AREA STABILIZED WITH 1 1/2" CRUSHED ROCK WHICH DRAINS INTO A SEDIMENT TRAP.
- A CONCRETE WASHOUT AREA SHALL BE DESIGNATED TO CLEAN CONCRETE TRUCKS AND TOOLS. AT NO TIME SHALL CONCRETE PRODUCTS AND WASTE BE ALLOWED TO ENTER COUNTY WATERWAYS SUCH AS CREEKS OR STORM DRAINS. NO WASHOUT OF CONCRETE, MORTAR MIXERS, OR TRUCKS SHALL BE ALLOWED ON SOIL. CONCRETE WASTE SHALL BE PROPERLY DISPOSED.
- PORTABLE TOILETS SHALL BE PLACED IN A LOCATION AWAY FROM VEHICULAR TRAFFIC, DRAINAGE INLETS, GUTTERS, AND WATERBODIES. TIE OR STAKE PORTABLE TOILETS TO PREVENT TIPPING AND EQUIP UNITS WITH OVERFLOW PAN/TRAY.
- PER SAN RAFAEL MUNICIPAL CODE 9.30.140 ANY CONSTRUCTION CONTRACTOR PERFORMING WORK IN THE CITY SHALL IMPLEMENT APPROPRIATE BMP'S TO PREVENT THE DISCHARGE OF CONSTRUCTION WASTES OR CONTAMINANTS FROM CONSTRUCTION MATERIALS, TOOLS AND EQUIPMENT FROM ENTERING A COUNTY STORM DRAIN SYSTEM.

DUST CONTROL NOTES

- THIS DUST CONTROL PLAN SHALL BE IMPLEMENTED DURING ALL PHASES OF GRADING AND SITE CONSTRUCTION PERIODS WHEN POTENTIAL DUST EMISSIONS ARE LIKELY TO OCCUR. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING THE FOLLOWING DUST CONTROL MEASURES:
- ALL ACTIVE CONSTRUCTION AREAS SHALL BE WATERED AT LEAST TWICE DAILY (WITH RECYCLED WATER, IF POSSIBLE).
  - ALL INACTIVE CONSTRUCTION AREAS (PREVIOUSLY GRADED AREAS WHICH ARE INACTIVE FOR TEN DAYS OR MORE) SHALL BE COVERED WITH NON-TOXIC SOIL STABILIZERS OR TARPS.
  - ANY EXPOSED STOCKPILES OF DIRT, SAND OR GRAVEL SHALL BE ENCLOSED, COVERED, AND WATERED TWICE DAILY OR COVERED WITH NON-TOXIC SOIL BINDERS OR TARPS.
  - VEGETATION IN DISTURBED AREAS SHALL BE REPLANTED AS QUICKLY AS POSSIBLE.
  - ALL TRUCKS HAULING SOIL, SAND, AND OTHER LOOSE MATERIALS SHALL BE COVERED AND MAINTAIN AT LEAST ONE FOOT OF FREEBOARD.
  - THE ON-SITE PAVED ACCESS ROAD, PARKING AREAS AND STAGING AREAS AT CONSTRUCTION SITES SHALL BE SWEEPED DAILY WITH WATER SWEEPERS. ADJACENT PUBLIC STREETS SHALL BE SWEEPED DAILY IF VISIBLE SOIL MATERIAL IS CARRIED ONTO ADJACENT PUBLIC STREETS.
  - SANDBAGS OR OTHER EROSION CONTROL MEASURES SHALL BE INSTALLED TO PREVENT SILT RUN-OFF ONTO PUBLIC ROADWAYS.
  - WINDBREAKS SHALL BE INSTALLED, WHERE NECESSARY, AT THE WINDWARD SIDE OF THE CONSTRUCTION AREAS.
  - EXCAVATION AND GRADING ACTIVITY SHALL BE SUSPENDED WHEN WIND GUSTS EXCEED 25 MILES PER HOUR.
  - THE PROJECT CONTRACTOR SHALL BE RESPONSIBLE FOR INFORMING SUBCONTRACTORS OF THESE REQUIREMENTS AND FOR IMPLEMENTING THESE MEASURES ON THE SITE.



- LEGEND**
- PROPERTY LINE
  - - - EXISTING CONTOURS
  - - - PROPOSED CONTOURS
  - STORM DRAIN INLET
  - FR FIBER ROLL
  - ② SEE CORRESPONDING BMP DETAIL ON THIS SHEET



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Project  
**STORM DRAIN IMPROVEMENTS**

Sheet Title  
**EROSION CONTROL PLAN AND DETAILS**

Client Project Number: 23-108

Scale: As indicated  
Drawn By: BM  
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Civil3D Version: 2022

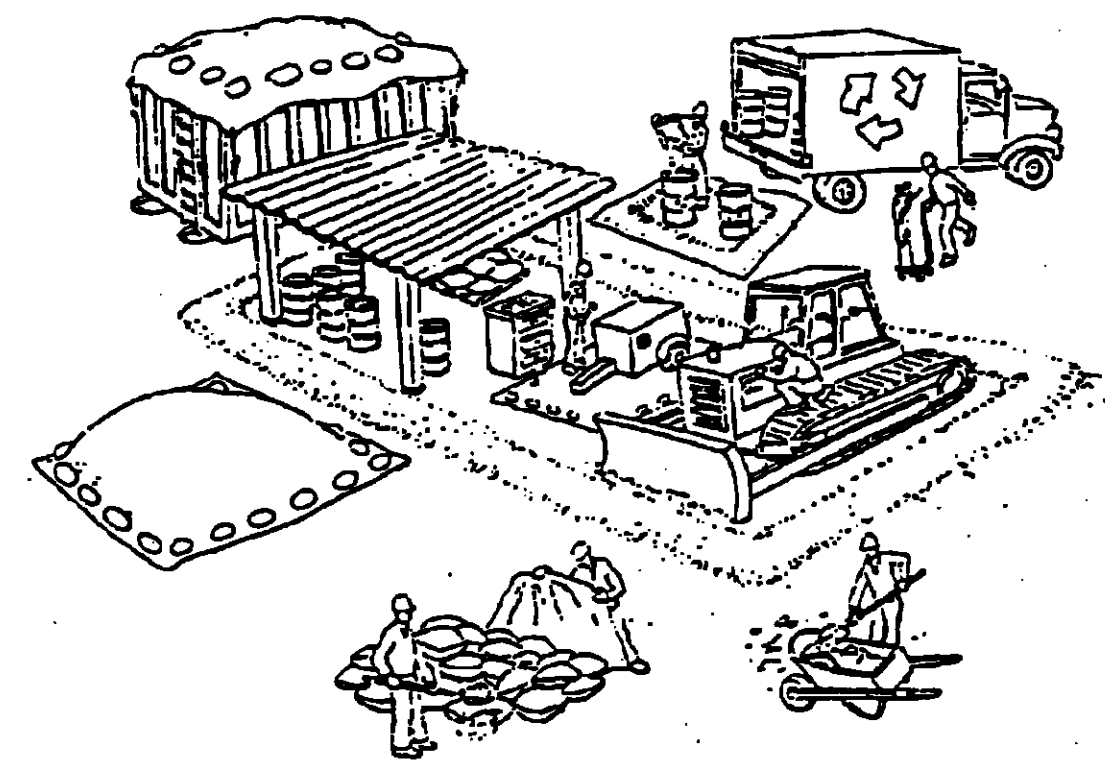
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Sheet 5 of 6

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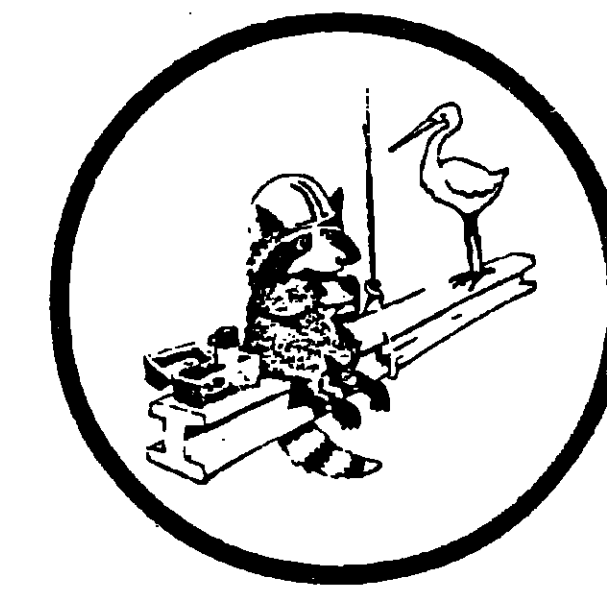
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# City of San Rafael Pollution Prevention — It's Part of the Plan



## Make sure your crews and subs do the job right!

Runoff from streets and other paved areas is a major source of pollution in San Francisco Bay. Construction activities can directly affect the health of the Bay unless contractors and crews plan ahead to keep dirt, debris, and other construction waste away from storm drains and local creeks. Following these guidelines will ensure your compliance with City of San Rafael ordinance requirements.



City of San Rafael Storm Water Program  
(415) 485-3435

### Materials storage & spill cleanup

#### Non-hazardous materials management

- ✓ Sand, dirt, and similar materials must be stored at least 10 feet from catch basins, and covered with a tarp during wet weather or when rain is forecast.
- ✓ Use (but don't overuse) reclaimed water for dust control as needed.
- ✓ Sweep streets and other paved areas daily. Do not wash down streets or work areas with water!
- ✓ Recycle all asphalt, concrete, and aggregate base material from demolition activities.
- ✓ Check dumpsters regularly for leaks and to make sure they don't overflow. Repair or replace leaking dumpsters promptly.

#### Hazardous materials management

- ✓ Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with City, state, and federal regulations.
- ✓ Store hazardous materials and wastes in secondary containment and cover them during wet weather.
- ✓ Follow manufacturer's application instructions for hazardous materials and be careful not to use more than necessary. Do not apply chemicals outdoors when rain is forecast within 24 hours.
- ✓ Be sure to arrange for appropriate disposal of all hazardous wastes.

#### Spill prevention and control

- ✓ Keep a stockpile of spill cleanup materials (rags, absorbents, etc.) available at the construction site at all times.
- ✓ When spills or leaks occur, contain them immediately and be particularly careful to prevent leaks and spills from reaching the gutter, street, or storm drain. Never wash spilled material into a gutter, street, storm drain, or creek!
- ✓ Report any hazardous materials spills immediately! Call City of San Rafael Fire Department, (415) 485-3308

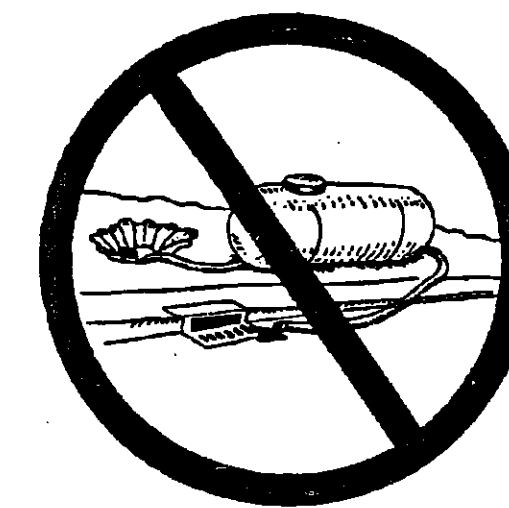
### Vehicle and equipment maintenance & cleaning

- ✓ Inspect vehicles and equipment for leaks frequently. Use drip pans to catch leaks until repairs are made; repair leaks promptly.
- ✓ Fuel and maintain vehicles on site only in a bermed area or over a drip pan that is big enough to prevent runoff.
- ✓ If you must clean vehicles or equipment on site, clean with water only in a bermed area that will not allow rinsewater to run into gutters, streets, storm drains, or creeks.
- ✓ Do not clean vehicles or equipment on-site using soaps, solvents, degreasers, steam cleaning equipment, etc.



### Dewatering operations

- ✓ Reuse water for dust control, irrigation, or another on-site purpose to the greatest extent possible.
- ✓ Be sure to call the City's Stormwater Manager before discharging water to a street, gutter, or storm drain. Call the Stormwater Manager at (415) 485-3435. Filtration or diversion through a basin, tank, or sediment trap may be required.
- ✓ In areas of known contamination, testing is required prior to reuse or discharge of groundwater. Consult with the City Fire Dept. to determine what testing to do and to interpret results. Contaminated groundwater must be treated or hauled off-site for proper disposal.



### Saw cutting

- ✓ Always completely cover or barricade storm drain inlets when saw cutting. Use filter fabric, hay bales, sand bags, or fine gravel dams to keep slurry out of the storm drain system.
- ✓ Shovel, absorb, or vacuum saw-cut slurry and pick up all waste as soon as you are finished in one location or at the end of each work day (whichever is sooner!).
- ✓ If saw cut slurry enters a catch basin, clean it up immediately.

### Concrete, grout, and mortar storage & waste disposal

- ✓ Be sure to store concrete, grout, and mortar under cover and away from drainage areas. These materials must never reach a storm drain.
- ✓ Wash out concrete equipment/trucks off-site or designate an on-site area for washing where water will flow onto dirt or into a temporary pit in a dirt area. Let the water seep into the soil and dispose of hardened concrete with trash.
- ✓ If a suitable dirt area is not available, collect the wash water and remove it for appropriate disposal off site.
- ✓ Divert water from washing exposed aggregate concrete to a dirt area where it will not run into a gutter, street, or storm drain. If a suitable dirt area is not available, filter the wash water through hay bales before discharging to a storm drain.



### Paving/asphalt work

- ✓ Do not pave during wet weather or when rain is forecast.
- ✓ Always cover storm drain inlets and manholes when paving or applying seal coat, tack coat, slurry seal, or fog seal.
- ✓ Place drip pans or absorbent material under paving equipment when not in use.
- ✓ Protect gutters, ditches, and drainage courses with hay bales, sand bags, or earthen berms.
- ✓ Do not sweep or wash down excess sand from sand sealing into gutters, storm drains, or creeks. Collect sand and return it to the stockpile, or dispose of it as trash.
- ✓ Do not use water to wash down fresh asphalt concrete pavement.



### Painting

- ✓ Never rinse paint brushes or materials in a gutter or street!
- ✓ Paint out excess water-based paint before rinsing brushes, rollers, or containers in a sink. If you can't use a sink, direct wash water to a dirt area and spade it in.
- ✓ Paint out excess oil-based paint before cleaning brushes in thinner.
- ✓ Filter paint thinners and solvents for reuse whenever possible. Dispose of oil-based paint sludge and unusable thinner as hazardous waste.



### Earthwork & contaminated soils

- ✓ Keep excavated soil on the site where it is least likely to collect in the street. Transfer to dump trucks should take place on the site, not in the street.
- ✓ Use hay bales, silt fences, or other control measures to minimize the flow of silt off the site.
- ✓ Avoid scheduling earth moving activities during the rainy season if possible. If grading activities during wet weather are allowed in your permit, be sure to implement all control measures necessary to prevent erosion.
- ✓ Mature vegetation is the best form of erosion control. Minimize disturbance to existing vegetation whenever possible.
- ✓ If you disturb a slope during construction, prevent erosion by securing the soil with erosion control fabric, or seed with fast-growing grasses as soon as possible. Place hay bales down-slope until soil is secure.
- ✓ If you suspect contamination (from site history, discoloration, odor, texture, abandoned underground tanks or pipes, or buried debris), call the Fire Dept., (415) 485-3308, for help in determining what testing should be done.
- ✓ Manage disposal of contaminated soil according to Fire Department instructions.



Storm drain polluters may be liable for fines of up to \$500 per day!





## PLANTING NOTES

### GENERAL

- ALL WORK SHALL BE PERFORMED BY PERSONS FAMILIAR WITH PLANTING WORK AND UNDER THE SUPERVISION OF A QUALIFIED PLANTING FOREMAN.
- ALL QUANTITIES AND PLANT COUNTS ARE FOR THE CONVENIENCE OF THE CONTRACTOR. IN CASE OF DISCREPANCIES, THE PLAN SHALL GOVERN.
- THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO MAKE SUBSTITUTIONS, ADDITIONS, AND DELETIONS IN THE PLANTING SCHEME AS THEY FEEL NECESSARY WHILE WORK IS IN PROGRESS, UPON APPROVAL BY THE OWNER. SUCH CHANGES ARE TO BE ACCOMPANIED BY EQUITABLE ADJUSTMENTS IN THE CONTRACT PRICE, WHEN NECESSARY.
- PLANT MATERIAL LOCATIONS SHOWN ARE DIAGRAMMATIC AND MAY BE SUBJECT TO CHANGE IN THE FIELD BY THE LANDSCAPE ARCHITECT. PLANT LOCATIONS ARE TO BE ADJUSTED IN THE FIELD AS NECESSARY TO SCREEN UTILITIES, BUT SHALL NOT BLOCK WINDOWS, BLOCK SIGNS NOR WEED ACCESS.
- THE DESIGN INTENT OF THE PLANTING PLAN IS TO ESTABLISH AN ATTRACTIVE MATURE LANDSCAPE APPEARANCE. FUTURE PLANT GROWTH WILL NECESSITATE TRIMMING, SHAPING, AND IN SOME CASE REMOVAL OF TREES AND SHRUBS AS AN ON-GOING MAINTENANCE PROCEDURE.
- ALL PLANTING AREA MUST BE IRRIGATED WITH AUTOMATIC IRRIGATION SYSTEM. IRRIGATION SYSTEM SHALL BE FULLY AUTOMATED AND OPERATIONAL WITH FULL COVERAGE PRIOR TO PLANTING.
- CONTRACTOR TO REVIEW ALL EXISTING, PROPOSED, & AS BUILT UTILITY PLANS PRIOR TO CONSTRUCTION. CONTRACTOR TO TAKE PRECAUTIONS IN EXCAVATION OF ALL TREE PLANTING PITS. CONTRACTOR TO NOTIFY LANDSCAPE ARCHITECT OF ANY CONFLICTS FOUND DURING CONSTRUCTION.
- CONTRACTOR MUST REVIEW ALL PLANS PRIOR TO THE BEGINNING OF CONSTRUCTION AND MAINTAIN THE FOLLOWING CLEARANCES FOR ALL TREE PLANTINGS. CONTRACTOR TO TAKE PRECAUTION IN ALL EXCAVATION ACTIVITY. NOTIFY LANDSCAPE ARCHITECT OF ANY CONFLICTS PRIOR TO INSTALLATION.
  - FIRE HYDRANTS AND PIPES: 5' MINIMUM
  - LIGHT POLES: 15' MINIMUM
  - UTILITIES: 5' MINIMUM
  - BUILDING ROOF EDGE: 5' MINIMUM
- CONTRACTOR TO PROVIDE AND ARRANGE FOR PLANT MATERIAL THRU CONTRACT GROW, PLANT BROKERS, OR DIRECT PURCHASE AS REQUIRED FOR THE FULL IMPLEMENTATION OF THE PROJECTS PLANTING PLAN. CONTRACTOR MUST SUBMIT WITHIN 30 DAYS AFTER AWARD OF A BID A DETAILED NURSERY LIST OF SECURED PLANT MATERIAL. CONTRACT GROW PLANT MATERIAL AND ANY SUBSTITUTION REQUESTS. CONTRACTOR SHALL ARRANGE AND SECURE ALL PLANT MATERIAL WITHIN 30 DAYS OF BID. UPON DELIVERY, PLANT MATERIAL THAT DOES NOT MEET NURSERY STANDARDS, IS ROOTBOUND, OF POOR QUALITY & HEALTH, SUBSTANDARD SIZE, AND / OR IS NOT APPROVED BY THE LANDSCAPE ARCHITECT SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. MATERIAL WHICH IS NOT SECURED AND IS UNAVAILABLE IN THE SIZE SPECIFIED SHALL BE UP-SIZED, IF AVAILABLE. ALL REPLACEMENT MATERIAL, SUBSTITUTIONS OR UP-SIZED PLANT MATERIAL MUST BE PROVIDED AS REQUIRED FOR THE FULL IMPLEMENTATION OF THE PLANTING PLAN AT NO ADDITIONAL COST TO THE CONTRACT AND OWNER.
- PROCUREMENT OF PLANT MATERIAL SHALL NOT BE LIMITED TO NORTHERN CALIFORNIA. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRUCKING, INSPECTIONS, AND INCIDENTALS FOR PROVIDING PLANT MATERIAL FROM SOURCES OUT OF STATE AS REQUIRED BY THE PROJECT PLANTING PLAN.

### EXISTING PLANT MATERIAL

- ALL EXISTING PLANT MATERIAL OR TREES TO REMAIN MUST BE PROTECTED AND MAINTAINED IN PLACE BY THE CONTRACTOR.
- ANY DAMAGED MATERIAL MUST BE FULLY REPLACED TO MATCH EXISTING BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT AND OWNER.
- CONTRACTOR MUST MAINTAIN ANY EXISTING IRRIGATION SYSTEMS OR PROVIDE TEMPORARY IRRIGATION SYSTEMS AS REQUIRED TO ALL EXISTING PLANTING AREAS TO REMAIN.

### SOILS

- THE CONTRACTOR MUST PROVIDE AN AGRICULTURAL SUITABILITIES ANALYSIS FOR ALL SOILS EXISTING AND IMPORTED INCLUDING BUT NOT LIMITED TO: EXISTING ON-SITE SOILS, IMPORTED TOPSOIL, LIME TREATED AREAS, AND ALL AMENDMENTS. RECOMMENDATIONS FOR AMENDMENTS CONTAINED IN THIS ANALYSIS ARE TO BE CARRIED OUT BEFORE PLANTING OCCURS. PROVIDE 2 TESTS AT 6" DEPTH AND 2 TESTS AT 24" DEPTH THROUGHOUT THE SITE. PROVIDE ADDITIONAL TESTING (ONE 6" AND ONE 24" DEPTH TEST PER 25,000 SF FOR AREAS WHICH WERE LIME TREATED). EACH TEST SAMPLE SHALL CONTAIN 3 REPRESENTATIVE SOIL SAMPLES. ALL LIME TREATED PLANTING AREAS SHALL BE REMOVED AND REPLACED WITH IMPORT TOP SOIL AT NO COST TO THE OWNER. ALL TESTING SHALL BE PAID FOR BY THE CONTRACTOR. FOR BID PURPOSES AMEND ALL SOIL WITH 6 YARDS OMRI COMPOST SOILS GYPSUM AND 100LBS OF GPO-POWER PLUS 5-3-1 W/ M PER 1000SF. CONTRACTOR TO SUBMIT ALL DELIVERY TICKETS FOR COMPOST AND FERTILIZERS FOR VERIFICATION.
- ALL SOILS IMPORTED ONTO THE SITE FOR ANY PURPOSE SUCH AS GRADING, NON EXPANSIVE FILL, FILL, OR FOR ANY GENERAL PURPOSE MUST BE TESTED FOR PLANT SUITABILITY PRIOR TO PLACEMENT. ALL IMPORT SOILS SHALL BE NON-DETRIMENTAL TO PLANT MATERIAL AND SOILS ANALYSIS SUBMITTED TO THE LANDSCAPE ARCHITECT FOR

- REVIEW AND APPROVAL. PROVIDE 1 TEST PER 500 CY OF MATERIAL.
- SOIL IS TO BE AMENDED, AT THE RATE INDICATED BY THE SOIL ANALYSIS, TO BRING THE SOIL ORGANIC MATTER CONTENT TO A MINIMUM OF 3.5% BY DRY WEIGHT, AND A MINIMUM OF 2" OF QUALITY RECYCLED COMPOST, ON ALL PLANTING AREAS.
- ALL PLANTERS IN AREAS WHICH HAVE BEEN COMPACTED, SUCH AS ADJACENT TO BUILDINGS AND IN PARKING LOTS, SHALL BE CROSS RIPPED TO THE FOLLOWING DEPTHS: PLANTERS LESS THAN THREE (3) FEET WIDE SHALL HAVE COMPACTION RELIEVED TO A MINIMUM DEPTH OF TWENTY-FOUR (24) INCHES BELOW SUBGRADE. PLANTERS THREE TO TEN (3-10) FEET WIDE MUST HAVE COMPACTION RELIEVED TO A MINIMUM DEPTH OF 18" BELOW SUBGRADE. PLANTERS MORE THAN 10' WIDE SHALL HAVE COMPACTION RELIEVED TO A MINIMUM DEPTH OF 12" BELOW SUBGRADE. AREAS SHALL BE PROTECTED AFTER DECOMPACTION.
- CONTRACTOR SHALL PERFORM A PERCOLATION TEST AT THE BEGINNING OF CONSTRUCTION AT 1 LOCATION PER ACRE (MAX OF 4) TO DETERMINE THE DRAINAGE CAPACITY OF THE EXISTING SITE SOIL FOR TREE HEALTH. NOTIFY THE LANDSCAPE ARCHITECT IF DRAINAGE IS LESS THAN 2" PER HOUR.

### SHRUBS

- SHRUBS AND PERENNIALS MUST HAVE ADEQUATE SETBACK FROM THE ADJACENT SIDEWALK AND EDGES OF PARKING LOT CURBS. NOTIFY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION IF PLANT MATERIAL MAY PROTRUDE INTO THE PATH OF TRAVEL.

### ACCESSORIES

- ALL PLANTING NOT BOUNDED BY CONCRETE OR A HARDSCAPE EDGE SHALL BE COMPLETELY SURROUNDED BY HEADERS. ALL ASPHALT AND DECOMPOSED GRANITE AREAS TO BE COMPLETELY SURROUNDED BY HEADERS OR ADJACENT CONCRETE WORK.
- ALL PLANTING AREAS MUST BE TOP-DRESSED WITH 3" LAYER OF RECYCLED CHIPPED MULCH. COLOR: BROWN. SUBMIT SAMPLE TO LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO ORDERING.
- ALL MULCH WITHIN STORMWATER PLANTING AREAS MUST BE 3" OF WASHED PEA GRAVEL. SUBMIT SAMPLE FOR REVIEW AND APPROVAL.
- ALL STORMWATER CURB CUTS MUST BE REINFORCED WITH A MINIMUM 12" WIDE X18" LONG X 6" DEEP BAND OF COBBLE. COBBLE SHALL BE 40% 4"-8" AND 60% 2"-3" NOYO COBBLE. PROVIDE 24" WIDE BY 6" DEPTH OF COBBLE AROUND ALL CATCH BASINS LOCATED IN DRAINAGE AREAS. SUBMIT SAMPLE FOR REVIEW AND APPROVAL.
- ALL RAINWATER LEADERS DISCHARGING INTO LANDSCAPE AREAS MUST HAVE SPLASH BLOCKS. MODEL: CDI 16X24". COLOR: TO MATCH PAVING. (800) 279-2278.
- ALL SLOPES GREATER THAN 2.5:1 MUST BE COVERED WITH EROSION CONTROL NETTING PER THE MANUFACTURER'S SPECIFICATIONS. OVERLAP ALL EDGES A MINIMUM OF 12" AND SECURE AS REQUIRED WITH METAL STAPLES. EROSION CONTROL NETTING TO BE WESTERN EXCELSIOR, EXCEL CS-3 OR APPROVED EQUAL. AVAILABLE FROM REED & GRAHAM 888-381-0800.
- THE LANDSCAPE CONTRACTOR SHALL AS A PART OF THIS BID PROVIDE FOR A PLANTING ALLOWANCE FOR THE AMOUNT OF \$3,000.00 (THREE THOUSAND DOLLARS), TO BE USED FOR SUPPLYING AND INSTALLING ADDITIONAL PLANT MATERIAL AS DIRECTED BY THE LANDSCAPE ARCHITECT AND APPROVED BY THE OWNER IN WRITING. THE UNUSED PORTION OF THE ALLOWANCE SHALL BE RETURNED TO THE OWNER AT THE BEGINNING OF THE MAINTENANCE PERIOD.
- SEE SPECIFICATIONS FOR ALL FERTILIZER REQUIREMENTS

### SUBMITTALS

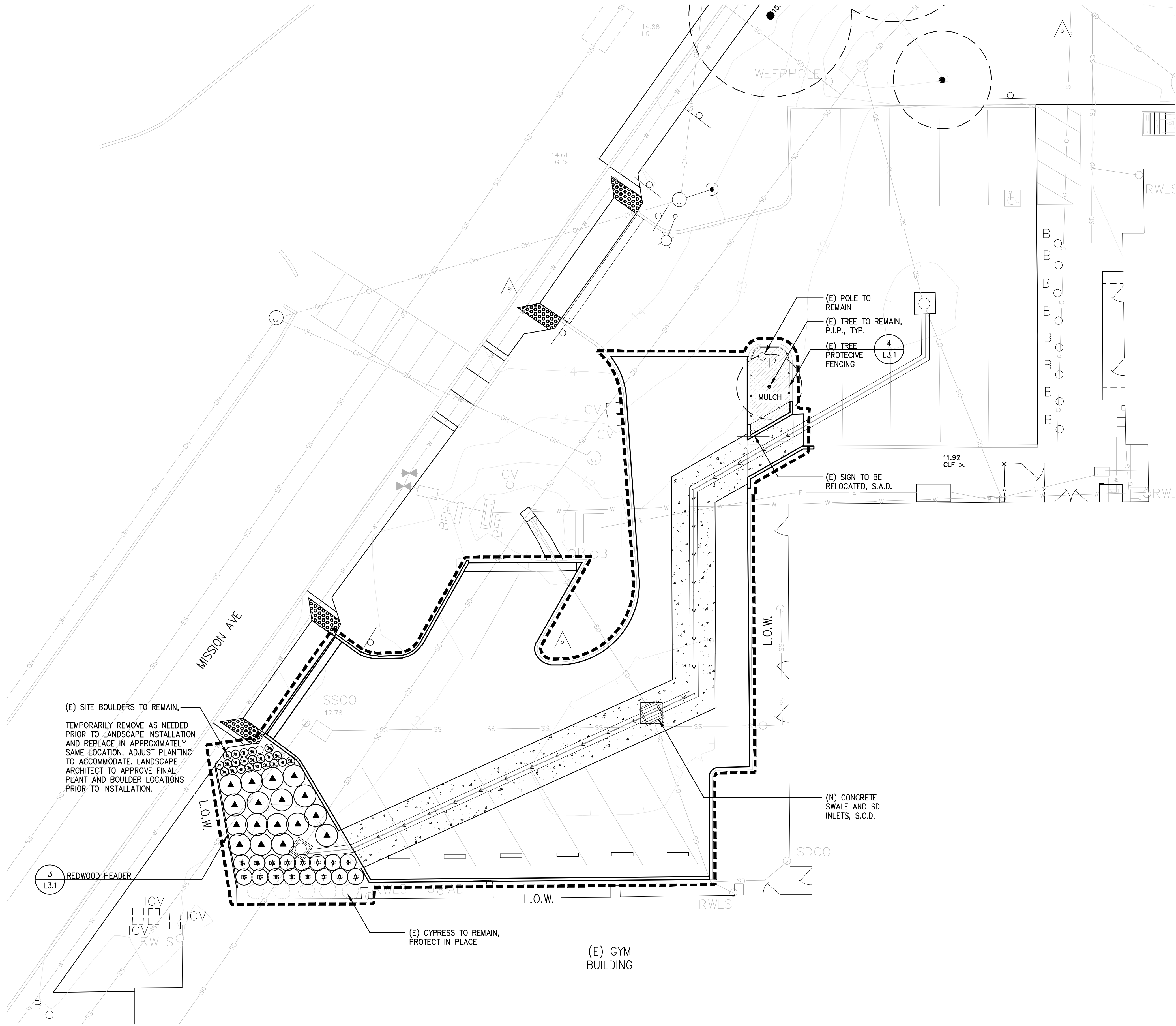
- CONTRACTOR MUST SUBMIT ALL TESTS, PRODUCTS, ACCESSORIES, CUT SHEETS OF ALL ITEMS SPECIFIED FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
- ALL PLANT MATERIAL MUST BE REVIEWED AND APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO DELIVERY. CONTRACTOR SHALL SUBMIT PHOTOS OF ALL SHRUBS, GROUND COVERS, VINES, AND TREES FOR PRELIMINARY REVIEW AND APPROVAL.
- PLANT MATERIAL NOT APPROVED BY THE LANDSCAPE ARCHITECT MAY BE SUBJECT TO REMOVAL AND REPLACEMENT WITH APPROVED PLANT MATERIAL AT NO ADDITIONAL COST TO THE CONTRACT OR OWNER.

### DISTRICT REQUIREMENTS

- ALL PLANT MATERIAL TO BE INSPECTED & APPROVED BY DISTRICT REPRESENTATIVE AND LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
- CONTACT THE PROJECT LANDSCAPE ARCHITECT FOR FINAL INSPECTION OF LANDSCAPE AND IRRIGATION. PRIOR TO RELEASE OF BUILDING FOR OCCUPANCY, THE PROJECT LANDSCAPE ARCHITECT WILL SUBMIT A LETTER TO THE DISTRICT CERTIFYING THE PLANTING AND IRRIGATION HAS BEEN INSTALLED IN CONFORMANCE WITH THE APPROVED PLANTING AND IRRIGATION PLANS, SUBJECT TO THE REVIEW AND APPROVAL OF THE DISTRICT. SECURITIES IN LIEU OF INSTALLATION WILL NOT BE ACCEPTED.
- DURING THE INSTALLATION OF LANDSCAPING AND INSTALLATION AND PRIOR TO THE ISSUANCE OF A BUILDING OCCUPANCY PERMIT, THE LANDSCAPE ARCHITECT MUST INSPECT AND MONITOR THE INSTALLATION OF MATERIALS TO VERIFY CONFORMANCE TO THESE PLANS. ONCE APPROVED, THE LANDSCAPE ARCHITECT SHALL PROVIDE A WRITTEN LETTER TO DEPARTMENT OF PLANNING AND DEVELOPMENT STATING COMPLIANCE WITH THE APPROVED PLANS.
- 

## PLANT LIST

SHRUBS	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE	SPACING	SPACING	QTY
DG	DIETES GRANDIFLORA	FORTNIGHT LILY	5 GAL	L	36" o.c.	36" o.c.	16
LI	LOMANDRA LONGIFOLIA 'BREEZE'	BREEZE™ MAT RUSH	5 GAL	L	48" o.c.	48" o.c.	17
SL	SALVIA X SYLVESTRIS 'LITTLE NIGHT'	LITTLE NIGHT MEADOW SAGE	5 GAL	L	30" o.c.	18" o.c.	22



**SR** SAN RAFAEL  
CITY SCHOOLS

Revisions

AGENCY APPROVAL

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GATES ASSOCIATES Project number: 6142

Facility  
SAN RAFAEL HIGH SCHOOL

Project  
STORM DRAIN  
IMPROVEMENTS

Sheet Title  
PLANTING PLAN

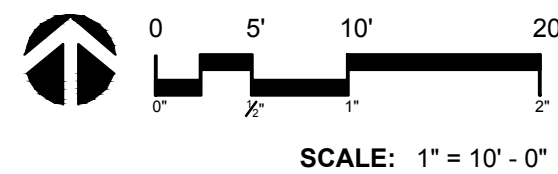
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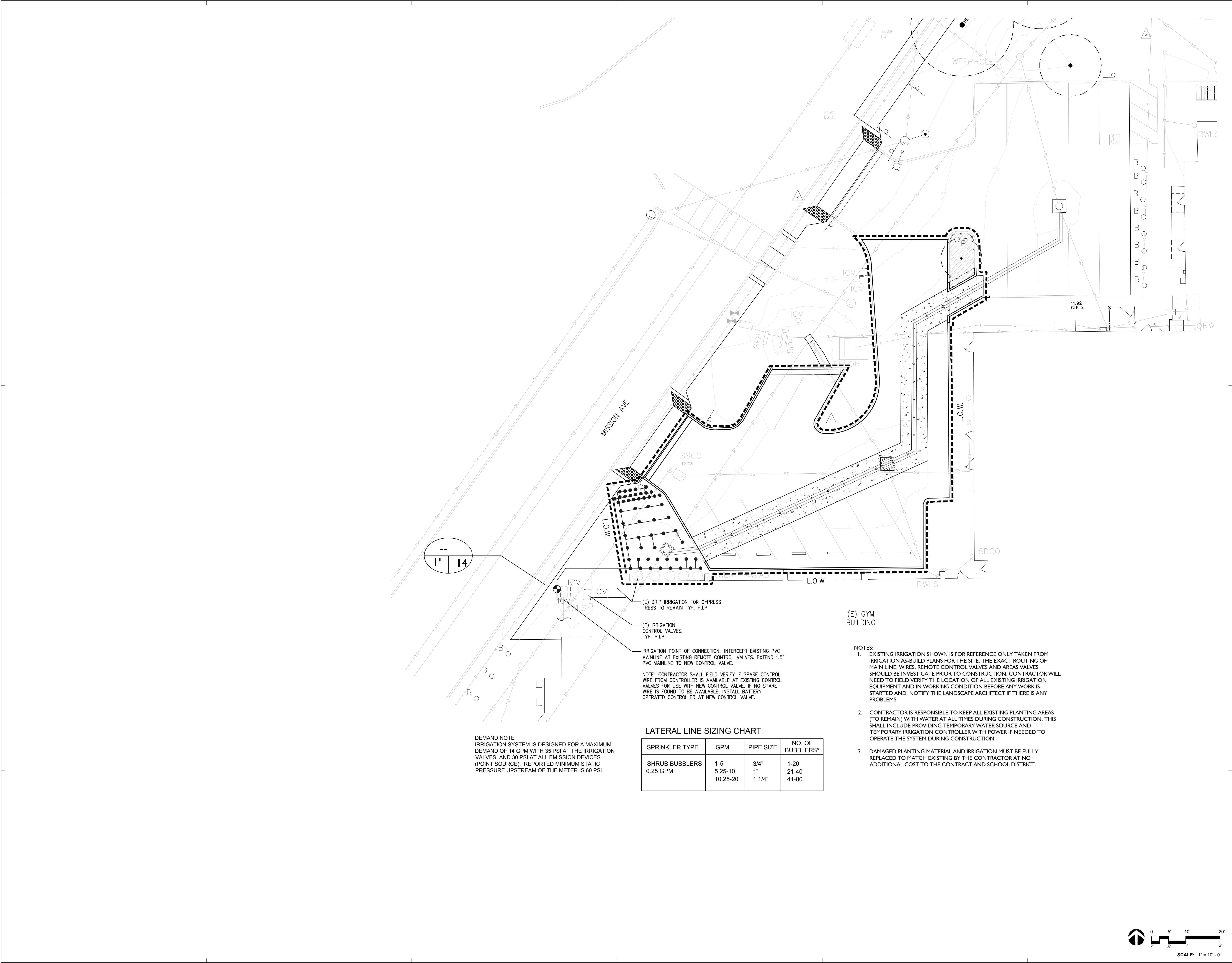
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Revit Version: 2019

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Sheet 1 of 4







**DEMAND NOTE**  
IRRIGATION SYSTEM IS DESIGNED FOR A MAXIMUM DEMAND OF 14 GPM WITH 35 PSI AT THE IRRIGATION VALVES, AND 30 PSI AT ALL EMISSION DEVICES (POINT SOURCE). REPORTED MINIMUM STATIC PRESSURE UPSTREAM OF THE METER IS 60 PSI.

LATERAL LINE SIZING CHART

SPRINKLER TYPE	GPM	PIPE SIZE	NO. OF BUBBLERS*
SHRUB BUBBLERS 0.25 GPM	1-5	3/4"	1-20
	5.25-10	1"	21-40
	10.25-20	1 1/4"	41-80

- NOTES:**
- EXISTING IRRIGATION SHOWN IS FOR REFERENCE ONLY TAKEN FROM IRRIGATION AS-BUILD PLANS FOR THE SITE. THE EXACT ROUTING OF MAIN LINE, WIRES, REMOTE CONTROL VALVES AND AREAS VALVES SHOULD BE INVESTIGATE PRIOR TO CONSTRUCTION. CONTRACTOR WILL NEED TO FIELD VERIFY THE LOCATION OF ALL EXISTING IRRIGATION EQUIPMENT AND IN WORKING CONDITION BEFORE ANY WORK IS STARTED AND NOTIFY THE LANDSCAPE ARCHITECT IF THERE IS ANY PROBLEMS.
  - CONTRACTOR IS RESPONSIBLE TO KEEP ALL EXISTING PLANTING AREAS (TO REMAIN) WITH WATER AT ALL TIMES DURING CONSTRUCTION. THIS SHALL INCLUDE PROVIDING TEMPORARY WATER SOURCE AND TEMPORARY IRRIGATION CONTROLLER WITH POWER IF NEEDED TO OPERATE THE SYSTEM DURING CONSTRUCTION.
  - DAMAGED PLANTING MATERIAL AND IRRIGATION MUST BE FULLY REPLACED TO MATCH EXISTING BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT AND SCHOOL DISTRICT.

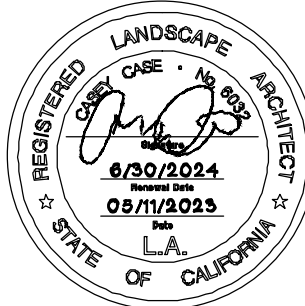


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Project  
STORM DRAIN  
IMPROVEMENTS

Sheet Title  
IRRIGATION PLAN

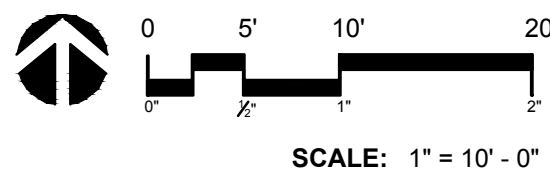
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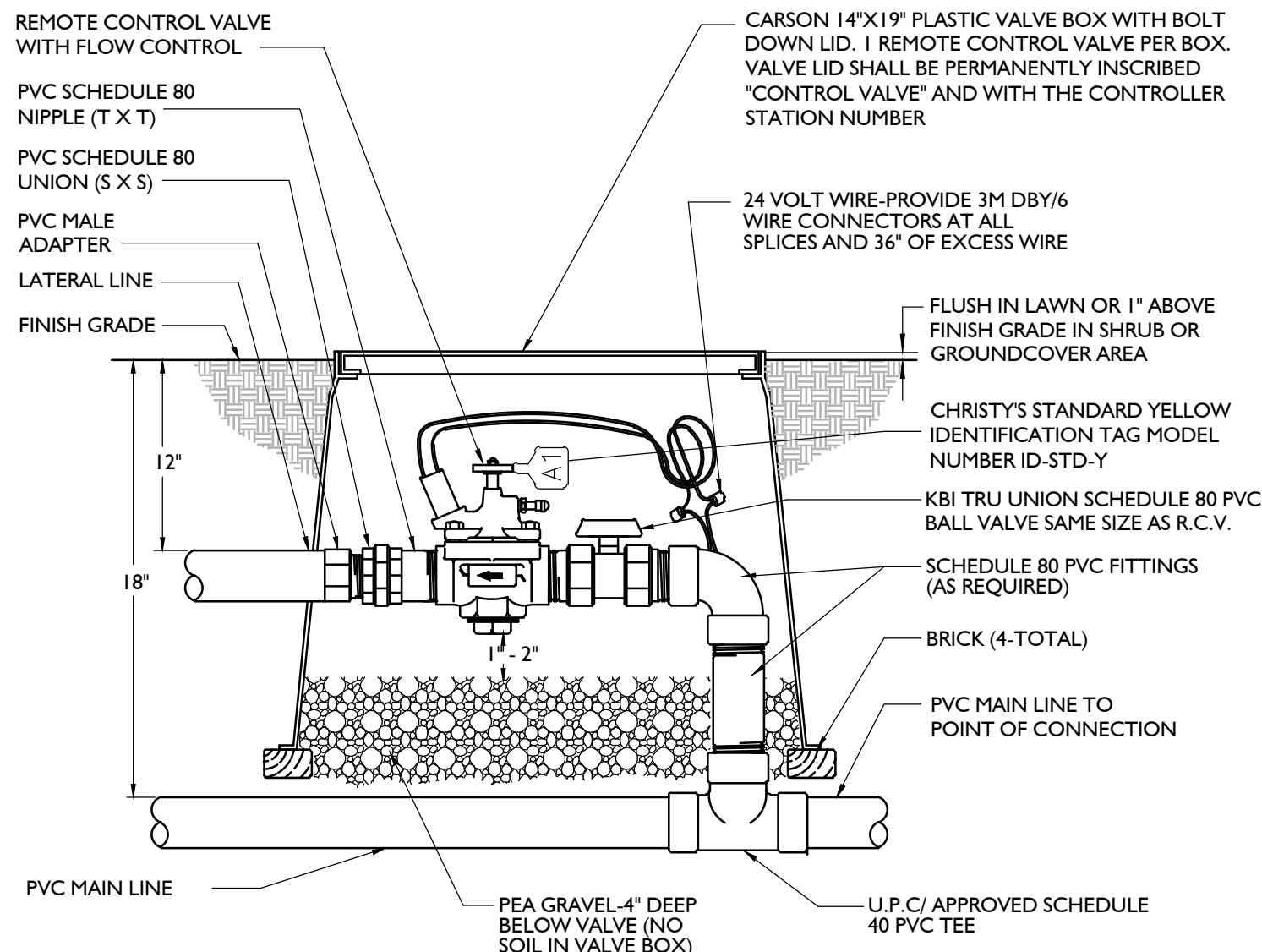
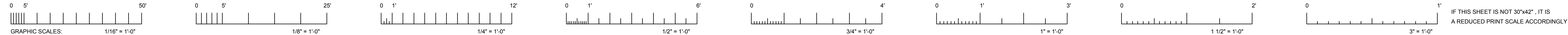
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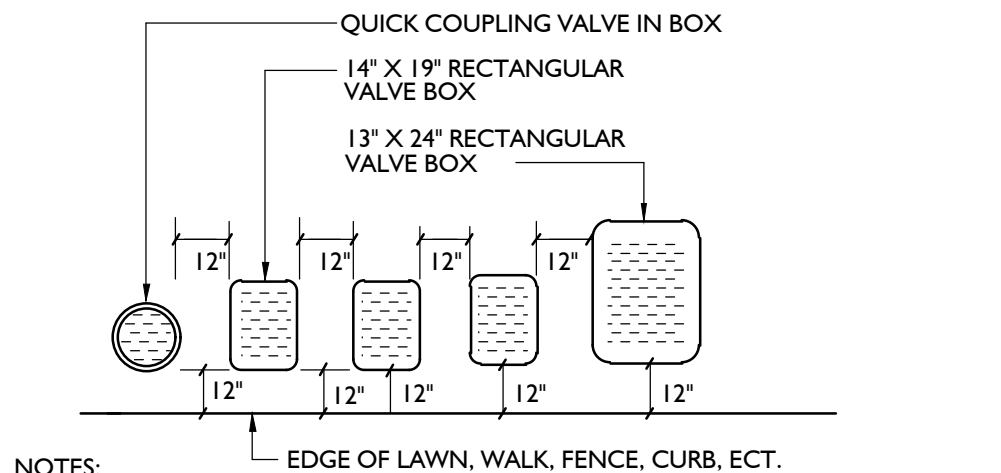
Sheet 2 of







1 REMOTE CONTROL VALVE INSTALLATION  
NTS



- NOTES:
- CENTER BOX OVER REMOTE CONTROL VALVE TO FACILITATE SERVICING VALVE.
  - SET BOXES 1" ABOVE FINISH GRADE OR MULCH COVER IN GROUND COVER/SHRUB AREA AND FLUSH WITH FINISH GRADE IN TURF AREA.
  - SET RCV AND VALVE BOX ASSEMBLY IN GROUND COVER/SHRUB AREA WHERE POSSIBLE. INSTALL IN LAWN AREA ONLY IF GROUND COVER DOES NOT EXIST ADJACENT TO LAWN.
  - SET BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO EDGE.
  - AVOID HEAVILY COMPACTING SOIL AROUND VALVE BOX EDGES TO PREVENT COLLAPSE AND DEFORMATION OF VALVE BOX SIDES.
  - ALL VALVE BOXES SHALL HAVE BOLT DOWN LIDS.
  - VALVE LID SHALL BE PERMANENTLY INSCRIBED "CONTROL VALVE" AND WITH THE CONTROLLER STATION NUMBER.

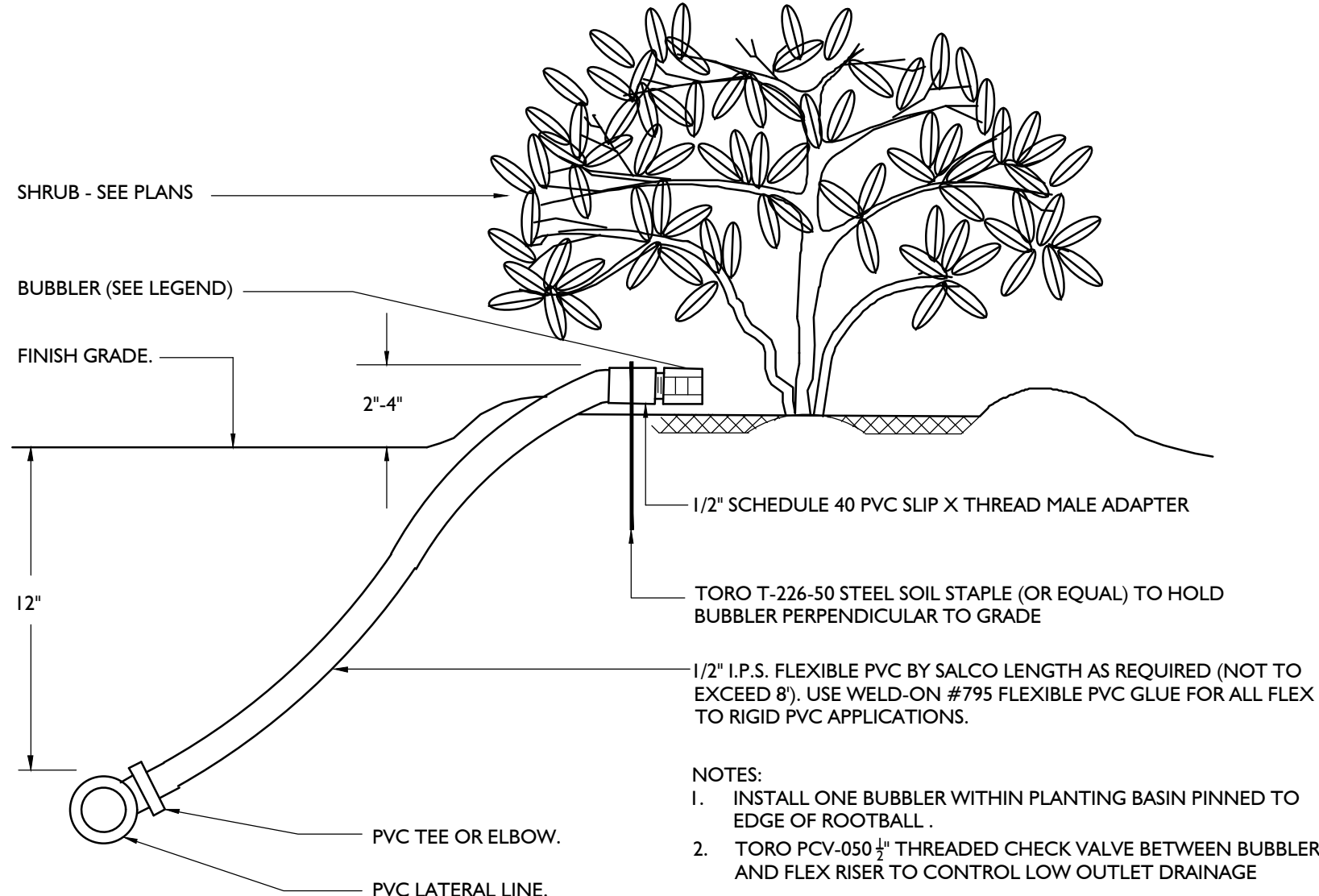
2 VALVE BOX INSTALLATION  
NTS

## IRRIGATION LEGEND

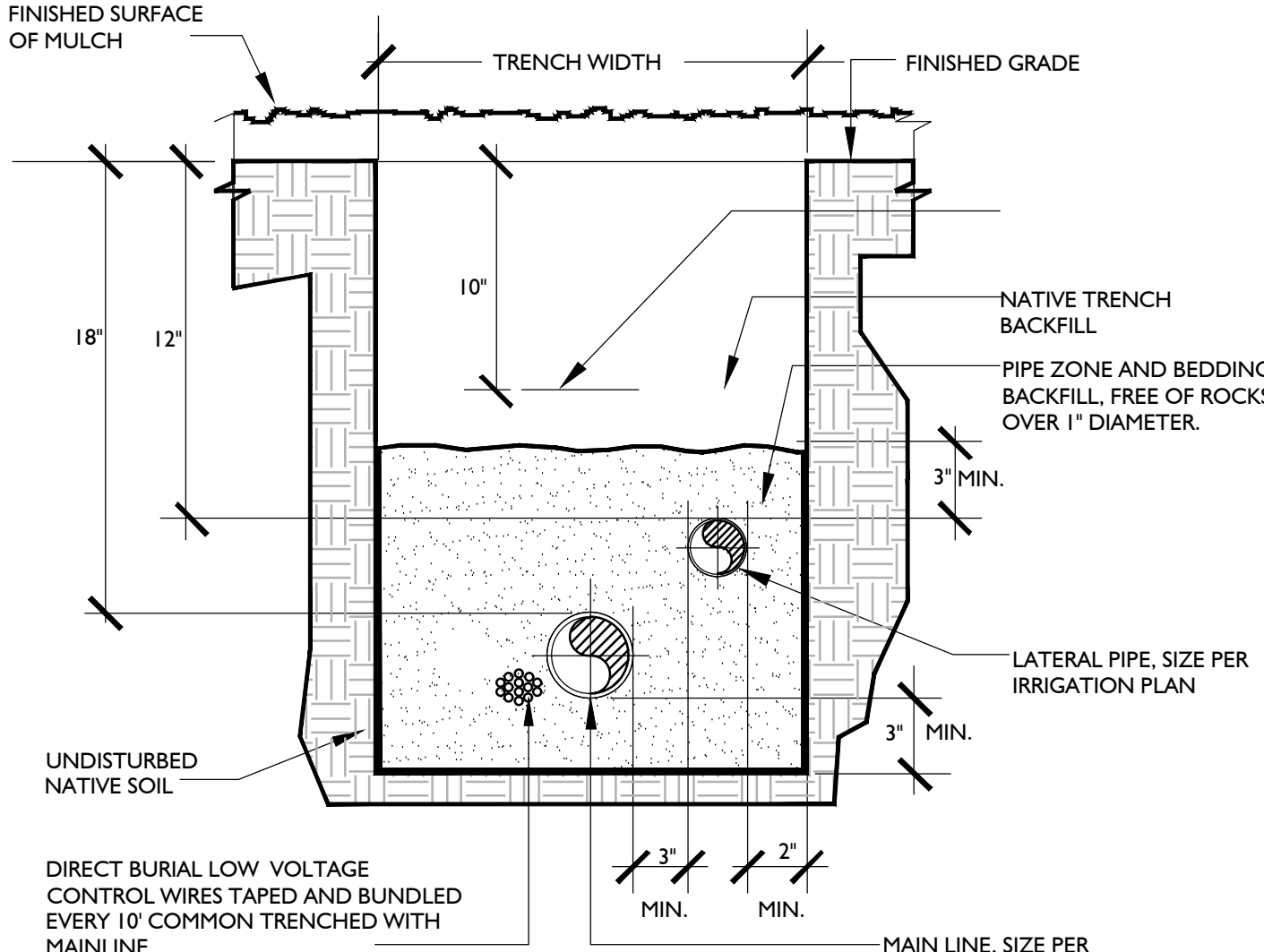
SYMBOL	MODEL NUMBER	DESCRIPTION	PSI	GPM	RADIUS
•	1401	RAINBIRD FLOOD BUBBLER ON RISER FOR SHRUBS	30	0.25	-
•	PEB SERIES TBOS-BT	RAIN BIRD REMOTE CONTROL VALVE. INCLUDE RAINBIRD BATTERY CONTROLLER WITH K80920 LATCHING SOLENOID. NOTE: BATTERY CONTROLLER NOT REQUIRED IF SPARE CONTROL WIRE IS AVAILABLE FROM CONTROLLER AT NEW VALVE LOCATION.			
ICV	EXISTING	EXISTING IRRIGATION REMOTE CONTROL VALVE			
1" 14"		STATION NUMBER			
		GALLONS PER MINUTE			
		VALVE SIZE			
		MAINLINE: SCHEDULE 40 PVC PLASTIC PIPE. FITTINGS SHALL BE SCHEDULE 40 PVC SOLVENT WELD FITTINGS AT CHANGES IN DIRECTION OR BRANCH MAINS, CONNECTIONS BETWEEN MAINLINE AND REMOTE CONTROL VALVES SHALL BE MADE WITH SCHEDULE 80 PVC FITTINGS. PROVIDE FOR A MINIMUM COVERAGE OF 18-INCHES.			
		LATERAL LINE: 1120-SCHEDULE 40 PVC PLASTIC PIPE WITH SCHEDULE 40 PVC SOLVENT WELD FITTINGS. PROVIDE FOR A MINIMUM COVERAGE OF 12-INCHES.			

## SUPPLEMENTAL IRRIGATION NOTES

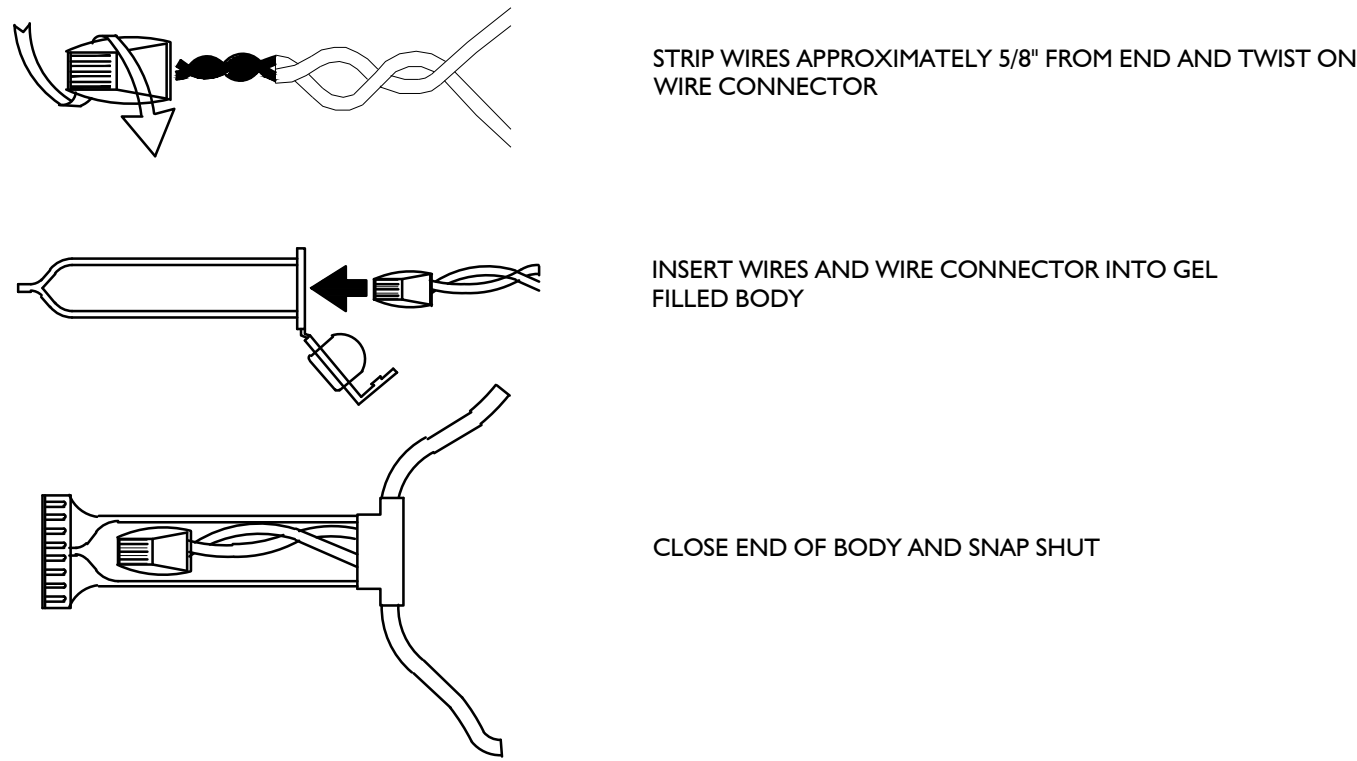
- THESE IRRIGATION DRAWINGS ARE DIAGRAMMATIC AND INDICATIVE OF THE WORK TO BE INSTALLED. ALL PIPING, VALVES, AND OTHER IRRIGATION COMPONENTS MAY BE SHOWN WITHIN PAVED AREAS FOR GRAPHIC CLARITY ONLY AND ARE TO BE INSTALLED WITHIN PLANTING AREAS WHERE FEASIBLE. WHEN INSTALLED WITHIN PAVING AREAS ALL VALVES, SPLICE BOXES, ETC SHALL BE INSTALLED WITHIN A PRECAST CONCRETE BOX, DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, SLEEVES, CONDUIT, AND OTHER ITEMS WHICH MAY BE REQUIRED. INVESTIGATE THE STRUCTURAL AND FINISHED CONDITION AFFECTING THE CONTRACT WORK INCLUDING OBSTRUCTIONS, GRADE DIFFERENCES OR AREA DIMENSIONAL DIFFERENCES. IN THE EVENT OF FIELD DISCREPANCY WITH CONTRACT DOCUMENTS, PLAN THE INSTALLATION WORK ACCORDINGLY BY NOTIFICATION AND APPROVAL OF THE OWNER'S AUTHORIZED REPRESENTATIVE AND ACCORDING TO THE CONTRACT SPECIFICATIONS. NOTIFY AND COORDINATE IRRIGATION CONTRACT WORK WITH APPLICABLE CONTRACTORS FOR THE LOCATION AND INSTALLATION OF PIPE, CONDUIT OR SLEEVES THROUGH OR UNDER WALLS, ROADWAYS, PAVING AND STRUCTURES BEFORE CONSTRUCTION. IN THE EVENT THESE NOTIFICATIONS ARE NOT PERFORMED, THE CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR REQUIRED REVISIONS.
- THE CONTRACTOR SHALL REVIEW RELATED DRAWINGS AND SHALL ENSURE COORDINATION WITH ALL APPLICABLE TRADES PRIOR TO SUBMITTING BID.
- THE IRRIGATION SYSTEM SHALL BE INSTALLED IN CONFORMANCE WITH ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES BY LICENSED CONTRACTORS AND EXPERIENCED WORKMEN. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND FEES RELATING TO HIS WORK.
- UNDERGROUND SERVICE ALERT (USA): FOR EXISTING UTILITY LOCATIONS, CONTRACTOR SHALL NOTIFY USA, 811 OR 800.227.2600 AT LEAST TWO (2) FULL WORKING DAYS PRIOR TO ALL PLANNED WORK OPERATIONS. THE U.S.A. AUTHORIZATION NUMBER SHALL BE KEPT AT THE SITE.
- EXISTING UTILITIES, UNDERGROUND FACILITIES & SITE IMPROVEMENTS: LOCATIONS & ELEVATIONS OF ALL EXISTING UTILITIES (UNDERGROUND & OVERHEAD) & SITE IMPROVEMENTS, IF SHOWN ON THE PLANS, ARE APPROXIMATE ONLY. FIELD VERIFY LOCATION. PROTECT EXISTING UTILITIES & SITE IMPROVEMENTS FROM DAMAGE. CONTRACTOR TO TAKE SPECIAL PRECAUTIONS WHEN WORKING NEAR HIGH RISK UTILITIES.
- CONTRACTOR SHALL CONTACT THE RESPECTIVE UTILITY COMPANY TO OBTAIN INFORMATION REGARDING THE EXACT DEPTH OF BURIAL & HORIZONTAL LOCATION OF UTILITY LINES AS NECESSARY, CONTRACTOR SHALL COORDINATE ALL NECESSARY UTILITY RELOCATIONS & ADJUSTMENTS WITH THE APPROPRIATE UTILITY COMPANIES.
- PRIOR TO PERFORMING UNDERGROUND CONSTRUCTION, THE CONTRACTOR SHALL MAKE THE NECESSARY PROBES TO IDENTIFY AREAS OF POSSIBLE CONFLICT WITH PROPOSED CONSTRUCTION AS CONTRACTOR SHALL EXCAVATE TO DETERMINE TYPES, EXTENT, SIZE, AND DEPTHS OF UNDERGROUND UTILITIES. COORDINATE WORK TO AVOID CONFLICTS BETWEEN PROPOSED IMPROVEMENTS & EXISTING UNDERGROUND FACILITIES, SEWER LATERALS, STORM DRAINS & WATER
- FIELD CHANGES: CONTRACTOR SHALL NOTIFY CITY'S REPRESENTATIVE IMMEDIATELY UPON DISCOVERY OF ANY POTENTIAL FIELD CHANGES. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY FIELD CHANGES MADE WITHOUT WRITTEN AUTHORIZATION FROM THE CITY.
- SITE RESTORATION: CONTRACTOR SHALL REPLACE OR RESTORE TO PRECONSTRUCTION CONDITION ALL PAVING, UTILITIES, SERVICES, IRRIGATION, LANDSCAPE MATERIALS, PAVEMENT DELINEATION & OTHER IMPROVEMENTS, THAT ARE NOT TO BE REMOVED BUT ARE DAMAGED DURING CONSTRUCTION AT NO ADDITIONAL EXPENSE TO THE OWNER.
- CONTRACTOR SHALL NOTE AND INSTALL SLEEVE LOCATIONS AS SHOWN ON IRRIGATION PLANS. IN ADDITION TO THE SLEEVES AND CONDUITS SHOWN ON THE DRAWINGS, THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF SLEEVES AND CONDUITS OF SUFFICIENT SIZE UNDER ALL PAVED AREAS.
- THE IRRIGATION SYSTEM SHALL BE INSTALLED BY A LICENSED CONTRACTOR IN CONFORMANCE WITH ALL APPLICABLE STATE AND LOCAL CODES/ORDINANCES. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND FEES RELATED TO HIS WORK ON THE PROJECT.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FAMILIARIZE HIMSELF WITH GRADE DIFFERENCES AND WITH ALL LOCATIONS OF STRUCTURES, UTILITIES, AND FENCES. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHERS FOR THE LOCATION AND INSTALLATION OF PIPE SLEEVES AND
- IRRIGATION EQUIPMENT NOT OTHERWISE DETAILED OR SPECIFIED SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL PROVIDE THE OWNER WITH AN ACCURATE AS-BUILT SET OF IRRIGATION DRAWINGS PRIOR TO FINAL ACCEPTANCE OF THE WORK. THE AS-BUILT DRAWINGS SHALL BE DELINEATED ON REPRODUCIBLE MATERIALS TO BE SUPPLIED BY THE LANDSCAPE ARCHITECT.
- FOR PLANTS ON A SLOPE, LOCATE SHRUB BUBBLER ON UP-SLOPE OF PLANT.
- INSTALL A VALCON 5000 SERIES SPRING-LOADED CHECK VALVE BELOW THOSE SHRUB BUBBLERS WHERE LOW HEAD DRAINAGE WILL CAUSE EROSION AND/OR EXCESS WATER. USE RWS-M-B-C FOR TREE BUBBLERS WHERE LOW HEAD DRAINAGE WILL CAUSE EROSION AND/OR EXCESS WATER.
- THE IRRIGATION CONTRACTOR SHALL FLUSH AND ADJUST ALL BUBBLER HEADS FOR OPTIMUM PERFORMANCE AND TO PREVENT RUNOFF ONTO WALKS OR ROADWAYS AS MUCH AS POSSIBLE. THROTTLE THE FLOW CONTROL OR ADJUST THE PRESSURE REGULATION MODULE AT EACH VALVE TO OBTAIN THE OPTIMUM OPERATING PRESSURE FOR EACH SYSTEM. ALL MAIN LINES SHALL BE FLUSHED PRIOR TO THE INSTALLATION OF BUBBLERS. AT 30 DAYS AFTER INSTALLATION EACH SYSTEM SHALL BE FLUSHED TO ELIMINATE GLUE AND DIRT PARTICLES FROM THE LINES
- PLASTIC VALVE BOXES ARE TO BE GREEN IN COLOR WITH BOLT DOWN, NON-HINGED COVER MARKED "IRRIGATION". BOX SHALL HAVE KNOCK OUTS. MANUFACTURER SHALL BE CARSON INDUSTRIES. VALVE BOX LIDS SHALL BE HEAT STAMPED OR ENGRAVED IN 1-1/2" LETTERS THE CONTENTS OF THE BOX. (REMOTE CONTROL VALVE NUMBERS (C-5), QUICK COUPLING VALVE (QC), GATE VALVE (GV), MASTER VALVE (MV), FLOW SENSOR (FS), WIRE SPLICE (WS), ETC.)
- THE CONTRACTOR SHALL FLUSH, AND ADJUST ALL HEADS AND VALVES FOR OPTIMUM COVERAGE WHERE APPLICABLE.
- DO NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS, GRADE DIFFERENCES OR DIFFERENCES IN THE AREA DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. SUCH OBSTRUCTIONS OR DIFFERENCES SHOULD BE BROUGHT TO THE ATTENTION OF THE OWNER'S AUTHORIZED REPRESENTATIVE. IN THE EVENT THAT THIS NOTIFICATION IS NOT PERFORMED, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.
- DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, SLEEVES, ETC., WHICH MAY BE REQUIRED. THE CONTRACTOR SHALL CAREFULLY INVESTIGATE THE STRUCTURAL AND FINISHED CONDITIONS AFFECTING ALL OF HIS WORK AND PLAN HIS 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. THEN WORK SHALL BE INSTALLED IN SUCH A MANNER AS TO AVOID CONFLICTS BETWEEN IRRIGATION SYSTEMS, PLANTING, AND ARCHITECTURAL FEATURES.
- OPERATE IRRIGATION CONTROLLER(S) BETWEEN THE HOURS OF 9:00 PM AND 7:00 AM.
- CONTROL WIRES SHALL BE UL APPROVED COPPER SINGLE STRAND TYPE UF DIRECT BURIAL 14 GAUGE RED IN COLOR. COMMON WIRES SHALL BE UL APPROVED COPPER SINGLE STRAND TYPE UF DIRECT BURIAL 1/2 GAUGE WHITE IN COLOR. SPARE CONTROL WIRES SHALL BE UL APPROVED COPPER SINGLE STRAND TYPE UF DIRECT BURIAL 14 GAUGE BLUE IN COLOR.
- REMOTE CONTROL VALVES SHALL BE WIRED TO CONTROLLER IN SEQUENCE AS SHOWN ON PLANS. RUN WIRE FROM EACH RCV TO THE CONTROLLER. SPLICING WIRES TOGETHER OUTSIDE OF VALVE BOXES WILL NOT BE PERMITTED. LEAVE A 36" COIL OF EXCESS WIRE AT EACH SPLICE AND 100 FEET ON CENTER ALONG WIRE RUN. TAPE WIRE IN BUNDLES 10 FEET ON CENTER. NO TAPING PERMITTED INSIDE SLEEVES.
- INSTALL KBI BPC SERIES (OR EQUAL) IN-LINE 5# SPRING CHECK VALVES FOR DRIP BUBBLER AND TREE BUBBLER LATERAL LINES AT EVERY 10' ELEVATION CHANGE OR AS NEEDED TO PREVENT LOW HEAD DRAINAGE. KBI KSC SERIES (OR EQUAL) SOLVENT WELD SWING CHECK VALVES CAN BE USED IN LATERAL LINES TO ISOLATE WATER FROM REVERSE FLOW WHERE NEEDED AT SLOPES TO PREVENT LOW HEAD DRAINAGE.
- MAINTAIN 6" MINIMUM CLEARANCE BETWEEN SOLVENT WELD FITTINGS ON IRRIGATION MAINLINE AND LATERAL LINE PIPES. MAINTAIN MINIMUM 10' CLEARANCE BETWEEN POTABLE AND CONSTANT PRESSURE RECYCLED WATER MAINLINES LINES. MAINTAIN MINIMUM 3' CLEARANCE BETWEEN CONSTANT PRESSURE RECYCLED WATER MAINLINE AND PG&E FACILITIES PER PG&E UO STANDARD S5453.
- WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES, THE CONTRACTOR SHALL USE ALL POSSIBLE CARE TO AVOID INJURY TO TREES, AND TREE ROOTS. EXCAVATION IN AREAS WHERE TWO (2) INCH AND LARGER ROOTS OCCUR SHALL BE DONE BY HAND. ROOTS TWO (2) INCHES AND LARGER IN DIAMETER SHALL BE WRAPPED IN BURLAP UNTIL BACKFILLED. TRENCHES ADJACENT TO TREE SHOULD BE CLOSED WITHIN TWENTY-FOUR (24) HOURS; WHERE THIS IS NOT POSSIBLE, THE SIDE OF THE TRENCH ADJACENT TO THE TREE SHALL BE KEPT SHADED WITH BURLAP OR CANVAS.
- THE IRRIGATION SYSTEM DESIGN IS BASED ON THE MINIMUM OPERATING PRESSURE SHOWN ON THE IRRIGATION DRAWINGS. THE IRRIGATION CONTRACTOR SHALL VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. REPORT ANY DIFFERENCE BETWEEN THE WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION TO THE OWNER'S AUTHORIZED REPRESENTATIVE.
- WHEN VERTICAL OBSTRUCTIONS (STREET LIGHTS, TREES, FIRE HYDRANTS, ETC.) INTERFERE WITH INSTALLATION OF THE BUBBLERS, THE IRRIGATION CONTRACTOR SHALL FIELD ADJUST THE SYSTEM BY ROUTING AROUND THE SIDES OF THE OBSTRUCTION SO AS TO PROVIDE PROPER COVERAGE. ALL ADJUSTMENTS SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.
- THE DESIGN INTENT OF THE IRRIGATION SYSTEM IS TO PROVIDE COMPLETE COVERAGE WITH NO RUN-OFF ONTO WALKWAYS AND PAVEMENT. ADJUST IRRIGATION TO CONTAIN BUBBLERS WITHIN PLANTING AREAS AND PREVENT RUN OFF OUTSIDE OF LANDSCAPE AREAS.
- CONTRACTOR SHALL PROVIDE MONTHLY SCHEDULE FOR ESTABLISHMENT PERIOD & FOLLOWING YEAR. LANDSCAPE AND IRRIGATION MAINTENANCE SCHEDULE, IRRIGATION AUDIT, IRRIGATION SURVEY, AND IRRIGATION WATER USE ANALYSIS SHALL BE SUBMITTED WITH THE CERTIFICATE OF COMPLETION IN COMPLIANCE WITH STATE OF CALIFORNIA MODEL WATER EFFICIENT. CONTRACTOR SHALL INPUT ALL REQUIRED DATA INTO CONTROLLERS TO ALLOW SELF SCHEDULING INCLUSIVE OF PLANT SPECIES, PLANT WATER REQUIREMENTS, EXPOSURE, SOIL TYPE, SLOPE, IRRIGATION TYPE AND IRRIGATION EFFICIENCY.



3 SHRUB BUBBLER INSTALLATION  
NTS



4 TYPICAL COMBINATION TRENCH  
NTS



5 3M-DBR/Y-6 WIRE CONNECTION  
NTS

**SR** SAN RAFAEL  
CITY SCHOOLS

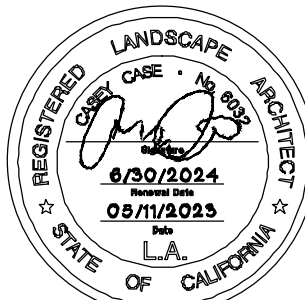
Revisions

## AGENCY APPROVAL

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Architect/Engineer Of Record: CASEY CASE



GATES ASSOCIATES Project number: 6142

Facility  
SAN RAFAEL HIGH SCHOOL

Project  
STORM DRAIN  
IMPROVEMENTS

Sheet Title  
IRRIGATION NOTES,  
LEGEND AND DETAILS

Client Project Number:

Scale:

Drawn By: DSS

Checked By: MO

Issue Date: 05/12/2023

Revit Version: 2019

Sheet

L2.2

Sheet 4 of



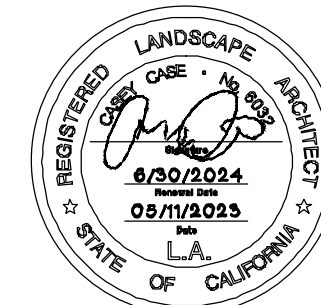
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Facility  
SAN RAFAEL HIGH SCHOOL

Project  
STORM DRAIN  
IMPROVEMENTS

Sheet Title  
CONSTRUCTION  
DETAILS

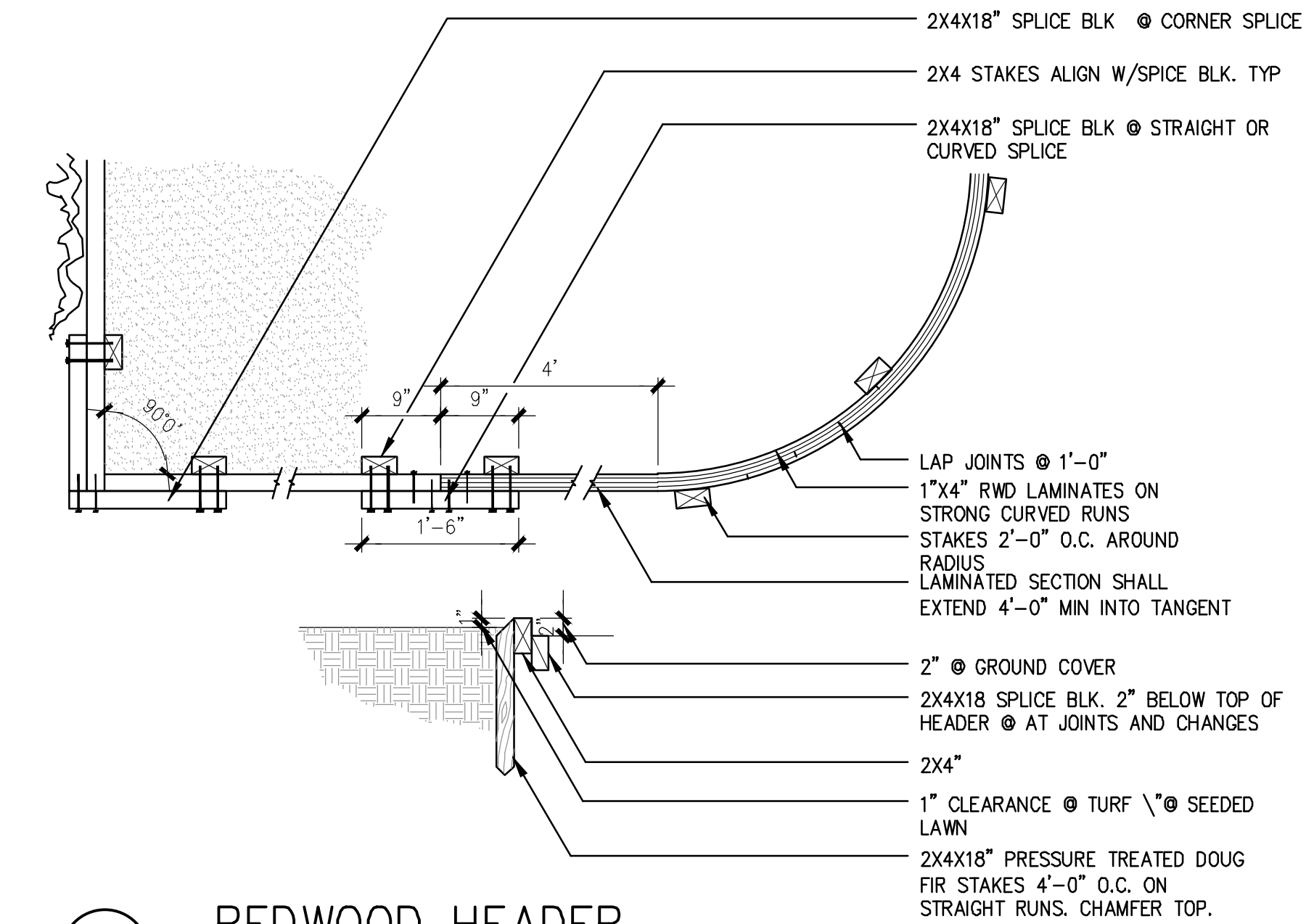
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Revit Version: 2019

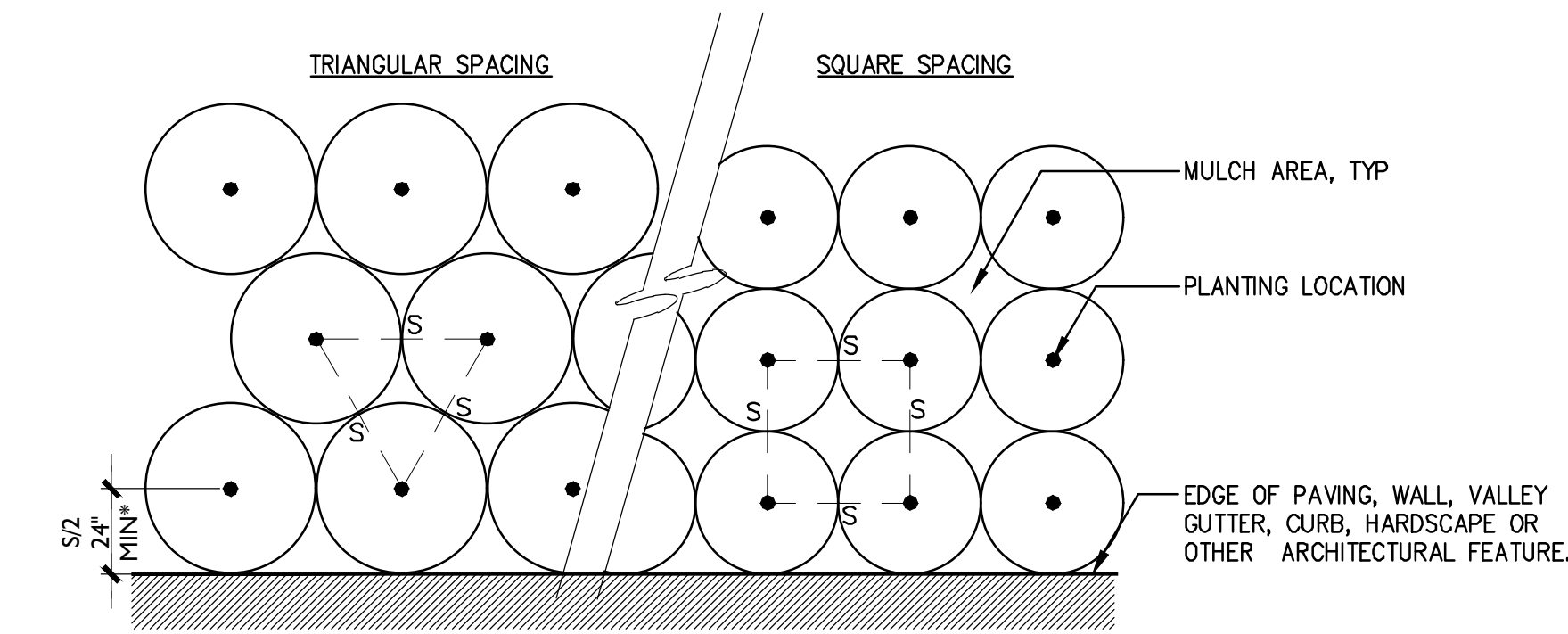
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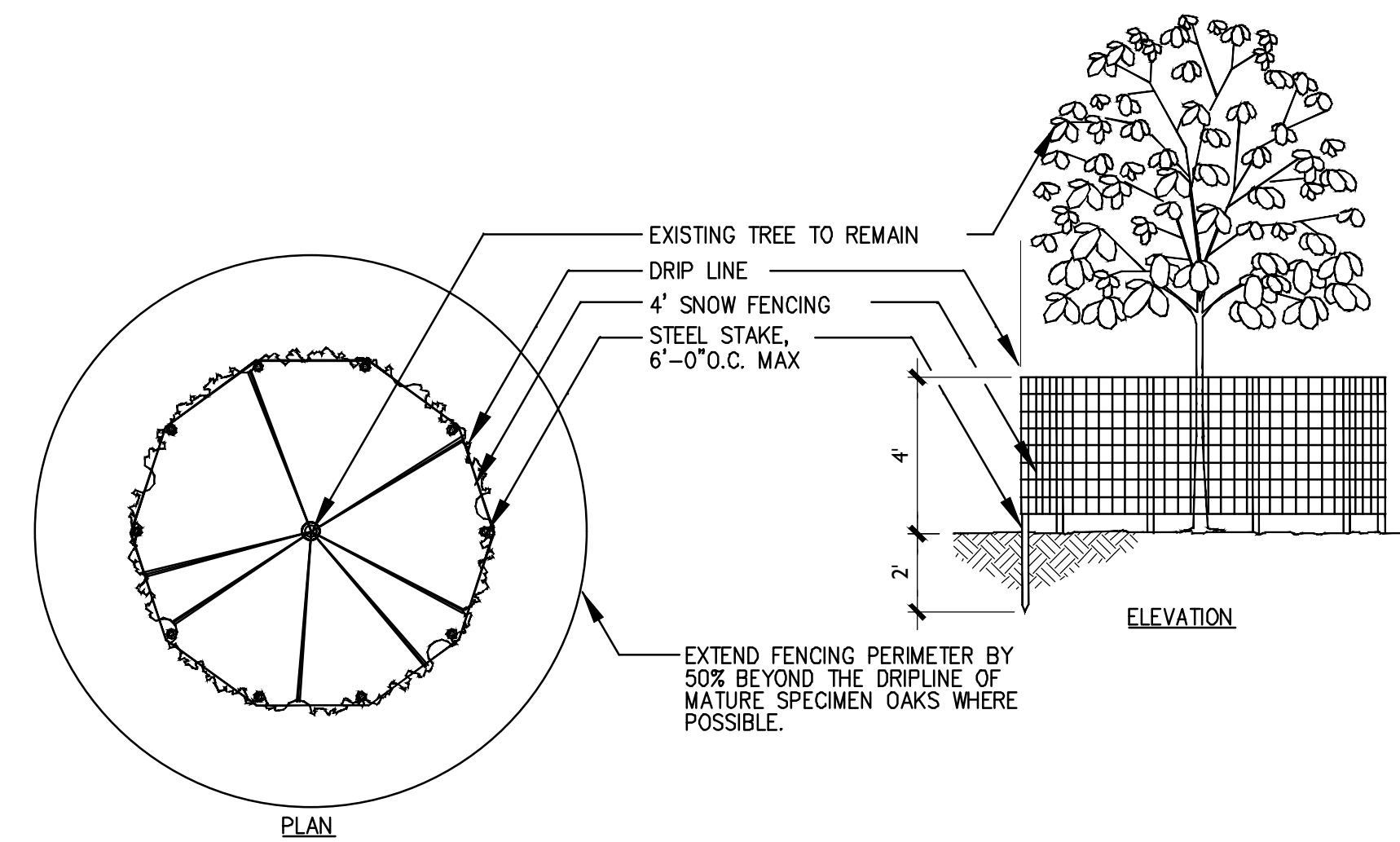
3 REDWOOD HEADER  
SCALE: 3/4" = 1'-0"



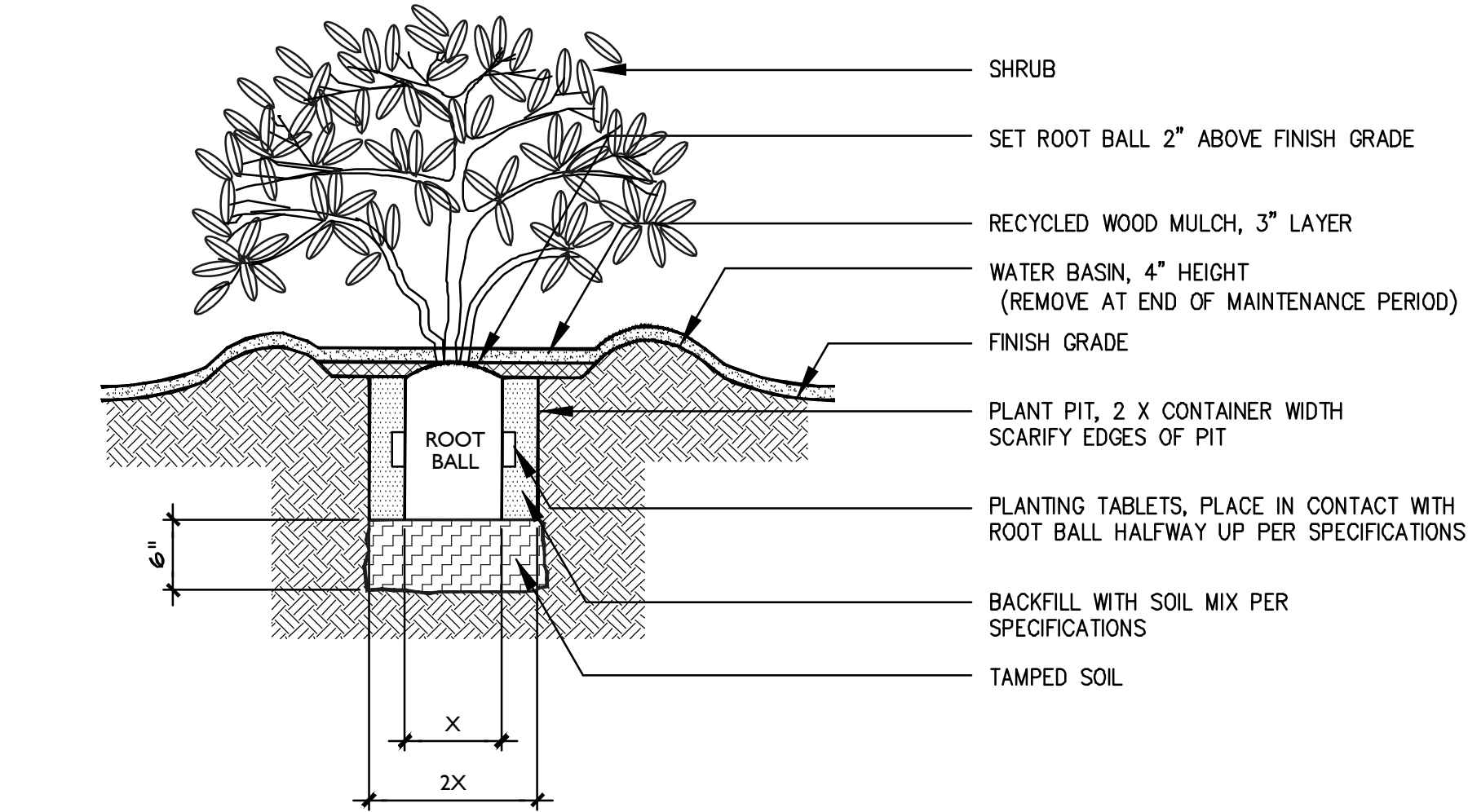
NOTES:  
A. S = PLANT SPACING DISTANCE ON CENTER, SEE CHART  
B. FOR USE AS A GUIDE FOR SHRUBS AND GROUNDCOVER WHEN PLANTS ARE SPACED EQUIDISTANT FROM EACH OTHER.  
\*AT ALL SHRUB AND GROUNDCOVER LOCATIONS WHERE SPRAY IRRIGATION IS USED. HOLD PLANTING 24" CLEAR OF CURB LINE IN CONJUNCTION WITH IRRIGATION PER AB 1881.

Plant Quantity Chart	
Spacing	# of Plants/S.F.
6" o.c.	4.60
8" o.c.	2.60
12" o.c.	1.15
18" o.c.	.512
24" o.c.	.290
30" o.c.	.185
36" o.c.	.128
42" o.c.	.087
48" o.c.	.063

2 PLANT SPACING  
SCALE: 1" = 1'-0"



4 EXISTING TREE PROTECTIVE FENCING  
SCALE: 1/4" = 1'-0"



1 SHRUB PLANTING  
SCALE: N.T.S.