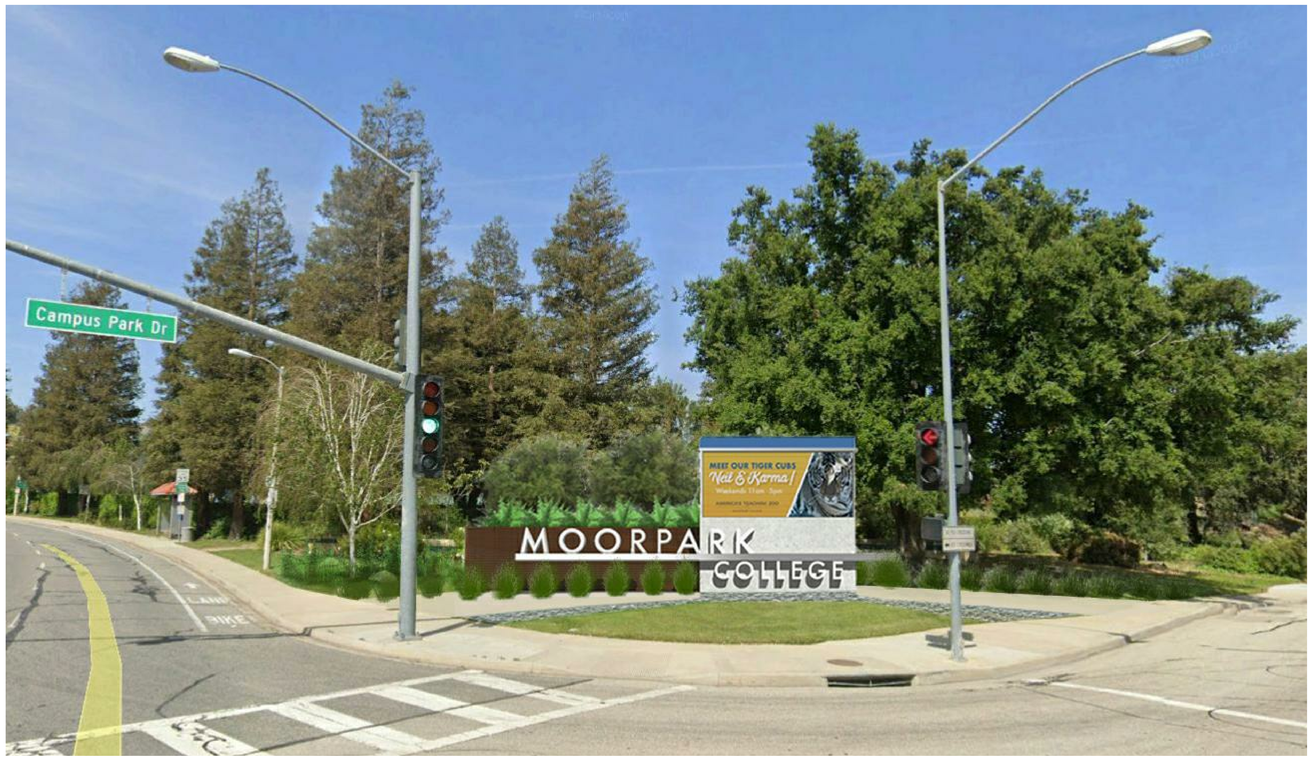
MOORPARK COLLEGE MAIN ENTRY SIGN

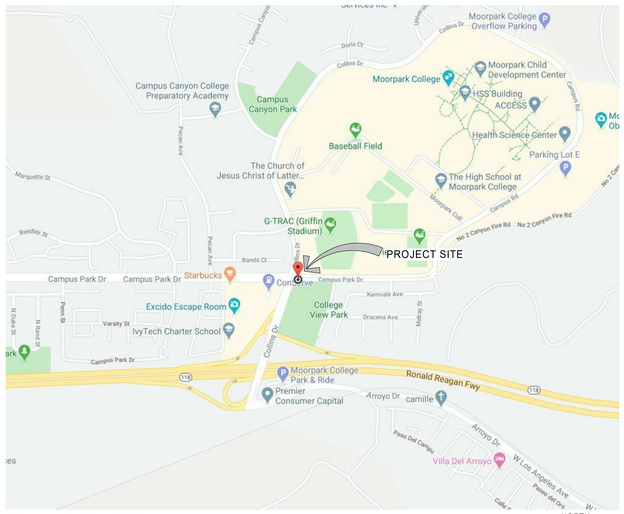
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT

NEW SIGN RENDERING



AERAIL VIEW

VICINITY MAP



COURTESY OF GOOGLE MAPS ©

NORTH

NOT TO SCALE

AGENCY REVIEW

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 03-120493 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 06/30/2020

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CLIENT NAME
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT

PROJECT NAME
MOORPARK COLLEGE MAIN ENTRY SIGN
7075 CAMPUS ROAD, MOORPARK, CA 93021

CONSULTANT

DSA A# 03-120493

SEAL

ISSUE FOR
DSA RESUBMITTAL

ISSUE DATE
04/17/2020

REVISIONS

NO.	REASON	DATE

PROJECT TEAM
PRINCIPAL IN CHARGE
RITA CARTER
PROJECT MANAGER
EMAN BERMANI
DESIGN TEAM
JEFF HATFIELD

PROJECT NAME
MOORPARK COLLEGE MAIN ENTRY SIGN

PROJECT NO.
613696000

SHEET TITLE
COVER SHEET

SHEET NUMBER
G000

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APPLICABLE STATE CODES

1. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH:

   2019 CALIFORNIA ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R.

   2019 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R.
   (2018 INTERNATIONAL BUILDING CODE VOLUMES 1 & 2 AND 2013 CALIFORNIA AMENDMENTS)

   2019 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R.
   (2018 NATIONAL ELECTRICAL CODE AND 2019 CALIFORNIA AMENDMENTS)

   2019 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R.
   (2018 UNIFORM PLUMBING CODE AND 2019 CALIFORNIA AMENDMENTS)

   2019 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 C.C.R.

2. ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH THE REQUIREMENTS OF THESE CODES AND ALL APPLICABLE LOCAL ORDINANCES. WHERE CONTRACT DOCUMENTS EXCEED SUCH REQUIREMENTS, WITHOUT VIOLATING SUCH CODES, REGULATIONS AND ORDINANCES, CONTRACT DOCUMENTS TAKE PRECEDENCE. WHERE CODES CONFLICT, THE MORE STRINGENT SHALL APPLY.

3. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.

DSA REQUIREMENTS

CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM OR A CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY THE DIVISION OF THE STATE ARCHITECT (DSA), AS REQUIRED BY SEC. 4-338, PART 1, TITLE 24, CCR.

THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CCR. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CCR, A CONSTRUCTION CHANGE DOCUMENT (CCD) , OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK. [SEC. 4-317(c), PART 1, TITLE 24, CCR]

PROJECT INSPECTOR

A DIVISION OF THE STATE ARCHITECT (DSA) CERTIFIED PROJECT INSPECTOR EMPLOYED BY THE DISTRICT AND APPROVED BY DSA SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK.

DUTIES AND REQUIRED IOR CLASSIFICATION PER SECTION 4-342, TITLE 24, PART 1 CCR AND IR A-7: CLASS 3 INSPECTOR CERTIFIED BY DSA.

A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.

SCOPE OF WORK

WORK UNDER THIS CONTRACT INCLUDES THE FOLLOWING ITEMS SHOWN ON THE DRAWINGS AND AS SPECIFIED IN THE PROJECT MANUAL, INCLUDING:

1. DEMOLITION OF EXISTING MONUMENT SIGN AND ASSOCIATED UTILITIES;
2. REMOVAL OF EXISTING LANDSCAPING IN VICINITY OF MONUMENT SIGN;
3. CONSTRUCTION OF NEW MONUMENT SIGN WITH ELECTRONIC DISPLAY PANEL AND REQUIRED ELECTRICAL AND DATA SYSTEMS; AND
4. INSTALLATION OF NEW LANDSCAPING AND IRRIGATION IN VICINITY OF MONUMENT SIGN.

GENERAL NOTES

1. DURING THE ENTIRE CONSTRUCTION PERIOD, IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN CONDITIONS AT THE PROJECT SITE, TO MEET THE REQUIREMENTS OF THE FEDERAL OCCUPATIONAL SAFETY AND DIVISION OF THE STATE ARCHITECT (DSA) AND CALIFORNIA OCCUPATIONAL REGULATIONS . THIS PROVISION SHALL COVER THE CONTRACTOR'S EMPLOYEES AND ALL OTHER PERSONS WORKING UPON OR VISITING THE SITE. THE CONTRACTOR SHALL BECOME FULLY INFORMED OF ALL APPLICABLE STANDARDS AND REGULATIONS AND INFORM ALL PERSONS AND REPRESENTATIVES RESPONSIBLE FOR WORK UNDER THIS CONTRACT.
2. CONTRACTOR TO VERIFY ALL EXISTING ELEMENTS, WHETHER THEY ARE TO REMAIN, BE REMOVED, OR RELOCATED, ARE IN THE LOCATION AND IN THE CONDITION THAT THESE CONSTRUCTION DOCUMENTS AND ALL REFERENCED DRAWINGS REPRESENT.CONFIRM ALL EXISTING CONDITIONS WITH THE CONTRACT DOCUMENTS. NOTIFY ARCHITECT IMMEDIATELY IN WRITING OF ALL DISCREPANCIES OR CONFLICTS. DO NOT PROCEED WITH WORK IN THE AREA OF DISCREPANCY OR CONFLICT UNTIL DIRECTION IS GIVEN BY ARCHITECT. IF CONTRACTOR PROCEEDS WITHOUT DIRECTION FROM ARCHITECT, IT SHALL BE AT CONTRACTORS RISK, AND CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED CORRECTIVE ACTION.CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDUM OR A CHANGE ORDER APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338.
3. REVIEW THE ARCHITECTURAL DRAWINGS BEFORE THE INSTALLATION OF SYSTEMS SHOWN ON CONSULTING ENGINEERS DOCUMENTS. DISCREPANCIES BETWEEN THE ARCHITECTURAL AND CONSULTING ENGINEER'S DOCUMENTS SHALL BE BROUGHT TO ARCHITECT'S ATTENTION FOR DIRECTION. CONSTRUCTION INSTALLED IN CONFLICT WITH THE ARCHITECTURAL DRAWINGS SHALL BE CORRECTED BY CONTRACTOR AT NO EXPENSE TO THE OWNER.
4. DO NOT SCALE THE CONSTRUCTION DOCUMENTS. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED GRAPHICS. NOTIFY ARCHITECT IMMEDIATELY IN WRITING OF ALL ADDITIONAL REQUIRED DIMENSIONS. DO NOT PROCEED WITH WORK IN THE AREA OF DISCREPANCY OR CONFLICT UNTIL DIRECTION IS GIVEN BY ARCHITECT. IF THE CONTRACTOR PROCEEDS WITHOUT DIRECTION FROM ARCHITECT, IT SHALL BE AT CONTRACTORS RISK, AND CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED CORRECTIVE ACTION.
5. CORRECT ALL WORK INSTALLED IN CONFLICT WITH THE CONSTRUCTION DOCUMENTS BY CONTRACTOR AS DIRECTED BY ARCHITECT AND AT NO ADDITIONAL EXPENSE TO THE OWNER.
6. VISIT JOB SITE PRIOR TO BEGINNING WORK AND VERIFY ALL DIMENSIONS AND CONDITIONS.
7. SECURE AND PAY FOR ALL PERMITS, GOVERNMENTAL FEES AND LICENSES REQUIRED FOR PROPER COMPLETION OF THE WORK. REQUEST ALL INSPECTIONS REQUIRED BY LOCAL GOVERNMENTAL AGENCIES AND COORDINATE THE WORK ACCORDINGLY.
8. WHERE WORK OR EQUIPMENT IS INDICATED "N.I.C." (NOT IN CONTRACT) OR "BY OTHERS" ON THE DRAWINGS, SHALL BE PROVIDED BY OWNER OR UNDER SEPARATE CONTRACT. CONTRACTOR SHALL COORDINATE AND COOPERATE TO EFFECT SUCH INSTALLATION.
9. DIMENSIONS ARE NOT ADJUSTABLE WITHOUT THE REVIEW OF ARCHITECT UNLESS NOTED (+/-) OR "VERIFY". ALL OTHER DIMENSIONS NOTED SHALL BE CONSIDERED AS ABSOLUTE AND USED FOR LAY-OUT CONTROL UNLESS OTHERWISE DIRECTED BY ARCHITECT.
10. "TYPICAL" MEANS COMPARABLE CHARACTERISTICS FOR THE ELEVATION OR DETAIL NOTED. WHEN A DETAIL OR NOTE IS IDENTIFIED AS "TYPICAL", CONTRACTOR SHALL APPLY THIS DETAIL OR NOTE TO EVERY LIKE CONDITION, WHETHER OR NOT THE REFERENCE IS REPEATED IN EVERY INSTANCE. VERIFY DIMENSIONS AND ORIENTATION ON PLANS.
11. PROVIDE WORK NOT SPECIFICALLY DETAILED OR SPECIFIED IN ACCORDANCE WITH DETAILS OR SIZES COVERING SIMILAR WORK.
12. "SIMILAR" MEANS COMPARABLE CHARACTERISTICS FOR THE ELEVATION OR DETAIL NOTED VERIFY DIMENSIONS AND ORIENTATION ON PLANS.
13. REFER TO THE PROJECT MANUAL FOR GENERAL CONDITIONS, SUPPLEMENTARY AND SPECIAL CONDITIONS, AND OTHER REQUIREMENTS.
14. THE CONTRACTOR SHALL PROVIDE AND INSTALL TEMPORARY PEDESTRIAN PROTECTION AS REQUIRED BY LOCAL CODE AND SPECIFICATION. PROVIDE BARRICADES AND PROTECTIVE DEVICES SEPARATING CONSTRUCTION AREAS PRIOR TO DELIVERY OF MATERIALS TO CONSTRUCTION ZONE AND REMOVAL OF WASTE FROM SITE, CHECK WITH THE SCHOOL DISTRICT FOR ACCEPTABLE ACCESS ROUTE AND TIME UNDER NO CIRCUMSTANCES SHOULD THE CONTRACTOR USE AREAS OUTSIDE THE CONSTRUCTION ZONE WITHOUT PRIOR CLEARANCE FROM THE SCHOOL DISTRICT. COMPLY WITH REQUIREMENTS AS SPECIFIED IN THE PROJECT MANUAL.
15. PROVIDE FOR THE PROPER SEQUENCE OF CONSTRUCTION, LOCATION AND SIZE OF OPENINGS. COORDINATE ALL CONSTRUCTION AS INDICATED BY THE CONTRACT DOCUMENTS, INCLUDING SHOP DRAWINGS REVIEWED AND APPROVED BY THE ARCHITECT.
16. TAKE ALL MEASURES TO ACCOMPLISH THE WORK WITH THE MINIMUM OF INTERRUPTION TO NORMAL SCHOOL PROCEDURES. NOTIFY OWNER IN ADVANCE OF ANY SYSTEM SHUT-OFFS. MINIMIZE NOISE AND DUST GENERATION TO MAXIMUM EXTENT POSSIBLE. COMPLY WITH REQUIREMENTS AS SPECIFIED IN THE PROJECT MANUAL.
17. REMOVE ALL TRASH AND DEBRIS DAILY. DO NOT STORE BUILDING MATERIALS IN WALKWAYS AT ANY TIME. COMPLY WITH REQUIREMENTS AS SPECIFIED IN THE PROJECT MANUAL.
18. PERFORM ALL CUTTING, PATCHING, AND FINISHING NECESSARY TO RESTORE THE SITE TO ORIGINAL CONDITION OF ALL EXISTING PORTIONS AFFECTED BY THE CONTRACTOR'S WORK, TO THE SATISFACTION OF THE ARCHITECT AND OWNER.
19. VERIFY POINTS OF CONNECTION, INCLUDING SIZES AND LOCATIONS, AND ALL OTHER REQUIRED OPERATING CRITERIA WITH MATERIAL MANUFACTURERS.
20. CONTRACTOR SHALL STIPULATE THAT ALL PROPOSED SUBSTITUTIONS ARE EQUAL IN PERFORMANCE AND COMPLY WITH APPLICABLE CODES AND REGULATIONS. CONTRACTOR'S SUBSTITUTION OF ALTERNATE MATERIALS OR SYSTEMS SHALL BE AT NO ADDITIONAL COST TO THE OWNER.
21. CONTRACTOR SHALL INSURE ALL CONSTRUCTION SHALL REMAIN ACCESSIBLE AND EXPOSED FOR INSPECTION PURPOSES UNTIL APPROVED BY THE INSPECTOR OF RECORD. FOR CONTINUOUS INSPECTION, TESTING, AND OBSERVATION REQUIREMENTS, REFER TO THE TESTING AND OBSERVATION PROGRAM.
22. PROTECTION DURING WELDING: THE CONTRACTOR SHALL CONFORM TO TITLE 8, CCR. FURTHER PROTECT OCCUPANTS AND THE PUBLIC WITH PORTABLE SOLID VISION BARRICADES AROUND LOCATIONS WHERE WELDING IS BEING PERFORMED, AND PROVIDE SIGNS WARNING AGAINST LOOKING AT WELDING WITHOUT PROPER EYE PROTECTION OR EQUIVALENT. SEE 2016 CFC FOR REQUIREMENTS FOR ON SITE WELDING.
23. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE SCHOOL DISTRICT SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
24. IPE WOOD CONSTRUCTION NOTES:
25. SHALL BE STANDARD F.A.S. GRADE IPE LUMBER, NO PRE-GROOVED OR TOUNGE AND GROOVE WILL BE ACCEPTED.
26. ALL IPE SHALL BE DELIVERED TO THE SITE AND ALLOWED TO ACCLIMATE IN A FLAT, DRY STACK W/ SPACERS, ELEVATED OFF THE GROUND AT LEAST 12" TILL ALL LUMBER HAS A MOISTURE CONTENT LESS THAN 12%. SEPARATE PLANKS WITH WOODEN SHIMS. SHALL BE COVERED WITH AN ADDITIONAL LAYER OF PLYWOOD DURING THE ACCLIMATION PROCESS.
27. IPE SHALL BE KEPT DRY UNTIL IT'S INSTALLED.
28. IPE SHALL NOT BE STORED IN AN ENCLOSED SPACE.
29. PRE-DRILL HOLES TO ENSURE PROPER ANGLE AND AVOID ALL CRACKING AND FISSURES.
30. IT IS RECOMMENDED THE CONTRACTOR USE BRAD POINT OR FOSTNER DRILL BITS FOR CLEANER HOLES.
31. USE #8 STAINLESS STEEL SELF-TAPPING SCREWS TO ATTACH IPE BOARDS TO ANGLE CLIPS.
32. APPLY SEAL AFTER ALL FRESH CUTS WITH AN END-GRAIN SEALER. IF END SEALANT TOUCHES THE FACE OF THE BOARD, WIPE CLEAN IMMEDIATELY.
33. USE ONLY A PREMIUM CARBIDE TIPPED SAW BLADE.
34. AFTER ACCLIMATION, ALL SIDES OF EACH IPE BOARD SHALL BE SEALED PRIOR TO INSTALLATION. SEALANT SHALL BE MESSMERS U.V. SEAL OR APPROVED EQUAL. SUBMIT TO ARCHITECT FOR REVIEW AND APPROVAL.
35. APPLY TWO COATS MINIMUM OF SEALER BY HAND WITH A BRUSH USING LIBERAL AMOUNTS OF SEALER, STIRRING THE MIXTURE OFTEN THROUGHOUT.
36. CONTRACTOR SHALL SUBMIT SCALED SHOP DRAWINGS FOR ALL FENCE, GATE, AND WALL PANELS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
37. SHOP DRAWINGS SHALL BE BASED ON ACTUAL BUILT DIMENSIONS OF SIGN AND PLANTER WALL. VERIFY IN THE FIELD PRIOR TO SUBMITTING SHOPS FOR REVIEW.
38. SHOP FABRICATE WHERE POSSIBLE TO LIMIT FIELD WELDING. ALL FIELD WELDS SHALL BE TREATED WITH TWO COATS OF ZINC RICH PRIMER.
39. GRIND SMOOTH ALL WELDS, TYP.

PROJECT DIRECTORY

PROJECT
MOORPARK COLLEGE MAIN ENTRY SIGN
705 CAMPUS ROAD,
MOORPARK, CA 93021

OWNER
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT
761 EAST DAILY DRIVE,
CAMARILLO, CA 93010
(805) 652-5500

ARCHITECT
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1300 DOVE STREET, SUITE 100
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STRUCTURAL
LITTLE DIVERSIFIED ARCHITECTURAL CONSULTING
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ELECTRICAL
LUCCI & ASSOCIATES, INC.
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CAMARILLO, CA 93012
(805) 389-6520

CIVIL
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NEWPORT BEACH, CA 92660
(949) 698-1400

LANDSCAPE
LITTLE DIVERSIFIED ARCHITECTURAL CONSULTING
1300 DOVE STREET, SUITE 100
NEWPORT BEACH, CA 92660
(949) 698-1488

DEMOLITION AND CONSTRUCTION NOTES

1. VERIFY ALL EXISTING CONDITIONS INCLUDING BUT NOT LIMITED TO, PLUMBING, IRRIGATION, ELECTRICAL AND ALL OTHER EXISTING SYSTEMS. MAKE NECESSARY PROVISIONS TO MAINTAIN THE INTEGRITY OF EXISTING SYSTEMS PRIOR TO THE COMMENCEMENT OF ANY DEMOLITION.
2. REFER TO DOCUMENTS PREPARED BY CONSULTING ENGINEERS FOR INFORMATION REGARDING THE REMOVAL OF EXISTING CONDITIONS.
3. COMPLY WITH ANSI A10.6 "SAFETY REQUIREMENTS FOR DEMOLITION" PUBLISHED BY THE AMERICAN NATIONAL STANDARDS INSTITUTE.

TRENCHING NOTES

1. PROTECT ALL UNDERGROUND UTILITIES IN PLACE.
2. NOTICE REGARDING EXISTING UTILITIES:
   THE EXISTENCE AND LOCATION OF ANY AND ALL CONDUITS, UTILITY PIPES, AND STRUCTURES SHOWN ON THIS SET OF PLANS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS AT THE TIME OF DESIGN. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT ANY AND ALL UTILITY LINES SHOWN ON THIS SET OF PLANS. THE CONTRACTOR FURTHER ASSUMES ANY AND ALL LIABILITY AND RESPONSIBILITY FOR THE CONDUITS, UTILITY PIPES, AND STRUCTURES SHOWN ON THIS SET OF DRAWINGS. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT. THIS STIPULATION INCLUDES THE SAFETY OF ANY AND ALL PERSONS AND PROPERTY. THE CONTRACTOR SHALL FURTHER DEFEND, IMDEMNIFY, AND HOLD THE OWNER AND ARCHITECT HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, WITH THE EXCEPTION OF LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ARCHITECT.

SHEET INDEX

TOTAL SHEET COUNT□ 26

AGENCY REVIEW

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PROJECT NAME
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7075 CAMPUS ROAD, MOORPARK, CA 93021

CONSULTANT
DSA A# 03-120493

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DSA A# 03-120493

ISSUE DATE
04/17/2020

REVISIONS

NO.	REASON	DATE

PROJECT TEAM
PRINCIPAL IN CHARGE
RITA CARTER
PROJECT MANAGER
EMAN BERMANI
DESIGN TEAM
JEFF HATFIELD

PROJECT NAME
MOORPARK COLLEGE MAIN ENTRY SIGN

PROJECT NO.
613696000

SHEET TITLE
GENERAL INFORMATION AND SHEET INDEX

SHEET NUMBER
G001

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GENERAL NOTES

1. WORK SHALL BE PERFORMED ACCORDING TO THE LATEST EDITIONS OF THE STANDARD SPECIFICATIONS AND PLANS FOR PUBLIC WORKS CONSTRUCTION (GREEN BOOK & S.P.P.W.C), THE LATEST EDITION OF CALIFORNIA BUILDING CODE AND CITY OF MOORPARK BUILDING CODE REQUIREMENTS.
2. NO WORK SHALL BE STARTED WITHOUT A PRE-CONSTRUCTION MEETING WITH THE OWNER AND INSPECTOR.
3. THE CONTRACTOR SHALL PROVIDE FOR CONTRIBUTORY DRAINAGE AT ALL TIMES AND TAKE ALL NECESSARY AND PROPER PRECAUTIONS TO PROTECT ADJACENT PROPERTIES AND IMPROVEMENTS FROM ANY AND ALL DAMAGE THAT MAY OCCUR FROM STORM WATER RUNOFF AND/OR DEPOSITION OF DEBRIS RESULTING FROM ANY AND ALL WORK.
4. NO REVISIONS SHALL BE MADE TO THESE PLANS WITHOUT THE APPROVAL OF THE CIVIL ENGINEER.
5. IMPORTANT NOTICE – SECTION 4216/4217 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE ANY "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG ALERT I.D. NUMBER, CALL UNDERGROUND SERVICE ALERT TOLL FREE @ 1-800-422-4133, TWO WORKING DAYS BEFORE YOU DIG.
6. ANY IMPROVEMENT(S) TO BE CONSTRUCTED WITHIN PUBLIC RIGHT-OF-WAY WILL REQUIRE SEPARATE CONSTRUCTION PERMIT AND INSPECTION FROM THE GOVERNING AGENCY(IES). CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL APPLICABLE PERMITS AND PAYING ANY REQUIRED FEES.
7. FILLS SHALL BE COMPACTED THROUGHOUT TO AT LEAST 90% OF MAXIMUM DRY DENSITY AS DETERMINED BY A.S.T.M. SOIL COMPACTION TEST D 1557.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING ALL GRADE STAKES UNTIL AUTHORIZED BY SURVEYOR TO REMOVE.
9. CONTRACTOR SHALL RESTORE LIKE FOR LIKE, TO THE SATISFACTION OF THE OWNER/ARCHITECT, ALL AREAS DAMAGED OR DISTURBED AS A RESULT OF WORK PERFORMED PURSUANT TO THESE PLANS AT HIS/HERS OWN EXPENSE.
10. FIELD DENSITY MAY BE DETERMINED BY THE NUCLEAR DENSITY METHOD A.S.T.M. D2922 & D3017 PROVIDED NOT LESS THAN 10% OF THE REQUIRED DENSITY TESTS UNIFORMLY DISTRIBUTED ARE BY THE SAND-CONE METHOD. THE METHOD OF DETERMINING FIELD DENSITY AND LOCATION AND APPROXIMATE ELEVATION SHALL BE SHOWN IN THE COMPACTION REPORT. OTHER METHODS MAY BE USED IF RECOMMENDED BY THE SOILS ENGINEER AND APPROVED IN ADVANCE BY THE CITY ENGINEER.
11. CRUSHED AGGREGATE BASE MATERIAL SHALL CONFORM TO SUBSECTION 200-2.2 OF STANDARD SPECIFICATIONS AND SHALL BE COMPACTED TO 95% RELATIVE COMPACTION USING MECHANICAL COMPACTING EQUIPMENT.
12. NEW CONCRETE SHALL BE CLASS 520-C-3250 (310-C-17) CONFORMING WITH S.S.P.W.C. 201-1.1.2.(UNLESS NOTED OTHERWISE)
13. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES WHETHER SHOWN OR NOT SHOWN ON THESE DRAWINGS. THE CONTRACTOR FURTHER ASSUMES ALL LIABLITY AND RESPONSIBILITY FOR THE UTILITY PIPES, CONDUITS, OR STRUCTURES SHOWN OR NOT SHOWN ON THESE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PUBLIC AND PRIVATE PROPERTY INSOFAR AS IT MAY BE AFFECTED BY THESE OPERATIONS. ALL COSTS FOR PROTECTING, REMOVING, AND RESTORING EXISTING IMPROVEMENTS SHALL BE BORNE BY THE CONTRACTOR.
14. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL BE IN EFFECT AT ALL TIMES.
15. THE CONTRACTOR SHALL VERIFY ALL JOINT ELEVATIONS PRIOR TO THE REMOVAL OF PAVEMENT, CURB, GUTTER, SIDEWALK AND/OR SLOPE GRADING. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER OF RECORD PRIOR TO REMOVALS WITHIN THE AREA OF THE DISCREPANCIES.
16. DUST SHALL BE CONTROLLED BY WATERING TO THE SATISFACTION OF THE INSPECTOR.
17. WHERE THE IRRIGATION SYSTEM IN CONFLICT WITH NEW WORK NEEDS TO BE RELOCATED OR REPLACED, CONTRACTOR SHALL COORDINATE THE WATER SHUT OFF OR ANY ELECTRICAL RELATED WORK WITH OWNER 48 HOURS PRIOR COMMENCING THE WORK.
18. ALL EXPOSED P.C.C. CORNERS SHALL BE ROUNDED WITH A 1/2" RADIUS.
19. ALL EXPORT OF MATERIAL FROM THE SITE MUST GO TO A PERMITTED SITE APPROVED BY THE BUILDING OFFICIAL OR A LEGAL DUMPSITE. RECEIPTS FOR ACCEPTANCE OF EXCESS MATERIAL BY A DUMPSITE ARE REQUIRED AND MUST BE PROVIDED TO THE BUILDING OFFICIAL UPON REQUEST.
20. CONTRACTOR TO CALCULATE HIS/HER OWN EARTHWORK QUANTITIES FOR BIDDING PURPOSES.
21. FOR JOINTS AT NEW CURB AND SIDEWALK REFER TO S.P.P.W.C. STD. PLAN No. 112-2. ALSO SEE DETAILS ON THIS SHEET FOR ADDITIONAL INFORMATION JOINT DETAILS.
22. IF WORK IS COMMENCED DURING RAINY SEASON, CONTRACTOR SHALL SATISFY CITY OF MOORPARK EROSION CONTROL REQUIREMENTS AND INSTALL APPROPRIATE BMPs.

BEST MANAGEMENT PRACTICE NOTES:

1. EVERY EFFORT SHOULD BE MADE TO ELIMINATE THE DISCHARGE OF NON- STORMWATER FROM THE PROJECT SITE AT ALL TIMES.
2. ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON-SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEET FLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSES OR WIND.
3. STOCKPILES OF EARTH AND OTHER CONSTRUCTION RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER.
4. FUELS, OILS, SOLVENTS, AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM.
5. EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON-SITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.
6. TRASH AND CONSTRUCTION RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND.
7. SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DEPOSITIONS MUST BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
8. ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION MUST BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER.

THE FOLLOWING BMPS AS OUTLINED IN, BUT NOT LIMITED TO, THE CALIFORNIA STORMWATER BEST MANAGEMENT PRACTICES HANDBOOK THE LATEST REVISED EDITION, MAY APPLY DURING THE CONSTRUCTION OF THIS PROJECT (ADDITIONAL MEASURES MAY BE REQUIRED IF DEEMED APPROPRIATE BY THE PROJECT ENGINEER OR THE BUILDING OFFICIAL)

WIND EROSION CONTROL

WE1 – WIND EROSION CONTROL

EQUIPMENT TRACKING CONTROL

TC1 – STABILIZED CONSTRUCTION ENTRANCE EXIT
TC2 – STABILIZED CONSTRUCTION ROADWAY
TC3 – ENTRANCE/OUTLET TIRE WASH

NON-STORMWATER MANAGEMENT

NS1 –WATER CONSERVATION PRACTICES
NS2 –DEWATERING OPERATIONS
NS3 –PAVING AND GRINDING OPERATIONS
NS5 – CLEAR WATER DIVERSION
NS6 – ILLICIT CONNECTION/DISCHARGER
NS7 – POTABLE WATER/IRRIGATION
NS8 – VEHICLE AND EQUIPMENT CLEANING
NS9 – VEHICLE AND EQUIPMENT FUELING
NS10 – VEHICLE AND EQUIPMENT MAINTENANCE
NS12 – CONCRETE CURING
NS13 – CONCRETE FINISHING
NS14 – MATERIAL AND EQUIPMENT USE
NS15 – DEMOLITION ADJACENT TO WATER
NS16 – TEMPORARY BATCH PLANTS

WATER MANAGEMENT & MATERIAL POLLUTION CONTROL

WM1 – MATERIAL DELIVERY AND STORAGE
WM2 – MATERIAL USE
WM3 – STOCKPILE MANAGEMENT
WM4 – SPILL PREVENTION AND CONTROL
WM5 – SOLID WASTE MANAGEMENT
WM6 – HAZARDOUS WASTE MANAGEMENT
WM7 – CONTAMINATION SOIL MANAGEMENT
WM8 – CONCRETE WASTE MANAGEMENT
WM9 – SANITARY/SEPTIC WASTE MANAGEMENT
WM10 – LIQUID WASTE MANAGEMENT

TEMPORARY SEDIMENT CONTROL

SE1 – SILT FENCE
SE2 – SEDIMENT BASIN
SE3 – SEDIMENT TRAP
SE4 – CHECK DAM
SE5 – FIBER ROLLS
SE6 – GRAVEL BAG BERM
SE7 – STREET SWEEPING AND VACUUMING
SE8 – SANDBAG BARRIER
SE9 – STRAW BALE BARRIER
SE10 – STORM DRAIN INLET PROTECTION

EROSION CONTROL

EC1 – SCHEDULING
EC2 – PRESERVATION OF EXISTING VEGETATION
EC3 – HYDRAULIC MULCH
EC4 – HYDROSEEDING
EC5 – SOIL BINDERS
EC6 – STRAW MULCH
EC7 – GEOTEXTILES & MATS
EC8 – WOOD MULCHING
EC9 – EARTH DIKES AND DRAINAGE SWALES
EC10 – VELOCITY DISSIPATION DEVICES
EC11 – SLOPE DRAINS
EC12 – STREAMBANK STABILIZATION
EC13 – POLYACRYLAMIDE

LEGEND

FS	FINISH SURFACE ELEVATION
TC	TOP OF CURB ELEVATION
TS	TOP OF CONCRETE SLAB ELEVATION
XXX.XX	PROPOSED SPOT ELEVATION
(XXX.XX)	EXISTING SPOT ELEVATION
	CMU WALL
——X——	EXISTING FENCE
G.B.	GRADE BREAK
ESW	EDGE OF SIDEWALK
DWY	DRIVEWAY
C&G	CURB & GUTTER
H.P.	HIGH POINT
NG	NATURAL GROUND
S.P.P.W.C.	STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION
S.S.P.W.C.	STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION
C.F.	CURB FACE
ELEV.	ELEVATION
EX.	EXISTING
BCR.	BEGIN CURB RETURN
ECR.	END CURB RETURN
A.P.	ANGLE POINT
KEY NOTE SYMBOL (X)	FURNISH AND INSTALL/CONSTRUCT, DEMOLISH, REMOVE AND REPLACE, OR RELOCATE, AS INDICATED.
XX.X%	NEW SLOPE
(XX.X)%	EXISTING SLOPE
FL	FLOW LINE
T.B.M.	TEMPORARY BENCH MARK
CONC.	CONCRETE PAVEMENT
A.C.	ASPHALT CONCRETE PAVING
(N)	NEW
F.F.	FINISH FLOOR
A.F.F.	ABOVE FINISH FLOOR
EG	EDGE OF GUTTER
CLR.	CLEAR
SCO	SEWER CLEAN-OUT
SMH	SEWER MANHOLE
P.A.	PLANTER AREA
D.I.	DRAINAGE INLET
TS	TOP OF SLAB
C.J.	CONTROL JOINT
E.J.	EXPANSION JOINT
CPB	COMMUNICATIONS PULL-BOX
EPB	ELECTRICAL PULL-BOX
RD	ROOF DRAIN
X / CX.X	DETAIL # / SHEET #

PRIVATE ENGINEER'S NOTICE TO CONTRACTOR

THE EXISTENCE AND LOCATION OF ANY AND ALL CONDUITS, UTILITY PIPES, AND STRUCTURES SHOWN ON THIS SET OF PLANS ARE OBTAINED BASED ON AVAILABLE RECORDS AT THE TIME OF DESIGN. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT AT THE TIME OF DESIGN EXCEPT AS SHOWN ON THIS SET OF PLANS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT ANY AND ALL UTILITY LINES SHOWN ON THIS SET OF PLANS. THE CONTRACTOR FURTHER ASSUMES ANY AND ALL LIABILITY AND RESPONSIBILITY FOR THE CONDUITS, UTILITY PIPES, AND STRUCTURES SHOWN ON THIS SET OF DRAWINGS.

CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT. THIS STIPULATION INCLUDES THE SAFETY OF ANY AND ALL PERSONS AND PROPERTY. THE CONTRACTOR SHALL FURTHER DEFEND, INDEMNIFY, AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, WITH THE EXCEPTION OF LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.

UNDERGROUND SERVICE ALERT

call: TOLL FREE

1-800-422-4133

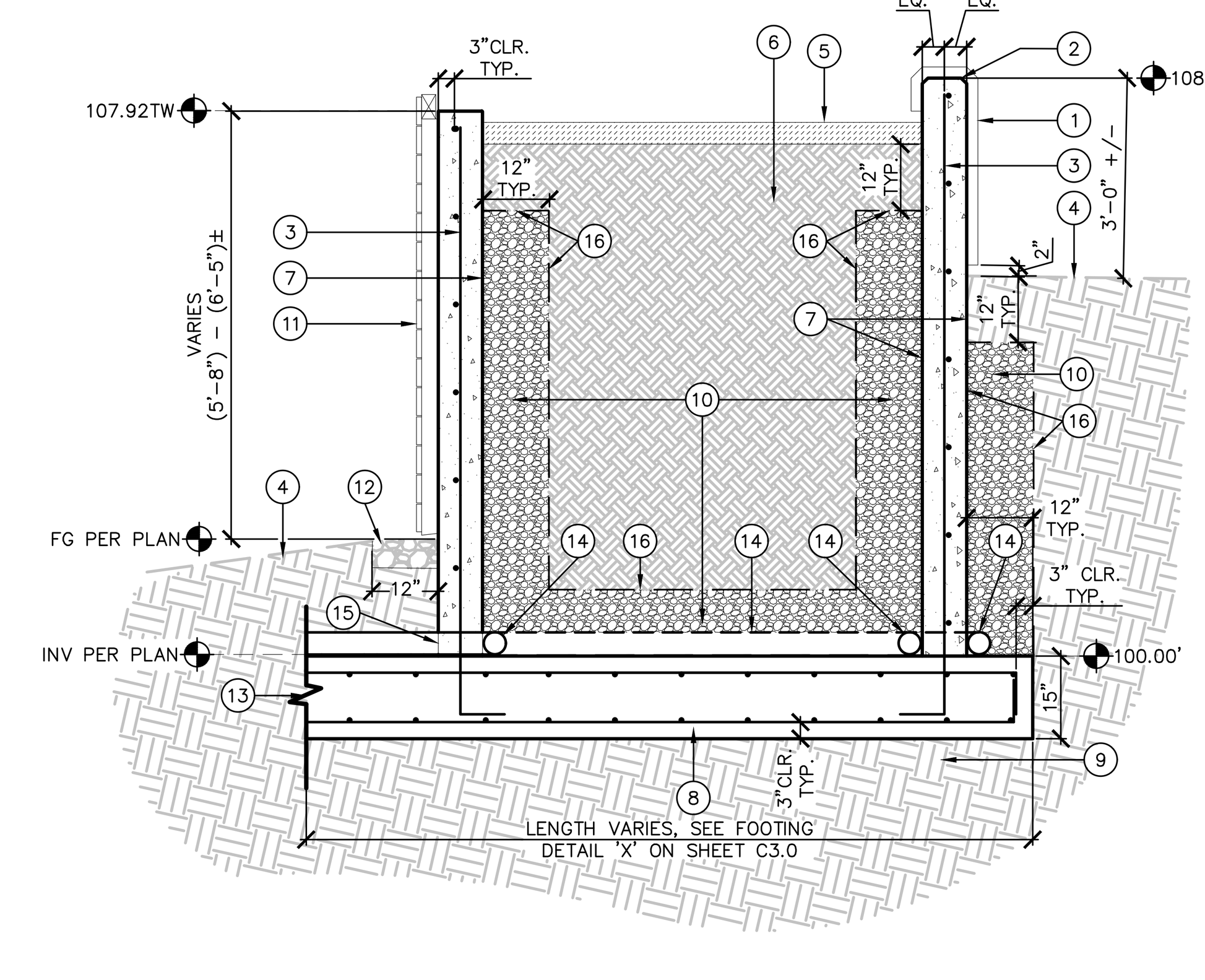
TWO WORKING DAYS BEFORE YOU DIG

DEVELOPMENT REQUIREMENT FOR STEM HORIZONTAL REBAR:
FOR #5 BARS: L_d=36" & L_{dh}=10" STD. HOOK & L_s=40"
DEVELOPMENT REQUIREMENT FOR STEM VERTICAL REBAR:
FOR #7 BARS: L_d=42" & L_{dh}=12" STD. HOOK & L_s=54"

STEEL BARS Fy = 60,000 PSI
CONCRETE F'c = 4,000 PSI
W/C RATIO = 0.5
SLUMP = 4"

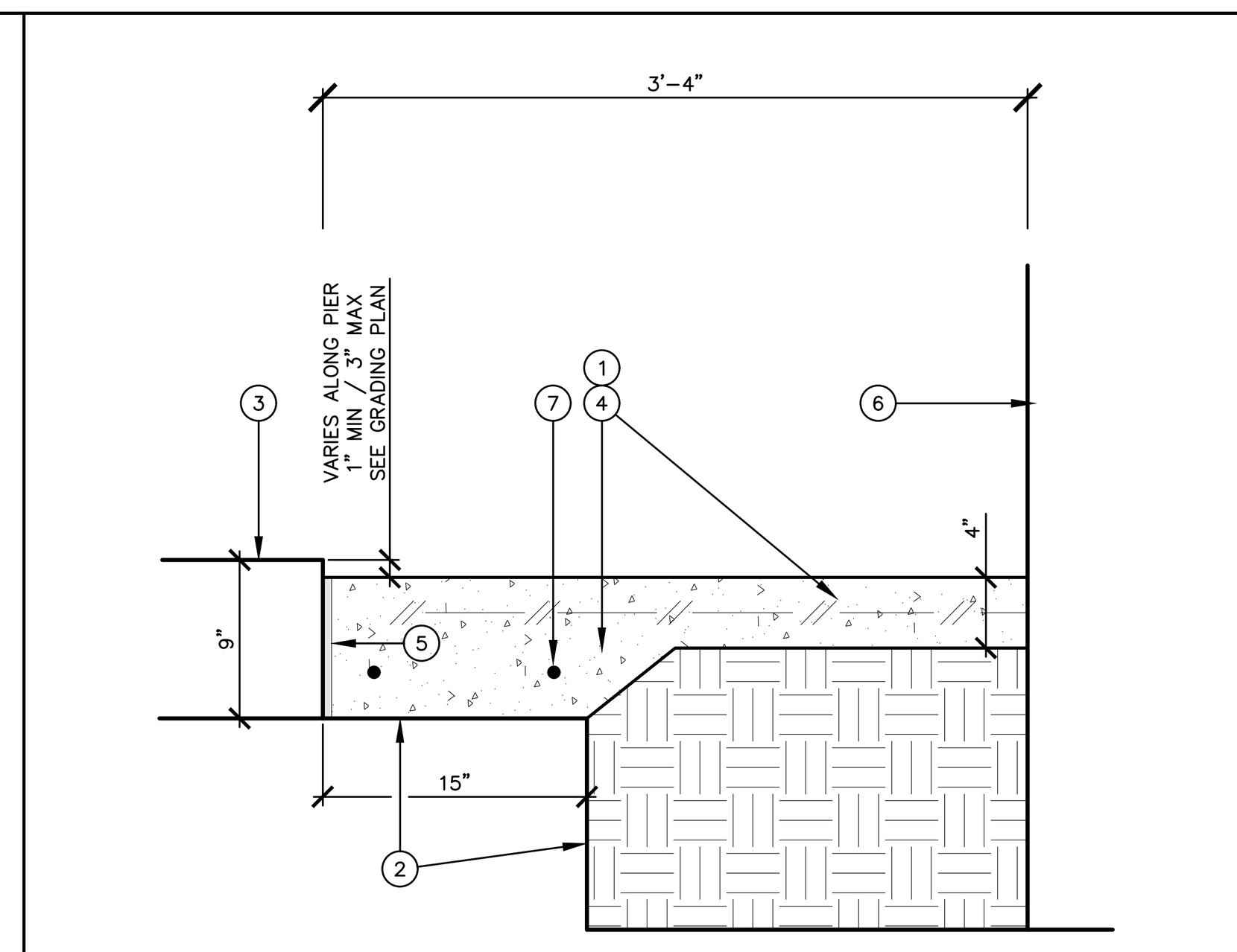
NOTE: CONTRACTOR MUST SUBMIT SCALED SHOP DRAWINGS ALONG WITH MIX DESIGN, CRUSHED ROCK, WATERPROOF MEMBRANE, FILTER FABRIC, & PIPE FOR REVIEW AND APPROVAL PRIOR COMMENCING ANY WORK.

NOTE: SOILS BELOW THE WALL FOOTING SHOULD BE OVEREXCAVATED TO A DEPTH OF 30" BELOW THE BOTTOMS OF THE FOOTINGS AND TO A DISTANCE OF 24" TO THE SIDES OF THE FOOTINGS. THE RESULTING SURFACES SHALL BE SCARIFIED AN ADDITIONAL 6", MOISTURE CONDITIONED AND RECOMPACTED. THE WALL FOOTING SHALL BE UNDERLAIN BY MIN. 30" OF ENGINEERED FILL. ALL FILL AND DISTURBED SOIL SHALL BE COMPACTED 95% OF RELATIVE MAX. DENSITY.



1. 1" SMOOTH PLASTER FINISH – COLOR T.B.D.
2. 1" CHAMFER, TYPICAL
3. 8" THICK POURED-IN-PLACE CONCRETE WALL REINFORCED W/ #7 @ 12" VERTICAL & #5 @ 16" HORIZONTAL
4. FINISH GRADE PER PLAN, TYP.
5. 3" MULCH – REFER TO PLANTING PLAN
6. SOIL BACKFILL PER PLANTING SPECIFICATIONS
7. WATERPROOF MEMBRANE, CONTRACTOR TO SUBMIT SPECIFICATION FOR ENGINEER'S REVIEW & APPROVAL BEFORE ORDERING OR INSTALLATION
8. 15" POURED-IN-PLACE CONCRETE FOOTING W/ #5 @ 12" EA. WAY. TOP & BOTTOM HOOK BARS (10") @ ALL EDGES.
9. OVEREX AND RECOMPACT PER NOTE ABOVE
10. ¾" CRUSHED ROCK LAYER, SHALL MEET S.S.P.W.C. GREENBOOK SPECIFICATIONS.
11. IPE SLATS PER ARCHITECTURAL PLANS
12. MORTAR SET COBBLE BAND @ BASE OF WALL TYP., PER LANDSCAPE PLANS
13. SEE STRUCTURAL PLANS FOR CONTINUATION OF FOOTING @ SIGN
14. 4" SDR-35 PERFORATED STORM DRAIN ; SET FLUSH W/ TOP OF FOOTING
15. CONNECT TO 6" SOLID STORM DRAIN PIPE, SEE GRADING & STORM DRAIN PLAN FOR CONTINUATION
16. MIRAFI 140N FILTER FABRIC

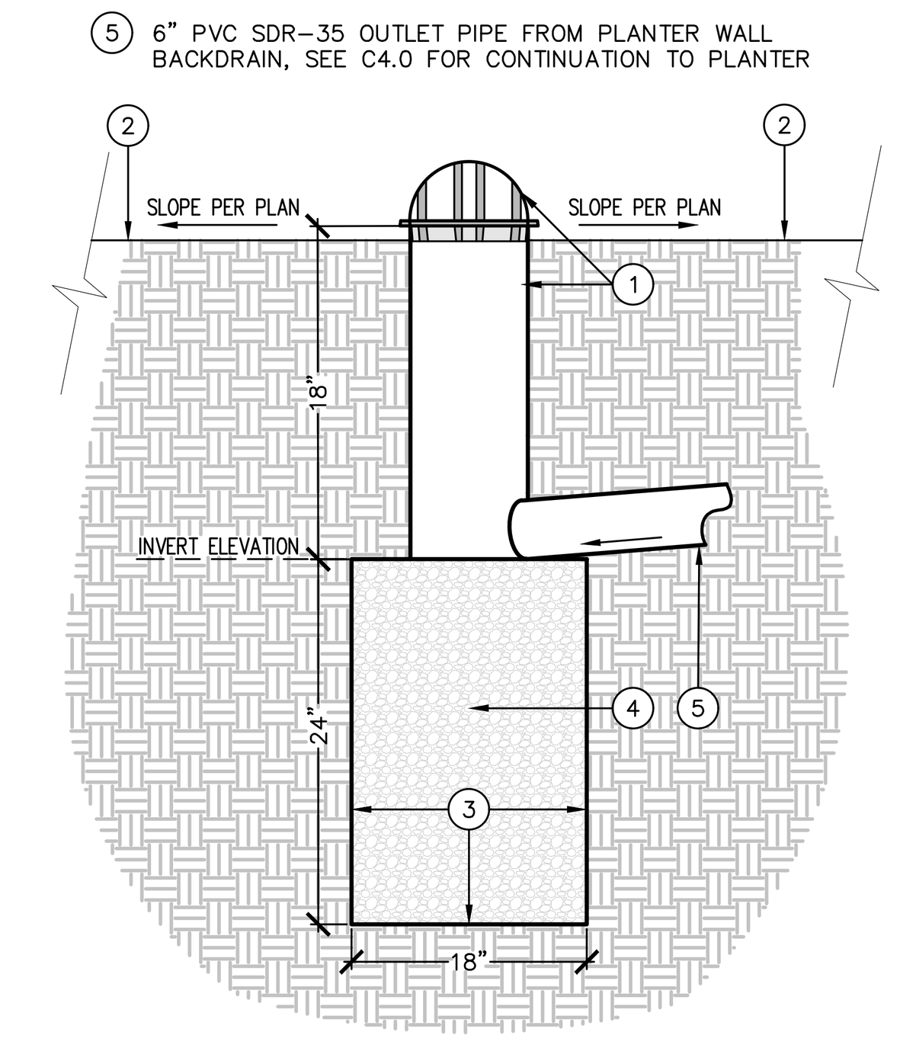
A1 RAISED PLANTER WALL SECTION N.T.S.



1. CONCRETE PAVING PER PLAN
2. CONCRETE FOOTING AND PIER PER STRUCTURAL ENGINEER'S PLANS
3. CONCRETE PIER CAP PER STRUCTURAL ENGINEER'S DRAWINGS
4. PROVIDE CONCRETE THICKENED EDGE WHERE OCCCURS ALONG EDGE PIER, TYP.
5. 1/2" EXPANSION JOINT W/ TRAFFIC SEALANT SET FLUSH WITH EDGE OF CONCRETE
6. CONCRETE PLANTER WALL PER PLAN AND DETAILS
7. (2) #3 CONT. SET 9" APART, 3" CLR. PLACE IN THE CENTER OF THICKENED EDGE, TYP.

A2 PAVING SECTION BEHIND SIGN N.T.S.

1. 8" NYLOPLAST DROP-IN DOME GRATE W/ PVC SDR-35 RISER.
2. ADJACENT LANDSCAPE, FINISH VARIES, REFER TO LANDSCAPE PLANS.
3. MIRAFI 140N FILTER FABRIC
4. 3/4" CRUSHED ROCK PER S.S.P.W.C. GREENBOOK SPECIFICATIONS
5. 6" PVC SDR-35 OUTLET PIPE FROM PLANTER WALL BACKDRAIN, SEE C4.0 FOR CONTINUATION TO PLANTER



B 8" DRAIN W/ CRUSHED ROCK SUMP DETAIL N.T.S.

SECTION 31 10 00
SITE CLEARING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Clearing and protection of vegetation.
B. Grubbing of root systems of trees and shrubs, abandoned utility lines and structures and other below grade obstructions and debris.
C. Removal of existing debris.

1.02 RELATED REQUIREMENTS

A. Section 01 10 00 - Summary: Limitations on Contractor's use of site and premises.
B. Section 01 50 00 - Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.
C. Section 01 57 13 - Temporary Erosion and Sediment Control.
D. Section 01 70 00 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products.
E. Section 01 74 19 - Construction Waste Management and Disposal: Limitations on disposal of removed materials; requirements for recycling.
F. Section 02 41 00 - Demolition: Removal of built elements and utilities.
   1. Removal of paving and removal if indicated of abandoned utilities.
   2. Sitework (Area of Work), removal of designated fences, walls, and other elements; capping and identifying utilities; landscape paving, and removal of concrete foundations.
G. Section 31 23 16 - Excavation: Site preparation for structure and paving.
H. Section 31 23 23 - Fill: Filling holes, pits, and excavations generated as a result of removal operations.

1.03 QUALITY ASSURANCE

A. Clearing Firm: Company specializing in the type of work required.
   1. Minimum of five years of documented experience.

PART 2 PRODUCTS

2.01 MATERIALS

A. Fill Material: As specified in Section 31 23 23 - Fill and Backfill

PART 3 EXECUTION

3.01 SITE CLEARING

A. Comply with other requirements specified in Section 01 70 00.
B. Minimize production of dust due to clearing operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.

3.02 EXISTING UTILITIES AND BUILT ELEMENTS

A. Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.
B. Protect existing utilities to remain from damage.
C. Do not disrupt public utilities without permit from authority having jurisdiction.
D. Protect existing structures and other elements that are not to be removed.

3.03 CLEARING

A. Perform clearing Work within confines of Project area indicated on Drawings or specified elsewhere herein and with strict adherence to the Contract Documents and Geotechnical recommendations.

3.04 VEGETATION

A. Scope: Remove trees, shrubs, brush, and stumps in areas to be covered by building structure, paving, lawns, and planting beds.
B. Do not remove or damage vegetation beyond the limits indicated on drawings.
C. Install substantial, highly visible fences at least 3 feet high to prevent inadvertent damage to vegetation to remain:
   1. At vegetation removal limits.
D. Remove only trees within area to be cleared that have been marked for removal. Confirm trees to be removed with District and Architect before beginning removal process.
   1. Cut trunks close and parallel to ground.
   2. Remove roots where under or within five feet of proposed structures.
   3. Neither remove nor prune trees and shrubbery in public rights-of-way except by written approval of authorities having jurisdiction.
E. In areas where vegetation must be removed but no construction will occur other than pervious paving, remove vegetation with minimum disturbance of the subsoil.
F. Vegetation Removed: Do not burn, bury, landfill, or leave on site, except as indicated.
   1. Chip, grind, crush, or shred vegetation for mulching, composting, or other purposes; preference should be given to on-site uses.
   2. Trees: Sell if marketable; if not, treat as specified for other vegetation removed; remove stumps and roots to depth of 18 inches.
   3. Existing Stumps: Treat as specified for other vegetation removed; remove stumps and roots to depth of 18 inches.
   4. Sod: Re-use on site if possible; otherwise sell if marketable, and if not, treat as specified for other vegetation removed.
G. Dead Wood: Remove all dead trees (standing or down), limbs, and dry brush on entire site; treat as specified for vegetation removed.
H. Restoration: If vegetation outside removal limits or within specified protective fences is damaged or destroyed due to subsequent construction operations, replace at no cost to District.

3.05 GRUBBING

A. At pipelines, remove all trees or stumps within five feet of the pipeline.
B. Perform grubbing where indicated on Drawings or as specified herein. Grubbing shall include removal from the ground of all stumps, roots, buried logs and other vegetation not otherwise indicated to remain, and removal and disposal of resulting refuse.
C. Completely grub areas where unsuitable surface material is to be removed.

3.06 DAMAGED VEGETATION

A. Neatly prune damaged branches and severed roots.
B. Apply wound paint to above-ground cuts and abrasions.
C. If trees and shrubs indicated to remain are damaged excessively, as determined by Owner Representative, Architect or authorities having jurisdiction, remove and replace damaged plants with comparable plants.

3.07 DEBRIS

A. Remove debris, junk, and trash from site.
B. Remove logs, rocks and other debris.
C. Dispose of Debris resulting from clearing and thoroughly clean rights-of-way.
D. Leave site in clean condition, ready for subsequent work.
E. Clean up spillage and wind-blown debris from public and private lands.

3.08 DISPOSAL

A. Debris Disposal: Dispose of all cleared and grubbed materials in a legal manner off site.
B. Hazardous Materials:
   1. Immediately notify the Owner Representative should hazardous materials or suspected hazardous materials be encountered.
   2. Dispose of such materials in accordance with all applicable laws and regulations and as directed by authorities having jurisdiction.
   3. Unforeseen conditions will be resolved in accordance with the Conditions of the Contract.
C. Saleable Materials:
   1. Unless otherwise indicated, all felled trees from which merchantable lumber or firewood can be produced shall become the property of the Contractor.
   2. Unless otherwise indicated, all metallic debris of salvageable value shall become the property of the Contractor.
   3. The Contractor shall remove all saleable materials from the site in a timely manner.
   4. Sale of salvaged and merchantable materials shall be done on site only with prior approval of the District.
D. Stockpiling Vegetation: Only if specified or indicated under landscape work, stockpile vegetation for subsequent mulching.
E. Burial and Burning: Debris shall not be buried or burned on site.

3.09 DUST CONTROL

A. Refer to requirements of:
   1. Section 01 50 00 - Temporary Construction Facilities and Controls.
   2. Section 31 22 00 - Grading.
B. Minimize dust during clearing and grubbing to protect adjoining property and vehicles parked in the vicinity.
C. Clean-up: Keep public thoroughfares clear of dust and debris by periodic sweeping and washing down, at least daily at the end of working hours.

END OF SECTION

C SITE CLEARING SPECIFICATIONS

SECTION 31 22 00
GRADING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Coordinate work of this Section to compliment and coordinate with field conditions and Civil Drawing noted specific referenced requirements. Utilize the most stringent requirements.
B. Removal of topsoil.
C. Rough grading and consolidation/compaction the site .
D. Excavation of subsoil, stockpiling for later reuse, and removal of excess from the site.
E. Preparing of subgrade for walks, pavements and site retaining walls.
F. Excavating, backfilling and compaction for wet utility lines.
G. Finish grading.

1.02 RELATED REQUIREMENTS

A. Section 31 10 00 - Site Clearing.
B. Section 31 23 16 - Excavation.
C. Section 31 23 23 - Fill: Filling and compaction.
D. Section 32 13 13 - Concrete Paving.

1.03 SUBMITTALS

A. Project Record Documents: Accurately record actual locations of utilities remaining by horizontal dimensions, elevations or inverts, and slope gradients.
   1. Accurately record location of all changes in finish elevations and gradients which materially affect drainage.

1.04 QUALITY ASSURANCE

A. Regulatory Requirements: For conditions not covered in this Section, refer to applicable provisions of the California Building Code (CBC), Chapter 18A - Soils and Foundations, as amended and adopted by authorities having jurisdiction.
B. Perform Work in accordance with locally adopted SSPWC standards.

1.05 PROTECTION

A. Dust Control: Comply with requirements specified in Section 01 50 00 - Temporary Facilities and Controls.
B. Protection:
   1. Comply with general requirements specified in Section 01 50 00 - Temporary Facilities and Controls.
   2. Provide protection for walks, curbs, drains, and trees and boxing around corners of existing buildings to prevent damage.
   3. Keep adjacent roads, streets and drives clear of dirt and debris from earthwork operations.
C. Underground Utilities:
   1. Buried utility lines may exist.
   2. If such are encountered, notify Owner Representative, Architect and District and for directions to be followed for preservation, relocation or demolition of utilities.

PART 2 PRODUCTS

2.01 MATERIALS

A. Topsoil: See Section 31 23 23.
B. Shoring and Bracing: Provide all materials and services necessary to properly engineer and construct shoring for excavations. Selection of materials and design of shoring, underpinning and bracing of new and existing structures shall be solely the responsibility of the Contractor.
   1. Shoring design shall comply with State of California Trenching and Shoring Manual issued by Offices of Structure Construction; 2011.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that survey bench mark and intended elevations for the Work are as indicated.
B. Verify the absence of standing or ponding water.
C. Upon discovery of unknown utility or concealed conditions, discontinue affected Work and notify Owner Representative, Architect and District for direction. Unforeseen conditions shall be resolved in accordance with the General Conditions.

3.02 PREPARATION

A. Identify required lines, levels, contours, and datum.
B. Stake and flag locations of known utilities.
C. Locate, identify, and protect from damage above- and below-grade utilities to remain.
   1. Maintain and protect existing utilities remaining which pass through Project area.
D. Notify utility company to remove and relocate utilities, as required.
E. Provide temporary means and methods to remove all standing or ponding water from areas prior to grading.
F. Protect site features to remain, including but not limited to bench marks, survey control points, existing structures, fences, sidewalks, paving, and curbs, from damage by grading equipment and vehicular traffic.
G. Protect trees to remain by providing substantial fencing around entire tree at the outer tips of its branches; no grading is to be performed inside this line.
H. Protect plants, lawns, and other features to remain as a portion of final landscaping.

3.03 ROUGH GRADING

A. Comply with Geotechnical Report and field directives of geotechnical engineer on-site.
B. Remove topsoil from areas to be further excavated, re-landscaped, or re-graded, without mixing with foreign materials.
   1. Coordinate topsoil with Section 31 10 00 - Site Clearing.
C. Do not remove topsoil when wet.
D. Remove subsoil from areas to be further excavated, re-landscaped, or re-graded.
   1. See Section 31 23 16 - Excavation.
E. Do not remove wet subsoil, unless it is subsequently processed to obtain optimum moisture content.
F. When excavating through roots, perform work by hand and cut roots with sharp axe.
G. See Section 31 23 23 for filling procedures.
H. All permanent cut or fill slopes shall have a maximum slope of 2:1 (H:V) ratio, horizontal to vertical and shall comply with applicable requirements of the Geotechnical Report and California Building Code (CBC).
I. Benching Slopes: Horizontally bench existing slopes greater than 5:1 (H:V) to key fill material to slope for firm bearing.
J. Stability: Replace damaged or displaced subsoil to same requirements as for specified fill.
K. Remove and replace soils deemed unsuitable by classification and which are excessively moist due to lack surface water control.
L. Grade top perimeter of excavations to prevent surface water from draining into excavation.
   1. Provide dewatering of excavations as required to ensure suitable conditions for concrete and backfilling operations.
M. Uniformly grade areas as shown on Drawings to tolerances specified in this Section..
   1. Evenly grade between points where elevations are shown or between points of Work and existing grades.
N. Slope rough grade away from building perimeter at gradient indicated.
   1. Upaved area slope for a distance of 10 feet from the building: Not less than one unit vertical in 20 units horizontal or 5 percent.
      a. CBC Section 1804A.4.
   2. When supported by soil conditions and climate; slope not less than 1:48 or 2 percent in unpaved areas.
      a. CBC Section 1804A.4, Exception.
O. Make grade changes gradual. Blend slopes into level areas.

3.04 SOIL REMOVAL AND STOCKPILING

A. Stockpile topsoil to be re-used on site; remove remainder from site.
   1. Topsoil and vegetation layers, root zones, and similar surface materials should be stripped and stockpiled for either reuse in landscape surface areas or removed from the site.
B. Stockpile subsoil on site for backfill, if soil is appropriate.
   1. Stockpile subsoil to depth not exceeding 8 feet.
C. Remove all lumped subsoil, boulders and rock in excess of 6 inches in greatest dimension.
D. Stockpile subsoil to be re-used on site; remove remainder from site.
E. Stockpiles: Use areas designated on site; pile depth not to exceed 8 feet; cover to protect from erosion.

3.05 FINISH GRADING

A. Before Finish Grading:
   1. Verify building and trench backfilling have been inspected.
   2. Verify subgrade has been contoured and compacted.
B. Remove debris, roots, branches, stones, in excess of 1/2 inch in size. Remove soil contaminated with petroleum products.
   1. Comply with CBC Section 1804A.3.
C. Where topsoil is to be placed, scarify surface to depth of 6 inches.
D. In areas where vehicles or equipment have compacted soil, scarify surface to depth of 6 inches.
E. Place topsoil in areas indicated.
F. Place topsoil where required to level finish grade.
G. Place topsoil during dry weather.
H. Remove roots, weeds, rocks, and foreign material while spreading.
I. Near plants spread topsoil manually to prevent damage.
J. Fine grade topsoil to eliminate uneven areas and low spots. Maintain profiles and contour of subgrade.
K. Lightly compact placed topsoil.
L. Maintain stability of topsoil during inclement weather. Replace topsoil in areas where surface water has eroded thickness below specifications.

3.06 TOLERANCES

A. Top Surface of Subgrade: Plus or minus 0.10 foot (1-3/16 inches) from required elevation.
B. Top Surface of Finish Grade: Plus or minus 0.04 foot (1/2 inch).
C. Top Surface Under Paving: Plus or minus 0.04 foot (1/2 inch) from required elevation.
D. Top Surface Under Footings and Foundations: Plus 0, minus 0.2 foot (2.4 inch).
E. Top Surface Under Slabs on Grade: Plus 0, minus 0.04 foot (1/2 inch).

3.07 REPAIR AND RESTORATION

A. Existing Facilities, Utilities, and Site Features to Remain: If damaged due to this work, repair or replace to original condition.
B. Trees to Remain: If damaged due to this work, trim broken branches and repair bark wounds; if root damage has occurred, obtain instructions from Architect as to remedy.
C. Other Existing Vegetation to Remain: If damaged due to this work, replace with vegetation of equivalent species and size.

3.08 FIELD QUALITY CONTROL

A. See Section 31 23 23 for compaction density testing.
B. Field Quality Control:
   1. Field inspections and testing shall be performed in accordance with requirements specified in Section 01 40 00 and 01 45 33.
   2. Make required quality control submittals in accordance with requirements specified.
C. Non-compliance: Should grade elevations, tests of fill or backfill indicate non-compliance with required elevations or density, Contractor shall over-excavate, recompact and retest until specified grade or density is obtained.
   1. Costs and Time associated with remedial Work and retesting shall be in accordance with provisions of the General Conditions.
   2. Retesting to demonstrate compliance shall be by a testing laboratory acceptable to District and shall be at Contractor's expense.

3.09 CLEANING

A. Remove unused stockpiled topsoil and subsoil. Grade stockpile area to prevent standing water.
B. Leave site clean and raked, ready to receive landscaping.

3.10 PROTECTION

A. Protect completed grading from erosion from weather and traffic.
B. Over-excavate and recompact areas damaged by construction activities and weather.

END OF SECTION

D GRADING SPECIFICATIONS

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 03-120493 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 06/30/2020

1300 Dove Street, Suite # 100
Newport Beach, CA. 92660

www.littleonline.com

VENTURA COUNTY COMMUNITY COLLEGE DISTRICT

MOORPARK COLLEGE WAYFINDING

7075 MOORPARK COLLEGE, MOORPARK, CA 93021

REGISTERED PROFESSIONAL ENGINEER
BARSIN BET GOVARGEZ
No. 81751
Exp. 3/31/22
CIVIL
STATE OF CALIFORNIA

DSA RESUBMITTAL

04/17/2020

NO.	REASON	DATE

PRINCIPAL IN CHARGE
Barsin Bet Govargez

PROJECT MANAGER
Eman Bermani

DESIGN TEAM
Michael Ledbetter

MOORPARK COLLEGE WAYFINDING

613696000

COVER SHEET- NOTES, DETAILS, & SPECIFICATIONS

C1.0

SECTION 03 30 10

CAST-IN-PLACE CONCRETE

1. PART 1 - GENERAL

1.1. SECTION INCLUDES

1.1.1. Formwork and anchorage.

1.1.2. Concrete reinforcement and accessories.

1.1.3. Cast-in-place concrete.

1.2. REFERENCES

1.2.1. ACI 117 - Specification for Tolerances for Concrete Construction and Materials.

1.2.2. ACI 301 - Specification for Structural Concrete.

1.2.3. ACI 302.1R - Guide for Concrete Floor and Slab Construction.

1.2.4. ACI 305R - Hot Weather Concreting, and ACI 306.1, Cold Weather Concreting.

1.2.5. ACI 308 - Standard Practice for Curing Concrete.

1.2.6. ACI 318 - Building Code Requirements for Structural Concrete.

1.2.7. ASTM C 33 - Concrete Aggregates.

1.2.8. ASTM C 94 - Ready-Mixed Concrete.

1.2.9. ASTM C 150 - Portland Cement.

1.2.10. ASTM D1752 - Preformed Sponge Rubber and Cork Expansion Joint Fillers.

1.3. SUBMITTALS

1.3.1. Provide submittals under provisions of Division 01.

1.3.2. Product Data/Materials List: Submit data indicating product standards, physical and chemical characteristics, technical specifications, limitations, maintenance instructions, and general recommendations regarding each material proposed for the work in this Section.

1.3.3. Test Reports: Submit certified copies of mill test report of reinforcing steel analysis to testing laboratory, Indicating products meet or exceed specified requirements.

1.3.3.1. Steel Source and Description

1.3.3.2. Ultimate tensile strength, Bend test, Elongation percentage and Yield point.

1.3.3.3. Heat number and Chemical analysis.

1.3.4. Mix designs: Prepare mix designs for Architect's review. Include the following information in mix design data:

1.3.4.1.1. Design Method, mix number.

1.3.4.1.2. Specified compressive strength, maximum aggregate size, slump, and placement method.

1.3.4.1.3. Application and location in structure.

1.3.4.1.4. Water-Cement Ratio.

1.3.4.1.5. Cement: Type, amount, and compliance with specified criteria statement.

1.3.4.1.6. Aggregates: Source(s), gradations (individual and combined).

1.3.4.1.7. Signature and stamp of licensed civil engineer responsible for mix design.

1.4. QUALITY ASSURANCE

1.4.1. Comply with applicable portions of referenced ACI 315 and ACI 347 standards for construction of concrete work specified in this Section.

1.4.2. Comply with Chapters 7 and 12 of ACI 318 for details of reinforcement and laps at bar splices respectively.

1.5. REGULATORY REQUIREMENTS

1.5.1. Conform to applicable sections of Chapter 19A, Part 2, Title 24, CCR.

1.6. PRODUCT HANDLING

1.6.1. On delivery to Project Site, place materials in area protected from weather.

1.6.2. Store materials above ground on framework or blocking and cover with protective waterproof covering providing for adequate air circulation and ventilation. Handle materials to prevent damage.

2. PART 2 - PRODUCTS

2.1. FORM MATERIALS

2.1.1. Conform to ACI 347.

2.1.2. Softwood Plywood - Vertical and horizontal surfaces.

2.1.2.1. Grade Certification: APA Grade stamped, complying with PS-1.

2.1.2.2. Type: APA Plyform, Exterior Type.

2.1.2.3. Class/Face Veneer: Class I or II, B-B Veneer.

2.1.2.4. Panel Finish: Where concrete will be exposed to view in final project, with painted and non-painted finish, provide HDO resin fiber overlay.

2.1.3. Lumber Forms: Any grade or species, S4S.

2.1.4. Form Ties:

2.1.4.1. Concealed Condition: Meadow Burke Penta-Tie or equal. Snap-off type, fixed length, cone type, 1 inch back break dimension, free of defects that could leave holes larger than one inch in concrete surface; provide flush plugs for cone holes or grout fill as specified.

2.1.4.2. Exposed Condition: Snap-off type, fixed length, cone type, 1 inch back break dimension, free of defects that could leave holes larger than one inch in concrete surface; provide semi-recessed plugs for cone holes.

2.1.5. Form Release Agent: Cresset or equal, colorless, water based material which will not stain concrete, or absorb moisture, or impair natural bonding or color characteristics of coating intended for use on concrete.

2.1.5.1. Select type suitable and appropriate for achieving CCS 2 surface at exposed concrete applications.

2.1.6. Corners: Chamfered, rigid plastic or wood strip type; 3/4 x 3/4 inch size; maximum possible lengths.

2.1.7. Form Stakes: Steel bar stock, pre-drilled for nails.

2.1.8. Formwork Panel Edge: Provide foam edge stripping at exposed formwork panel edges to minimize mortar leakage.

2.2. REINFORCING STEEL

2.2.1. Reinforcing Steel:

2.2.1.1. Non-Welded Systems: ASTM A615, deformed billet steel bars, uncoated.

2.2.1.1.1. Bar size #3 and larger: Grade 60.

2.2.1.2. Provide reinforcing steel complying with ASTM A 706, Grade 60, deformed, uncoated steel, where shown.

2.2.2. Dowels: Same as 2.2.1.

2.2.3. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for strength and support of reinforcement during concrete placement conditions including load bearing pad on bottom to prevent vapor retarder/retarder/barrier puncture.

2.2.4. Fabricate concrete reinforcing in accordance with CRSI Manual of Standard Practice, ACI 315, and ACI 318.

2.2.5. Do NOT bend or straighten bars in manner that will weaken or injure bar. Do not re-bend bars #5 and larger.

2.2.6. Do NOT use heat to bend bars.

2.2.7. Remove and replace reinforcement with following fabrication defects:

2.2.7.1. Bar lengths, depths and bends exceeding specified fabrication tolerances.

2.2.7.2. Bends or kinks not shown on drawings or final shop drawings.

2.2.7.3. Bars with reduced cross-section due to excessive rusting or other causes.

2.2.8. Locate reinforcing splices as shown on Drawings. Obtain approval of Structural Engineer for splices not shown on drawings.

2.3. CONCRETE MATERIALS

2.3.1. Cement: Conform to CBC Section 1913A.1, and ASTM C150; normal - Type II, low alkali, grey color. Type V cement shall be used for concrete in contact with soil.

2.3.2. Fine and Coarse Aggregates: Conform to CBC Section 1903A.6, ASTM C33 and the following:

2.3.2.1. Coarse Aggregate: Clean, hard, fine-grained, sound, crushed rock or washed gravel;

2.3.2.1.1. Slabs, Columns, Walls: Class Designation 5M per ASTM C 33, Table 3, with 1 inch grading.

2.3.2.1.2. Foundations: Class Designation 3M per ASTM C 33, Table 3, with 1-1/2 inch grading.

2.3.2.2. Fine Aggregate: Washed natural or manufactured sand, hard, strong, durable particles: not more than 1 percent deleterious materials.

2.3.2.3. Aggregate shall be non-reactive per ASTM C 289.

2.3.3. Water: Clean, potable, and not detrimental to concrete.

2.3.4. Concrete slab-on-grade rock base: Clean, washed crushed rock base, 3/8 inch grading, complying with ASTM C 33.

2.4. ACCESSORIES

2.4.1. Membrane Curing Blankets

2.4.1.1. Provide Whitecap or equal 483-Curelap light colored plastic faced 10 oz. burlap curing blankets complying with ASTM C 171.

2.4.2. Vapor Retarder Membrane

2.4.2.1. Manufacturer: Stego Wrap, www.stegoindutries.com, or equal.

2.4.2.2. Type: Polyolefin geomembrane film.

2.4.2.3. Product Characteristics:

2.4.2.3.1. Thickness: Minimum 15 mils.

2.4.2.3.2. Perm Rating: Maximum 0.01 grains/square foot/hour per ASTM F 1249.

2.4.2.3.3. Water Vapor Transmission Rate: Maximum 0.006 grains/square foot/hour per ASTM F 1249.

2.4.2.3.4. Puncture resistance: Minimum puncture resistance of 2200 grams per ASTM D 1709.

2.4.2.3.5. Tensile Strength: Minimum tensile strength of 50 pounds per ASTM D 882. Values shall be based on ASTM E 154 Resistance to Decay test portion.

2.4.2.3.6. Low Temperature Brittleness: Pass per ASTM D 1790.

2.4.2.4. Accessories.

2.4.2.4.1. Provide all required seam tapes and mastics as supplied by manufacturer.

2.4.3. Non-Shrink Grout: Premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing admixtures, capable of developing a minimum compressive strength of 8,000 psi at 28 days when tested in accordance with CRD-C-621 and ASTM C 1107.

2.4.4. Admixtures: Concrete admixtures shall be subject to prior approval by DSA the jurisdictional authority and Architect. Calcium chloride or admixtures containing chloride shall not be used. Admixture(s) shall not adversely affect concrete strength or color of colored concrete, where occurs.

2.4.5. Polymer Modified Concrete: Provide Sika Armatec 110 polymer modified concrete, with 3/8 inch minus aggregate conforming to manufacturers criteria.

2.4.6. Bonding Agent: Provide SikaDur 32 Hi-Mod bonding agent/adhesive conforming to manufacturers criteria.

2.5. SCREED SYSTEMS AND JOINT FORMING MATERIALS

2.5.1. Screed Systems: Provide Grann Adjustable Quick Screed or equal chairs, available through Dayton Richmond (800-745-3700).

2.5.2. Formed Construction Joints: Meadow Burke Keyed Kold or equal, galvanized steel, tongue and groove type.

2.5.3. Isolation Joint at radiused conditions: W.R. Meadows, www.wrmeadows.com, or equal, Ceramar, 3/8 inch thick by full depth of slab.

2.5.4. Isolation Joint at perimeter conditions: W.R. Meadows or equal, Sealtight Fiber, 3/8 inch thick by full depth of slab.

2.5.5. Weakened plane/control joints: Provide Soff-Cut system or sawcutting at all slab areas. Use of cast-in-place concrete joints is not acceptable.

JOINT SEALERS

2.5.6. Provide sealants per Section 07 90 00.

2.6. CONCRETE MIX

2.6.1. Prepare concrete mix design, stamped and signed by a CA. Professional Engineer and in accordance with ACI 318, Chapter 5, section 1904A.

2.6.1.1. Provide concrete mixes as necessary to attain strengths and characteristics as noted on the drawings and in the specifications.

2.6.1.2. Concrete strength: minimum compressive strength of 4,000 psi at 28 days

2.6.1.3. Maximum Water-Cement ratio: Maximum 0.5 at point of placement, or according to indicated concrete strength.

2.6.1.4. Mix concrete in accordance with ASTM C94

2.6.1.5. Deliver to Inspector on site, with each mixer load of concrete, certificate bearing signature of the Weighmaster and Testing Laboratory batch plant inspector stating quantities of each material contained in load and time mixer was loaded.

2.6.1.6. Delivery Requirements:

2.6.1.6.1. Licensed Weighmaster shall positively identify materials as to quantity and certify each load by ticket.

2.6.1.6.2. Ticket shall be transmitted to Project Inspector by truck driver.

2.6.1.6.3. Project Inspector shall keep daily record of pours, identify each truck, its load and time of receipt and transmit duplicate copy of record to DSA.

2.6.1.6.4. Concrete arriving at Work without Weighmaster ticket will be rejected.

2.6.1.7. Representative of Testing Laboratory shall maintain continuous inspection of batch plant preparation of concrete, including review of aggregate and cement loading and mixing procedures, and final quantities contained in each truck load.

2.6.1.7.1. Where batch plant is certified as conforming to quality control and equipment criteria defined by *CBC Section 1705A.3.3 Chapter 17A, Part 2, Title 24, CCR*, batch plant inspection may be waived, following acceptance of such certification by DSA.

2.6.1.7.2. In the absence of such certification, batch plant inspection may be waived for concrete used on single story wood framed structures when criteria defined in CBC Section 1705A.3.3, Chapter 17A, Part 2, Title 24, CCR are met. Comply with initial batch plant inspection and criteria specified in paragraph 2.6.2.2 of this Section.

2.7. SOURCE QUALITY CONTROL AND TESTS

2.7.1. Provide for testing under the provisions of Section 01 45 00.

2.7.2. Reinforcing

2.7.2.1. Reinforcing Bars: Section 1913A.2, Chapter 19A,Part 2, Title 24, CCR and AWS D1.4.

2.7.2.2. Cost of testing for unidentified stock shall be reimbursed to the Owner by the Contractor.

2.7.3. Cement and Aggregate

2.7.3.1. Cement: CBC Section 1913A.1, Chapter 19A, Part 2, Title 24, CCR.

2.7.3.2. Aggregate: CBC Section 1903A.4, Chapter 19A, Part 2, Title 24, CCR.

2.7.3.3. Batch Plant Inspection: CBC Section 1705A.3.2, Chapter 19A, Part 2, Title 24, CCR and criteria specified in this Section.

2.8. OTHER MATERIALS

2.8.1. Provide all other materials, not specifically described but required for complete and proper installation of this work, as selected by the contractor and subject to the approval of the Architect.

3. PART 3 - EXECUTION

3.1. SURFACE CONDITIONS

3.1.1. Inspection

3.1.1.1. Prior to work of this section, carefully inspect previously installed work. Verify all such work is complete to the point where this installation may properly commence.

3.1.1.2. Verify that work of this section may be installed in strict accordance with the original design, all pertinent codes and regulations, and all pertinent portions of the referenced standards.

3.1.1.3. Verify all excavations have been inspected and approved by the Geotechnical Engineer. Verify all reinforcement and forms have been inspected and approved.

3.1.1.4. Verify concrete elevations, dimensions, and alignment with work specified in other sections.

3.1.1.5. Verify requirements for concrete cover over reinforcement.

3.1.1.6. Identify, verify, and coordinate placement of piping and conduit sleeves through concrete.

3.1.1.7. Identify, verify, and coordinate the location, dimension, and requirements of all depressions, recesses, block-outs and other provisions.

3.1.1.8. Verify anchors, seats, plates, reinforcement and other items embedded in concrete are accurately placed, positioned securely, and will permit proper concrete placement.

3.1.2. In the event of discrepancy, immediately notify the Architect.

3.1.3. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

3.2. FORMWORK AND REINFORCING

3.2.1. Erect formwork, shoring and bracing to achieve design requirements, in accordance with requirements of ACI 347.

3.2.2. Verify lines, levels, and measurement before proceeding with formwork.

3.2.3. Do not apply form release agent where concrete surfaces receive special finishes or applied coatings which may be affected by agent.

3.2.4. Coordinate work of other Sections in forming and setting openings, slots, recesses, chases, sleeves, bolts, anchors, and other inserts.

3.2.5. Locate and set in place items which will be cast directly into concrete.

3.2.5.1. Set all anchor bolts, hold downs and related embeds with plywood templates, anchored to formwork as required to maintain in alignment and position during concrete placement.

3.2.6. Arrange and assemble formwork to permit dismantling and stripping. Do not damage concrete during stripping. Provide crush plates or other approved guards where stripping operation may damage concrete. Kerf wood inserts to permit easy removal.

3.2.7. Chamfer exposed corners. Seal Joints between chamfer and form panel. Miter chamfer strips at changes in direction.

3.2.8. Openings in structural members which are not indicated on Drawing are not permitted.

3.2.9. Foundation Formwork

3.2.9.1. Hand trim sides and bottom of earth forms; remove loose dirt.

3.2.9.2. Construct wood edge forms, as specified below, to extend not less than 2 inches below soil level. Do not permit stakes to extend into or through footing zone. Form all concrete without penetrating footing concrete.

3.2.9.3. Fill over-excavated footings and foundations with concrete at no additional contract cost.

3.2.9.4. Excavate as necessary to accommodate installation and removal of formwork.

3.2.9.5. Prior to pouring footings or foundations, remove all debris, loose material, and water from excavation. Where water has accumulated in excavation, obtain Architects and Geotechnical Engineers review of the suitability of sub-grade condition.

3.2.9.6. Do not place concrete on mud or saturated soils. Repair sub-grade as required by Geotechnical Engineer at no additional contract cost.

3.2.10. Wall and structure formwork

3.2.10.1. Provide bracing to ensure stability of formwork.

3.2.10.2. Align form joints.

3.2.10.3. Place plywood panels with horizontal joints level, vertical joints plumb.

3.2.10.3.1. Unless noted otherwise, place panel edge at center of surface and extend in equal dimension in each direction.

3.2.10.3.2. Set form tie so that visible cones are placed in a uniform and aligned pattern. Maintain cones level and vertically aligned.

3.2.10.4. Keep form joints to a minimum. Use maximum size panels.

3.2.10.5. Back all joints by a stud or solid blocking, and provide shaped filler where necessary for smoothness. Provide foam form edge striping to prevent grout washout.

3.2.10.6. Reused panels shall be thoroughly cleaned, damaged edges or surfaces repaired, and both sides and edges coated with specified material.

3.2.10.7. Nail plywood along edges and to intermediate supports with common wire nails spaced as necessary to maintain alignment and prevent warping.

3.2.11. Apply form release agent on formwork in accordance with manufacturer's recommendations. Apply prior to placement of reinforcing steel, anchoring devices, and embedded items.

3.2.11.1. Do not apply form release agent where concrete surfaces will receive special finishes or applied coverings which are effected by agent. Soak inside surfaces of untreated forms with clean water. Keep surfaces wet prior to placement of concrete.

3.2.12. Do not remove forms or bracing until concrete has gained sufficient strength to carry its own weight and imposed loads, and in accordance with the following:

3.2.12.1. Loosen forms carefully. Do not wedge pry bars, hammers, or tools against finish concrete surfaces scheduled for exposure to view.

3.2.12.2. Store removed forms in manner that surfaces to be in contact with fresh concrete will not be damaged. Discard damaged forms.

3.2.13. Vapor retarder/barrier membrane installation

3.2.13.1. Proof roll subgrade.

3.2.13.2. Place 4 inch crushed rock base over sub-grade.

3.2.13.3. Place vapor retarder/barrier membrane over rock base, lapping edges 12 inches. Tape and seal edges and penetrations. Extend membrane to footing face and turn down to bottom of footing.

3.2.13.4. Provide pipe "boots" at all pipe and conduit penetrations in accordance with manufactures recommendations.

3.2.13.5. Obtain inspectors approval of membrane installation before placing concrete.

3.2.13.6. Exercise care in placing reinforcing steel and concrete to avoid puncturing vapor retarder/barrier membrane. Do not drive stakes through the membrane. Use flat base screed supports.

3.2.14. Place all concrete reinforcing in accordance with CRSI Placing Reinforcing Bars.

3.2.15. Before placing, clean reinforcing of loose scale, rust, oil, dirt, and any coating adversely affecting concrete bond.

3.2.16. Repair vapor retarder/barrier damaged during placement of concrete reinforcing. Repair with same material; lap over damaged areas minimum 6 inches and seal watertight with manufacturer's approved seam tape.

3.2.17. Place, support and secure reinforcement against displacement. Do not deviate from required position. Do not bend or straighten bars after placement.

3.2.18. Do not displace or damage vapor retarder /retarder/barrier.

3.2.19. Accommodate placement of formed openings. Maintain concrete cover around reinforcing as indicated.

3.2.20. Provide dowel joints at concrete joints as shown on drawings.

3.2.21. Prepare previously placed concrete by cleaning with steel brush and applying bonding agent in accordance with manufacturer's instructions. Before concrete is deposited upon or against concrete that has taken its initial set or has hardened, mechanically roughen hardened concrete to minimum 1/4" amplitude. Remove all encrustations from forms and reinforcements.

3.2.22. Screed Placement and Leveling:

3.2.22.1. Space screeds at manufacturers recommended spacing.

3.2.22.2. Space screed for strip pours.

3.2.22.3. Level screeds by use of laser level equipment to specified slab elevation.

3.3. PLACING CONCRETE

3.3.1. Place concrete in accordance with ACI 304

3.3.2. Ready mix concrete shall be delivered in accordance with ASTM C94. Concrete shall be placed within 90 minutes after start of mixing.

3.3.3. Conform to ACI 305R when concreting during hot weather or when weather conditions may cause rapid evaporation of moisture. Conform to ACI 306R for concrete placement in cold weather conditions.

3.3.4. Ensure reinforcement, inserts, embedded parts, formed joint fillers, and joint devices are not disturbed during concrete placement.

3.3.5. Maintain records of concrete placement. Record date, location, quantity, air temperature, and test samples taken.

3.3.6. Place concrete continuously between predetermined expansion, control, and construction joints.

3.3.6.1. Place construction joints only at locations shown on drawings or as approved by Architect.

3.3.6.2. Install construction joints as indicated on drawings

3.3.6.3. Once concrete operation has begun, it shall be continued until the specific panel, component, or section is complete.

3.3.7. Thoroughly consolidate concrete during placement using mechanical vibrators. Do not allow vibrators to contact forms or reinforcing.

3.3.8. Screed floors and slabs on grade level or slope to drain as noted on drawings.

3.4. CONCRETE FINISHING

3.4.1. Slab Finish

3.4.1.1. Produce hard and impervious surfaces, free from defects and blemishes.

3.4.1.2. Provide steel troweled finish, Class 3, per ACI 302.1R. Steel troweling shall consist of three separate operations. Obtain Architect's approval of finish prior to proceeding.

3.4.1.3. At all corridors, utility areas, and similar surfaces not receiving subsequent finish, provide medium swirl texture.

Slabs receiving thin set ceramic tile, waterproofing membranes or traffic topping; provide steel trowel and very light broom finish.

3.4.2. Exterior Slab Floors at service areas:

3.4.2.1. Exterior Service/Utility Concrete Slabs: Provide steel trowel and light broom finish. Broom finish shall be placed in a pattern as directed by the Architect.

3.4.3. All Other Surfaces

3.4.3.1. All surfaces shall be as-cast, subject to repair of surface deficiencies as specified.

3.4.4. Surface Defects

3.4.4.1. Surface defects shall be as defined in ACI 309.2R.

3.4.4.2. Surface irregularities shall be as defined in ACI 347 for Class B surfaces for semi exposed surfaces, and Class A surfaces at all exposed to view conditions.

3.4.4.3. All surface defects shall be repaired per approved methods and as specified.

3.5. EXPANSION AND WEAKENED PLANE JOINT INSTALLATION

3.5.1. Locate and form expansion control and contraction joints. Coordinate location with joint pattern shown for finish flooring.

3.5.1.1. Expansion joint spacing shall generally not exceed 15-ft in any direction – 400-sf max area.

3.5.1.2. Control joint [saw cut] spacing shall generally not exceed 5-ft in any direction.

3.5.2. Place formed construction joints in floor slab. Set top screed to required elevations. Secure to resist movement of wet concrete.

3.5.3. Install isolation /expansion joints with sealant between slab edges and vertical structural elements.

3.5.4. Install sealants in accordance with Division 07.

3.5.5. Provide construction joints or equal weakened plane joints at locations shown on drawings.

3.5.5.1. Saw cut slab before random shrinkage cracks form, and as soon as slab is firm enough to not be damaged by saw blade. Complete sawcutting within 12 hours of pour.

3.6. CURING AND PROTECTION

3.6.1. Maintain concrete above 50 degrees F and in a thoroughly moist condition for at least the first 7 days after placing concrete.

3.6.2. Floor Surface Curing

3.6.2.1. Cure floor surfaces in accordance with ACI 308.

3.6.2.2. Curing Blanket Placement: Install blankets immediately after finishing and joint placement is completed. Place over all surfaces, including face of footings and depressions. Anchor as required to maintain in place for a period of 7 days.

3.6.2.3. Membrane sealing Compounds: Apply in accordance with manufacturer's instructions.

3.7. FIELD QUALITY CONTROL

3.7.1. Field inspection and testing will be performed in accordance with provisions of code

3.7.2. Provide free access to Work and cooperate with appointed firm.

3.7.3. Comply with requirements of CBC Section 1905A.1.2 regarding frequency of testing for concrete test specimens.

3.7.4. One slump test will be taken for each set of test cylinders taken.

3.7.4.1. Prepare concrete sample(s) for each type of concrete placed each day.

3.7.4.2. Prepare one sample for each 50 cubic yards or fraction thereof.

3.7.4.3. Prepare one sample for each 2,000 square feet of slab or wall surface are placed, or a fraction thereof.

3.8. TOLERANCES

3.8.1. All tolerances shall be as defined in ACI 117 and as specified.

3.8.2. Classification shall be per General Building: Cast-in-Place, ACI 117, Section 4.0, unless noted otherwise.

3.8.3. Unless noted otherwise, depressions in slab floors between high spots shall be a maximum 3/16 inch in ten feet, using a metal straight edge placed at any location on slab, and measured within 72 hours of pour.

3.9. PATCHING

3.9.1. Exposed formed concrete surfaces, both interior and exterior, including surfaces designated to receive painted finish, shall provide surfaces suitable for subsequent finishing, free from imperfect joints, fins, "honeycombing", air pockets or "bug" holes, or other such imperfections.

3.9.2. Remove rough spots, stains and hardened mortar or grout from intended smooth surfaces by rubbing such surfaces lightly with fine Carborundum stone. Use liberal amount of water and rub sufficiently to remove defects without changing texture of concrete.

3.9.3. Filling Snap Tie Cone Holes:

3.9.3.1. Break off tie rods at bottom of cone holes.

3.9.3.2. Concealed Applications: Flush hole with water, and allow to dry. Coat entire inner surface of cone hole with liquid bonding agent, then grout holes solid with approved cement grout and grind smooth.

3.9.3.3. Exposed Applications: Flush hole with water, and allow to dry. Coat entire inner surface of cone hole with liquid bonding agent. Insert semi-recessed plug with approved cement.

3.10. DEFECTIVE CONCRETE

3.10.1. Concrete will be considered defective if strength characteristics indicated by tests of molded cylinders and core tests fall below the minimum 28-day strengths specified or indicated. Replace or adequately strengthen such defective concrete in a manner acceptable to the Architect and Structural Engineer.

3.10.2. Concrete will be considered defective if any one of the following conditions occurs:

3.10.2.1. Any concrete work not formed as indicated or is not in conformance with specified tolerances.

3.10.2.2. Any concrete with voids or honeycomb that has been cut, resurfaced or filled, unless under the direction of the Structural Engineer.

3.10.2.3. Any concrete with sawdust, shavings, wood, or embedded debris.

3.10.2.4. Any concrete placed more than 90 minutes after batching.

3.10.2.5. Replace or repair such defective concrete to the satisfaction of the Architect at no extra cost to the Owner.

3.11. EQUIPMENT BASES

3.11.1. Provide concrete bases and anchorage for mechanical, electrical, and other work as required and shown on the drawings and in accordance with reviewed Shop Drawings of related trades.

3.12. MISCELLANEOUS CONCRETE WORK

3.12.1. Provide areaways, cast-in-place valve boxes, pits, splash blocks, bases, and other miscellaneous concrete as shown and required to complete the Work. Conform to applicable requirements as specified in this section.

END OF SECTION

E CAST IN PLACE CONCRETE SPECIFICATIONS

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 03-120493 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 06/30/2020

1300 Dove Street, Suite # 100
Newport Beach, CA. 92660
www.littleonline.com

VENTURA COUNTY COMMUNITY COLLEGE DISTRICT

MOORPARK COLLEGE WAYFINDING

7075 MOORPARK COLLEGE, MOORPARK, CA 93021

REGISTERED PROFESSIONAL ENGINEER
BARSIN BET GOVARGEZ
No. 81751
Exp. 3/31/22
CIVIL
STATE OF CALIFORNIA

DSA RESUBMITTAL

04/17/2020

NO.	REASON	DATE

PRINCIPAL IN CHARGE
Barsin Bet Govargez
PROJECT MANAGER
Eman Bermani
DESIGN TEAM
Michael Ledbetter

MOORPARK COLLEGE WAYFINDING

613696000

SPECIFICATIONS

C1.1

SECTION 31 23 16
EXCAVATION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Excavating for footings, paving, and site structures.
B. Temporary excavation support and protection systems.

1.02 RELATED REQUIREMENTS

A. Document 00 31 00 - Available Project Information: Geotechnical report; bore hole locations and findings of subsurface materials.
B. Section 01 40 00 - Quality Requirements: Inspection of bearing surfaces.
C. Section 01 50 00 - Temporary Facilities and Controls: Dewatering excavations and water control.
D. Section 01 57 13 - Temporary Erosion and Sediment Control: Slope protection and erosion control.
E. Section 01 70 00 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring. General requirements for dewatering of excavations and water control.
F. Section 02 41 00 - Demolition: Shoring and underpinning existing structures.
G. Section 31 10 00 - Site Clearing: Vegetation and existing debris removal.
H. Section 31 22 00 - Grading: Grading.
I. Section 31 23 23 - Fill: Fill materials, backfilling, and compacting.

1.03 REFERENCE STANDARDS

A. 29 CFR 1926 - U.S. Occupational Safety and Health Standards; current edition.

1.04 REFERENCE STANDARDS

A. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft3 (2,700 kN m/m3)); 2012, with Editorial Revision (2015).

1.05 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
B. Temporary Support and Excavation Protection Plan.
C. Project Record Documents: Record drawings at project closeout according to 01 70 00 - Execution and Closeout Requirements. Show locations of installed support materials left in place, including referenced locations and depths, on drawings.
D. Shoring Installer's Qualification Statement.
E. Field Quality Control Submittals: Document visual inspection of load-bearing excavated surfaces.

1.06 QUALITY ASSURANCE

A. Temporary Support and Excavation Protection Plan:
1. Indicate sheeting, shoring, and bracing materials and installation required to protect excavations and adjacent structures and property.
2. Include drawings and calculations for bracing and shoring.
3. Bracing and shoring design to meet requirements of OSHA's Excavation Standard, 29 CFR 1926, Subpart P.
B. Designer Qualifications: For design of temporary shoring and bracing, employ a Professional Engineer experienced in design of this type of work and licensed in California.
C. Shoring Installer Qualifications: Company specializing in performing the shoring and bracing work of this section with minimum five years of documented experience.

1.07 COORDINATION OF SPECIFICATION REQUIREMENTS

A. Coordinate these Specification Section requirements with specifications included on Drawings. Comply with more stringent requirements and with those requirements of authorities having jurisdiction.
B. Comply in full with the direction (recommendations) given in the Geotechnical Report.

PART 2 PRODUCTS

2.01 MATERIALS

A. Bedding and Fill to Correct Over-Excavation:
1. See Section 31 23 23 for bedding and corrective fill materials at general excavations.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that survey bench mark and intended elevations for the work are as indicated.
B. Survey existing adjacent structures and improvements and establish exact elevations at fixed points to act as benchmarks.
1. Resurvey benchmarks during installation of excavation support and protection systems and notify District if any changes in elevations or positions occur or if cracks, sags, or other damage is evident in adjacent construction.
C. Determine the prevailing groundwater level prior to excavation. If the proposed excavation extends less than 1 foot into the prevailing groundwater, control groundwater intrusion with perimeter drains routed to sump pumps, or as directed by Architect. If the proposed excavation extends more than 1 foot into the prevailing groundwater, control groundwater intrusion with a comprehensive dewatering procedures, or as directed by Geotechnical Engineer.

3.02 PREPARATION

A. Identify required lines, levels, contours, and datum locations.
B. See Section 31 10 00 for clearing, grubbing, and removal of existing debris.
C. Locate, identify, and protect utilities that remain and protect from damage.
D. Protect bench marks, survey control points, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.
E. Grade top perimeter of excavation to prevent surface water from draining into excavation. Provide temporary means and methods, as required, to maintain surface water diversion until no longer needed, or as directed by Architect.

3.03 TEMPORARY EXCAVATION SUPPORT AND PROTECTION

A. Excavation Safety: Comply with OSHA's Excavation Standard, 29 CFR 1926, Subpart P.
1. Excavations in stable rock or in less than 5 feet in depth in ground judged as having no cave-in potential do not require excavation support and protection systems.
2. Depending upon excavation depth, time that excavation is open, soil classification, configuration and slope of excavation sidewalls, design and provide an excavation support and protection system that meets the requirements of 29 CFR 1926, Subpart P:
a. Sloping and benching systems.
b. Support systems, shield systems, and other protective systems.
B. Shoring Design: Comply with State of California Trenching and Shoring Manual issued by Offices of Structure Construction; 2011.
1. Provide all materials and services necessary to properly engineer and construct shoring for excavations. Selection of materials and design of shoring, underpinning and bracing of new and existing structures shall be solely the responsibility of the Contractor.
C. Underpin adjacent structures that could be damaged by excavating work, including utilities and pipe chases.
D. Protect excavations from cave-in and from loose soil and other matter from falling in.
E. Leave excavation support and protection systems, used as formwork or within 10 feet of existing foundations, permanently in place, unless otherwise noted.
1. Cut off top 4 feet below grade, abandon remainder.
F. Excavation support and protection systems not required to remain in place may be removed subject to approval of District or District's Representative.
1. Remove temporary shoring and bracing in a manner to avoid harmful disturbance to underlying soils and damage to buildings, structures, pavements, facilities and utilities.

3.04 EXCAVATING

A. Excavate to accommodate construction operations and paving/site structures.
1. Excavate to the specified elevations.
2. Excavate to the length and width required to safely install, adjust, and remove any forms, bracing, or supports necessary for the installation of the work.
3. Hand trim excavations. Remove loose matter.
4. Excavate subsoil from areas to be filled with topsoil, to construct foundations, footings, slabs on grade, paving and to achieve final finish grades.
5. Over-excavate to working elevations for backfilling and compaction operations.
6. Specific Site requirements:
a. Flatwork/Hardscape/wall foundation and sign structure:
1.a) In areas of proposed concrete flatwork or pavement, provide a minimum over-excavation and recompaction of 1.5 feet below existing grade or 18 inches below The lowest proposed subgrade elevation, whichever is deeper.
1.b) In areas of proposed sign structure and wall foundation , provide a minimum over-excavation and recompaction of 1.5 feet below bottom of the lowest footing or existing grade, whichever is deeper.
2) Extend over-excavation and recompaction a minimum horizontal distance of 2 feet from outside hardscape limits and structure foundation.
3) Proof-roll the bottom of the removal to identify yielding subgrade conditions (for additional removal, if necessary) under the observation of the geotechnical consultant.
4) onsite soil may be used for fill once they are cleaned of all organic material, rock , debris, and irreducible material larger than 6 inches. Import soil shall be equal to, or better than on-site soils in strength, expansion, and compressibility characteristics. All onsite and import soil material shall evaluate and test the import soils in order to confirm the quality of the material. Also, fill and backfill should be placed at, or slightly above optimum moisture in layers with loose thickness not greater than 6 inches. Each layer should be compacted to a minimum of 90% of the maximum dry density obtainable by the ASTM D 1557 test method. The upper one foot of subgrade below areas to be paved should be compacted to minimum of 95% of the maximum dry density.
b. After completion of the removal of existing fill soils and prior to fill placement, scarify the exposed surface to a minimum depth of 6 inches, moisture condition as necessary to near optimum moisture content and recompact using heavy compaction equipment to an unyielding condition.
7. Where excavations are made to a depth greater than that indicated, such additional depth shall be filled with concrete having the same compressive strength as specified for the footing.
a. Correct unauthorized and erroneous excavation at no change in Contract Time or Contract Sum.
B. Notify Architect of unexpected subsurface conditions and discontinue affected Work in area until notified to resume work.
C. Slope banks of excavations deeper than 4 feet to angle of repose or less until shored, per CalOSHA requirements for Type C Soil.
1. Machine slope banks of excavations to minimum 1 to 1 ratio horizontal to vertical or angle of repose, if less, until shored.
a. Exception: If authorized in writing by Geotechnical Engineer.
b. Slope must comply with local codes, ordinances and requirements of agencies having jurisdiction.
c. See Section 00 31 00 - Available Project Information.
D. Do not interfere with 45 degree influence line of bearing splay of foundations.
1. Avoid interference at footings by providing additional width, depth, and other provisions.
E. Remove lumped subsoil, boulders, and rock up to 1/3 cu yd measured by volume.
F. Provide temporary means and methods, as required, to remove all water from excavations until directed by Architect. Remove and replace soils deemed suitable by classification and which are excessively moist due to lack of dewatering or surface water control.

3.05 SUBGRADE PREPARATION

A. See Section 31 23 23 for subgrade preparation at general excavations.

3.06 FILLING AND BACKFILLING

A. Do not fill or backfill until all debris, water, unsatisfactory soil materials, obstructions, and deleterious materials have been removed from excavation.
B. See Section 31 23 23 for fill, backfill, and compaction requirements at general excavations.
C. See Section 31 22 00 for rough and final grading and topsoil replacement requirements.

3.07 REPAIR

A. Correct areas that are over-excavated and load-bearing surfaces that are disturbed; see Section 31 23 23 at no additional cost.

3.08 FIELD QUALITY CONTROL

A. See Section 01 40 00 - Quality Requirements, for general requirements for field inspection and testing.
B. Provide for visual inspection of load-bearing excavated surfaces by Architect before placement of foundations.
C. Scarification, over excavation and all other excavations will be subject to the approval of the Soils Engineer.

3.09 CLEANING

A. Stockpile excavated material to be re-used in area designated on site in accordance with Section 31 22 00.
B. Remove excavated material that is unsuitable for re-use from site.
C. Remove excess excavated material from site.
1. Geotechnical engineer or other consiltant as selected by District to test soils prior to export for disposition.

3.10 PROTECTION

A. Divert surface flow from rains or water discharges from the excavation.
B. Prevent displacement of banks and keep loose soil from falling into excavation; maintain soil stability.
C. Protect open excavations from rainfall, runoff, freezing groundwater, or excessive drying so as to maintain foundation subgrade in satisfactory, undisturbed condition.
D. Protect bottom of excavations and soil adjacent to and beneath foundation from freezing.
E. Keep excavations free of standing water and completely free of water during concrete placement.

END OF SECTION

F EXCAVATION SPECIFICATIONS

SECTION 32 11 23
AGGREGATE BASE COURSES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Aggregate base course.
B. Paving aggregates.
C. Soil sterilization.

1.02 RELATED REQUIREMENTS

A. Section 31 22 00 - Grading: Preparation of site for base course.
B. Section 32 12 16 - Asphalt Paving: Finish and binder asphalt courses.
C. Section 32 13 13 - Concrete Paving: Finish concrete surface course.
D. Section 32 17 13 - Parking Bumpers: Concrete bumpers.

1.03 REFERENCE STANDARDS

A. AASHTO T 180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18 in.) Drop; 2018.
B. ASTM D698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft3 (600 kN-m/m3)); 2012, with Editorial Revision (2015).
C. ASTM D1556/D1556M - Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method; 2015, with Editorial Revision (2016).
D. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft3 (2,700 kN m/m3)); 2012, with Editorial Revision (2015).
E. ASTM D2487 - Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System); 2011.
F. ASTM D6938 - Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth); 2017.
G. SSPWC - Greenbook: Standard Specifications for Public Works Construction; latest adopted edition.

1.04 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
B. Samples: 10 lb sample of each type of aggregate; submit in air-tight containers to testing laboratory.
C. Materials Sources: Submit name of imported materials source.
D. Certificates of Conformance: Aggregate and sterilant materials.
E. Aggregate Composition Test Reports: Results of laboratory tests on proposed and actual materials used.
F. Compaction Density Test Reports.

1.05 QUALITY ASSURANCE

A. Regulatory Requirements: Where reference is made to Standard Specifications, the following shall apply.
1. Perform off-site Work in public rights-of-way in accordance with requirements of authorities having jurisdiction, including ASTM D3763. For conditions not indicated otherwise on Contract Drawings, conform to Standard Details adopted by authorities having jurisdiction.
2. Perform on-site Work as indicated and referenced on Contract Drawings and as specified herein.
B. The quantity of volatile organic compounds (VOC) used in weed killer, tack coat, primer and other materials shall not exceed limits permitted under current regulations of:
1. South Coast Air Quality Management District (AQMD).
C. Source Quality Control: Obtain materials from one source throughout.

1.06 DELIVERY, STORAGE, AND HANDLING

A. When necessary, store materials on site in advance of need.
B. When aggregate materials need to be stored on site, locate where directed by District.
C. Aggregate Storage, General:
1. Separate differing materials with dividers or stockpile separately to prevent intermixing.
2. Prevent contamination.
3. Protect stockpiles from erosion and deterioration of materials.

PART 2 PRODUCTS

2.01 MATERIALS

A. Sub-Base Material: Existing or imported materials as recommended in geotechnical report. Refer to Document 00 31 00 - Available Project Information.
B. Aggregate Type Class II: Coarse or crushed aggregate, conforming to Municipality, SSPWC Section 200-2.2.
C. Coarse Aggregate: Pit run washed stone; free of shale, clay, friable material and debris.
1. Graded in accordance with ASTM D2487 Group Symbol GW.
D. Herbicide: Comply with all applicable environmental protection and hazardous materials laws and regulations .
1. Comply with current EPA acceptable standard and the California Department of Pesticide Regulations for soils sterilant.
2. Comply with the "Healthy Schools Act" as amended in 2014.
3. Obtain product approval from District, prior to purchase and use.
4. Sterilant: Selected as appropriate for the environment in which is it to be placed.
5. Contractor shall be licensed with the State of California to apply sterilant.
6. Sterilant: Commercial grade for commercial application.
7. Payment for soil sterilization: Include full compensation for application and all materials and incidental work required.
8. Application Rate: Follow manufacturer recommendations.
9. Acceptable Manufacturers:
a. Dow AgroSciences; Spike 80DF: www.dowagro.com.
b. Pro-Serve Inc.; Bare-Spot Monobor-Chlorate: www.pro-serveinc.com.
c. Casoron 50W by Uniroyal Chemical Co., Inc.
d. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 SOURCE QUALITY CONTROL

A. See Section 01 40 00 - Quality Requirements, for general requirements for testing and analysis of aggregate materials.
B. Where aggregate materials are specified using ASTM D2487 classification, testing of samples for compliance shall be provided before delivery to site.
C. If tests indicate materials do not meet specified requirements, change material and retest.
D. Provide materials of each type from same source throughout the Work.

PART 3 EXECUTION

3.01 EXAMINATION

A. Establishment of Grades
1. Set grade stakes per Section 01 70 00 - Execution and Closeout Requirements.
2. All work shall conform to the lines, elevations, and grades shown on the Drawings.
a. Use three consecutive points set on the same slope together so that any variation from a straight grade can be detected.
b. Report any such variation to the Architect. Contractor shall be responsible for any error in the grade of the finished work.
3. Grade or location stakes lost or disturbed, shall be reset by the Surveyor at no additional expense to District.
4. Areas having drainage gradients of 2 percent or more, provide elevation stakes, set with instrument, at grid intervals of 25 feet.
a. Intermediate stakes may be set by using a tightly-drawn string line over the tops of adjacent stakes.
b. Grade stakes must be set at all grade breaks, grade changes, etc.
5. Areas having drainage gradients of less than 2 percent; provide elevation stakes, set with instrument, at 10 foot intervals.
a. Grade stakes must be set at all grade breaks, grade changes, etc.
B. Verify that survey bench marks and intended elevations for the work are as indicated.
C. Verify substrate has been inspected, gradients and elevations are correct, and is dry.

3.02 PREPARATION

A. Stockpiling:
1. Clear and level storage sites prior to stockpiling of material.
2. Stockpile all materials, including approved material available from excavation and grading, in the manner and at the locations designated.
3. Aggregates shall be stockpiled on the cleared and leveled areas designated by the Owner Representative to prevent segregation.
4. Materials obtained from different sources shall be stockpiled separately.
B. Soil Sterilant:
1. Sterilize soil areas to receive paving.
2. Apply soil sterilant in accordance with manufacturer's instructions and applicable environmental regulations.
3. Take care to confine application to the areas to be paved. Sterilant shall not be applied within 2 feet of planting areas.
C. Correct irregularities in substrate gradient and elevation by scarifying, reshaping, and re-compacting.
D. Do not place aggregate on soft, muddy, or frozen surfaces.

3.03 INSTALLATION

A. Place and compact aggregate base material in accordance with ASTM D3763, Subsection 301-2. Place aggregate base below curbs and gutters and paving also, compacted to 95 percent at vehicular traffic and 90 percent at pedestrian-only traffic.
B. Application of Base Course:
1. After preparing the subgrade, Avoid all vehicular or machine traffic on the subgrade.
a. Should it be necessary to haul over the prepared subgrade, drag and roll the traveled way as frequently as may be necessary to remove ruts, cuts, and breaks in the surface.
b. Rake and hand tamp all cuts, ruts, and breaks in the surface of the subgrade that are not removed by the above operations.
c. Equip with pneumatic tires all equipment used for transporting materials over the prepared subgrade.
2. Do not permit continued use of sections of prepared subgrade for hauling, so as to cut up or deform it from the true cross-section. Protect the prepared subgrade from all traffic.
3. Maintain the surface in its finished condition until the succeeding layer is placed.
C. Under Bituminous Concrete Paving:
1. It is required that areas of exterior asphalt pavement be underlain by a layer of aggregate base material which meets the requirements, Thickness of base layer is as shown on the Drawings and varies per the Usage Type area.
a. It is required that the upper 12 inches of soils below asphalt pavement base material be over-excavated and consist predominantly of satisfactory soil materials and/or approved imported fill.
1) Engineered Fill: See Section 31 23 23 - Fill.
b. It is required that the exposed bottom surface soils, below overexcavation, be scarified to the recommended depth of 8 inches, moisture conditioned to achieve optimum moisture content, but not higher than 2 percent above optimum, and then re-compacted to a minimum 90 percent relative compaction before any fill materials are placed.
2. The above subgrade preparation recommendations are based on the assumption that soils encountered during field exploration are representative of soils throughout the site.
a. However, there can be unforeseen and unanticipated variations in soils between points of subsurface exploration. For this reason, the actual subgrade preparation will have to be determined on the basis of in-grading observations and testing performed by representatives of the project geotechnical consultant.
3. Provide grade stakes and elevations by a California Licensed Surveyor (LS) for the Geotechnical Engineer.
a. Verify that the over-excavation depths, shown on the construction drawings for asphalt concrete pavement structural sections, have been achieved prior to re-compaction.
4. Correct irregularities by dressing down or filling as may be required, to bring areas to true subgrade elevations.
5. Where filling is required, scarify the subgrade to bond the new material to the in place material; use additional material as required at no additional cost. Subject to the approval of the Architect.
6. Remove excess material from the site to a legal disposal area.
D. Under Portland Cement Concrete Paving:
1. Compact to 95 percent of maximum dry density and 90 percent at pedestrian-only traffic.
E. Place aggregate in maximum 4 inch layers and roller compact to specified density.
F. Level and contour surfaces to elevations and gradients indicated.
G. Add small quantities of fine aggregate to coarse aggregate as appropriate to assist compaction.
H. Add water to assist compaction. If excess water is apparent, remove aggregate and aerate to reduce moisture content.
I. Use mechanical tamping equipment in areas inaccessible to compaction equipment.
J. Apply herbicide to finished surface.

3.04 TOLERANCES

A. Subgrade Tolerances:
1. Subgrade for Pavement: Do not vary more than 0.02 ft..
2. Subgrade for Subbase or Base Material: Do not vary more than 0.04 ft..
3. Variations within the above specified tolerances shall be compensating so that the average grade and cross section specified are met.
B. Flatness: Maximum variation of 1/4 inch measured with 10 foot straight edge.
C. Scheduled Compacted Thickness: Within 1/4 inch.
D. Variation From Design Elevation: Within 1/2 inch.

3.05 FIELD QUALITY CONTROL

A. See Section 01 40 00 - Quality Requirements, for general requirements for field inspection and testing.
B. Compaction density testing shall be performed on compacted aggregate base course in accordance with ASTM D1556 or ASTM D6938.
C. Results will be evaluated in relation to compaction curve determined by testing uncompacted material in accordance with AASHTO T 180, ASTM D698 ("Standard Proctor"), or ASTM D1557 ("modified Proctor").
D. If tests indicate work does not meet specified requirements, remove work, replace and retest.
E. Proof roll compacted aggregate at surfaces that are under slabs-on-grade and paving.

3.06 CLEANING

A. Remove unused stockpiled materials, leave area in a clean and neat condition. Grade stockpile area to prevent standing surface water.
B. Leave borrow areas in a clean and neat condition. Grade to prevent standing surface water.

END OF SECTION

G AGGREGATE BASE COURSES SPECIFICATIONS

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 03-120493 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 06/30/2020

1300 Dove Street, Suite # 100
Newport Beach, CA. 92660
www.littleonline.com

VENTURA COUNTY COMMUNITY COLLEGE DISTRICT

MOORPARK COLLEGE WAYFINDING

7075 MOORPARK COLLEGE, MOORPARK, CA 93021

REGISTERED PROFESSIONAL ENGINEER BARSIN BET GOVARGEZ No. 81751 Exp. 3/31/22 CIVIL STATE OF CALIFORNIA

DSA RESUBMITTAL

04/17/2020

NO.	REASON	DATE

PRINCIPAL IN CHARGE
Barsin Bet Govargez

PROJECT MANAGER
Eman Bermani

DESIGN TEAM
Michael Ledbetter

MOORPARK COLLEGE WAYFINDING

613696000

SPECIFICATIONS

C1.2

SECTION 31 23 23
FILL

PART 1 GENERAL

1.01 SECTION INCLUDES
A. Filling, backfilling, and compacting for footings, paving, and site structures.
B. Filling holes, pits, and excavations generated as a result of removal (demolition) operations.

1.02 RELATED REQUIREMENTS
A. Section 00 31 00 - Available Project Information: Geotechnical report; bore hole locations and findings of subsurface materials.
B. Section 01 57 13 - Temporary Erosion and Sediment Control: Slope protection and erosion control.
C. Section 03 30 00 - Cast-in-Place Concrete.
D. Section 31 22 00 - Grading: Removal and handling of soil to be re-used.
E. Section 31 22 00 - Grading: Site grading.
F. Section 31 23 16 - Excavation: Removal and handling of soil to be re-used.

1.03 DEFINITIONS
A. Finish Grade Elevations: Indicated on drawings.
B. Subgrade Elevations: Indicated on drawings.

1.04 REFERENCE STANDARDS
A. AASHTO T 180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18 in.) Drop; 2018.
B. ASTM D4829 - Standard Test Method for Expansion Index of Soils; 2011.
C. ASTM D1556/D1556M - Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method; 2015, with Editorial Revision (2016).
D. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft3 (2,700 kN m/m3)); 2012, with Editorial Revision (2015).
E. ASTM D2487 - Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System); 2011.
F. DTSC-Clean Fill - California Department of Toxic Substances Control - Clean Imported Fill Material; Current.
G. Greenbook - Greenbook: Standard Specifications for Public Works Construction; latest adopted edition.

1.05 SUBMITTALS
A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
B. Soil Samples: 10 pounds sample of each type of fill; submit in air-tight containers to testing laboratory.
1. Submit samples directly to Geotechnical Engineer for testing and analysis copy transmittals to Architect and District.
C. Materials Sources: Submit name of imported materials source.
D. Fill Composition Test Reports: Results of laboratory tests on proposed and actual materials used, including manufactured fill.
E. Compaction Density Test Reports.
F. Manufacturer's Instructions.
G. Manufacturer's Qualification Statement.
H. Specimen Warranty.
I. Provide proof that all imported materials conform to the requirements of DTSC-Clean Fill Imported Fill Materials for School Sites by proper documentation for the imported materials.

1.06 QUALITY ASSURANCE
A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than ten years of documented experience.
B. Testing Agency Qualifications: Independent firm specializing in performing testing and inspections of the type specified in this section.
C. Copies of Documents at Project Site: Maintain at the project site a copy of each referenced document that prescribes execution requirements.

1.07 DELIVERY, STORAGE, AND HANDLING
A. When necessary, store materials on site in advance of need.
B. When fill materials need to be stored on site, locate stockpiles where agreed to.
1. Separate differing materials with dividers or stockpile separately to prevent intermixing.
2. Prevent contamination.
3. Protect stockpiles from erosion and deterioration of materials.

1.08 WARRANTY
A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.
B. Correct defective Work within a five year period after Date of Substantial Completion.

PART 2 PRODUCTS

2.01 FILL MATERIALS
A. General Fill: Subsoil excavated on-site.
1. Graded.
2. Free of lumps larger than 3 inches, rocks larger than 4 inches, and debris.
3. Complying with ASTM D2487 Group Symbol CL.
B. Structural Fill: Subsoil excavated on-site.
1. Graded.
2. Free of organic matter, debris, and oversize particles (e.g., cobbles, rubble, etc. that are larger than 3 inches, rocks larger than 4 inches. Fill shall contain at least fifty percent of material smaller than 1/4 inch in size.
3. Imported fill materials: The soil shall be tested for potential contamination in accordance with DTSC-Clean Fill protocols. Submit to Geotechnical Engineer.
a. Import sandy soil shall be free of organics, debris and oversize particles (e.g., cobbles, rubble, etc. that are greater than 3 inches in the largest dimension).
b. Additionally, import soils shall not have any corrosion impacts to buried concrete; and be non-expansive (Expansion Index less than 50 per ASTM D4829).
c. Prior to import, geotechnical consultant shall evaluate and test the import soils in order to confirm the quality of the material.
4. On-site soils should only be used as specified in the Soils Report.
5. Complying with ASTM D2487 Group Symbol CL.
C. Concrete for Fill: As specified in Section 03 30 00; compressive strength of 2500 psi.
1. Exception: Concrete used under footings and foundations to correct over-excavation shall be same as for footings and foundation.
D. Granular Fill - Fill Type GM, GW: Coarse aggregate, conforming to Uniform Standard Specifications for Public Works Construction Off-Site Improvements standard.
1. Grade in accordance with ASTM D2487 Group Symbol SP or SW.
G. Topsoil: Topsoil excavated on-site.
1. Unclassified.
a. The soil shall be tested for potential contamination in accordance with DTSC-Clean Fill protocols.
2. Graded.
3. Free of roots, rocks larger than 1/2 inch, subsoil, debris, large weeds and foreign matter.
4. Acidity range (pH) of 5.5 to 7.5.
5. Containing a minimum of 4 percent and a maximum of 25 percent inorganic matter.
6. Complying with ASTM D2487 Group Symbol OH.
7. Limit decaying matter to 5 percent of total content by volume.
H. Type F - Subsoil: Reused, free of rocks larger than 3 inch size, and debris.
1. Existing fill and alluvium or older alluvium may be considered suitable for re-use as compacted fills provided the recommendations of the geotechnical report and observations of the geotechnical engineer are followed.
2. Expansive soils (EI>51) are not be placed with the upper 3 feet of subgrade soils

2.02 ACCESSORIES
A. Geotextile Fabric: Non-biodegradable, non-woven; Geotex 801 manufactured by Propex Geotextile Systems, geotextile.com.

2.03 SOURCE QUALITY CONTROL
A. See Section 01 40 00 - Quality Requirements, for general requirements for testing and analysis of soil material.
B. Where fill materials are specified by reference to a specific standard, test and analyze samples for compliance before delivery to site.
C. If tests indicate materials do not meet specified requirements, change material and retest.
D. Provide materials of each type from same source throughout the Work.
E. Comply with EPA/DTSC-Clean Fill requirements.

PART 3 EXECUTION

3.01 EXAMINATION
A. Verify structural or other backfill materials to be reused or imported are acceptable to the satisfaction of the Geotechnical Engineer. Approval shall be obtained in advance of re-use or importation onto the site.
1. The soil shall be tested for potential contamination in accordance with DTSC-Clean Fill protocols.
2. Provide imported fill materials compatible with on-site soils in addition to being suitable for its intended use with the following criterion, as allowed by the Geotechnical Engineer.
a. Predominantly granular in nature.
b. Containing no rocks larger than 6 inch maximum dimension.
c. Free of organic material (loss on ignition less-than 2 percent).
d. Very low expansion potential (with an Expansion Index less than 21).
e. Low corrosion impact to the proposed improvements.
B. Verify that survey bench marks and intended elevations for the Work are as indicated.
C. Identify required lines, levels, contours, and datum locations.
D. See Section 31 22 00 for additional requirements.
E. Verify subdrainage, dampproofing, or waterproofing installation has been inspected.
F. Verify structural ability of unsupported walls to support imposed loads by the fill.
G. Verify areas to be filled are not compromised with surface or ground water.

3.02 PREPARATION
A. Scarify and proof roll subgrade surface to a depth of 8 inches to identify soft spots.
B. Cut out soft areas of subgrade not capable of compaction in place. Backfill with Greenbook, Type II or concrete fill and compact to density equal to or greater than requirements for subsequent backfill material.
C. Compact subgrade to density equal to or greater than requirements for subsequent fill material.
D. Prior to placement of aggregate base course material at paved areas, compact subsoil to 95 percent of its maximum dry density in accordance with ASTM D1557.
E. Until ready to fill, maintain excavations and prevent loose soil from falling into excavation.

3.03 FILLING
A. Fill to contours and elevations indicated using unfrozen materials.
B. Fill up to subgrade elevations unless otherwise indicated.
1. Place fill soils compacted in horizontal lifts to a relative compaction of 90 percent or more in general accordance with ASTM D1557.
2. Lift thickness for fill soils will vary depending on the type of compaction equipment used but should generally be placed in horizontal lifts not exceeding 8 inches in loose thickness.
3. Place fill soils at slightly above optimum moisture content as evaluated by ASTM D1557.
4. Avoid damage to wet and dry utility lines when compacting fill and subgrade materials.
C. Employ a placement method that does not disturb or damage other work.
1. Do not disturb or damage foundation perimeter drainage and foundation waterproofing and protective cover utilities in trenches.
D. Systematically fill and compact per geotechnical report. Do not fill over porous, wet, frozen or spongy subgrade surfaces.
E. Maintain optimum moisture content of fill materials to attain required compaction density.
F. Granular Fill: Place and compact materials in equal continuous layers not exceeding 6 inches compacted depth.
G. Soil Fill: Place and compact material in equal continuous layers not exceeding 8 inches compacted depth.
1. Expansive soils (EI>20) are not be placed with the upper 3 feet of subgrade soils. CBC Section 1803.5.3.
H. Slope grade away from building minimum 2 inches in 10 feet, unless noted otherwise. Make gradual grade changes. Blend slope into level areas.
I. Correct areas that are over-excavated.
1. Load-bearing foundation surfaces: Fill with concrete.
2. Other areas: Use general fill, flush to required elevation, compacted to minimum 90 or 95 percent of maximum dry density in subgrade zone.
J. Compaction Density Unless Otherwise Specified or Indicated:
1. Under paving, slabs-on-grade, and similar construction: 90 percent of maximum dry density.
2. At other locations: 90 percent of maximum dry density.
K. Reshape and re-compact fills subjected to vehicular traffic.
L. Maintain temporary means and methods, as required, to remove all water while fill is being placed as required, or until directed by the Architect. Remove and replace soils deemed unsuitable by classification and which are excessively moist due to lack of dewatering or surface water control.
M. Remove surplus fill and backfill materials from site.

3.04 FILL AT SPECIFIC LOCATIONS
A. Use general fill unless otherwise specified or indicated.
B. Structural Fill:
1. Use general fill.
2. Fill up to subgrade elevations.
3. Maximum depth per lift: 6 inches, compacted.
4. Compact to minimum 90 percent of maximum dry density.
C. At Footings:
1. Use general fill.
2. Fill up to subgrade elevation.
3. Compact each lift to 90 percent of maximum dry density.
4. Do not backfill against unsupported foundation walls.
5. Backfill simultaneously on each side of unsupported foundation walls until supports are in place.
D. Under Monolithic Paving :
1. Compact subsoil to 90 percent of its maximum dry density before placing fill.
2. Use general fill.
3. Fill up to subgrade elevation.
4. Compact to 90 percent of maximum dry density.
5. See Section 32 11 23 for aggregate base course placed over fill.

3.05 TOLERANCES
A. Top Surface of General Filling: Plus or minus 1 inch from required elevations.
B. Top Surface of Filling Under Paved Areas: Plus or minus 1/2 inch from required elevations.

3.06 FIELD QUALITY CONTROL
A. See Section 01 40 00 - Quality Requirements, for general requirements for field inspection and testing.
1. Laboratory Tests and Analyses: Where backfill is required to be compacted to a specified density, tests for compliance shall be made in accordance with requirements specified in Section 01 40 00 - Quality Requirements.
B. Perform compaction density testing on compacted fill in accordance with ASTM D1556 or ASTM D6938.
1. Field inspections and testing shall be performed and submitted in accordance with requirements specified in Section 01 40 00 - Quality Requirements.
2. Allow testing service to inspect and approve each subgrade and fill layer before further fill, backfill or construction Work is performed.
3. Alternate Density Test Method:
a. Field density tests may also be performed by the nuclear method in accordance with ASTM D6938, providing that calibration curves are periodically checked and adjusted to correlate to tests performed using ASTM D1556/D1556M.
b. In conjunction with each density calibration check, check the calibration curves furnished with the moisture gages in accordance with ASTM D6938.
c. If field tests are performed using nuclear methods, make calibration checks of both density and moisture gages at beginning of Work, on each different type of material encountered, and at intervals as directed by Architect or District's testing and inspection agency.
C. Evaluate results in relation to compaction curve determined by testing uncompacted material in accordance with ASTM D 1557 ("modified Proctor") or AASHTO T 180.
D. Non-compliance: If tests indicate work does not meet specified requirements, remove work, replace and retest.
1. Should tests of fill or backfill indicate non-compliance with required density, Contractor shall over-excavate, recompact and retest until specified density is obtained.
2. Costs and Time associated with remedial Work and retesting shall be in accordance with provisions of the General Conditions.
3. Retesting to demonstrate compliance shall be by a testing laboratory acceptable to District and shall be at Contractor's expense.
E. Frequency of Tests:
1. Footing Subgrade Testing:
a. For each strata of soil on which footings will be placed, perform at least one test to verify required design bearing capacities.
b. Subsequent verification and approval of each footing subgrade may be based on a visual comparison of each subgrade with related tested strata when acceptable to Geotechnical Engineer.
2. Paved Areas and Building Slab Subgrade Testing:
a. Perform at least one field density test of subgrade for every 2,000 sf of paved area or building slab, but in no case fewer than three tests.
b. In each compacted fill layer, perform one field density test for every 2,000 sf of overlaying building slab or paved area, but in no case fewer than three tests.
3. Foundation Wall Backfill Testing: Perform at least two field density tests at locations and elevations as directed.
F. Proof roll compacted fill at surfaces that will be under slabs-on-grade.

3.07 CLEANING
A. See Section 01 74 19 - Construction Waste Management and Disposal, for additional requirements.
B. Remove unused stockpiled materials, leave area in a clean and neat condition. Grade stockpile area to prevent standing surface water.
C. Leave borrow areas in a clean and neat condition. Grade to prevent standing surface water.

END OF SECTION

H GRADING SPECIFICATIONS

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VENTURA COUNTY COMMUNITY COLLEGE DISTRICT

MOORPARK COLLEGE WAYFINDING

7075 MOORPARK COLLEGE, MOORPARK, CA 93021

REGISTERED PROFESSIONAL ENGINEER
BARSIN BET GOVARGEZ
No. 81751
Exp. 3/31/22
CIVIL
STATE OF CALIFORNIA

DSA RESUBMITTAL

04/17/2020

NO.	REASON	DATE

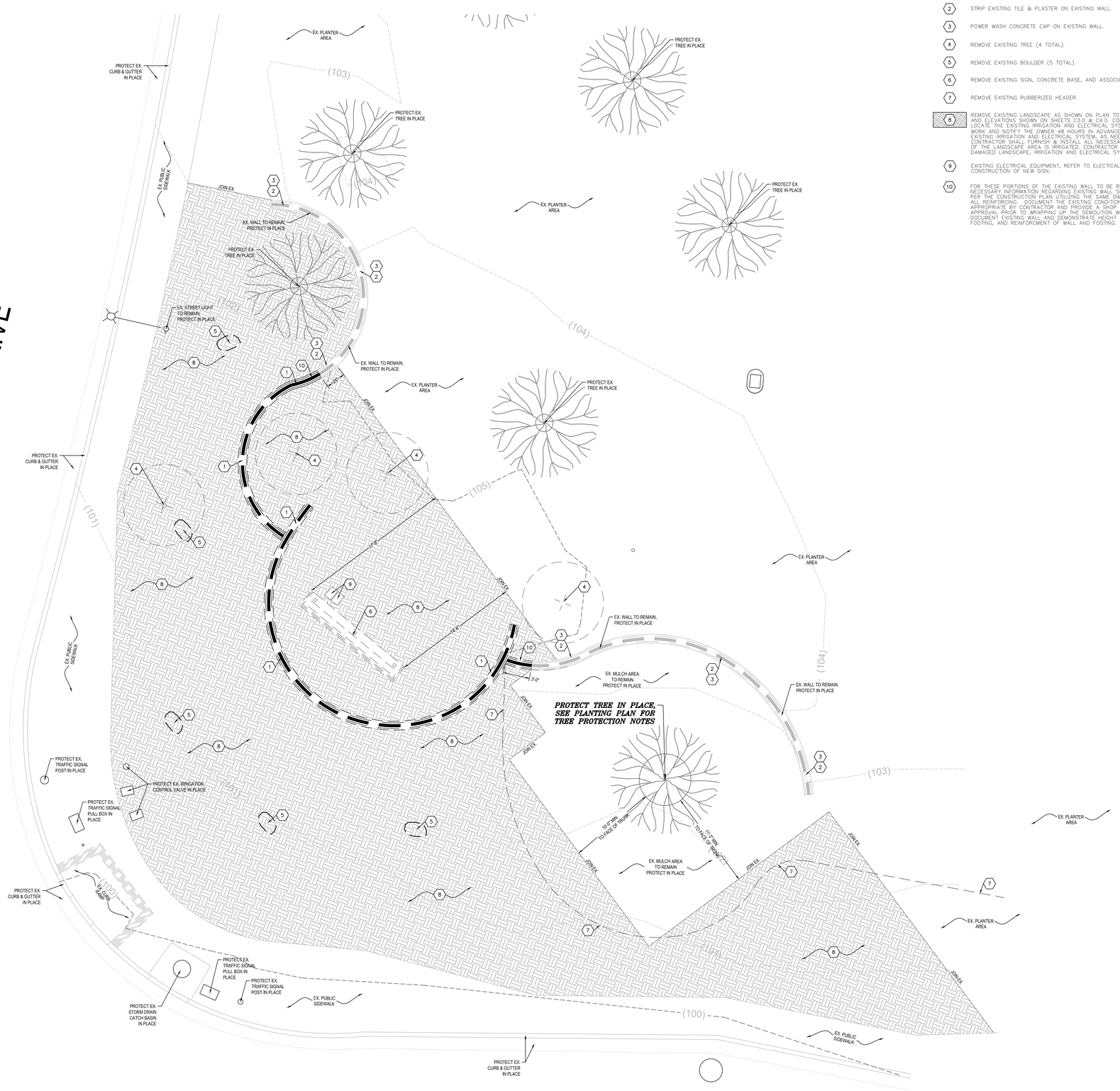
PRINCIPAL IN CHARGE
Barsin Bet Govargez
PROJECT MANAGER
Eman Bermani
DESIGN TEAM
Michael Ledbetter

MOORPARK COLLEGE
WAYFINDING

613696000

SPECIFICATIONS

C1.3



SCALE:1"=5'

DEMOLITION KEYNOTES :

1. REMOVE EXISTING WALL AND ASSOCIATED FOOTING.
2. STRIP EXISTING TILE & PLASTER ON EXISTING WALL.
3. POWER WASH CONCRETE CAP ON EXISTING WALL.
4. REMOVE EXISTING TREE (4 TOTAL).
5. REMOVE EXISTING BOULDER (5 TOTAL).
6. REMOVE EXISTING SIGN, CONCRETE BASE, AND ASSOCIATED FOOTING.
7. REMOVE EXISTING RUBBERIZED HEADER.
8. REMOVE EXISTING LANDSCAPE AS SHOWN ON PLAN TO ACCOMMODATE THE NEW IMPROVEMENTS AND ELEVATIONS SHOWN ON SHEETS C3.0 & C4.0. CONTRACTOR SHALL FIELD VERIFY AND LOCATE THE EXISTING IRRIGATION AND ELECTRICAL SYSTEM THAT IS IN CONFLICT WITH PROPOSED WORK AND NOTIFY THE OWNER 48 HOURS IN ADVANCE FOR WATER SHUT OFF. REMOVE/RELOCATE EXISTING IRRIGATION AND ELECTRICAL SYSTEM, AS NEEDED TO COMPLETE THE NEW WORK. CONTRACTOR SHALL FURNISH & INSTALL ALL NECESSARY MATERIAL TO ENSURE THE REMAINING OF THE LANDSCAPE AREA IS IRRIGATED. CONTRACTOR SHALL REMOVE AND REPLACE EXISTING DAMAGED LANDSCAPE, IRRIGATION AND ELECTRICAL SYSTEM LIKE FOR LIKE.
9. EXISTING ELECTRICAL EQUIPMENT, REFER TO ELECTICAL PLANS FOR DEMOLTION AND RE-ROUTING FOR CONSTRUCTION OF NEW SIGN.
10. FOR THESE PORTIONS OF THE EXISTING WALL TO BE REMOVED, CONTRACTOR SHALL DOCUMENT ALL NECESSARY INFORMATION REGARDING EXISTING WALL SO THAT SMALL PORTIONS OF IT CAN BE REBUILT PER THE CONSTRUCTION PLAN UTILIZING THE SAME DIMENSIONS FOR WALL AND FOOTINGS AS WELL AS ALL REINFORCING. DOCUMENT THE EXISTING CONDITION, BY VISUAL INSPECTION OR X-RAY AS DEEMED APPROPRIATE BY CONTRACTOR AND PROVIDE A SHOP DRAWING BACK TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO WRAPPING UP THE DEMOLITION WORK IN THIS AREA. SHOP DRAWING SHALL DOCUMENT EXISTING WALL AND DEMONSTRATE HEIGHT AND WIDTH OF WALL, DEPTH TO FOOTING, SIZE OF FOOTING, AND REINFORCMENT OF WALL AND FOOTING.

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CONSULTANT

SEAL
PROFESSIONAL ENGINEER — BARSIN BET GOVARGEZ — No. 81751 — Exp. 3/31/22 — CIVIL — STATE OF CALIFORNIA

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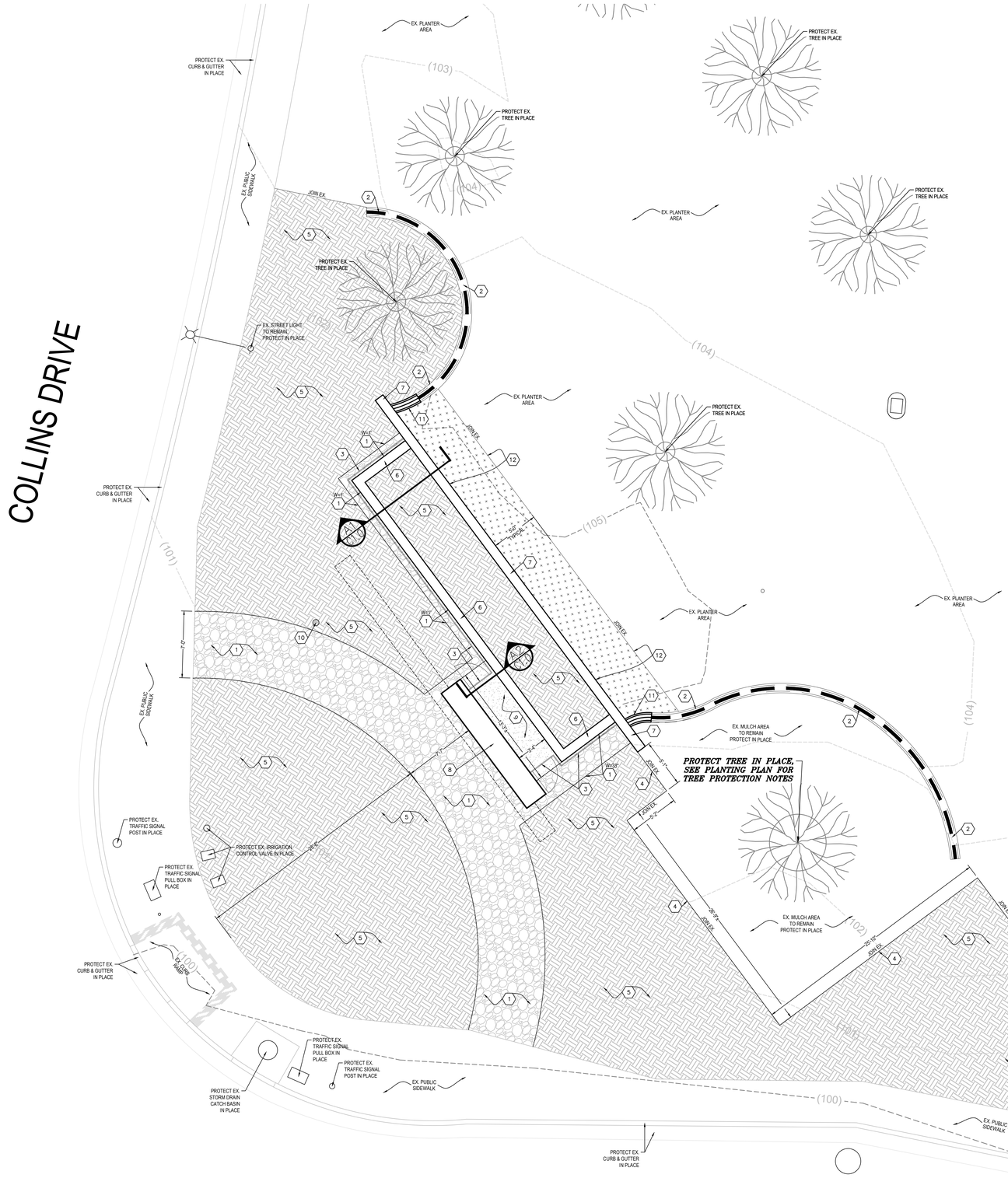
PRINCIPAL IN CHARGE
Barsin Bet Govargez
PROJECT MANAGER
Eman Bermani
DESIGN TEAM
Michael Ledbetter

PROJECT NAME
MOORPARK COLLEGE WAYFINDING

PROJECT NO.
613696000

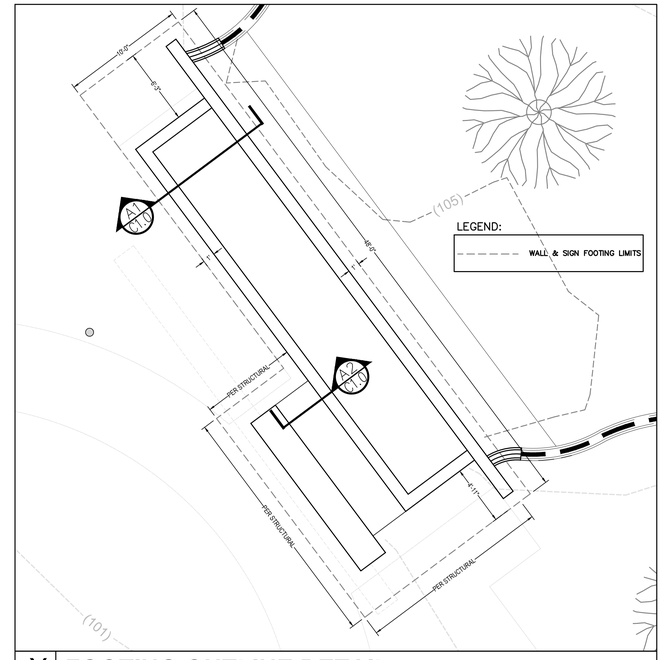
SHEET TITLE
DEMOLITION PLAN

SHEET NUMBER
C2.0



CONSTRUCTION KEYNOTES (INSTALL AND FURNISH):

1. MORTAR SET COBBLE W/ STEEL EDGING, SEE LANDSCAPE PLANS.
2. APPLY NEW STUCCO FINISH TO EXISTING WALL.
3. NEW WOODEN FENCE AND GATE, SEE ARCHITECTURAL PLANS.
4. NEW SHOVEL-CUT EDGE.
5. NEW LANDSCAPE & IRRIGATION, SEE LANDSCAPE PLANS.
6. NEW LOW C.I.P. CONCRETE PLANTER WALL, SEE ARCHITECTURAL PLANS. SEE DETAIL 'X/C3.0' FOR FOOTING OUTLINE.
7. NEW TALL C.I.P. CONCRETE PLANTER WALL, SEE ARCHITECTURAL PLANS. SEE DETAIL 'X/C3.0' FOR FOOTING OUTLINE.
8. NEW MONUMENT SIGN, SEE ARCHITECTURAL PLANS. SEE DETAIL 'X/C3.0' FOR FOOTING OUTLINE.
9. NEW 4" THICK CONCRETE PAVEMENT W/ 4 x 4 W/ 2.9 x 2.9 MESH REINF. PLACED AT MID-HEIGHT ON A MINIMUM 12 INCH THICK LAYER OF SUBGRADE COMPACTED TO 90% OF THE MATERIALS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM-D1557. NATURAL GREY W/ MEDIUM BROOM FINISH. SEE SPECS SECTION 'E/C1.1.'
10. NEW 8" NYLOPLAST DRAIN, SEE SHEET C4.0 FOR MORE INFORMATION.
11. REBUILD THESE PORTIONS OF THE EXISTING WALL. CONTRACTOR SHALL UTILIZE SHOP DRAWING OF ASBUILT CONDITION DOCUMENTED DURING DEMOLITION TO INSTALL A NEW WALL THAT MATCHES THE EXISTING CONDITION LIKE FOR LIKE. INSTALL NEW SECTIONS OF WALL TO MATCH EXISTING BASED ON THE HEIGHT AND WIDTH OF WALL AND FOOTING AND ALL REINFORCEMENT AS SHOWN ON THE APPROVED AS-BUILT SHOP DRAWING. PROVIDE W/ #3X12"L DOWELS INTO ADJACENT NEW AND EXISTING WALLS @ 12" O.C. VERTICALLY. OVER EXCAVATE AND RECOMPACT FOR THE NEW FOOTINGS OF THESE WALLS SHALL MATCH THE REQUIREMENTS OF THE NEW WALL, SEE NOTES ON DETAIL 'A1/C1.0'.
12. AREA BEHIND SIGN TO BE 3" LAYER OF MULCH ONLY, SEE LANDSCAPE PLANS FOR SPEC.



X FOOTING OUTLINE DETAIL

SCALE:1"=5'

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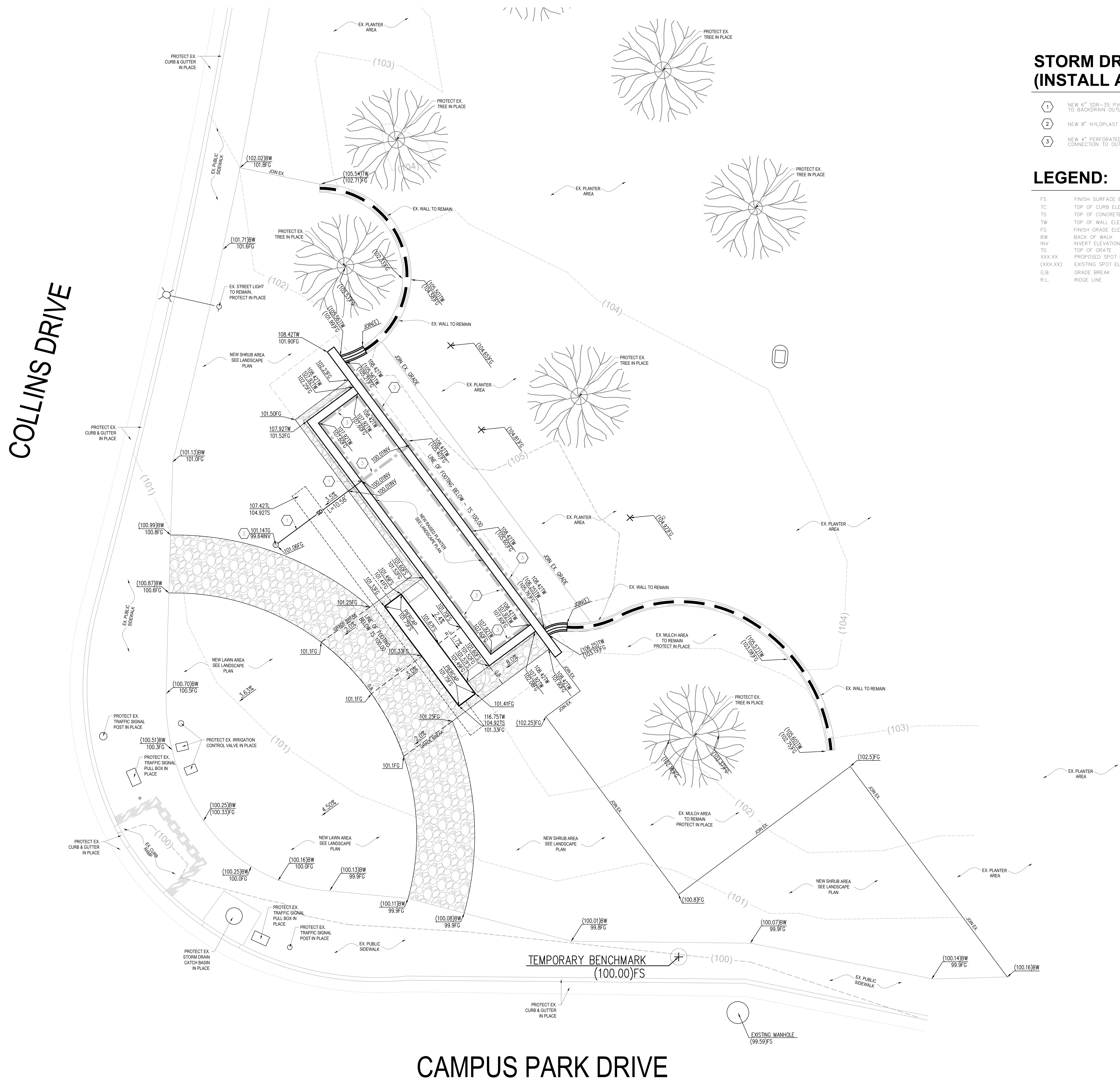
PROJECT MANAGER
Eman Bermani
DESIGN TEAM
Michael Ledbetter

PROJECT NAME
MOORPARK COLLEGE WAYFINDING

PROJECT NO.
613696000

SHEET TITLE
CONSTRUCTION PLAN

SHEET NUMBER
C3.0



SCALE:1"=5'

STORM DRAIN KEYNOTES (INSTALL AND FURNISH):

1. NEW 6" SDR-35 PVC STORM DRAIN PIPE, SEE DETAIL 'A/C1.0' FOR CONNECTION TO BACKDRAIN OUTLET PIPE AT PLANTER WALL.
2. NEW 8" NYLOPLAST DRAIN, SEE DETAIL 'B/C1.0.'
3. NEW 4" PERFORATED SDR-35 PVC STORM DRAIN PIPE, SEE DETAIL 'A/C1.0' FOR CONNECTION TO OUTLET PIPE AS SHOWN.

LEGEND:

FS	FINISH SURFACE ELEVATION
TC	TOP OF CURB ELEVATION
TS	TOP OF CONCRETE SLAB ELEVATION
TW	TOP OF WALL ELEVATION
FG	FINISH GRADE ELEVATION (TOP OF DECORATIVE ROCK GROUT WHERE OCCURS)
BW	BACK OF WALK
INV	INVERT ELEVATION
TG	TOP OF GRATE
XXX.XX	PROPOSED SPOT ELEVATION
(XXX.XX)	EXISTING SPOT ELEVATION
G.B.	GRADE BREAK
R.L.	RIDGE LINE

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PROJECT MANAGER
Eman Bermani
DESIGN TEAM
Michael Ledbetter

PROJECT NAME
MOORPARK COLLEGE WAYFINDING

PROJECT NO.
613696000

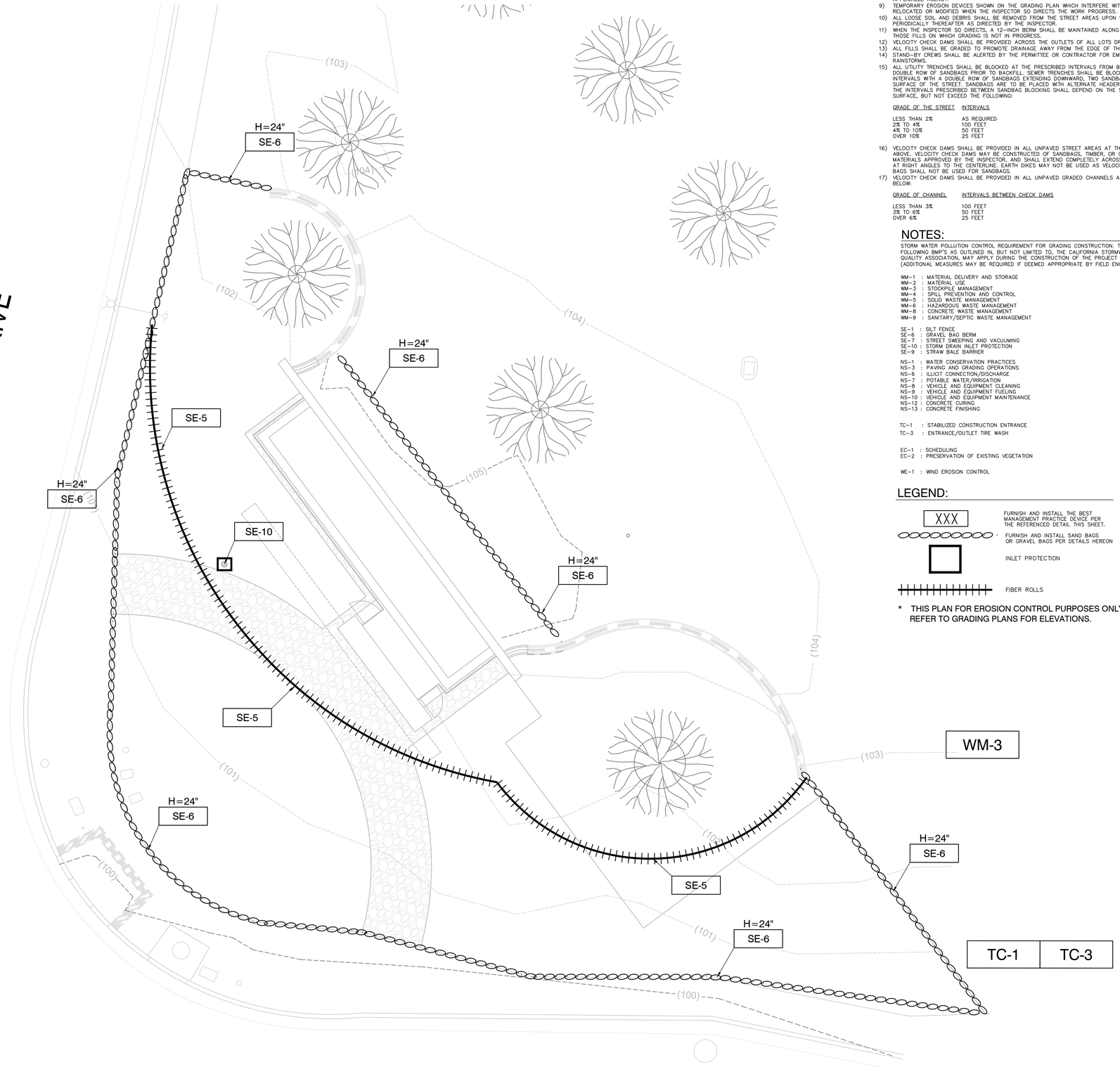
SHEET TITLE
GRADING & STORM DRAIN PLAN

SHEET NUMBER
C4.0

PROVIDE SE-10 BMP AT ALL NEARBY DROP INLETS AND CURB INLETS.

INTERIM GRADING SWPPP REQUIREMENTS

1. FINAL LOCATION OF STAGING PER FIELD CONDITIONS AND PW'S APPROVAL.
2. PROTECT ALL STORM DRAIN INLETS AND CATCH BASINS WITHIN THE WORK AREA SHOWN OR NOT SHOWN HEREON PER "BMP SE-10" HEREON.
3. ANY STOCKPILE WITHIN THE WORK AREA SHALL BE MANAGED PER "BMP WM-3" SHOWN ON THIS PLAN.



EROSION CONTROL NOTES:

1) IN CASE OF AN EMERGENCY, CALL CONSTRUCTION PROJECT MANAGER, AT ----------.
2) A SUFFICIENT SUPPLY OF EMERGENCY WORK SHALL BE AVAILABLE AT ALL TIMES. NECESSARY MATERIALS SHALL BE AVAILABLE ON-SITE AND STOCKPILED AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES OR TO REPAIR ANY DAMAGED EROSION CONTROL MEASURES.
3) EROSION CONTROL DEVICES SHALL NOT BE MOVED OR MODIFIED WITHOUT THE APPROVAL OF THE ARCHITECT.
4) ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY IN THE PERIOD FROM OCTOBER 15 THROUGH APRIL 15, AND AT ANY OTHER PERIOD WHEN THE WEATHER FORECAST INDICATES A GREATER THAN 50% PROBABILITY OF RAIN.
5) AFTER A RAINSTORM, ALL SILT AND DEBRIS SHALL BE REMOVED FROM CHECK BERMS AND DESILTING BASINS. ANY GRADED SLOPE SURFACE PROTECTION MEASURES DAMAGED DURING THE RAINSTORM SHALL ALSO BE REPAIRED IMMEDIATELY.
6) FILL SLOPES AT THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE TOP OF THE SLOPE AT THE CONCLUSION OF EACH WORKING DAY.
7) A SIX-FOOT HIGH PERIMETER FENCE OR A 24-HOUR GUARD SHALL BE POSTED ON THE SITE WHENEVER THE DEPTH OF WATER IN ANY DEVICE EXCEEDS 18 INCHES.
8) THE ENGINEER OF RECORD IS RESPONSIBLE FOR ASSURING THE ACCURACY AND ACCEPTABILITY OF THE WORK. IN THE EVENT OF DISCREPANCIES ARISING DURING CONSTRUCTION, THE ENGINEER OF RECORD SHALL BE RESPONSIBLE FOR PREPARING AN ACCEPTABLE SOLUTION AND REVISING THE PLANS FOR APPROVAL BY THE APPLICABLE AGENCY.
9) TEMPORARY EROSION DEVICES SHOWN ON THE GRADING PLAN WHICH INTERFERE WITH THE WORK SHALL BE RELOCATED OR MODIFIED WHEN THE INSPECTOR SO DIRECTS THE WORK PROGRESS.
10) ALL LOOSE SOIL AND DEBRIS SHALL BE REMOVED FROM THE STREET AREAS UPON STARTING OPERATIONS AND PERIODICALLY THEREAFTER AS DIRECTED BY THE INSPECTOR.
11) WHEN THE INSPECTOR SO DIRECTS, A 12-INCH BERM SHALL BE MAINTAINED ALONG THE TOP OF THE SLOPE OF THOSE FILLS ON WHICH GRADING IS NOT IN PROGRESS.
12) VELOCITY CHECK DAMS SHALL BE PROVIDED ACROSS THE OUTLETS OF ALL LOTS DRAINING INTO THE STREET.
13) ALL FILLS SHALL BE GRADED TO PROMOTE DRAINAGE AWAY FROM THE EDGE OF THE FILL.
14) STAND-BY CREWS SHALL BE ALERTED BY THE PERMITTEE OR CONTRACTOR FOR EMERGENCY WORK DURING RAINSTORMS.
15) ALL UTILITY TRENCHES SHALL BE BLOCKED AT THE PRESCRIBED INTERVALS FROM BOTTOM TO TOP WITH A DOUBLE ROW OF SANDBAGS PRIOR TO BACKFILL. SEWER TRENCHES SHALL BE BLOCKED AT THE PRESCRIBED INTERVALS WITH A DOUBLE ROW OF SANDBAGS EXTENDING DOWNWARD, TWO SANDBAGS FROM THE GRADED SURFACE OF THE STREET. SANDBAGS ARE TO BE PLACED WITH ALTERNATE HEADER AND STRETCHER COURSES. THE INTERVALS PRESCRIBED BETWEEN SANDBAG BLOCKING SHALL DEPEND ON THE SLOPE OF THE GROUND SURFACE, BUT NOT EXCEED THE FOLLOWING:

GRADE OF THE STREET	INTERVALS
LESS THAN 2%	AS REQUIRED
2% TO 4%	100 FEET
4% TO 10%	50 FEET
OVER 10%	25 FEET

16) VELOCITY CHECK DAMS SHALL BE PROVIDED IN ALL UNPAVED STREET AREAS AT THE INTERVALS INDICATED ABOVE. VELOCITY CHECK DAMS MAY BE CONSTRUCTED OF SANDBAGS, TIMBER, OR OTHER EROSION-RESISTANT MATERIALS APPROVED BY THE INSPECTOR, AND SHALL EXTEND COMPLETELY ACROSS THE STREET OR CHANNEL AT RIGHT ANGLES TO THE CENTERLINE. EARTH DIKES MAY NOT BE USED AS VELOCITY CHECK DAMS. PLASTIC BAGS SHALL NOT BE USED FOR SANDBAGS.
17) VELOCITY CHECK DAMS SHALL BE PROVIDED IN ALL UNPAVED GRADED CHANNELS AT THE INTERVALS INDICATED BELOW:

GRADE OF CHANNEL	INTERVALS BETWEEN CHECK DAMS
LESS THAN 3%	100 FEET
3% TO 6%	50 FEET
OVER 6%	25 FEET

18) AFTER SEWER AND UTILITY TRENCHES ARE BACKFILLED AND COMPACTED, THE SURFACES OVER SUCH TRENCHES SHALL BE MOUNDED SLIGHTLY TO PREVENT CHANNELING OF WATER IN THE TRENCH AREA. CARE SHOULD BE EXERCISED TO PROVIDE FOR CROSS FLOWS AT FREQUENT INTERVALS WHERE TRENCHES ARE NOT ON THE CENTERLINE OF A CROWN STREET.
19) EXCEPT WHEN THE INSPECTOR DIRECTS OTHERWISE, ALL DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN RAIN IS FORECAST AND SHALL BE MAINTAINED DURING THE RAINY SEASON (OCTOBER 1 THRU APRIL 15).
20) ALL BASINS AND CHECK DAMS SHALL HAVE THE DEBRIS AND SILT REMOVED AFTER EACH STORM TO RESTORE THEIR CAPACITY.
21) SANDBAG SHALL BE STOCKPILED IN PARKWAY AT INTERVALS SHOWN PLANS, READY TO BE PLACED IN POSITION WHEN RAIN IS FORECAST, OR WHEN THE PUBLIC WORKS INSPECTOR SO DIRECTS.
22) BRUSH AND GROUND COVER MAY NOT BE REMOVED MORE THAN 10-FEET ABOVE FILLS BETWEEN OCTOBER 1 AND APRIL 15.
23) PLACEMENT OF DEVICES TO REDUCE EROSION DAMAGE WITHIN THE PROJECT MUST BE SHOWN ON THE PLAN. STOCKPILE LOCATIONS FOR MATERIALS SHALL ALSO BE INDICATED ON THE DRAWING.
24) OUTLET CONDITIONS FROM THE DESILTING BASIN SHALL NOT EXCEED DOWNSTREAM LIMITATIONS. THE OVERFLOW SHALL BE DESIGNED TO SAFELY PASS 1.5 TIMES THE 25-YEAR PEAK DISCHARGE.
25) A CONSTRUCTION ENTRANCE SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF GRADING. LOCATION OF THE ENTRANCE MAY BE ADJUSTED BY THE CONTRACTOR TO FACILITATE GRADING OPERATIONS. ALL CONSTRUCTION TRAFFIC ENTERING THE PAVED ROAD MUST CROSS THE CONSTRUCTION ENTRANCE. THE CONSTRUCTION ENTRANCE SHALL CONSIST OF A BED OF 3/4" GRAVEL OF THE FOLLOWING MINIMUM DIMENSIONS: 15' WIDE, 30' LONG AND 12" DEEP. THE CONSTRUCTION ENTRANCE SHALL BE REMOVED PRIOR TO PLACING BASE FOR PAVING.
26) ALL SANDBAGS SHALL BE AMERICAN BUILDERS SUPPLY SIZE 18"X30" MADE OF PROPYLENE MATERIAL OR EQUAL, WITH 10X12 WEAVE, 950 DENIER, 1200-HOUR U.V. RATING, OF MILK WHITE COLOR, AND SHOULD HAVE 1000 PER BALE.
27) SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEET FLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSES OR WIND.
28) STOCKPILES OF EARTH AND OTHER CONSTRUCTION RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER.
29) FUELS, OILS, SOLVENTS AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM.
30) NON-STORM WATER RUNOFF FROM EQUIPMENT AND VEHICLE WASHING AND ANY OTHER ACTIVITY SHALL BE CONTAINED AT THE PROJECT SITE.
31) EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON SITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.
32) TRASH AND CONSTRUCTION RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND.
33) SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED SO TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DEPOSITIONS MUST BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
34) ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION MUST BE STABILIZED.

NOTES:

STORM WATER POLLUTION CONTROL REQUIREMENT FOR GRADING CONSTRUCTION. THE FOLLOWING BMP'S AS OUTLINED IN, BUT NOT LIMITED TO, THE CALIFORNIA STORMWATER QUALITY ASSOCIATION, MAY APPLY DURING THE CONSTRUCTION OF THE PROJECT (ADDITIONAL MEASURES MAY BE REQUIRED IF DEEMED APPROPRIATE BY FIELD ENGINEER).

WM-1 : MATERIAL DELIVERY AND STORAGE
WM-2 : MATERIAL USE
WM-3 : STOCKPILE MANAGEMENT
WM-4 : SPILL PREVENTION AND CONTROL
WM-5 : SOLID WASTE MANAGEMENT
WM-6 : HAZARDOUS WASTE MANAGEMENT
WM-8 : CONCRETE WASTE MANAGEMENT
WM-9 : SANITARY/SEPTIC WASTE MANAGEMENT

SE-1 : SILT FENCE
SE-6 : GRAVEL BAG BERM
SE-7 : STREET SWEEPING AND VACUUMING
SE-10 : STORM DRAIN INLET PROTECTION
SE-9 : STRAW BALE BARRIER

NS-1 : WATER CONSERVATION PRACTICES
NS-3 : PAVING AND GRADING OPERATIONS
NS-6 : ILLICIT CONNECTION/DISCHARGE
NS-7 : POTABLE WATER/IRRIGATION
NS-8 : VEHICLE AND EQUIPMENT CLEANING
NS-9 : VEHICLE AND EQUIPMENT FUELING
NS-10 : VEHICLE AND EQUIPMENT MAINTENANCE
NS-12 : CONCRETE CURING
NS-13 : CONCRETE FINISHING

TC-1 : STABILIZED CONSTRUCTION ENTRANCE
TC-3 : ENTRANCE/OUTLET TIRE WASH

EC-1 : SCHEDULING
EC-2 : PRESERVATION OF EXISTING VEGETATION

WE-1 : WIND EROSION CONTROL

LEGEND:

XXX — FURNISH AND INSTALL THE BEST MANAGEMENT PRACTICE DEVICE PER THE REFERENCED DETAIL THIS SHEET.

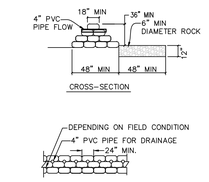
FURNISH AND INSTALL SAND BAGS OR GRAVEL BAGS PER DETAILS HEREON

INLET PROTECTION

FIBER ROLLS

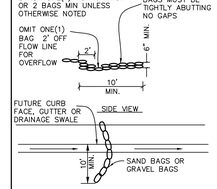
* THIS PLAN FOR EROSION CONTROL PURPOSES ONLY. REFER TO GRADING PLANS FOR ELEVATIONS.

LINEAR SEDIMENT BARRIER



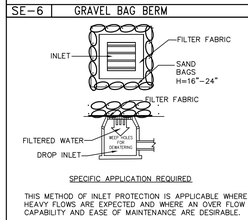
WOVEN FABRIC SANDBAG FILLED WITH COARSE SAND-MIN WEIGHT 40 LBS. OR GRAVEL BAGS

SWALE, GUTTER OR CURB&GUTTER



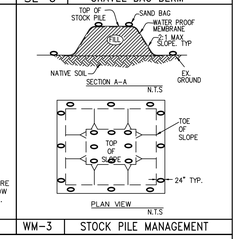
WOVEN FABRIC SANDBAG FILLED WITH COARSE SAND-MIN WEIGHT 40 LBS. OR GRAVEL BAGS

SE-6 | GRAVEL BAG BERM



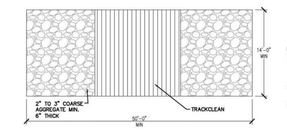
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY FLOWS ARE EXPECTED AND WHERE AN OVER FLOW CAPABILITY AND EASE OF MAINTENANCE ARE DESIRABLE.

SE-6 | GRAVEL BAG BERM

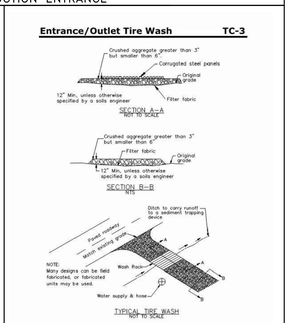


SE-10 | DROP INLET

WM-3 | STOCK PILE MANAGEMENT



TC-1 | STABILIZED CONSTRUCTION ENTRANCE



TC-3 | ENTRANCE/OUTLET TIRE WASH

SCALE:1"=5'

AGENCY REVIEW

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CLIENT NAME

VENTURA COUNTY COMMUNITY COLLEGE DISTRICT

PROJECT NAME

MOORPARK COLLEGE WAYFINDING

7075 MOORPARK COLLEGE, MOORPARK, CA 93021

CONSULTANT

SEAL

ISSUE FOR
DSA RESUBMITTAL

ISSUE DATE
04/17/2020

REVISIONS

NO.	REASON	DATE

PROJECT TEAM

PRINCIPAL IN CHARGE
Barsin Bet Govargez

PROJECT MANAGER
Eman Bermani

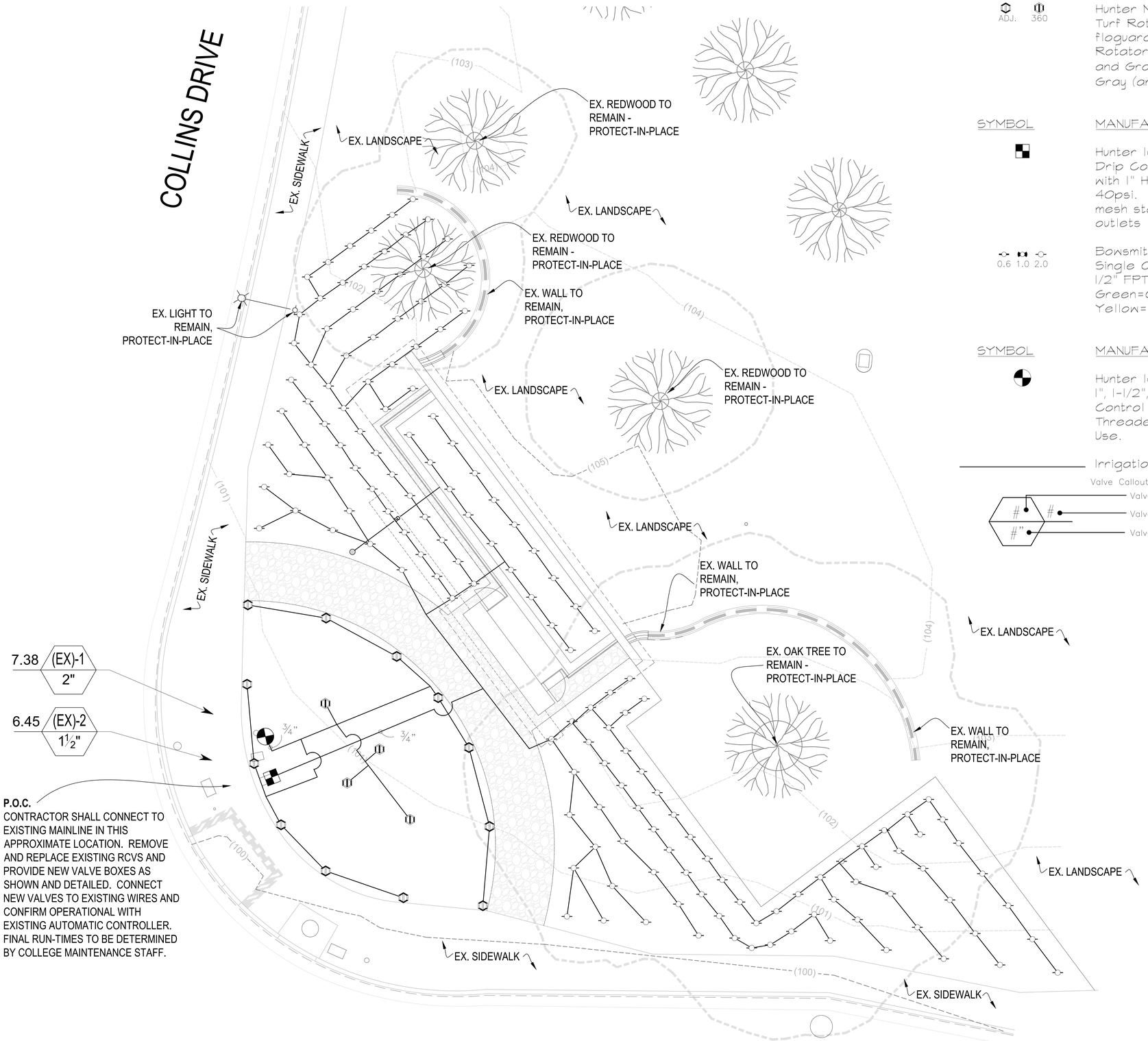
DESIGN TEAM
Michael Ledbetter

PROJECT NAME
MOORPARK COLLEGE WAYFINDING

PROJECT NO.
613696000

SHEET TITLE
EROSION CONTROL PLAN

SHEET NUMBER
C5.0



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IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	PSI
ADJ. 360	Hunter MP800SR PRO5-06-PRS40-CV-F Turf Rotator, 6.0" pop-up with check valve, floguard, pressure regulated to 40 psi, MP Rotator nozzle on PRS40 body. ADJ=Orange and Gray (arc 90-210), 360=Lime Green and Gray (arc 360)	40

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	Hunter ICZ-151-40 Drip Control Zone Kit. 1-1/2" ICV Globe Valve with 1" HY100 filter system. Pressure Regulation: 40psi. Flow Range: 20 GPM to 60 GPM. 120 mesh stainless steel screen. 1-1/2" inlet x dual 1" outlets
0.6 1.0 2.0	Bowsmith SL200 Series Single Outlet Emitter Single Outlet emitter, 0.6gph through 2.0gph flow, 1/2" FPT with barbed elbow outlet. Green=0.6gph, Blue=1.0gph, Red=2.0gph, Yellow=3.0gph.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	Hunter ICV-G 1", 1-1/2", 2", and 3" Plastic Electric Remote Control Valves, Globe Configuration, with NPT Threaded Inlet/Outlet, for Commercial/Municipal Use.

Irrigation Lateral Line: PVC Class 200

IRRIGATION NOTES:

1. ALL LOCAL, MUNICIPAL AND STATE LAWS ARE HEREBY INCORPORATED INTO THESE PLANS AND SHALL BE CARRIED OUT BY THE CONTRACTOR.
3. THE CONTRACTOR IS EXPECTED TO SECURE COPIES OF THE CURRENT ARCHITECTURAL AND ENGINEERING PLANS AND ANIMALIZE THEMSELVES WITH ALL ASPECTS OF THE PROJECT AS IT RELATES TO THEIR SCOPE.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SECURE ANY AND ALL PERMITS REQUIRED TO PERFORM THEIR SCOPE OF WORK.
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES WITHIN THE LIMIT OF WORK PRIOR TO COMMENCING ANY WORK. LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND THE LANDSCAPE ARCHITECT MAKES NO GUARANTEES ABOUT THEIR ACTUAL LOCATIONS. NOTIFY THE OWNER'S AUTHORIZED REPRESENTATIVE IN THE EVENT DISCREPANCIES ARE FOUND BETWEEN THE PLANS AND CONDITIONS IN THE FIELD.
6. THE IRRIGATION DESIGN SHOWN HERE-IN IS DIAGRAMMATIC AND SHOWN FOR GRAPHIC CLARITY ONLY. ALL LATERALS, VALVES, ETC. SHALL BE INSTALLED WITHIN THE LIMIT OF WORK AND LOCATED IN LANDSCAPE AREAS WHERE EVER POSSIBLE. CONTRACTOR WILL BE EXPECTED TO MAKE ADJUSTMENTS IN THE FIELD TO AVOID CONFLICTS WITH PROPOSED PLANTING AND ARCHITECTURAL IMPROVEMENTS.
7. CONTRACTOR SHALL INSTALL ALL PIPE UNDER PAVED AREAS (HARDSCAPE, PARKING LOTS, ETC.) INSIDE SLEEVING AS SHOWN ON THE LEGEND AND SPECIFICATIONS. INSTALL PER DETAILS PROVIDED. AT A MINIMUM, SLEEVES ARE TO BE 2X THE DIAMETER OF THE PIPE OR WIRE BUNDLE CARRIED. SLEEVES SHALL EXTEND 6" MIN. PAST THE EDGE OF PAVED AREAS ABOVE.
8. IRRIGATION HEADS SHALL BE INSTALLED WITH THE NOZZLE, SCREEN, AND ARCS SHOWN ON THE LEGEND. CONTRACTOR IS EXPECTED TO PERFORM MINOR ADJUSTMENTS IN THE FIELD TO LIMIT THE AMOUNT OF OVER-SPRAY ONTO ANY HARDSCAPE ELEMENT. WHERE OCCURS, AND AT NO ADDITIONAL COST TO THE OWNER, CONTRACTOR IS HEREBY DIRECTED TO REPLACE NOZZLES, SCREENS, ETC. WITH MORE APPROPRIATE RADIUS EQUIPMENT TO BETTER FIT ACTUAL FIELD CONDITIONS ENCOUNTERED.
9. DO NOT SHUT DOWN EXISTING SYSTEM LONGER THAN 48 HOURS IN ONE PERIOD. NOTIFY THE SCHOOL DISTRICT AT LEAST 48 HOURS IN ADVANCE OF ANY SUCH SHUTDOWNS. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY IRRIGATION TO MAINTAIN SYSTEM ACTIVE IN OPERATION TO EXISTING LANDSCAPE AREAS AFFECTED OUTSIDE THE PROJECT WORK AREA BY ANY SUCH SHUTDOWNS.
10. MAINTAIN A SET OF 'AS-BUILT' DRAWINGS ON SITE DURING CONSTRUCTION AND DELIVER TO ARCHITECT AND DISTRICT PROJECT MANAGER AT CLOSE OF PROJECT.

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7075 CAMPUS ROAD
MOORPARK, CA 93021

CONSULTANT

SEAL
LICENSED LANDSCAPE ARCHITECT
CHARLES A. LEDBETTER
4/30/21
STATE OF CALIFORNIA

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DSA RESUBMITTAL

ISSUE DATE
04/17/2020

REVISIONS

NO.	REASON	DATE

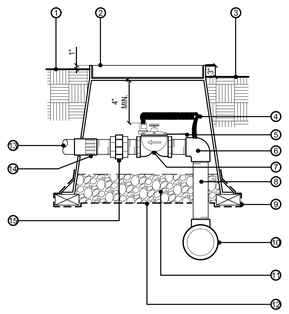
PROJECT TEAM
PRINCIPAL IN CHARGE
Barsin Bet Govargez
PROJECT MANAGER
Raymond Gamo
DESIGN TEAM
Michael Ledbetter

PROJECT NAME
MOORPARK COLLEGE WAYFINDING

PROJECT NO.
613696000

SHEET TITLE
IRRIGATION PLAN AND LEGEND

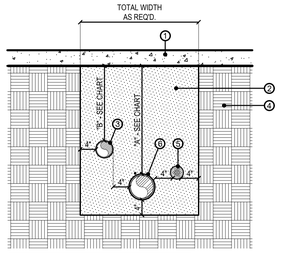
SHEET NUMBER
L1.0



1. FINISH GRADE IN TURF AREAS
2. PLASTIC RECTANGULAR VALVE BOX WITH BOLT DOWN COVER, USE STAINLESS BOLT, NUT, AND WASHER. BOX TO BE PLACED AT RIGHT ANGLE TO HARDSCAPE EDGE. HEAT BRAND "RCV" AND CONTROL STATION # ONTO LID.
3. FINISH GRADE IN SHRUB AREAS
4. 24" WIRE LOOP
5. VALVE ID TAG
6. SCH. 80 PVC THREADED ELL
7. CONTROL VALVE, SEE LEGEND FOR SPECS
8. SCH 80 PVC NIPPLES (TYP). LENGTH AS REQUIRED
9. (4) BRICK SUPPORTS
10. IRRIGATION MAINLINE
11. 3/4" ROCK GRAVEL 2 CUBIC FEET
12. LANDSCAPE FABRIC
13. LATERAL
14. SCH. 80 PVC FEMALE ADAP.
15. SCH. 80 UNION

NOTES:
a. ALL THREADED CONNECTIONS TO HAVE TEFLON TAPE OR PASTE.

D REMOTE CONTROL VALVE
N.T.S.

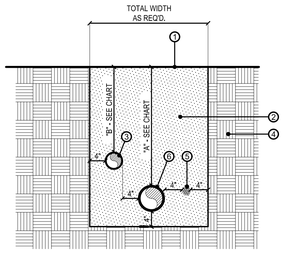


1. PAVING
2. SAND BACKFILL COMPACTED TO THE DENSITY OF EXISTING SOIL
3. LATERAL LINE SEE LEGEND FOR SPECS
4. UNDISTURBED SOIL
5. CONTROL WIRE SEE LEGEND FOR SPECS
6. MAINLINE SLEEVE, SEE LEGEND FOR SPECS

PEDESTRIAN PAVEMENT	A	B
2" TO 12" SIZE	36"	18"
VEHICULAR PAVEMENT	A	B
2" TO 12" SIZE	42"	30"

PVC SLEEVES TO BE TWICE THE DIAMETER OF THE PIPE OR WIRE BUNDLE CARRIED.

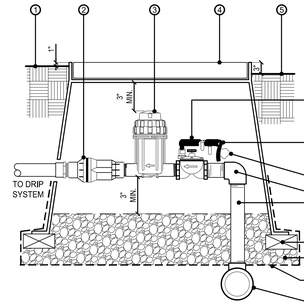
C SLEEVING
N.T.S.



1. FINISH GRADE
2. CLEAN COMPACTED BACKFILL
3. LATERAL LINE - SEE PLANS AND LEGEND
4. UNDISTURBED SOIL
5. CONTROL WIRES, SEE SPECS.
6. MAINLINE - SEE PLANS AND LEGEND

DIMENSION	A	B
1/2" TO 2-1/2" IN SIZE	24"	18"
3" IN SIZE	30"	
4" AND LARGER	36"	

B TRENCHING
N.T.S.



1. FINISH GRADE IN TURF AREAS
2. PRESSURE REGULATOR, PART OF CONTROL ZONE KIT
3. BASKET STRAINER, PART OF CONTROL ZONE KIT PER LEGEND.
4. PLASTIC RECTANGULAR (JUMBO VALVE BOX(S) WITH BOLT DOWN COVER, USE STAINLESS BOLT, NUT, AND WASHER, BOX TO BE PLACED AT RIGHT ANGLE TO HARDSCAPE EDGE. HEAT BRAND "RCV" AND CONTROL STATION # ONTO LID.
5. FINISHED GRADE IN SHRUB AREAS
6. REMOTE CONTROL VALVE, SEE LEGEND FOR SPECS.
7. 24" WIRE LOOP WITH DRI-SPLICE CONNECTORS (1 OF 2)
8. VALVE ID TAG
9. SCH. 80 PVC TxT ELL
10. SCH 80 PVC NIPPLES LENGTH AS REQ.. (1 OF 2)
11. (4) BRICK SUPPORTS
12. 3/4" ROCK, 2 CUBIC FEET
13. LANDSCAPE FABRIC
14. IRRIGATION MAINLINE OR MANIFOLD SUPPLY

NOTES:
a. ALL THREADED CONNECTIONS TO HAVE TEFLON TAPE OR PASTE.
b. INSTALL VALVE BOX EXTENSIONS AS REQUIRED TO ACHIEVE PROPER VALVE INSTALLATION AT MAINLINE DEPTH.

A DRIP ZONE CONTROL KIT
N.T.S.

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CONSULTANT

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EDWARD A. LEDBETTER
4/30/21
STATE OF CALIFORNIA

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PRINCIPAL IN CHARGE
Barsin Bet Govargez
PROJECT MANAGER
Raymond Gamo
DESIGN TEAM
Michael Ledbetter

PROJECT NAME
MOORPARK COLLEGE
WAYFINDING

PROJECT NO.
613696000

SHEET TITLE
IRRIGATION DETAILS

SHEET NUMBER
L2.0

SECTION 02810 - UNDERGROUND IRRIGATION SYSTEM
PART 1 - GENERAL

1.1. RELATED DOCUMENTS:

1.1.1. DRAWINGS AND GENERAL PROVISIONS OF CONTRACT APPLY TO WORK OF THIS SECTION.

1.2. DESCRIPTION OF WORK:

1.2.1. THE WORK CONSISTS OF FURNISHING LABOR, TOOLS, MACHINERY, MATERIALS, AND PROCESSES REQUIRED TO COMPLETE THE IRRIGATION SYSTEM DESCRIBED HEREIN AND SHOWN ON THE DRAWINGS.

1.2.2. THE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS TO INDICATE AND SPECIFY A COMPLETE IRRIGATION SYSTEM INSTALLED READY FOR USE WITHOUT FURTHER COST IN LABOR OR MATERIALS TO THE OWNER.

1.3. QUALITY ASSURANCE:

1.3.1. SUBCONTRACT WORK TO A SINGLE FIRM SPECIALIZING IN IRRIGATION WORK. CONTRACTOR SHALL POSSESS ALL LICENSES AND PERMITS REQUIRED PERFORMING THE WORK OF THIS CONTRACT INCLUDING A C-27 LANDSCAPING LICENSE.

1.4. SUBMITTALS:

1.4.1. THE CONTRACTOR SHALL FURNISH THE ARTICLES, EQUIPMENT, MATERIALS OR PROCESSES SPECIFIED BY NAME IN THE DRAWINGS AND SPECIFICATIONS. NO SUBSTITUTION WILL BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL BY THE LANDSCAPE ARCHITECT, OR THE OWNER'S AUTHORIZED REPRESENTATIVE.

1.4.2. THE CONTRACTOR SHALL SUBMIT TO THE LANDSCAPE ARCHITECT CATALOG DATA AND FULL DESCRIPTIVE LITERATURE FOR APPROVAL OF ITEMS DIFFERENT THAN THOSE SPECIFIED.

1.4.3. EQUIPMENT OR MATERIALS INSTALLED OR FURNISHED WITHOUT THE PRIOR APPROVAL OF THE LANDSCAPE ARCHITECT MAY BE REJECTED AND THE CONTRACTOR REQUIRED TO REMOVE SUCH MATERIALS FROM THE SITE AT HIS OWN EXPENSE.

1.4.4. APPROVAL OF ANY ITEM, ALTERNATE OR SUBSTITUTE INDICATES ONLY THAT THE PRODUCT(S) APPARENTLY MEET THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS ON THE BASIS OF THE INFORMATION OR SAMPLES SUBMITTED.

1.4.5. MANUFACTURER'S WARRANTIES SHALL NOT RELIEVE THE CONTRACTOR OF HIS LIABILITY UNDER THE GUARANTEE. SUCH WARRANTY SHALL ONLY SUPPLEMENT THE GUARANTEE.

1.5. GUARANTEE:

1.5.1. FURNISH GUARANTEE IN ACCORDANCE WITH THE GENERAL CONDITIONS, FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE - AT THE CONCLUSION OF THE MAINTENANCE PERIOD - A COMPLETE WATER IRRIGATION SYSTEM, INCLUDING NON-SETTLING OF THE BACKFILL IN TRENCHES WHICH, IF OCCURS, SHALL BE CORRECTED, INCLUDING REPAIRS AND/OR REPLACEMENT OF ANY MATERIAL DAMAGED THEREBY OR THEREFROM.

1.5.2. MANUFACTURER'S WARRANTIES SHALL NOT RELIEVE THE CONTRACTOR OF HIS LIABILITY UNDER THE GUARANTEE. SUCH WARRANTY SHALL ONLY SUPPLEMENT THE GUARANTEE.

PART 2 - PRODUCTS

2.1. MATERIALS:

2.1.1. PRESSURE PIPE: COMPLY WITH FOLLOWING:

2.1.1.1. PVC PLASTIC PRESSURE LINES: FOR PIPING UPSTREAM OF REMOTE CONTROL VALVES AND QUICK COUPLERS. ALL TWO (2) INCHES AND LARGER SHALL BE CLASS 315 POLYVINYL CHLORIDE (PVC) SIMPSON OR APPROVED EQUAL. ALL ONE AND ONE-HALF (1-1/2) INCHES AND SMALLER SHALL BE TYPE I, GRADE 2, DESIGNATED AS PVC 1220, SCHEDULE 40.

2.1.1.2. NON-PRESSURE PIPE: (DOWNSTREAM FROM REMOTE CONTROL VALVES): COMPLY WITH FOLLOWING:

2.1.2. PLASTIC NON-PRESSURE LINES: FOR PIPING DOWNSTREAM OF REMOTE CONTROL VALVES, TYPE 1, GRADE 2 (IMPACT MODIFIED), AS DESIGNATED AS PVC 1220, CLASS 200, (SDR21), CONFORMING TO COMMERCIAL STANDARDS CS256-63.

2.1.3. IDENTIFICATION: FURNISH PLASTIC PIPE CONTINUOUSLY AND PERMANENTLY MARKED WITH FOLLOWING INFORMATION: MANUFACTURER'S NAME OR TRADE MARK, SIZE, CLASS AND TYPE OF PIPE, WORKING PRESSURE AT 73.4 DEGREES F., AND NATIONAL SANITATION FOUNDATION (NSF) RATING.

PIPE FITTINGS AND CONNECTIONS: COMPLY WITH FOLLOWING:

2.2. FITTINGS AND CONNECTIONS:

2.2.1. POLYVINYL CHLORIDE PIPE FITTINGS AND CONNECTIONS: TYPE II, GRADE 1, SCHEDULE 40, , HIGH IMPACT MOLDED FITTINGS, MANUFACTURED FROM VIRGIN COMPOUNDS AS SPECIFIED FOR PIPING TAPERED SOCKET OR MOLDED THREAD TYPE, SUITABLE FOR EITHER SOLVENT WELD OR SCREWED CONNECTIONS. MACHINE THREADED FITTINGS AND PLASTIC SADDLE AND FLANGE FITTINGS ARE NOT ACCEPTABLE. FURNISH FITTINGS PERMANENTLY MARKED WITH FOLLOWING INFORMATION: NOMINAL PIPE SIZE, TYPE AND SCHEDULE OF MATERIAL AND NATIONAL SANITATION FOUNDATION (NSF) SEAL OF APPROVAL. PVC FITTING SHALL CONFORM TO ASTM D2464 AND D2466 AND BE SUITABLE FOR NON-POTABLE WATER USE.

2.2.2. FLEXIBLE RISERS SHALL BE OF LINE SIZE IPS, PVC PLASTIC THREADED ADAPTERS SECURELY HELD TO APPROXIMATELY 4.6" LONG SYNTHETIC RUBBER OR FLEX-VINYL HOSE SHANKS, 85 POUND MINIMUM. KING BROS., EXCALIBRE OR EQUAL.

2.2.3. SOLVENT CEMENTS SHALL COMPLY WITH ASTM D2564. SOCKET JOINTS SHALL BE MADE PER RECOMMENDED PROCEDURES FOR JOINING PVC PLASTIC PIPE AND FITTINGS WITH PVC SOLVENT CEMENT BY THE PIPE AND FITTING MANUFACTURER AND PROCEDURES OUTLINED IN THE APPENDIX OF ASTM D2564.

2.2.4. THREAD LUBRICANT SHALL BE TEFLON RIBBON-TYPE, OR APPROVED EQUAL, SUITABLE FOR THREADED INSTALLATIONS AS PER MANUFACTURER'S RECOMMENDATIONS.

2.3. VALVES: MANUFACTURER'S STANDARD, OF TYPE AND SIZE INDICATED, AND AS FOLLOWS:

2.3.1. REMOTE CONTROL VALVES SHALL BE OF THE TYPE AND SIZE DESIGNATED ON THE DRAWINGS.

2.3.2. QUICK COUPLER VALVES (EXISTING)

2.3. SPRINKLER HEADS:

2.3.1. SPRINKLER HEADS SHALL BE OF THE TYPES AND SIZES WITH DIAMETER (OR RADIUS) OF THROW, PRESSURE, NOZZLE DISCHARGE AND/OR OTHER DESIGNATIONS INDICATED ON THE DRAWINGS. ALL SPRINKLER HEADS OF THE SAME TYPE AND SIZE SHALL BE OF THE SAME MANUFACTURER.

2.4. VALVE BOXES:

2.4.1. FOR REMOTE CONTROL VALVES: 10" X 19" NOM. PLASTIC VALVE BOX WITH TOP UNLESS NOTED OTHERWISE ON DRAWINGS.

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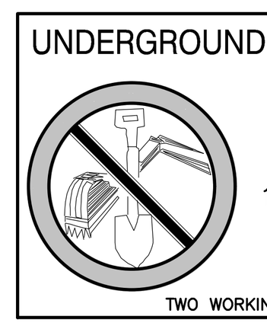

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PART 3 - EXECUTION

3.1. SYSTEM DESIGN:

3.1.1. ALL SCALED DIMENSIONS ARE APPROXIMATE. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON THE SITE PRIOR TO PROCEEDING WITH WORK UNDER THIS CONTRACT.

3.1.2. THE CONTRACTOR SHALL LOCATE AND MARK ALL EXISTING UTILITIES SUCH AS POWER, TELEPHONE, DOMESTIC WATER, WATER, AND TILE DRAINS. THE CONTRACTOR SHALL TAKE EXTREME CARE WHEN EXCAVATING OR WORKING IN THESE AREAS AND COORDINATION AND COOPERATION BETWEEN THE OWNER'S REPRESENTATIVE AND THE CONTRACTOR IS REQUIRED AS THE WORK PROGRESS TO THE AREA. CONTRACTOR SHALL GIVE 24 HOURS NOTICE TO REPRESENTATIVE AS WORK PROGRESSES TO UNDERGROUND UTILITY AREAS. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ANY UTILITIES.

3.1.3. SHOULD UTILITIES NOT LOCATED OR MARKED BE FOUND DURING EXCAVATION, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE OWNER AND SHALL DISCONTINUE WITH WORK IN THE AREA, EXCEPT NECESSARY EMERGENCY WORK, TO REPAIR OR PREVENT DAMAGE UNTIL INSTRUCTIONS ARE GIVEN TO THE CONTRACTOR BY THE OWNER'S REPRESENTATIVE.

3.1.4. FAILURE TO NOTIFY THE OWNER OF DISCOVERY OF SUCH UTILITIES OR DAMAGE THERETO WILL RESULT IN THE CONTRACTOR BEING LIABLE FOR ANY AND ALL DAMAGE CAUSED TO THE UTILITIES AS A RESULT OF HIS ACTIONS.

3.1.5. THE CONTRACTOR SHALL, BEFORE STARTING WORK ON THE IRRIGATION SYSTEM, CAREFULLY NOTE ALL FINISH GRADES IN ORDER TO SATISFY HIMSELF THAT HE MAY PROCEED WITH THE WORK AND TO RESTORE FINISH GRADES TO ORIGINAL CONTOURS BEFORE COMPLETION.

3.1.6. THE INSTALLATION OF ALL IRRIGATION MATERIALS, INCLUDING PIPE, SHALL BE COORDINATED WITH THE LANDSCAPE DRAWINGS TO AVOID INTERFERING WITH THE TREES, SHRUBS, OR OTHER PLANTING.

3.1.7. LAY OUT SPRINKLER HEADS AND MAKE ANY MINOR ADJUSTMENTS REQUIRED DUE TO DIFFERENCE BETWEEN SITE AND DRAWINGS. ANY SUCH DEVIATIONS IN LAYOUT SHALL BE WITHIN THE INTENT OF THE ORIGINAL DRAWINGS, AND WITHOUT ADDITIONAL COST TO THE OWNER. WHEN DIRECTED BY THE OWNER, THE LAYOUT SHALL BE APPROVED BEFORE INSTALLATION.

3.1.8. DO NOT WILLFULLY INSTALL THE SPRINKLER SYSTEM AS INDICATED ON THE DRAWING WHEN IT IS OBVIOUS IN THE FIELD THAT PREVIOUSLY UNKNOWN OBSTRUCTIONS OR GRADE DIFFERENCES EXIST, THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. SUCH OBSTRUCTIONS OR DIFFERENCES SHOULD BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT.

3.1.9. WATER SUPPLY: THE CONTRACTOR SHALL CONNECT TO THE EXISTING IRRIGATION SYSTEM AS INDICATED ON THE DRAWINGS.

3.1.10. WORKMANSHIP AND PROCEDURE: THE ROUTING OF THE PRESSURE SUPPLY LINES AS INDICATED ON THE DRAWINGS IS DIAGRAMMATIC. LOCATE ALL PRESSURE SUPPLY LINES IN PLANTING AREAS. CROSS PERPENDICULAR UNDER PAVEMENT IN A SLEEVE AS DESCRIBED IN THESE SPECIFICATIONS.

3.2. INSTALLATION:

3.2.1. GENERAL: UNLESS OTHERWISE INDICATED, COMPLY WITH REQUIREMENTS OF UNIFORM PLUMBING CODE.

3.2.1.1. EXCAVATION OF TRENCHES: EXCAVATE TRENCHES, PREPARE SUB-GRADE AND BACKFILL TO LINE AND GRADE WITH SUFFICIENT ROOM FOR PIPES FITTINGS, TESTING AND INSPECTING OPERATIONS. DO NOT BACKFILL UNTIL THE PIPE SYSTEM HAS BEEN SUBJECTED TO A HYDROSTATIC TEST AS SPECIFIED.

3.2.1.2. DEPTH OF TRENCH:

3.2.1.2.1. POLYVINYL CHLORIDE PRESSURE LINE............18" MIN.
3.2.1.2.2. POLYVINYL CHLORIDE NON-PRESSURE LINE....12" MIN.

3.2.1.3. SUBSOIL SHALL BE FREE OF ALL ROCKS OVER ONE (1) INCH DIAMETER, DEBRIS, AND LITTER PRIOR TO USE AS BACKFILL.

3.2.1.4. REPAIR ANY LEAKS AND REPLACE ALL DEFECTIVE PIPE OR FITTINGS UNTIL LINES MEET TEST REQUIREMENTS. DO NOT COVER ANY LINES UNTIL THEY HAVE BEEN CHECKED AND APPROVED FOR TIGHTNESS, QUALITY OF WORKMANSHIP AND MATERIALS.

3.2.1.5. BACKFILL TRENCHES, AFTER APPROVAL OF PIPING, WITH SUITABLE AND APPROVED MATERIAL, TAMPING SOIL AROUND PIPE AND THOROUGHLY COMPACTING ALL TRENCH FILLS UNTIL 90% COMPACTION HAS BEEN ACHIEVED.

3.2.1.6. BACKFILL MATERIAL SHALL BE AN APPROVED SOIL, FREE FROM ROCKS AND CLODS. PROVIDE BACKFILL UNDER, AROUND AND ABOVE TOP OF PIPE FOR PVC PLASTIC PIPE AND BRASS PIPING.

3.2.2. INSTALLATION OF POLYVINYL CHLORIDE PIPE:

3.2.2.1. BECAUSE OF THE NATURE OF PLASTIC PIPE AND FITTINGS, EXERCISE CAUTION IN HANDLING, LOADING AND STORING, TO AVOID DAMAGE.

3.2.2.2. THE PIPE AND FITTINGS SHALL BE STORED UNDER COVER UNTIL USING, AND SHALL BE TRANSPORTED IN A VEHICLE WITH A BED LONG ENOUGH TO ALLOW THE LENGTH OF PIPE TO LAY FLAT SO AS NOT BE SUBJECTED TO UNDUE BENDING OR CONCENTRATED EXTERNAL LOAD AT ANY POINT.

3.2.2.3. ANY PIPE THAT HAS BEEN DENTED OR DAMAGED SHALL BE DISCARDED UNLESS SUCH DENT OR DAMAGED SECTION IS CUT OUT AND PIPE REJOINED WITH A COUPLING.

3.2.2.4. TRENCH DEPTH SHALL BE AS SPECIFIED ABOVE FROM THE FINISH GRADE TO THE TOP OF THE PIPE. THE BOTTOM OF THE TRENCH SHALL BE FREE OF ROCKS, CLODS, AND OTHER SHARP-EDGED OBJECTS.

3.2.2.5. PIPE ENDS AND FITTINGS SHALL BE WIPED WITH "MEK" PRIMER, OR APPROVED EQUAL, BEFORE WELDING SOLVENT IS APPLIED. WELDED JOINTS SHALL BE GIVEN A MINIMUM OF 15 MINUTES TO SET BEFORE MOVING OR HANDLING. ALL FIELD CUTS SHALL BE BEVELED TO REMOVE BURRS AND EXCESS MATERIAL BEFORE FITTING AND GLUING TOGETHER.

3.2.2.6. PIPE SHALL BE SNAKED FROM SIDE-TO-SIDE OF TRENCH BOTTOM TO ALLOW FOR EXPANSION AND CONTRACTION.

3.2.2.7. CENTER LOAD PIPE WITH SMALL AMOUNT OF BACKFILL TO PREVENT ARCHING AND SLIPPING UNDER PRESSURE. LEAVE JOINTS EXPOSED FOR SITE OBSERVATION DURING TESTING.

3.2.2.8. NO WATER SHALL BE PERMITTED IN THE PIPE UNTIL SITE OBSERVATION HAS BEEN COMPLETED AND A PERIOD OF AT LEAST 24 HOURS HAS ELAPSED FOR SOLVENT WELD SETTING AND CURING.

3.2.2.9. PLASTIC TO METAL JOINTS SHALL BE MADE WITH PLASTIC MALE ADAPTERS, METAL NIPPLE HAND TIGHTENED, PLUS ONE TURN WITH A STRAP WRENCH.

3.2.2.10. PLASTIC TO PLASTIC JOINTS: SOLVENT-WELD, USING SOLVENT RECOMMENDED BY PIPE MANUFACTURER ONLY.

3.2.2.11. SOLVENT-WELD JOINTS: ASSEMBLE PER MANUFACTURER'S RECOMMENDATIONS.

3.2.3. NOT USED

3.2.4. REMOTE CONTROL WIRING:

3.2.4.1. DIRECT BURIAL CONTROL WIRE SIZES: AS SHOWN AND SPECIFIED HEREIN BEFORE.

3.2.4.2. PROVIDE ONE CONTROL WIRE AND ONE COMMON GROUND WIRE TO SERVICE EACH VALVE IN SYSTEM. PROVIDE 4-FOOT MINIMUM EXPANSION LOOP AT EACH VALVE TO PERMIT REMOVAL AND MAINTENANCE OF VALVES.

3.2.4.3. INSTALL CONTROL WIRES AT LEAST 12" BELOW FINISH GRADE AND MINIMUM OF 4" FROM ANY PIPE OR FITTINGS EXCEPT AT TERMINAL POINTS.

3.2.4.4. INSTALL CONTROL WIRES AND IRRIGATION PIPING IN COMMON TRENCHES WHEREVER POSSIBLE.

3.2.4.5. IN CASE OF DAMAGE TO ANY COMMON OR CONTROL WIRE, CONTRACTOR IS TO RUN AN EXTRA COMMON AND CONTROL WIRE ON EACH LEG OF MAINLINE TO THE FARTHEST RCV BACK TO THE CONTROLLER.

3.2.4.6. CONTROL WIRE SPLICES: ALLOW ONLY ON RUNS OF MORE THAN 300-FEET, SPLICES AS FOLLOWS:

3.2.4.6.1. STRIP OFF MINIMUM OF 2-1/2" OF INSULATION FROM EACH WIRE.

3.2.4.6.2. TWIST ON SCOTCHLOK ELECTRICAL SPRING CONNECTOR, MINIMUM FOUR COMPLETE TURNS.

3.2.4.6.3. SEAL CONNECTOR IN EPOXY RESIN.

3.2.4.6.4. TAPE COMPLETED SPLICE WITH SCOTCH 33 ELECTRICAL TAPE.

3.2.4.7. NUMBERING AND TAGGING: IDENTIFY DIRECT BURIAL CONTROL WIRES FROM AUTOMATIC VALVES TO TERMINAL STRIPS OF CONTROLLER AT TERMINAL STRIP BY TAGGING WIRE WITH NUMBER OF CONNECTED VALVES.

3.2.6. REMOTE CONTROL VALVES:

3.2.6.1. INSTALL REMOTE CONTROL VALVES IN LOCATIONS APPROXIMATELY AS SHOWN ON THE DRAWINGS, WITH A COVER OF 8 INCHES MINIMUM OVER TOP OF FLOW CONTROL STEM. INSTALL A UNION TYPE CONNECTION. FIT WITH PLASTIC VALVE BOX AND COVER.

3.2.6.2. EACH REMOTE CONTROL VALVE SHALL BE TAGGED WITH "CHRISTY TAG" INDICATING CONTROLLER NUMBER AND SEQUENCE NUMBER.
3.2.7. VALVE BOX:

3.2.7.1. INSTALL VALVE BOXES AS SHOWN ON DETAIL. INSTALL NO MORE THAN ONE VALVE PER BOX.

3.2.7.2. VALVE BOX LIDS SHALL BE AND BRANDED AS SPECIFIED ON DETAILS.

3.2.8. SPRINKLER HEADS:

3.2.8.1. ALL SPRINKLER HEADS SHALL BE INSTALLED AS PER DETAILS SHOWN.

3.2.8.2. NOZZLE SIZE OF ALL HEADS SHALL BE ADJUSTED TO SUIT ANY PARTICULAR CONDITIONS OF THE AREA. THIS SHALL BE DONE AFTER THE SYSTEM HAS BEEN THOROUGHLY TESTED, IMMEDIATELY AFTER WRITTEN NOTIFICATION BY THE LANDSCAPE ARCHITECT TO DO SO.

3.2.9. QUICK COUPLER ASSEMBLY: (EXISTING, P.I.P.)

3.2.10. FLUSHING OF SYSTEMS:

3.2.10.1. AFTER PIPING AND RISERS ARE IN PLACE, BUT PRIOR TO THE INSTALLATION OF THE SPRINKLER HEADS, A FULL HEAD OF WATER SHALL BE USED TO FLUSH OUT THE SYSTEM. AFTER SYSTEM IS THOROUGHLY FLUSHED, CAP ALL RISERS.

3.2.10.2. CONNECTION TO MAIN: CONNECT TO EXISTING IRRIGATION SYSTEM SERVING OVERALL CAMPUSE IN APPROXIMATE LOCATION AS INDICATED ON THE PLANS.

3.2.11. TESTING:

3.2.11.1. GENERAL: NOTIFY ARCHITECT/ENGINEER IN WRITING WHEN TESTING WILL BE CONDUCTED. CONDUCT TESTS IN PRESENCE OF ARCHITECT/ENGINEER.

3.2.11.2. PRESSURE TEST

3.2.11.2.1.ALL PRESSURE LINES SHALL BE TESTED UNDER HYDROSTATIC PRESSURE OF 125 LBS. PER SQUARE INCH AND ALL NON-PRESSURE LINES SHALL BE TESTED UNDER THE EXISTING STATIC PRESSURE AND BOTH ARE PROVEN WATERTIGHT. (CONTRACTOR TO SUPPLY ALL EQUIPMENT NEEDED FOR TESTING.)

3.2.11.2.2.PRESSURE SHALL BE SUSTAINED IN THE LINES FOR NOT LESS THAN FOUR HOURS. IF LEAKS DEVELOP, THE JOINTS SHALL BE REPLACED AND THE TEST REPEATED UNTIL THE ENTIRE SYSTEM IS PROVEN WATERTIGHT.

3.2.11.2.3.TESTS SHALL BE OBSERVED AND APPROVED BY THE LANDSCAPE ARCHITECT AND/OR OWNER PRIOR TO BACKFILL. BACKFILLING TRENCHES PRIOR TO INSPECTION WILL NOT BE ALLOWED AND ALL PREMATURELY FILLED TRENCHES SHALL BE SUBJECT TO REOPENING AS DIRECTED BY THE LANDSCAPE ARCHITECT.

3.2.11.3. COVERAGE TESTING: PERFORM OPERATIONAL TESTING AFTER HYDROSTATIC TESTING IS COMPLETED, BACKFILL IS IN PLACE, AND SPRINKLER HEADS ADJUSTED TO FINAL POSITION.

3.2.11.4. AFTER COMPLETION OF LANDSCAPE WORK, CAREFULLY ADJUST HEADS SO THEY WILL BE FLUSH WITH LAWN AREAS OR NOT MORE THAN 1/2" ABOVE FINISH GRADE IN GROUNDCOVER AREA.

3.3. SITE OBSERVATION VISITS BY THE ARCHITECT:

3.3.1. IN ALL CASES WHERE SITE OBSERVATION VISITS OF THE IRRIGATION SYSTEM WORK IS REQUIRED AND/OR WHERE PORTIONS OF THE WORK ARE SPECIFIED TO BE PERFORMED UNDER THE DIRECTION AND/OR SITE OBSERVATION OF THE ARCHITECT OR HIS REPRESENTATIVE, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AT LEAST THREE (3) WORKING DAYS IN ADVANCE OF THE TIME SUCH SITE OBSERVATION AND/OR DIRECTION IS REQUIRED.

3.3.2. SITE OBSERVATION WILL BE REQUIRED FOR THE FOLLOWING PARTS OF THE WORK:

3.3.2.1. FINAL SITE OBSERVATION VISIT BY THE ARCHITECT AND PERFORMANCE TEST SHALL BE AT THE SAME TIME AS THE FINAL SITE OBSERVATION OF THE SPECIFIED LANDSCAPE MAINTENANCE PERIOD WORK.

3.4. RECORD DRAWINGS:

3.4.1. BEFORE FINAL ACCEPTANCE OF WORK, THE CONTRACTOR SHALL PROVIDE A RECORD SET OF DRAWINGS SHOWING THE SPRINKLER SYSTEM WORK. INFORMATION SHALL BE ON BROWN LINE SEPIA TRANSPARENCIES FOR REPRODUCTION PURPOSES.

3.4.2. ANY CHANGES IN LOCATION OF ITEMS OR TYPE OF INSTALLATIONS FROM THAT SHOWN ON DRAWINGS SHALL BE SO INDICATED ON THE RECORD DRAWINGS.

3.4.3. VALVES SHALL BE NUMBERED AND CORRESPONDING NUMBERS SHALL BE SHOWN ON THE RECORD DRAWINGS.

3.4.4. ALL REMOTE CONTROL VALVES, SHUT-OFF VALVES, QUICK COUPLER VALVES SHALL BE LOCATED BY MEASURED DIMENSIONS. DIMENSIONS SHALL BE GIVEN TO PERMANENT OBJECTS AND SHALL BE TO THE NEAREST ONE-HALF FOOT.

3.4.5. ON THE INSIDE SURFACE OF THE COVER OF EACH AUTOMATIC CONTROLLER, PREPARE AND MOUNT A COLOR-CODED CHART SHOWING THE VALVES, MAINLINE, AND SPRINKLER HEADS SERVICED BY THAT PARTICULAR CONTROLLER. ALL VALVES SHALL BE NUMBERED TO MATCH THE OPERATION SCHEDULE AND THE DRAWINGS. ONLY THOSE AREAS CONTROLLED BY THAT CONTROLLER SHOULD BE SHOWN. THIS CHART SHALL BE A PLOT PLAN, ENTIRE OR PARTIAL, SHOWING BUILDING, WALKS, ROADS AND WALLS. A PHOTOSTATIC PRINT OF THIS PLAN, REDUCED AS NECESSARY AND LEGIBLE IN ALL DETAILS, SHALL BE MADE TO A SIZE THAT WILL FIT INTO THE CONTROLLER COVER. THIS PRINT SHALL BE APPROVED BY THE ARCHITECT AND SHALL BE HERMETICALLY SEALED BY PLASTIC. THIS PLAN SHALL THEN BE SECURED TO THE BACK OF THE ENCLOSURE DOOR.

3.4.6. IMMEDIATELY UPON THE INSTALLATION OF ANY BURIED PIPE OR EQUIPMENT, THE CONTRACTOR SHALL INDICATE ON THE DRAWINGS THE LOCATIONS OF SAID EQUIPMENT. DIMENSIONS SHALL BE GIVEN FROM PERMANENT OBJECTS SUCH AS BUILDINGS, SIDEWALKS, CURBS AND DRIVEWAYS.

END OF SECTION 02810

AGENCY REVIEW

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 03-120493 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 06/30/2020

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CLIENT NAME

VENTURA COUNTY COMMUNITY COLLEGE DISTRICT

PROJECT NAME

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7075 CAMPUS ROAD
MOORPARK, CA 93021

CONSULTANT

SEAL

LICENSED LANDSCAPE ARCHITECT
MICHAEL A. LEDBETTER 5553
SIGNATURE
4/30/21
RENEWAL DATE
4/17/20
DATE
STATE OF CALIFORNIA

ISSUE FOR

DSA RESUBMITTAL

ISSUE DATE

04/17/2020

REVISIONS

NO.	REASON	DATE

PROJECT TEAM

PRINCIPAL IN CHARGE
Barsin Bet Govargez

PROJECT MANAGER
Raymond Gamo

DESIGN TEAM
Michael Ledbetter

PROJECT NAME

MOORPARK COLLEGE
WAYFINDING

PROJECT NO.

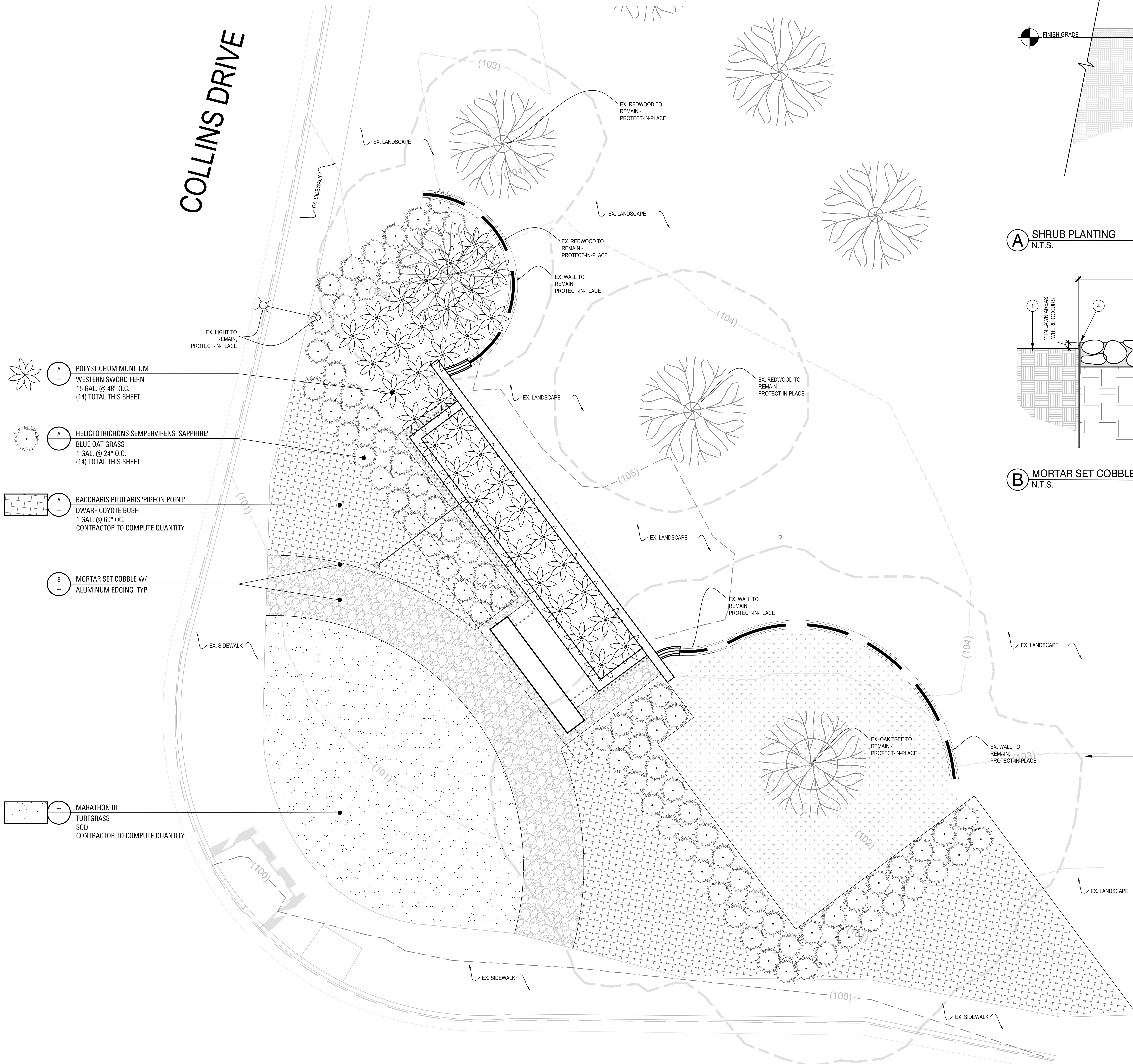
613696000

SHEET TITLE

IRRIGATION
SPECIFICATIONS

SHEET NUMBER

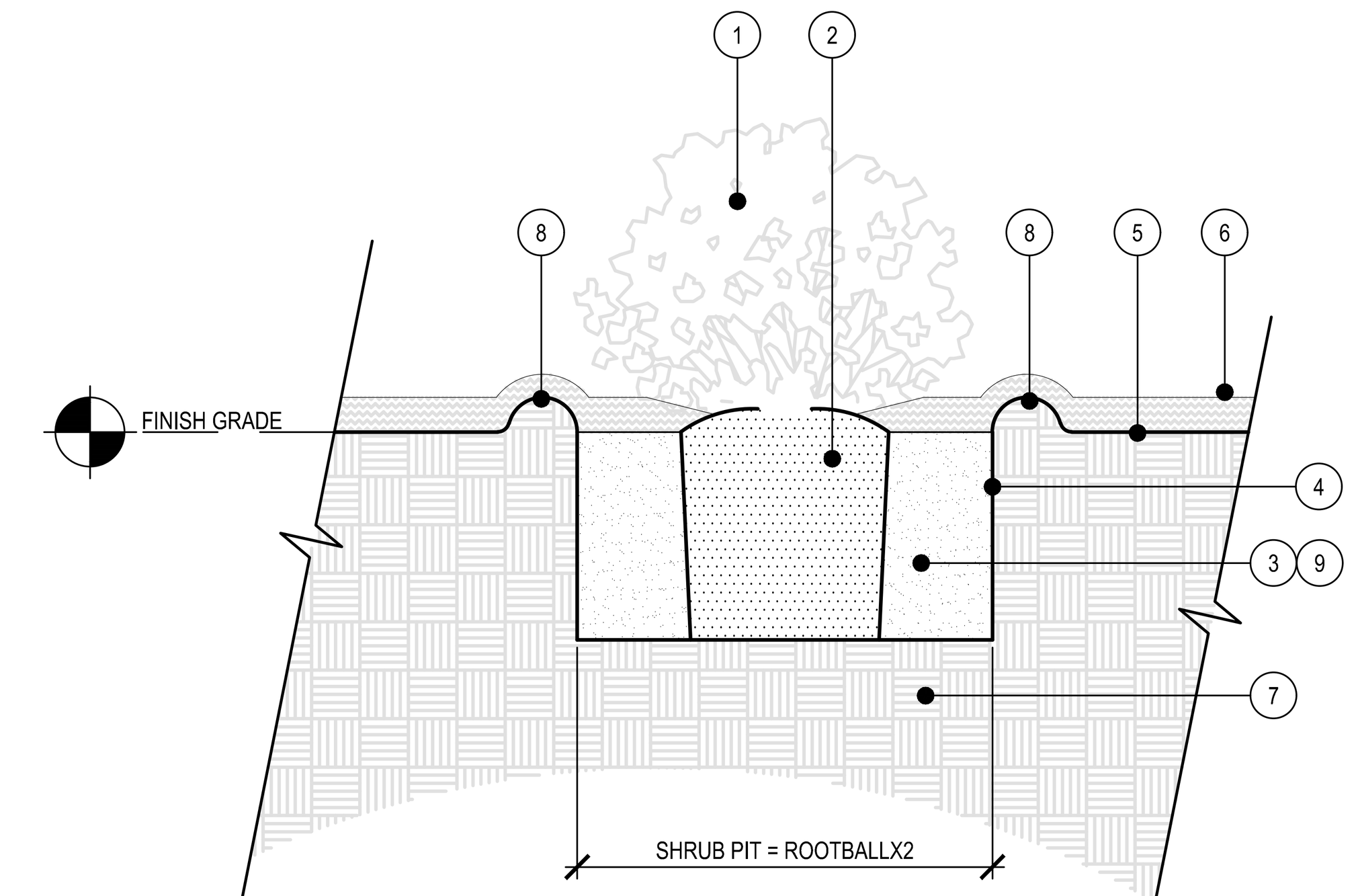
L2.1



CAMPUS PARK DRIVE

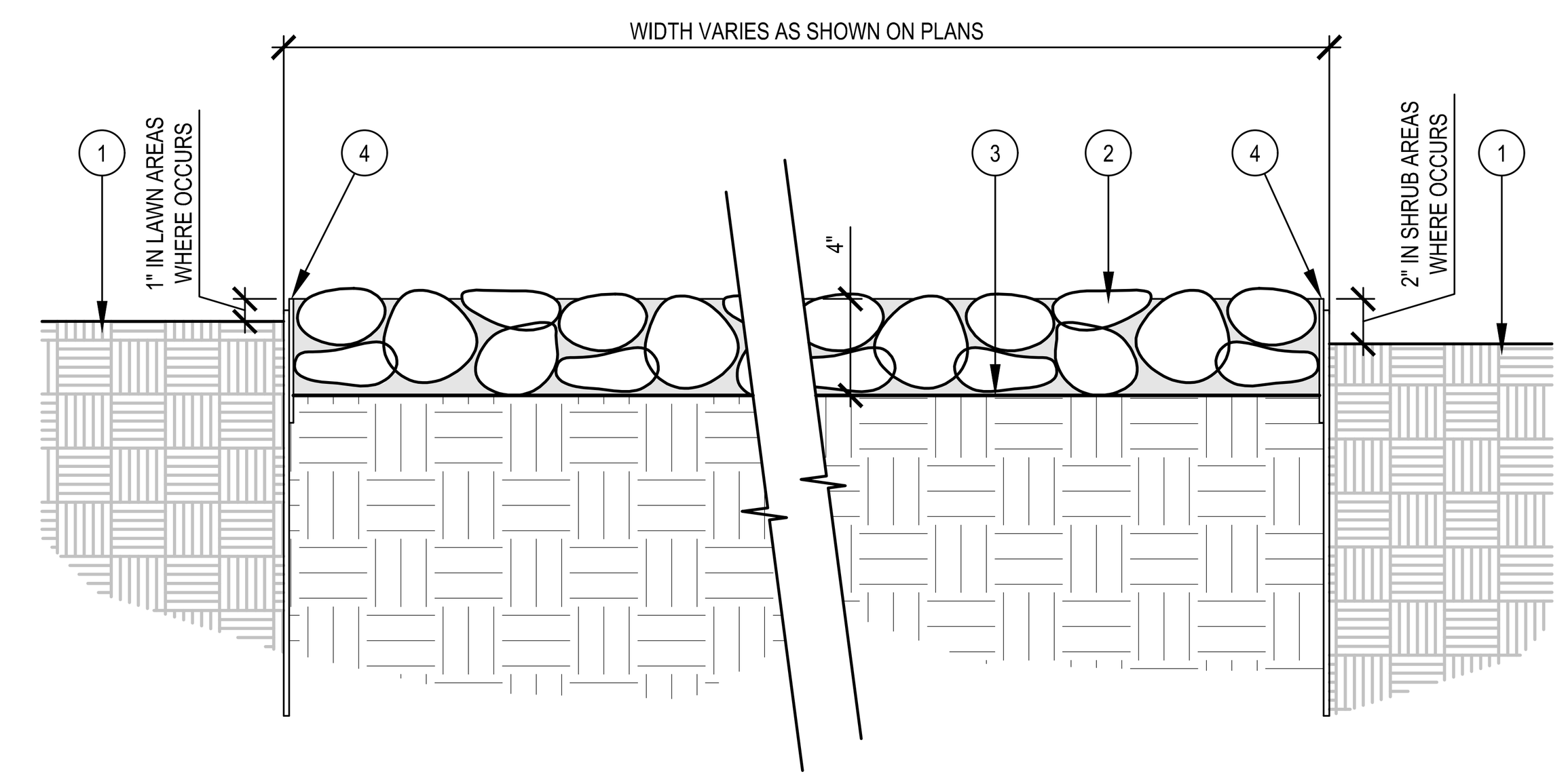
UNDERGROUND SERVICE ALERT
call: TOLL FREE
1-800-422-4133
TWO WORKING DAYS BEFORE YOU DIG

SCALE:1"=5'



1. SHRUB PER PLAN - CENTER IN PIT, SET LEVEL TYPICAL.
2. ROOTBALL - SET 2" ABOVE FINISH GRADE
3. AMENDED BACKFILL
4. SCARIFY BOTTOM AND SIDES OF PLANTING PIT, TYPICAL.
5. FINISH GRADE
6. MULCH
7. NATIVE UNDISTURBED SOIL
8. WATERING BASIN
9. PLANT TABLETS (3) PER SHRUB

A SHRUB PLANTING
N.T.S.



1. ADJACENT FINISH GRADE PER PLAN.
2. 4"-6" MEXICAN BLACK BEACH COBBLE HAND SET WITH DARK GREY MORTAR.
3. COMPACTED SUBGRADE - ROLLED FLAT
4. 3/16" THICK ALUMINUM LANDSCAPE EDGING, SHALL BE 'SURE-LOC' OR APPROVED EQUAL. 5.5" DEEP W/ 18" STAKES. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

PROVIDE 4'X4' MOCK-UP IN THE FIELD FOR REVIEW AND APPROVAL PRIOR TO COMMENCING REST OF COBBLE INSTALLATION. ANY MORTAR SET COBBLE INSTALLED WITHOUT PRIOR APPROVAL WILL BE SUBJECT TO REMOVAL AND REPLACEMENT AT CONTRACTOR'S EXPENSE.

B MORTAR SET COBBLE
N.T.S.

PLANTING NOTES:

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FURNISH PLANT MATERIAL THAT IS FREE OF PESTS AND DISEASE. ANY PLANT MATERIAL FOUND AT THE SITE EXHIBITING SIGNS OF PESTS AND/OR DISEASE WILL BE REMOVED AND REPLACED AT NO COST TO THE OWNER.
2. ALL SHRUB AREAS SHALL RECEIVE 3" DARK, HARDWOOD BARK MUCH. SHALL BE CAMPUS STANDARD TO MATCH EXISTING SHRUB AREAS. SUBMIT SAMPLE FOR REVIEW AND APPROVAL PRIOR TO PURCHASE. NO SHREDDED MATERIAL WILL BE ACCEPTED.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH OTHER TRADES AS REQUIRED TO ACCOMPLISH PLANTING OPERATIONS PER THE CONSTRUCTION SCHEDULE.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS AND STRUCTURES, 2% MIN.
5. CONTRACTOR SHALL NOT WILLFULLY INSTALL ANY PLANT MATERIAL WHEN IT IS OBVIOUS THAT UNKNOWN CONDITIONS OR GRADE DIFFERENCES EXIST THAT WOULD MAKE THE PROPOSED DESIGN UNACHIEVABLE. NOTIFY THE GENERAL CONTRACTOR IMMEDIATELY IF ANY SUCH CONDITIONS ARE DISCOVERED. FAILURE TO NOTIFY THE APPROPRIATE PARTIES COULD RESULT IN THE REJECTION AND REMOVAL OF FINISHED WORK AT NO COST TO THE OWNER.

TREE PROTECTION NOTES & SPECIAL REQUIREMENTS FOR WORK WITHIN DRIP LINE OF EXISTING OAK TREE

HATCHED AREA BENEATH EXISTING OAK TO REMAIN UNDISTURBED THROUGHOUT CONSTRUCTION.

1. PRIOR TO COMMENCING ANY WORK WITHIN THE DRIPLINE OF THE EXISTING OAK, CONTRACTOR WILL BE REQUIRED TO SECURE THE SERVICES OF A CERTIFIED ARBORIST TO REVIEW THE EXISTING CONDITIONS AROUND THE OAK TREE AND PROVIDE RECOMMENDATIONS REGARDING CONSTRUCTION OPERATIONS WITHIN THE DRIPLINE OF THE EXISTING OAK.
2. SUBMIT NAME AND QUALIFICATIONS OF CERTIFIED ARBORISTS TO BE USED AS PART OF BID PACKAGE.
3. IF DEEMED NECESSARY, ARBORIST SHALL OBSERVE WORK BEING PERFORMED WITHIN THE DRIPLINE OF THE EXISTING OAK AND PROVIDE RECOMMENDATIONS FOR EXISTING ROOTS OVER 2" IN DIAMETER TO BE DISTURBED BY CONSTRUCTION OPERATIONS.
4. PRIOR TO ANY GRADING OR CONSTRUCTION, THE CONTRACTOR SHALL SET UP A TREE PROTECTION ZONE, TREE PROTECTION ZONE SHALL FOLLOW EXISTING OAK'S DRIPLINE, TYPICAL.
5. TREE PROTECTION FENCING SHALL BE 6-FT HIGH CHAINLINK.
6. ALL EQUIPMENT TRACKS SHALL REMAIN OUTSIDE OF THE DRIPLINE AND AVOID CONTACT WITH ANY PART OF THE PROTECTED TREE.
7. NO STOCKPILING, TRENCHING FOR UTILITIES OR DRAINAGE, GRADING, OR SOIL COMPACTING SHALL BE ALLOWED WITHIN THE TREE PROTECTION ZONE.
8. NO SOLVENTS, FUELS OR CONSTRUCTION DEBRIS SHALL BE ALLOWED WITHIN THE TREE PROTECTION ZONE.
9. THE CONTRACTOR SHALL BE REQUIRED TO INSTALL A 6" LAYER OF WOOD CHIPS TO PREVENT COMPACTION IF ENTERING THE TREE PROTECTION ZONE.
10. THE CONTRACTOR SHALL MAINTAIN ALL PROTECTION FENCING IN AN UPRIGHT, STURDY MANNER AT THE PRESCRIBED LOCATIONS THROUGHOUT THE ENTIRE CONSTRUCTION PHASE.
11. ALL TRENCHING AND/OR POST DIGGING WITHIN THE TREE PROTECTION ZONE SHALL BE DONE WITH MAN-POWERED TOOLS. NO HEAVY EQUIPMENT SHALL BE ALLOWED WITHIN THE TREE PROTECTION ZONE.

AGENCY REVIEW

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DIV. OF THE STATE ARCHITECT
APP. 03-120493 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 06/30/2020

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CONSULTANT

SEAL

ISSUE FOR
DSA RESUBMITTAL

ISSUE DATE
04/17/2020

REVISIONS

NO.	REASON	DATE

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PROJECT MANAGER
Raymond Gamo
DESIGN TEAM
Michael Ledbetter

PROJECT NAME
MOORPARK COLLEGE WAYFINDING

PROJECT NO.
613696000

SHEET TITLE
PLANTING PLAN AND LANDSCAPE DETAILS

SHEET NUMBER
L3.0

SECTION 02900 - LANDSCAPE WORK
PART 1 - GENERAL

1.1. RELATED DOCUMENTS

1.1.1. DRAWINGS AND GENERAL PROVISIONS OF CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND DIVISION 1 SPECIFICATION SECTIONS, APPLY TO THIS SECTION.

1.2. SUMMARY

1.2.1. THIS SECTION INCLUDES PROVISIONS FOR THE FOLLOWING ITEMS:

1.2.1.1. NOT USED.
1.2.1.2. SHRUBS.
1.2.1.3. PLANTS.
1.2.1.4. GROUNDCOVER.
1.2.1.5. SODDING LAWN AREAS.
1.2.1.6. NOT USED
1.2.1.7. SOIL AMENDMENTS.
1.2.1.8. FINISH GRADING.
1.2.1.9. MAINTENANCE PERIOD.

1.2.2. RELATED SECTIONS: THE FOLLOWING SECTIONS CONTAIN REQUIREMENTS THAT RELATE TO THIS SECTION.

1.2.3. UNDERGROUND SPRINKLER SYSTEM IS SPECIFIED IN DIVISION 2 SECTION, "UNDERGROUND IRRIGATION SYSTEM."

1.3. QUALITY ASSURANCE

1.3.1. SUBCONTRACT LANDSCAPE WORK TO A SINGLE FIRM SPECIALIZING IN LANDSCAPE WORK. THE CONTRACTOR SHALL POSSESS ALL LICENSES AND PERMITS REQUIRED TO PERFORM THE WORK INCLUDING A C-27 LANDSCAPING LICENSE.

1.3.2. SOURCE QUALITY CONTROL:

1.3.2.1. GENERAL: SHIP LANDSCAPE MATERIALS WITH CERTIFICATES OF INSPECTION REQUIRED BY GOVERNING AUTHORITIES. COMPLY WITH REGULATIONS APPLICABLE TO LANDSCAPE MATERIALS.

1.3.2.2. DO NOT MAKE SUBSTITUTIONS. IF SPECIFIED LANDSCAPE MATERIAL IS NOT OBTAINABLE, SUBMIT PROOF OF NON-AVAILABILITY TO LANDSCAPE ARCHITECT, TOGETHER WITH PROPOSAL FOR USE OF EQUIVALENT MATERIAL.

1.3.2.3. ANALYSIS AND STANDARDS: PACKAGE STANDARD PRODUCTS WITH MANUFACTURER'S CERTIFIED ANALYSIS. FOR OTHER MATERIALS, PROVIDE ANALYSIS BY RECOGNIZED LABORATORY MADE IN ACCORDANCE WITH METHODS ESTABLISHED BY THE ASSOCIATION OF OFFICIAL AGRICULTURE CHEMISTS, WHEREVER APPLICABLE.

1.3.2.4. TREES, SHRUBS, AND PLANTS: PROVIDE TREES, SHRUBS, AND PLANTS OF QUANTITY, SIZE, GENUS, SPECIES, AND VARIETY SHOWN AND SCHEDULED FOR LANDSCAPE WORK AND COMPLYING WITH RECOMMENDATIONS AND REQUIREMENTS OF ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK". PROVIDE HEALTHY, VIGOROUS STOCK, GROWN IN RECOGNIZED NURSERY IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICE AND FREE OF DISEASE, INSECTS, EGGS, LARVAE, AND DEFECTS SUCH AS KNOTS, SUN-SCALD, INJURIES, ABRASIONS, OR DISFIGUREMENT.

1.3.2.5. LABEL EACH TREE AND SHRUB WITH SECURELY ATTACHED WATERPROOF TAG BEARING LEGIBLE DESIGNATION OF BOTANICAL AND COMMON NAME.

1.3.2.6. WHERE FORMAL ARRANGEMENTS OR CONSECUTIVE ORDER OF TREES OR SHRUBS ARE SHOWN, SELECT STOCK FOR UNIFORM HEIGHT AND SPREAD, AND LABEL WITH NUMBER TO ASSURE SYMMETRY IN PLANTING.

1.3.2.7. SELECTION: THE LANDSCAPE ARCHITECT MAY CHECK TREES AND SHRUBS EITHER AT PLACE OF GROWTH OR AT SITE BEFORE PLANTING, FOR COMPLIANCE WITH REQUIREMENTS FOR GENUS, SPECIES, VARIETY, SIZE, AND QUALITY. THE CONTRACTOR SHALL SUBMIT PHOTOGRAPHS TO LANDSCAPE ARCHITECT OF TYPICAL TREE (15 GAL. AND LARGER CONTAINER SIZES) FOR LANDSCAPE WORK. LANDSCAPE ARCHITECT RETAINS RIGHT TO FURTHER CHECK TREES AND SHRUBS FOR SIZE AND CONDITION OF BALLS AND ROOT SYSTEMS, INSECTS, INJURIES AND LATENT DEFECTS, AND TO REJECT UNSATISFACTORY OR DEFECTIVE MATERIAL AT ANY TIME DURING PROGRESS OF WORK. REMOVE REJECTED TREES OR SHRUBS IMMEDIATELY FROM PROJECT SITE.

1.4. SUBMITTALS

1.4.1. GENERAL: SUBMIT THE FOLLOWING IN ACCORDANCE WITH CONDITIONS OF CONTRACT.

1.4.2. PLANT AND MATERIAL CERTIFICATIONS:

1.4.2.1. CERTIFICATES OF INSPECTION AS REQUIRED BY GOVERNMENTAL AUTHORITIES.

1.4.2.2. MANUFACTURER'S OR VENDOR'S CERTIFIED ANALYSIS FOR SOIL AMENDMENTS AND FERTILIZER MATERIALS.

1.4.2.3. LABEL DATA SUBSTANTIATING THAT PLANTS, TREES, SHRUBS AND PLANTING MATERIALS COMPLY WITH SPECIFIED REQUIREMENTS.

1.4.2.4. PHOTOS OF ALL PROPOSED PLANT MATERIAL FROM NURSERY SHOWING TYPICAL SIZE AND HEALTH OF PLANTS TO BE PROVIDED AND INSTALLED.

1.5. DELIVERY, STORAGE AND HANDLING

1.5.1. PACKAGED MATERIALS: DELIVER PACKAGED MATERIALS IN CONTAINERS SHOWING WEIGHT, ANALYSIS, AND NAME OF MANUFACTURER. PROTECT MATERIALS FROM DETERIORATION DURING DELIVERY, AND WHILE STORED AT SITE.

1.5.3. TREES AND SHRUBS: DO NOT PRUNE PRIOR TO DELIVERY UNLESS OTHERWISE APPROVED BY LANDSCAPE ARCHITECT. DO NOT BEND OR BIND-TIE TREES OR SHRUBS IN SUCH MANNER AS TO DAMAGE BARK, BREAK BRANCHES, OR DESTROY NATURAL SHAPE. PROVIDE PROTECTIVE COVERING DURING DELIVERY.

1.5.4. DO NOT REMOVE CONTAINER-GROWN STOCK FROM CONTAINERS UNTIL PLANTING TIME.

1.6. JOB CONDITIONS

1.6.1. UTILITIES: DETERMINE LOCATION OF UNDERGROUND UTILITIES AND PERFORM WORK IN A MANNER, WHICH WILL AVOID POSSIBLE DAMAGE. HAND EXCAVATES, AS REQUIRED. MAINTAIN GRADE STAKES SET BY OTHERS UNTIL PARTIES CONCERNED MUTUALLY AGREE UPON REMOVAL.

1.6.2. EXCAVATION: WHEN CONDITIONS DETRIMENTAL TO PLANT GROWTH ARE ENCOUNTERED, SUCH AS RUBBLE FILL, ADVERSE DRAINAGE CONDITIONS, OR OBSTRUCTIONS, NOTIFY LANDSCAPE ARCHITECT BEFORE PLANTING.

1.7. SEQUENCING AND SCHEDULING

1.7.1. PLANTING TIME: PROCEED WITH, AND COMPLETE LANDSCAPE WORK AS RAPIDLY AS PORTIONS OF SITE BECOME AVAILABLE, AND SHALL BE PERFORMED DURING THOSE PERIODS WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE IN ACCORDANCE WITH LOCALLY ACCEPTED HORTICULTURAL PRACTICE.

1.7.2. COORDINATION WITH GROUNDCOVERS: PLANT TREES AND SHRUBS AFTER FINAL GRADES ARE ESTABLISHED AND PRIOR TO PLANTING OF GROUNDCOVER, UNLESS OTHERWISE ACCEPTABLE BY LANDSCAPE ARCHITECT. IF PLANTING OF TREES AND SHRUBS OCCUR AFTER GROUNDCOVER, PROTECT GROUNDCOVER AREAS AND PROMPTLY REPAIR DAMAGE TO GROUNDCOVER RESULTING FROM PLANTING OPERATIONS.

UNDERGROUND SERVICE ALERT
call: TOLL FREE
1-800-422-4133
TWO WORKING DAYS BEFORE YOU DIG

1.8. SPECIAL PROJECT WARRANTY

1.8.1. WARRANTY GROUNDCOVERS THROUGH SPECIFIED MAINTENANCE PERIOD, AND UNTIL FINAL ACCEPTANCE.

1.8.2. WARRANTY SHRUBS FOR A PERIOD OF 90 DAYS AFTER DATE OF FINAL ACCEPTANCE.

1.8.3. WARRANTY TREES, FOR A PERIOD OF ONE YEAR AFTER DATE OF SUBSTANTIAL COMPLETION, AGAINST DEFECTS INCLUDING DEATH AND FOR PERIOD OF 90 DAYS AFTER DATE OF UNSATISFACTORY GROWTH, EXCEPT FOR DEFECTS RESULTING FROM NEGLECT BY OWNER, ABUSE OR DAMAGE BY OTHERS, OR UNUSUAL PHENOMENA OR INCIDENTS WHICH ARE BEYOND LANDSCAPE INSTALLER'S CONTROL.

1.8.4. REMOVE AND REPLACE TREES, SHRUBS, OR OTHER PLANTS FOUND TO BE DEAD OR IN UNHEALTHY CONDITION DURING WARRANTY PERIOD. MAKE REPLACEMENTS WITHIN 14 CALENDAR DAYS. REPLACE TREES AND SHRUBS, WHICH ARE IN DOUBTFUL CONDITION AT END OF WARRANTY PERIOD; UNLESS, IN OPINION OF LANDSCAPE ARCHITECT, IT IS ADVISABLE TO EXTEND WARRANTY PERIOD FOR A FULL GROWING SEASON.

1.8.5. ANOTHER WARRANTY SITE OBSERVATION VISIT WILL BE CONDUCTED AT END OF EXTENDED WARRANTY PERIOD, IF ANY, TO DETERMINE ACCEPTANCE OR REJECTION. REPLACEMENT SHALL BE THE PLANTS USED FOR SAME KIND AND SIZE AS SPECIFIED FOR LANDSCAPE WORK. REPLACEMENTS SHALL BE FURNISHED, AND PLANTED AS ORIGINALLY SPECIFIED.

PART 2 - PRODUCTS

2.1. SOIL AMENDMENTS

2.1.1. BARK MULCH: A 3-INCH MINUS BLEND, DARK COLORED PRODUCT RECOMMENDED FOR MULCHING IN SHRUB BEDS. PRODUCT AS NOTED ON THE DRAWINGS.

2.1.2. COMMERCIAL FERTILIZER: COMPLETE FERTILIZER OF NEUTRAL CHARACTER, WITH SOME ELEMENTS DERIVED FROM ORGANIC SOURCES AND CONTAINING THE FOLLOWING PERCENTAGES OF AVAILABLE PLANT NUTRIENTS:

2.1.2.1. PRE-PLANT FERTILIZER: PROVIDE FERTILIZER WITH NOT MORE THAN 1 PERCENT TOTAL NITROGEN; AND NOT LESS THAN 10 PERCENT AVAILABLE PHOSPHORIC ACID AND 10 PERCENT SOLUBLE POTASH.

2.1.2.2. POST-PLANT FERTILIZER: PROVIDE FERTILIZER WITH PERCENTAGE OF NITROGEN REQUIRED TO PROVIDE NOT LESS THAN 18 POUNDS OF ACTUAL NITROGEN, 6 PERCENT PHOSPHORIC ACID AND 8 PERCENT POTASSIUM. PROVIDE NITROGEN IN A FORM THAT WILL BE AVAILABLE DURING INITIAL PERIOD OF GROWTH; AT LEAST 50 PERCENT OF NITROGEN TO BE ORGANIC FORM.

2.1.2.3. PLANT TABLETS, AGRIFORM (20-10-5-) BLUE CHIP TABLETS 21 GRAM.

2.1.3. IRON SULPHATE, IRON SHALL BE EXPRESSED AS METALLIC-DERIVED FROM SULFATE-DEEP GREEN (FESO4OH2O) A MINIMUM ANALYSIS OF 200% AND 98.3% RETAINED ON A 10 MESH SCREEN.

2.2.3. GYPSUM, AGRICULTURAL GRADE GYPSUM SHALL BE A (CASO4OH2O) CALCIUM SULFATE 94.3%. 90% SHALL PASS A 50-MESH SCREEN.

2.2.4. SOIL SULPHUR, SHALL BE ELEMENTAL SULPHUR (99.5%) COMMERCIALLY MANUFACTURED SO THAT A PURE SULPHUR PRODUCT IS USED.

2.2.5. ORGANIC SOIL CONDITIONER, SHALL BE A PRODUCT THAT AIDS THE STRUCTURE OF THE SOIL CONSISTING OF RAPIDLY DECAYING SLOWLY DECAYING, AND NON-DECAYING MATERIAL. NITROGEN (ORGANIC OR AMMONIC) 0.5%, PH LESS THAN 6.8 SALINITY (ECE X 103 AT 25° C) = 2.5, ASH CONTENT NOT TO EXCEED 10%. IRON (FE) EXPRESSED AS METALLIC 0.08% ORGANIC MATTER 35%. PROPERTIES: SCREEN ANALYSIS:

2.2.5.1. MESH + 0.2% 8 MESH + 25.7% 32 MESH + 5%
MESH + 36.6% 12 MESH + 30.7% REMAINDER 0.9%

2.2.5.2. THE COMMERCIAL GRADE PRODUCT USED SHALL BE PLANT CHOICE SOIL AMENDMENT, ORGANIC RECYCLING WEST SOIL AMENDMENT, OR BUTLERS MILL LOAMEX OR APPROVED EQUAL BY LANDSCAPE ARCHITECT.

2.2.6. PLANTING BACKFILL, SHALL BE A THOROUGHLY BLENDED MIXTURE OF EXCAVATED SOIL FROM THE PITS AND SOIL AMENDMENTS AT THE FOLLOWING MIXTURE SOIL CONDITIONER:

2.2.6.1. SOIL CONDITIONER 50%
2.2.6.2. ON SITE SOIL 50%

2.3. PLANT MATERIALS

2.3.1. QUALITY: PROVIDE TREES, SHRUBS, AND OTHER PLANTS OF SIZE, GENUS, SPECIES, AND VARIETY SHOWN AND SCHEDULED FOR LANDSCAPE WORK AND COMPLYING WITH RECOMMENDATIONS AND REQUIREMENTS OF ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK."

2.3.2. CONTAINER STOCK (1 GAL., 5 GAL., 15 GAL., BOXES) SHALL HAVE GROWN IN CONTAINER FOR AT LEAST SIX MONTHS, BUT NOT OVER TWO YEARS. NO CONTAINER PLANTS THAT HAVE CRACKED OR BROKEN BALLS OF EARTH, WHEN TAKEN FROM THE CONTAINER, SHALL BE PLANTED, EXPECT UPON SPECIAL APPROVAL. NO TREES WITH DAMAGED ROOTS OR BROKEN BALLS SHALL BE PLANTED.

2.3.3. TREES: NOT APPLICABLE

2.3.4. SHRUBS: PROVIDE SHRUBS OF THE HEIGHT AND WIDTH SHOWN OR LISTED REQUIRED BY ANSI Z60.1 FOR TYPE AND HEIGHT OF SHRUB REQUIRED.

2.4 SODDED AREAS

A. SOD: TPI (SPEC), CERTIFIED TURFGRASS SOD QUALITY; CULTIVATED GRASS SOD; TYPE INDICATED IN PLANT SCHEDULE ON DRAWINGS; WITH STRONG FIBROUS ROOT SYSTEM, FREE OF STONES, BURNED OR BARE SPOTS; CONTAINING NO MORE THAN 5 WEEDS PER 1000 SQ FT. MINIMUM AGE OF 18 MONTHS, WITH ROOT DEVELOPMENT THAT WILL SUPPORT ITS OWN WEIGHT WITHOUT TEARING, WHEN SUSPENDED VERTICALLY BY HOLDING THE UPPER TWO CORNERS.
B. TOPSOIL: EXCAVATED FROM SITE AND FREE OF WEEDS.
C. WATER: CLEAN, FRESH AND FREE OF SUBSTANCES OR MATTER THAT COULD INHIBIT VIGOROUS GROWTH OF GRASS.

2.5. GROUNDCOVER

2.5.1. PROVIDE PLANTS ESTABLISHED AND WELL ROOTED IN FLAT REMOVABLE CONTAINERS, OR INTEGRAL PEAT POTS AND WITH NOT LESS THAN MINIMUM NUMBER AND LENGTH OF RUNNERS REQUIRED BY ANSI Z60.1 FOR THE POT SIZE SHOWN OR LISTED.

PART 3 - EXECUTION

3.1. PREPARATION - GENERAL

3.1.1. LAY OUT PLANTING AREAS SHALL MEAN ALL AREAS TO BE PLANTED WITH TREES, SHRUBS, GROUNDCOVERS AND AREAS FOR MULTIPLE PLANTINGS. STAKE LOCATIONS AND OUTLINE AREAS AND SECURE LANDSCAPE ARCHITECT'S ACCEPTANCE BEFORE START OF PLANTING WORK. MAKE MINOR ADJUSTMENTS AS MAY BE REQUIRED.

3.1.2. ALL ROCK AND OTHER GROWTH OR DEBRIS ACCUMULATED DURING THE DURATION OF THE PROJECT SHALL BE REMOVED FROM THE SITE. UPON COMPLETION OF ALL GRADING OPERATIONS, SOIL SAMPLES (3 LOCATIONS MIN.) SHALL BE TAKEN BY THE CONTRACTOR AND ANALYZED BY A SOIL LABORATORY. THE RESULTS OF THESE TESTS ARE TO BE REVIEWED BY THE LANDSCAPE ARCHITECT FOR ANY REQUIRED MODIFICATIONS TO SPECIFIED SOIL PREPARATION.

3.1.3. GRADING AND SOIL PREPARATION WORK SHALL BE PERFORMED ONLY DURING THE PERIOD WHEN BENEFICIAL AND OPTIMUM RESULTS MAY BE OBTAINED. IF THE MOISTURE CONTENT OF THE SOIL SHOULD REACH SUCH A LEVEL THAT WORKING IT WOULD DESTROY SOIL STRUCTURE, SPREADING AND GRADING OPERATIONS SHALL BE SUSPENDED UNTIL THE MOISTURE CONTENT IS INCREASED OR REDUCED TO ACCEPTABLE LEVELS AND THE DESIRED RESULTS ARE LIKELY TO BE OBTAINED.

3.1.4. ALL SCALED DIMENSIONS ARE APPROXIMATE. BEFORE PROCEEDING WITH ANY WORK, CAREFULLY CHECK AND VERIFY ALL DIMENSIONS AND IMMEDIATELY INFORM THE LANDSCAPE ARCHITECT OF ANY DISCREPANCY BETWEEN THE DRAWINGS AND/OR SPECIFICATIONS AND ACTUAL CONDITIONS.

3.1.5. QUANTITIES FOR PLANT MATERIALS ARE SHOWN FOR CONVENIENCE ONLY, AND NOT GUARANTEED. CHECK AND VERIFY COUNT AND SUPPLY SUFFICIENT NUMBER TO FULFILL INTENT OF DRAWINGS. CERTIFY ANY CLARIFICATIONS WITH THE LANDSCAPE ARCHITECT. ADEQUATELY STAKE, BARRICADE, AND PROTECT ALL IRRIGATION EQUIPMENT, MANHOLES, UTILITY LINES, AND OTHER EXISTING PROPERTY DURING ALL PHASES OF THE SOIL AMENDING PLANTING AND GRADING OPERATIONS.

3.1.6. UPON DELIVERY OF MATERIAL AND/OR COMPLETION OF ALL SOIL CONDITIONING AND GRADING BUT PRIOR TO INITIATING PLANTING OPERATIONS, THE LANDSCAPE ARCHITECT WITH THE HERETOFORE SPECIFIED SIGNED COPIES OF REQUIRED CERTIFICATES, TRIP SLIPS, AND INVOICES FOR SOIL PREPARATION MATERIALS, SHALL INVOICE SUCH MATERIAL, COMPARING THE TOTAL QUANTITIES OF EACH MATERIAL FURNISHED AGAINST THE TOTAL AREA TO EACH OPERATION. IF THE MINIMUM RATES OF APPLICATION HAVE NOT BEEN MET, THE LANDSCAPE ARCHITECT WILL REQUIRE THE DISTRIBUTION OF ADDITIONAL QUANTITIES OF THESE MATERIALS TO FULFILL THE MINIMUM APPLICATION REQUIREMENTS SPECIFIED AT NO COST TO OWNER.

3.2. FINISH GRADING

3.2.1. FINISH GRADING: FINISH GRADES SHALL BE AS INDICATED ON THE CIVIL ENGINEER'S DRAWINGS AND LANDSCAPE DRAWINGS.

3.2.2. FINISH GRADES SHALL BE MEASURED AS THE FINAL WATER COMPACTED AND SETTLED SURFACE GRADES; AND SHALL BE WITHIN PLUS OR MINUS 0.1 FOOT OF THE SPOT ELEVATIONS AND GRADE LINES INDICATED ON THE DRAWING.

3.2.3. FINISH GRADES SHALL BE MEASURED AT THE TOP SURFACE OF SURFACE MATERIALS.

3.2.4. MOLDING AND ROUNDING OF THE GRADES SHALL BE PROVIDED AT ALL CHANGES IN SLOPE.

3.2.5. ALL UNDULATIONS AND IRREGULARITIES IN THE PLANTING SURFACES RESULTING FROM TILLAGE, ROTOTILLING AND ALL OTHER OPERATIONS SHALL BE LEVELED AND FLOATED OUT BEFORE PLANTING OPERATIONS ARE INITIATED.

3.2.6. THE CONTRACTOR SHALL TAKE EVERY PRECAUTION TO PROTECT AND AVOID DAMAGE TO SPRINKLER HEADS, IRRIGATION LINES, AND OTHER UNDERGROUND UTILITIES DURING HIS GRADING AND CONDITIONING OPERATIONS.

3.2.7. FINAL FINISH GRADES SHALL INSURE POSITIVE DRAINAGE OF THE SITE WITH ALL SURFACE DRAINAGE AWAY FROM BUILDINGS, WALLS, AND TOWARD ROADWAYS, DRAINS AND CATCH BASINS.

3.2.8. FINAL GRADES SHALL BE ACCEPTABLE TO THE LANDSCAPE ARCHITECT BEFORE PLANTING OPERATIONS WILL BE ALLOWED TO BEGIN.

3.2.9. PLANTING SURFACES SHALL BE GRADED WITH NO LESS THAN 2 PERCENT SURFACE SLOPE FOR POSITIVE DRAINAGE UNLESS OTHERWISE NOTED ON PLANS.

3.2.10. COMPACT THE SOIL MIX TO A RELATIVE COMPACITON OF 85% OF MODIFIED MAXIMUM DRY DENSITY (ASTM D1557).

3.2.11. FINAL GRADES WITHIN RAISED PLANTER WALLS BEHIND NEW SIGN SHALL BE DETERMINED AFTER ADEQUATE COMPACTING OF BACKFILL WITHIN RAISED PLANTER HAS BEEN ACHIEVED. FURTHER SETTLEMENT WITHIN THE RAISED PLANTER WILL NOT BE ACCEPTED. WHERE APPRECIABLE SETTLEMENT HAS OCCURRED WITHIN THE RAISED PLANTER PRIOR TO FINAL ACCEPTANCE AT THE END OF THE WARRANTY PERIOD, THE CONTRACTOR WILL BE REQUIRED TO ADDRESS AREAS THAT HAVE SETTLED AND RETURN THEM TO AS DESIGNED FINISH GRADES WITHIN THE RAISED PLANTER.

3.3. PREPARATION FOR SHRUB AREAS

3.3.2.1.1. "SCHEDULE OF PLANTING SOIL MIXTURE:

3.3.2.1.1.1. SOIL CONDITIONER: 6 CU. YD. PER 1,000 SQ. FT.
3.3.2.1.1.2. IRON SULPHATE: 20 LBS. PER 1,000 SQ. FT.
3.3.2.1.1.3. GYPSUM: 120 LBS. PER 1,000 SQ. FT.
3.3.2.1.1.4. PRE-PLANT FERTILIZER: 30 LBS. PER 1,000 SQ. FT.

3.3.2.2. SCHEDULE OF PLANTING SOIL MIXTURE IS FOR BIDDING PURPOSES ONLY. SOIL TEST MAY REDUCE OR INCREASE TOTAL SOIL AMENDMENT YARDAGE. ADJUSTMENT (PLUS OR MINUS) MAY BE NECESSARY. CONTRACTOR SHALL OBTAIN AT LEAST ONE SOIL TESTS OF FINAL GRADE AT SITE FOR SOIL MIXTURE RECOMMENDATIONS AND SUBMIT RESULTS TO LANDSCAPE ARCHITECT FOR THEIR RECORD. CONTRACTOR SHALL SUBMIT, IN ADDITION TO HIS BASE BID; UNIT COST FOR EACH SCHEDULE OF PLANTING SOIL MIXTURE.

3.4. DEEP WATERING AND WEED ABATEMENT:

3.4.1. AFTER COMPLETE INSTALLATION AND TESTING OF THE IRRIGATION SYSTEM, AND PREPARATION OF PLANTING AREAS, ALL PLANTING AREAS SHALL BE DEEP WATERED AND COMPACTED AND SETTLED BY CONTINUOUS APPLICATION OF IRRIGATION WATER UNTIL THE SOIL IS MOIST TO A MINIMUM DEPTH OF 8".

3.4.2. CARE SHALL BE TAKEN THAT THE RATE OF APPLICATION OF WATER DOES NOT CAUSE EROSION OR SLUFFING OF SOILS.

3.4.3. ALL DEPRESSIONS, VOIDS, EROSION SCARS AND SETTLED TRENCHES GENERATED BY THE DEEP WATERING SHALL BE FILLED WITH CONDITIONED TOPSOIL AND BROUGHT TO FINISH GRADE.

3.5. EXCAVATION FOR TREES AND SHRUBS

3.5.1. CONTAINER GROWN STOCK IN CANS SHALL BE CUT ON TWO SIDES WITH AN APPROVED CAN CUTTER. STOCK GROWN IN BOXES SHALL HAVE BOTTOMS REMOVED. ALL USED CONTAINERS SHALL BE REMOVED TO THE STORAGE AREAS OR FROM THE SITE. EACH TREE AND SHRUB SHALL BE PLACED IN THE CENTER OF THE HOLE AND SHALL BE SET PLUMB, REMOVE SIDES OF BOXES WHERE REQUIRED, AND HELD RIGIDLY IN POSITION UNTIL THE PLANTING BACKFILL HAS BEEN TAMPED FROM AROUND EACH ROOT BALL.

3.5.1.1. FOR CONTAINER-GROWN STOCK, EXCAVATE AS SPECIFIED FOR SIZE OF CONTAINER WIDTH AND DEPTH.

3.5.1.2. DISPOSE OF EXCESS SUBSOIL REMOVED FROM PLANTING EXCAVATIONS.

3.5.1.3. FILL EXCAVATIONS FOR TREES AND SHRUBS WITH WATER AND ALLOW WATER TO PERCOLATE OUT PRIOR TO PLANTING.

3.6. PLANTING TREES AND SHRUBS

3.6.1. SET CONTAINER GROWN STOCK AS SPECIFIED, CUT CANS ON 2 SIDES WITH AN APPROVED CAN CUTTER; REMOVE BOTTOMS OF WOODEN BOXES AFTER PARTIAL BACKFILLING SO AS NOT TO DAMAGE ROOTBALLS. ALL USED CONTAINERS SHALL BE REMOVED TO THE STORAGE AREAS OR FROM THE SITE. EACH TREE AND SHRUB SHALL BE PLACED IN THE CENTER OF THE HOLE AND SHALL BE SET PLUMB AND HELD RIGIDLY IN POSITION UNTIL THE PLANTING BACKFILL HAS BEEN TAMPED FROM AROUND EACH ROOT BALL.

3.6.2. ALL PLANTS SHALL BE SET AT SUCH A LEVEL THAT AFTER SETTLING, THEY BEAR THE SAME RELATIONSHIP TO THE SURROUNDING FINISH GRADE AS THEY BORE TO THE SOIL LINE GRADE IN THE CONTAINER.

3.6.3. PLANTING TABLETS SHALL BE PLACED IN EACH TREE-PLANTING HOLE AT THE FOLLOWING RATE:

3.6.3.1. 1-21 GRAM TABLET PER 1-GALLON CONTAINER.
3.6.3.2. 3-21 GRAM TABLETS PER 5-GALLON CONTAINER.
3.6.3.3. 4-21 GRAM TABLETS PER 15-GALLON CONTAINER.
3.6.3.4. 1-21 GRAM TABLET PER EACH 4 INCH OF BOX SIZE.

3.6.4. NO PLANT WILL BE ACCEPTED IF THE ROOTBALL IS BROKEN OR CRACKED, EITHER BEFORE, DURING OR AFTER THE PROCESS OF INSTALLATION.

3.6.5. WATER BASIN SHALL BE FORMED AROUND EACH TREE AND SHRUB PER DETAIL. ALL PLANTS SHALL BE THOROUGHLY WATERED INTO THE FULL DEPTH OF EACH PLANT HOLE IMMEDIATELY AFTER PLANTING.

3.7 SODDING LAWN AREAS

3.71 PREPERATION

A. APPLY FERTILIZER IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
B. APPLY AFTER SMOOTH RAKING OF TOPSOIL AND PRIOR TO INSTALLATION OF SOD.
C. APPLY FERTILIZER NO MORE THAN 48 HOURS BEFORE LAYING SOD.
D. MIX THOROUGHLY INTO UPPER 2 INCHES OF TOPSOIL.
E. LIGHTLY WATER TO AID THE DISSIPATION OF FERTILIZER.

3.72 LAYING SOD

A. MOISTEN PREPARE SURFACE IMMEDIATELY PRIOR TO LAYING SOD.
B. LAY SOD IMMEDIATELY AFTER DELIVERY TO SITE TO PREVENT DETERIORATION.
C. LAY SOD SMOOTH AND TIGHT WITH NO OPEN JOINTS VISIBLE, AND NO OVERLAPPING; STAGGER END JOINTS 12 INCHES MINIMUM. DO NOT STRETCH OR OVERLAP SOD PIECES.
D. WHERE SOD IS PLACED ADJACENT TO HARD SURFACES, SUCH AS CURBS, PAVEMENTS, ETC., PLACE TOP ELEVATION OF SOD 1/2 INCH BELOW TOP OF HARD SURFACE.
E. WATER SODDED AREAS IMMEDIATELY AFTER INSTALLATION. SATURATE SOD TO 4 INCHES OF SOIL.
F. AFTER SOD AND SOIL HAVE DRIED, ROLL SODDED AREAS TO ENSURE GOOD BOND BETWEEN SOD AND SOIL AND TO REMOVE MINOR DEPRESSIONS AND IRREGULARITIES. ROLL SODDED AREAS WITH ROLLER NOT EXCEEDING 300 LBS.

3.8 NOT USED

3.9. PLANTING GROUND COVER

3.9.1. SPACE GROUND COVER PLANTS AS INDICATED OR SCHEDULED.

3.9.2. DIG HOLES LARGE ENOUGH TO ALLOW FOR SPREADING OF ROOTS AND BACKFILL WITH PLANTING SOIL. WORK SOIL AROUND ROOTS TO ELIMINATE AIR POCKETS AND LEAVE A SLIGHT SAUCER INDENTATION AROUND PLANTS TO HOLD WATER. WATER THOROUGHLY AFTER PLANTING, TAKING CARE NOT TO COVER CROWNS OF PLANTS WITH WET SOILS.

3.9.3. BARK MULCH. PROVIDE NOT LESS THAN FOLLOWING THICKNESS OF BARK MULCH IN PLANTING AREAS SPECIFIED.

3.9.4. PROVIDE 2 INCHES THICKNESS OF BARK MULCH.

3.10. POST FERTILIZATION

3.10.1. POST FERTILIZATION FOR ALL AREAS (18-6-8) SHALL OCCUR 45 DAYS AFTER PLANTING AT A RATE OF 8 LBS. PER 1,000 SQ. FT.

3.11. MAINTENANCE PERIOD

3.11.1. THE MAINTENANCE PERIOD BEGINS ON THE FIRST DAY AFTER ALL LANDSCAPE AND IRRIGATION WORK AND ALL OTHER INDICATED OR SPECIFIED WORK ON THIS PROJECT IS COMPLETE, CHECKED, ACCEPTED AND WRITTEN APPROVAL FROM THE LANDSCAPE ARCHITECT IS GIVEN TO BEGIN THE MAINTENANCE PERIOD.

3.11.2. THE CONTRACTOR SHALL CONTINUOUSLY MAINTAIN ALL INVOLVED AREAS OF THE CONTRACT DURING THE PROGRESS OF THE WORK AND DURING THE MAINTENANCE PERIOD UNTIL THE FINAL ACCEPTANCE OF THE WORK.

3.11.3. REGULAR PLANTING MAINTENANCE OPERATIONS SHALL BEGIN IMMEDIATELY AFTER EACH PLANT OR LAWN IS PLANTED. PLANTS AND LAWNS SHALL BE KEPT IN A HEALTHY, GROWING CONDITION AND IN A VISUALLY PLEASING APPEARANCE BY WATERING, PRUNING, MOWING, ROLLING, TRIMMING, EDGING, FERTILIZING, RE-STAKING, PEST AND DISEASE CONTROLLING, SPRAYING, WEEDING, CLEANING-UP AND ANY OTHER NECESSARY OPERATION.

3.11.4. THE MAINTENANCE PERIOD SHALL CONTINUE UNTIL FINAL ACCEPTANCE, BUT IN NO CASE, LESS THAN FOLLOWING PERIOD:

3.11.4.1. 60 DAYS AFTER SUBSTANTIAL COMPLETION OF PLANTING.

3.11.5. THE CONTRACT COMPLETION DATE OF THE CONTRACT MAINTENANCE PERIOD WILL BE EXTENDED, WHEN IN THE OPINION OF THE LANDSCAPE ARCHITECT, IMPROPER MAINTENANCE AND/OR POSSIBLE POOR OR UNHEALTHY CONDITION OF PLANTED MATERIAL OR UN-ESTABLISHED NON-COVERING LAWNS ARE EVIDENT AT THE TERMINATION OF THE SCHEDULED MAINTENANCE PERIOD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADDITIONAL MAINTENANCE OF THE WORK AT NO CHANGE IN CONTRACT PRICE UNTIL ALL OF THE WORK IS COMPLETED AND ACCEPTABLE.

3.11.6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ADEQUATE PROTECTION OF THE AREAS. DAMAGED AREAS SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.

3.11.7. MAINTAIN TREES, SHRUBS, AND OTHER PLANTS BY PRUNING, CULTIVATING, AND WEEDING AS REQUIRED FOR HEALTHY GROWTH. RESTORE PLANTING WATER BASINS. TIGHTEN AND REPAIR STAKE AND GUY SUPPORTS AND RESET TREES AND SHRUBS TO PROPER GRADES OR VERTICAL POSITION AS REQUIRED. SPRAY AS REQUIRED TO KEEP TREES AND SHRUBS FREE OF INSECTS AND DISEASE.

3.12. CLEANUP AND PROTECTION

3.12.1. DURING LANDSCAPE WORK, KEEP PAVEMENTS CLEAN AND WORK AREA IN AN ORDERLY CONDITION.

3.12.2. PROTECT LANDSCAPE WORK AND MATERIALS FROM DAMAGE DUE TO LANDSCAPE OPERATIONS, OPERATIONS BY OTHER CONTRACTORS AND TRADES, AND TRESPASSERS. MAINTAIN PROTECTION DURING INSTALLATION AND MAINTENANCE PERIODS. TREAT, REPAIR, OR REPLACE DAMAGED LANDSCAPE WORK AS DIRECTED.

3.13. SITE OBSERVATION VISITS:

3.17.1. SITE OBSERVATION VISITS HEREIN SPECIFIED SHALL BE MADE BY THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL REQUEST SITE OBSERVATION (48 HOURS MIN.) IN ADVANCE OF THE TIME OBSERVATION IS REQUIRED.

3.13.2. SITE OBSERVATION WILL BE REQUIRED FOR THE FOLLOWING PARTS OF THE WORK:

3.13.2.1. WHEN PLANTING, AND ALL OTHER INDICATED OR SPECIFIED WORK, EXCEPT THE MAINTENANCE PERIOD, HAS BEEN COMPLETED. ACCEPTANCE AND WRITTEN APPROVAL SHALL ESTABLISH BEGINNING OF THE MAINTENANCE PERIOD.

3.13.2.2. FINAL SITE OBSERVATION VISITS AT THE COMPLETION OF THE MAINTENANCE PERIOD. THIS SITE OBSERVATION VISIT SHALL ESTABLISH THE BEGINNING DATE FOR THE WARRANTY PERIOD OF PLANT MATERIAL.

3.13.2.3. UPON COMPLETION OF THE WARRANTY PERIOD.

3.13.3. ACCEPTANCE: UPON COMPLETION OF THE FINAL SITE OBSERVATION VISIT AND THE WORK OF THIS SECTION, THE CONTRACTOR WILL BE NOTIFIED IN WRITING (1) WHETHER THE WORK IS ACCEPTABLE; (2) OF ANY REQUIREMENTS NECESSARY FOR COMPLETION AND ACCEPTANCE.

3.13.4. THIS CONTRACTOR OR HIS AUTHORIZED REPRESENTATIVE SHALL BE ON THE SITE AT THE TIME OF EACH SITE OBSERVATION VISIT BY THE LANDSCAPE ARCHITECT.

END OF SECTION 02900

AGENCY REVIEW

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 03-120493 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 06/30/2020

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CLIENT NAME
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT

PROJECT NAME
MOORPARK COLLEGE WAYFINDING
7075 CAMPUS ROAD
MOORPARK, CA 93021

CONSULTANT

SEAL

ISSUE FOR
DSA RESUBMITTAL

ISSUE DATE
04/17/2020

REVISIONS

NO.	REASON	DATE

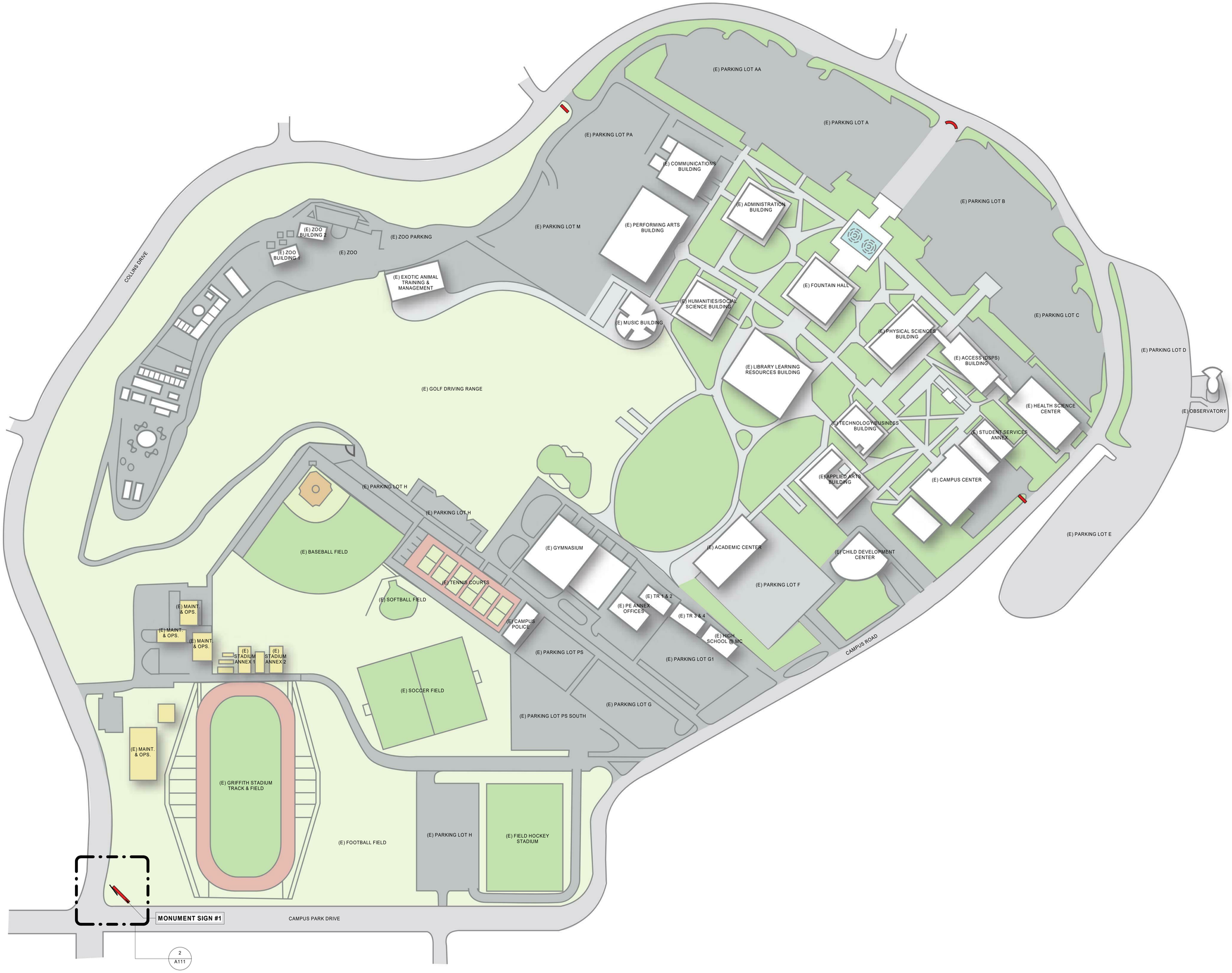
PROJECT TEAM
PRINCIPAL IN CHARGE
Barsin Bet Govargez
PROJECT MANAGER
Raymond Gamo
DESIGN TEAM
Michael Ledbetter

PROJECT NAME
MOORPARK COLLEGE WAYFINDING

PROJECT NO.
613696000

SHEET TITLE
PLANTING SPECIFICATIONS

SHEET NUMBER
L4.0



OVERALL SITE PLAN 1 A101
1" = 100'-0"

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AGENCY REVIEW

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 03-120493 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 06/30/2020

LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
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CLIENT NAME
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT

PROJECT NAME
MOORPARK COLLEGE MAIN ENTRY SIGN
7075 CAMPUS ROAD, MOORPARK, CA 93021

CONSULTANT

DSA A# 03-120493

SEAL

ISSUE FOR
DSA RESUBMITTAL
DSA A# 03-120493

ISSUE DATE
04/17/2020

REVISIONS

NO.	REASON	DATE

PROJECT TEAM
PRINCIPAL IN CHARGE
RITA CARTER
PROJECT MANAGER
EMAN BERMANI
DESIGN TEAM
JEFF HATFIELD

PROJECT NAME
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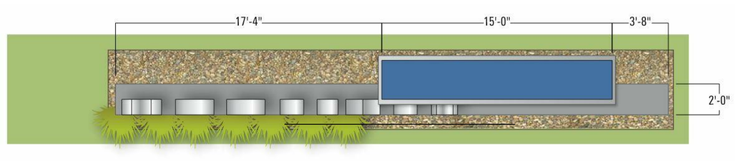
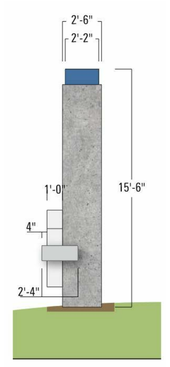
PROJECT NO.
613696000

SHEET TITLE
OVERALL SITE PLAN

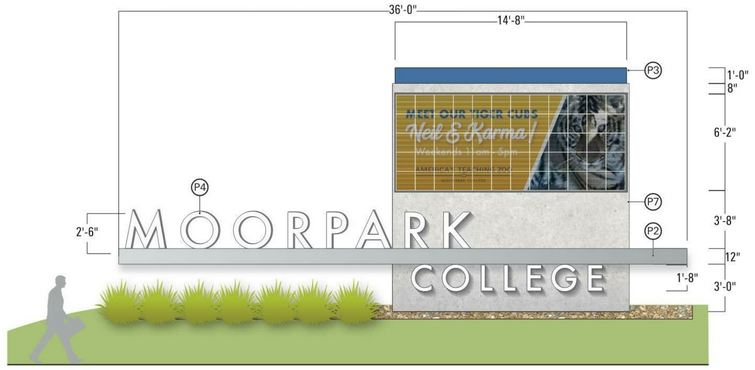
SHEET NUMBER
A101



6 A111 MONUMENT SIGN #1 - PLAN VIEW
1/4" = 1'-0"



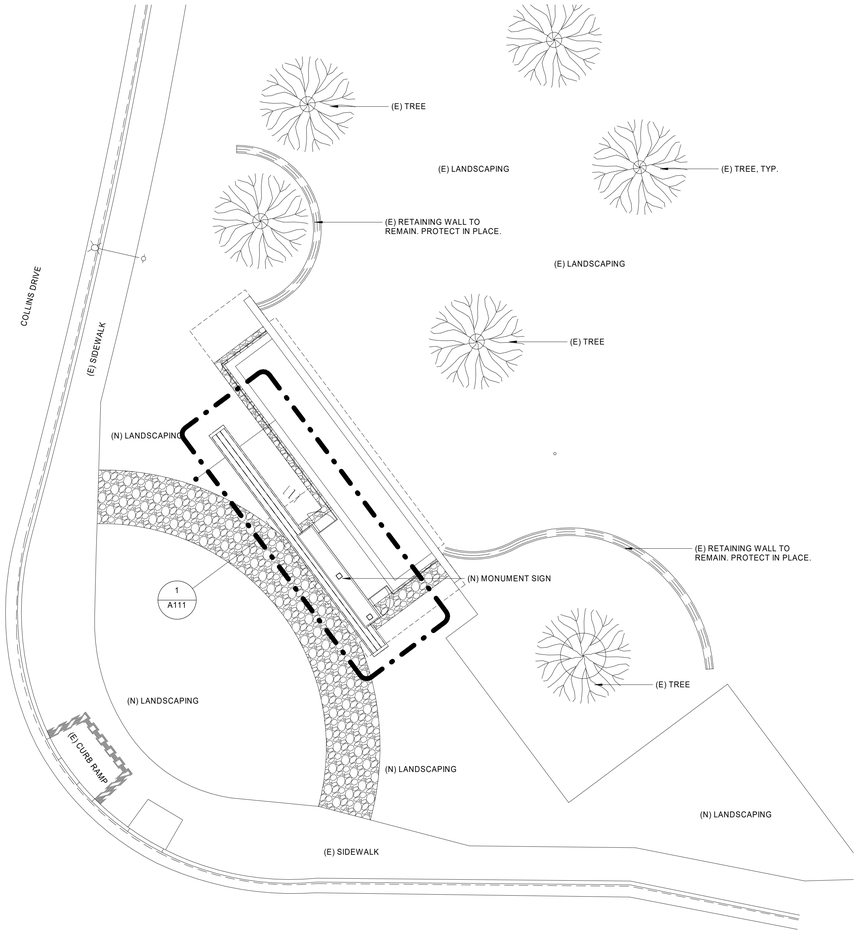
5 A111 MONUMENT SIGN #1 - RIGHT SIDE ELEVATION
1/4" = 1'-0"



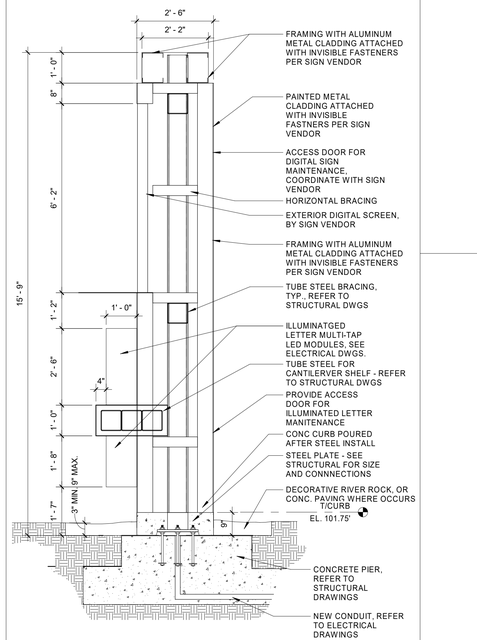
COLOR SCHEDULE

P2	P3	P4	P7
MATTHEWS PAINT MP18076	MATTHEWS PAINT MP06046	MATTHEWS PAINT MP27386	MATTHEWS PAINT MP00015

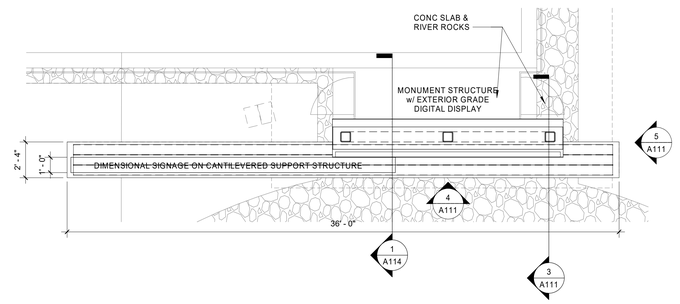
4 A111 MONUMENT SIGN #1 - FRONT ELEVATION
1/4" = 1'-0"



2 A111 ENLARGED SITE PLAN @ MONUMENT SIGN #1
1/8" = 1'-0"



3 A111 MONUMENT SIGN #1 - SECTION
1/2" = 1'-0"



1 A111 MONUMENT SIGN #1 - PLAN
1/4" = 1'-0"

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PROJECT NO.
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MONUMENT SIGN #1

SHEET NUMBER
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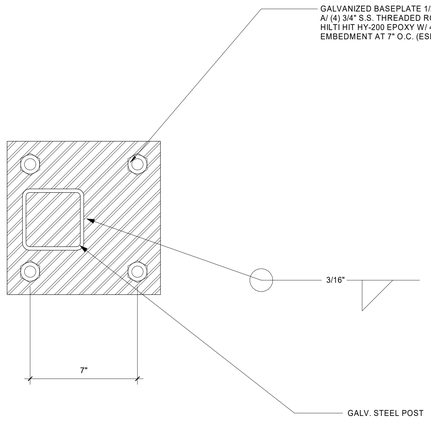
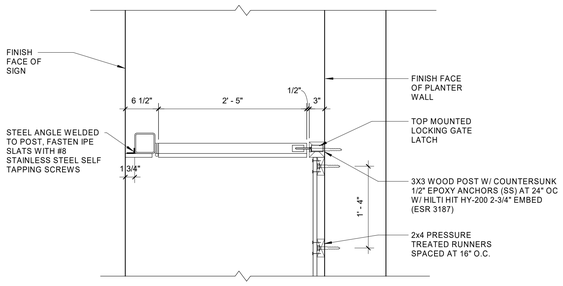
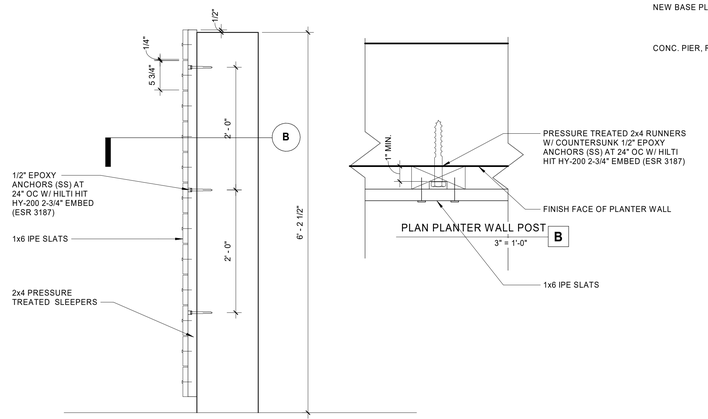


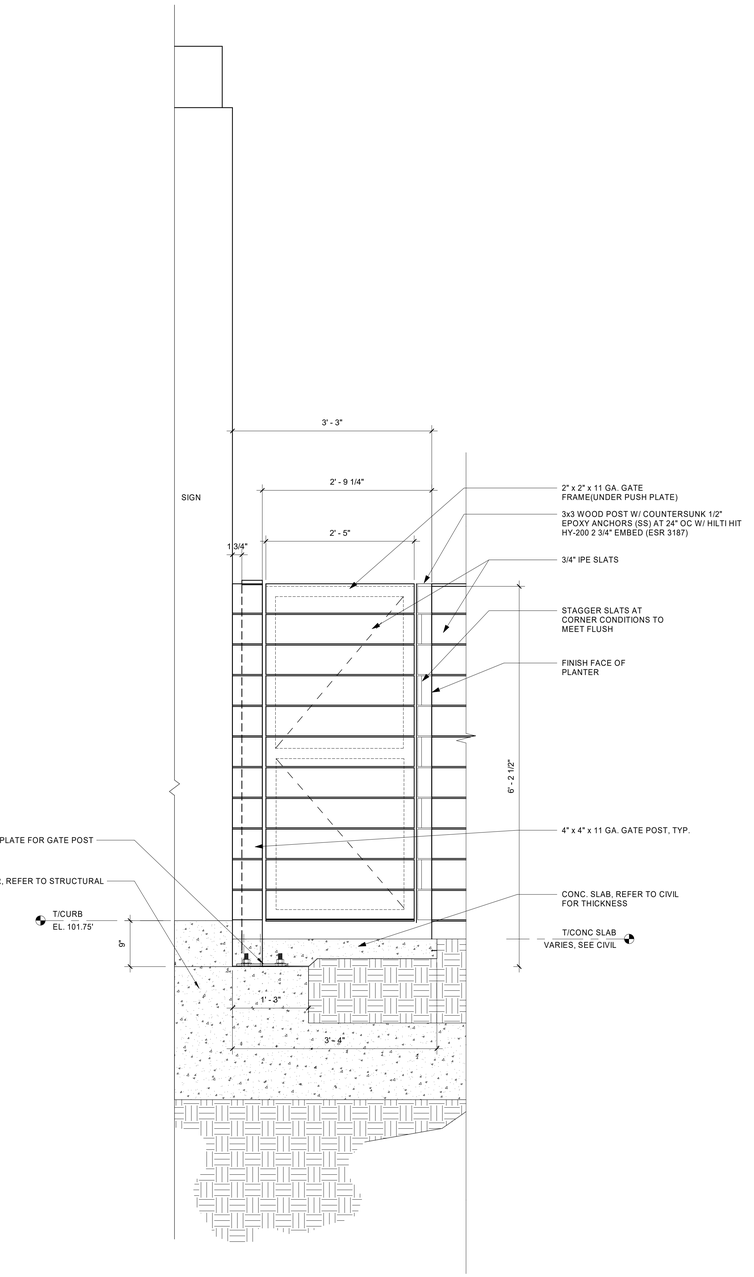
3 A114 GATE POST FOOTING
3" = 1'-0"



4 A114 GATE - PLAN VIEW
1" = 1'-0"



2 A114 SECTION - SLATS @ PLANTER WALL
1" = 1'-0"



1 A114 GATE DETAIL
1" = 1'-0"

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PROJECT NO.
613696000

SHEET TITLE
GATE DETAILS

SHEET NUMBER
A114

GENERAL CONDITIONS AND STATEMENTS

1. THESE NOTES SHALL APPLY UNLESS INDICATED OTHERWISE BY DRAWINGS OR SPECIFICATIONS. IN THE EVENT THAT CONFLICTS OCCUR BETWEEN THESE NOTES, DRAWINGS OR SPECIFICATIONS NOTIFY THE STRUCTURAL ENGINEER FOR RESOLUTION PRIOR TO PROCEEDING WITH THE WORK.
2. STRUCTURAL DRAWINGS INDICATE TYPICAL AND CERTAIN SPECIFIC CONDITIONS ONLY. SHOP DRAWINGS SHALL DETAIL ALL CONDITIONS IN ACCORDANCE WITH THE SPECIFIED STANDARDS AND THE SPECIFIC REQUIREMENTS OF THIS PROJECT. SUBMIT SHOP DRAWINGS ON ALL STRUCTURAL MATERIALS FOR APPROVAL BEFORE FABRICATION. CONTRACTOR SHALL REVIEW AND APPROVE SHOP DRAWINGS PRIOR TO SUBMISSION.
3. THE STRUCTURE INDICATED BY THE DRAWINGS AND SPECIFICATIONS IS STRUCTURALLY STABLE ONLY IN ITS COMPLETED FORM. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS, METHODS, SEQUENCES AND OPERATIONS OF CONSTRUCTION AND SHALL PROVIDE TEMPORARY BRACING AS REQUIRED TO MAINTAIN THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.
4. ALL DETAILS, SECTIONS, AND NOTES INDICATED ON THE DRAWINGS SHALL APPLY AT ALL LOCATIONS WHERE CONDITIONS ARE SIMILAR TO THOSE INDICATED BY THE DETAIL, SECTION, OR NOTE.
5. CENTERLINES OF COLUMNS AND FOUNDATIONS SHALL COINCIDE WITH GRID LINE INTERSECTIONS UNLESS NOTED OTHERWISE.
6. CENTERLINES OF FLOOR AND ROOF FRAMING MEMBERS SHALL COINCIDE WITH GRID LINES UNLESS NOTED OTHERWISE.
7. EQUALLY SPACE FLOOR AND ROOF FRAMING MEMBERS BETWEEN GRID LINES UNLESS NOTED OTHERWISE.
8. USE ONLY DIMENSIONS INDICATED ON THE DRAWINGS. DO NOT SCALE THE DRAWINGS OR USE ANY DIMENSIONS TAKEN FROM ELECTRONIC DATA FILES.
9. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE STRUCTURAL WORK WITH CIVIL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS AND ALL OTHER RELEVANT TRADES. IN CASE OF CONFLICT BETWEEN STRUCTURAL WORK AND DRAWINGS RELATED TO OTHER TRADES THE CONTRACTOR SHALL MAKE IN THEIR BID ALLOWANCE FOR THE MORE SEVERE REQUIREMENTS. CONFLICTS BETWEEN THE STRUCTURAL WORK AND THE DRAWINGS OF OTHER TRADES SHALL NOT BE A REASON FOR ANY ADDITIONAL COST OR DELAY IN EXECUTION OF THE WORK.
10. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER OF ANY DISCREPANCIES BETWEEN THE STRUCTURAL DOCUMENTS AND ANY OTHER DOCUMENTS OR EXISTING CONDITIONS FOR RESOLUTION PRIOR TO PROCEEDING WITH THE WORK.

ABBREVIATIONS

ADDL	ADDITIONAL	EL	ELEVATION	LLV	LONG LEG VERTICAL
ADH	ADHESIVE	ELEC	ELECTRICAL	LSH	LONG SIDE HORIZONTAL
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL	ELEV	ELEVATOR	LSV	LONG SIDE VERTICAL
		EOD	EDGE OF DECK	LW	LIGHT WEIGHT
AFF	ABOVE FINISHED FLOOR	EOS	EDGE OF SLAB	MAX	MAXIMUM
ALT	ALTERNATE	EQ	EQUAL	MECH	MECHANICAL
ARCH	ARCHITECT	EQUIP	EQUIPMENT	MFR	MANUFACTURER
B/	BOTTOM OF	EW	EACH WAY	MIN	MINIMUM
BCB	BOTTOM CHORD BRACING	EXP	EXPANSION	MOW	MIDDLE OF WALL
BCX	BOTTOM CHORD EXTENSION	EXT	EXTERIOR	NTS	NOT TO SCALE
BFF	BELOW FINISHED FLOOR	EXIST; E	EXISTING	NW	NORMAL WEIGHT
BLDG	BUILDING	FFE	FINISHED FLOOR ELEVATION	OC	ON CENTER
BOTT	BOTTOM	FIN	FINISHED	OH	OPPOSITE HAND
BP	BASE PL	FLR	FLOOR	OPNG	OPENING
BRG	BEARING	FOB	FACE OF BRICK	PAF	POWDER/ POWER ACTUATED FASTENER
BTWN	BETWEEN	FOM	FACE OF MASONRY		
CIP	CAST IN PLACE	FOS	FACE OF STUD	PC	PRECAST or PILE CAP
CJ	CONTRACTION OR CONSTRUCTION JOINT	FRTW	FIRE RETARDANT TREATED WOOD	PJF	PRE-MOLDED JOINT FILLER
				PL	PLATE
CL	CENTERLINE	FTG	FOOTING	PLBG	PLUMBING
CLR	CLEAR	GA	GAGE	PT	PRESSURE TREATED or POST TENSIONED
CMU	CONCRETE MASONRY UNIT	GALV	GALVANIZED		
COL	COLUMN	GB	GRADE BEAM	QTY	QUANTITY
CONC	CONCRETE	GC	GENERAL CONTRACTOR	REINF	REINFORCEMENT
CONN	CONNECTION	GLB	GLULAM BEAM	REF	REFERENCE
CONT	CONTINUOUS	HD	HEADED	REQD	REQUIRED
COORD	COORDINATE	HORIZ; H	HORIZONTAL	SCHD	SCHEDULE
CTR	CENTER	INT	INTERIOR	SIM	SIMILAR
DBA	DEFORMED BAR ANCHOR	JBE	JOIST BEARNING ELEVATION	SOG	SLAB ON GRADE
DCJ	DOWELED CONSTRUCTION JOINT	JT	JOINT	SPEC	SPECIFICATIONS
		K	KIPS	STD	STANDARD
DEFL	DEFLECTION	KLF; PLF	KIPS/POUNDS PER LINEAR FOOT	T/	TOP OF
DEMO	DEMOLISH or DEMOLITION			TCX	TOP CHORD EXTENSION
DIA; Ø	DIAMETER	KSI; PSI	KIPS/POUND PER SQUARE INCH	TYP	TYPICAL
DIM	DIMENSION			UNO	UNLESS NOTED OTHERWISE
DWG	DRAWING	KSF; PSF	KIPS/POUNDS PER SQUARE FOOT	VERT; V	VERTICAL
DWL	DOWEL			VIF	VERFIY IN FIELD
EA	EACH	LB	POUND	w/	WITH
EF	EACH FACE	LG	LONG	WP	WORK POINT
EJ	EXPANSION JOINT	LLH	LONG LEG HORIZONTAL	WWF	WELDED WIRE FABRIC

DESIGN CRITERIA

DESIGN CODES

1.	BUILDING CODE	2019 CALIFORNIA BUILDING CODE
2.	DESIGN LOADS	ASCE 7-16 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
3.	STEEL	AISC 360-16 SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS
4.	CONCRETE	ACI 318-14 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
5.	CONCRETE MASONRY	ACI 530-13 BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES
6.	COLD FORMED STEEL STRUCTURAL MEMBERS	AISI S100-16 NORTH AMERICAN SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL
7.	WOOD	NDS 2015 NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION

DESIGN LOADS

1.	BUILDING RISK CATEGORY	II	
2.	SIGN DEAD LOAD	TOTAL DEAD LOAD	6,000 LBS MAX
3.	SEISMIC LOAD	Ie	1.0
		SITE CLASSIFICATION	D (DEFAULT)
		Sds	1.853
		Sd1	0.995
		SEISMIC DESIGN CATEGORY	E
		SEISMIC FORCE RESISTING SYSTEM	SIGN
		ANALYSIS PROCEDURE	ASCE7 CHAPTER 13
		SEISMIC BASE SHEAR	3 KIPS (ASD)
4.	WIND LOAD	WIND SPEED	110 MPH
		EXPOSURE	C
		Iw	1.0
		Kd	0.85
		Kz	0.85
		kzt	1.0
		WIND BASE SHEAR	5.4 KIPS (ASD)
		COMPONENTS AND CLADDING PRESSURES IN ACCORDANCE WITH ASCE 7	

SELECTIVE DEMOLITION

1. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE MEANS OF DEMOLITION AND THE INTEGRITY AND STABILITY OF THE EXISTING STRUCTURE DURING DEMOLITION AND THROUGHOUT CONSTRUCTION UNTIL THE WORK IS COMPLETED.
2. EXISTING CONDITIONS AND STRUCTURAL MEMBERS INDICATED ARE FOR REFERENCE ONLY AND SHALL BE VERIFIED AT THE SITE BY THE CONTRACTOR. NOTIFY THE STRUCTURAL ENGINEER OF ANY DISCREPANCIES BETWEEN CONDITIONS INDICATED AND THOSE FOUND AT THE SITE PRIOR TO THE START OF DEMOLITION OF EXISTING STRUCTURAL MEMBERS.
3. PRIOR TO THE START OF DEMOLITION WORK VERIFY THAT ANY ELECTRICAL SYSTEM, MECHANICAL SYSTEM, PLUMBING SYSTEM, OR UTILITY EMBEDDED IN THE EXISTING STRUCTURE IS NOT DAMAGED OR DISRUPTED BY THE DEMOLITION WORK UNLESS IT IS REQUIRED BY THE WORK AND ADEQUATE MEASURES ARE TAKEN TO PRESERVE THE SYSTEM OR UTILITY BEYOND THE AREA OF DEMOLITION.
4. WHERE NEW OPENINGS ARE INDICATED TO BE CUT THROUGH EXISTING CONCRETE MEMBERS, THE CONTRACTOR SHALL CORE DRILL ALL CORNERS OF THE OPENING AND SAW CUT OPENING EDGES BETWEEN CORE DRILLED HOLES. DO NOT CUT BEYOND HOLES. CUT AND CHIP CORNER HOLES TO PRODUCE SQUARE OPENING CORNERS AS REQUIRED.

EXISTING CONDITIONS

1. EXISTING DRAWINGS WERE NOT AVAILABLE FOR THIS PROJECT. ALL EXISTING DIMENSIONS, CONNECTION DETAILS, MEMBER SIZES, FRAMING CONFIGURATION, ETC. HAVE BEEN ASSUMED. THE GENERAL CONTRACTOR IS TO FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO STARTING CONSTRUCTION OR PREPARING SHOP DRAWINGS. NOTIFY THE ARCHITECT AND ENGINEER OF ANY AREA WHERE THE EXISTING CONDITIONS DO NOT MATCH THE CONDITIONS ASSUMED ON THESE DRAWINGS.

DEFERRED SUBMITTALS

THE FOLLOWING ITEMS SHALL BE DESIGNED BY A SPECIALTY ENGINEER FOR THE CONTRACTOR. DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED TO DSA AND THE ARCHITECT FOR REVIEW AND APPROVAL, SEALED AND SIGNED BY A CALIFORNIA STRUCTURAL ENGINEER.

1. ENTRY SIGN FRAMING & CONNECTIONS

SOIL AND SUBSURFACE CONDITIONS

1. SOIL BEARING CAPACITY SHALL BE VERIFIED BY PROJECT STATE GEOTECHNICAL ENGINEER.
2. THE FOUNDATIONS HAVE BEEN DESIGNED BASED ON THE FOLLOWING PRESUMPTIVE CODE VALUES:
   SPREAD FOOTING BEARING PRESSURE ON SOIL 1,500 PSF
   ACTIVE SOIL PRESSURE ON RETAINING WALL OF 60 PSF/FT
3. ALL FILL MATERIALS SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER. THE TOP 12" BELOW FOOTINGS SHALL BE COMPACTED TO 98% OF STANDARD PROCTOR.
4. FOOTING BEARING ELEVATIONS SHALL BE ADJUSTED AT TIME OF EXCAVATION TO ACHIEVE THE REQUIRED BEARING CAPACITY IF SO REQUIRED.
5. BACKFILLING OF RETAINING WALLS SHALL BE PLACED SO THAT EQUAL LOADING SHALL BE MAINTAINED ON EACH SIDE OF WALL UNTIL THE LOWER GRADE IS REACHED.
6. PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDING FOUNDATIONS BOTH DURING CONSTRUCTION AND PERMANENTLY.
7. MAINTAIN STABILITY OF EXCAVATIONS UNTIL PROPERLY BACKFILLED. KEEP EXCAVATIONS FREE OF LOOSE MATERIAL. DEWATER EXCAVATIONS AND REMOVE ANY WET MATERIAL PRIOR TO PLACING CONCRETE.
8. HEAVY EQUIPMENT USED FOR PLACING OR COMPACTING BACKFILL SHALL NOT BE OPERATED WITHIN A DISTANCE EQUAL TO THE HEIGHT OF THE BACKFILL ABOVE THE TOP OF FOOTING, (1 HORIZONTAL TO 1 VERTICAL). HAND OPERATED COMPACTION EQUIPMENT SHALL BE USED FOR COMPACTION OPERATIONS IN THIS AREA.
9. EXCAVATION BRACING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. EXCAVATION BRACING SHALL BE DESIGNED FOR LATERAL LOADING RESULTING FROM AN EQUIVALENT FLUID PRESSURE OF 60 PCF AND A SURFACE SURCHARGE OF 250 PSF.

CAST IN PLACE STRUCTURAL CONCRETE

1. SUBMIT MIX DESIGNS FOR EACH TYPE OF CONCRETE SPECIFIED.
2. SUBMIT DATA FOR ALL ADMIXTURES, CURING COMPOUNDS AND HARDENERS THAT ARE INTENDED FOR USE.
3. TESTING LABORATORY SHALL SAMPLE AND TEST CONCRETE AS FOLLOWS:
   TAKE SAMPLES IN ACCORDANCE WITH ASTM C31. SAMPLE 4 CYLINDERS FOR EACH 100 CUBIC YARDS, 5000 SF OF SURFACE AREA OR FOR EACH PLACEMENT OF EACH TYPE OF CONCRETE PLACED IN ANY ONE DAY.
4. TEST WHEN SAMPLES ARE TAKEN FOR AIR CONTENT AND SLUMP IN ACCORDANCE WITH ASTM C143.
5. TEST CYLINDERS FOR COMPRESSIVE STRENGTH IN ACCORDANCE WITH ASTM C39.
   TEST 1 CYLINDER AT 7 DAYS
   TEST 2 CYLINDERS AT 28 DAYS
   HOLD ONE CYLINDER IN RESERVE AND BREAK AT 56 DAYS IF THE 28 DAY CYLINDERS DO NOT SATISFY ACI CRITERIA FOR THE SPECIFIED STRENGTH.
6. TEST REPORTS SHALL BE SENT TO THE STRUCTURAL ENGINEER AND SHALL BE AVAILABLE AT THE JOBSITE
7. CONCRETE SHALL HAVE THE MINIMUM 28 DAY COMPRESSIVE STRENGTH AND WEIGHTS:

LOCATION	28 DAY STRENGTH	UNIT WEIGHT	WATER/CEMENT RATIO
FOUNDATIONS	4,000 PSI	145 PCF	0.50 MAX

8. COARSE AGGREGATE TO BE 1" MAXIMUM.
9. CONCRETE WORK SHALL CONFORM TO ACI 318.
10. REINFORCING BARS SHALL CONFORM TO ASTM A615 GRADE 60.
11. REINFORCING BARS TO BE WELDED SHALL CONFORM TO ASTM A706 GRADE 60.
12. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A82 AND A185. PROVIDE MATERIAL IN SHEETS. LAP ALL WELDED WIRE FABRIC ONE FULL SQUARE PLUS 2" AT ALL SHEET EDGES.
13. REINFORCING BAR SUPPORT DEVICES SHALL CONFORM TO CRSI MANUAL OF STANDARD PRACTICE.
14. CONCRETE CLEAR COVER ON EMBEDDED REINFORCING SHALL BE AS FOLLOWS:

LOCATION	BAR SIZE	MINIMUM CLEAR COVER
FOOTINGS	ALL	3" BOTTOM AND SIDES, 2" TOP
CONCRETE EXPOSED TO EARTH OR WEATHER	#5 AND SMALLER	1 1/2"
	#6 THROUGH #18	2"

15. ALL CONTINUOUS BARS SHALL HAVE A CLASS B TENSION LAP SPLICE AT ALL SPLICES UNO. PROVIDE CORNER BARS FOR ALL CONTINUOUS BARS AT ALL FOUNDATION AND WALL CORNERS AND INTERSECTIONS. LAP CORNER BARS 48 BAR DIAMETERS EACH END.
16. PROVIDE DOWELS TO FOOTINGS TO MATCH ALL WALL, PIER AND COLUMN VERTICAL REINFORCING UNO. EMBED DOWELS IN FOOTING WITH HOOK TO WITHIN 3" OF BOTTOM OF FOOTING. EXTEND DOWELS ABOVE FOOTING FOR 48 BAR DIAMETER LAP SPLICE WITH VERTICAL REINFORCING UNO.
17. CONSTRUCTION AND CONTRACTION JOINTS IN WALLS SHALL BE LOCATED AT 20'-0" OC MAXIMUM AND 10'-0" MAXIMUM FROM WALL CORNERS. ALIGN JOINTS IN WALLS WITH JOINTS IN SLABS AT LOCATIONS WHERE SLABS ARE CONNECTED TO WALLS.
18. CONFORM TO ACI 306 FOR COLD WEATHER CONCRETE AND ACI 305 FOR HOT WEATHER CONCRETE WORK WHEN ANY COMBINATION OF TEMPERATURE, HUMIDITY OR WIND SPEED RESULTS IN CONDITIONS THAT WOULD IMPAIR THE QUALITY OF CONCRETE. CONCRETE IS TO BE REJECTED IF ITS TEMPERATURE AT TIME OF PLACEMENT IS 90 DEGREES F OR ABOVE.
19. CHAMFER ALL EXPOSED CONCRETE EDGES 3/4" UNO. SEE ARCHITECTURAL DRAWINGS FOR DETAILS.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL EMBEDDED ITEMS IN CONCRETE WORK. COORDINATE WITH THE FOLLOWING: CIVIL, ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS, PRECAST SHOP DRAWINGS, MECHANICAL, ELECTRICAL AND PLUMBING EQUIPMENT AND FIXTURE REQUIREMENTS.

STRUCTURAL STEEL

1. STRUCTURAL STEEL CONSTRUCTION DETAILING, FABRICATION AND ERECTION SHALL CONFORM TO THE AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS"
   A. STRUCTURAL STEEL MEMBERS SHALL CONFORM TO THE FOLLOWING STANDARDS:

WIDE FLANGE SHAPES	ASTM A992
ANGLE, CHANNELS AND PLATES	ASTM A36
ANCHOR RODS <= 3/4"Ø	ASTM F1554 GRADE 36
ANCHOR RODS >= 7/8"Ø	ASTM F1554 GRADE 55
PIPE	ASTM A53
RECTANGULAR HSS	ASTM A500 GRADE C, 50 ksi
HEADED STUDS	ASTM A108, GRADE 1015-1020

2. ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED.
3. SPLICING OF STRUCTURAL STEEL MEMBERS IS PROHIBITED WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER FOR THE LOCATION AND TYPE OF SPLICE.
4. CAMBER BEAMS WHERE INDICATED. WHERE NO CAMBER IS INDICATED, BEAMS SHALL BE FABRICATED SO THAT AFTER ERECTION, ANY NATURAL CAMBER IS UPWARD.
5. ALL COPES, HOLES, OPENINGS AND MODIFICATIONS REQUIRED IN STRUCTURAL STEEL MEMBERS FOR ERECTION OR THE WORK OF OTHER TRADES SHALL BE INDICATED ON THE SHOP DRAWINGS AT TIME OF SUBMITTAL FOR REVIEW.
6. FIELD MODIFICATION OF STRUCTURAL STEEL IS PROHIBITED WITHOUT PRIOR WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD.
7. SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL STRUCTURAL STEEL AND SHALL INDICATE COMPLETE CONNECTION INFORMATION, BOTH SHOP AND FIELD.
8. PROVIDE A SHOP COAT OF FABRICATOR'S STANDARD RUST INHIBITIVE PRIMER TO ALL STEEL UNO.
9. FILL SOLID WITH NON-SHRINK GROUT UNDER ALL BASE AND BEARING PLATES (5,000 PSI MIN AT 28 DAYS).
10. CONNECTION NOTES:
    A. CONNECTION MATERIALS SHALL CONFORM TO THE FOLLOWING STANDARDS AND MATERIAL PROPERTIES:

ANGLES	ASTM A36
WT	ASTM A992
PLATES	ASTM A36
BOLTS	ASTM A325
NUTS	ASTM A563
WASHERS	ASTM F436
WELDING ELECTRODES	E70XX

    B. BOLTED CONNECTIONS SHALL CONFORM TO THE PROVISIONS OF THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS."
    C. WELDED CONNECTIONS SHALL BE MADE WITH CONTINUOUS FILLET WELDS UNO. MINIMUM WELD SIZE SHALL BE 1/4" OR AS REQUIRED BY AISC SPECIFICATION, WHICHEVER IS LARGER. MINIMUM WELD LENGTH SHALL BE 2".
    D. ALL WELDS SHALL BE MADE BY AWS CERTIFIED WELDERS, APPROVED BY DSA.

LIGHT GAGE METAL FRAMING

1. LIGHT GAGE METAL FRAMING INDICATED ON THE DRAWINGS INDICATES TYPICAL CONDITIONS AND MINIMUM REQUIREMENTS.
2. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER OF RECORD FOR REVIEW. SHOP DRAWINGS SHALL INCLUDE LAYOUT OF ALL LIGHT GAGE METAL FRAMING INCLUDING ARRANGEMENT, DIMENSIONS, MATERIALS, STRESS VALUES, CONNECTORS, ANCHORAGE, AND RELATION TO ADJACENT WORK.
3. LIGHT GAGE METAL FRAMING DESIGN AND CONSTRUCTION SHALL CONFORM TO THE AISI NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS.
4. MINIMUM GAGE OF MEMBERS PROVIDING LATERAL SUPPORT FOR MASONRY VENEER SHALL BE 18 GAGE (43 MILS). LIMIT LATERAL DEFLECTION OF STUDS PROVIDING LATERAL SUPPORT FOR MASONRY VENEER TO H/600.
5. MINIMUM YIELD STRENGTH (Fy) FOR LIGHT GAGE METAL FRAMING MEMBERS SHALL BE 33,000 PSI FOR 18 GAGE (43 MILS) AND THINNER. MINIMUM YIELD STRENGTH (Fy) FOR MEMBERS SHALL BE 50,000 PSI FOR 16 GAGE (54 MILS) AND THICKER.
6. ALL LIGHT GAGE METAL STUDS, TRUSSES, TRACK, BRIDGING AND ACCESSORIES SHALL BE FORMED FROM STEEL HAVING A G-60 GALVANIZED COATING CONFORMING TO ASTM A653 AND C955.
7. A MINIMUM OF 10" LENGTH OF UN-PUNCHED STEEL IS REQUIRED AT ENDS OF STUDS AND AT ALL BEARING POINTS AND CONCENTRATED LOADS (NO PUNCHING HOLES OF ANY SIZE IS PERMITTED IN THESE 10 INCHES). NO CUTTING OF THE STUD FLANGES IS PERMITTED.
8. SPLICES IN LOAD BEARING STUDS ARE NOT PERMITTED.
9. LOAD BEARING STUDS SHALL HAVE FULL BEARING AGAINST THE INSIDE TRACK WEB TOP AND BOTTOM. STUD ENDS SHALL BE CUT SQUARE.
10. LATERAL BRIDGING SHALL BE USED TO PROVIDE LATERAL STABILITY OF LOAD BEARING STUDS. BRIDGING SHALL BE (2) 1 1/2" - 18 GA (43 MILS) FLAT STRAP (ONE EACH SIDE OF WALL). FASTEN BRIDGING TO EACH STUD FLANGE WITH (1) #10 SCREW. PROVIDE TRACK BLOCKING BETWEEN STUDS IN LINE WITH BRIDGING SPACED AT 10'-0" MAXIMUM ALONG LENGTH OF ALL BRIDGING LINES AND EACH SIDE OF WALL OPENINGS.
11. BRIDGING IS TO BE SPACED AT 4' - 0" OC VERTICALLY.
12. MINIMUM TRACK FASTENING AT FOUNDATION SHALL BE 0.177"Ø POWDER ACTUATED FASTENERS (PAF) SPACED AT 8" OC. WITH 1 1/2" MINIMUM PENETRATION INTO CONCRETE.
13. CUTTING OF LOAD BEARING METAL STUDS, TRACK, BRIDGING OR BRACING IS NOT PERMITTED WITHOUT SPECIFIC APPROVAL FROM THE ENGINEER OF RECORD.
14. ATTACH ALL EXTERIOR SHEATHING AND INTERIOR SHEATHING AT BEARING WALLS TO METAL STUDS WITH #6 SCREWS SPACED AT 6" OC AT ALL PANEL EDGES AND PANEL INTERIOR. REFER TO ARCHITECTURAL DRAWINGS FOR NON-LOAD BEARING WALLS AND ALL WALL DIMENSIONS.

POST-INSTALLED ANCHORS

1. EXCEPT WHERE INDICATED ON THE DRAWINGS, POST-INSTALLED ANCHORS SHALL CONSIST OF THE FOLLOWING ANCHOR TYPES AS PROVIDED BY HILTI, INC. CONTACT HILTI AT (800) 879-8000 FOR PRODUCT RELATED QUESTIONS.
   A. ANCHORAGE TO CONCRETE
      a. ADHESIVE ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
         • HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HIT-Z ROD PER ICC ESR-3187.
      b. MEDIUM DUTY MECHANICAL ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
         • HILTI KWIK HUS-EZ AND KWIK HUS EZ-1 SCREW ANCHORS PER ICC ESR-3027
         • HILTI KWIK BOLT-TZ EXPANSION ANCHORS PER ICC ESR-1917
   B. REBAR DOWELING INTO CONCRETE
      a. ADHESIVE ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
         • HILTI HY-200 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT (TE-CD OR TE-YD) AND VC150/300 VACUUM (VC105 OR VC 300) SYSTEM WITH CONTINUOUSLY DEFORMED REBAR PER ICC ESR-3187
2. ALL ANCHOR BASE PLATES, PRESSURE TREATED WOOD SILLS, OR EXTERIOR APPLICATIONS SHALL BE GALVANIZED OR STAINLESS STEEL.
3. ANCHOR CAPACITY USED IN DESIGN SHALL BE BASED ON THE TECHNICAL DATA PUBLISHED BY HILTI OR SUCH OTHER METHOD AS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
4. INSTALL ANCHORS PER THE MANUFACTURER INSTRUCTIONS, AS INCLUDED IN THE ANCHOR PACKAGING.
5. OVERHEAD ADHESIVE ANCHORS MUST BE INSTALLED USING THE HILTI PROFI SYSTEM.
6. THE CONTRACTOR SHALL ARRANGE AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR ALL OF THEIR ANCHORING PRODUCTS SPECIFIED. THE STRUCTURAL ENGINEER OF RECORD MUST RECEIVE DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS ARE TRAINED PRIOR TO THE COMMENCEMENT OF INSTALLING ANCHORS.
7. ANCHOR CAPACITY IS DEPENDANT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON DRAWINGS.
8. EXISTING REINFORCING BARS IN THE CONCRETE STRUCTURE MAY CONFLICT WITH SPECIFIC ANCHOR LOCATIONS. EXISTING REBAR AND STANDS MUST NOT BE CUT OR DAMAGED, UNLESS NOTED ON THE DRAWINGS THAT THE BARS CAN BE CUT. THE CONTRACTOR SHALL REVIEW THE EXISTING STRUCTURAL DRAWINGS AND SHALL UNDERTAKE TO LOCATE THE POSITION OF THE REINFORCING BARS AT THE CONCRETE ANCHORS, BY HILTI FERROSCAN, GPR, X-RAY, OR OTHER MEANS.

AGENCY REVIEW

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 03-120493 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 06/30/2020

LITTLE
DIVERSIFIED ARCHITECTURAL CONSULTING
1300 Dove Street, Suite 100
Newport Beach, CA. 92660
T: 949.698.1400
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CLIENT NAME
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT

PROJECT NAME
MOORPARK COLLEGE MAIN ENTRY SIGN
7075 CAMPUS ROAD, MOORPARK, CA 93021

CONSULTANT

DSA A# 03-120493

SEAL
REGISTERED PROFESSIONAL ENGINEER
BRYAN T. STARR
No. S5076
Exp. 6/30/21
STRUCTURAL
STATE OF CALIFORNIA
04/17/2020

ISSUE FOR
DSA RESUBMITTAL

ISSUE DATE
04/17/2020

REVISIONS

NO.	REASON	DATE

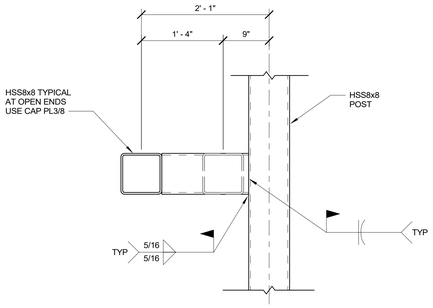
PROJECT TEAM
PRINCIPAL IN CHARGE
RC
PROJECT MANAGER
EB
DESIGN TEAM
Bryan Starr, SE

PROJECT NAME
MOORPARK COLLEGE MAIN ENTRY SIGN

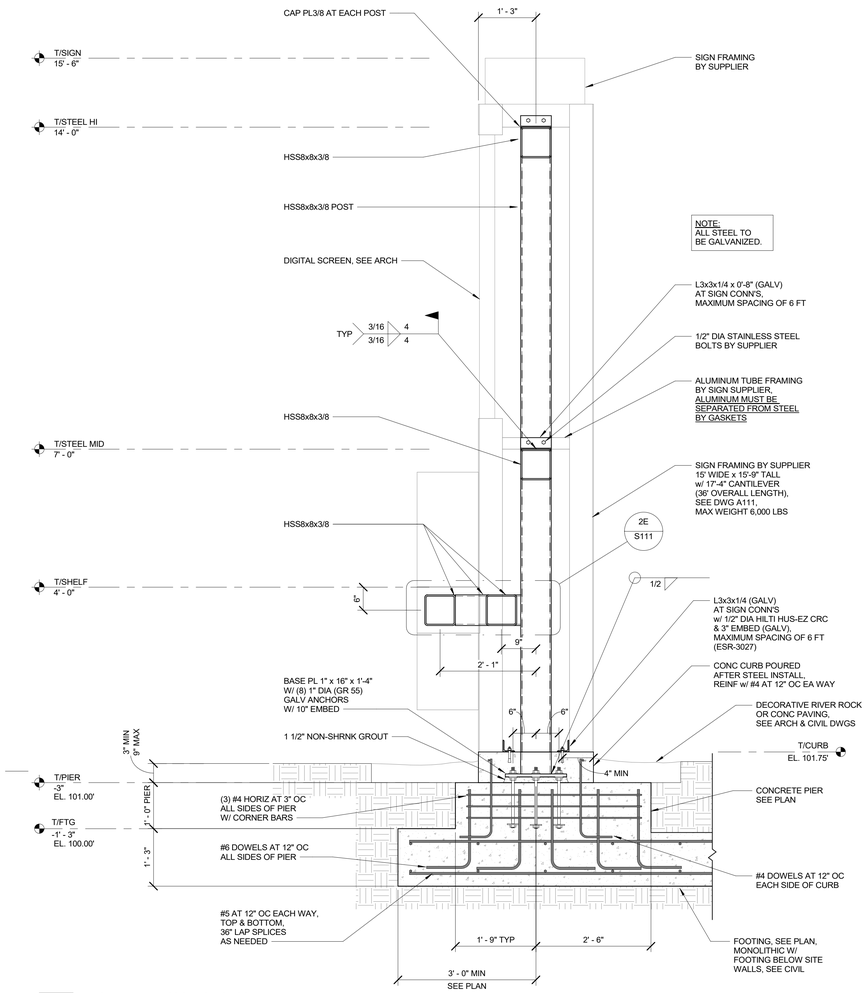
PROJECT NO.
613696000

SHEET TITLE
STRUCTURAL GENERAL NOTES

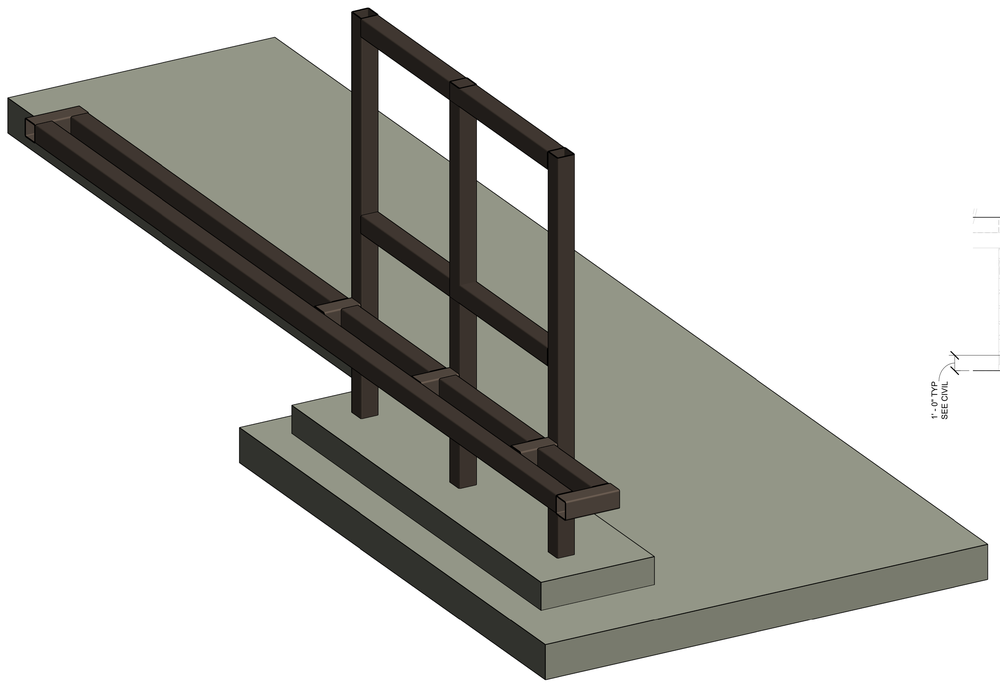
SHEET NUMBER
S001



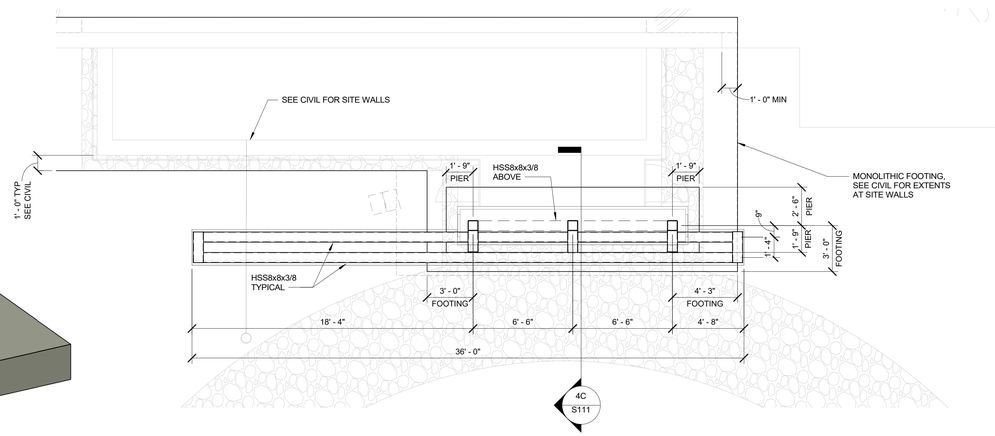
2E / S111 TYPICAL HSS CONNECTION
1" = 1'-0"



4C / S111 MAIN ENTRY SIGN SECTION
3/4" = 1'-0"



1A / S111 ISOMETRIC VIEW



4A / S111 FOUNDATION PLAN
1/4" = 1'-0"

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STRUCTURAL
STATE OF CALIFORNIA
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DSA RESUBMITTAL

ISSUE DATE
04/17/2020

REVISIONS

NO.	REASON	DATE

PROJECT TEAM
PRINCIPAL IN CHARGE
RC
PROJECT MANAGER
EB
DESIGN TEAM
Bryan Starr, SE

PROJECT NAME
MOORPARK COLLEGE MAIN ENTRY SIGN

PROJECT NO.
613696000

SHEET TITLE
MAIN ENTRY SIGN STRUCTURE & FOUNDATION

SHEET NUMBER
S111

GENERAL NOTES

A. GENERAL

1. SCOPE
THE DRAWINGS AND THESE GENERAL NOTES DESCRIBE THE SCOPE OF WORK AND SYSTEMS. THE MATERIAL REQUIRED FOR THE WORK SHALL BE CONTRACTOR FURNISHED AND CONTRACTOR INSTALLED, UNLESS SPECIFICALLY NOTED OTHERWISE. THE WORK INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING PRINCIPAL SYSTEMS AND EQUIPMENT. ALL ITEMS NOTED ON THE PLAN WHICH ARE NOT EXPLICITLY STATED AS EXISTING SHALL BE NEW.

2. PERMITS AND CHARGES
OBTAIN AND PAY FOR ALL NECESSARY CONSTRUCTION PERMITS, INSPECTION FEES, AND OTHER CHARGES BY AGENCIES HAVING JURISDICTION.

3. REGULATIONS AND CODES
PROVIDE AND INSTALL ALL MATERIALS IN CONFORMANCE WITH THE 2019 C.E.C., CALIFORNIA ADMINISTRATIVE CODE TITLE 8, AND OTHER CODES AND REGULATIONS HAVING JURISDICTION. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE REQUIREMENTS OF THE INSPECTING AUTHORITY AND THE MANUFACTURERS RECOMMENDATIONS.

4. VERIFYING EXISTING CONDITIONS
BEFORE SUBMITTING BID, BECOME THOROUGHLY FAMILIAR WITH ACTUAL EXISTING CONDITIONS AT THE BUILDING. THE INTENT OF THE WORK IS SHOWN ON THE DRAWINGS AND DESCRIBED HEREINAFTER. BY THE ACT OF SUBMITTING A BID PROPOSAL FOR THE WORK, THE CONTRACTOR SHALL BE DEEMED TO HAVE MADE SUCH STUDY AND EXAMINATION AND TO ACCEPT ALL CONDITIONS PRESENT AT THE SITE. NO REQUEST FOR ADDITIONAL PAYMENT WILL BE CONSIDERED AS VALID, DUE TO FAILURE TO ALLOW FOR CONDITIONS WHICH MAY EXIST.

5. COORDINATION
COORDINATE ALL WORK WITH OTHER TRADES. OBTAIN ALL DRAWINGS THAT WILL REQUIRE COORDINATION AND PROVIDE ALL ELECTRICAL CONNECTION REQUIRED WHETHER SHOWN ON ELECTRICAL DRAWINGS OR NOT. ELECTRICAL EQUIPMENT LOCATIONS INDICATED ARE SHOWN DIAGRAMMATICALLY, EXACT LOCATION SHALL BE VERIFIED. SCALING OFF OF DRAWINGS SHALL BE DONE AT CONTRACTORS RISK. DO NOT SCALE DEVICES, LIGHTING FIXTURES OR ANY EQUIPMENT FROM PLANS. LIGHTING FIXTURE QUANTITIES AND LENGTHS SHALL BE CONTRACTORS RESPONSIBILITY. FIXTURES ARE SHOWN FOR CIRCUITING ONLY. CONTRACTOR TO VERIFY SIZES & QUANTITIES PRIOR TO BID.

6. SERVICE CONTINUITY
UNINTERRUPTED EXISTING ELECTRICAL POWER SHALL BE MAINTAINED TO OTHER TRADES FOR TEMPORARY POWER AREAS OF THE SITE DURING CONSTRUCTION. PROVIDE ANY TEMPORARY SERVICES AS MAY BE REQUIRED. IDENTIFY AT BID TIME, ALL WORK TO BE DONE ON PREMIUM TIME AND THE TOTAL OVERTIME MAN-HOURS REQUIRED FOR COMPLETION.

7. AS BUILT
PROVIDE RECORD DRAWINGS IN ACAD TO THE OWNER WITH ALL CHANGES NOTED THEREON AT THE COMPLETION OF THE PROJECT. RECORD DRAWINGS SHALL BE SIGNED AND DATED BY CONTRACTOR PRIOR TO RELEASE OF FINAL RETENTION OF ALL MONIES.

8. GUARANTEE
CONTRACTOR SHALL UNCONDITIONALLY GUARANTEE ALL LABOR AND MATERIALS ON ALL WORK AGAINST DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR.

9. SHOP DRAWINGS
SUBMIT SHOP DRAWINGS AND MATERIAL LIST FOR REVIEW PRIOR TO COMMENCING ANY WORK. ALL EQUIPMENT TO BEAR U.L. LABEL OR THAT OF ANOTHER ACCEPTABLE TESTING LABORATORY. SHOP DRAWINGS MUST BE STAMPED BY THE CONTRACTOR FOR CONFORMANCE PRIOR TO SUBMITTAL. SUBMIT THREE HARD COPY SETS OF SHOP DRAWINGS FOR REVIEW PRIOR TO PURCHASING ALL BREAKER MOUNTING HARDWARE, DISCONNECT SWITCHES, FUSES, CONTROLLERS, LIGHTING FIXTURES, LIGHT SWITCHES, RECEPTACLES, ETC.

10. CONTRACTOR BID
CONTRACTOR'S BID SHALL BE BASED ON ALL WORK SHOWN ON THE PLANS AND AS SPECIFIED. IF CONTRACTOR PROPOSES TO SUBSTITUTE FOR EQUIPMENT SPECIFIED, HE SHALL SUBMIT HIS REQUEST FOR CONSIDERATION OF THE OWNER AND ENGINEER PRIOR TO BID IN WRITING. ALL SUBSTITUTIONS MUST BE REVIEWED BY THE ENGINEER IN WRITING. SUCH REVIEW SHALL NOT RELIEVE THE CONTRACTOR COMPLYING WITH THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS, AND THE CONTRACTOR SHALL BE RESPONSIBLE AT HIS OWN EXPENSE FOR ANY CHARGES RESULTING FROM HIS PROPOSED SUBSTITUTIONS WHICH AFFECT OTHER PARTS OF HIS OWN WORK, THE OWNER, ENGINEER OF RECORD OR THE WORK OF OTHER CONTRACTORS.

B. MATERIAL AND INSTALLATION
ALL WORK AND MATERIAL SHALL CONFORM TO THE LATEST RULES OF THE GOVERNING ELECTRICAL CODE AND INSTALLATION SHALL BE OF THE LATEST INDUSTRY STANDARDS OF WORKMANSHIP.

ALL INSTALLED MATERIALS AND EQUIPMENT SHALL BE LISTED U.L., NRTL OR LISTED AND APPROVED BY AN APPROVED TESTING LABORATORY.

1. CONDUITS
CONDUIT SHALL BE EMT, PVC, IMC, RIGID OR FLEXIBLE STEEL TYPE. CONDUIT SHALL BE MANUFACTURED IN ACCORDANCE WITH UL-1. A GROUND WIRE IS REQUIRED IN ALL FLEXIBLE CONDUIT AND UNDERGROUND CONDUIT. BUSHINGS SHALL BE INSTALLED ON ALL COMMUNICATION, TELEPHONE & SPEAKER CONDUITS. PROVIDE 3/16" NYLON PULL STRING IN ALL EMPTY CONDUITS. NO MC, BX OR AC90 SHALL BE PERMITTED. FLEXIBLE STEEL CONDUIT RUNS SHALL BE LIMITED TO A MAXIMUM LENGTH OF 6 FOOT. ALL CONNECTIONS SHALL BE COMPRESSION & NOT SCREW TYPE.

2. SWITCHES AND RECEPTACLES
PROVIDE 20AMP NEMA RATED SWITCHES AND RECEPTACLES OF SPECIFICATION GRADE. ALL SWITCHES SHALL BE RATED FOR 120 AND/OR 277 VOLT AND RECEPTACLES SHALL BE NEMA 5-20R. IN ALL OFFICES AND OFFICE AREAS DEVICES SHALL BE DECORA SERIES TYPE WITH COLOR SELECTION BY CONTRACTOR/OWNERS REPRESENTATIVE.

3. FEEDERS AND BRANCH CIRCUITS IDENTIFICATION
IDENTIFY FEEDERS WITH THE CORRESPONDING CIRCUIT DESIGNATION AT THE OVER-CURRENT DEVICE, LOAD END, AND IN PULL BOXES WITH E-Z CODE OR OTHER APPROVED WIRE MARKER. IDENTIFY BRANCH CIRCUITS WITH I.D. MARKERS, THE CORRESPONDING CIRCUIT DESIGNATION AT THE OVER-CURRENT DEVICE, AT ALL SPLICES, IN JUNCTION BOXES, AND IN OUTLETS. USE PLASTIC COATED SELF-STICKING MARKERS SUCH AS THOMAS & BETTS E-Z CODE FOR IDENTIFICATION OF CONDUCTORS. IDENTIFY SIGNAL & COMMUNICATION CABLES AT TERMINAL AND OUTLET UNIQUELY WITH PERMANENT LABELING.

4. CONDUCTORS
DELIVER ALL CONDUCTORS TO THE JOB SITE IN ORIGINAL UNBROKEN CARTON OR REEL, PROPERLY TAGGED WITH U.L. LABEL, SIZE, TYPE, MANUFACTURER, TRADE NAME AND THE DATE OF MANUFACTURE. (MUST BE MANUFACTURED WITHIN 6 MONTHS) PROVIDE COPPER CONDUCTORS #12 AWG MINIMUM UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS. PROVIDE STRANDED COPPER CONDUCTORS FOR ALL WIRING. USE CONDUCTORS WITH 90°C THHN/THWN 600 VOLTS INSULATION, UNLESS OTHERWISE NOTED. CONDUCTOR SIZE NO.1 AWG AND SMALLER WITH 90 DEGREE C INSULATION ARE TO USE THE 60 DEGREE COLUMN OF THE CODE, TABLE 310-16, TO DETERMINE AMPACITY. CONDUCTORS #1/0 AWG AND LARGER WITH 75 DEGREE AND 90 DEGREE INSULATION ARE TO USE THE 75 DEGREE COLUMN OF CODE, TABLE 310-16, TO DETERMINE AMPACITY. (110.14C) WHERE THE NUMBER OF CONDUCTORS IN A RACEWAY OR CABLE EXCEEDS THREE, THE ALLOWABLE AMPACITY OF EACH CONDUCTOR SHALL BE REDUCED PER TABLE 310.15(B)(3)(a).

5. STRUCTURAL SUPPORT
EACH SECTION OF FLOOR MOUNTED SWITCHBOARD, DISTRIBUTION BOARD, MCC, ETC. SHALL BE BOLTED TO THE CONCRETE HOUSEKEEPING PAD USING (6) 3/4"-10 GRADE 2 BOLTS AND CONICAL WASHERS TORQUED TO 70LB-FT. PROVIDE MINIMUM 4000 PSI STRENGTH CONCRETE BELOW ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT. TIE THE TOP OF ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT TO THE BUILDING STRUCTURE IN A SEISMICALLY APPROVED MANNER.

6. ELECTRICAL CERTIFICATION
"ELECTRICIANS" PERFORMING WORK ON THIS PROJECT SHALL BE CURRENTLY CERTIFIED IN ACCORDANCE WITH THE STATE OF CALIFORNIA AB931 AND THE DIVISION OF APPRENTISHIP STANDARDS SECTION 3099.

C. DEMOLITION
1. NOTIFY THE OWNER IMMEDIATELY WHEREVER EXISTING EQUIPMENT IS ENCOUNTERED WHICH MUST BE RELOCATED DUE TO THE NEW CONSTRUCTION, AND WHICH IS NOT INDICATED ON THE PLANS.
2. ALL REMOVED MATERIALS AND EQUIPMENT WHICH ARE SALVAGEABLE SHALL REMAIN THE PROPERTY OF THE OWNER. DELIVER SUCH SALVAGED MATERIALS AND EQUIPMENT ON THE PREMISES AS DIRECTED BY OWNER, AND NEATLY PILE OR STORE THEM AND PROTECT FROM DAMAGE. REMOVE FROM PREMISES AND DISPOSE OF ALL MATERIALS CONSIDERED BY THE OWNER TO BE SCRAP.
3. ALL DEVICES, CIRCUITS CONDUCTORS, FEEDERS ETC., WHEN NOTED TO BE REMOVED, SHALL BE REMOVED TO THE LAST ACTIVE DEVICE. ALL OVER-CURRENT PROTECTION AND DISCONNECT DEVICES NO LONGER UTILIZED BUT REMAINING AS LAST ACTIVE DEVICE SHALL BE LABELED AS 'SPARE'. COORDINATE ALL OUTAGES WITH OWNERS REPRESENTATIVE.
4. DISCONNECT AND MAKE SAFE ALL ELECTRICAL SYSTEMS ON SITE AND IN WALL, FLOORS, AND CEILINGS SCHEDULED FOR REMOVAL.
5. REMOVE, RELOCATE, AND EXTEND EXISTING INSTALLATIONS TO ACCOMMODATE NEW CONSTRUCTION.
6. REMOVE ABANDONED WIRING TO SOURCE OF SUPPLY AND RE-LABEL DEVICES AS SPARES.
7. REMOVE ABANDONED CONDUIT, INCLUDING ABANDONED CONDUIT ABOVE ACCESSIBLE CEILING FINISHES. CUT CONDUIT FLUSH WITH WALLS AND FLOOR, AND PATCH SURFACES.
8. DISCONNECT ABANDONED OUTLETS AND REMOVE DEVICES. REMOVE ABANDONED OUTLETS IF CONDUIT SERVICING THEM IS ABANDONED AND REMOVE. PROVIDE BLANK COVER FOR ABANDONED OUTLETS WHICH ARE NOT REMOVED.
9. DISCONNECT AND REMOVE ABANDONED LUMINAIRES. REMOVE BRACKETS, STEMS, HANGERS, AND OTHER
10. REPAIR ADJACENT CONSTRUCTION AND FINISHES DAMAGED DURING DEMOLITION AND EXTENSION WORK
11. MAINTAIN ACCESS TO EXISTING ELECTRICAL INSTALLATIONS WHICH REMAIN ACTIVE. MODIFY INSTALLATION OR PROVIDE ACCESS PANEL AS APPROPRIATE.
12. BEGINNING OF DEMOLITION MEANS CONTRACTOR ACCEPTS EXISTING CONDITIONS.

D. EXECUTION
1. CAREFULLY PROTECT ALL WALLS, TRIM, FLOORS, EQUIPMENT UTILITY LINES AND MATERIALS. WHEN WORKING ON FINISHED SURFACES, LIMIT DAMAGE TO THE CONFINES AS MUCH AS POSSIBLE AND RESTORE TO THE ORIGINAL CONDITION ALL SURFACES WHICH ARE DAMAGED BECAUSE OF THE INSTALLATION OF THIS WORK.
2. EQUIPMENT, MATERIALS AND SUPPLIES REMOVED FOR PROTECTION SHALL BE REPLACED IN ORIGINAL LOCATIONS. ANY MATERIALS DAMAGED SHALL BE REPLACED WITH NEW MATERIALS OF LIKE KIND AND QUALITY.
3. DO ALL DRILLING, CUTTING, CHANNELING AND PATCHING REQUIRED TO INSTALL ELECTRICAL WORK AS INDICATED OR HEREIN SPECIFIED. M ALL HOLES, CURBS, ETC., IN FLOORS, CEILINGS AND WALLS SHALL BE PATCHED, UNLESS INDICATED OTHERWISE. PAINT ALL NEW ELECTRICAL RACEWAYS, CABINETS, ENCLOSURES AND FITTINGS PENETRATING INTO FIRE RATED ENVELOPES, SPACES, ETC.
4. ALL CONDUIT RUNS SHALL BE CONCEALED, UNLESS SHOWN OTHERWISE. PROVIDE A PULL WIRE IN ALL EMPTY CONDUITS.
5. EXISTING CONDITION SHOWN IS FROM AVAILABLE RECORD DRAWINGS AND VISUAL FIELD SURVEY AND SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ACTUAL EXISTING CONDITION AT SITE.
6. ALL WORK SHOWN IS NEW UNLESS SPECIALLY INDICATED AS EXISTING (X). ALL ELECTRICAL EQUIPMENT MOUNTING AND ANCHORAGE MUST CONFORM WITH LOCAL AND STATE SEISMIC CODES.

E. GROUNDING & BONDING
FURNISH AND INSTALL COMPLETE BONDING AND GROUNDING SYSTEM AS REQUIRED BY CODES. CONTINUITY OF GROUNDING SHALL BE MAINTAINED MECHANICALLY AND ELECTRICALLY THROUGHOUT THE SYSTEM. A GREEN GROUNDING CODE SIZED CONDUCTOR SHALL BE CARRIED IN ALL CONDUITS.

F. INSTALLATION
1. IT IS THE INTENT OF THESE PLANS AND SPECIFICATIONS THAT A COMPLETE AND WORKABLE ELECTRICAL INSTALLATION BE PROVIDED FOR ALL THE EQUIPMENT DESCRIBED OR SHOWN AS BEING IN THIS CONTRACT. TOWARD THIS END FURNISH ALL LABOR AND TOOLS NECESSARY AND FURNISH AND INSTALL ALL APPARATUS, MATERIALS AND EQUIPMENT IN A FASHION COMPLYING WITH ALL APPLICABLE CODES, INCLUDING ITEMS REQUIRED BUT NOT NORMALLY SHOWN, SUCH AS LAMPS, COUPLINGS, HANGERS, BRACKETS, CLAMPS, BOXES, CONNECTORS AND HARDWARE. REFER ALSO TO WRITTEN SPECIFICATIONS FOR GENERAL, MECHANICAL AND ELECTRICAL SECTIONS.
2. PROCURE ALL PERMITS FROM LEGALLY CONSTITUTED AUTHORITIES, ARRANGE FOR ALL INSPECTIONS AND PAY ALL COSTS FOR FEES AND TESTS IN CONNECTION THEREWITH. COMPLY WITH CODES: NOTHING IN THESE PLANS AUTHORIZES DEVIATION FROM APPLICABLE CODES.
3. DETERMINE EXACT ROUTING OF CONCEALED FEEDERS AND BRANCH HOMERUNS IN COOPERATION WITH OTHER TRADES TO SIMPLIFY INSTALLATION WHEREVER POSSIBLE BUT SUBJECT TO APPROVAL OF ARCHITECT FOR VISUAL AND STRUCTURAL REASONS.
4. PROVIDE A CODE APPROVED DISCONNECT SWITCH OR BREAKER WITHIN SIGHT OF EVERY MOTOR AND FEED MOTORS NOT EQUIPPED WITH "BUILT IN" PROTECTION THROUGH A MAGNETIC OR MANUAL STARTER WITH OVERLOAD HEATERS SIZED TO COMPLY WITH MOTOR MANUFACTURER'S RECOMMENDATIONS AND APPLICABLE CODES.
5. FOR CONNECTIONS TO EXHAUST FANS, PUMPS, COMPRESSORS, SPACE HEATERS, WATER HEATERS, AQUASTATS, SOLENOID VALVES AND OTHER MECHANICAL EQUIPMENT AND FOR CONDUITS AND WIRE REQUIRED BUT NOT NECESSARILY SHOWN ON THESE DRAWINGS REFER TO MECHANICAL PLANS AND DETERMINE EXACT LOCATIONS UNDER DIRECTION OF HEATING AND VENTILATING CONTRACTOR.
6. DO NOT RUN ANY CONDUIT IN SLAB IF ITS OUTSIDE DIAMETER EXCEEDS 1/3 THE THICKNESS OF THE SLAB. LOCATE CONDUITS WITHIN THE MIDDLE OF THE SLAB. WHERE CONDUITS ARE GROUPED IN PARALLEL RUNS, SPACE THEM 3" OR MORE APART. WHERE CONDUITS CROSS EACH OTHER, THICKEN SLAB PROPORTIONATELY OVER A HORIZONTAL AREA EQUAL TO TEN TIMES THE DIAMETER OF THE LARGEST CONDUIT. REFER ALSO TO DETAILS SHOWN..
7. SIZE OUTLET BOXES IN CONFORMITY WITH CODE FOR NUMBER AND GAUGE OF CONDUCTORS THEREIN, EXCEPT WHERE NOTED TO BE LARGER. MINIMUM BOX SIZE SHALL BE 4" SQUARE BY 1-1/2" DEEP.
8. ALL ELECTRICAL WORK SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATING, SERVICING, MAINTAINING AND REPAIRING. ALL CONDUIT SHALL BE CONCEALED WHERE POSSIBLE. EXPOSED CONDUIT SHALL BE IN STRAIGHT LINES PARALLEL WITH, OR AT RIGHT ANGLES TO, COLUMN LINES OR BEAMS AND SEPARATED BY AT LEAST THREE (3) INCHES FROM WATER LINES WHENEVER THEY RUN LONG SIDE OR ACROSS SUCH LINES. CONDUIT SHALL NOT BE RUN BELOW CABLE TRAYS OR LIGHT FIXTURES WITHOUT SPECIFIC APPROVAL OF THE OWNERS REPRESENTATIVE. HANGERS SHALL BE FASTENED TO STEEL, CONCRETE OR MASONRY, BUT NOT TO PIPING. HANGERS AND SUPPORT SYSTEMS ARE AN INTEGRAL PART OF THE VISUAL ENVIRONMENT. ALL HANGERS AND SUPPORTS EXPOSED TO PUBLIC VIEW MUST BE SHOWN IN DETAIL ON PLANS SUBMITTED TO ENGINEER FOR APPROVAL OF APPEARANCE. ALL HANGERS MUST BE UNIFORMLY SPACED AND NEATLY INSTALLED WITH NO EXCESS MATERIAL BEYOND WHAT IS REQUIRED FOR THE SUPPORT FUNCTION. CONTRACTOR SHALL SELECT ACCESSORIES AND HARDWARE WITH A SMOOTH, NEAT FINISHED APPEARANCE AND PAINT ALL EXPOSED CONDUIT HANGERS TO MATCH THE ADJACENT FINISHES.
9. ALL RECEPTACLES SHALL BE MOUNTED AT 18" PER ADA REQUIREMENTS UNLESS NOTED OTHERWISE, MEASURED FROM BOTTOM OF BOX.
10. ALL DISTRIBUTION BOARDS, SWITCHBOARDS AND TRANSFORMERS THAT ARE FLOOR MOUNTED SHALL BE MOUNTED ON 2" THICK HOUSEKEEPING PAD. TRANSFORMER SHALL BE ON VIBRATION ISOLATION PADS AND CONNECTED WITH FLEXIBLE CONDUIT.
11. CONTRACTOR SHALL EXAMINE PLANS AND VERIFY IN FIELD LOCATIONS OF ALL FIRE RATED WALLS, CEILINGS AND FLOORS. CONTRACTOR SHALL SEAL ALL ELECTRICAL SYSTEM PENETRATIONS THROUGH FIRE RATED WALLS, CEILINGS AND FLOORS WITH U.L. LISTED MATERIAL APPROVED BY THE AUTHORITY HAVING JURISDICTION.
12. ALL SWITCHES SHALL BE MOUNTED 36" TO 48" MEASURED FROM BOTTOM & TOP OF BOX RESPECTIVELY.
13. PANEL CIRCUIT DIRECTORY SHALL COMPLY WITH CEC 408.4.
14. PROVIDE 90% COMPACTION OR SAND SLURRY OVER ALL UNDERGROUND CONDUITS, USE ONLY CLEAN FILL.

G. ADDITIONAL NOTES
1. MARKING - UNDERGROUND SYSTEM SHALL BE LEGIBLY MARKED "UNDERGROUND SYSTEM" AT THE SOURCE OR FIRST DISCONNECTING MEANS OF THE SYSTEM. THE MARKING SHALL BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED. (250.21)(C)
2. PROVIDE SWITCH AND RECEPTACLE HEIGHTS PER STATE OF CALIFORNIA ACCESSIBLE REQUIREMENTS.
3. THE ISSUANCE OF A PERMIT SHALL NOT PREVENT THE BUILDING OFFICIAL FROM REQUIRING THE CORRECTION OF ERRORS ON THESE PLANS OR FROM PREVENTING ANY VIOLATION OF THE CODES ADOPTED BY THE CITY, RELEVANT LAWS, ORDINANCES, RULES AND/OR REGULATIONS.
4. FOR FIRE RATED WALL/CEILING PENETRATION AND/OR MEMBRANE PENETRATION, COMPLETE NRTL CLASSIFICATION SHEETS SHALL BE PROVIDED TO THE INSPECTOR AT THE TIME OF INSPECTION FOR THE LISTED RATED ASSEMBLY.
5. EACH MULTIWIRE BRANCH CIRCUIT SHALL BE PROVIDED WITH A MEANS THAT WILL SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS AT THE PANELBOARD WHERE THE BRANCH CIRCUIT ORIGINATES. (210.4)
6. MULTIWIRE BRANCH CIRCUITS SUPPLYING POWER TO THE PARTITION SHALL BE PROVIDED WITH A MEAN TO DISCONNECT SIMULTANEOUSLY ALL UNGROUNDED CONDUCTORS AT THE PANELBOARD WHERE THE BRANCH CIRCUIT ORIGINATES. (605.7)
7. PROVIDE SEPARATE SUBMITTAL; OBTAIN ALL REQUIRED PERMITS, INSPECTIONS AND APPROVALS FOR ALL FIRE ALARM SYSTEM INSTALLATIONS AND/OR MODIFICATIONS FROM THE FIRE DEPARTMENT.
8. ALL NEW OVERCURRENT DEVICES INSTALLED IN EXISTING PANELS/SWITCHBOARDS SHALL MATCH THE MAKE, MODEL AND INTERRUPTING CAPACITY OF THE EXISTING OVERCURRENT DEVICES.
9. RACEWAY SEALS. CONDUITS OR RACEWAYS THROUGH WHICH MOISTURE MAY CONTACT LIVE PARTS SHALL BE SEALED OR PLUGGED AT EITHER OR BOTH ENDS.
10. ALL 15-20 AMP 120 VOLTS, SINGLE PHASE RECEPTACLES WITHIN KITCHEN AND FOOD PREPARATION AREAS TO BE GFCI PER NEC 210.8.
11. PROVIDE LOCAL DISCONNECTS FOR ALL HARDWIRED EQUIPMENT THAT IS NOT "WITHIN SIGHT" OF THE SOURCE PANEL.
12. MULTIPLE RACEWAYS CONTAINING MORE THAN 3 CURRENT CARRYING CONDUCTORS SHALL COMPLY WITH [2016 CEC, 310.15(B)(2)(A)].
13. THE IDENTIFICATION OF EVERY CIRCUIT OF A PANEL BOARD AND SWITCHBOARD SHALL BE LEGIBLY IDENTIFIED AS TO ITS CLEAR, EVIDENT, AND SPECIFIC PURPOSE OR USE AND SHALL INCLUDE SUFFICIENT DETAIL TO ALLOW EACH CIRCUIT TO BE DISTINGUISHED FROM ALL OTHERS. 2016 C.E.C 408.4 - PROVIDE MORE DETAIL ON PANEL SCHEDULE CIRCUIT DESCRIPTIONS.
14. A SINGLE RECEPTACLE INSTALLED ON AN INDIVIDUAL BRANCH CIRCUIT SHALL HAVE AN AMPERE RATING OF NOT LESS THAN THAT OF THE BRANCH CIRCUIT. INDICATE THE RECEPTACLE RATING. (210.21(B)(1))
15. PROVIDE RECEPTACLE OUTLETS WHEREVER CORD CONNECTED EQUIPMENT WILL BE USED. (210.50(B))
16. WHERE THE DISCONNECTS ARE NOT PROVIDED WITHIN SIGHT FROM THE EQUIPMENT IT SUPPLIES, THE SWITCH OR CIRCUIT BREAKER MUST INCLUDE PROVISIONS FOR ADDING A LOCK, AND THESE PROVISIONS MUST REMAIN WITH THE EQUIPMENT. THESE LOCKING PROVISIONS HAVE TO BE PART OF THE EQUIPMENT, EITHER INHERENT TO THE EQUIPMENT DESIGN OR AS A ACCESSORY FEATURE THAT CAN BE INSTALLED ON THE EQUIPMENT. [410.141(B), 422.31(B), 424.19, 440.14 EXCEPTION NO. 1, 600.6(A)(2)(3), 620.51(A) EXCEPTION NO. 1, 620.53, 620.55]
17. STANDARD NON-LOCKING STRAIGHT-BLADE RECEPTACLES IN 120- AND 250-VOLT CONFIGURATION AT WET/DAMP LOCATION ARE REQUIRED TO BE LISTED WEATHER-RESISTANT TYPE. [CEC 406.8(A)].

SYMBOLS

- WP GFCI RECEPTACLE AT 18" AFF TO BOTTOM OF DEVICE
- (2)DATA OUTLETS, 2 GANG FLOOR BOX WITH DEVICES AND 2 CAT 6 CABLES PER NOTES & SPECIFICATION. PROVIDE 1-1/4"C MINIMUM TO CABLE TRAY OR IDF.
- SPECIAL OUTLET, TYPE AS REQUIRED BY EQUIPMENT.
- (J) JUNCTION BOX (CEILING MTD.) SIZE PER TABLE AND NEC ARTICLE 370
- (J) JUNCTION BOX (WALL MTD.) SIZE PER TABLE AND NEC ARTICLE 370
- (T) THERMOSTAT - 36" TO 48" AFF, BOTTOM & TOP OF BOX RESPECTIVELY
- [T] TRANSFORMER
- BRANCH CIRCUIT PANELBOARD - 120/208VAC, 3Ø, 4W.
- 4'X8'X3/4" TELEPHONE BACKBOARD, MARINE PLYWOOD AND PAINTED WITH FIRE RESISTANT PAINT, PER OWNERS REPRESENTATIVE.
- CONDUIT RUN CONCEALED ABOVE CEILING OR IN WALLS,
- CONDUIT RUN CONCEALED BELOW FLOOR OR UNDERGROUND
- FLEXIBLE CONDUIT (WITH GROUND CONDUCTOR, PROVIDE LIQUID TIGHT CONDUIT IN ALL EXPOSED AREAS)
- #10 — HASH MARKS INDICATE QUANTITY OF #12 CONDUCTORS. NO HASH MARKS INDICATE (2)#12AWG. (PROVIDE GROUND CONDUCTOR IN ALL CONDUITS.) WHERE NO NUMBER IS INDICATED, THE CONDUCTORS ARE #12AWG(MIN.) CONDUIT SIZE IS AS REQUIRED BY ELECTRICAL CODE. (3/4" CONDUIT MINIMUM).
- 2LA 1-3-5,7 — INDICATES A HOMERUN TO PNL 2LA, CKTS 1-3-5 WITH SHARED NEUTRAL & CKT 7 WITH DEDICATED NEUTRAL.
- 3/4"C-2#12 & 1#12 GND
- 3/4"C-3#12 & 1#12 GND
- 3/4"C-4#12 & 1#12 GND
- 3/4"C-5#12 & 1#12 GND
- #10 3/4"C-2#10 & 1#10 GND
- #10 3/4"C-3#10 & 1#10 GND
- #10 3/4"C-4#10 & 1#10 GND
- #10 3/4"C-5#10 & 1#10 GND

(for the above conductor symbols:) 1" CONDUIT MINIMUM IF UNDERGROUND (CONTRACTOR TO PROVIDE DEDICATED NEUTRALS FOR CIRCUITS WHICH DO NOT HAVE COMMON CIRCUIT HANDLE TIES ON BREAKERS FEEDING THE CIRCUITS)

- 1 — SEE KEY NOTE #1 AS INDICATED ON DRAWING
- $ P — SWITCH WITH PILOT LIGHT @ 42"AFF
- $ 3ab — 3-WAY SWITCH, a & b INDICATES LIGHT FIXTURE TO BE SWITCHED (EACH A 3-WAY) MOUNTED @ 42" AFF
- $ — SWITCH MOUNTED @ +42" AFF
- $ M — MOTOR RATED SWITCH
- $ a,b,c,d — CIRCUIT SWITCH LEGS; WALL SWITCHES
- [P] POWER IN - GRADE PLULLBOX
- [C] COM IN - GRADE PULLBOX
- 60AS 35AF 3P — DISCONNECT SWITCH, 60AMP SWITCH, 35 AMP FUSE, 3 POLE W/ OVERCURRENT PROTECTION U.O.N.
- (M) 100A UTILITY METER (OR AS NOTED)
- 3P 100AS 60AF — FUSED DISCONNECT SWITCH 100AMP SWITCH RATING WITH 60 AMP FUSES, 3 POLE
- 200AF 150AT 3P — MOLDED CASE CIRCUIT BREAKER 200 AMP FRAME, 150 AMP TRIP RATING, 3 POLE

COLOR CODE FOR CONDUCTORS

PROVIDE CONDUCTOR COLOR CODE AS FOLLOWS:
120/208VAC,3Ø,4W: BLUE,BLACK,RED FOR PHASE CONDUCTORS AND WHITE FOR NEUTRAL, GREEN FOR GROUND.

277/480VAC,3Ø,4W: ORANGE,BROWN,YELLOW FOR PHASE CONDUCTORS AND WHITE FOR NEUTRAL, GREEN FOR GROUND.

DERATING TABLE

NEC #310-8 ADJUSTMENT FACTORS

(a) MORE THAN THREE CURRENT-CARRYING CONDUCTORS IN A RACEWAY OR CABLE. WHERE THE NUMBER OF CURRENT-CARRYING CONDUCTORS IN A RACEWAY OR CABLE EXCEEDS THREE, THE ALLOWABLE AMPACITIES SHALL BE REDUCED AS SHOWN IN THE FOLLOWING TABLE:

NUMBER OF CURRENT-CARRYING CONDUCTORS	PERCENT OF VALUES IN TABLES AS ADJUSTED FOR AMBIENT TEMPERATURE IF NECESSARY
4 THROUGH 6	80
7 THROUGH 9	70
10 THROUGH 20	50
21 THROUGH 30	45
31 THROUGH 40	40
41 AND ABOVE	35

WHERE SINGLE CONDUCTORS OR MULTICONDUCTOR CABLES ARE STACKED OR BUNDLED LONGER THAN 24 INCHES (610 mm) WITHOUT MAINTAINING SPACING AND ARE NOT INSTALLED IN RACEWAYS, THE ALLOWABLE AMPACITY OF EACH CONDUCTOR SHALL BE REDUCED AS SHOWN IN THE ABOVE TABLE.

EXCEPTION NO. 1: WHERE CONDUCTORS OF DIFFERENT SYSTEMS, AS PROVIDED IN SECTION 300-3, ARE INSTALLED IN A COMMON RACEWAY OR CABLE, THE DERATING FACTORS SHOWN ABOVE SHALL APPLY TO THE NUMBER OF POWER AND LIGHTING (ARTICLES 210, 215, 220, AND 230) CONDUCTORS ONLY.

EXCEPTION NO. 2: FOR CONDUCTORS INSTALLED IN CABLE TRAYS, THE PROVISIONS OF SECTION 318-11 SHALL APPLY.

EXCEPTION NO. 3: DERATING FACTORS SHALL NOT APPLY TO CONDUCTORS IN NIPPLES HAVING A LENGTH NOT EXCEEDING 24 INCHES (610mm).

EXCEPTION NO. 4: DERATING FACTORS SHALL NOT APPLY TO UNDERGROUND CONDUCTORS ENTERING OR LEAVING AN OUTDOOR TRENCH IF THOSE CONDUCTORS HAVE PHYSICAL PROTECTION IN THE FORM OF RIGID METAL CONDUIT, INTERMEDIATE METAL CONDUIT, OR RIGID NONMETALLIC CONDUIT HAVING A LENGTH NOT EXCEEDING 10 FEET (3.05m) ABOVE GRADE AND THE NUMBER OF CONDUCTORS DOES NOT EXCEED FOUR.

EXCEPTION NO. 5: FOR OTHER LOADING CONDITIONS, ADJUSTMENT FACTORS AND AMPACITIES SHALL BE PERMITTED TO BE CALCULATED UNDER SECTION 310-15(b)

(FNC): SEE APPENDIX B, TABLE B-310-11 FOR ADJUSTMENT FACTORS FOR MORE THAN THREE CURRENT-CARRYING CONDUCTORS IN A RACEWAY OR CABLE WITH LOAD DIVERSITY.

(b) MORE THAN ONE CONDUIT, TUBE, OR RACEWAY. SPACING BETWEEN CONDUITS, TUBING, OR RACEWAYS SHALL BE MAINTAINED.

LIST OF DRAWINGS

SHEET	DESCRIPTION	SHEET	DESCRIPTION
E100	GENERAL NOTES, ABBREVIATIONS, SYMBOLS & DRAWING LIST		
E150	EXISTING ELECTRICAL SITE DEMOLITION PLAN		
E200	ELECTRICAL SINGLE LINE DIAGRAM & PANEL SCHEDULE		
E400	ELECTRICAL SITE PLAN - NEW WORK		
E410	ELECTRICAL PLAN ENLARGED AREA - NEW WORK		
E600	ELECTRICAL DETAIL SHEET		

SCOPE OF WORK

FOR NEW MARQUE SIGN, PROVIDE NEW POWER CONNECTION & EXTEND EXISTING OPTICAL FIBER TO NEW SIGN.
DEMO OR EXTEND OLD SIGN ELECTRICAL SYSTEMS AS NOTED.

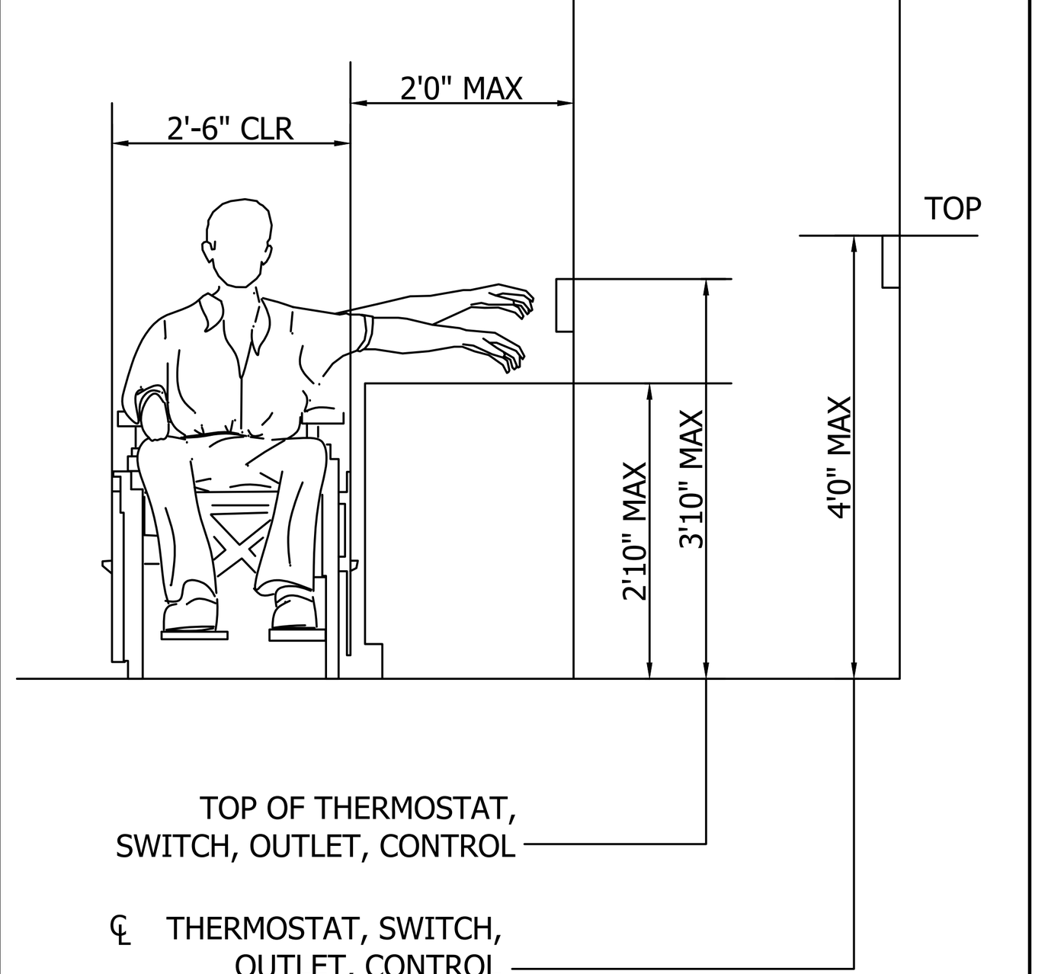
APPLICABLE CODES AND STANDARDS

1. 2019 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 1
2. 2019 CALIFORNIA BUILDING CODE (CBC)
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 2
(2018 INTERNATIONAL BUILDING CODE (IBC) W/CALIFORNIA AMENDMENTS)
3. 2019 CALIFORNIA ELECTRICAL CODE (CEC)
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 3
(2017 NATIONAL ELECTRICAL CODE (NEC) W/CALIFORNIA AMENDMENTS)
4. 2019 CALIFORNIA ENERGY CODE
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 6
5. 2016 CALIFORNIA FIRE CODE (CFC)
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 9
(2018 INTERNATIONAL FIRE CODE (IFC) W/CALIFORNIA AMENDMENTS)
6. 2019 CALIFORNIA REFERENCED STANDARDS CODE
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 12
7. AMERICANS WITH DISABILITIES ACT (ADA)
TITLE II - ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAG)
1990 STATE FIRE MARSHAL REGULATIONS AND AMENDMENTS TO-DATE
8. CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, CALIFORNIA STATE ACCESSIBILITY STANDARDS
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 19
9. 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE
(CAL GREEN), PART II, TITLE 24 C.C.R.
10. 2019 CALIFORNIA MECHANICAL CODE (CMC)
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 4
(2018 UNIFORM MECHANICAL CODE (UMC) W/CALIFORNIA AMENDMENTS)
11. 2019 CALIFORNIA PLUMBING CODE (CPC)
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 5
(2018 UNIFORM PLUMBING CODE (UPC) W/CALIFORNIA AMENDMENTS)
12. 2013 TITLE 19 CALIFORNIA CODE OF REGULATIONS (CCR)
PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS
13. 2016 NFPA 72 NATIONAL FIRE ALARM CODE

ABBREVIATIONS

A	AMPERES	M	METER
AF	AMP FRAME/AMP FUSE	MC	METAL CLAD
AFC	AVAILABLE FAULT CURRENT	MDF	MAIN DISTRIBUTION FRAME
AFF	ABOVE FINISHED FLOOR	MIN.	MINIMUM
AIC	AMP INTERRUPTING CURRENT	MTD	MOUNTED
ARCH	ARCHITECT	MTB	MAIN TELEPHONE BACKBOARD
AS	AMP SWITCH	MTG	MOUNTING
ASTM	AMERICAN SOCIETY OF TESTING MATERIAL(S)	MV	MEDIUM VOLTAGE
		MH	METAL HALIDE
AT	AMP TRIP	MFG	MANUFACTURER
AWG	AMERICAN WIRE GAGE	NEC	NATIONAL ELECTRICAL CODE
BKBD	BACKBOARD	(N)	NEW
C	CONDUIT OR CEILING	NIC	NOT IN CONTRACT
CB	CIRCUIT BREAKER	NL	NIGHT LIGHT
CONT	CONTINUATION	NO	NORMALLY OPEN
CKT	CIRCUIT	NC	NORMALLY CLOSED
CLG	CEILING	OH	OVERHEAD
CO	CONDUIT ONLY	P	POWER OR POLE
CTV	CABLE TELEVISION	PBO	PROVIDED BY OTHERS
(CU)	COPPER	PNL	PANEL
CW	COLD WATER PIPE	(R)	REMOVED
DIS	DISCONNECT	RGS	RIGID GALVANIZED STEEL CONDUIT
DS	DISCONNECT SWITCH		
DWG	DRAWING	RM	ROOM
ECD	ELECTRICAL CONTRACTOR	SN	SYSTEM NEUTRAL
EM	EMERGENCY LIGHT/FEEDER	SPD	SURGE PROTECTION DEVICE
EMT	ELECTRICAL METAL TUBING	TC	TIME CLOCKS
EOR	ENGINEER OF RECORD	TTB	TELEPHONE TERMINAL BOARD
EPR	ETHYLENE PROPYLENE RUBBER	TTC	TELEPHONE TERMINAL CABINET
(F)	FRONT	TR	TRANSFORMER
FS	SHALLOW FLOOR BOX	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
FT	FEET		
GC	GENERAL CONTRACTOR	TYP	TYPICAL
GFI	GROUND FAULT INTERRUPTER	UG	UNDERGROUND
GND	GROUND	UL	UNDERWRITERS LABORATORY
HP	HORSEPOWER	UON	UNLESS OTHERWISE NOTED
ID	IDENTIFICATION	UNSW	UNSWITCHED
IDF	INTERMEDIATE DISTRIBUTION FRAME	V	VOLTS/VOLTAGE
		VA	VOLT AMPS
IG	ISOLATED GROUND	VD	VOLTAGE DROP
JB	JUNCTION BOX	W	WATTS/WATTAGE OR WIRE
K	KILO	WP	WEATHERPROOF
KVA	KILO VOLT AMPS=1000VA	W/	WITH
LC	LIGHTING CONTACTOR	(X)	EXISTING
LCL	LONG CONTINUOUS LOAD	φ	PHASE
LV	LOW VOLTAGE		

MOUNTING HEIGHT OVER OBSTRUCTION



SITE/AREA MAP

AGENCY REVIEW

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 03-120493 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☐
DATE: 06/30/2020

LITTLE
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PROJECT NAME
MOORPARK COLLEGE MAIN ENTRY SIGN
7075 CAMPUS ROAD, MOORPARK, CA 93021

CONSULTANT

LUCCI & ASSOCIATES INC.
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DSA A# 03-120493

SEAL
REGISTERED PROFESSIONAL ENGINEER
KENNETH W. LUCCI
No. E 8340
Exp. 09/30/2020
ELECTRICAL
STATE OF CALIFORNIA

ISSUE FOR
PROGRESS SET
DSA A# 03-120493

ISSUE DATE
03/23/2020

REVISIONS

NO.	REASON	DATE

PROJECT TEAM
PRINCIPAL IN CHARGE
K.L.
PROJECT MANAGER
.
DESIGN TEAM
L.K.

PROJECT NAME
MOORPARK COLLEGE WAYFINDING PROJECT

PROJECT NO.
613696000

SHEET TITLE
GENERAL NOTES, SYMBOLS, ABBREVIATIONS & DRAWING LIST

SHEET NUMBER
E100

L.A.I.# 19786-01 PAPER SIZE 42"x30"

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DATE: 16 April 2020
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PLOT BY: Lee Keener
DRAWING FILENAME: 19786E100-01
SAVE DATE: 3/23/2020 5:05:43 PM
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Apr 16, 2020 5:22pm
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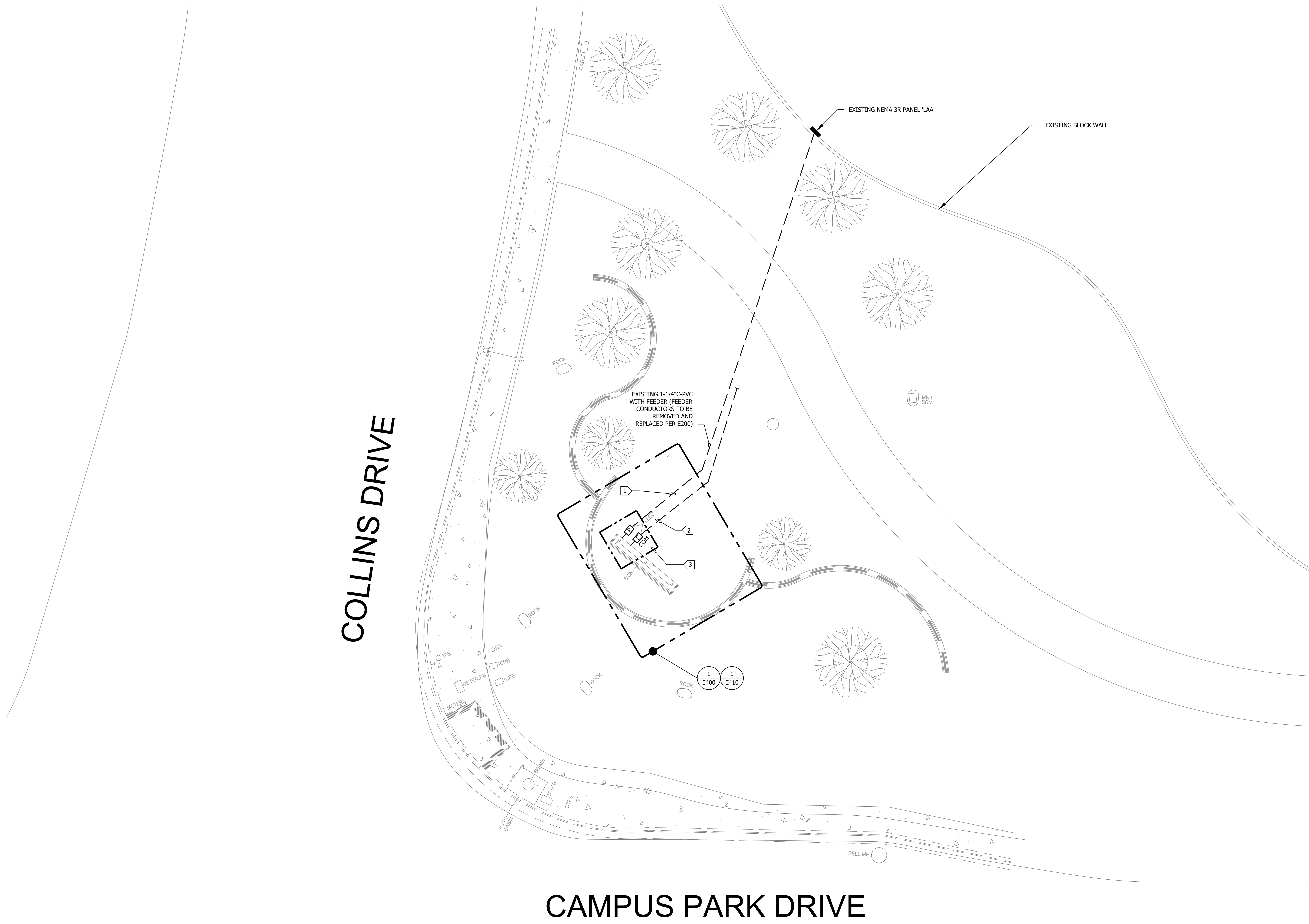
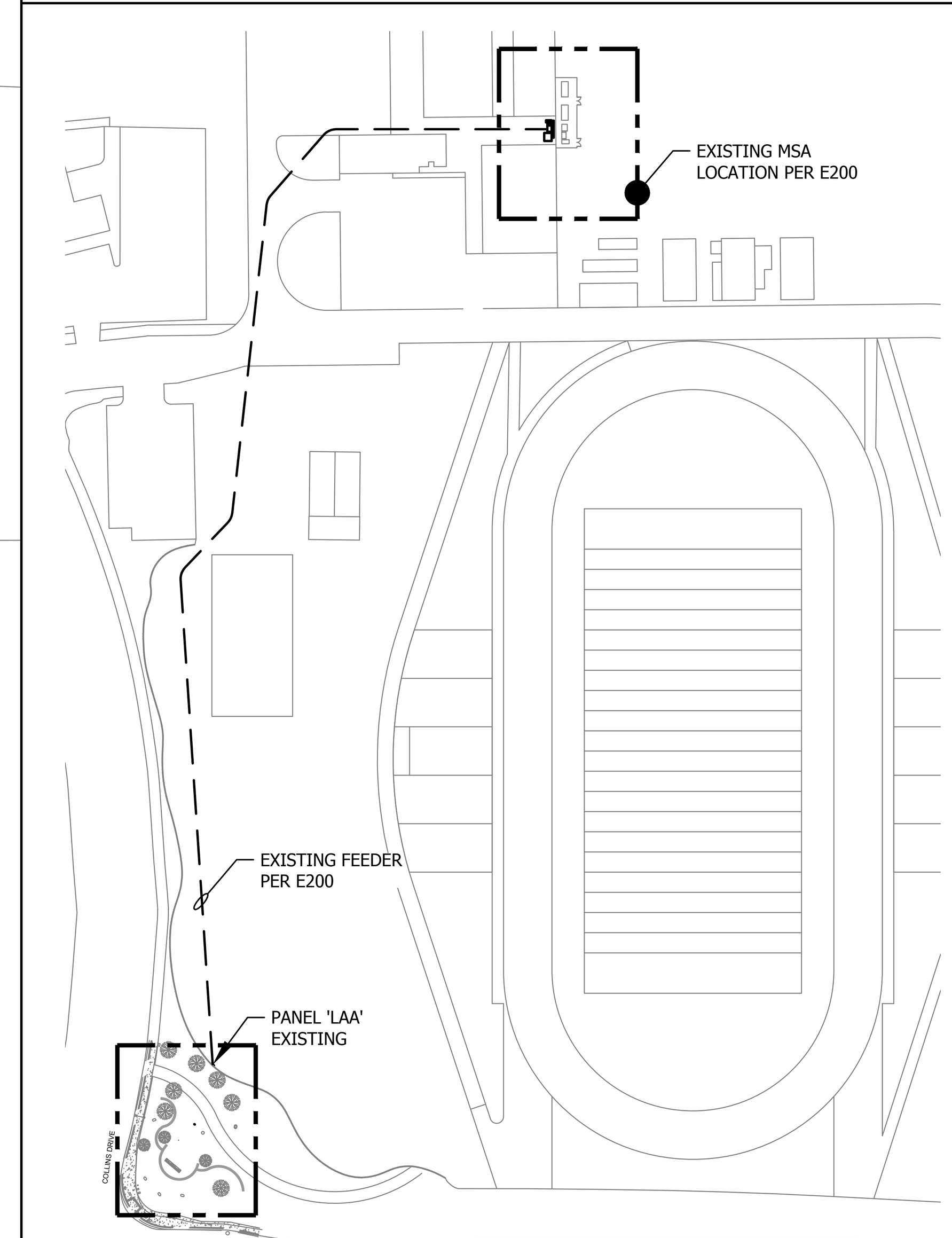


EXISTING ELECTRICAL SITE DEMOLITION PLAN (1 / E150)

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



OVERALL EXISTING ELECTRICAL SITE DEMOLITION PLAN (2 / E150)

SCALE: 1"=100'-0"

SHEET NOTES:

1. SCOPE: PROVIDE AND PERFORM DEMOLITION, PREPARATORY AND MISCELLANEOUS WORK IN AREAS AS INDICATED AND SPECIFIED, COMPLETE.
2. DEMOLITION AND REMOVAL OF EXISTING ELECTRICAL CONDUIT, WIRING AND EQUIPMENT REQUIRED TO COMPLETE THE PROJECT.
3. PREPARATION OF THE EXISTING BUILDING TO RECEIVE OR CONNECT THE NEW WORK.
4. MISCELLANEOUS DEMOLITION, CUTTING, ALTERATION, AND REPAIR WORK ON EXISTING SITE AND IN THE EXISTING BUILDING NECESSARY FOR THE COMPLETION OF THE ENTIRE PROJECT.
5. DISCONNECTING AND RECONNECTION OF ELECTRICAL EQUIPMENT AS REQUIRED BY THE CONSTRUCTION MODIFICATIONS.
6. EXISTING CONDITIONS: PRIOR TO BID MAKE A DETAILED SURVEY OF THE EXISTING CONDITIONS PERTAINING TO THE WORK. CHECK THE LOCATIONS OF ALL EXISTING STRUCTURES, EQUIPMENT AND WIRING (BRANCH CIRCUITING AND CONTROLS). CHECK FOR ANY HAZARDOUS MATERIALS WHICH MAY REQUIRE SPECIAL HANDLING.
7. SALVAGE AND DISPOSAL: ALL REMOVED MATERIAL OTHER THAN ITEMS TO BE REUSED SHALL BE RETURNED TO THE OWNER OR DISPOSED OF IN ACCORDANCE WITH INSTRUCTIONS FROM THE OWNER'S REPRESENTATIVE. DISPOSAL SHALL BE DONE IN ACCORDANCE WITH EPA AND GOVERNING BODY REQUIREMENTS AND REGULATIONS. CONTRACTOR SHALL PAY ALL FEES AND CHARGES FOR DISPOSAL.
8. TWO WEEKS PRIOR TO START OF ANY WORK CONTRACTOR SHALL SCHEDULE ALL WORK AND ELECTRICAL SYSTEM OUTAGES WITH OWNERS WRITTEN APPROVAL.
9. CONTRACTOR SHALL LEAVE ALL POWER & SIGNAL CIRCUITS ENERGIZED, VIA JUNCTION BOX, TO DEVICES IN AREAS OUTSIDE OF DEMOLITION AREA EVEN IF SYSTEMS ARE ROUTED THROUGH DEMOLITION AREA.
10. CONTRACTOR SHALL FIELD VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO ANY TRENCHING. CONTRACTOR SHALL PROTECT ALL EXISTING/REMAINING UNDERGROUND UTILITY SYSTEMS IN PLACE. CONTRACTOR SHALL REPAIR ANY UTILITY SYSTEM DAMAGED DURING CONSTRUCTION.

KEY NOTES:

1. (X) POWER CONDUIT AND FEEDER - CONDUIT TO BE REUSED & CONDUCTORS TO BE REPLACED PER E200/E400/E410.
2. (X) OPTICAL FIBER COM CONDUIT & FIBER OPTIC CABLING TO BE REUSED/ MODIFIED PER E400/E410.
3. EXISTING CONCRETE IN GRADE PULL BOXES TO BE REMOVED (AND REUSED IF IN GOOD CONDITION) AND CABLING TO BE INTERCEPTED (POWER CABLE TO BE REPLACED PER E200) AND COM (OPTICAL FIBER TO BE PROTECTED AND EXTENDED WITH NEW CONDUITS PER E400/E410) TO NEW MARQUE SIGN (DO NOT DAMAGE EXISTING OPTICAL FIBER CABLE) SEE E400/E410.

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DSA A# 03-120493

SEAL
REGISTERED PROFESSIONAL ENGINEER KENNETH W. LUCCI Exp. 09/30/2020 ELECTRICAL STATE OF CALIFORNIA

ISSUE FOR
PROGRESS SET
DSA A# 03-120493

ISSUE DATE
03/23/2020

REVISIONS

NO.	REASON	DATE

PROJECT TEAM
PRINCIPAL IN CHARGE: K.L.
PROJECT MANAGER: -
DESIGN TEAM: L.K.

PROJECT NAME
MOORPARK COLLEGE WAYFINDING PROJECT

PROJECT NO.
613696000

SHEET TITLE
EXISTING ELECTRICAL SITE DEMOLITION PLAN

SHEET NUMBER
E150

DRAFTER: CM01 DRAWING FILENAME: 19786E150-01 PATHNAME: G:\19\786\EL\Sheets\SIGN 1 DATE: 16 April 2020 TIME: 5:22 pm
SAVE DATE: 3/23/2020 2:05:12 PM PLOT BY: Lee Keener PLOT DATE: 4/16/2020 5:22:27 PM

L.A.I.# 19786-01 PAPER SIZE 42"x30"

PANEL SOURCE AND CALCULATIONS HAVE BEEN FIELD VERIFY & NEW LOAD CAN BE ADDED EASILY WITHOUT OVERLOADING EXISTING PANEL

EXISTING PANEL

PANEL NUMBER LAA — VOLTAGE 120/208 — PHASE 3 — WIRE 4 — ■ NEMA 3R — ■ COPPER BUSS
SOURCE LA — A.I.C. 10,000 — ■ MAIN CIRCUIT BREAKER 100
PANEL LOCATION PER E150 — BUS AMPERE RATING 100

LCL	MISC	RCPT	LITE	CIRCUIT DESCRIPTION	LOAD(VA) A	LOAD(VA) B	LOAD(VA) C	BRKR POLE	BRKR AMP	CKT	PHASE A B C	CKT	BRKR AMP	BRKR POLE	LOAD(VA) A	LOAD(VA) B	LOAD(VA) C	CIRCUIT DESCRIPTION	MISC	RCPT	LITE	LCL
				LIGHTING	500			1	20	1		2	20	1	200			IRRIGATION CONTROLLER				
				LIGHTING		600		1	20	3		4	20	1		540		RECEPTACLE				
				LIGHTING			200	1	20	5		6	20	1			540	RECEPTACLE				
				RECEPTACLE	540			1	20	7		8	20	1	540			RECEPTACLE				
				RECEPTACLE		720		1	20	9		10	20	1		540		RECEPTACLE				
				RECEPTACLE			540	1	20	11		12	30				1000	SIGN				
				RECEPTACLE	540					13		14		2	1000			SIGN				
				SPACE						15		16				.		SPACE				
				SPACE						17		18					.	SPACE				
				SPACE						19		20	60		3000			MARQUE SIGN				
				SPACE						21		22				3000		MARQUE SIGN				
				RECEPTACLE			180	1	20	23		24		3			3000	MARQUE SIGN				
				TOTALS	1580	1320	920								3740	4080	3540	TOTALS				

NEW BREAKER & LOAD (circuit 23)

LOAD & CONDUCTORS TO BE REMOVED & REPLACED WITH BREAKER & LOAD IN 20-22-24 (circuits 12, 14)

NEW SQUARE 'D' "QOB" BREAKER & LOAD (circuits 20, 22, 24)

L.C.L. VOLT AMPS:	.	PHASE A	.	PHASE B	.	PHASE C	.
TOTAL VOLT AMPS:	15180	PHASE A	5320	PHASE B	5400	PHASE C	4460
TOTAL AMPS:	42.2	PHASE A	44.3	PHASE B	45	PHASE C	37.2

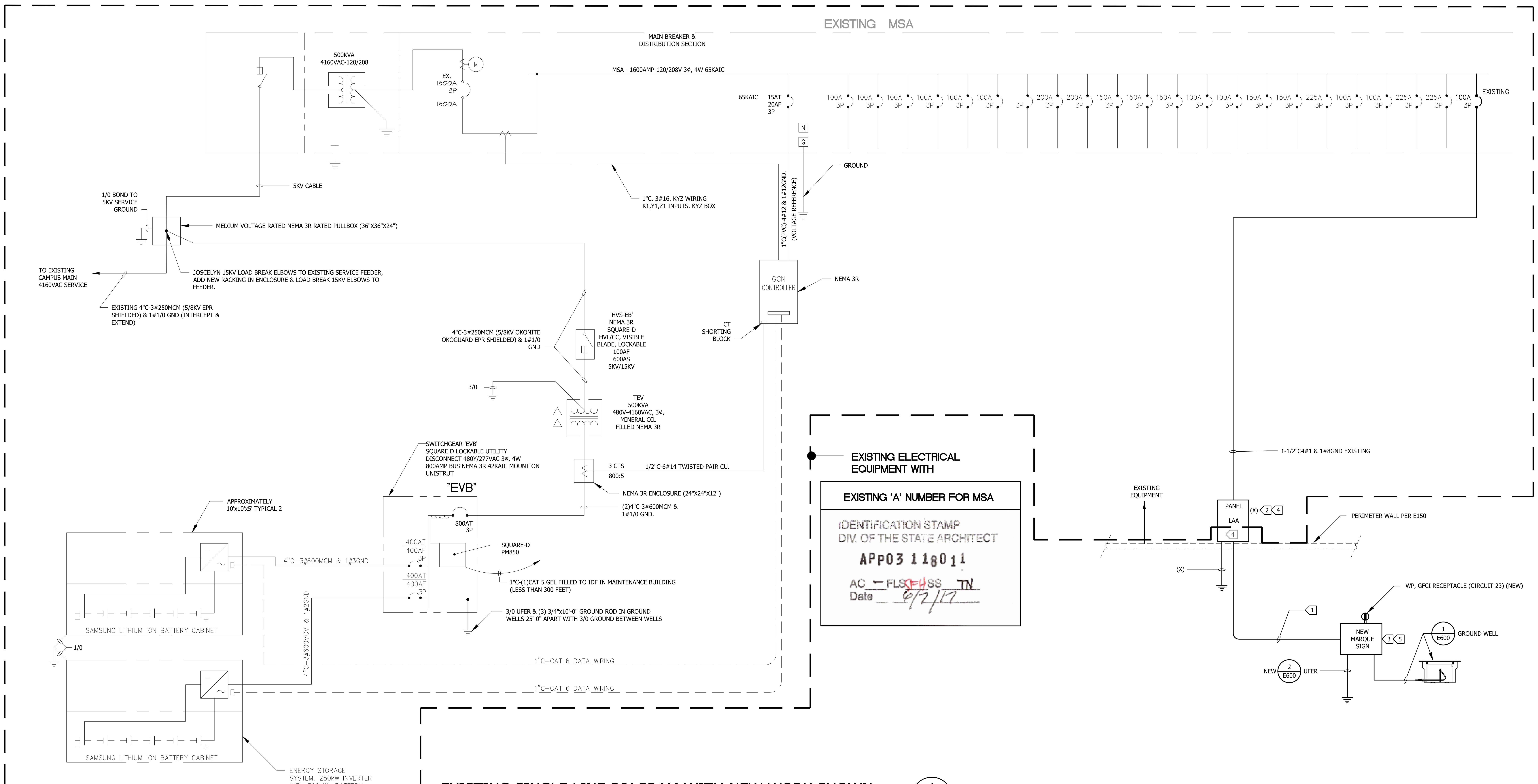
PANEL LAA SCHEDULE 2 / E200
SCALE: NONE

SHEET NOTES:

1. VERIFY LOCATION OF ALL BUILDINGS AND APPENDITURES ON ARCHITECTURAL AND CIVIL PLANS.
2. CONTRACTOR SHALL VERIFY LOCATION & REQUIREMENTS OF ALL ELECTRICAL DEVICES PRIOR TO BID. ROUGH-IN & INSTALLATION.
3. CONTRACTOR SHALL, IN ROUTING ALL CIRCUITS, INCREASE CONDUCTOR & CONDUIT SIZE TO ALLOW FOR VOLTAGE DROP SHOULD THE CONTRACTOR EXCEED ROUTING INDICATED ON DRAWING. ENGINEER OF RECORD MUST BE NOTIFIED PRIOR TO ANY DEVIATIONS FROM APPROVED PLAN CHECK (PERMIT SET) DRAWINGS.
4. FIELD VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO TRENCHING. SCHEDULE AND COORDINATE ALL SITE WORK WITH OWNER PRIOR TO ANY TRENCHING.
5. ALL CONDUIT 90° CONDUIT BENDS AND RISERS SHALL BE PVC COATED RIGID STEEL.
6. CONTRACTOR SHALL COORDINATE AND PROVIDE ALL SITE ELECTRICAL SERVICE REQUIREMENTS WITH SERVING UTILITY.
7. ALL SERVICE ENTRANCE EQUIPMENT SHOP DRAWINGS SHALL BE SUBMITTED TO THE LOCAL UTILITY COMPANY FOR APPROVAL, WITH WRITTEN APPROVAL RECEIVED PRIOR TO SUBMISSION TO ELECTRICAL ENGINEER FOR APPROVAL.
8. VERIFY LOCATION OF ALL EQUIPMENT AND DEVICES ON ARCHITECTURAL AND CIVIL PLANS.
9. MINIMUM CONDUIT BURIAL DEPTH IS 24", 36" MINIMUM BELOW STREETS & PARKING LOTS FOR 0-600 VOLT SYSTEMS.
10. CONTRACTOR TO PROVIDE GROUND CONDUCTORS IN ALL CONDUITS.
11. 1" CONDUIT MINIMUM UNDERGROUND.
12. COORDINATE WORK WITH OTHER TRADES. OBTAIN ALL DRAWINGS THAT WILL REQUIRE COORDINATION AND PROVIDE ALL ELECTRICAL CONNECTIONS, DEVICES, AND WIRING REQUIRED WHETHER SHOWN ON ELECTRICAL DRAWINGS OR NOT.
13. CONTRACTOR SHALL FURNISH AND INSTALL PULL BOXES AS REQUIRED TO INSTALL CONDUCTORS PER CONDUCTOR MANUFACTURERS RECOMMENDATIONS, PER THE NATIONAL ELECTRICAL CODE AND PER LOCAL AUTHORITIES HAVING JURISDICTION.

KEY NOTES:

1. EXISTING 1-1/4"C - PVC SCHEDULE 40, REMOVE EXISTING CONDUCTORS & INSTALL NEW 4#6 & 1#10 GROUND TO NEW MARQUE SIGN & PROVIDE 2#12 & 1#12 GROUND TO NEW RECEPTACLE AT NEW MARQUE PER E410.
2. ADD BREAKERS & LOAD PER DETAIL 2 TO EXISTING PANEL.
3. NEW MARQUE SIGN. PROVIDE NEW 3/4"x10'-0" GROUND ROD & 1#6 GROUND WITHIN 6 FEET OF NEW MARQUE SIGN PER DETAIL 1 SHEET E600.
4. ADD NEW 20A/1P & 60A/3P SQUARE 'D' "QOB" BREAKERS PER DETAIL 2.
5. SIGN MANUFACTURER TO PROVIDE LOCAL DISCONNECT & ELECTRICAL COMPONENTS PER NEC ARTICLE 600.



EXISTING SINGLE LINE DIAGRAM WITH NEW WORK SHOWN 1 / E200
SCALE: NONE

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APP. 03-120493 INC:
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DATE: 06/30/2020

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CLIENT NAME

VENTURA COUNTY COMMUNITY COLLEGE DISTRICT

PROJECT NAME

MOORPARK COLLEGE MAIN ENTRY SIGN

7075 CAMPUS ROAD, MOORPARK, CA 93021

CONSULTANT

LUCCI & ASSOCIATES INC.
CONSULTING ELECTRICAL ENGINEERS
3251 CORTE MALPASO, #511
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(805) 389-6520 FAX (805) 389-6519

DSA A# 03-120493

SEAL

REGISTERED PROFESSIONAL ENGINEER — KENNETH W. LUCCI — No. E 8340 — Exp. 09/30/2020 — ELECTRICAL — STATE OF CALIFORNIA

ISSUE FOR
PROGRESS SET
DSA A# 03-120493

ISSUE DATE
03/23/2020

REVISIONS

NO.	REASON	DATE

PROJECT TEAM
PRINCIPAL IN CHARGE
K.L.
PROJECT MANAGER
.
DESIGN TEAM
L.K.

PROJECT NAME
MOORPARK COLLEGE WAYFINDING PROJECT

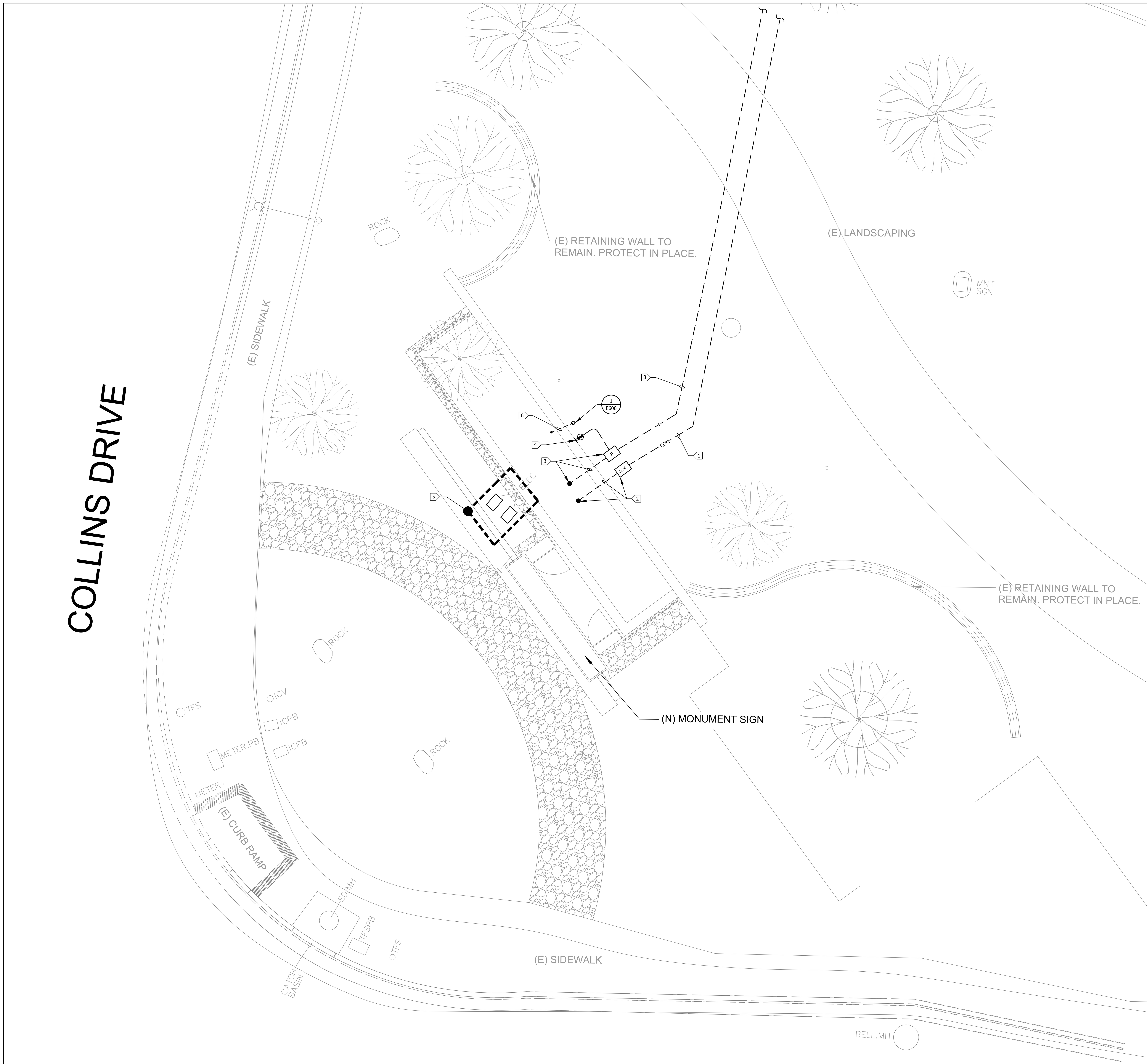
PROJECT NO.
613696000

SHEET TITLE
ELECTRICAL SINGLE LINE DIAGRAM AND PANEL SCHEDULE

SHEET NUMBER
E200

DRAFTER: CM01
DRAWING FILENAME: 19786E200-01
PATHNAME: G:\19\786\EL\Sheets\SIGN 1
DATE: 16 April 2020
TIME: 5:22 pm
SAVE DATE: 4/16/2020 5:19:53 PM
PLOT BY: Lee Keener
PLOT DATE: 4/16/2020 5:22:28 PM
DRAWING: G:\19\786\EL\Sheets\SIGN 1\19786E200-01.dwg

L.A.I.# 19786-01 PAPER SIZE 42"x30"



ELECTRICAL SITE PLAN - NEW WORK (1 / E400)
SCALE: 1/4"=1'-0"

MARQUE SIGN REQUIRES POWER (60A/3 PHASE AT 120/208 VAC) AND OPTICAL FIBER. EACH SYSTEM IS RUN IN DEDICATED CONDUIT. EXISTING POWER CONDUIT TO MARQUE AREA IS TO BE REUSED TO MAXIMUM EXTENT POSSIBLE. EXISTING POWER PULLBOX (THIS BOX WILL REQUIRE REMOVAL) & FEEDER/CONDUIT SHALL BE INTERCEPTED AND EXTENDED TO NEW 12" x 18" POWER PULLBOX (IN-GRADE WITH CONCRETE COVER) WITH NEW CONDUCTORS PER E200 TO MARQUE SIGN & NEW CONDUCTORS TO RECEPTACLE WP GFCI (SEE DETAIL 3 ON E600). FIBER OPTIC CABLE IN EXISTING CONDUIT SHALL BE PROTECTED FROM DAMAGE AND "PULLED BACK" TO NEW COM 12" x 18" PULLBOX (IN-GRADE WITH CONCRETE COVER) AND THE CONDUIT EXTENDS INTO THE MARQUE SIGN CONCRETE BASE (JUST LIKE POWER CONDUIT) AS REQUIRED BY MARQUE SIGN VENDOR.

SHEET NOTES:

1. VERIFY LOCATION OF ALL BUILDINGS AND APPENDITURES ON ARCHITECTURAL PLANS.
2. CONTRACTOR SHALL VERIFY LOCATION AND REQUIREMENTS OF ALL ELECTRICAL DEVICES PRIOR TO BID. ROUGH-IN AND INSTALLATION.
3. CONTRACTOR SHALL, IN ROUTING ALL CIRCUITS, INCREASE CONDUCTOR AND CONDUIT SIZE TO ALLOW FOR VOLTAGE DROP SHOULD THE CONTRACTOR EXCEED ROUTING INDICATED ON DRAWING. ENGINEER OF RECORD MUST BE NOTIFIED PRIOR TO ANY DEVIATIONS FROM APPROVED PLAN CHECK (PERMIT SET) DRAWINGS.
4. CONTRACTOR SHALL FIELD VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO ANY TRENCHING. CONTRACTOR SHALL PROTECT ALL EXISTING/REMAINING UNDERGROUND UTILITY SYSTEMS IN PLACE. CONTRACTOR SHALL REPAIR ANY UTILITY SYSTEM DAMAGED DURING CONSTRUCTION.
5. ALL CONDUIT 90° CONDUIT BENDS AND RISERS SHALL BE PVC SCHEDULE 80.
6. LABEL BOTH PULLBOXES COVERS WITH "COM" AND "POWER" AS PER SYSTEM TYPE.
7. MINIMUM CONDUIT BURIAL DEPTH IS 24".
8. CONTRACTOR TO PROVIDE GROUND CONDUCTORS IN ALL CONDUITS.
8. 1" CONDUIT MINIMUM UNDERGROUND.
10. COORDINATE WORK WITH OTHER TRADES. OBTAIN ALL DRAWINGS THAT WILL REQUIRE COORDINATION AND PROVIDE ALL ELECTRICAL CONNECTIONS, DEVICES, AND WIRING REQUIRED WHETHER SHOWN ON ELECTRICAL DRAWINGS OR NOT.
11. CONTRACTOR SHALL FURNISH AND INSTALL PULL BOXES AS REQUIRED TO INSTALL CONDUCTORS PER CONDUCTOR MANUFACTURERS RECOMMENDATIONS, PER THE NATIONAL ELECTRICAL CODE AND PER LOCAL AUTHORITIES HAVING JURISDICTION.

KEY NOTES:

1. EXISTING FIBER OPTIC CONDUIT TO BE REUSED & EXTENDED TO NEW MARQUE SIGN WITH NEW 1" C - CONDUIT (IN THRU CONCRETE BASE PER DETAIL 2 THIS SHEET AND AS REQUIRED BY MANUFACTURER).
2. NEW 12" x 18" CONCRETE IN-GRADE PULLBOX (WITH CONCRETE COVER) FOR COM OPTICAL CABLE, EXTEND 1-1/4" CONDUIT & FIBER INTO SIGN AND TERMINATE FIBER AS REQUIRED PER SIGN MANUFACTURER.
3. EXISTING POWER FEEDER (CONDUIT TO BE INTERCEPTED), & CONDUIT TO BE REUSED BUT CONDUCTORS REPLACED PER E200, NEW POWER FEEDER TO BE ROUTED INTO NEW 12" x 18" IN-GRADE CONCRETE PULLBOX WITH CONCRETE COVER AND NEW MARQUE SIGN CONDUCTORS EXTENDED TO SIGN THRU SIGN CONCRETE BASE PER MANUFACTURERS REQUIREMENTS.
4. NEW WP GFCI RECEPTACLE FED PER E200 VIA NEW E200 FEEDER VIA POWER CONCRETE PULLBOX.
5. EXISTING PULLBOXES & ASSOCIATED FEEDERS, FOR DEMOLITION SEE E150.
6. GROUND CONDUCTOR IN 1"C-(PVC).

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DSA A# 03-120493

SEAL
REGISTERED PROFESSIONAL ENGINEER
KENNETH W. LUCCI
No. E 8340
Exp. 09/30/2020
ELECTRICAL
STATE OF CALIFORNIA

ISSUE FOR
PROGRESS SET
DSA A# 03-120493

ISSUE DATE
03/23/2020

REVISIONS

NO.	REASON	DATE

PROJECT TEAM
PRINCIPAL IN CHARGE: K.L.
PROJECT MANAGER: -
DESIGN TEAM: L.K.

PROJECT NAME
MOORPARK COLLEGE WAYFINDING PROJECT

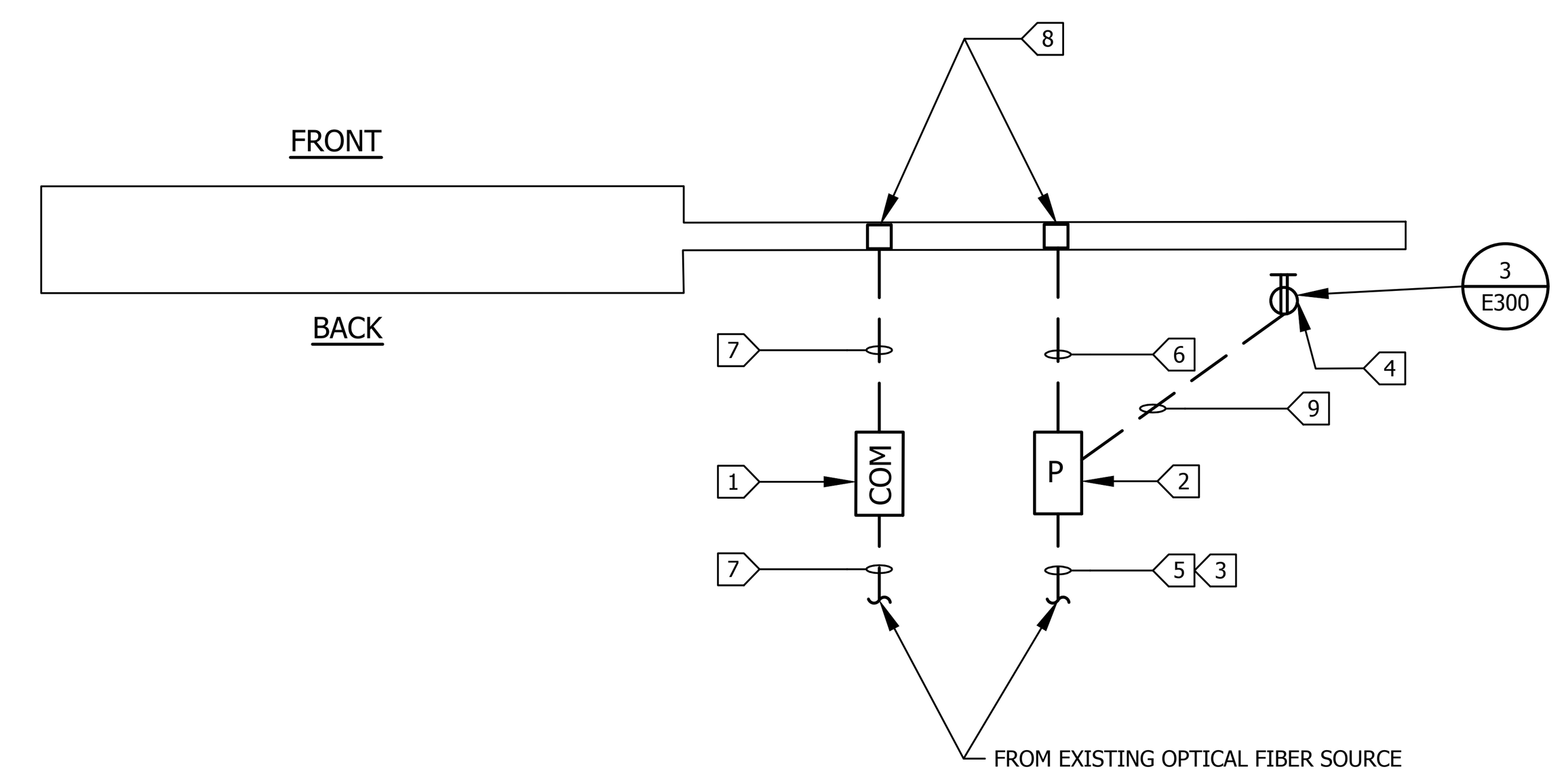
PROJECT NO.
613696000

SHEET TITLE
ELECTRICAL PLAN NEW WORK

SHEET NUMBER
E400

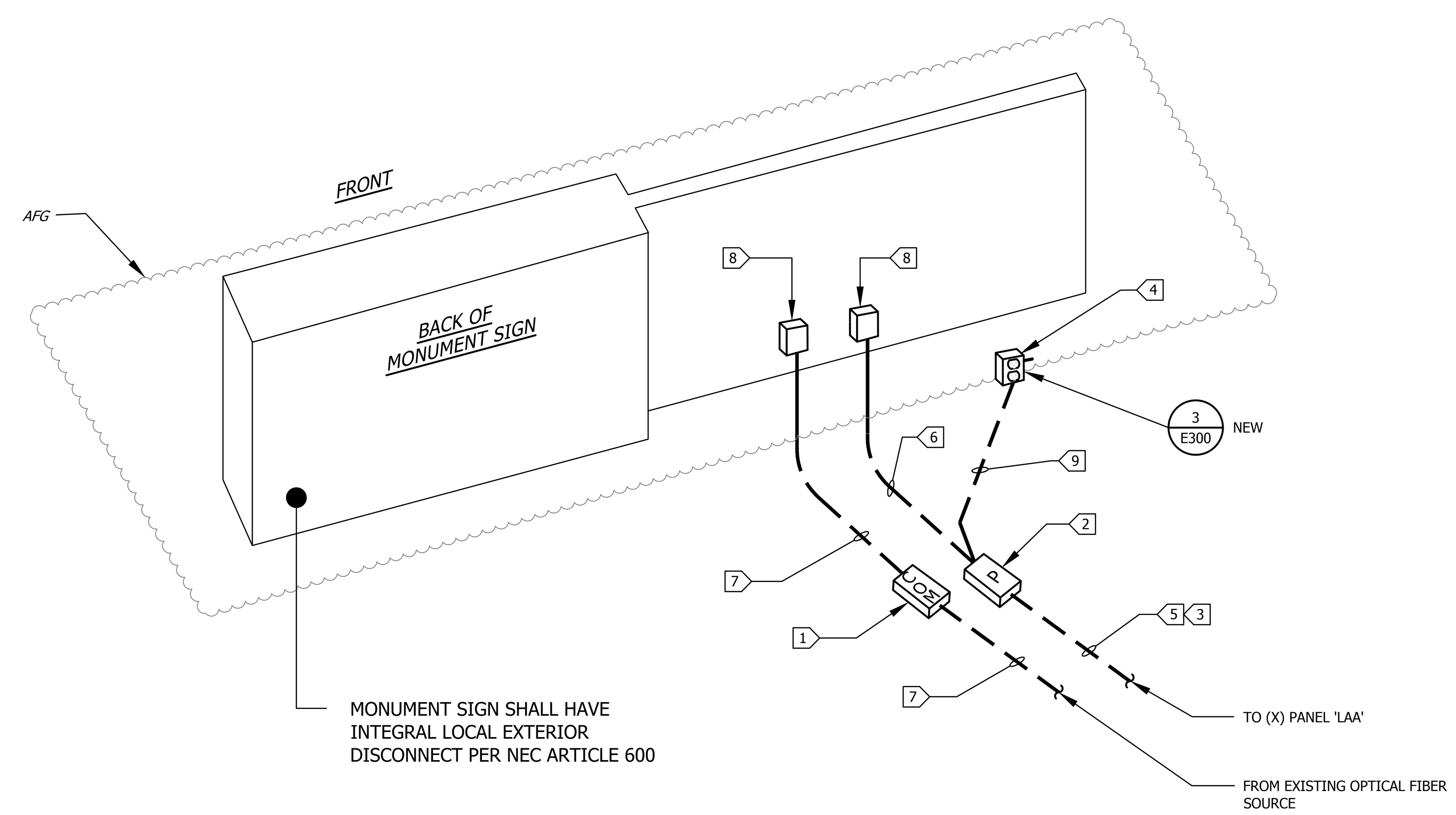
DRAFTER: CM01 DRAWING FILENAME: 19786E400-01 PATHNAME: G:\19\1786\EL\Sheets\SIGN 1 DATE: 16 April 2020 TIME: 5:22 pm
SAVE DATE: 3/23/2020 2:05:29 PM PLOT BY: Lee Kiener PLOT DATE: 4/16/2020 5:22:33 PM

L.A.I.# 19786-01 PAPER SIZE 42"x30"



PLAN VIEW OF MARQUE SIGN (B)

NO SCALE



BACK ELEVATION OF MARQUE SIGN (A)

NO SCALE ISOMETRIC VIEW

ELECTRICAL PLAN - NEW MARQUE SIGN (1 / E410)

SCALE: NONE ALL NEW WORK

N

SHEET NOTES:

1. VERIFY STUB UP LOCATIONS ON ARCHITECTURAL PLANS.
2. CONTRACTOR SHALL VERIFY LOCATION AND REQUIREMENTS OF ALL ELECTRICAL CONNECTIONS PRIOR TO BID PROPOSAL, ROUGH-IN, AND FINISH INSTALLATION.
3. CONTRACTOR SHALL, IN ROUTING ALL CIRCUITS, INCREASE CONDUCTOR & CONDUIT SIZE TO ALLOW FOR VOLTAGE DROP SHOULD THE CONTRACTOR EXCEED ROUTING INDICATED ON DRAWING. ENGINEER OF RECORD MUST BE NOTIFIED PRIOR TO ANY DEVIATIONS FROM APPROVED PLAN CHECK (PERMIT SET) DRAWINGS.
4. CONTRACTOR SHALL FURNISH AND INSTALL PULL BOXES AS REQUIRED TO INSTALL CONDUCTORS PER CONDUCTOR MANUFACTURERS RECOMMENDATIONS, PER THE NATIONAL ELECTRICAL CODE AND PER LOCAL AUTHORITIES HAVING JURISDICTION.
5. 1" CONDUIT MINIMUM UNLESS OTHERWISE NOTED.
6. COORDINATE WORK WITH OTHER TRADES. OBTAIN ALL DRAWINGS THAT WILL REQUIRE COORDINATION AND PROVIDE ALL ELECTRICAL CONNECTIONS, DEVICES, AND WIRING REQUIRED WHETHER SHOWN ON ELECTRICAL DRAWINGS OR NOT.
7. PROVIDE CODE SIZED EQUIPMENT GROUNDING CONDUCTORS FOR MARQUE SIGN DOCUMENTS.

KEY NOTES:

1. NEW 12"x18" CONCRETE IN-GRADE COMMUNICATION PULLBOX (OPTICAL FIBER CABLING TO BE REUSED FOR NEW MARQUE SIGN).
2. NEW 12"x18" POWER PULLBOX (CONDUCTORS TO BE REPLACED SEE E200).
3. EXISTING CONDUIT, PULL NEW CONDUCTOR PER E200 AND 5.
4. NEW RECEPTACLE GFCI.
5. REMOVE EXISTING CONDUCTORS AND REPLACE WITH 4#6 & 1#10GND TO MARQUE SIGN & 2#10 & 1#10 FOR NEW WP GFCI RECEPTACLE REUSE IN EXISTING 1-1/4" C FOR NEW FEEDER.
6. WITH NEW FEEDER 1-1/4"C-4#6 AND 1#10 GROUND.
7. EXISTING INTERCEPTED OPTICAL FIBER FOR MARQUE SIGN TO BE EXTENDED VIA NEW 1-1/4" C TO NEW SIGN.
8. NEW INTERIOR POINT OF CONNECTION PER SIGN MANUFACTURER.
9. NEW 1"C-2#10 AND 1#10 GROUND.

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DSA A# 03-120493

SEAL
REGISTERED PROFESSIONAL ENGINEER KENNETH W. LUCCI No. E 8340 Exp. 09/30/2020 ELECTRICAL STATE OF CALIFORNIA

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DSA A# 03-120493

ISSUE DATE
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REVISIONS

NO.	REASON	DATE

PROJECT TEAM
PRINCIPAL IN CHARGE: K.L.
PROJECT MANAGER: .
DESIGN TEAM: L.K.

PROJECT NAME
MOORPARK COLLEGE WAYFINDING PROJECT

PROJECT NO.
613696000

SHEET TITLE
ELECTRICAL PLAN ENLARGED AREA NEW WORK

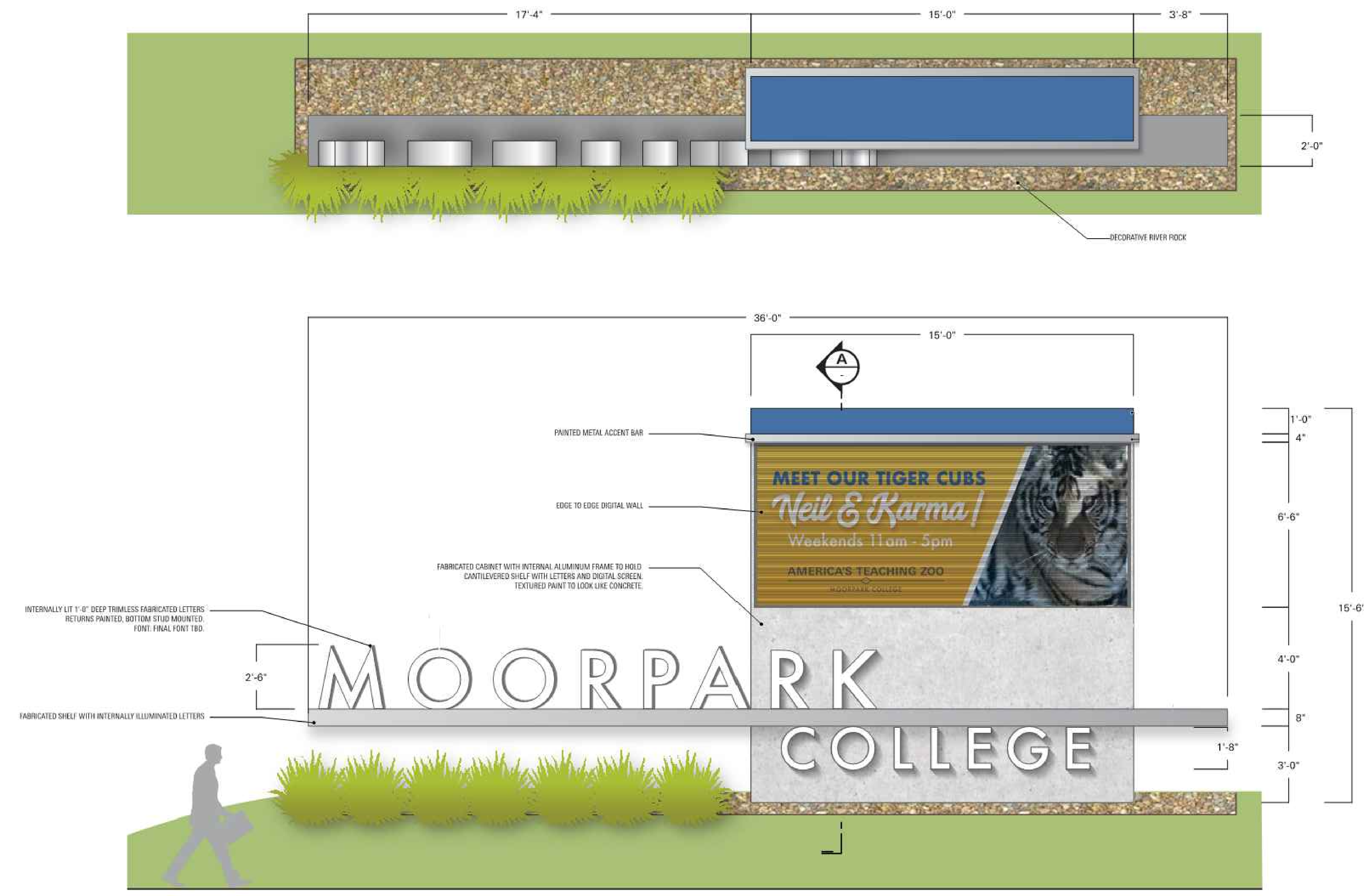
SHEET NUMBER
E410

L.A.I.# 19786-01 PAPER SIZE 42"x30"

DRAFTER: CM01 DRAWING FILENAME: 197866600-01 PATHNAME: G:\19\786\EL\Sheets\SIGN 1 DATE: 16 April 2020 TIME: 5:22 pm
DRAWING: G:\19\786\EL\Sheets\SIGN 1\197866600-01.dwg SAVE DATE: 3/23/2020 9:54:20 AM PLOT BY: Lee Keener PLOT DATE: 4/16/2020 5:22:40 PM

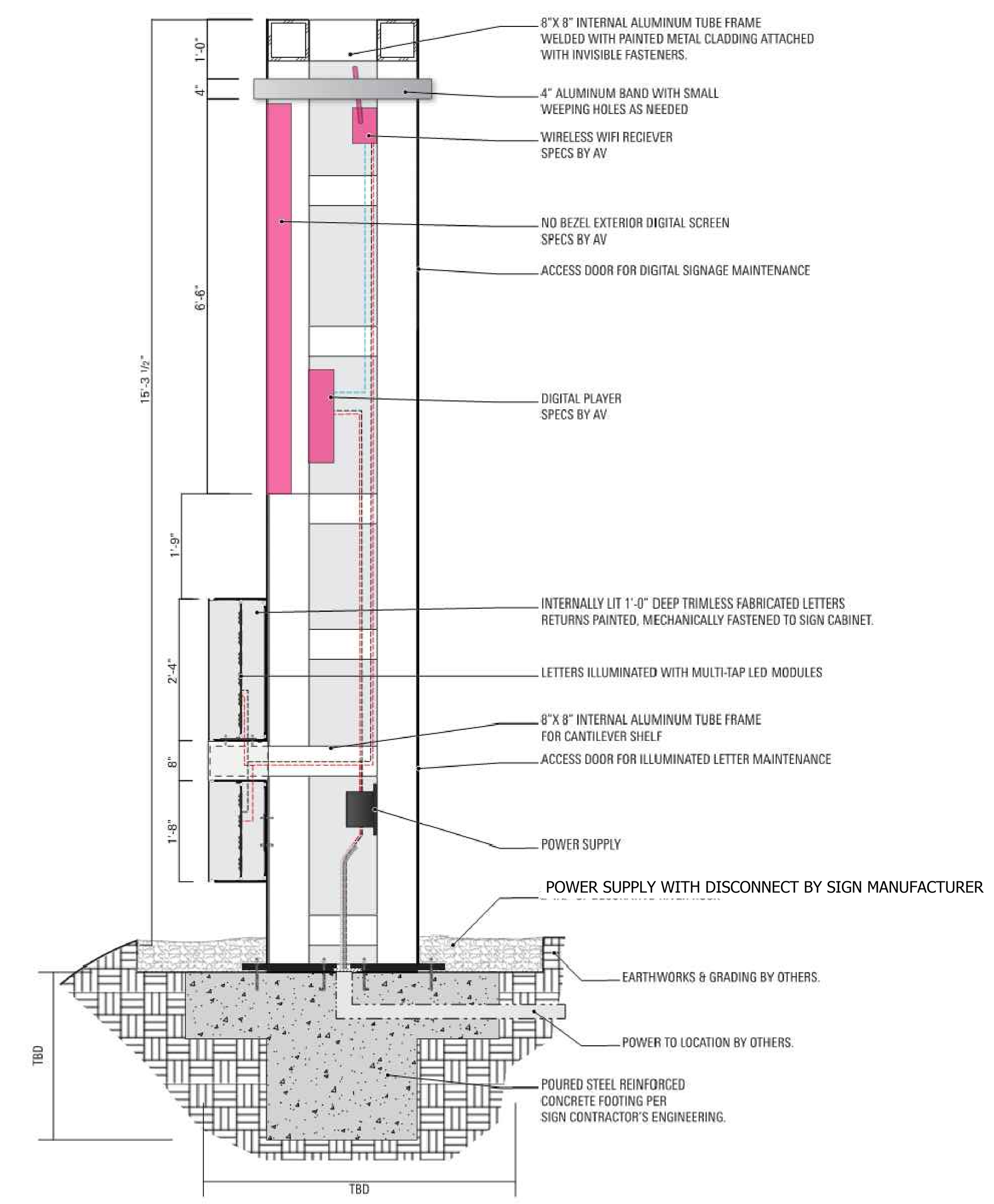
MAIN MONUMENT SIGN #1:
DESIGN INTENT

Appendix A



ELEVATION 5
SCALE: NTS
E600

Appendix A

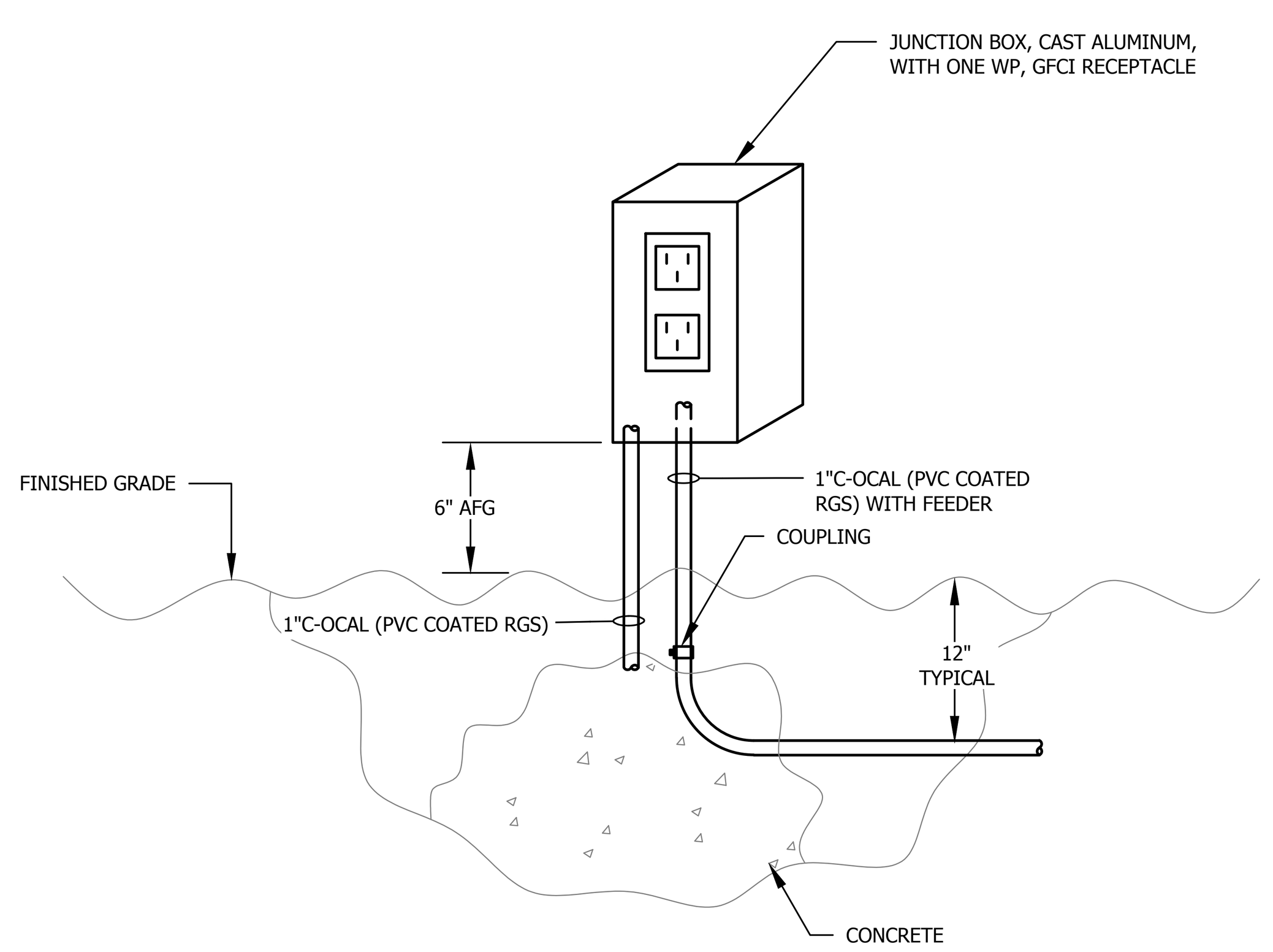


SECTION 4
SCALE: NTS
E600

GROUND SIGN PER E200 / E600

COMPONENTS

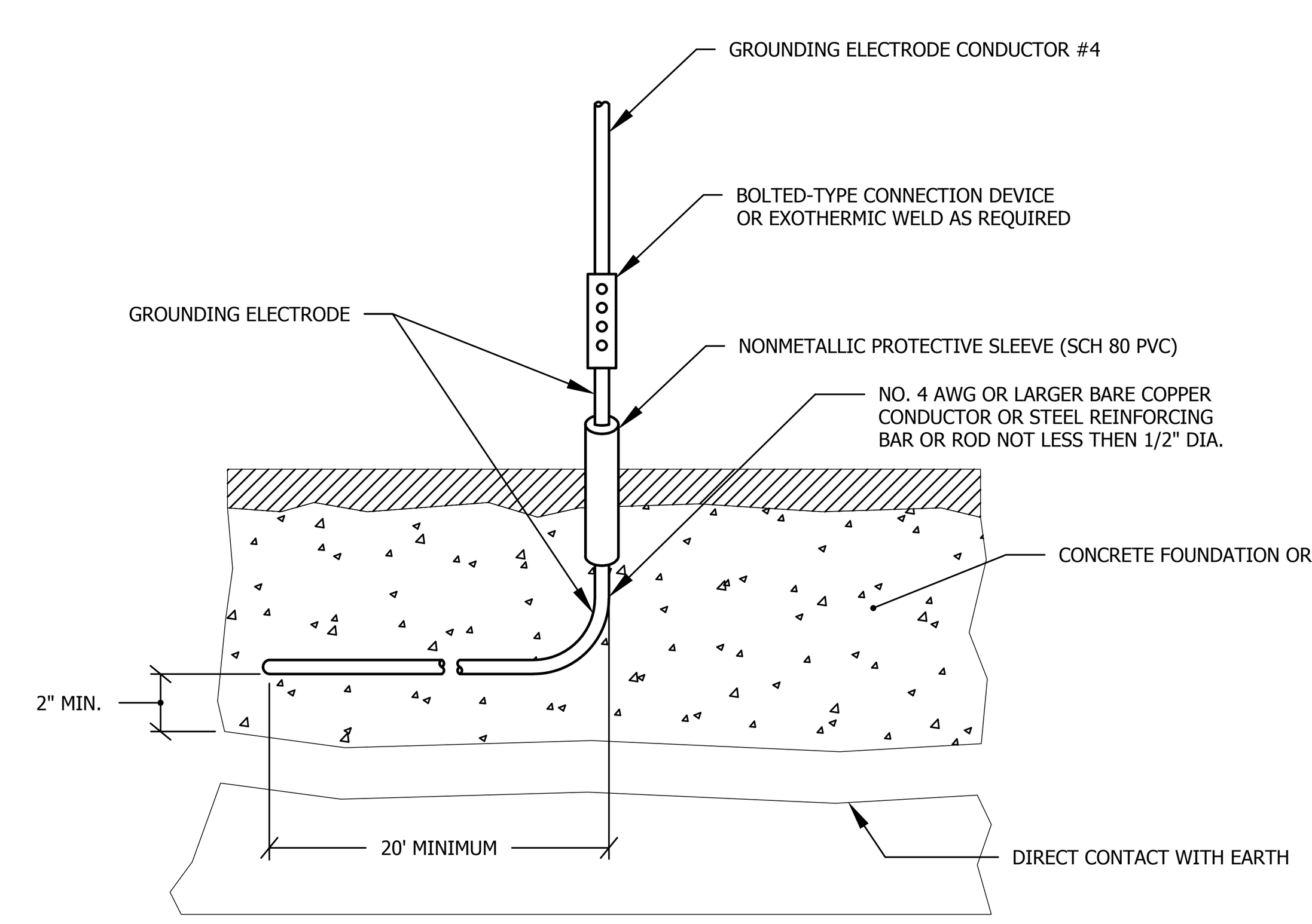
- CARLON RED-DOT 2 GANG ALUMINUM CAST BOX 2IHD5-3
- 2 DUPLEX GFCI RECEPTACLES
- LOCKABLE #2CKU COVER



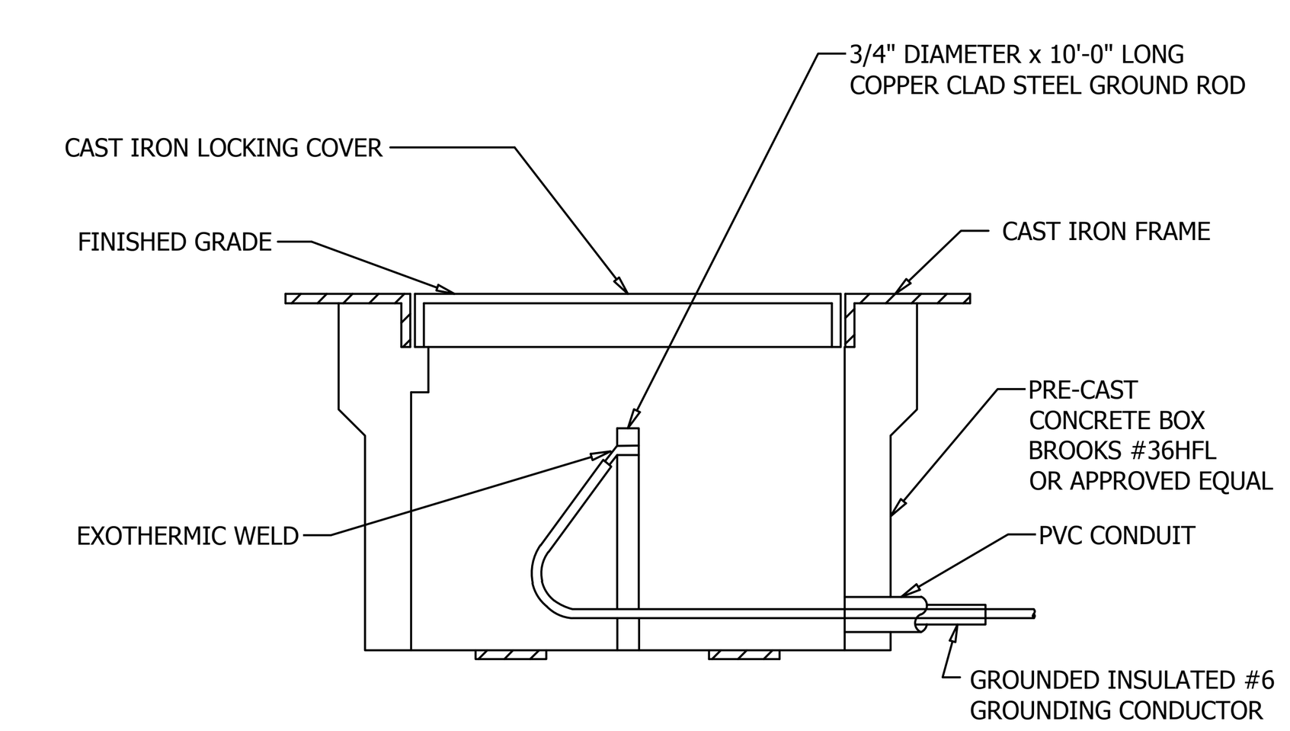
RECEPTACLE DETAIL 3
SCALE: NONE
E600

DETAIL NOTES:

1. CONCRETE-ENCASED ELECTRODE: AN ELECTRODE ENCASED BY AT LEAST 2 INCHES (50.8MM) OF CONCRETE. LOCATED WITHIN AND NEAR THE BOTTOM OF A CONCRETE FOUNDATION OR FOOTING THAT IS IN DIRECT CONTACT WITH THE EARTH, CONSISTING OF AT LEAST 20 FEET (6.1 M) OF ONE OR MORE BARE OR ZINC GALVANIZED OR OTHER ELECTRICALLY CONDUCTIVE COATED STEEL REINFORCING BARS OR RODS OF NOT LESS THAN 1/2 INCH (12.7 MM) DIAMETER, OR CONSISTING OF AT LEAST 20 FEET (6.1 M) OF BARE COPPER CONDUCTOR # 4.



UFER GROUND DETAIL 2
SCALE: NONE
E600



GROUNDING WELL DETAIL 1
SCALE: NONE
E600

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-
DESIGN TEAM
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PROJECT NAME
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PROJECT NO.
613696000

SHEET TITLE
ELECTRICAL DETAILS

SHEET NUMBER
E600

L.A.I.# 19786-01 PAPER SIZE 42"x30"