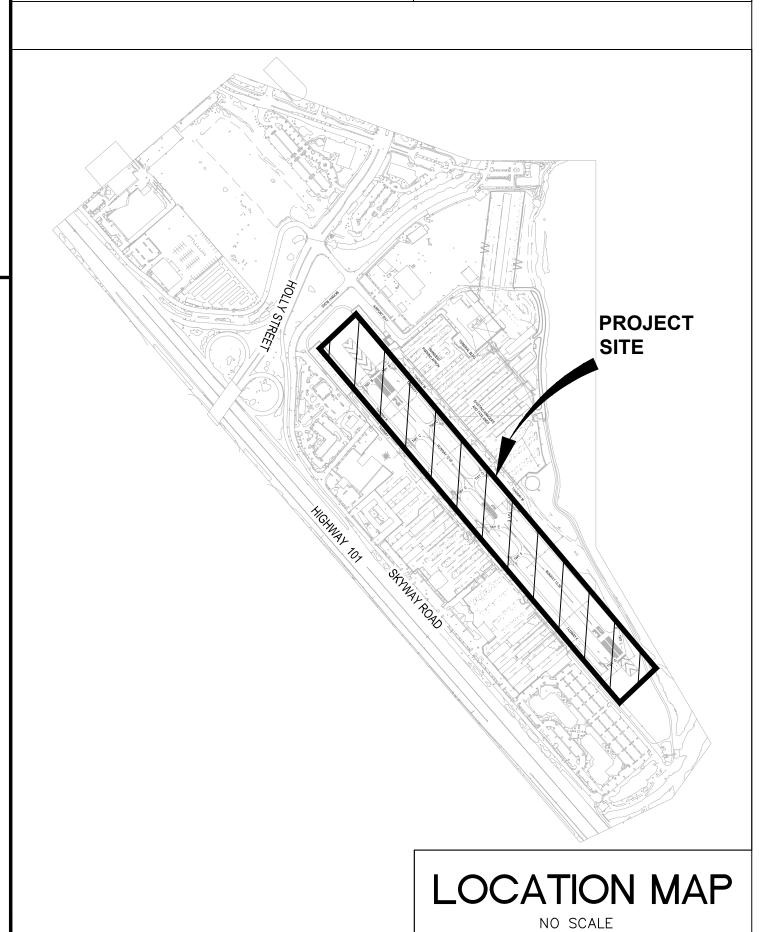
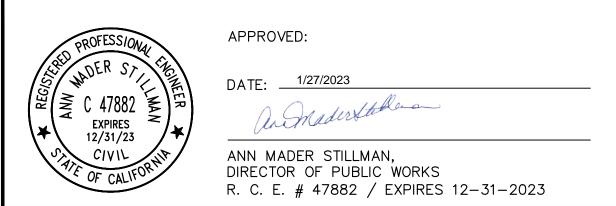
ACIFI OCEAN VICINITY MAP





COUNTY OF SAN MATEO CALIFORNIA

RUNWAY 12-30 AND CONNECTOR TAXIWAYS REHABILITATION SAN CARLOS AIRPORT

TO BE SUPPLEMENTED BY STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS DATED MAY 2018 AND ADOPTED BY SAN MATEO COUNTY, FEBRUARY 11, 2020, BY RESOLUTION NO. 077277

COUNTY PROJECT NO. ASLO3

OBLITERATE EXISTING PAVEMENT MARKINGS

PREPARE PAVEMENT SURFACE FOR SEAL COAT

EXISTING UNDERGROUND TELEPHONE LINE

MILL EXISTING PAVEMENT TO REMOVE SURFACE BUMP

REMOVE EXISTING RUBBER

CONTRACTOR'S ACCESS ROUTE

EXISTING TELEPHONE MANHOLE

EXISTING OVERHEAD ELECTRIC LINE

EXISTING GUY WIRE AND ANCHOR

EXISTING UTILITY POLE

EXISTING POLE SUPPORT

EXISTING CONCRETE MARKER

EXISTING CONCRETE DUCT MARKER

EXISTING CONCRETE CABLE MARKER

EXISTING CONCRETE SPLICE MARKER

EXISTING SINGLE POST TRAFFIC SIGN

EXISTING DOUBLE POST TRAFFIC SIGN

EXISTING BOLLARD OR POST

EXISTING MONITORING WELL

EXISTING OBSERVATION WELL

EXISTING SURFACE SENSOR

EXISTING HOLDING POSITION LIGHT

EXISTING RETROREFLECTIVE MARKER

EXISTING IN-PAVEMENT EDGE LIGHT

EXISTING AIRFIELD GUIDANCE SIGN

EXISTING ELECTRICAL DISCONNECT

EXISTING REIL UNIT

EXISTING TRANSFORMER

EXISTING LIGHTED WIND CONE

PROPOSED PAVEMENT SECTION

PROPOSED RSA SOIL STABILIZATION

PROPOSED PAVEMENT SURFACE SEAL COAT

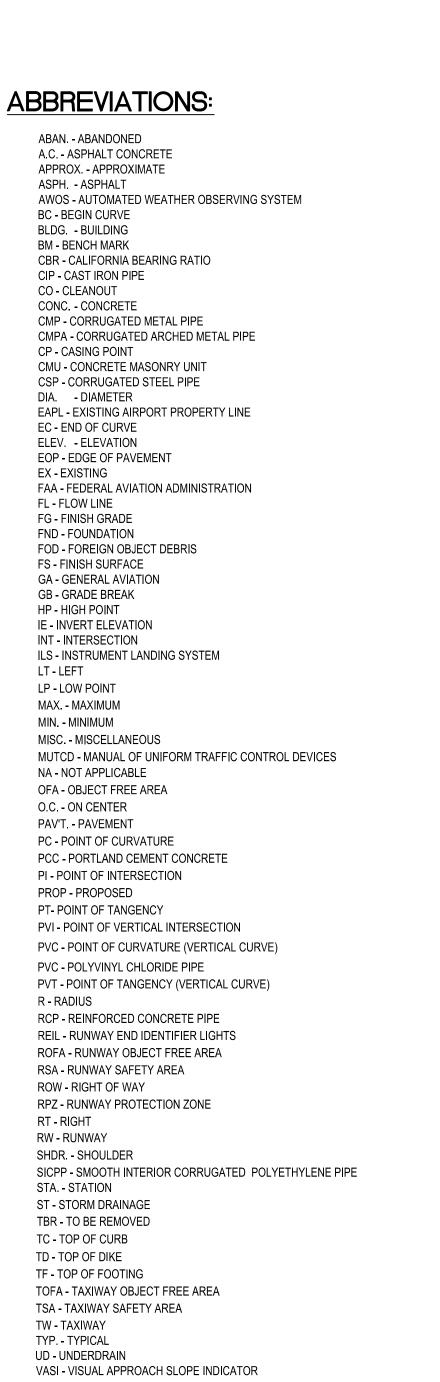
EXISTING WIND CONE

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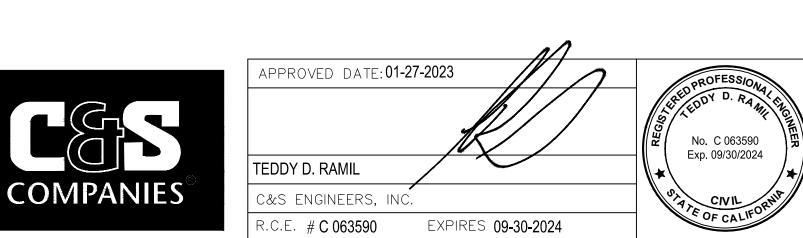
EXISTING RUNWAY OR TAXIWAY EDGE LIGHT

EXISTING TIE-DOWN

EXISTING UNDERGROUND ELECTRIC LINE



C&S Engineers, Inc.	
Folsom Boulevard, Suite 210 Sacramento, California 95826 Phone: 916-364-1470 www.cscos.com	



LEGEND:

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— X — X — X — X — X — EXISTING FENCE LINE

-X-X-X-X-X-X-X-X-X EXISTING SINGLE SWING GATE

KEYED NOTE REFERENCE

EXISTING AIRPORT PROPERTY LINE

EXISTING ROADWAY BOUNDARY

EXISTING RUNWAY SAFETY AREA

EXISTING TAXIWAY SAFETY AREA

EXISTING EDGE OF WATER

WORK AREA HAUL ROUTE

LOW PROFILE BARICADES

EXISTING CONTOUR LINE

— X — EXISTING DOUBLE SWING GATE

CONTRACTOR STAGING AREA

EXISTING TOP/BOTTOM OF DITCH

EXISTING CANTILEVER GATE

EXISTING GUIDE RAIL

EXISTING DRAINAGE LINE

EXISTING UNDERDRAIN

EXISTING HEADWALL

EXISTING WATER LINE

EXISTING HYDRANT

EXISTING WATER VALVE

EXISTING WATER MANHOLE

EXISTING SANITARY FORCE MAIN

EXISTING SANITARY MANHOLE

EXISTING GAS LINE MARKER

PROPOSED INLET PROTECTION

EXISTING SANITARY LINE

EXISTING GAS LINE

EXISTING GAS VALVE

PROPOSED FIBER ROLL

EXISTING UNDERDRAIN CLEANOUT

EXISTING DRAINAGE MANHOLE

EXISTING PIPE END SECTION

EXISTING TAXIWAY OBJECT FREE AREA

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OF SAN			DESIGNED BY: E.A. (C&S)	TITLE SI
			CHECKED BY: D.M. (C&S)	RUNWAY 12-30 AND CONNECTOR
			DRAWN BY: E.A. (C&S)	TROINWAT 12-30 AND CONNECTOR
			ANN MADER STILLM	AN, DIRECTOR OF PUBLIC WORKS
10/11/19/05	REVISION	DATE	SAN	N MATEO COUNTY
CO WORT		FOR REDUCED P ORIGINAL SCALE		1 2

EXISTING ELECTRICAL MANHOLE

EXISTING JUNCTION CAN PLAZA

EXISTING AIRFIELD LIGHTING CABLE IN TRENCH

EXISTING AIRFIELD LIGHTING CABLE IN CONDUIT

EXISTING PULLBOX

EXISTING JUNCTION CAN

EXISTING CIRCUIT LABEL

EXISTING DUCT BANK

IRON ROD FOUND

EXISTING FENCE LINE TO BE REMOVED

X_B X_B

-/-/-W-/-/-/-/-/-/-/-/-

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EXISTING SURVEY BASELINE

EXISTING SURVEY BASELINE POINT

EXISTING SURVEY CONTROL POINT

EXISTING BENCHMARK LOCATION

EXISTING CONIFEROUS TREE TO BE REMOVED

EXISTING DRAINAGE LINE TO BE REMOVED

EXISTING UNDERDRAIN TO BE REMOVED

EXISTING CATCH BASIN TO BE REMOVED

EXISTING WATER LINE TO BE REMOVED

EXISTING HYDRANT TO BE REMOVED

EXISTING WATER VALVE TO BE REMOVED

EXISTING SANITARY LINE TO BE REMOVED

EXISTING SANITARY FORCE MAIN TO BE

EXISTING GAS LINE TO BE REMOVED

EXISTING GAS VALVE TO BE REMOVED

EXISTING SANITARY MANHOLE TO BE REMOVED

EXISTING UNDERGROUND TELEPHONE LINE TO BE

EXISTING FIBER OPTIC LINE TO BE REMOVED

EXISTING OVERHEAD TELEPHONE LINE TO BE

EXISTING TELEPHONE JUNCTION BOX TO BE REMOVED

EXISTING TELEPHONE MANHOLE TO BE REMOVED

EXISTING OVERHEAD ELECTRIC LINE TO BE REMOVED

EXISTING UNDERGROUND ELECTRIC LINE TO BE

EXISTING LIGHT POLE TO BE REMOVED

EXISTING UNDERDRAIN CLEANOUT TO BE REMOVED

EXISTING DRAINAGE MANHOLE TO BE REMOVED

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TITLE SHEET

SCALE: NOT TO SCALE DATE: JANUARY 2023 AND CONNECTOR TAXIWAYS REHABILITATION 555 COUNTY CENTER, 5th FLOOR

> GI001 SHEET 1 OF 53

REDWOOD CITY, CALIFORNIA 94063

GENERAL CONSTRUCTION NOTES

- THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 70-08, ATTACHMENT A -CONSTRUCTION SAFETY AND PHASING PLAN (CSPP) OF THE GENERAL PROVISIONS.
- 2. THESE DRAWINGS HAVE BEEN PREPARED, IN PART, BASED UPON RECORD DRAWINGS AND/OR CAD FILES FURNISHED BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THOSE UTILIZING THE INFORMATION ON THESE DRAWINGS ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY PURPOSE.
- 3. EXISTING UTILITIES WERE TAKEN FROM PLANS OF RECORD. THEY HAVE BEEN SHOWN TO THE EXTENT KNOWN AND ARE OFFERED IN GOOD FAITH SOLELY FOR INFORMATIONAL PURPOSES. THEY MAY NOT REFLECT ACTUAL LOCATIONS AND MAY NOT BE INCLUSIVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES PRIOR TO THE START OF CONSTRUCTION.
- 4. THE ACTUAL LOCATION AND ELEVATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
- 5. IN THE EVENT OF DAMAGE TO EXISTING UTILITIES OR CABLES, THE ENGINEER AND OWNER SHALL BE NOTIFIED IMMEDIATELY.
- 6. THE CONTRACTOR SHALL REPAIR ALL DAMAGE TO UTILITIES OR CABLES, AS DIRECTED BY THE ENGINEER. IMMEDIATELY AND AT THE CONTRACTOR'S EXPENSE.
- 7. ALL AREAS DISTURBED AS A RESULT OF THE CONTRACTOR'S STAGING AND CONSTRUCTION OPERATIONS SHALL BE RESTORED EQUAL TO OR BETTER THAN ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
- 8. DURING THE WORK OF THIS CONTRACT, THE CONTRACTOR SHALL FURNISH, ERECT AND MAINTAIN WHATEVER TEMPORARY LIGHTING MAY BE NECESSARY TO KEEP THE TAXIWAY IN OPERATING CONDITION WHEN OPEN FOR AIRCRAFT.
- 9. ALL DIRT, DUST, STONES AND LOOSE DEBRIS SHALL BE CONTINUOUSLY REMOVED FROM ALL PAVED SURFACES DURING THIS CONTRACT.
- 10. THE CONTRACTOR SHALL RECONSTRUCT AND MAINTAIN EXISTING ACCESS ROADS AS REQUIRED FOR ACCESS TO THE WORK AREAS.
- 11. PROPOSED ACCESS ROADS SHALL BE REMOVED UPON COMPLETION OF WORK AND THE AREA RESTORED TO ORIGINAL CONDITION.
- 12. ALL OF THE CONTRACTOR'S OPERATIONS SHALL REMAIN ON AIRPORT PROPERTY AT ALL TIMES. UNDER NO CIRCUMSTANCES WILL THE CONTRACTOR BE ALLOWED ON ADJACENT PROPERTY.
- 13. THIS CONTRACT DOES NOT ALLOW FOR PRICE INCREASES DUE TO ESCALATION IN COST OF UNIT BID ITEMS. THE CONTRACTOR SHALL TAKE THIS INTO CONSIDERATION WHEN PREPARING UNIT PRICES FOR BID.
- 14. THE COST OF ALL FAILING TESTS PERFORMED BY THE OWNER OR ON THE OWNER'S BEHALF SHALL BE BORNE BY THE CONTRACTOR.

GRADING AND EXCAVATION NOTES

- 15. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL STRIP AND STOCKPILE ALL MATERIAL SUITABLE FOR TOPSOILING.
- 16. SELECTIVE GRADING SHALL BE REQUIRED AS DIRECTED BY THE ENGINEER.
- 17. QUALITY ASSURANCE TESTS WILL BE MADE BY AND AT THE EXPENSE OF THE OWNER. UNLESS OTHERWISE NOTED. THE COST OF ALL FAILING TESTS SHALL BE BORNE BY THE CONTRACTOR.
- 18. THE QUANTITY OF UNCLASSIFIED EXCAVATION, ITEM P-152, INCLUDES 21,580 CY OF UNDERCUT EXCAVATION WHICH WILL BE USED ONLY WHEN DIRECTED BY THE ENGINEER.
- THE QUANTITY OF CRUSHED STONE BASE COURSE, ITEM P-209, INCLUDES 36,930 SY FOR REPLACEMENT OF UNDERCUT EXCAVATION WHICH WILL BE USED ONLY WHEN DIRECTED BY THE ENGINEER.
- 20. THE QUANTITY OF SEPARATION FABRIC, ITEM P-154/P-208/P-209, INCLUDES 13,870 (8" THICK) SY AND 23,060 (11" THICK) SY FOR PLACEMENT IN UNDERCUT AREAS WHICH WILL BE USED ONLY WHEN DIRECTED BY THE ENGINEER.
- 21. THE EXACT LOCATIONS AND DIMENSIONS OF PAVEMENT TO BE RECONSTRUCTED SHALL BE DETERMINED BY THE ENGINEER DURING CONSTRUCTION.
- 22. ALL SPOIL SHALL BE DISPOSED OF OFF-SITE AT THE CONTRACTORS EXPENSE.
- 23. THE LIMIT FOR TOPSOILING, SEEDING, AND MULCHING ARE THE LIMITS OF GRADING SHOWN ON THE GRADING PLANS. ALL AREAS OUTSIDE OF THE GRADING LIMITS WHICH ARE DISTURBED SHALL BE RESTORED BY THE CONTRACTOR AT HIS EXPENSE.
- 24. THE COMBINATION OF SILT/CLAY SOILS AND HIGH NATURAL MOISTURE CONTENTS CREATE THE POTENTIAL FOR LOSS OF STRENGTH UNDER REPETITIVE LOADINGS OR VIBRATION. THE CONTRACTOR SHOULD TAKE THESE FACTORS INTO CONSIDERATION WHEN SELECTING EQUIPMENT, METHODS AND MEANS FOR CONSTRUCTION OF THIS PROJECT, AS WELL AS HAULING EQUIPMENT THAT WILL OPERATE IN THE AREA THROUGHOUT CONSTRUCTION. ANY DAMAGE TO THE SUBGRADE CONDITION AS A RESULT OF CONSTRUCTION OPERATIONS SHALL BE RESTORED TO EQUAL OR BETTER THAN ORIGINAL CONDITION, AS DIRECTED BY THE ENGINEER AND ALL AT THE CONTRACTOR'S EXPENSE.
- 25. TEMPORARY AIR AND WATER POLLUTION, SOIL EROSION AND SILTATION CONTROL WORK PERFORMED FOR PROTECTION OF CONSTRUCTION AREAS OUTSIDE THE

- CONSTRUCTION LIMITS. SUCH AS BORROW AREAS AND WASTE AREAS. HAUL ROADS. EQUIPMENT AND MATERIAL STORAGE SITES, AND TEMPORARY PLANT SITES, WILL NOT BE MEASURED AND PAID FOR DIRECTLY BUT SHALL BE CONSIDERED AS A SUBSIDIARY OBLIGATION OF THE CONTRACTOR.
- 26. ALL SOIL EROSION AND SEDIMENT CONTROL DEVICES AND MATERIALS SHALL BE IN PLACE PRIOR TO BEGINNING EARTHWORK OPERATIONS AND SHALL BE MAINTAINED UNTIL THE NEW SLOPES ARE STABILIZED WITH SEEDING AND/OR SLOPE PROTECTION.

SURVEY NOTES

- 27. FOR TYPICAL SECTIONS, THE CONTOUR INTERVAL EQUALS 1 FOOT. FOR TRANSITIONAL AREAS TO KEYWAYS, THE CONTOUR INTERVAL EQUALS 0.1 FOOT.
- 28. ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM, COORDINATES REFER NAD 83 HORIZONTAL DATUM.
- 29. THE TOPOGRAPHIC FEATURES SHOWN HEREON WERE COMPILED FROM FIELD SURVEY PERFORMED BY R.E.Y ENGINEERS, INC. DATED JANUARY 28, 2019 AND OCTOBER 17, 2022.

PAVING NOTES

- ALL AREAS TO BE OVERLAID SHALL BE PREPARED IN ACCORDANCE WITH ITEM P-101 "PREPARATION/REMOVAL OF EXISTING PAVEMENTS".
- 31. THE CONTRACTOR'S ATTENTION IS DIRECTED TO ITEM P-101 "PREPARATION/REMOVAL OF EXISTING PAVEMENTS" AS IT RELATES TO FILLING JOINTS AND CRACKS IN EXISTING PAVEMENT. A MIXTURE OF EMULSIFIED ASPHALT AND SAND IS REQUIRED TO FILL JOINTS AND CRACKS IN EXISTING PAVEMENT. ITEM P-605, "JOINT SEALING FILLER" WILL NOT BE ALLOWED.
- 32. EMULSIFIED ASPHALT TACK COAT, ITEM P-603, SHALL BE APPLIED PRIOR TO PLACING EACH LIFT OF PAVEMENT, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- 33. TRANSVERSE PAVING JOINTS IN ONE LAYER SHALL LINE UP WITH TRANSVERSE JOINTS IN THE PREVIOUS LAYERS UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- 34. TRANSVERSE PAVING JOINTS IN ADJACENT LANES SHALL LINE UP WITH EACH OTHER EXTENDING ACROSS THE FULL WIDTH OF PAVEMENT.
- 35. IN CASES OTHER THAN CENTERLINE JOINTS, LONGITUDINAL PAVING JOINTS IN ONE LAYER SHALL BE OFFSET FROM THAT IN THE PREVIOUS LAYER BY AT LEAST ONE FOOT. THE JOINT AT THE CENTERLINE OF THE PAVEMENT SHALL LINE UP WITH PREVIOUS LAYER CENTERLINE JOINTS.
- 36. PROPOSED BITUMINOUS SURFACE COURSE TO BE INSTALLED IN PAVEMENT RECONSTRUCTION AREAS, SHALL BE SUBJECTED TO THE SAME MATERIAL ACCEPTANCE CRITERIA AS THE ASPHALT LEVELING COURSE.
- 37. COLD JOINTS SHALL BE SAWCUT BACK A MINIMUM OF 6 INCHES TO EXPOSE A CLEAN, SOUND, UNIFORM VERTICAL SURFACE FOR THE FULL DEPTH OF THE LIFT. THE SAWCUT SHALL NOT BE PERFORMED UNTIL THE PAVEMENT HAS REACHED AMBIENT TEMPERATURE.
- 38. DELAMINATED PAVEMENT SHALL BE REMOVED BY COLD MILLING. THE LIMITS OF DELAMINATED PAVEMENT SHALL BE SAW CUT. THE LOCATION OF THE LIMITS OF DELAMINATED PAVEMENT WILL BE DETERMINED BY THE ENGINEER.

ELECTRICAL AND SIGNAGE NOTES

- 39. ALL ELECTRICAL WORK SHALL CONFORM TO APPLICABLE LOCAL, STATE AND NATIONAL ELECTRICAL CODES.
- 40. THE ELECTRICAL CHARACTERISTICS OF PROPOSED EQUIPMENT SHALL BE VERIFIED TO BE COMPATIBLE WITH EXISTING EQUIPMENT MANUFACTURER PRIOR TO INSTALLATION.
- 41. ABANDONED CABLES MAY EXIST IN THE VICINITY OF THE PROPOSED WORK. IF ENCOUNTERED, CONTRACTOR SHALL VERIFY THAT THEY ARE ABANDONED PRIOR TO REMOVAL. IF THEY ARE NOT ABANDONED, CABLES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- 42. ITEMS OF SPECIFIC MANUFACTURE SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS AND/OR MANUFACTURER'S REPRESENTATIVE DIRECTIONS.
- 43. ALL GROUND CONNECTIONS SHALL BE MADE USING EXOTHERMIC CONNECTIONS.
- 44. GROUND RODS SHALL BE INSTALLED AT 500-FT INTERVALS ALONG COUNTERPOISE
- 45. ALL CABLE CONNECTIONS SHALL BE MADE AT LIGHT UNITS OR AT ENDS OF DUCT BANKS UNLESS DIRECTED OTHERWISE.
- 46. THE OWNER RESERVES THE RIGHT TO SALVAGE LIGHTING EQUIPMENT. THE EQUIPMENT TO BE SALVAGED IS IDENTIFIED IN THE SPECIFICATION. SALVAGED EQUIPMENT SHALL BE STOCKPILED AT A LOCATION DESIGNATED BY THE OWNER IN PROPER WORKING CONDITION. ALL OTHER LIGHTING EQUIPMENT SHALL BE SPOILED OFF AIRPORT PROPERTY AT A PROPER DISPOSAL SITE SELECTED BY THE CONTRACTOR.
- 47. PROVIDE WATERTIGHT TERMINATION FOR ALL BURIED CONDUIT ENDS.
- 48. ALL RUNWAY AND TAXIWAY EDGE LIGHTS SHALL BE LOCATED 10 FEET OFF THE DEFINED PAVEMENT EDGE UNLESS OTHERWISE NOTED OR DIRECTED. THE CONTRACTOR SHALL ALIGN ALL LIGHTS ON TANGENT SECTIONS SUCH THAT THEY FORM A STRAIGHT LINE.
- 49. WHEN DETERMINING THE NUMBER OF CHARACTERS IN A GUIDANCE SIGN LEGEND

- THE CHARACTERS 1,. (DOT), (DASH) WILL BE CONSIDERED ONE HALF CHARACTER. PAYMENT WILL BE FOR THE SUM OF ALL CHARACTERS ON THE LONGEST FACE ROUNDED UP TO THE WHOLE NUMBER, CHARACTERS ON THE OPPOSITE SIDE OF THE SIGN WILL NOT BE COUNTED.
- 50. WHEN DETERMINING THE NUMBER OF CHARACTERS IN A GUIDANCE SIGN LEGEND THE SYMBOL ON THE OPPOSITE SIDE OF A RUNWAY HOLDING POSITION SIGN WHICH REPRESENTS THE RUNWAY SAFETY AREA OR THE ILS CRITICAL AREA WILL BE CONSIDERED 4 CHARACTERS.

MARKING NOTES

- 51. FOR CLARITY PURPOSES, EXISTING RUNWAY MARKINGS TO BE REMOVED ARE NOT SHOWN.
- 52. REMOVAL OF EXISTING MARKINGS SHALL BE IN ACCORDANCE WITH ITEM P-620.

GENERAL NOTES SCALE: NOT TO SCALE

EXPIRES 12/31/23

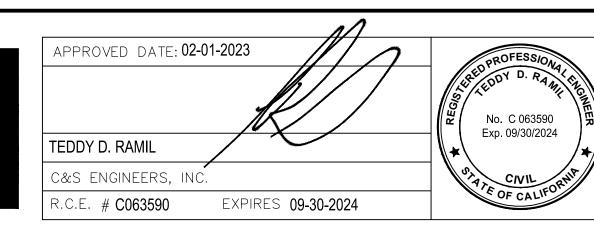
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ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS R. C. E. # 47882 / EXPIRES 12-31-2023

C&S Engineers, Inc. 7801 Folsom Boulevard, Suite 210 Sacramento, California 95826 Phone: 916-364-1470 www.cscos.com



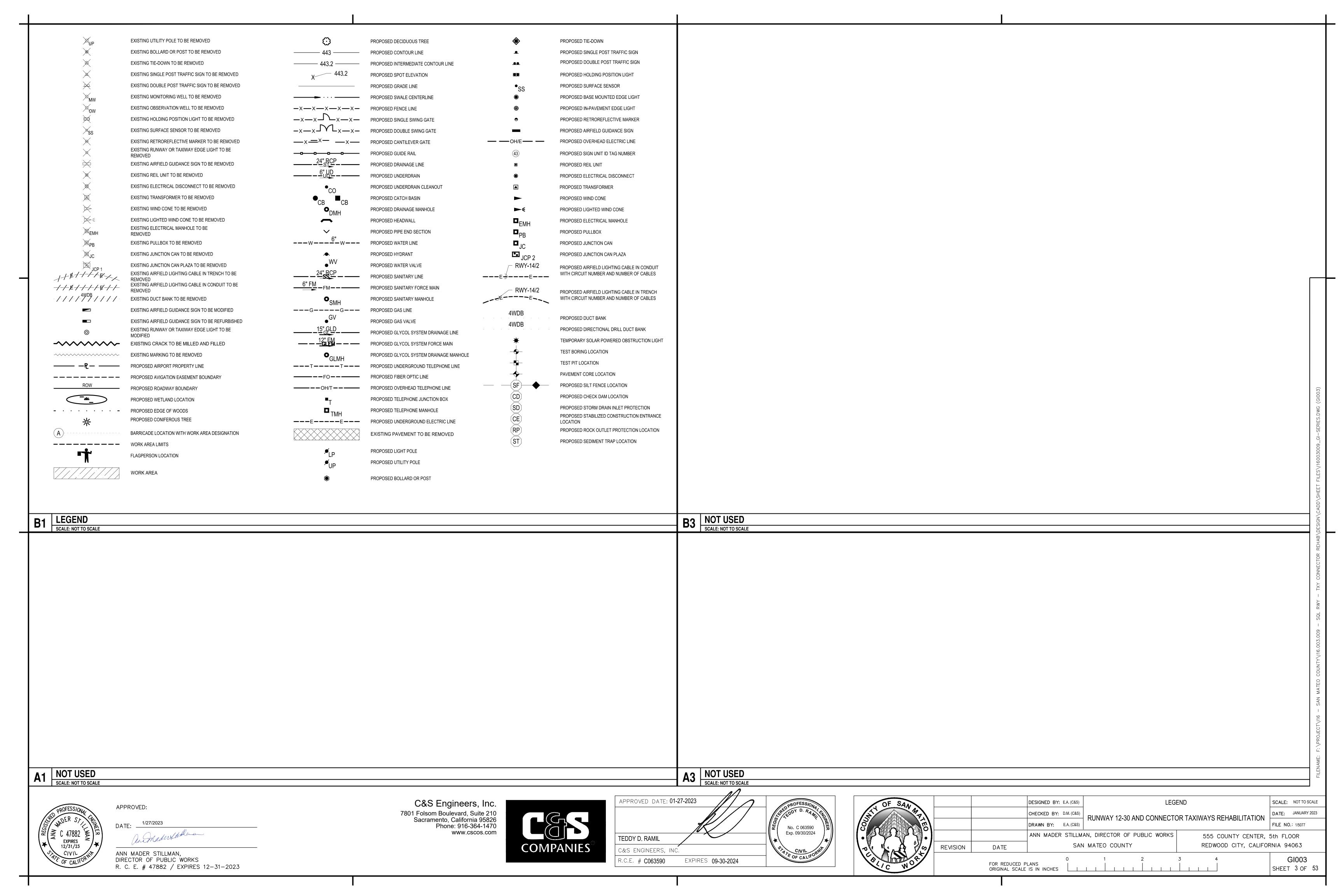


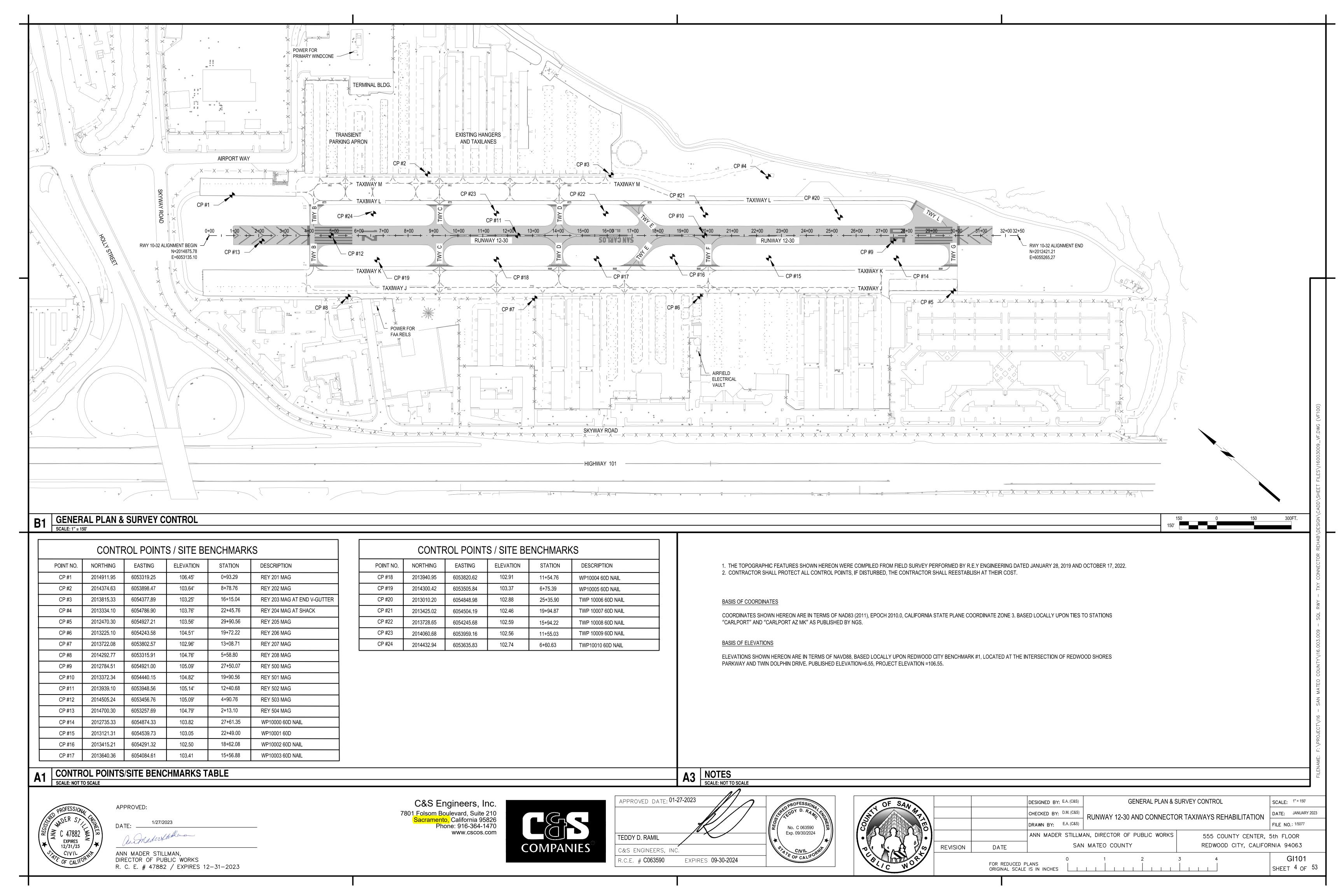
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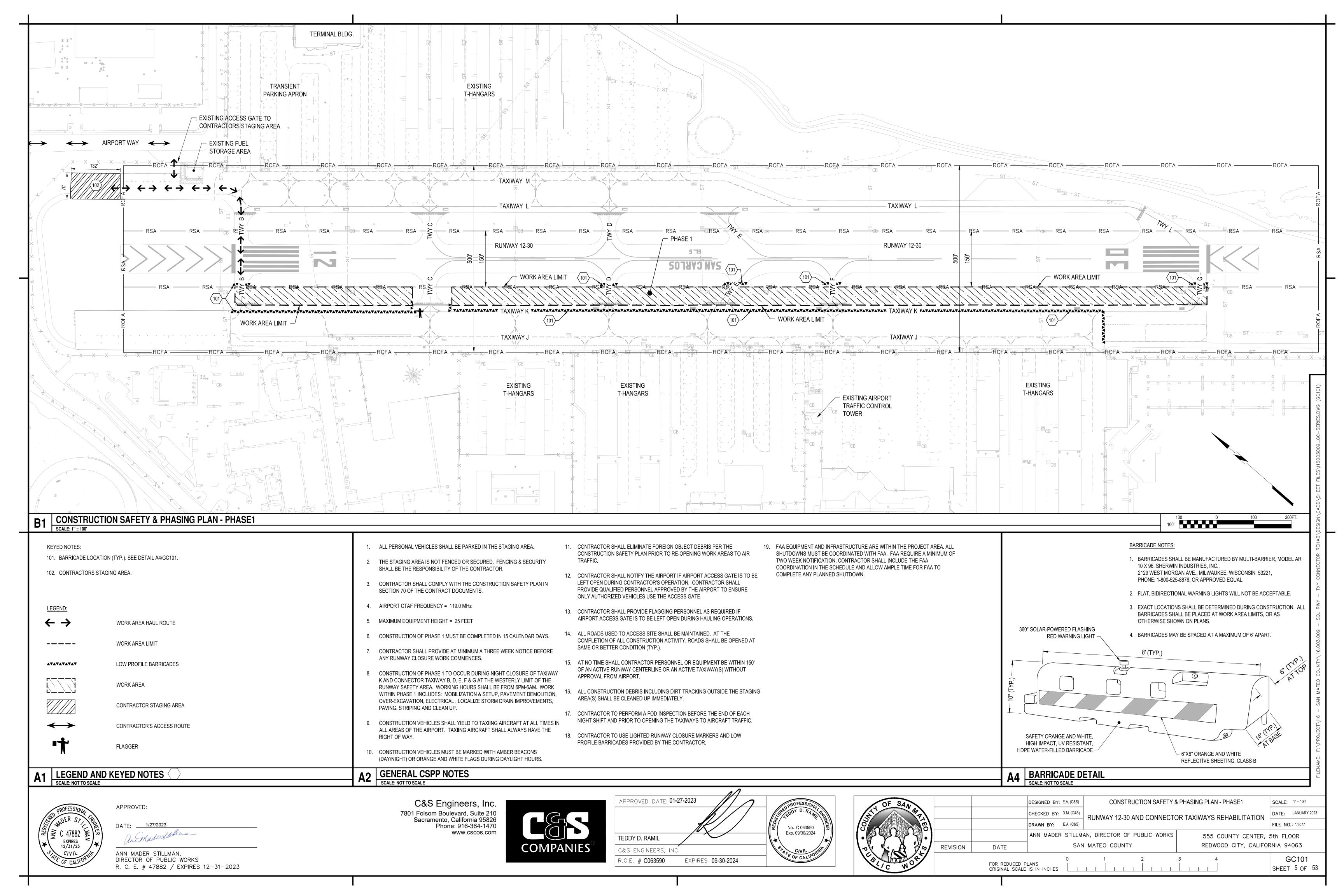
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	DRAWN BY:	E.A. (C&S)					FILE NO.: 1/50)77		
			ANN MADER	STILLM	AN, DIRECTOR (OF PUBLIC WORKS	555 COUNTY CENTER, 5th FLOOR			
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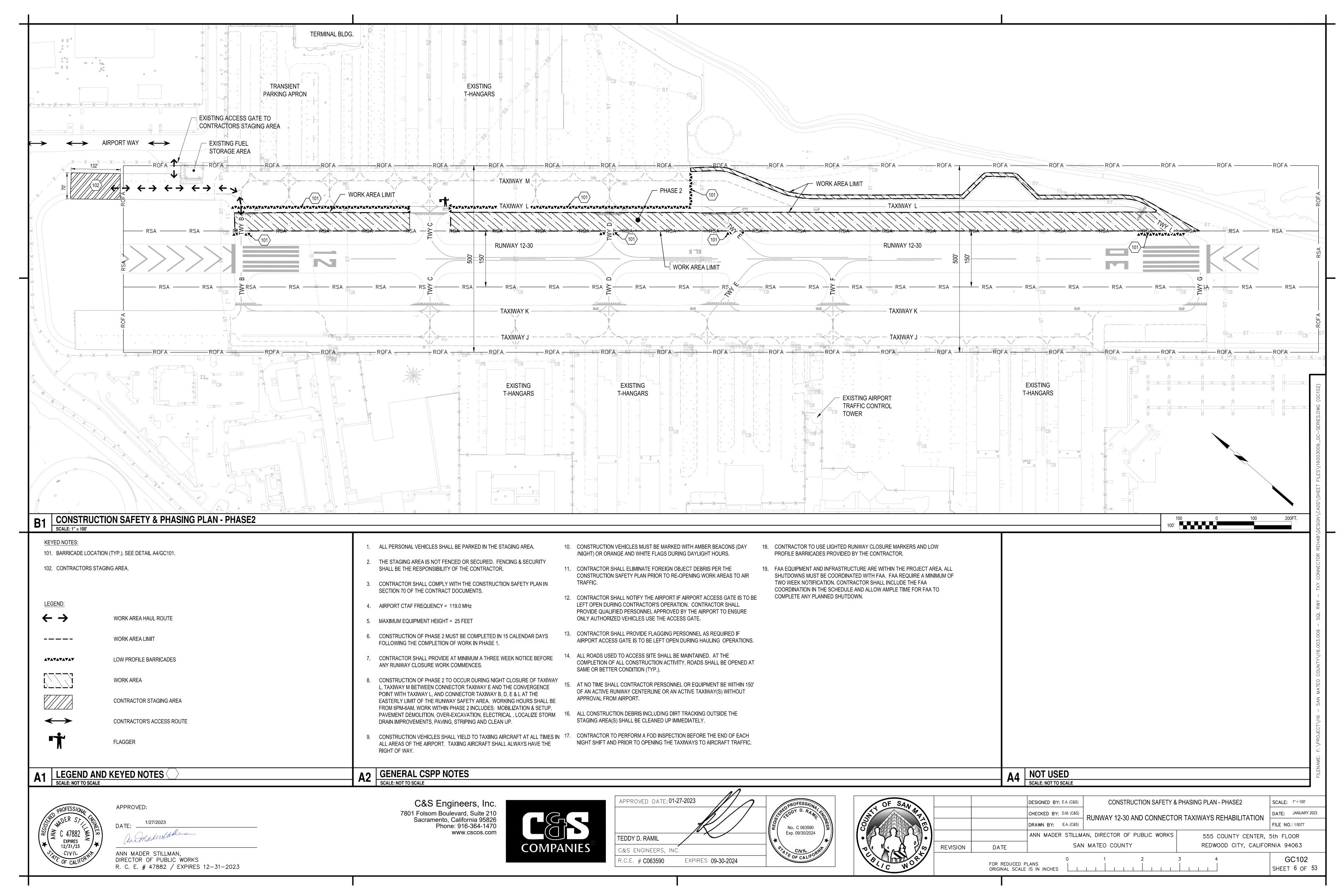
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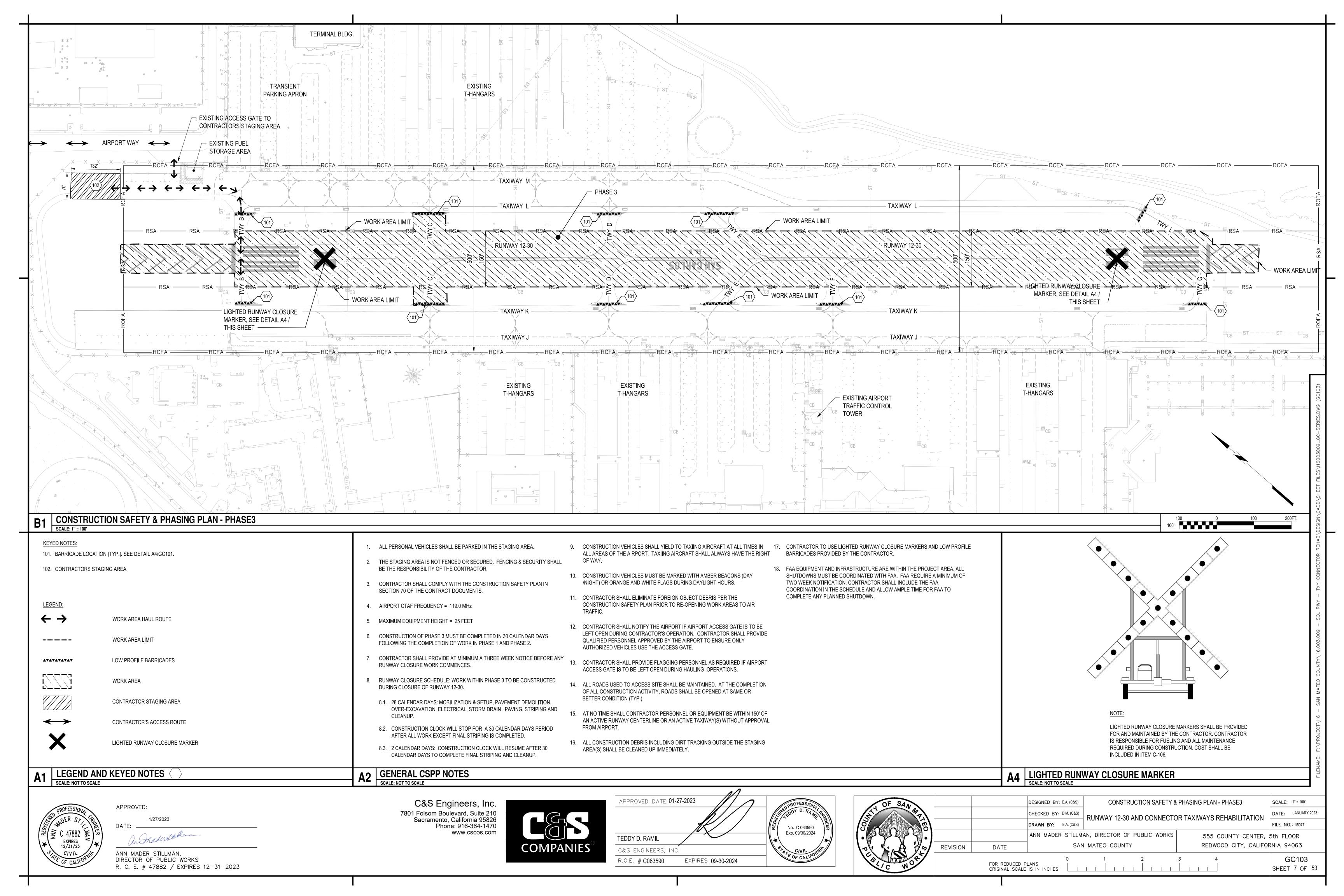
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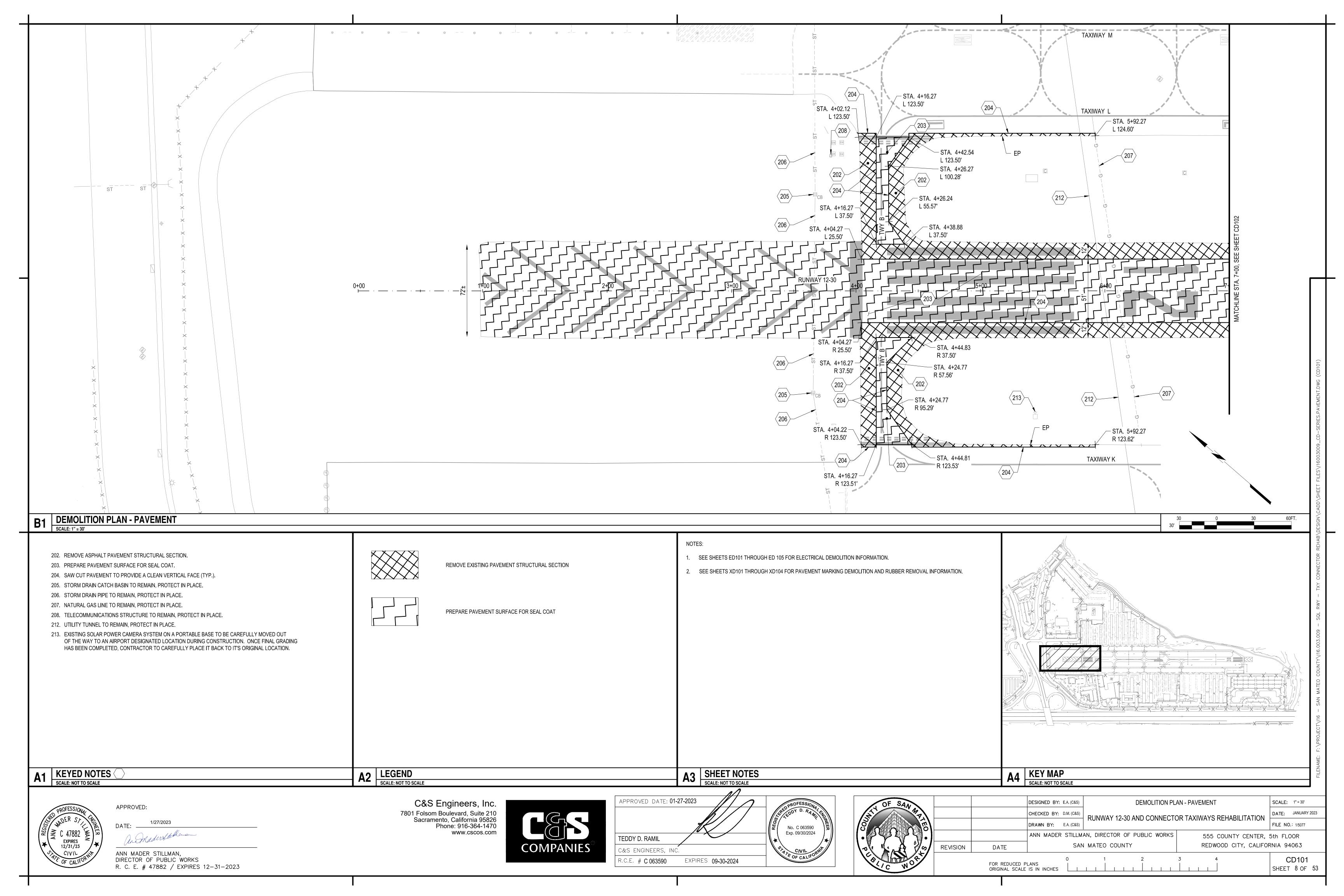


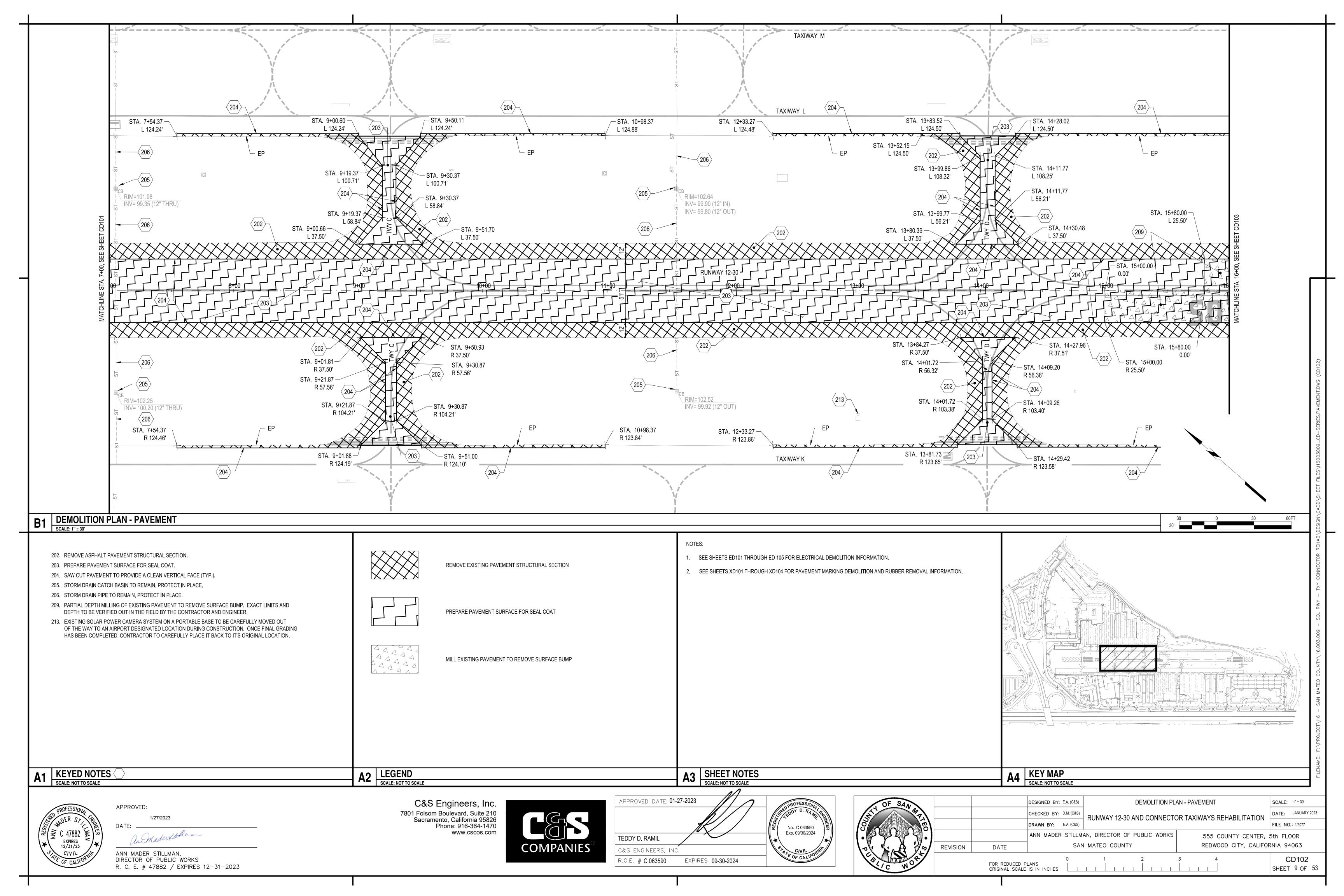


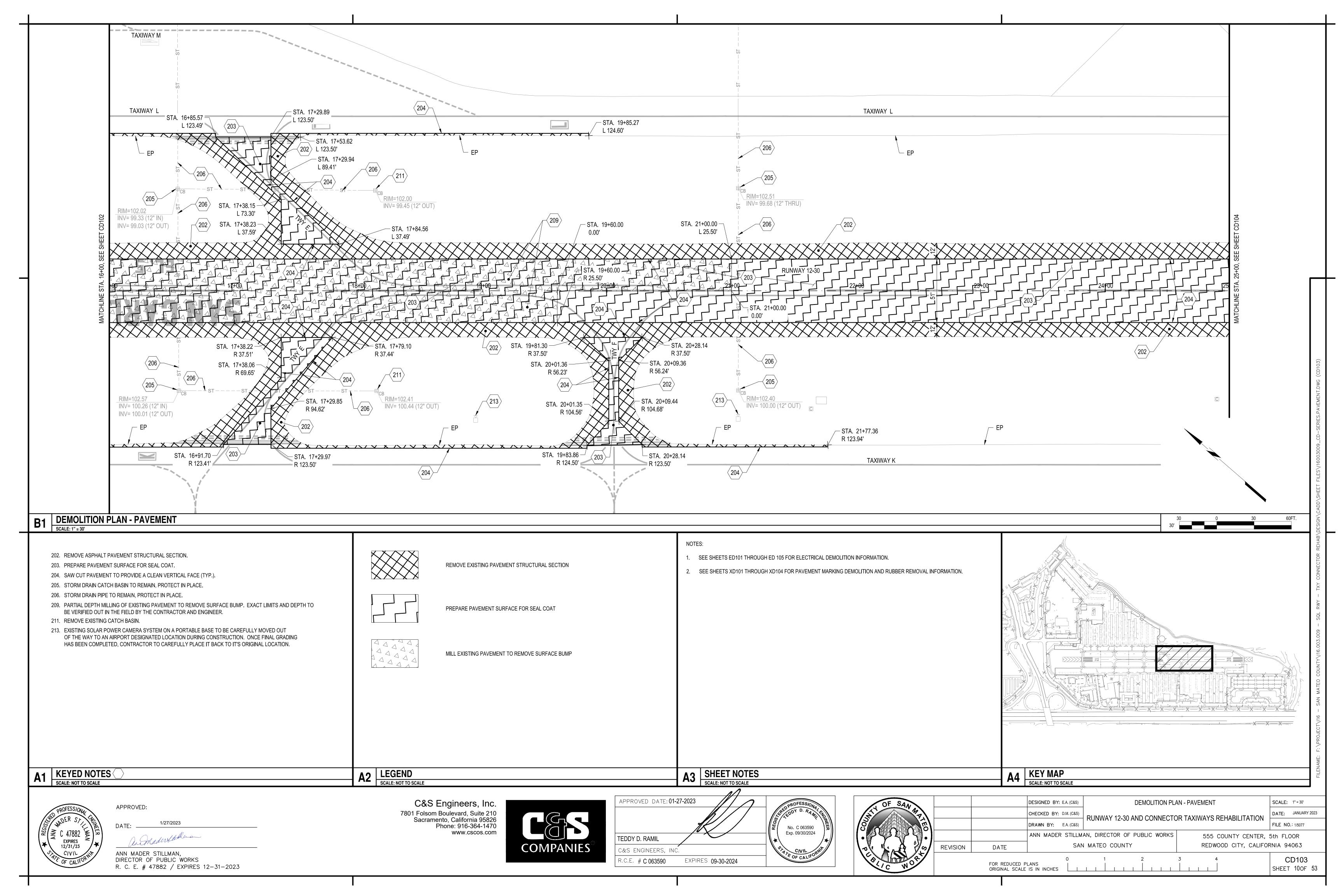


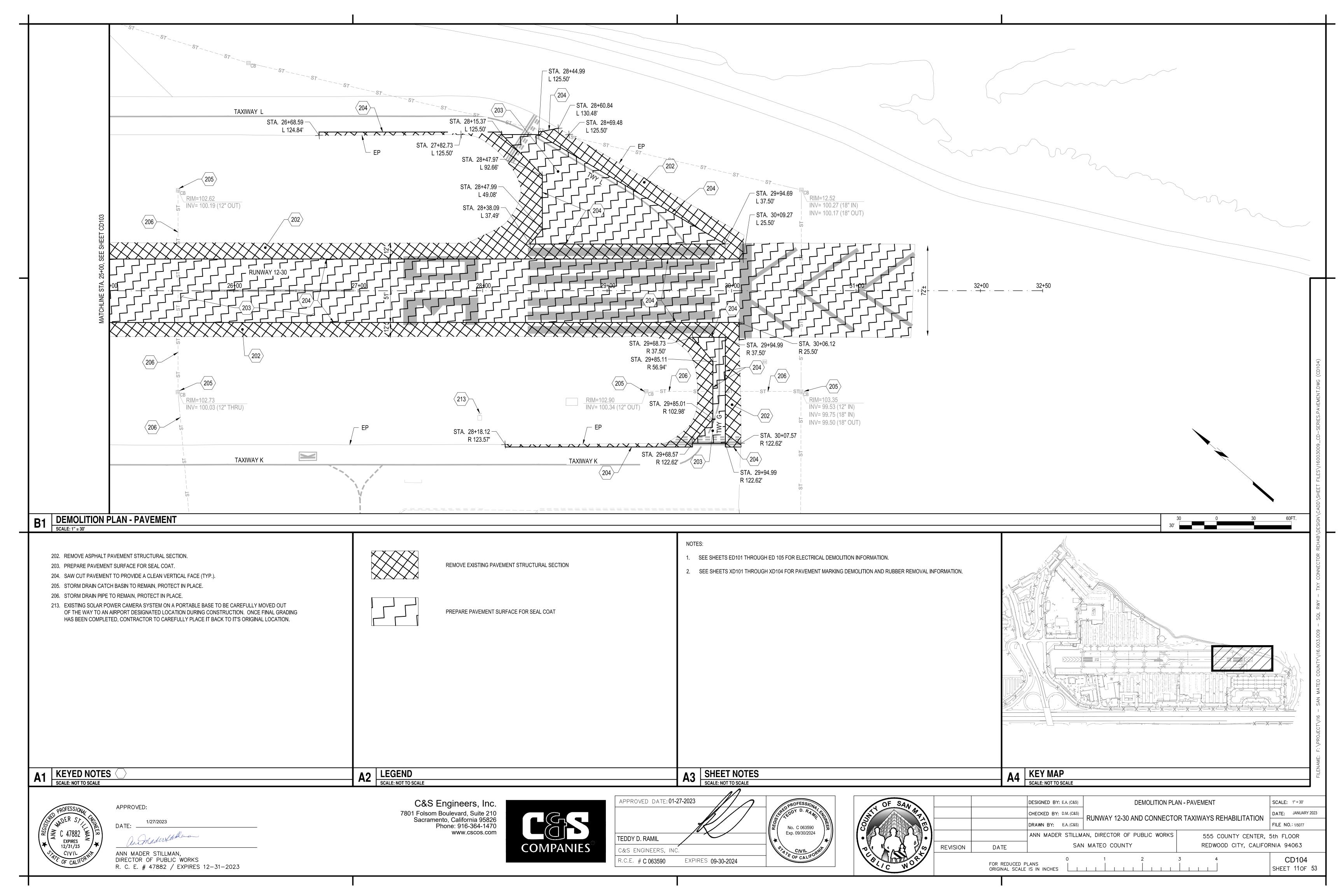


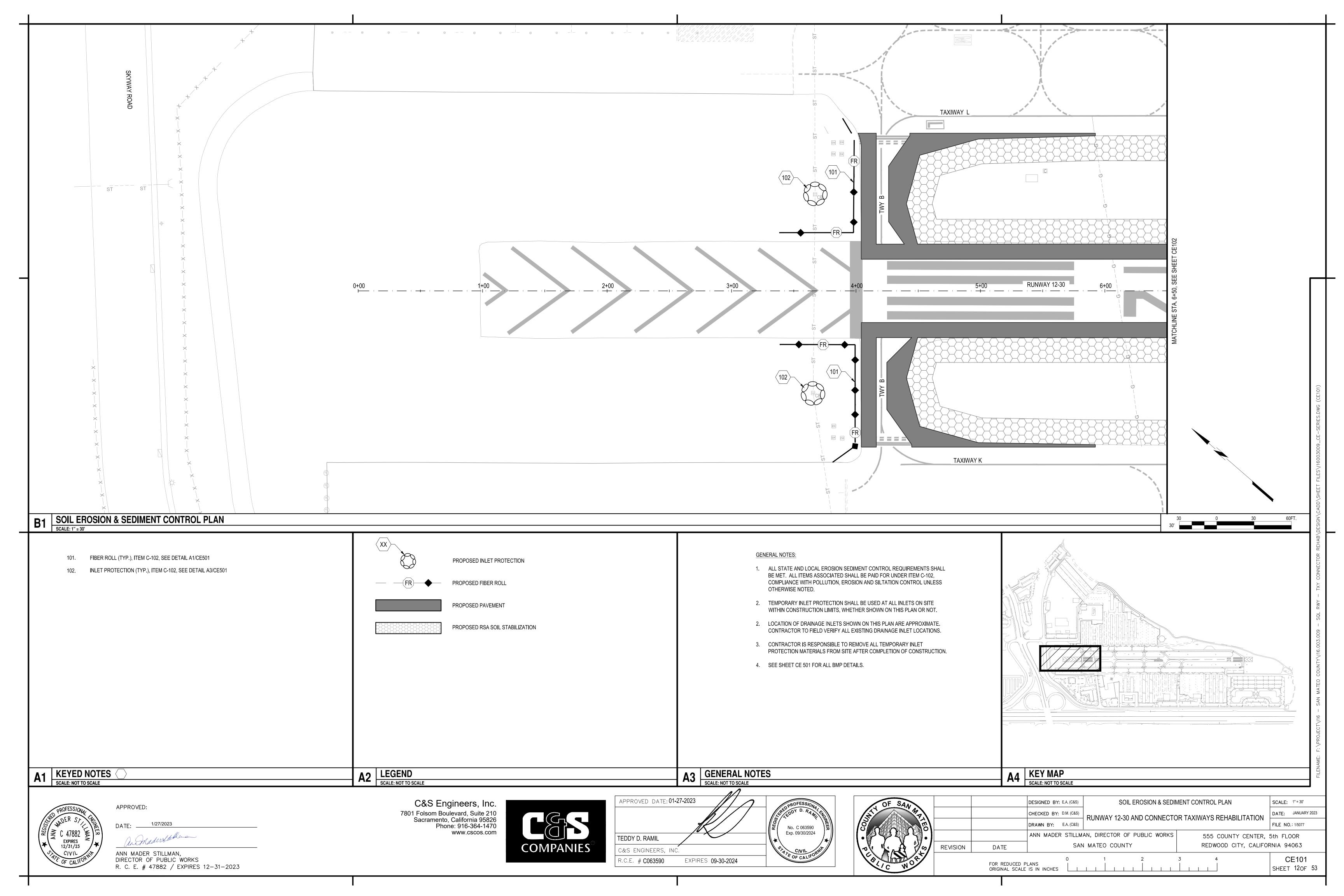


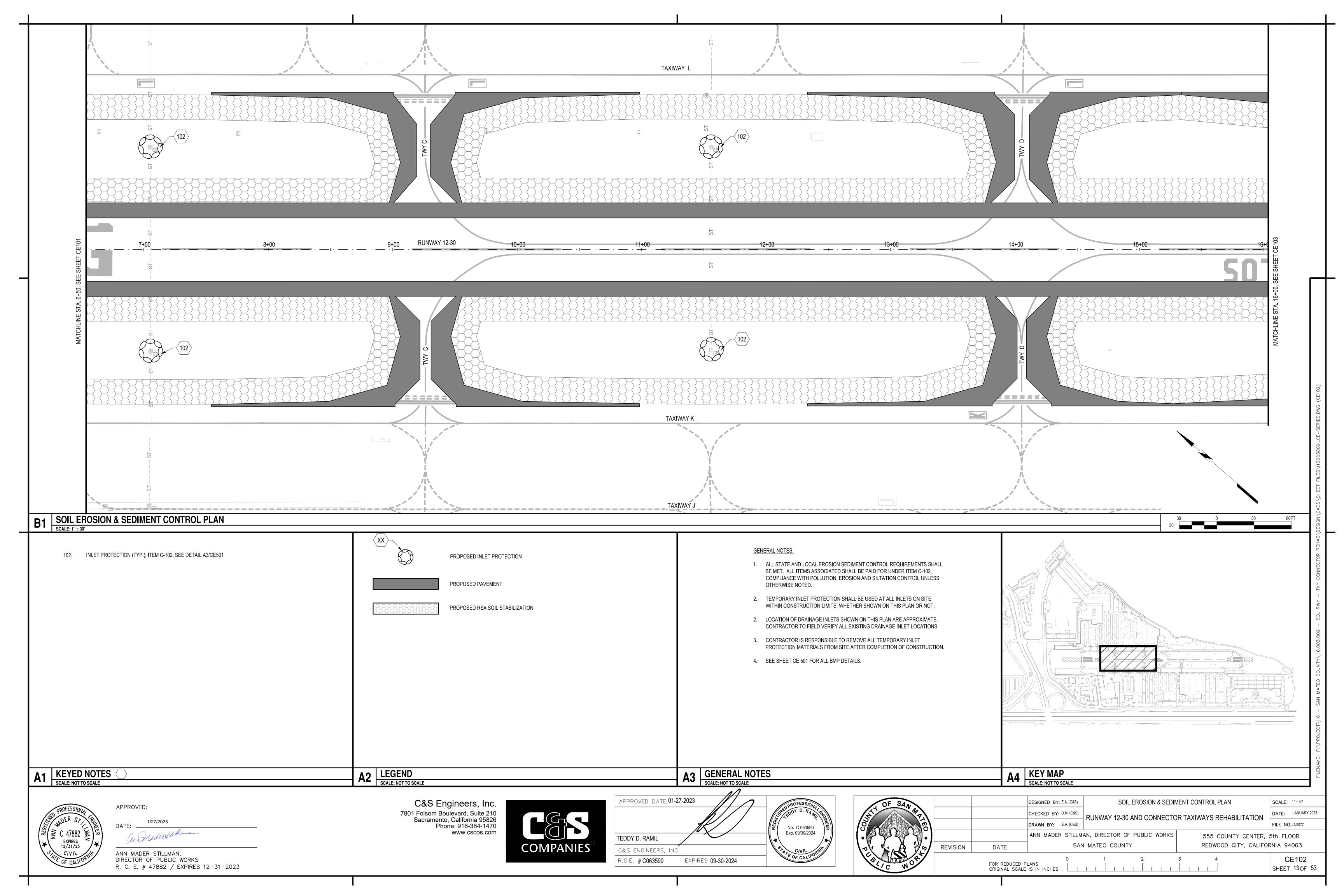


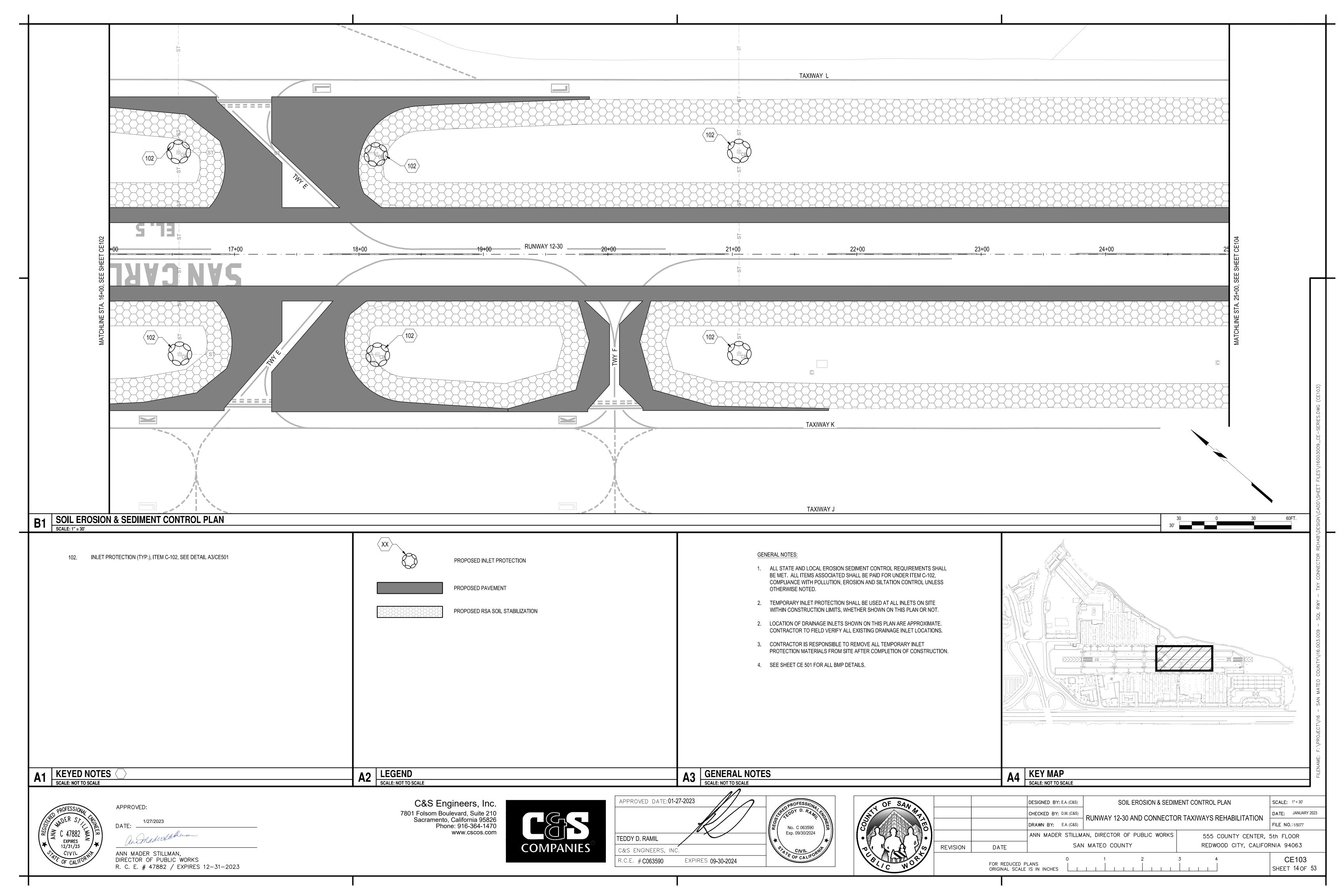


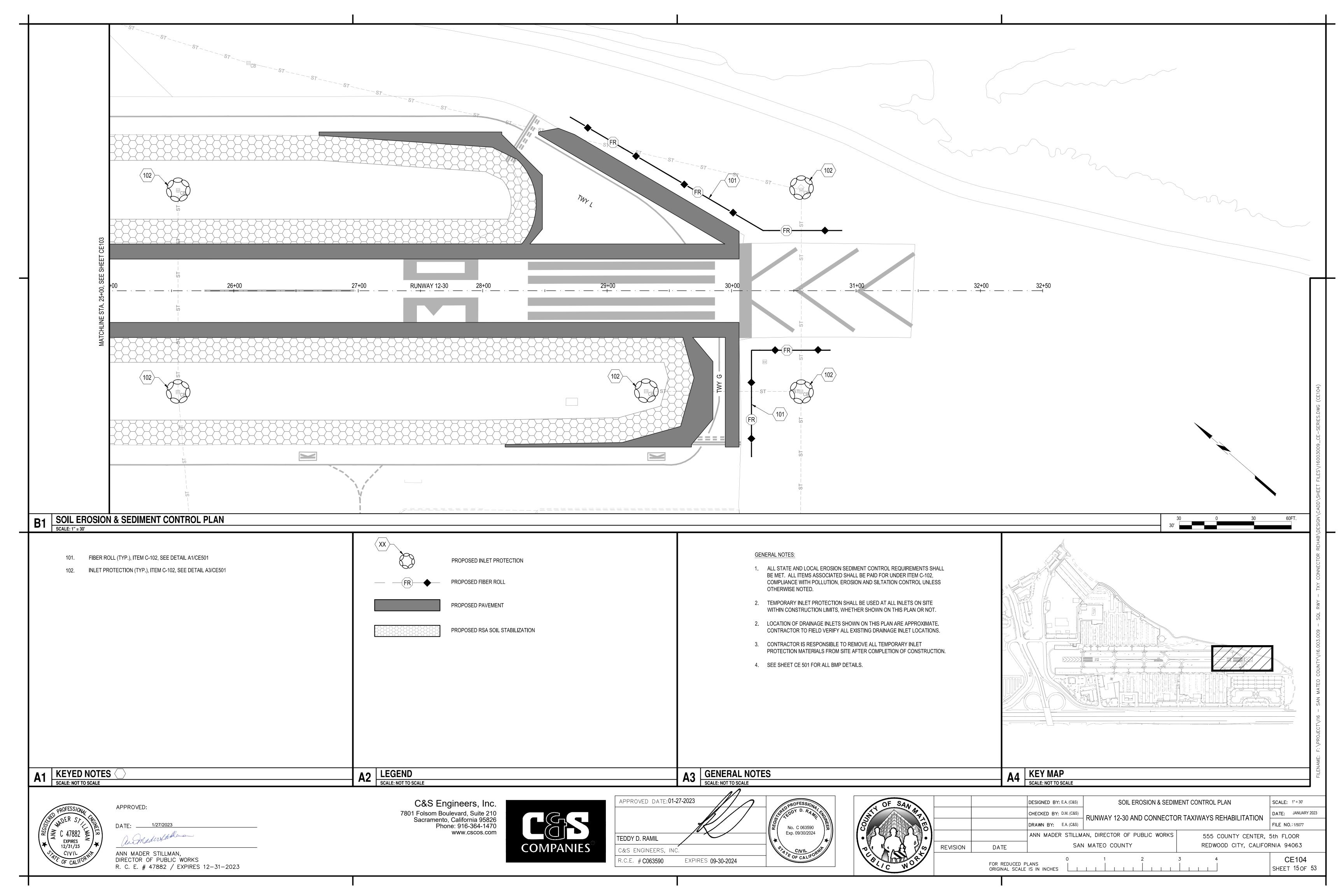


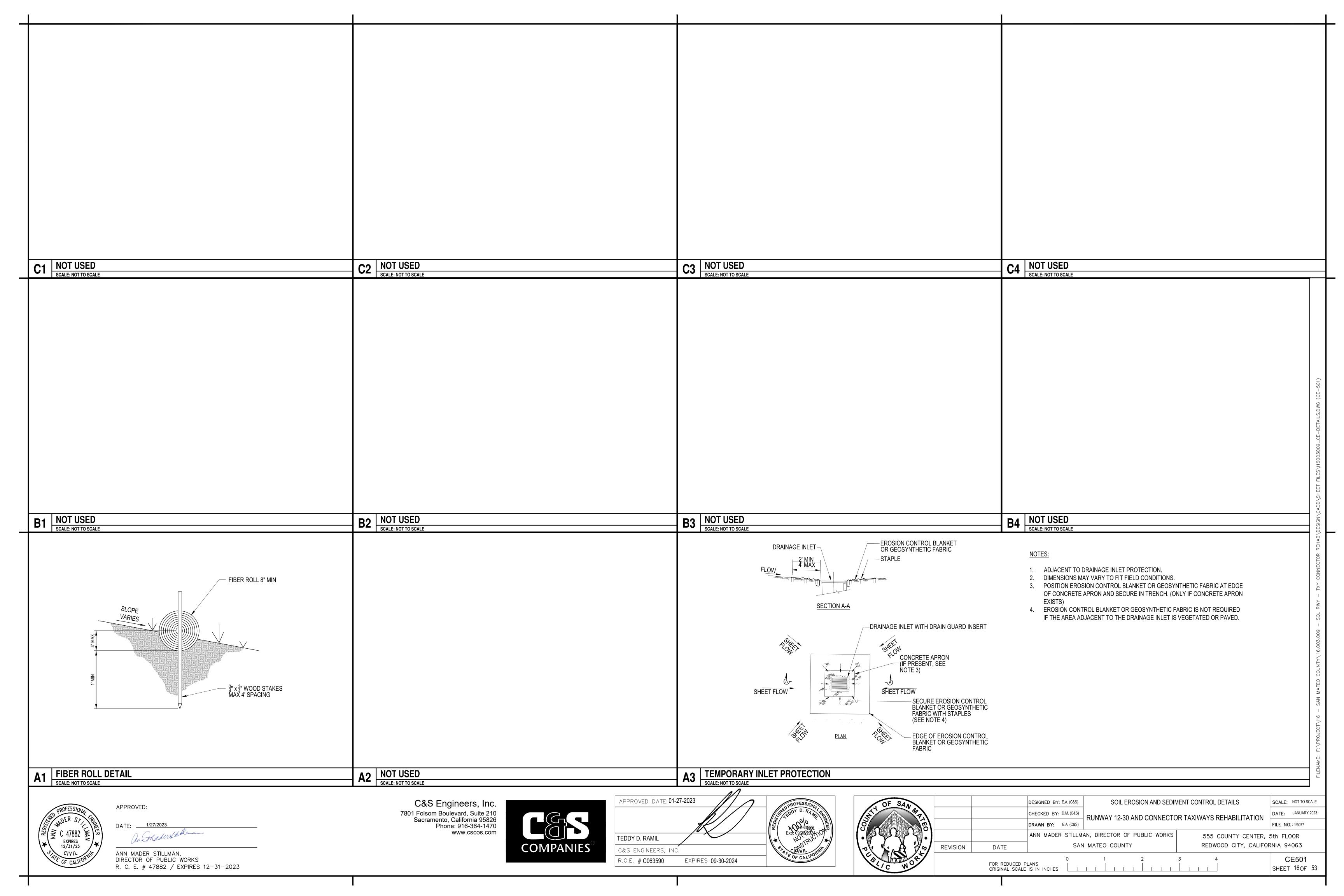


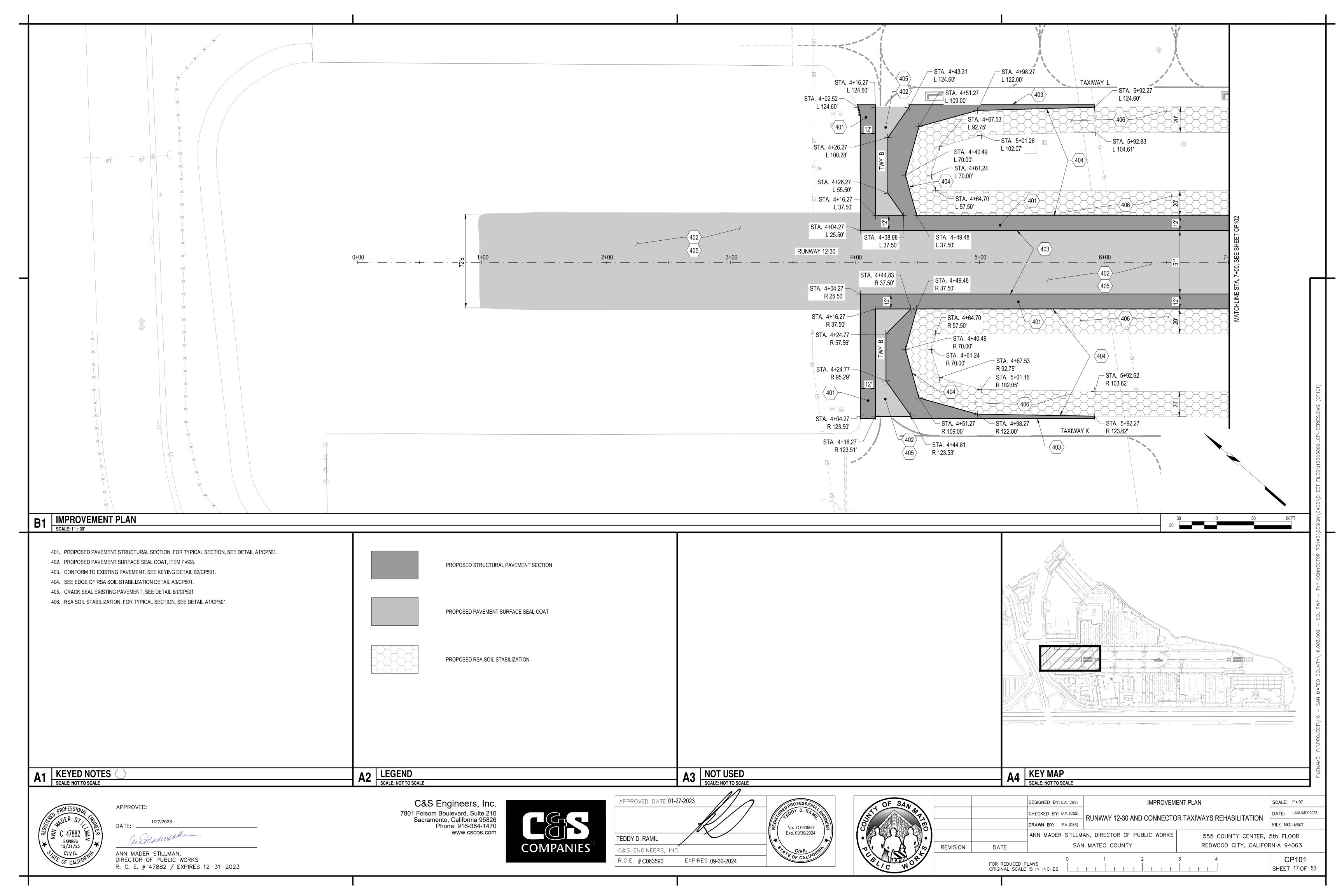


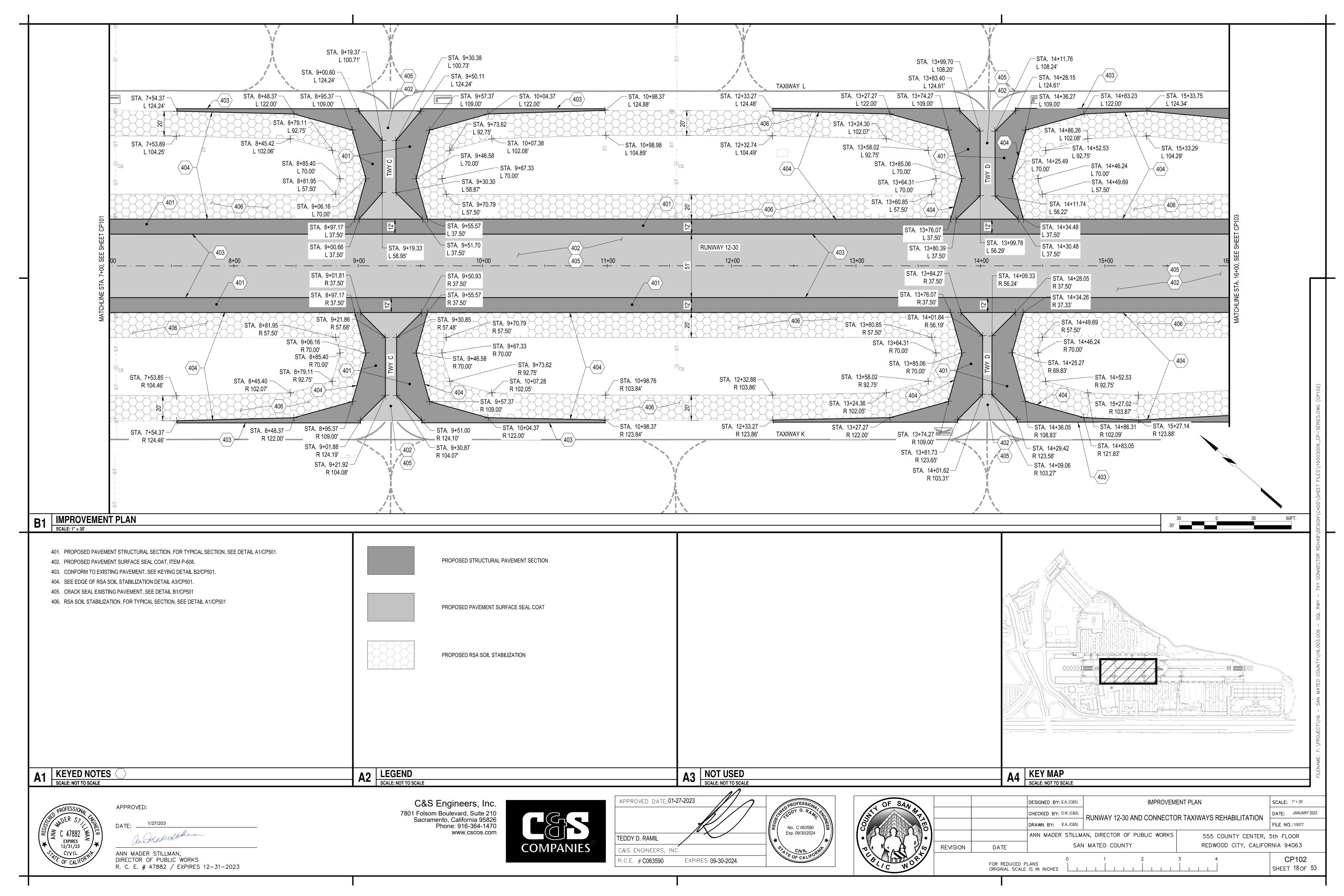


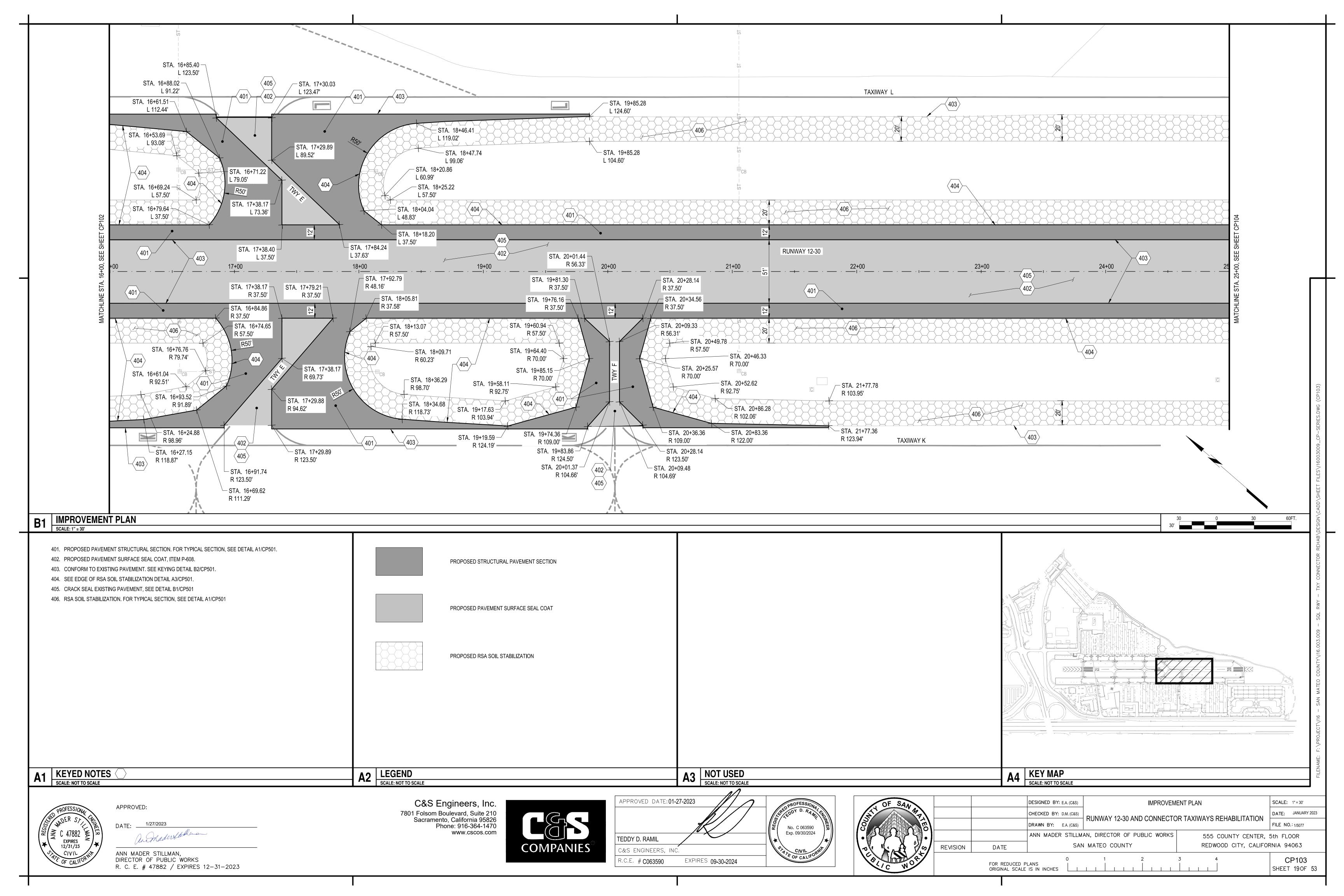


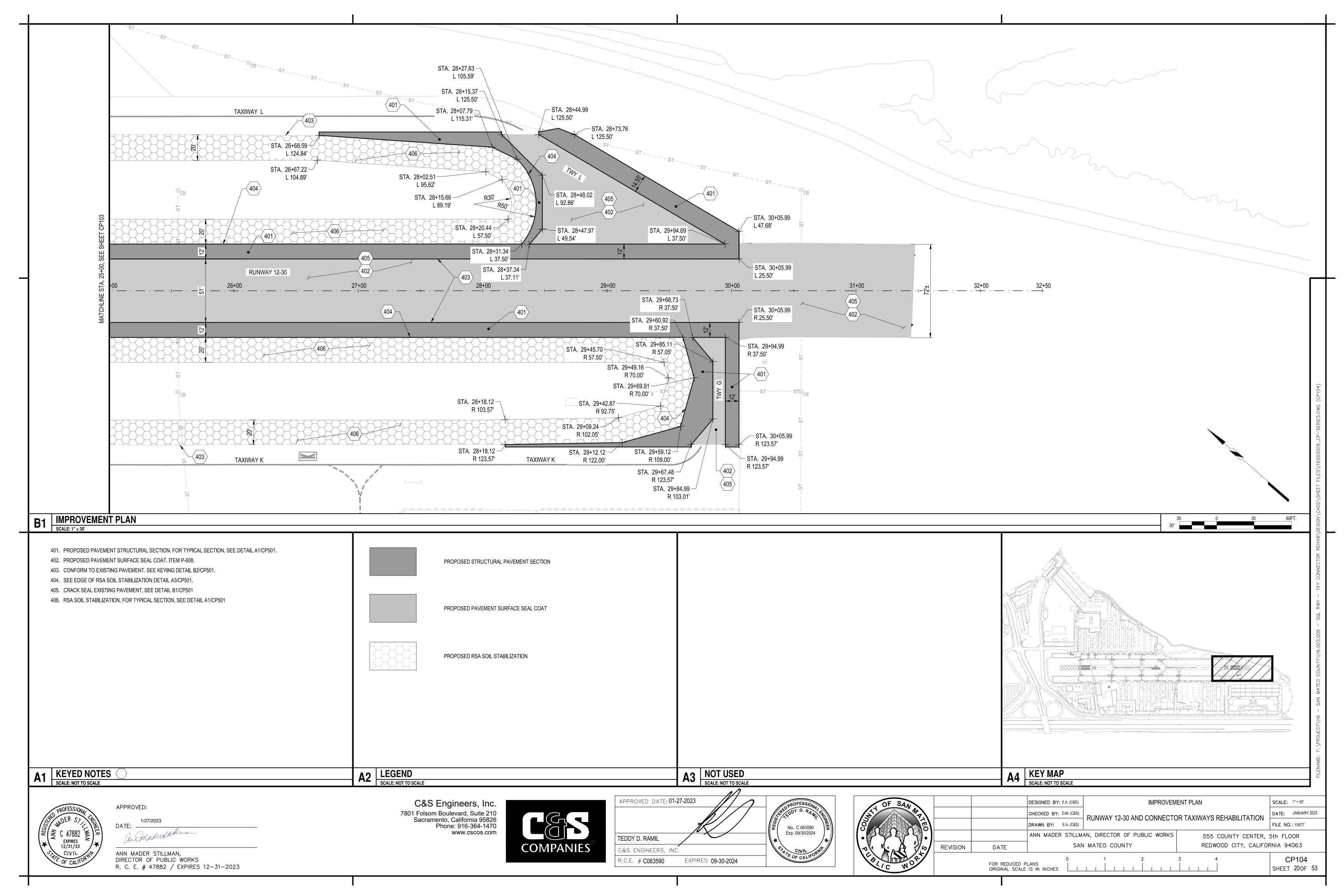


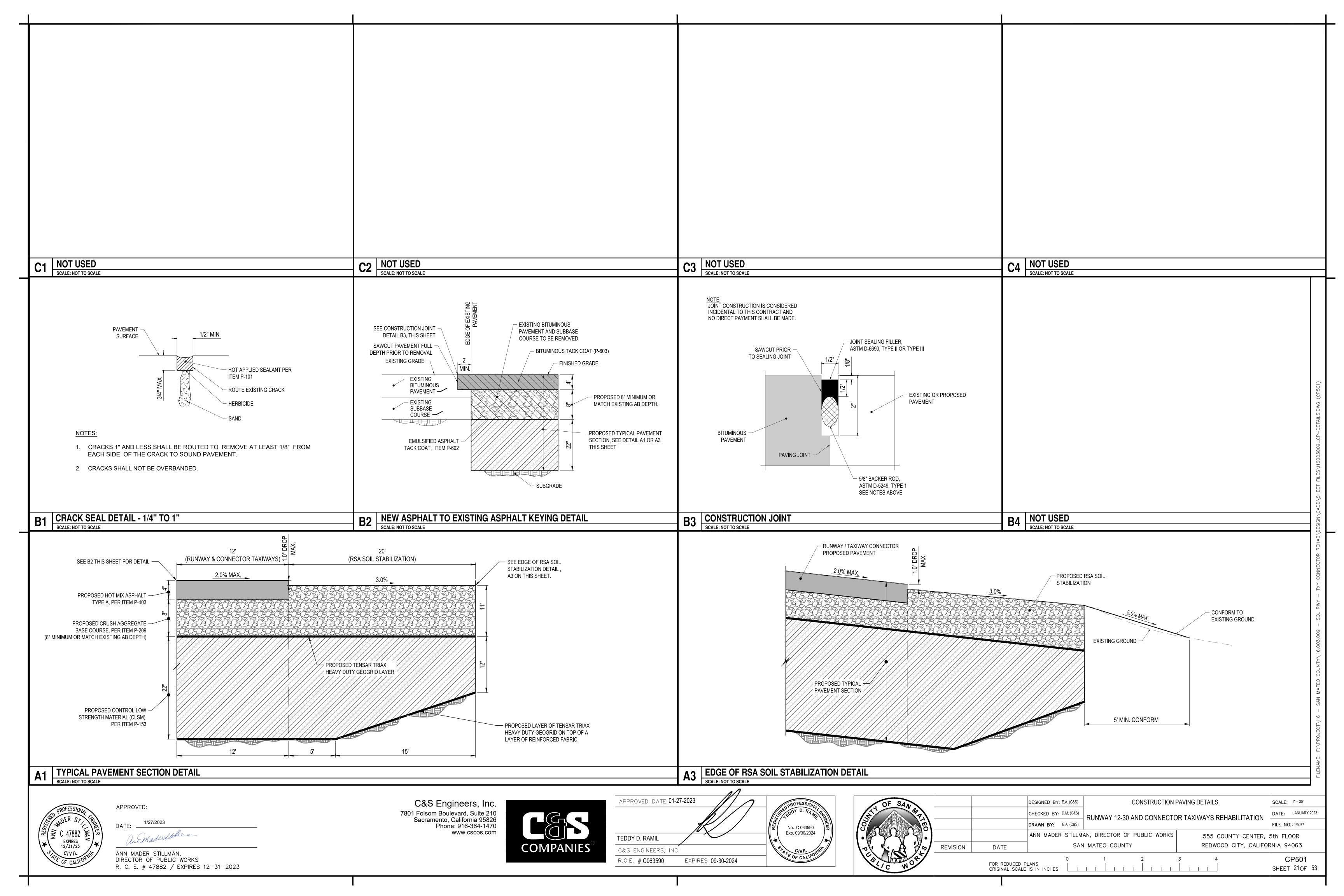


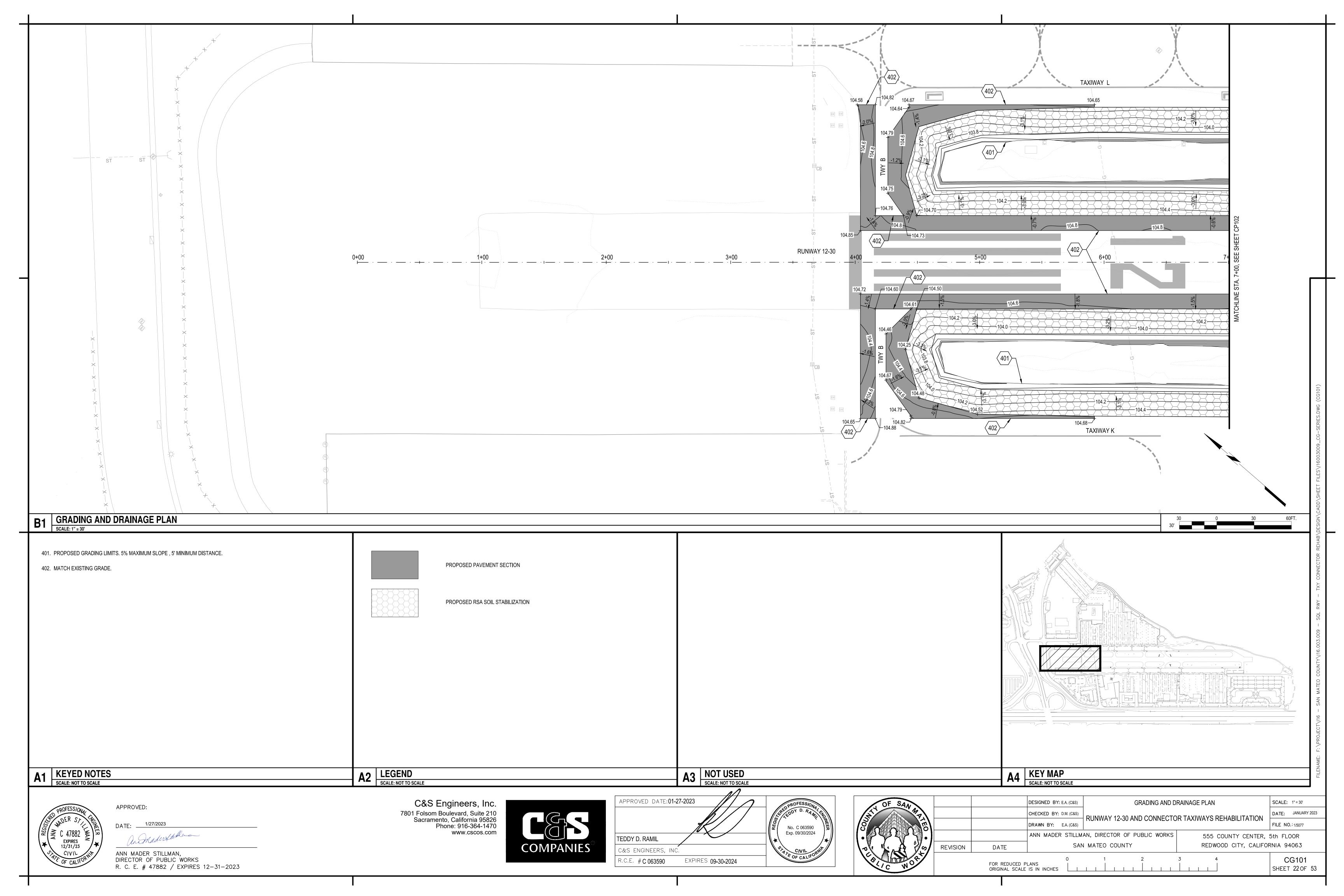


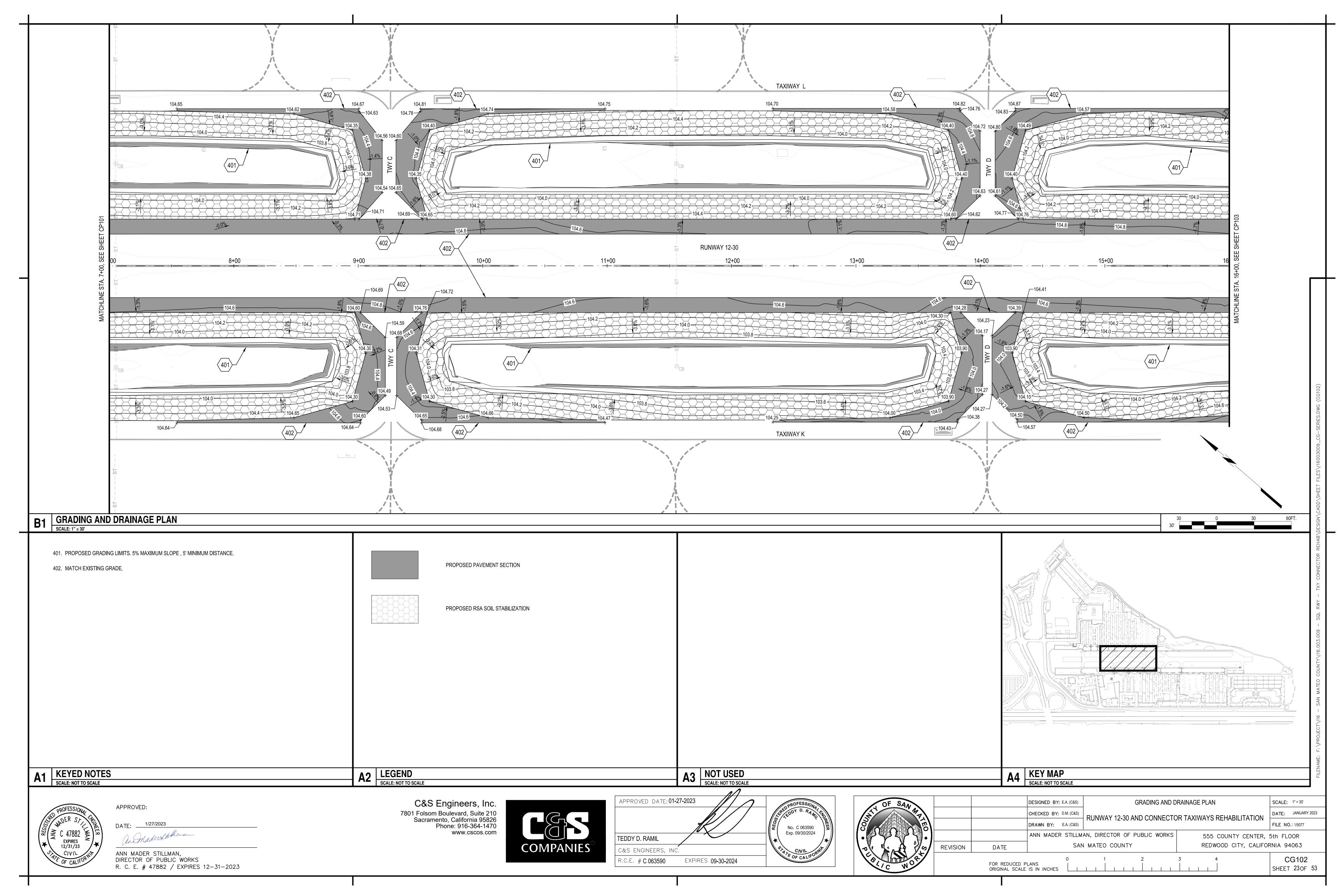


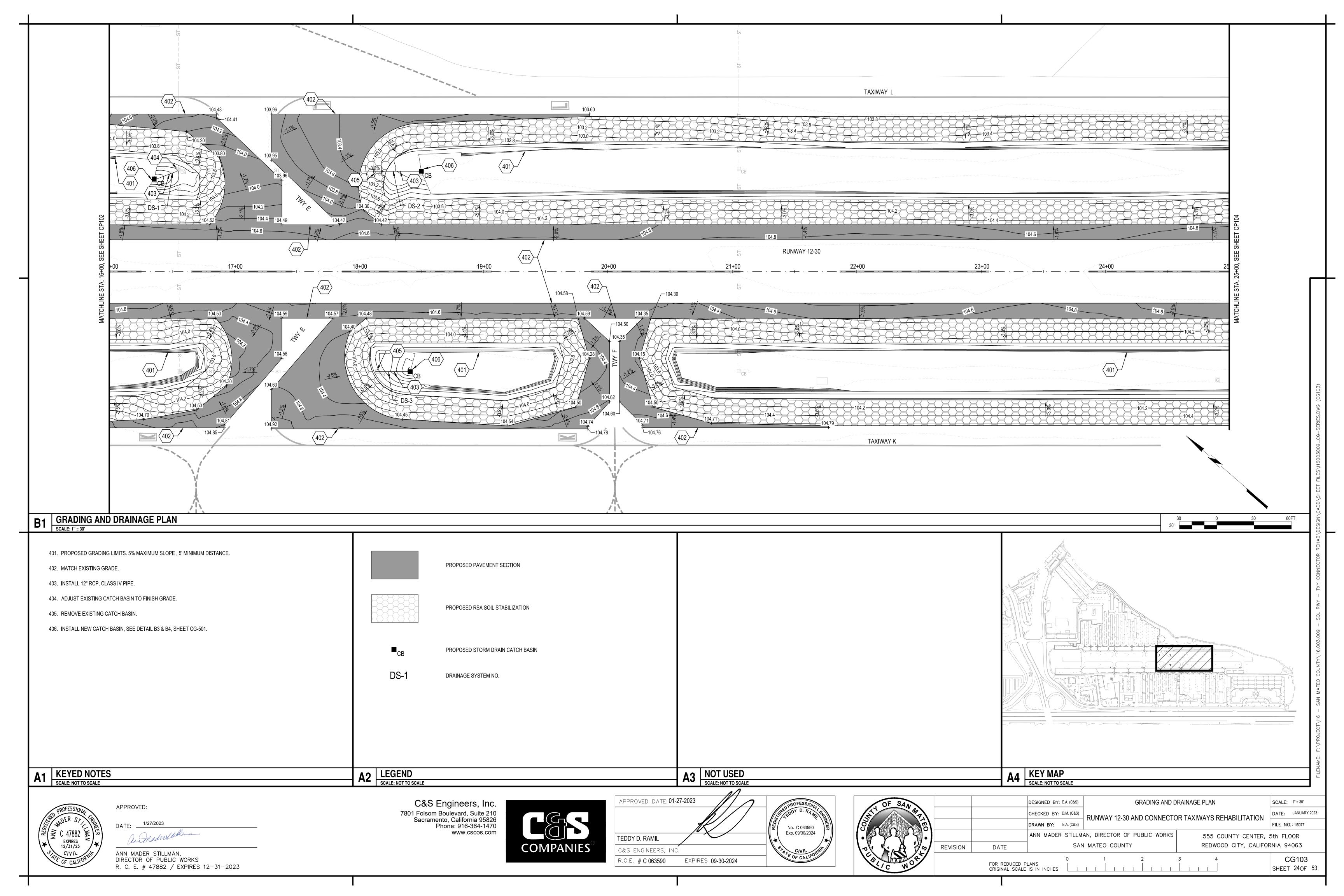


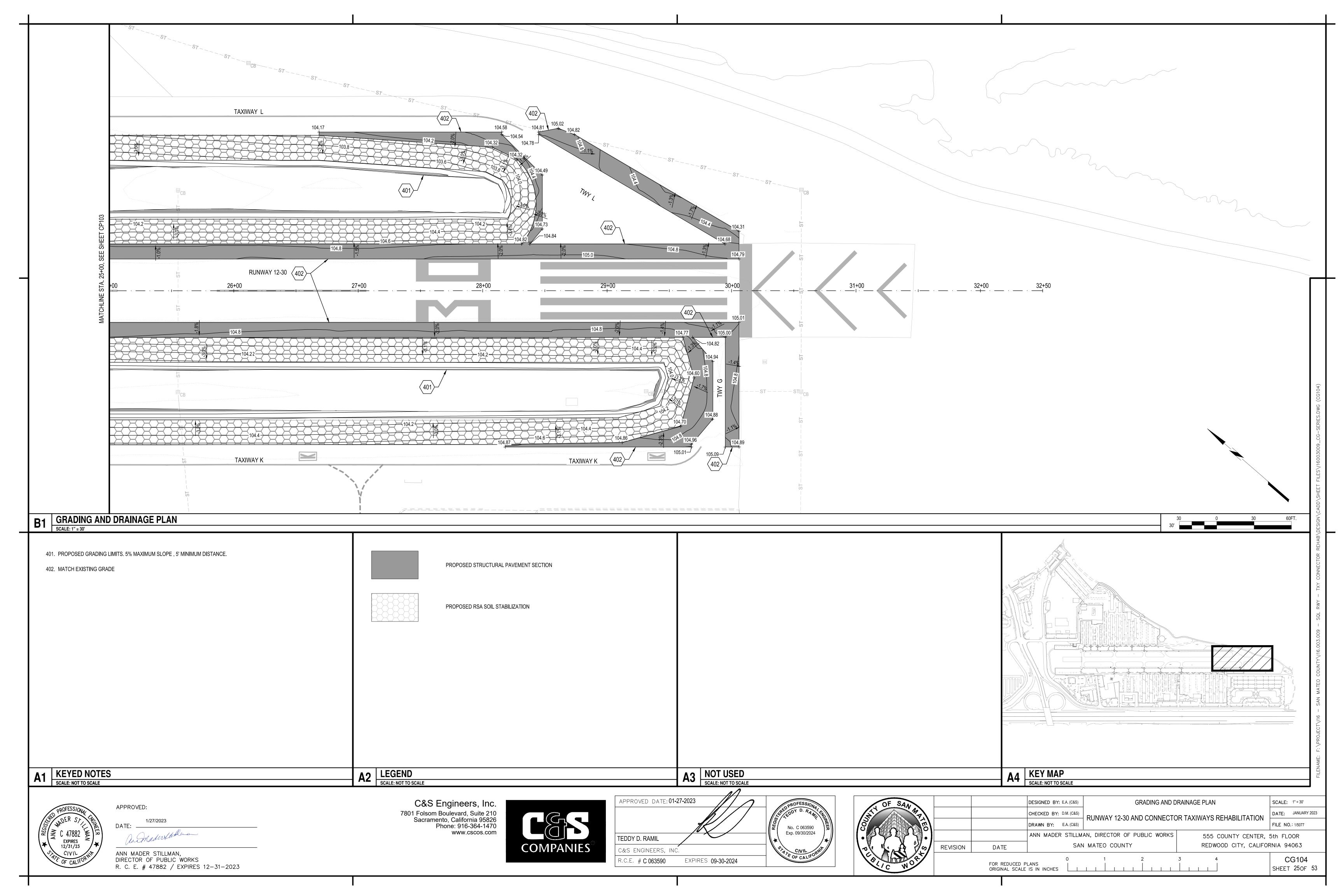


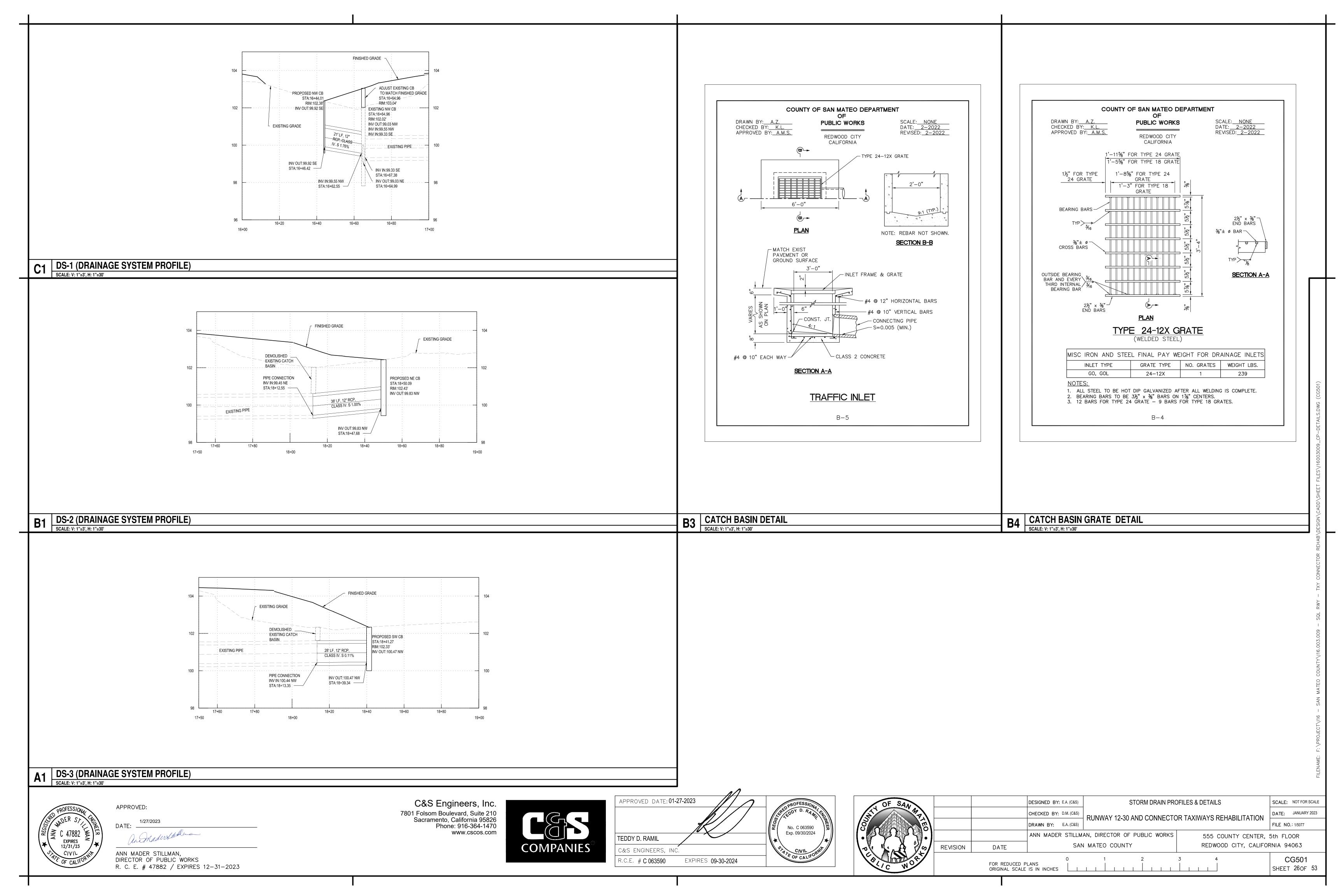


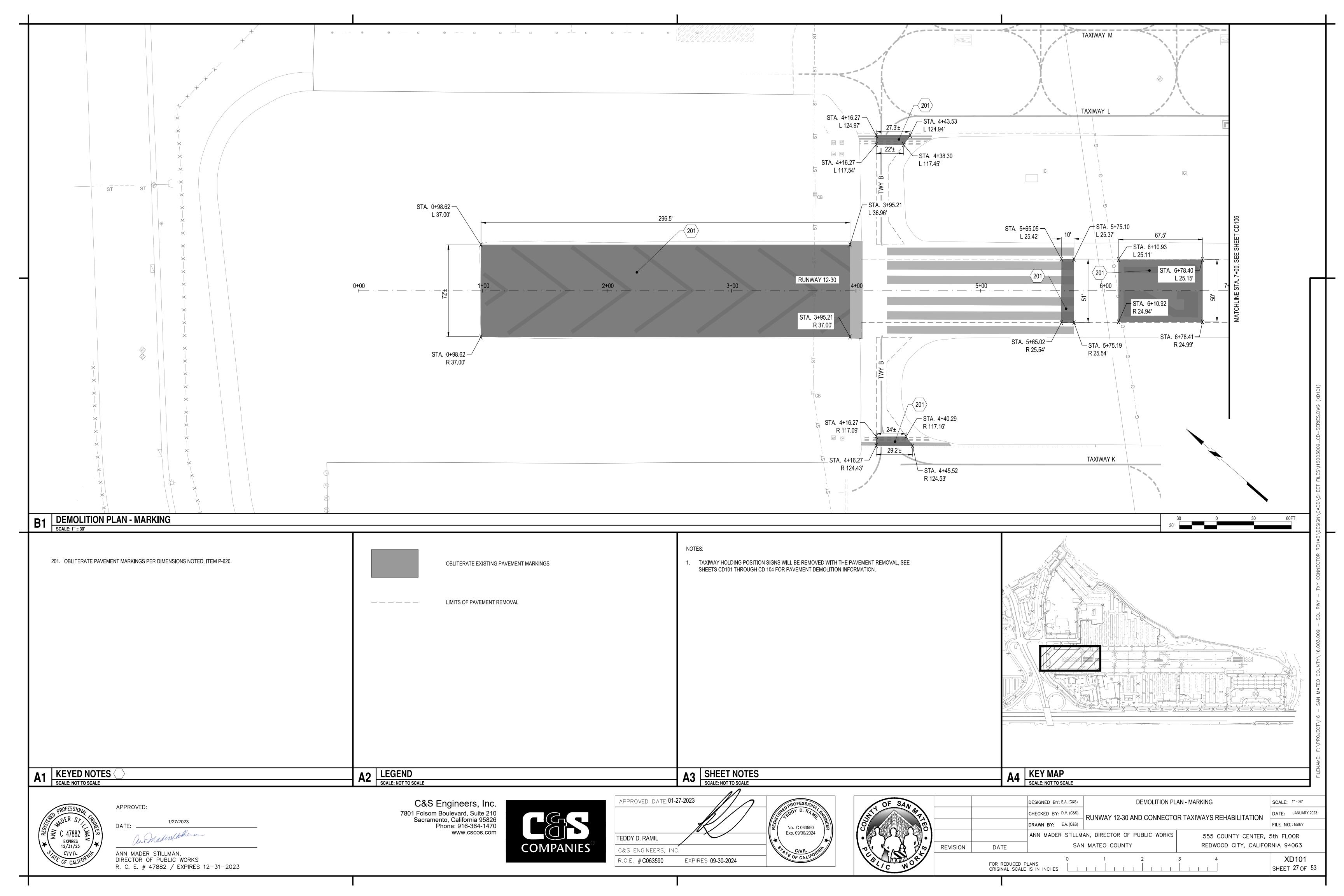


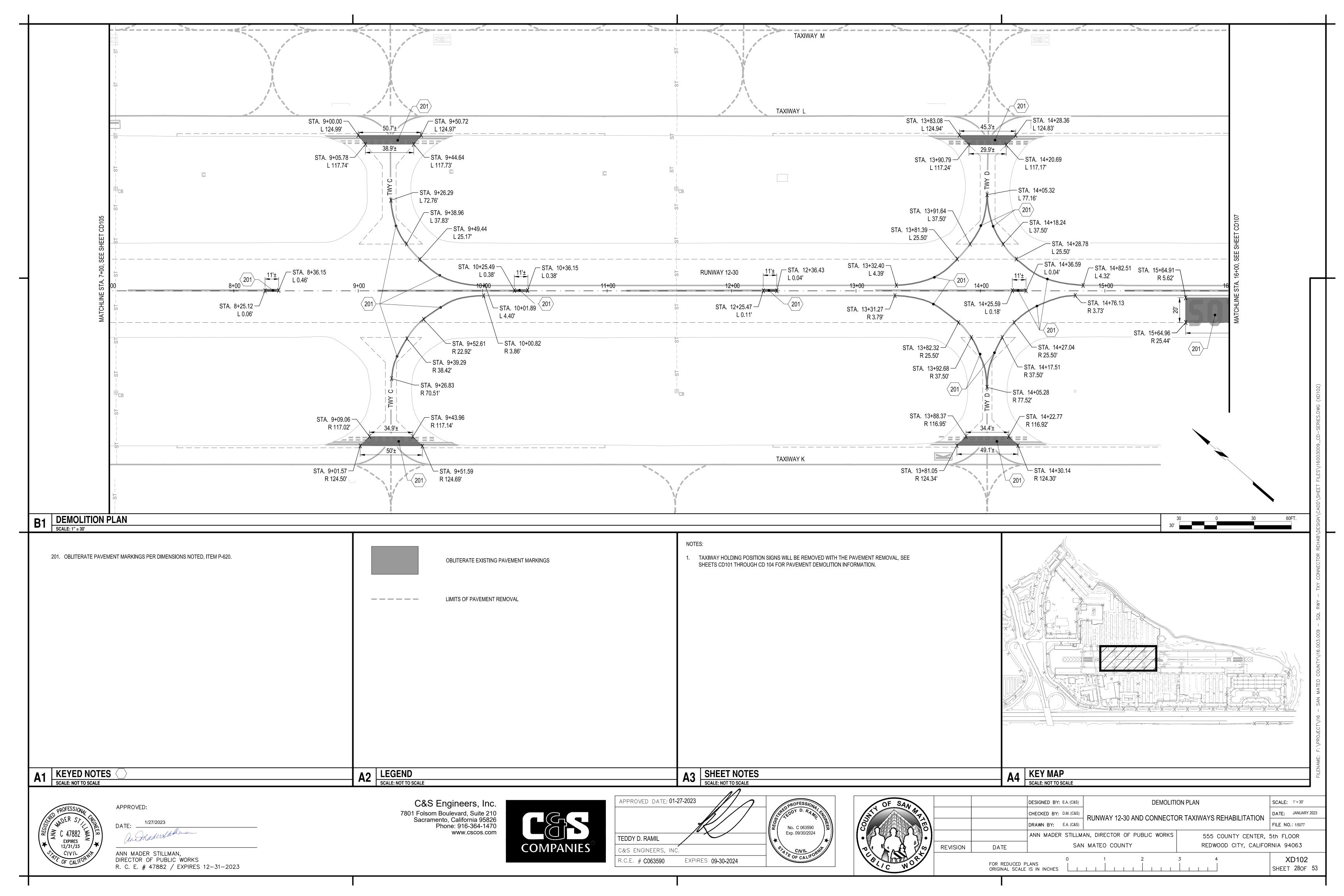


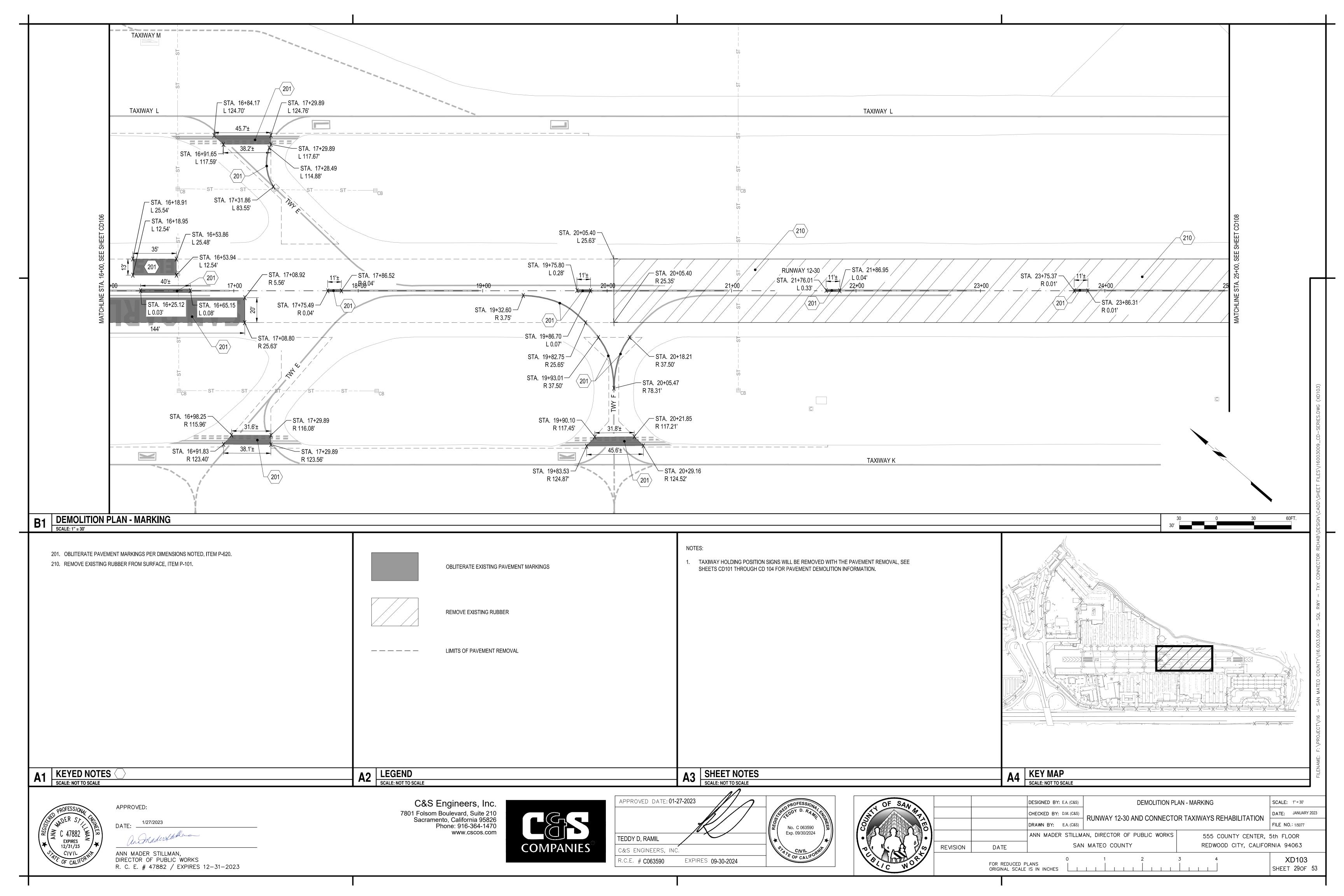


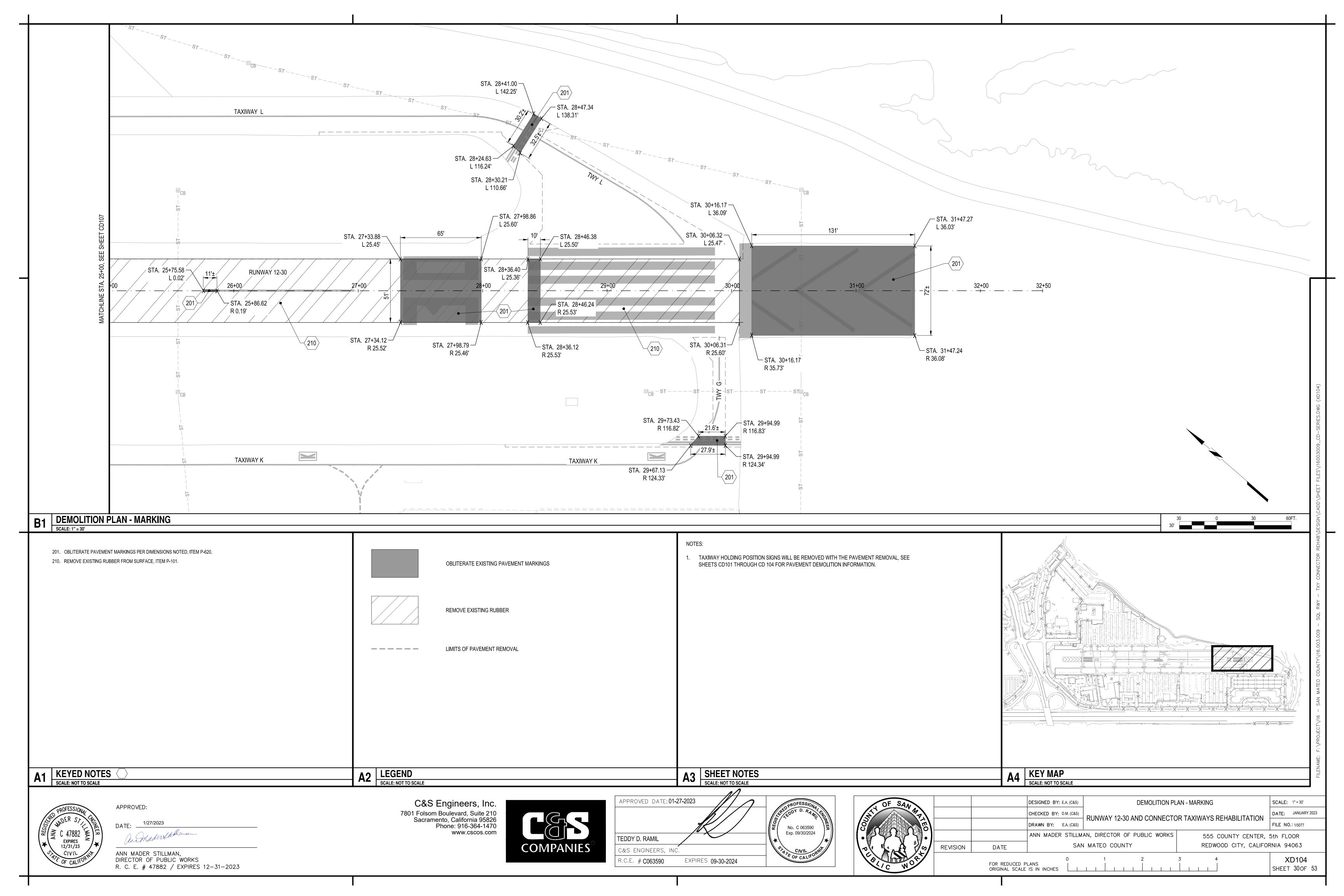


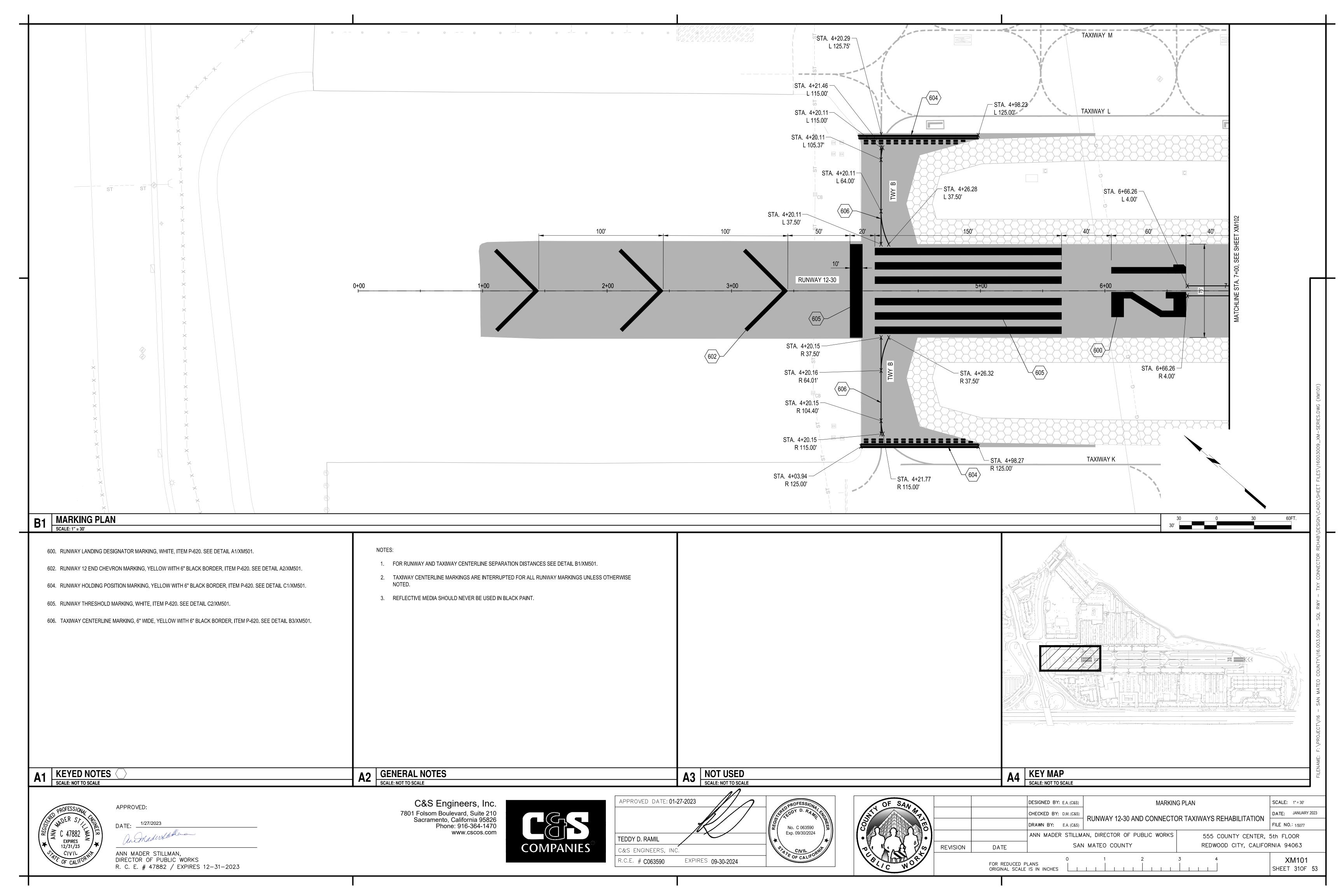


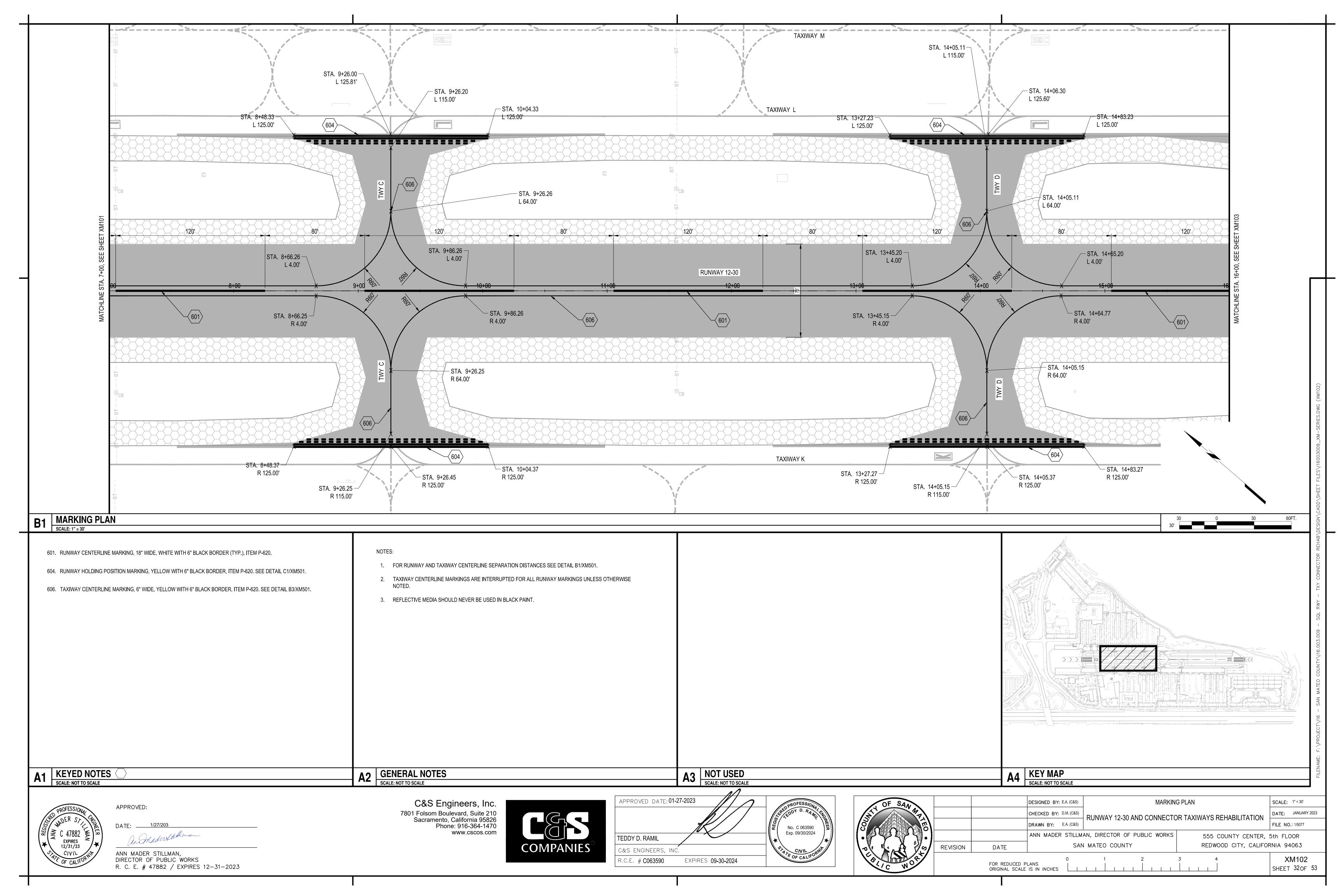


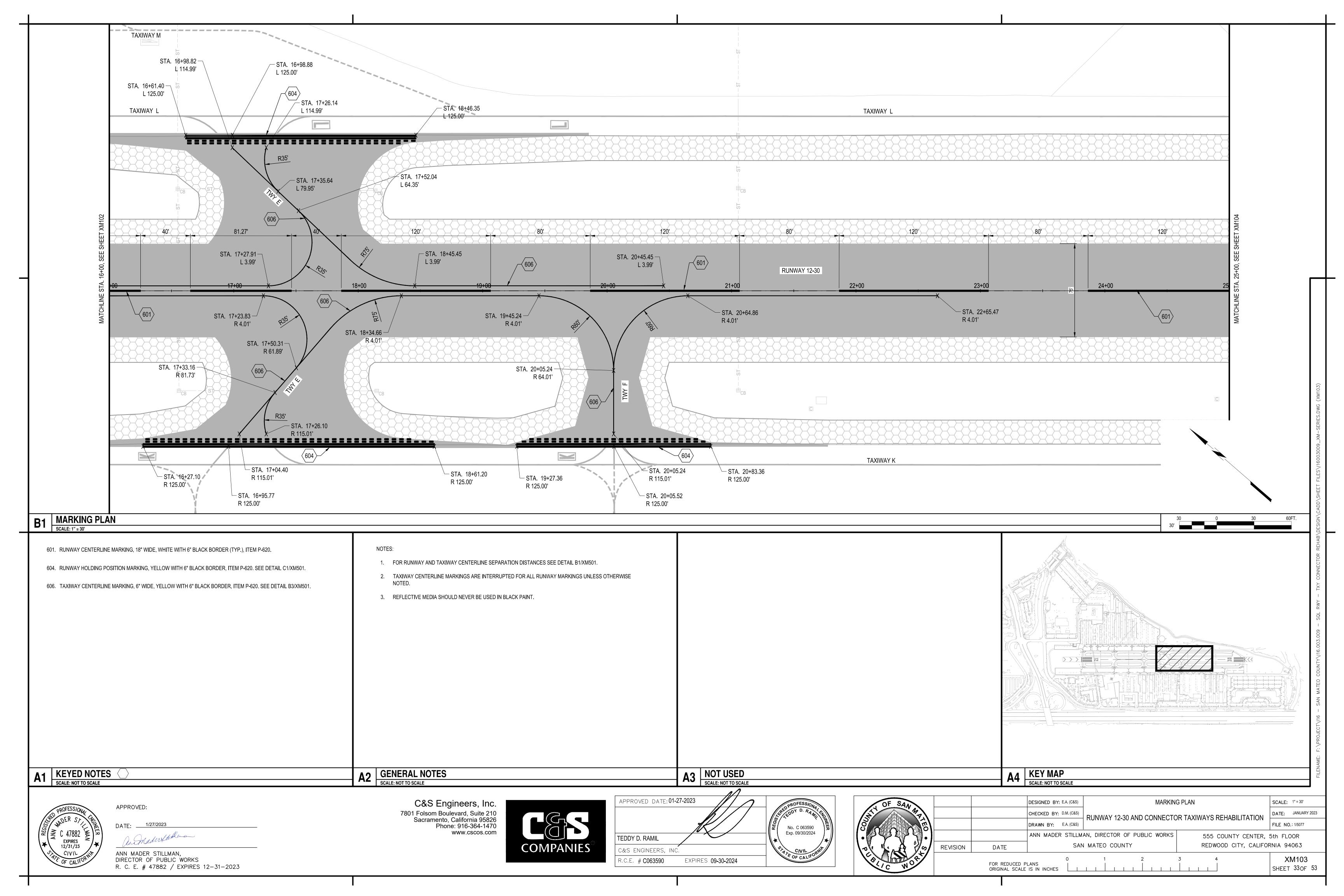


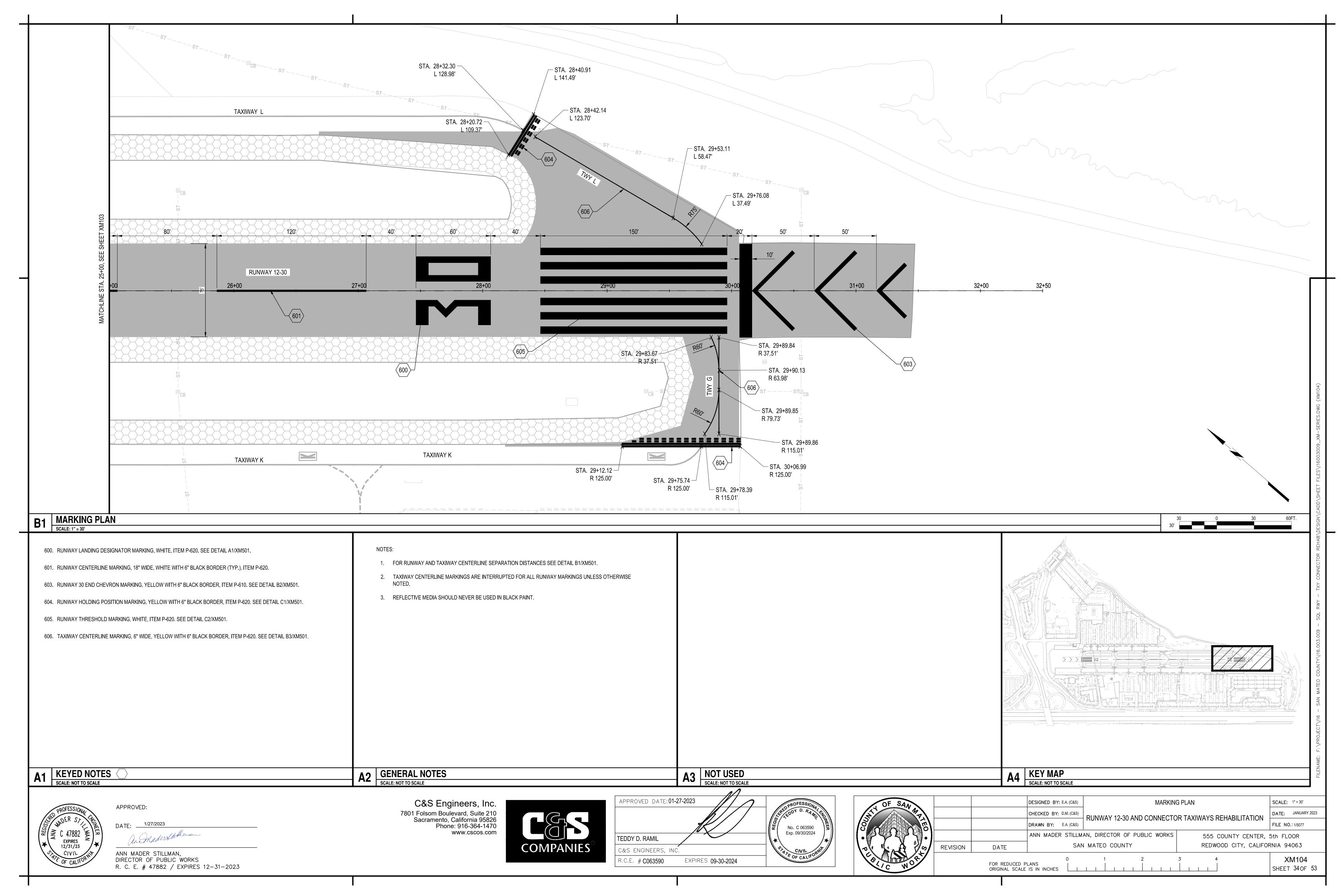


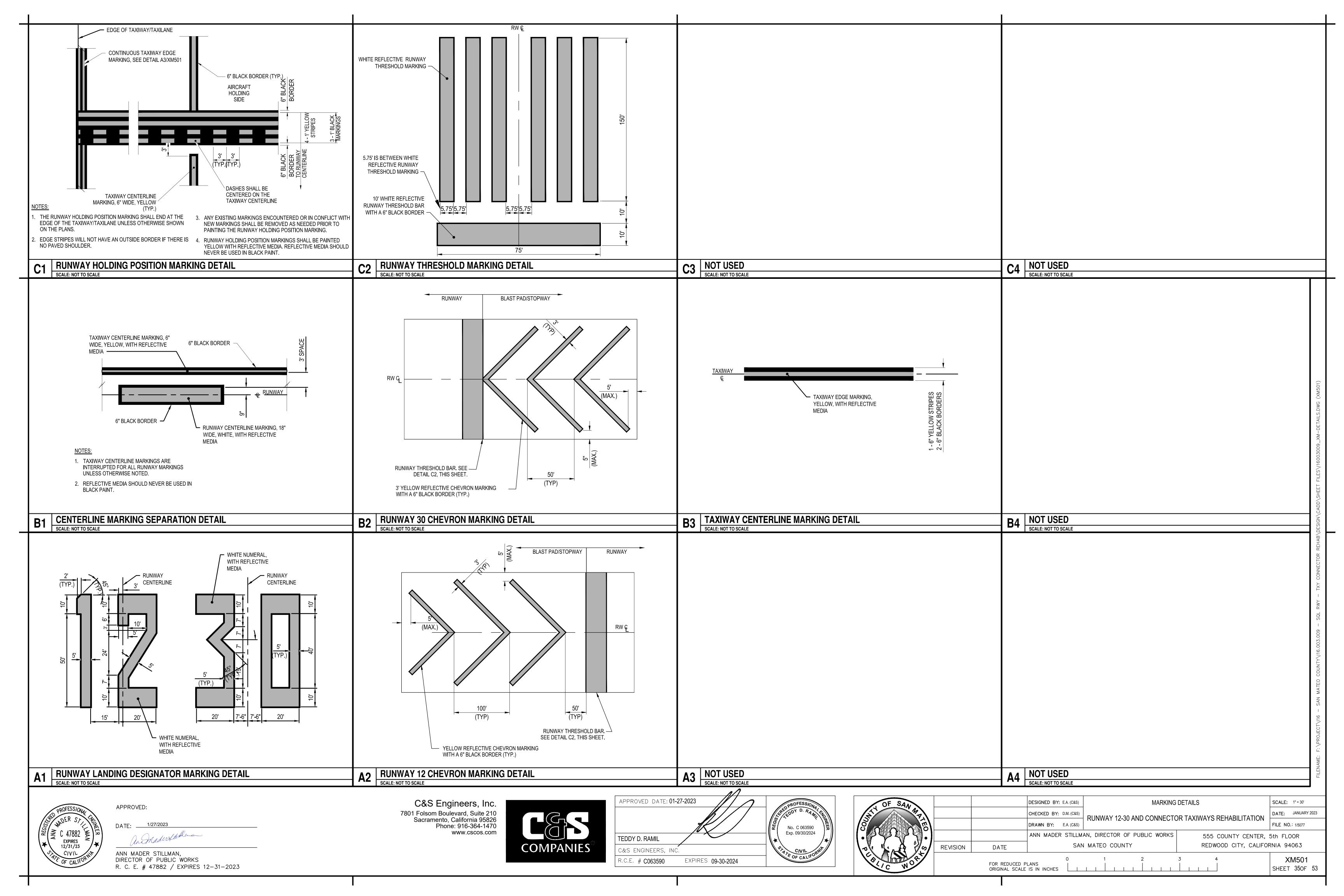












- 2. ONE WEEK PRIOR TO EXCAVATING IN ANY AREA. THE CONTRACTOR SHALL HAVE AN APPROVED UTILITY LOCATING SERVICE LOCATE AND MARK OUT ALL UTILITIES. THE CONTRACTOR SHALL MEET WITH AIRPORT OPERATIONS AND THE RPR TO DETERMINE TAXIWAY OR RUNWAY CLOSURE TIMES AND DURATIONS FOR THE LOCATING TASKS. CONTRACTOR SHALL PERFORM SITE INVESTIGATIONS TO VERIFY LOCATION AND DEPTH OF ALL UTILITIES AS NECESSARY. INVESTIGATION TECHNIQUES MAY INCLUDE BY RF TRACING, GROUND PENETRATING RADAR, VACUUM OR AIR PRESSURE POT-HOLING OR BY OTHER MEANS APPROVED BY THE RPR. CONTRACTOR SHALL ACCURATELY RECORD AND MARK THE LOCATION OF ALL UTILITIES. ALL MARKERS SHALL BE APPROVED BY AIRPORT OPERATIONS AND CANNOT PRESENT A HEIGHT OBSTRUCTION OR FOREIGN OBJECT DEBRIS HAZARD TO AIRCRAFT (DISLODGE DUE TO WIND). THE CONTRACTOR SHALL VERIFY THE ROUTING OF ALL EXISTING CABLES AND NOTIFY THE RPR IF DISCREPANCIES EXIST TO THE ROUTING SHOWN ON THE CONTRACT DRAWINGS. ADVANCE NOTICE WILL ALLOW THE RPR TO MODIFY THE DESIGN PRIOR TO CONSTRUCTION.
- 3. ALL INTERRUPTIONS OF TAXIWAY OR RUNWAY LIGHTING SHALL BE COORDINATED WITH AIRPORT OPERATIONS AND SHALL BE SUBJECT TO THE APPROVAL OF AIRPORT OPERATIONS.
- 4. ALL AIRFIELD LIGHTING CIRCUITS SHALL BE MAINTAINED BY THE CONTRACTOR DURING OPERATIONAL PERIODS. ALL SIGNS AND LIGHTS SHALL BE ILLUMINATED AT THE END OF EACH WORK SHIFT. TEMPORARY ELECTRICAL JUMPERS WILL BE REQUIRED AND SHALL BE APPROVED BY THE RPR. THE CONTRACTOR SHALL FURNISH, ERECT AND MAINTAIN WHATEVER TEMPORARY CABLES MAY BE NECESSARY TO KEEP THE TAXIWAYS AND RUNWAYS IN OPERATING CONDITION WHEN OPEN FOR AIRCRAFT
- 5. THE CONTRACTOR SHALL PROVIDE FINAL RED LINE AS BUILT DRAWINGS UPON COMPLETION OF THE PROJECT. RED LINE AS-BUILT DRAWINGS SHALL IDENTIFY LOCATIONS OF ALL PERMITTED IN-LINE SPLICES. IDENTIFICATION OF CABLE SPLICES AT LIGHT AND SIGN L-823 CABLE CONNECTOR KITS ARE NOT REQUIRED TO BE SHOWN.
- 6. THESE DRAWINGS HAVE BEEN PREPARED, IN PART, BASED UPON RECORD DRAWINGS AND/OR CAD FILES FURNISHED BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THOSE UTILIZING THE INFORMATION ON THESE DRAWINGS ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY PURPOSE.
- 7. EXISTING UTILITIES WERE TAKEN FROM PLANS OF RECORD. THEY HAVE BEEN SHOWN TO THE EXTENT KNOWN AND ARE OFFERED IN GOOD FAITH SOLELY FOR INFORMATIONAL PURPOSES. THEY MAY NOT REFLECT ACTUAL LOCATIONS AND MAY NOT BE INCLUSIVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES PRIOR TO THE START OF CONSTRUCTION.
- 8. THE CONTRACTOR SHALL BE AWARE THAT ABANDONED DIRECT BURIED CABLES AND LIGHT BASE FOUNDATIONS MAY BE ENCOUNTERED WHILE TRENCHING AND EXCAVATION. ALL EXCAVATED CABLES AND LIGHT BASES SHALL BE REMOVED AND DISPOSED OF OFF SITE AT THE CONTRACTOR EXPENSE. ALL VOIDS SHALL BE PROPERLY BACKFILLED WITH ON SITE SOIL.
- 9. THE ACTUAL LOCATION AND ELEVATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
- 10. IN THE EVENT OF DAMAGE TO EXISTING UTILITIES OR CABLES. THE RPR AND OWNER SHALL BE NOTIFIED IMMEDIATELY.
- 11. THE CONTRACTOR SHALL REPAIR ALL DAMAGE TO UTILITIES OR CABLES, AS DIRECTED BY THE RPR, IMMEDIATELY AND AT THE CONTRACTOR'S EXPENSE.
- 12. ALL AREAS DISTURBED AS A RESULT OF THE CONTRACTOR'S CONSTRUCTION OPERATIONS SHALL BE RESTORED EQUAL TO OR BETTER THAN ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
- 13. SELECTIVE GRADING AROUND LIGHTS AND SIGNS SHALL BE REQUIRED AS DIRECTED BY THE RPR. THE COST SHALL BE INCLUDED IN THE RESPECTIVE ELECTRICAL PAY
- 14. ALL ELECTRICAL WORK SHALL CONFORM TO FEDERAL AVIATION ADMINISTRATION SPECIFICATIONS AND APPLICABLE LOCAL, STATE AND NATIONAL ELECTRICAL CODES,
- 15. THE ELECTRICAL CHARACTERISTICS OF PROPOSED EQUIPMENT SHALL BE VERIFIED TO BE COMPATIBLE WITH EXISTING EQUIPMENT MANUFACTURER PRIOR TO INSTALLATION.
- 16. ABANDONED CABLES MAY EXIST IN THE VICINITY OF THE PROPOSED WORK. IF ENCOUNTERED, CONTRACTOR SHALL VERIFY THAT THEY ARE ABANDONED PRIOR TO REMOVAL. NON USED DIRECT BURIED CABLES SHALL BE ABANDONED IN PLACE, INCIDENTALLY REMOVED IN PROJECT EXCAVATION, OR REMOVED FROM DUCT BANKS AND/OR CONDUITS.

- 17. ITEMS OF SPECIFIC MANUFACTURE SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS AND OR MANUFACTURER'S REPRESENTATIVE DIRECTIONS.
- 18. ALL GROUND CONNECTIONS SHALL BE MADE USING EXOTHERMIC CONNECTIONS.
- 19. ALL CABLE CONNECTIONS SHALL BE MADE AT LIGHT UNITS, JUNCTION CANS, PULL BOXES, MANHOLES OR SIGNS UNLESS DIRECTED OTHERWISE, CABLE SPLICING ALONG THE CONDUIT RUNS OR WITHIN CONDUITS IS NOT ALLOWED. ALL CABLES SHALL BE CONTINUOUS WITHOUT SPLICES. INCLUDING HOME RUN CIRCUITS. UNLESS OTHERWISE APPROVED.
- 20. PROVIDE WATERTIGHT TERMINATION AND END CAP FOR ALL BURIED CONDUIT ENDS
- 21. ALL RUNWAY AND TAXIWAY EDGE LIGHTS SHALL BE LOCATED 10 FEET OFF THE DEFINED PAVEMENT EDGE UNLESS OTHERWISE NOTED OR DIRECTED. THE CONTRACTOR SHALL ALIGN ALL LIGHTS ON TANGENT SECTIONS SUCH THAT THEY FORM A STRAIGHT LINE. LIGHTS AROUND RADIUS SHALL BE EVENLY SPACED. THE CONTRACTOR SHALL NOT SOLELY RELAY ON THE CAD FILES FOR LAYOUT AND SHALL CONFIRM AND VALIDATE THE SPACING AND SETBACK REQUIREMENTS PRIOR TO FINAL INSTALLATION.
- 22. ALL LIGHT BASES SHALL HAVE A MINIMUM OF TWO CONDUIT STUBS SPACED 180 DEGREES APART. ANOTHER STUB AT 90 DEGREES IS REQUIRED FOR DRAIN PIPES AT THE LOCATIONS IDENTIFIED ON THE PLANS, CAP CONDUIT STUB IF IT IS NOT OCCUPIED. ADDITIONAL CONDUIT STUBS MAY BE REQUIRED, SEE PLANS FOR LOCATIONS.
- 23. ANY EQUIPMENT AND MATERIALS THAT ARE TEMPORARILY REMOVED, AND TO BE RE-USED, SHALL BE STORED IN A SAFE LOCATION AND PROTECTED FROM THE ENVIRONMENT, DAMAGE TO ANY STORED EQUIPMENT AND MATERIAL THAT IS SCHEDULED TO BE REINSTALLED SHALL BE REPLACED IN-KIND BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- 24. SOME EXISTING MANHOLES, JUNCTION CANS, PULL BOXES, CONDUITS AND DUCT BANKS WHERE WORK IS SCHEDULED TO OCCUR MAY CONTAIN ADDITIONAL ENERGIZED CABLES. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT MEN AND EQUIPMENT AS WELL AS TO MAINTAIN EXISTING CIRCUITS ASSOCIATED WITH ACTIVE AND OPEN PAVEMENTS.
- 25. THE CONTRACTOR IS ENCOURAGED TO USE PRECAST LIGHT BASES, SIGN FOUNDATIONS AND ELECTRICAL STRUCTURES WHERE EVER POSSIBLE. IN GENERAL IN-PAVEMENT LIGHT BASES MUST BE CAST IN PLACE.
- 26. THE CONTRACTOR SHALL MARK OUT ALL PROPOSED PROJECT FEATURES FOR THE RPR'S APPROVAL PRIOR TO EXCAVATION AND FOUNDATION INSTALLATION. LAYOUT SHALL BE MADE BY A LICENSED LAND SURVEYOR. OFFSET PINS MAY BE INSTALLED TO TRIANGULATE TO THE PROPOSED FEATURE AFTER EXCAVATION.
- 27. IN THE EVENT ANY OBSTRUCTIONS AND/OR UTILITIES NOT SHOWN ON THE PLANS ARE ENCOUNTERED DURING CONSTRUCTION, AND ARE DEEMED TO BE CONFLICTS TO THE NEW WORK, ALL WORK SHALL STOP (ON THAT ITEM) AND THE RPR NOTIFIED PRIOR TO PROCEEDING WITH WORK, WORK MAY PROCEED ON OTHER WORK TASKS TO MAINTAIN SCHEDULE.
- 28. ROUTING OF CONDUIT IS DIAGRAMMATIC AND CONCEPTUAL IN NATURE AND NOT INTENDED TO SHOW ALL REQUIRED OFFSETS AND DETAILS. EXACT ROUTING WILL BE DETERMINED IN THE FIELD AND MUST BE APPROVED BY THE RPR.
- 29. NO IN-LINE SPLICES SHALL BE PERMITTED ON AIRFIELD CABLES UNLESS COORDINATED IN ADVANCE AND APPROVED OR SHOWN ON THE PLANS. THIS INCLUDES HOMERUN CIRCUITS.
- 30. IN AREAS WHERE PROPOSED CONDUIT IS DESIGNED TO BE INSTALLED AT A LOCATION WHERE EXISTING CONDUIT IS TO BE ABANDONED, THE CONTRACTOR SHALL REMOVE THE EXISTING CONDUIT. CONDUIT REMOVAL SHALL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF THE PROPOSED CONDUIT.
- 31. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 6 FEET OF COILED CABLE SLACK IN EVERY ELECTRICAL STRUCTURE AND LIGHT BASE. THE SLACK WILL BE USED TO BRING THE TRANSFORMER AND CONNECTORS A MINIMUM OF 3 FEET ABOVE THE GROUND SURFACE FOR MAINTENANCE AND ALLOW FOR FUTURE CABLE SPLICE REPAIRS. PAYMENT WILL BE MADE UNDER ITEM L-108, LINEAR FOOT.
- 32. THE RETURN CABLE CONNECTED TO EVERY LIGHT TRANSFORMER SHALL BE WRAPPED IN RED TAPE AS APPROVED BY THE RPR.
- 33. FINE GRADING SHALL INCLUDE CREATING A SMOOTH STABLE UNIFORM SURFACE WITH TOPSOIL TO SUPPORT TURF GROWTH. ALL AREAS SHALL BE RAKED OR OTHERWISE CLEARED OF STONES AND OTHER MATERIAL LARGER THAN 1" IN ANY DIAMETER. SURFACES MUST MEET TSA/RSA STANDARDS AND SAFELY ACCOMMODATE THE AIRPORTS MOWING EQUIPMENT
- 34. THE LOCATION OF JUNCTION CANS AND CONDUITS MAY BE FIELD ADJUSTED TO AVOID CONFLICTS AS APPROVED BY THE RPR AND ENGINEER.

- 35. SEPARATE MEASUREMENT AND PAYMENT WILL BE MADE FOR CABLE REMOVAL FOR THOSE CONDUITS AND DUCT BANKS SCHEDULED FOR REUSE AND PAID UNDER ITEM L-110. THE LINEAR FOOT PAYMENT ITEM IS MEASURED BY CONDUIT, REGARDLESS OF THE NUMBER OF CABLES WITHIN THE CONDUIT. CONDUITS MAY BE INDIVIDUAL OR MULTIPLE CONSTRAINED WITHIN A DUCT BANK. CABLE REMOVAL SHALL NOT BE PAID FOR SEPARATELY IN CASES WHERE THE CONDUIT IS BEING EXCAVATED. WHERE CONDUITS (WITH CABLES) FALL WITHIN THE PROJECT EXCAVATION LIMITS, THE COST FOR REMOVING AND DISPOSING OF BOTH CABLE AND CONDUIT SHALL BE INCIDENTAL TO ITEM P-152 EXCAVATION.
- 36. THE FINAL GRADE SHALL BE SMOOTH, FREE OF RUTS, DEPRESSIONS OR DROP OFFS. THE CRUSHED AGGREGATE SHALL MEET THE FINISHED GRADE OF ALL LIGHTS, SIGNS AND OTHER FEATURES AND BE PLACED WITH NO VERTICAL DROPS ALLOWED. CRUSHED AGGREGATE SHALL BE GRADED SLIGHTLY AWAY FROM ELECTRICAL FEATURES INCLUDING LIGHTS AND SIGNS WITH A MAXIMUM ALLOWABLE SLOPE OF 3.0 PERCENT, IN COMPLIANCE WITH RUNWAY AND TAXIWAY SAFETY AREA GRADING REQUIREMENTS. THE FINISH SURFACE SHALL BE LEFT IN A MANNER TO SAFELY ACCOMMODATE THE OWNERS FINISH MOWING EQUIPMENT AS APPROVED BY THE OWNER, AREAS THAT SETTLE OUT FROM TRENCH SETTLEMENT OVER THE ONE-YEAR WARRANTY PERIOD SHALL BE RE-TOPSOILED. SEEDED AND MULCHED TO RESTORE THE INTENDED GRADE.
- 37. ALL CONDUIT CONNECTIONS TO EXISTING LIGHT UNITS, DUCT BANKS OR SIGNS SHALL BE MADE WITH INDUSTRY STANDARD UL LISTED WATERTIGHT CONNECTORS. ALL NECESSARY SWEEPS SHALL BE MADE WITH PRE-FORMED SWEEPS OR CONDUIT BENT ON-SITE USING APPROVED CONDUIT HEATING EQUIPMENT (HOT BOX). ALL CONNECTIONS SHALL BE INCIDENTAL TO ITEM L-110 PAYMENT ITEMS.
- 38. ALL DIRT, DUST, STONES AND LOOSE DEBRIS SHALL BE CONTINUOUSLY REMOVED FROM ALL PAVED SURFACES DURING THIS CONTRACT.
- 39. THE CONTRACTOR SHALL VERIFY ALL INPUT VOLTAGES, AMPERAGE AND OTHER ELECTRICAL CHARACTERISTICS FOR REPLACEMENT TRANSFORMERS, REGULATORS. ETC. PRIOR TO ORDERING THE EQUIPMENT.
- 40. IT IS THE INTENT OF THIS CONTRACT TO HAVE A WELL DRAINED, WATER FREE UNDERGROUND ELECTRICAL SYSTEM INCLUDING ALL ELECTRICAL STRUCTURES. ALTHOUGH WATERTIGHT CONNECTORS ARE SPECIFIED, THE JOINTS AND COUPLINGS WILL LEAK IN WATER AND THEREFORE IS CLASSIFIED AS A "WET SYSTEM". ELECTRICAL DRAINS HAVE BEEN DESIGNED INTO THE PROJECT TO DRAIN INCOMING WATER. ADDITIONAL DRAINS, ABOVE AND BEYOND THOSE SHOWN ON THE PLANS, MAY BE REQUIRED TO MEET THIS REQUIREMENT AS RECOMMENDED BY THE CONTRACTOR AND APPROVED BY THE RPR. PAYMENT FOR ELECTRICAL DRAINAGE SUMPS SHALL BE MADE UNDER ITEM L-110.
- 41. PAVEMENT CORING IS CRITICAL TO THE CORRECT INSTALLATION OF SEMI-FLUSH IN-PAVEMENT 2-PART LIGHT BASES SPECIFIED IN THIS CONTRACT. THE CONTRACTOR SHALL PROVIDE A TRAILER OR RIG MOUNTED CORE MACHINE CAPABLE OF CORING UP TO A 36-INCH DIAMETER HOLE THRU THE MAXIMUM DEPTH OF PAVEMENT (COORDINATE WITH THE CIVIL PAVEMENT SHEETS). HAND HELD OR FLOOR MOUNTED UNITS WILL NOT BE ACCEPTABLE, PROVIDE A SHOP DRAWING SUBMITTAL OF THE INTENDED EQUIPMENT FOR REVIEW AND APPROVAL BY THE RPR PRIOR TO CONSTRUCTION. THE UNIT PROVIDED SHALL USE DIAMOND CUTTING TEETH, BE ADJUSTABLE (TO PRECISELY CENTER THE CORE OVER THE INTENDED LIGHT LOCATION) AND BE INTENDED FOR THE APPLICATION SPECIFIED.
- 42. AIRPORT OPERATIONS RESERVES THE RIGHT TO SALVAGE ANY PORTION OF THE EXISTING LIGHTING SYSTEM COMPONENTS SCHEDULED FOR DEMOLITION. THE OWNER WILL MARK AND INFORM THE CONTRACTOR OF WHAT EQUIPMENT THEY WISH TO SALVAGE PRIOR TO CONSTRUCTION, WITH A PREFERENCE ON THAT IN BEST OPERATING CONDITION. THERE IS NO GUARANTEE ON THE QUANTITY OF EQUIPMENT OR MATERIAL REQUESTED FOR SALVAGE. THE CONTRACTORS DEMOLITION PRICING SHALL INCLUDE COST PROVISIONS TO COVER SPOILING EVERYTHING OFF SITE, CAREFULLY REMOVING AND STOCKPILING EVERYTHING FOR SALVAGE, OR A COMPOSITE BLEND OF THE TWO CIRCUMSTANCES. THE OWNER MAY ELECT TO SALVAGE THE FOLLOWING EQUIPMENT: CONSTANT CURRENT REGULATORS, EDGE LIGHT ASSEMBLIES (LIGHT UNIT, LIGHT POST, TRANSFORMER, LIGHT BASE COVER), THRESHOLD LIGHT ASSEMBLIES (LIGHT UNIT, CONDUIT POST, TRANSFORMER, LIGHT BASE COVER), GUIDANCE SIGN ASSEMBLIES (SIGN HOUSING, PANELS, LEGS, FLOOR FLANGES), CABLE, ELECTRICAL POWER AND CONTROL EQUIPMENT. THE CONTRACTOR SHALL SEPARATE USEABLE EQUIPMENT FROM UNUSABLE EQUIPMENT. THE EQUIPMENT TO BE SALVAGED SHALL BE CAREFULLY REMOVED BY THE CONTRACTOR, TRANSPORTED AND STOCKPILED AT A LOCATION DESIGNATED BY THE OWNER IN PROPER WORKING CONDITION. ALL OTHER MATERIALS SHALL BE SPOILED OFF AIRPORT PROPERTY AT A PROPER DISPOSAL SITE AT THE CONTRACTOR EXPENSE.
- 43. THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING AN EFFECTIVE SAFETY PROGRAM. SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR AND ALL EMPLOYEES, REGARDLESS OF POSITION. SAFETY MUST BE PRACTICED DAILY IN EVERY WORK TASK FOLLOWING ALL INDUSTRY STANDARD AND OSHA REGULATIONS. AIRPORT LIGHTING CIRCUITS ARE. BY THEIR NATURE. VERY DANGEROUS AND REQUIRE SPECIALIZED TRAINING ON THEIR FUNCTIONALITY. AIRFIELD CIRCUITS RELAY ON CONSTANT CURRENT AND VOLTAGE METER READINGS CANNOT BE RELIED UPON AS PORTIONS OF THE CIRCUIT MAY READ NEAR ZERO VOLTS.

- 44. AT A MINIMUM, THE FOLLOWING SAFETY PRACTICES SHOULD BE FOLLOWED BY ALL
- ENSURE THAT ALL PERSONNEL ARE TRAINED AND FAMILIAR WITH ELECTRICAL SAFETY. - STRICTLY OBSERVE SAFETY RULES. RULES SHALL BE LISTED IN THE CONTRACTOR SAFETY PLAN AND INCLUDE PERSONAL SAFETY PRECAUTIONS.
- ENSURE THAT ALL TEST AND SERVICE EQUIPMENT IS UL APPROVED AND RATED FOR THE CURRENT AND VOLTAGES EXPECTED.
- PRIOR TO BEGINNING ANY ELECTRICAL WORK, COORDINATE THE WORK SCHEDULE WITH AIRPORT OPERATIONS AND THE RPR. MAKE SURE CIRCUITS WILL NOT BE ENERGIZED DURING WORK BY OBSERVING STRICT LOCK OUT- TAG OUT PROCEDURES.
 - AT LEAST TWO ELECTRICIANS SHOULD BE ASSIGNED WHEN WORKING ON HIGH VOLTAGE CIRCUITS. WITH AT LEAST ONE HAVING A THOUGH KNOWLEDGE OF HIGH VOLTAGE AIRFIELD LIGHTING CIRCUITS. THE SECOND PERSON'S PRIMARY RESPONSIBILITY WILL BE AN
- KNOW HOW TO SUMMON IMMEDIATE EMERGENCY AND MEDICAL AID. - PROVIDE A SAFETY NOTICE BOARD AND ALL NECESSARY SAFETY EQUIPMENT.
- 45. THE BASIC RULES APPLICABLE WHEN WORKING AROUND AIRFIELD LIGHTING CIRCUITS INCLUDE:
- ALWAYS ASSUME THAT THE CIRCUIT IS ENERGIZED, OR CAN BE ENERGIZED BY REPORT CONTROL, UNTIL PROVEN OTHERWISE BY MECHANICAL DISCONNECTION AND LOCK OUT-
- NEVER UNDER ANY CIRCUMSTANCES BREAK A LIVE CIRCUIT.
- NEVER ENTER AN ELECTRICAL STRUCTURE WITH ENERGIZED CONDUCTORS AND NEVER HANDLE LIVE CABLES WHILE THERE IS CURRENT PRESENT UNLESS SPECIAL PRECAUTIONS
- TAKE CAUTION OF INDUCED VOLTAGES. VOLTAGES MAY BE INDUCED IN AN OTHERWISE DE-ENERGIZED CONDUCTOR FROM A NEARBY ENERGIZED CABLE
- CONFINED SPACE ENTRY AND EXCAVATION SHORING SHALL BE GOVERNED BY OSHA REQUIREMENTS.
- 46. THIS CONTRACT DOES NOT ALLOW FOR PRICE INCREASES DUE TO ESCALATION IN THE COST OF UNIT PRICED BID ITEMS. THE CONTRACTOR SHALL TAKE THIS INTO CONSIDERATION WHEN PREPARING UNIT PRICED ITEMS FOR BID AND MAKE CONSIDERATIONS FOR MARKET VOLATILITY.
- 47. A NOMINAL QUANTITY OF SPARE LIGHT AND SIGN FIXTURES SHALL BE TURNED OVER TO THE AIRPORT AT THE COMPLETION OF THE PROJECT, NEW AND UNPACKAGED. THE LIST OF REQUESTED SPARE PARTS IS SHOWN ON THE ELECTRICAL DETAILS.
- 48. THE CONTRACTOR IS ADVISED THAT SELECT ESTIMATED QUANTITIES INCLUDE BUMPS TO ACCOUNT FOR UNEXPECTED CONDITIONS DURING CONSTRUCTION. THE BUMPS RANGE UP
- 49. THE QUANTITY OF 2-INCH HDPE CONDUIT INSTALLED BY DIRECTIONAL DRILLING, ITEM L-113 IS NOT SHOWN ON THE PLANS. THIS IS A RESERVE ITEM TO ONLY BE USED WHERE EXISTING DUCT BANKS ARE FOUND TO BE COMPROMISED AND UNUSABLE. ALL INSTANCES OF HORIZONTAL DIRECTIONAL DRILLING SHALL BE APPROVED BY THE RPR.
- 50. THE QUANTITY OF ELECTRICAL JUNCTION CANS, ITEM L-115, INCLUDES 6 EACH WHICH WILL ONLY BE USED WHEN APPROVED BY THE RPR. THIS RESERVE QUANTITY OF JUNCTION CANS IS INTENDED TO TERMINATE THE ENDS OF ANY HORIZONTAL DIRECTIONAL DRILLING USED.

EDGE LIGHT LENS COLOR LEGEND G R 180° GREEN, 180° RED R G 180° RED, 180° GREEN

W 360° WHITE

B 360° BLUE

SCHEDULE OF CIRCUITS CIRCUIT NAME PROPOSED CABLE CIRCUIT ID 1- NO. 8 AWG, 5KV, 1/C 1- NO. 8 AWG, 5KV, 1/C

REDWOOD CITY, CALIFORNIA 94063

CONDUIT LABELING KEY

TW/1 - TAXIWAY LIGHTING CIRCUIT WITH 1 CABLE TW/2 - TAXIWAY LIGHTING CIRCUIT WITH 2 CABLES

RW/1 - RUNWAY LIGHTING CIRCUIT WITH 1 CABLE

RW/2 - RUNWAY LIGHTING CIRCUIT WITH 2 CABLES PROPOSED

TW/1 - TAXIWAY LIGHTING CIRCUIT WITH 1 CABLE TW/2 - TAXIWAY LIGHTING CIRCUIT WITH 2 CABLES

RW/1 - RUNWAY LIGHTING CIRCUIT WITH 1 CABLE

RW/2 - RUNWAY LIGHTING CIRCUIT WITH 2 CABLES

CIRCUIT TABLE & LIGHT LENS COLOR TABLE

SAN MATEO COUNTY

GENERAL ELECTRICAL NOTES DESIGNED BY: C.B. SCALE: NOT TO SCALE DATE: JANUARY 2023 CHECKED BY: D.M. RUNWAY 12-30 AND CONNECTOR TAXIWAYS REHABILITATION DRAWN BY: S.D. ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS 555 COUNTY CENTER, 5th FLOOR

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES

REVISION DATE EI001 SHEET 360F 53

ELECTRICAL NOTES SCALE: NOT TO SCALE



APPROVED:

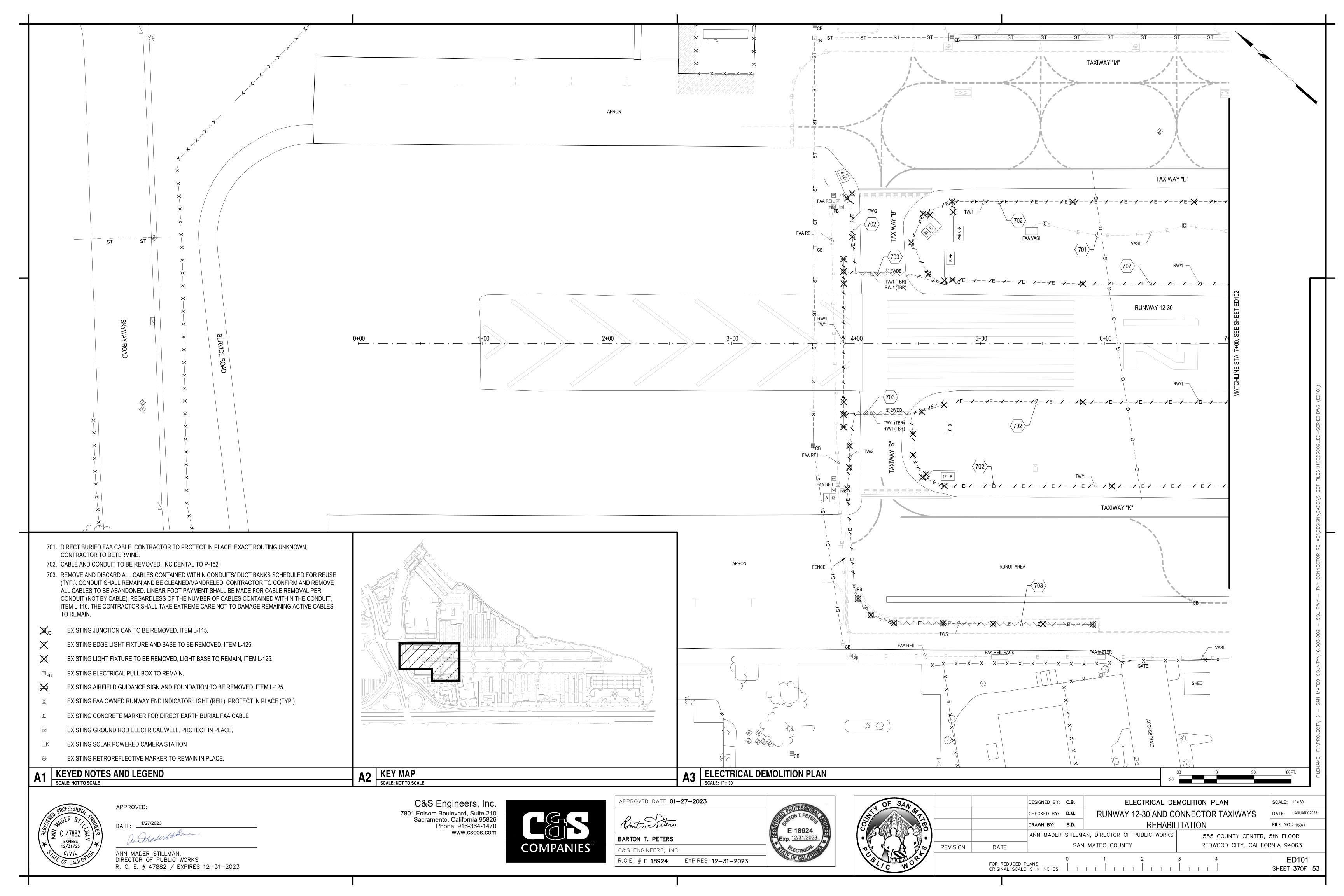
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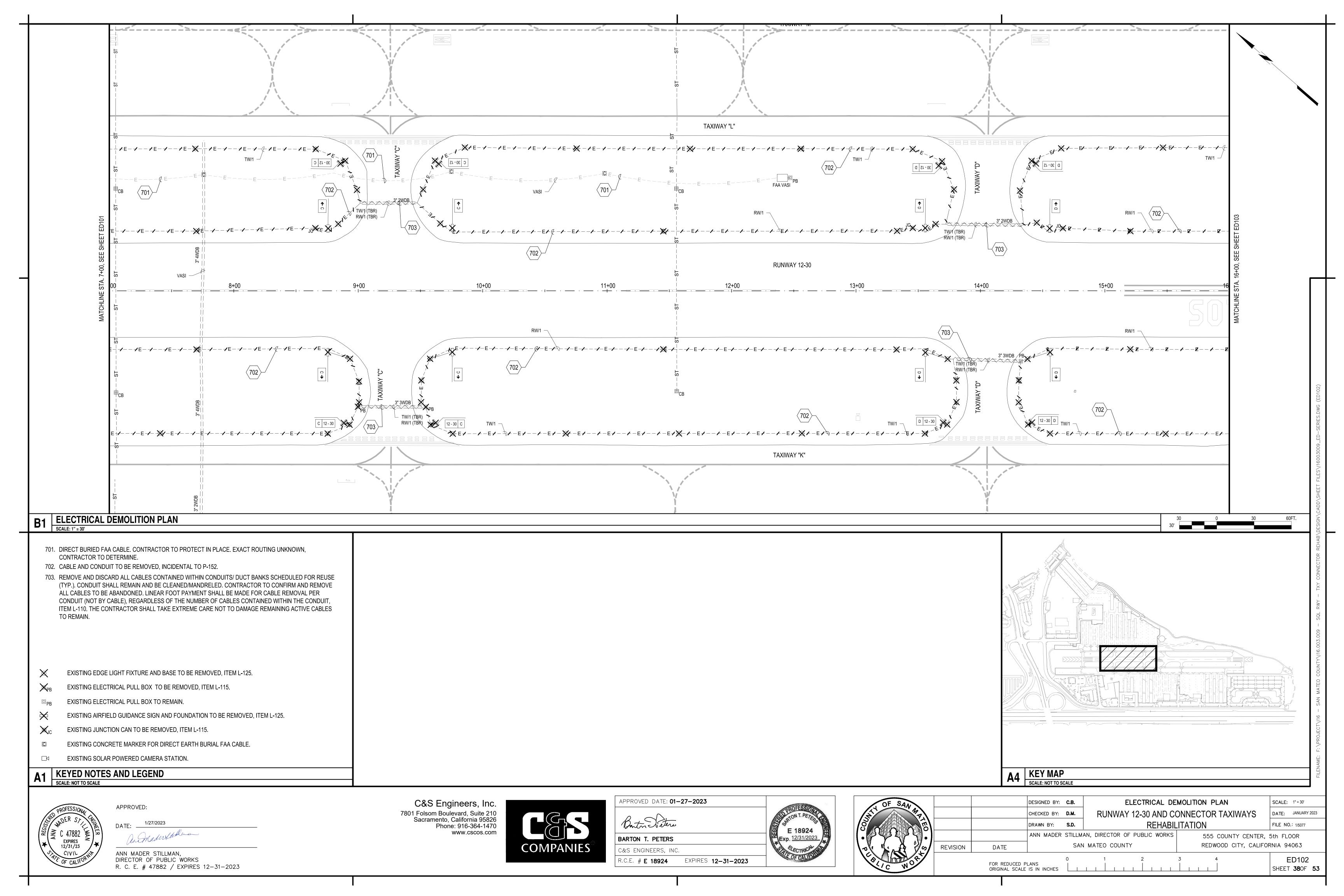
ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS R. C. E. # 47882 / EXPIRES 12-31-2023

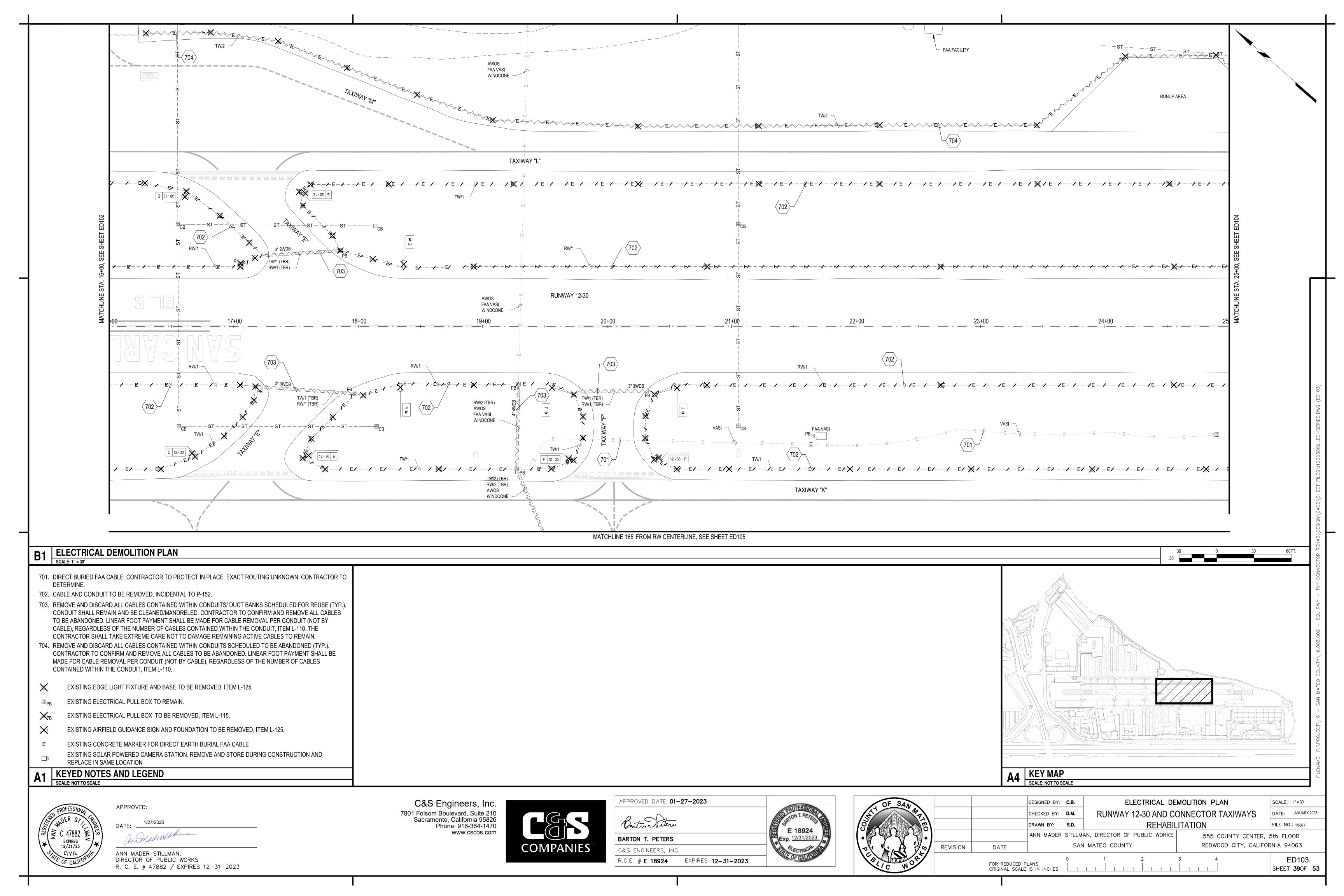
C&S Engineers, Inc. 7801 Folsom Boulevard, Suite 210 Sacramento, California 95826 Phone: 916-364-1470 www.cscos.com

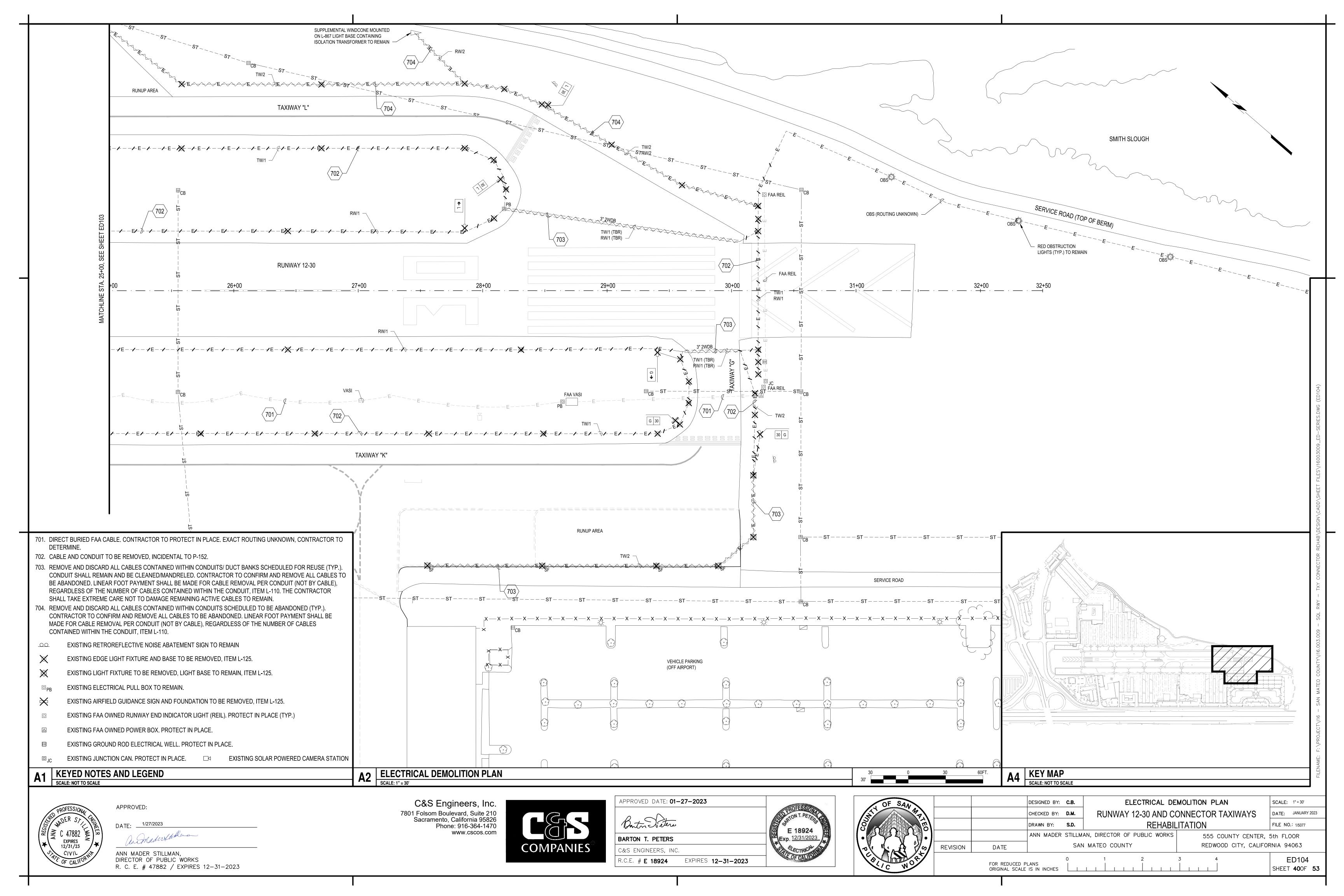


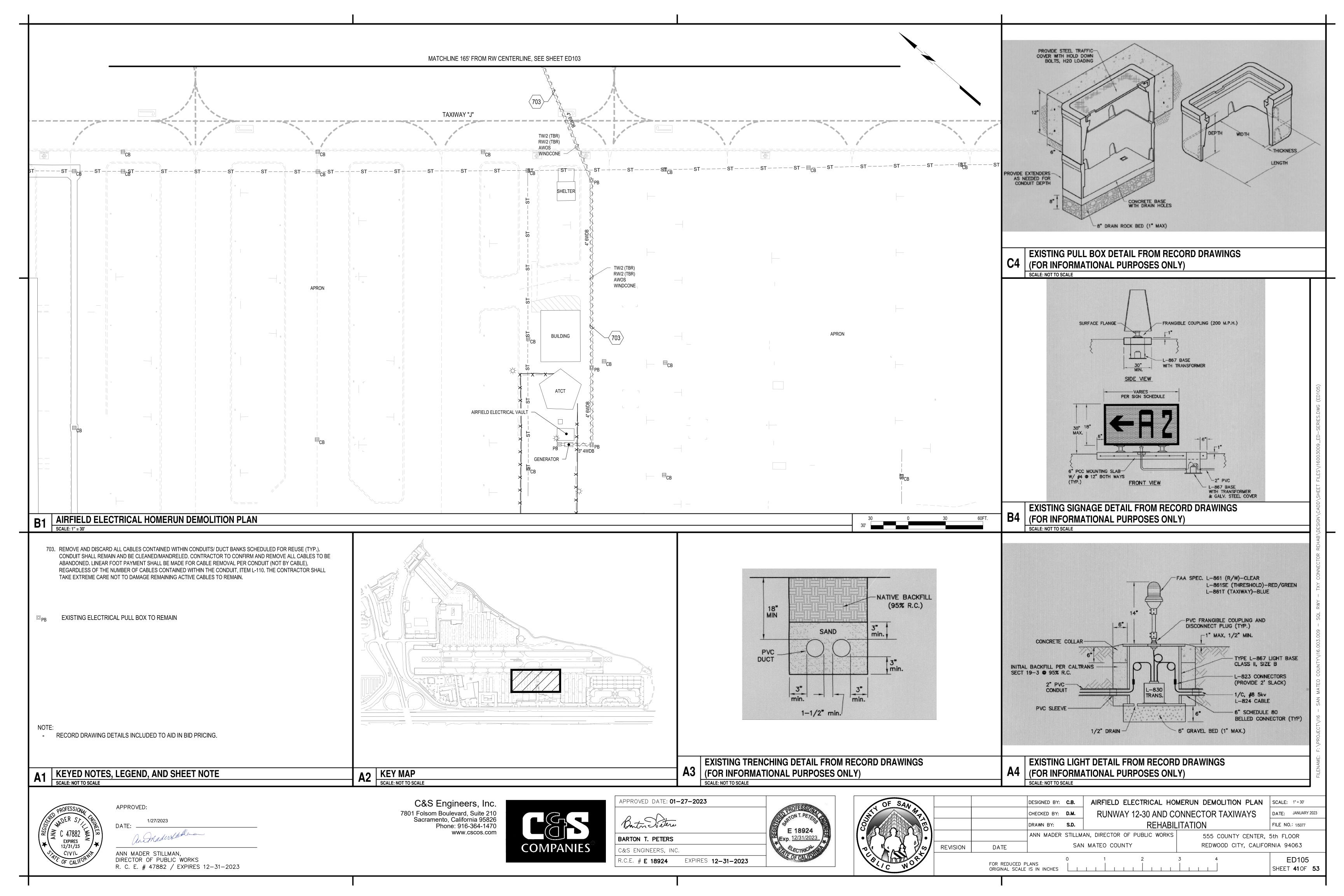
APPROVED DATE: 01-27-2023 Bouton Stetere E 18924 BARTON T. PETERS C&S ENGINEERS, INC. EXPIRES **12-31-2023** R.C.E. # **E 18924**

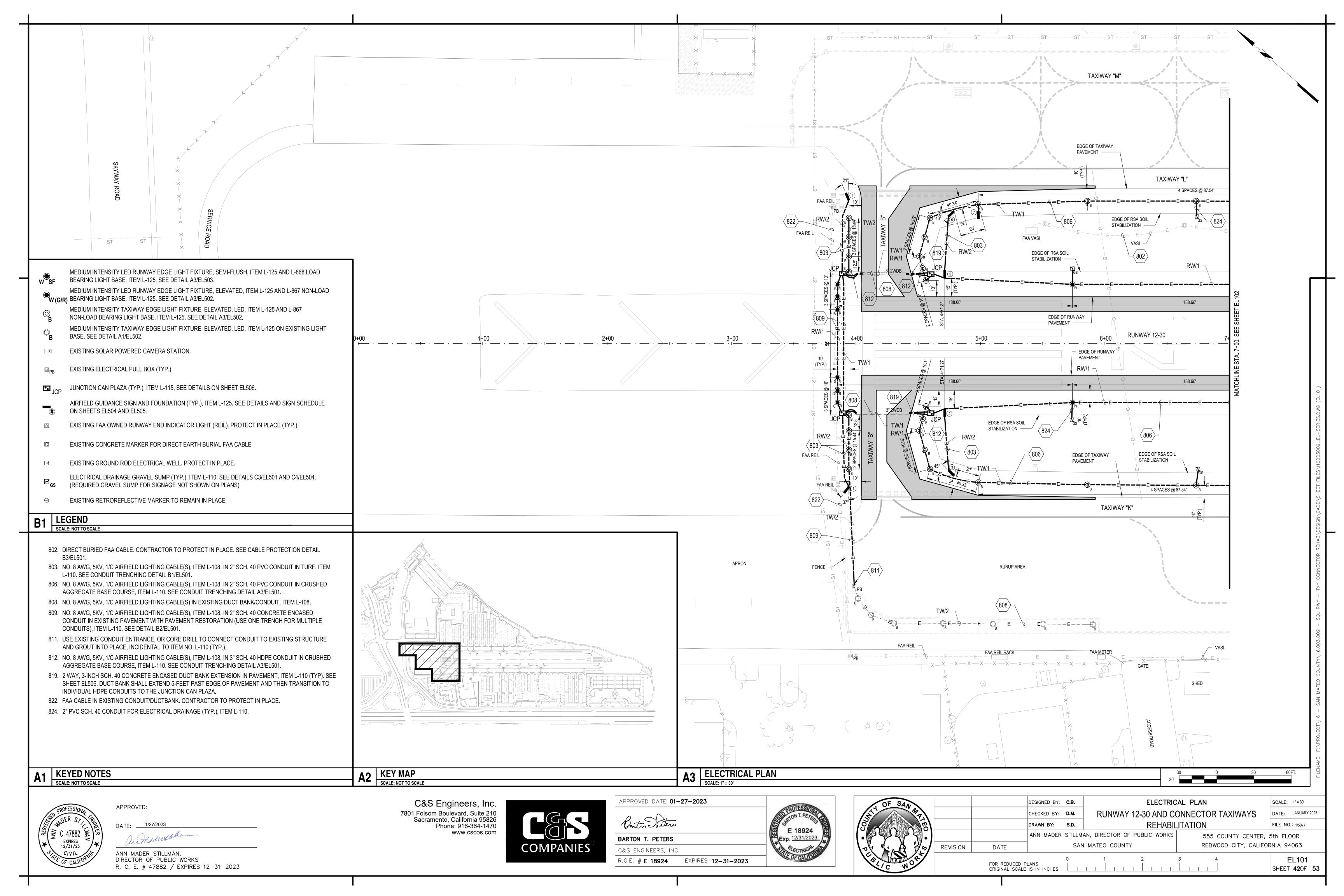


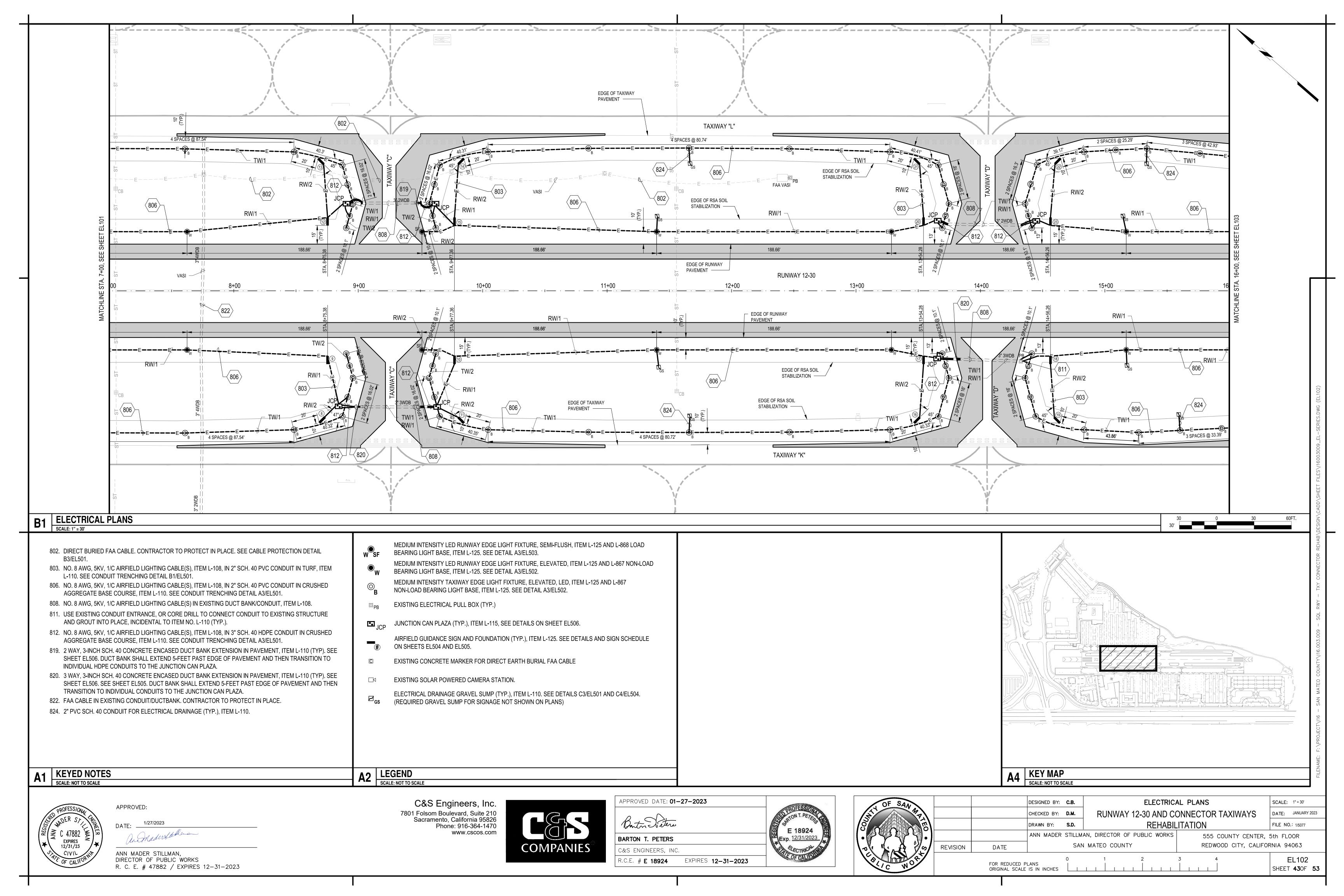


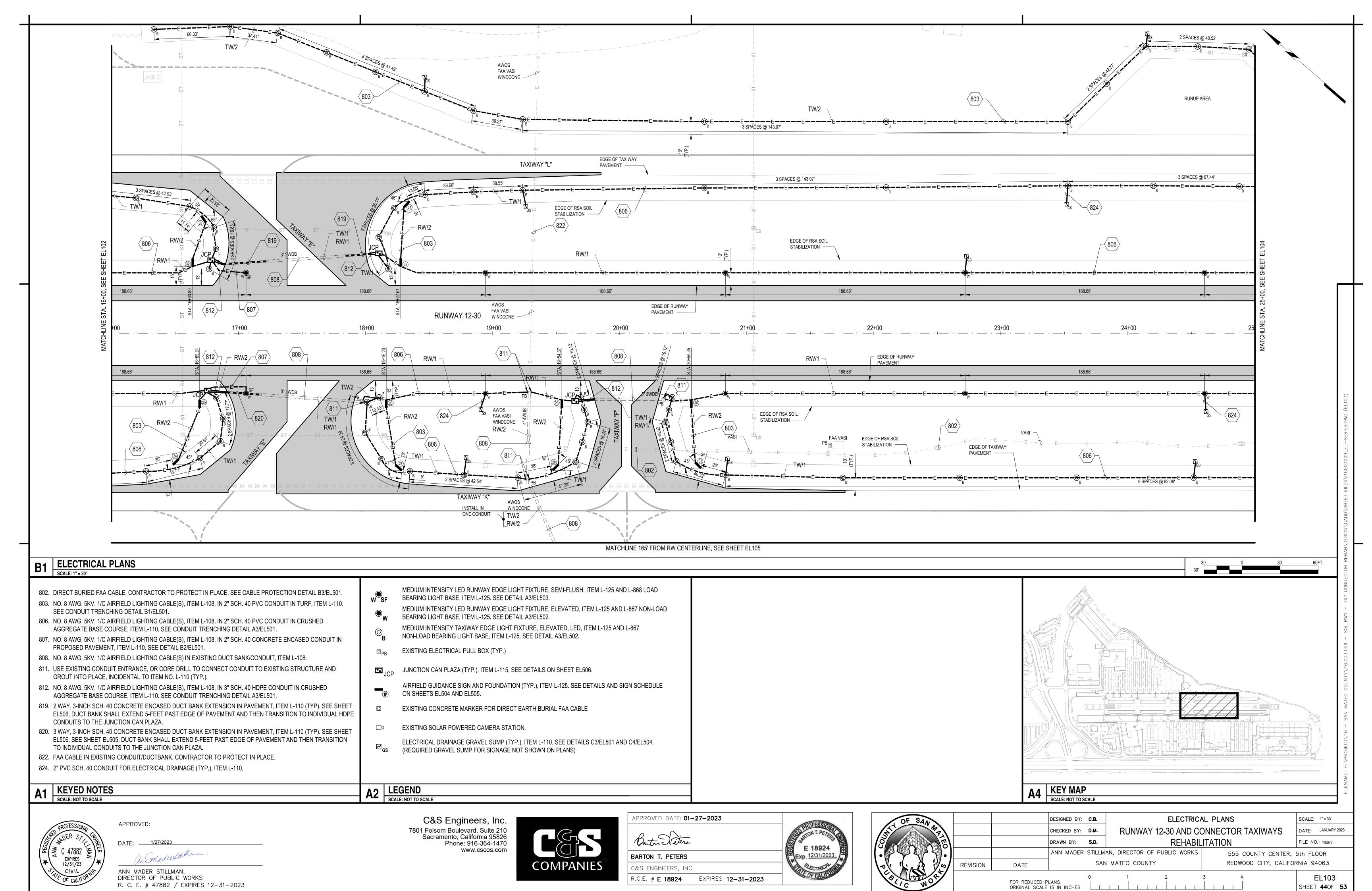




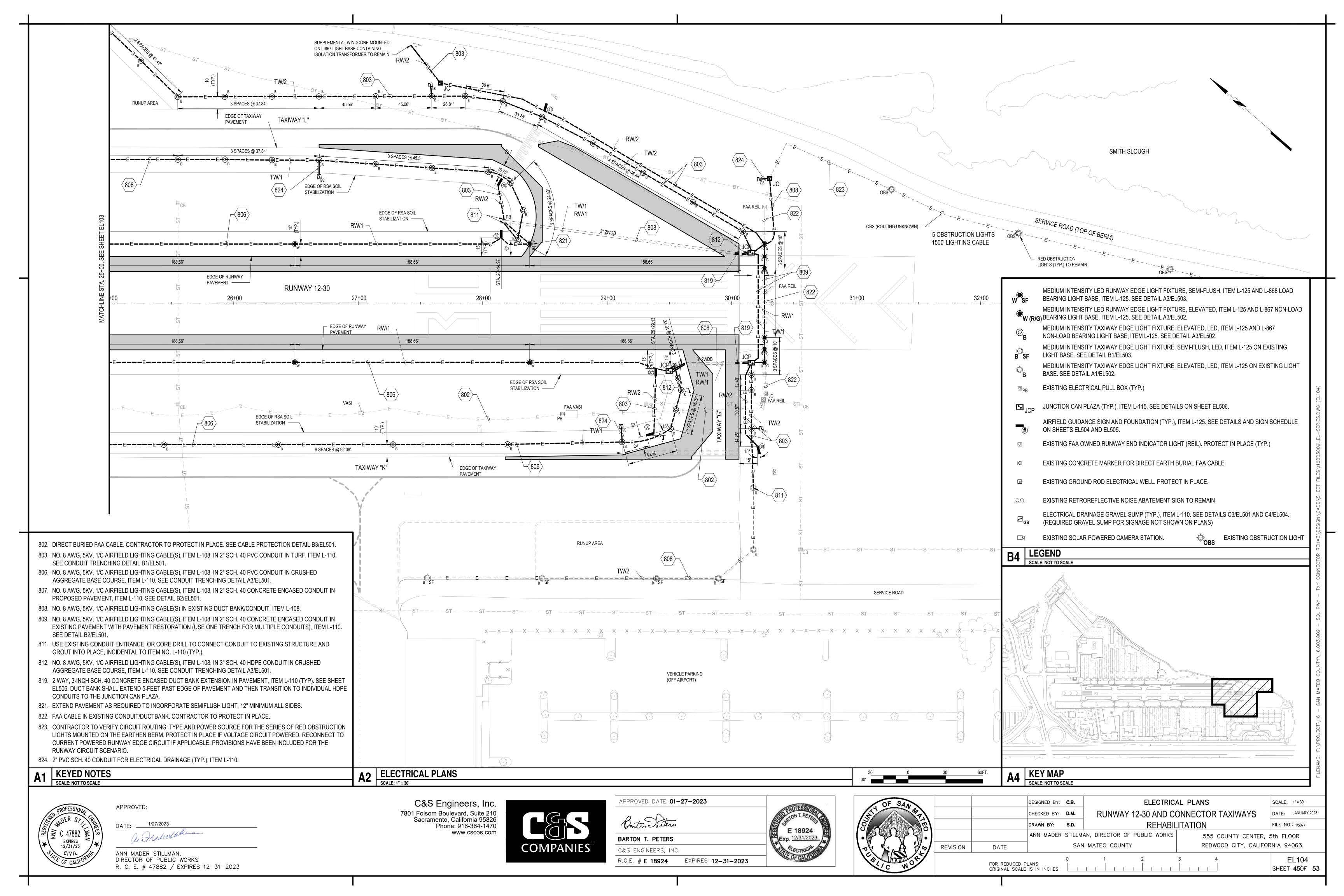


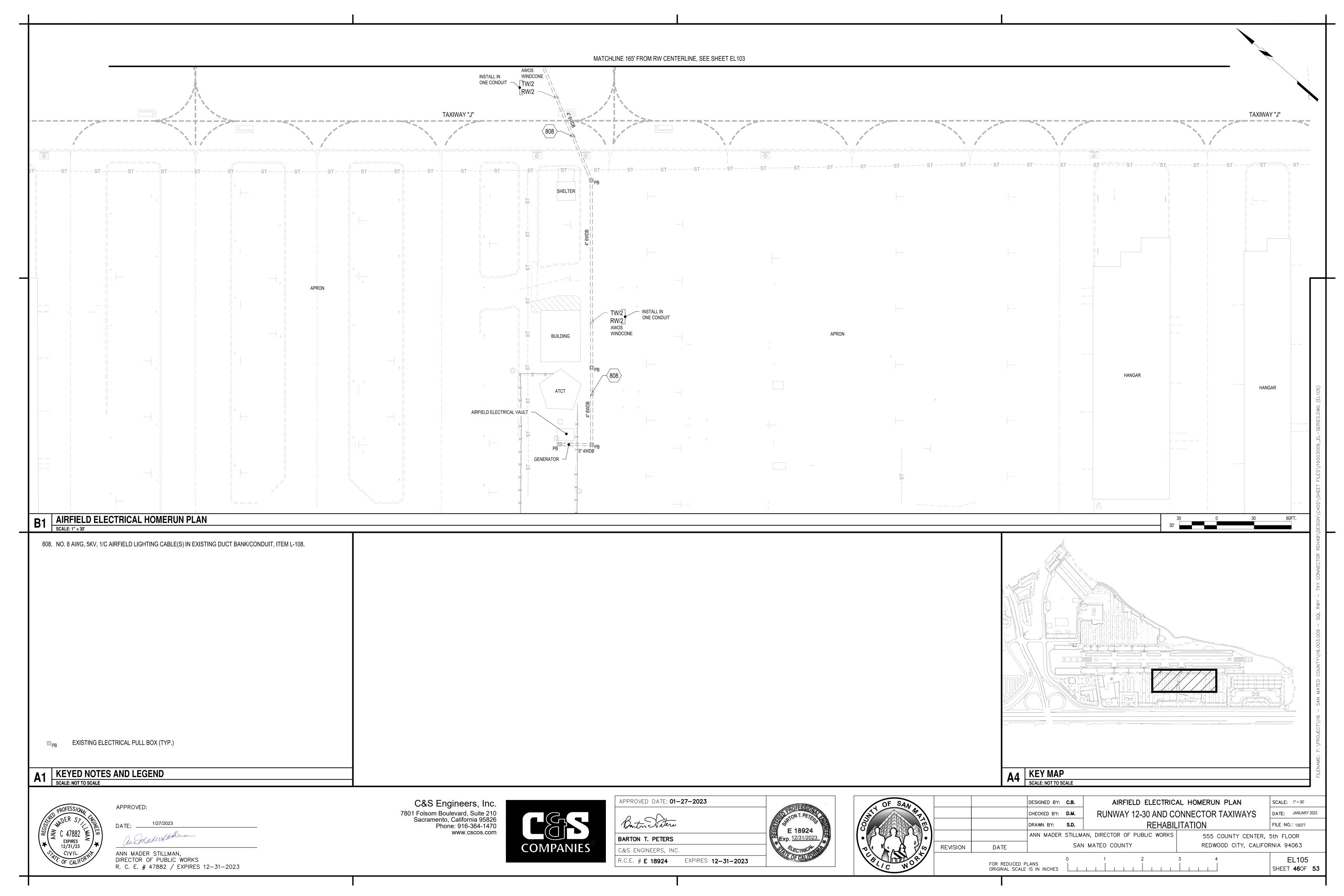


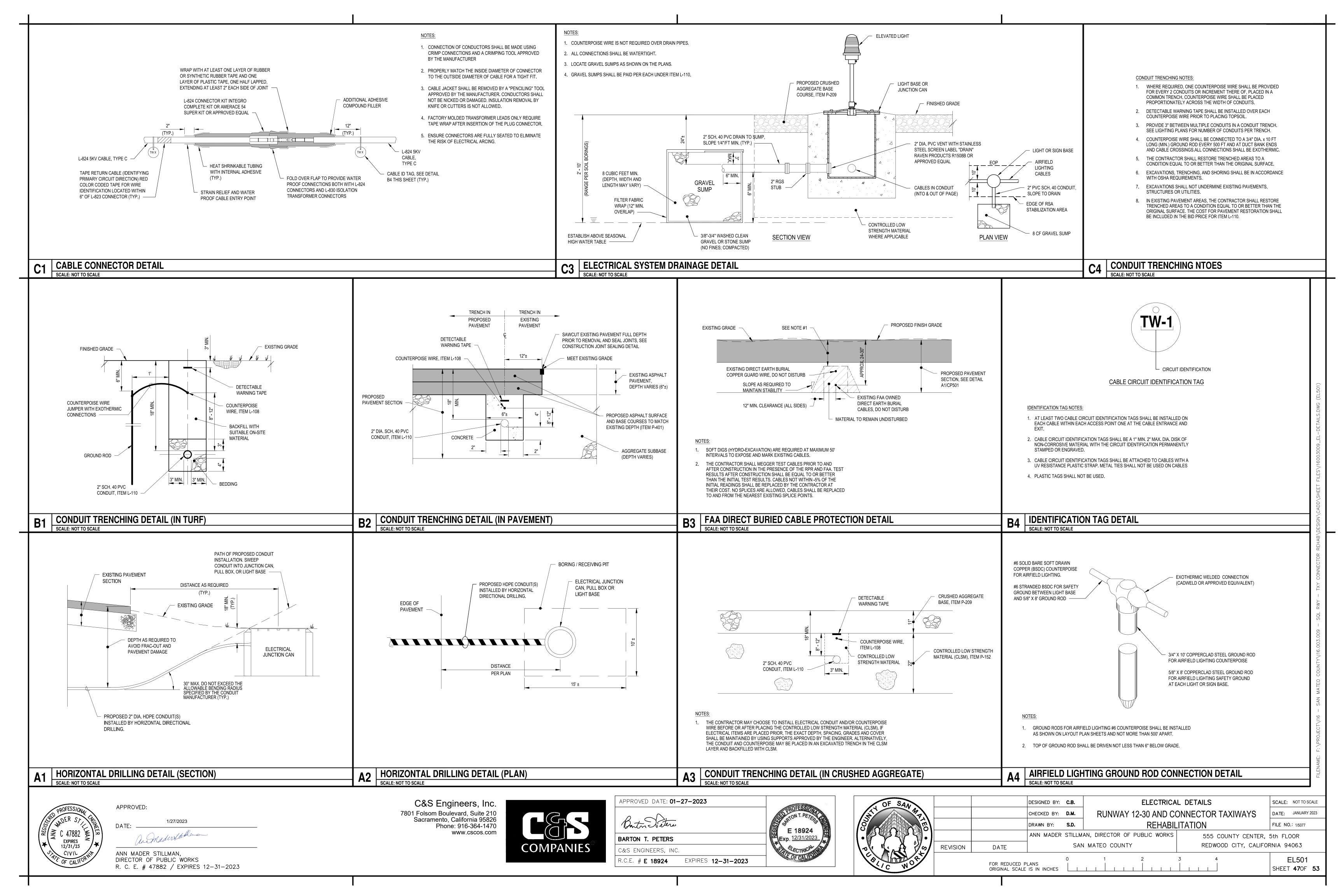


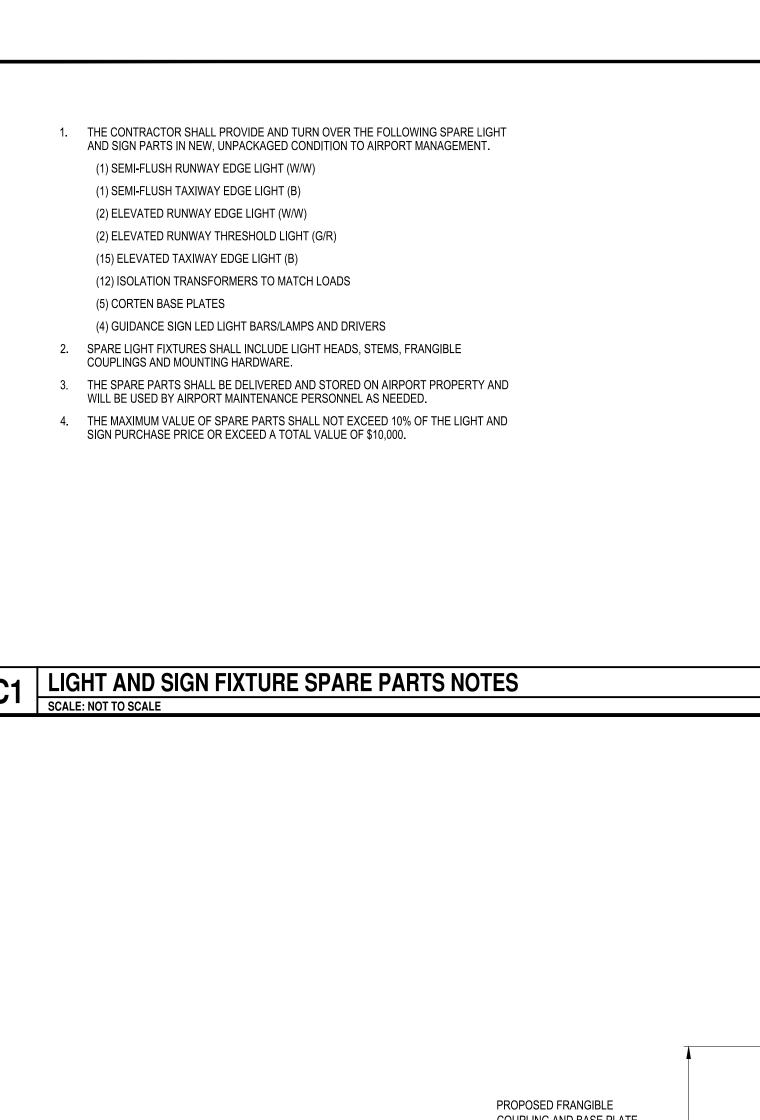


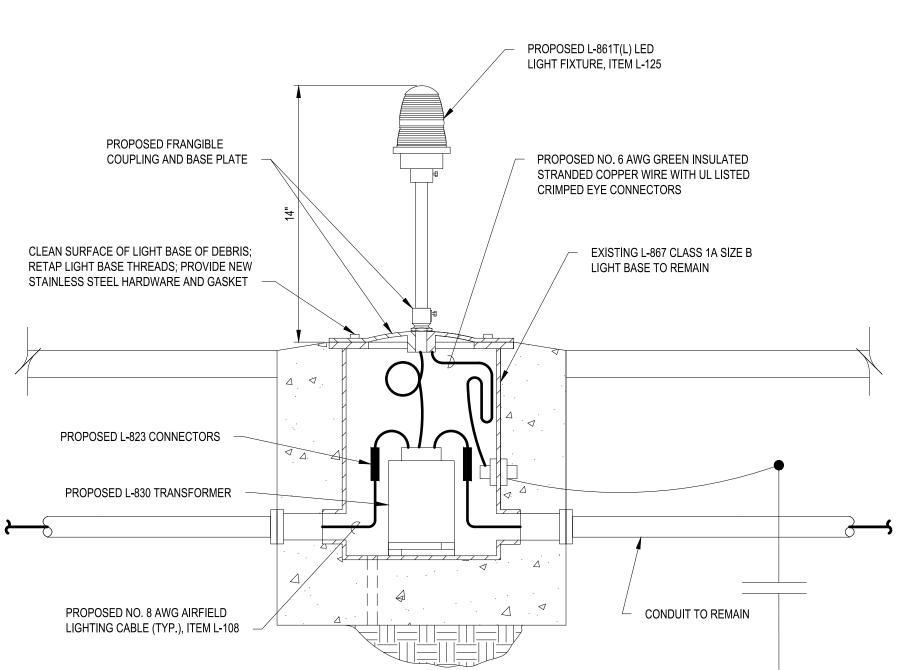
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LIGHT NOTES:

- 1. TRANSFORMERS FOR L-861T(L) FIXTURES SHALL BE 6.6 AMP PRIMARY/6.6 AMP SECONDARY. SIZE
- AS REQUIRED FOR LIGHT FIXTURE.

CONDUCTORS, AND GREEN GROUND.

2. PROVIDE A MINIMUM OF 3' OF CABLE SLACK ABOVE THE GROUND SURFACE ON PRIMARY

ELEVATED LIGHT UNIT MODIFICATION DETAIL

SCALE: NOT TO SCALE

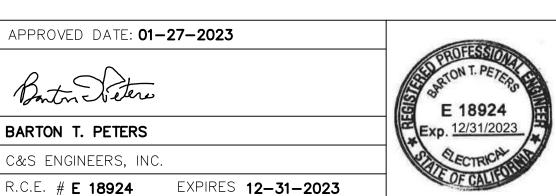
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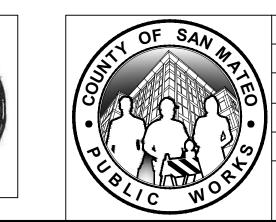
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ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS R. C. E. # 47882 / EXPIRES 12-31-2023

C&S Engineers, Inc. 7801 Folsom Boulevard, Suite 210 Sacramento, California 95826 Phone: 916-364-1470 www.cscos.com







			DESIGNED BY:	C.B.		ELEVAT	ED LIG	HT DETAILS	SCALE: NOT TO S
47.			CHECKED BY:	D.M.	RUNWAY	12-30 AI	ND CO	NNECTOR TAXIWAYS	DATE: JANUARY
NE I			DRAWN BY:	S.D.		REI	HABILI [*]	TATION	FILE NO.: 1/5077
			ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS 555 COUNTY CENTER, 5th						5th FLOOR
20	REVISION	DATE		SAN	N MATEO COUNTY	REDWOOD CITY, CALIFOR	REDWOOD CITY, CALIFORNIA 94063		
60.00	0 1 2 3 4 FOR REDUCED PLANS							EL502 SHEET 48 0F	

LED LIGHT FIXTURE,

- RUNWAY: MEDIUM INTENSITY LED L-861(L)/L-861SE(L)

NO. 6 AWG GREEN INSULATED STRANDED COPPER

WIRE WITH UL LISTED CRIMPED EYE CONNECTORS

FINISHED GRADE

CRUSHED AGGREGATE BASE COURSE, ITEM P-209. DEPTH TO MATCH PROPOSED PAVEMENT SECTION.

SEE CONDUIT TRENCHING

DETAILS

(TYP.), ITEM L-110

GROUND ROD

PROVIDE WATERTIGHT

TERMINATIONS (TYP.)

2" SCH. 40 PVC CONDUIT

SOLID BARE COPPER

LIGHT BASE

AIRFIELD LIGHTING

CABLE, ITEM L-108

COUNTERPOISE WIRE, ITEM L-108.

ROUTE COUNTERPOISE AROUND

SCALE: NOT TO SCALE

DATE: JANUARY 2023

EL502

SHEET **48**0F **53**

STAINLESS STEEL COVER BOLTS

L-867 CLASS 1A, SIZE B

(12" DIA.) LIGHT BASE

₹ 12" TQ 18"

GROUND

JUMPER

2" CONDUIT DRAIN WHERE

REQUIRED PER PLAN

AUGER HOLE TO ACCEPT LIGHT

MECHANICAL COPPER GROUND

LUG, INTERNAL AND EXTERNAL

- TAXIWAY: MEDIUM INTENSITY LED L861T(L)

BASE IN CLSM LAYER 1. ALL LIGHT BASES SHALL HAVE A MINIMUM OF TWO CONDUIT STUBS SPACED 180 DEGREES APART. CAP CONDUIT IF STUB IS

2" LIQUID-TIGHT FLEXIBLE

CONDUIT (TYP.), OPTIONAL

1.5", 12 TPI FRANGIBLE

COUPLING

L-867 CORTEN BASE PLATE

AND NEOPRENE GASKET

SECONDARY LEAD

WITH CONNECTOR

CONCRETE

L-823 CONNECTOR

L-830 TRANSFORMER

2" RGS CONDUIT

STUB (TYP.) —

AIRFIELD LIGHTING CABLE (TYP.), ITEM L-108

LIGHT BASE SHALL REST UPON UNDISTURBED SOIL,

UNDISTURBED CLSM, OR A LAYER OF COMPACTED

BACKFILL

WITH CSLM —

SLOPE TO DRAIN

NOT OCCUPIED. ADDITIONAL CONDUIT STUBS MAY BE REQUIRED, SEE PLANS FOR NUMBER AND LOCATION OF STUBS. 2. CONNECT A SAFETY GROUND JUMPER TO THE EXTERNAL GROUND LUG AND ATTACH IT TO A 5/8" DIA. x 8 FT LONG (MIN.)

AGGREGATE BASE COURSE. -

3. CONDUIT OUTBOARD OF THE FLEXIBLE CONDUIT AND AIRFIELD LIGHTING CABLES ARE PAID FOR SEPARATELY. ALL OTHER

ITEMS ARE INCLUDED IN PAYMENT FOR THE EDGE LIGHT. 4. TRANSFORMERS FOR FIXTURES SHALL BE 6.6 AMP PRIMARY/6.6 AMP SECONDARY. SIZE AS REQUIRED FOR LIGHT FIXTURE.

5. PROVIDE A MINIMUM OF 3' OF CABLE SLACK ABOVE THE GROUND SURFACE ON PRIMARY CONDUCTORS, AND GREEN GROUND.

6. WHERE REQUIRED ON THE PLANS, PROVIDE A 2" PVC DRAIN CONNECTOR TO A HUB 90° TO THE LIGHT BASE THAT CONNECTS

TO THE GRAVEL SUMP. DRAINS ARE TO BE POSITIONED AT LOW POINTS IN THE SYSTEM. SEE DETAIL C3/EL501.

7. PRECAST LIGHT BASES ARE HIGHLY RECOMMENDED DUE TO SCHEDULE CONSTRAINTS.

8. PROVIDE GLASS LENSES, NO ARCTIC KIT.

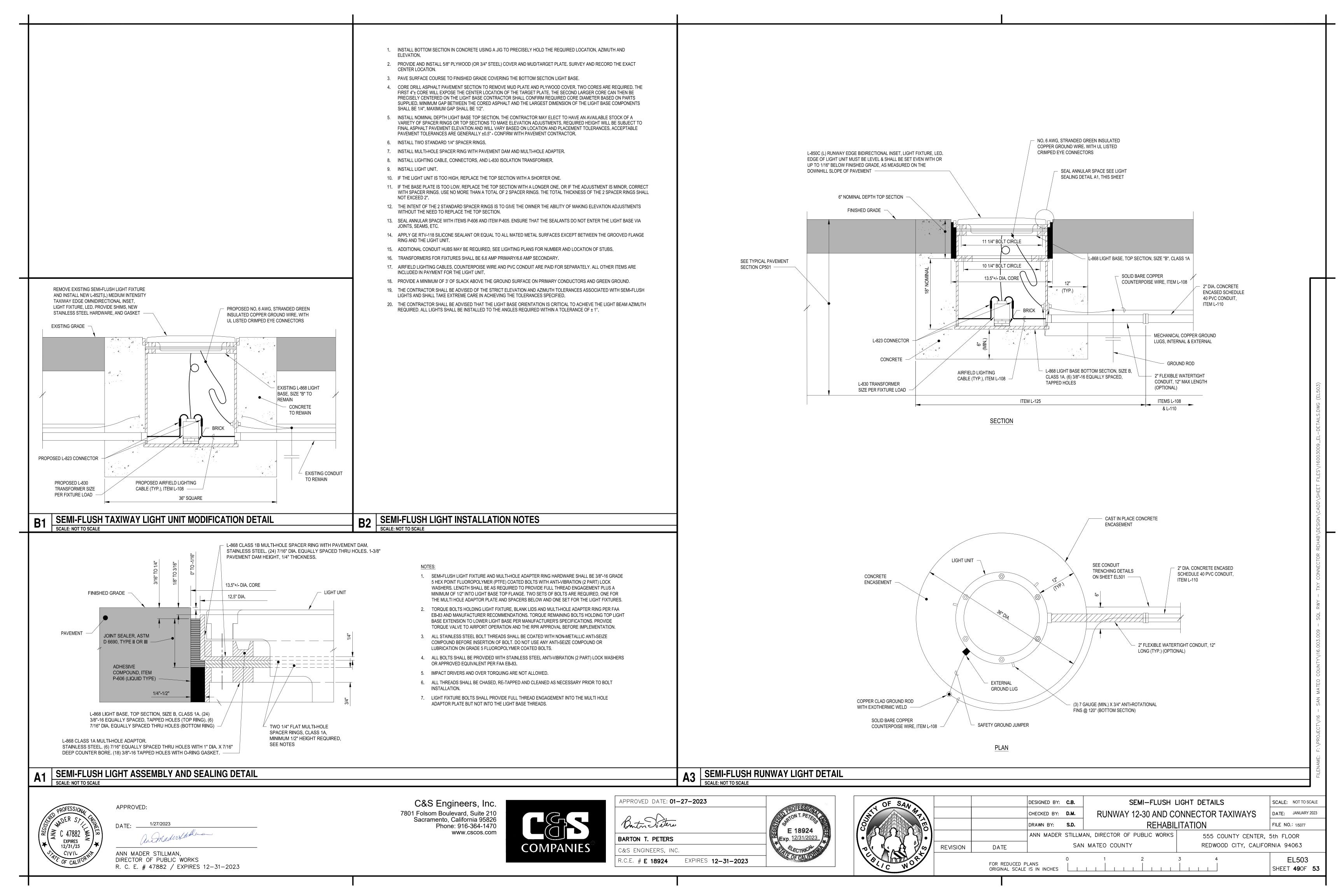
PROPOSED CONTROL LOW STRENGTH

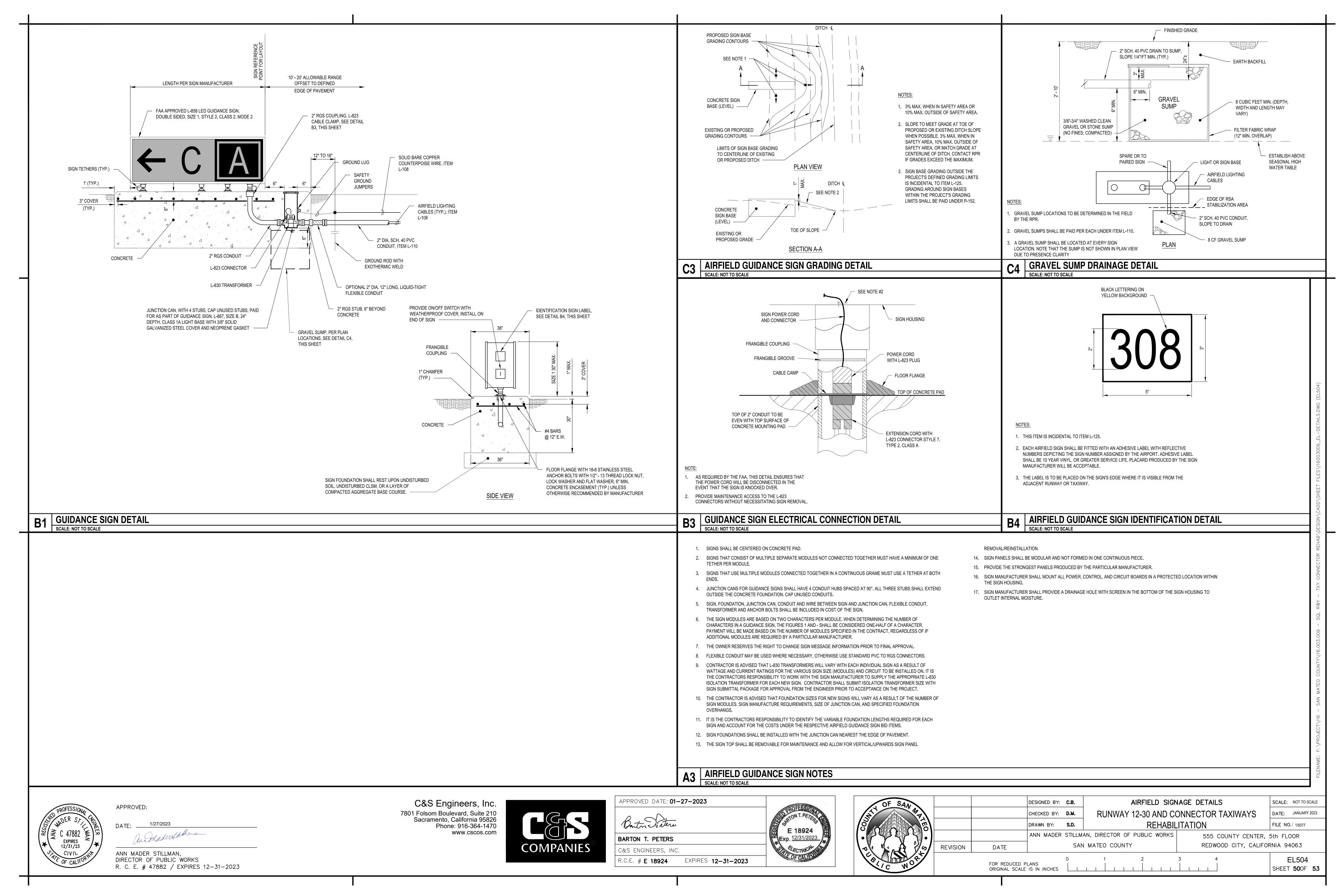
MATCH PROPOSED PAVEMENT SECTION.

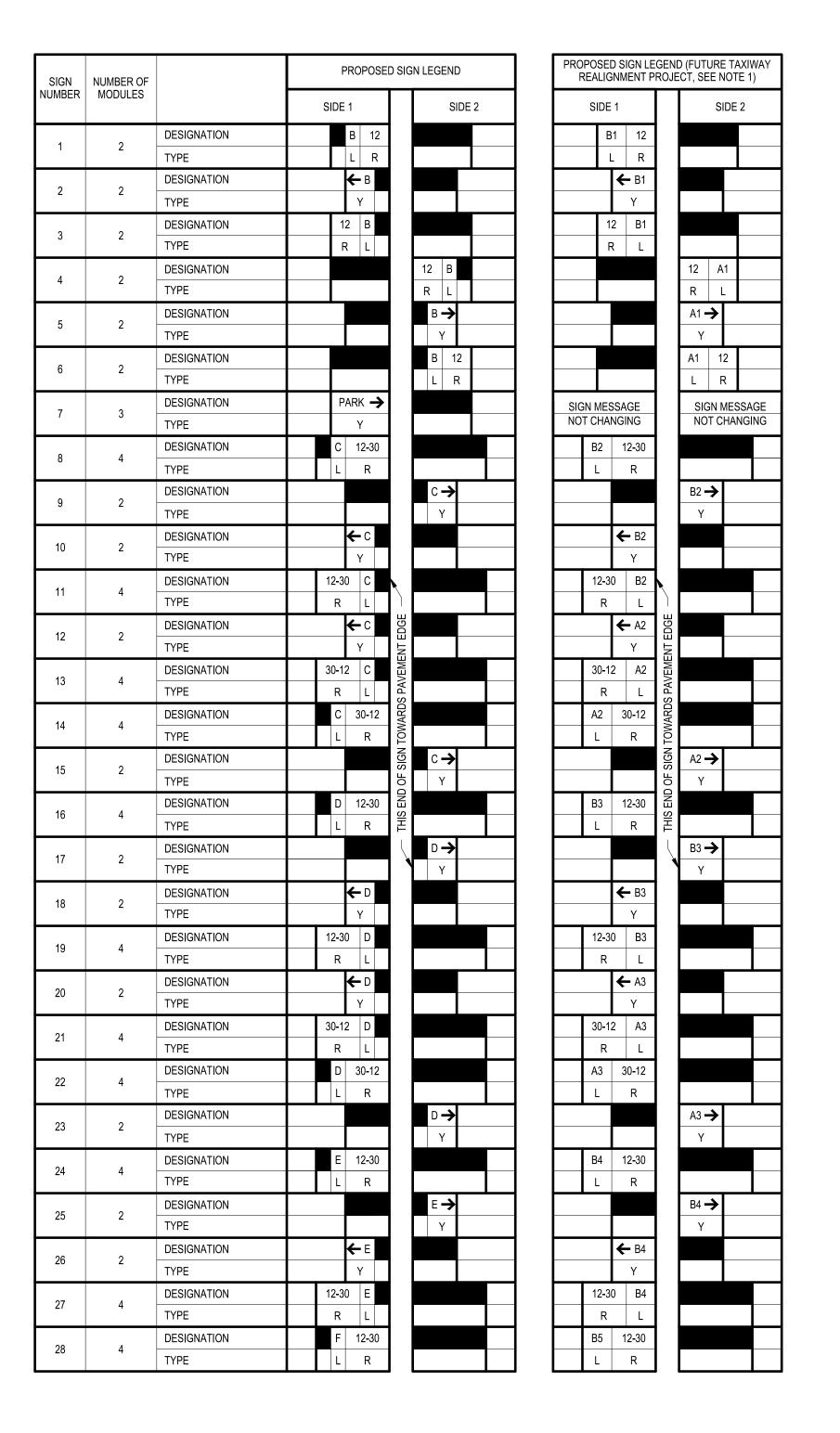
MATERIAL (CLSM), PER ITEM P-153. DEPTH TO

9. LIGHT BASE SHALL BE LEVEL AND PLUMB.

A3 ELEVATED LIGHT IN AGGREGATE BASE COURSE DETAIL (BASE MOUNTED)







SIGN	NUMBER OF		PROPOSED SIG	ON LEGEND	PROPOSED SIGN LEGEND (FUTURE TAX REALIGNMENT PROJECT, SEE NOTE					
NUMBER	MODULES		SIDE 1	SIDE 2	SIDE 1		S	IDE 2		
	0	DESIGNATION		F →			B5 →			
29	2	TYPE		Υ			Υ			
00	2	DESIGNATION	← F		← B	5				
30		TYPE	Υ		Y					
04	4	DESIGNATION	12-30 F		12-30 B	5				
31		TYPE	R L		R L					
20		DESIGNATION	← E		← A					
32	2	TYPE	Υ		Y					
00	4	DESIGNATION	30-12 E		30-12 A	1				
33		TYPE	R L		R L					
0.4		DESIGNATION	E 30-12		A4 30-1	<u> </u>				
34	4	TYPE	F 30-12 R SIGN TOWARDS PAVEMENT EDGE		L R	THIS END OF SIGN TOWARDS PAVEMENT FDGF				
0.5	2	DESIGNATION	VEM	E →		NEW	A4 →			
35		TYPE	S PA	Υ		AG SC	Y			
00	2	DESIGNATION	G 30 WAR		B6 3) AR				
36		TYPE	L R		L F					
07	2	DESIGNATION		G →			B6 →			
37		TYPE	POO	Υ			Y			
00		DESIGNATION	30 G R L L		30 B	S NEW				
38	2	TYPE	R L E		R L	╗┋				
00		DESIGNATION	← L		← A	5 \	<u>, </u>			
39	2	TYPE	Y							
40	2	DESIGNATION		30 L			30 A	\ 5		
40		TYPE		R L			R I	L		
4.4	_	DESIGNATION	L 30		A5 3)				
41	2	TYPE	L R		L F					

SIGN TYPE LEGEND:

R - INDICATES L-858R MANDATORY INSTRUCTION SIGN (WHITE INSCRIPTION ON A RED BACKGROUND)

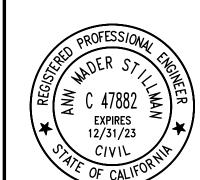
L - INDICATES L-868L LOCATION SIGN (YELLOW INSCRIPTION ON A BLACK BACKGROUND)

Y - INDICATES L-858Y DIRECTION SIGN (BLACK INSCRIPTION ON A YELLOW BACKGROUND)

- INDICATES A BLANK PANEL

1. THE TAXIWAY NAMES WILL CHANGE UNDER THE FUTURE TAXIWAY REALIGNMENT PROJECT. THE SIGN HOUSING SHALL BE SIZED ACCORDINGLY TO ACCOMMODATE THE FUTURE MESSAGE SHOWN. PROVIDE BLANK SPACES/PANELS UNDER THIS PROJECT TO ACCOMMODATE THE EXISTING (SHORTER) MESSAGES.

GUIDANCE SIGN INDEX SCALE: NOT TO SCALE



APPROVED:

1/27/2023 an Smader the Com

ANN MADER STILLMAN, DIRECTOR OF PUBLIC WORKS R. C. E. # 47882 / EXPIRES 12-31-2023





APPROVED DATE: 0	1–27–2023	FFC
Bonton Stere		E 18924
BARTON T. PETERS		Exp. 12/31/2023
C&S ENGINEERS, IN	C.	PECTRICAL
R.C.E. # E 18924	EXPIRES 12-31-2023	COF CALIFORNIA

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OF WOR

			DESIGNED BY:	C.B.		SCALE: NOT TO SO					
			CHECKED BY:	D.M.	RUNWAY 12-30 AND CONNECTOR TAXIWAYS				DATE: JANUARY		
TE I			DRAWN BY:	S.D.		REH/	ΓΙΟΝ	FILE NO.: 1/5077			
•			ANN MADER	STILLM	AN, DIRECTOR	OF PUBLIC WO	555 COUNTY CENTER	5th FLOOR			
5	REVISION	DATE		SAN	MATEO COUNTY			REDWOOD CITY, CALIFORNIA 94063			
7			•	0	1	2	3	4	FI 505		

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES

SCALE: NOT TO SCALE

DATE: JANUARY 2023

EL505

SHEET **51** OF **53**

