OLA #: 331001631 Routing #: 17-HA2-XC-00001

(Local \$CDOTWRK) REGION: 2 (vjm)

PROJECT: IM 0252-423 (19039)

### **CONTRACT**

THIS CONTRACT, executed this day of	, by and between the State of Colorado, for
the use and benefit of the Colorado Department of Transpor	tation ("State" or "CDOT") and the City of Colorado Springs,
Colorado, 30 South Nevada Avenue, Colorado Springs, Co	olorado, 80903, CDOT Vendor #: 2000015 ("Local Agency"
or "Department of Transportation"), and the State and the	Local Agency shall be individually referred to as a "Party"
and together shall be referred to as the "Parties."	

### RECITALS

- 1. Authority exists in the law and funds have been budgeted, appropriated and otherwise made available and a sufficient uncommitted balance thereof remains available for payment of Project and Local Agency costs in Fund Number 400, Function 3301, GL Acct. 4512000010, WBS Element 19039.10.20 (Contract Encumbrance Amount: \$0.00).
- 2. Required approval, clearance and coordination have been accomplished from and with appropriate agencies...
- 3. Section 43-2-102 and 103, C.R.S require the State to maintain State highways (including where such highways extend through a city or an incorporated town), and 43-2-135 describes certain specific responsibilities of the State and affected local entities (respectively) with respect to State highways that are also part of a local street system;
- 4. The Local Agency has estimated the contribution and is prepared to provide the funding required for their contribution toward the Project, as evidenced by an appropriate ordinance or resolution duly passed and adopted by the authorized representatives of the Local Agency, which expressly authorizes the Local Agency to enter into this agreement and to expend its funds for the Contribution, which ordinance or resolution is attached hereto as **Exhibt B** and incorporated herein by reference
- 5. The Local Agency has funds available and desires to provide 100% of the funding for the Work.
- 6. This contract is executed under the authority of §§ 29-1-203, 43-1-110; 43-1-116, 43-2-101(4)(c) and 43-2-144, C.R.S. and **Exhibit B**.
- 7. The Parties hereto desire to agree upon the division of responsibilities with regard to the Project.

### THE PARTIES NOW AGREE THAT:

### Section 1. Scope of Work

The work under this contract shall consist of the landscaping project for the I-25/Cimarron Expressway interchange (the "Project"), and the Local Agency shall provide their Contribution toward the Project, as more specifically described in **Exhibit A**.

### Section 2. Order of Precedence

In the event of conflicts or inconsistencies between this contract and its exhibits, such conflicts or inconsistencies shall be resolved by reference to the documents in the following order of priority:

- 1. This contract
- 2. **Exhibit A** (Scope of Work)
- 3. Other Exhibits in descending order of their attachment.

### Section 3. Term

This contract shall be effective upon approval of the CDOT Chief Engineer or designee. The term of this agreement shall continue through the completion and final acceptance of the Project by the State, FHWA, if applicable, and the Local Agency.

### Section 4. Project Funding Provisions

- A. The Local Agency has estimated the total cost of the Contribution and is prepared to provide its funding, as evidenced by the signing of this contract, which expressly authorizes the Local Agency the authority to expend its Contribution toward the Project.
- B. The contribution is estimated to be \$1,500,000.00 (the "Contribution").
- C. The maximum amount payable by the Local Agency under this contract shall be \$1,500,000.00 unless such amount is increased by an appropriate written modification to this contract executed by the Parties hereto before any increased cost is incurred
- D. The Parties hereto agree that this contract is contingent upon all funds designated for the Project herein being made available from State sources, as applicable. Should these sources fail to provide necessary funds as agreed upon herein, the contract may be terminated by either Party, provided that any Party terminating its interest and obligations herein shall not be relieved of any obligations which existed prior to the effective date of such termination or which may occur as a result of such termination.
- E. The Local Agency will make a one time payment of \$1,500,000.00 on or before April 1, 2018.

### Section 5. State and Local Agency Commitments

The Scope of Work (**Exhibit A**) describes the work to be performed.

### A. Design [if applicable]

- 1. If the work includes preliminary design or final design (the "Construction Plans"), or design work sheets, or special provisions and estimates (collectively referred to as the "Plans"), the State shall comply with the following requirements, as applicable:
  - a. perform or provide the Plans, to the extent required by the nature of the work.
  - b. prepare final design (Construction Plans) in accord with the requirements of the latest edition of the American Association of State Highway Transportation Officials (AASHTO) manual or other standard, such as the Uniform Building Code, as approved by CDOT.
  - c. prepare special provisions and estimates in accord with the State's Roadway and Bridge Design Manuals and Standard Specifications for Road and Bridge Construction.
  - d. include details of any required detours in the Plans, in order to prevent any interference of the construction work and to protect the traveling public.
  - e. stamp the Plans produced by a Colorado Registered Professional Engineer.
  - f. provide final assembly of Plans and contract documents.
  - g. be responsible for the Plans being accurate and complete.
  - h. make no further changes in the Plans following the award of the construction contract except by agreement in writing between the Parties. The Plans shall be considered final when approved and accepted by the Parties hereto, and when final they shall be deemed incorporated herein.

### B. Construction [if applicable]

- 1. If the work includes construction, the State shall perform the construction in accordance with the approved design plans and/or administer the construction all in accord with the Scope of Work (Exhibit A). Such administration shall include Project inspection and testing; approving sources of materials; performing required plant and shop inspections; documentation of contract payments, testing and inspection activities; preparing and approving pay estimates; preparing, approving and securing the funding for contract modification orders and minor contract revisions; processing contractor claims; construction supervision; and meeting the Quality Control requirements of the FHWA/CDOT Stewardship Agreement.
- 2. If the State is the responsible party:
  - a. it shall appoint a qualified professional engineer, licensed in the State of Colorado, as the State Agency Project Engineer (SAPE), to perform that administration. The SAPE shall administer the Project in accordance with this agreement, the requirements of the construction contract and applicable State procedures.

- b. if bids are to be let for the construction of the Project, the State shall, in conjunction with the Local Agency, advertise the call for bids and upon concurrence by the Local Agency will award the construction contract(s) to the low responsive, responsible bidder(s).
  - (1) in advertising and awarding the bid for the construction of a federal-aid project, the State shall comply with applicable requirements of 23 USC § 112 and 23 CFR Parts 633 and 635 and C.R.S. § 24-92-101 et seq. Those requirements include, without limitation, that the State/contractor shall incorporate Form 1273 in its entirety verbatim into any subcontract(s) for those services as terms and conditions therefore, as required by 23 CFR 633.102(e).
  - (2) the Local Agency has the option to concur or not concur in the proposal of the apparent low bidder for work on which competitive bids have been received. The Local Agency must declare its concurrence or non-concurrence within 3 working days after said bids are publicly opened.
  - (3) by indicating its concurrence in such award, the Local Agency, acting by or through its duly authorized representatives, agrees to provide additional funds, subject to their availability and appropriation for that purpose, if required to complete the work under this Project if no additional federal-aid funds will be made available for the Project.
- c. If all or part of the construction work is to be accomplished by State personnel (i.e. by force account), rather than by a competitive bidding process, the State will ensure that all such force account work is accomplished in accordance with the pertinent State specifications and requirements with 23 CFR 635, Subpart B, Force Account Construction.

### Section 6. ROW Acquisition and Relocation

If the Project includes right of way, prior to this Project being advertised for bids, the State will certify in writing that all right of way has been acquired in accordance with the applicable State and federal regulations, or that no additional right of way is required.

Any acquisition/relocation activities must comply with: all applicable federal and State statutes and regulations, including but not limited to the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended (P.L. 91-646) and the Uniform Relocation Assistance and Real Property Acquisition Policies for Federal and Federally Assisted Programs as amended (49 CFR Part 24); CDOT's Right of Way Manual; and CDOT's Policy and Procedural Directives.

Allocation of Responsibilities are as follows:

- Federal participation in right of way acquisition (3111 charges), relocation (3109 charges) activities, if any, and right of way incidentals (expenses incidental to acquisition/relocation of right of way 3114 charges);
- Federal participation in right of way acquisition (3111 charges), relocation (3109 charges) but no participation in incidental expenses (3114 charges); or
- No federal participation in right of way acquisition (3111 charges) and relocation activities (3109 expenses).

Regardless of the option selected above, the State retains oversight responsibilities. The Local Agency's and the State's responsibilities for each option is specifically set forth in CDOT's Right of Way Manual. The manual is located at http://www.coloradodot.info/business/manuals/right-of-way.

If right of way is purchased for a State highway, including areas of influence of the State highway, the Local Agency shall immediately convey title to such right of way to CDOT after the Local Agency obtains title.

### Section 7. Utilities

If necessary, the State will be responsible for obtaining the proper clearance or approval from any utility company which may become involved in this Project. Prior to this Project being advertised for bids, the responsible party will certify in writing that all such clearances have been obtained.

### Section 8. Railroads

In the event the Project involves modification of a railroad company's facilities whereby the work is to be accomplished by railroad company forces, the State shall make timely application to the Public Utilities Commission requesting its order providing for the installation of the proposed improvements and not proceed with that part of the work without compliance. The State shall also establish contact with the railroad company involved for the purpose

of complying with applicable provisions of 23 CFR 646, subpart B, concerning federal-aid projects involving railroad facilities, including:

- 1. Executing an agreement setting out what work is to be accomplished and the location(s) thereof, and that the costs of the improvement shall be eligible for federal participation.
- 2. Obtaining the railroad's detailed estimate of the cost of the work.
- 3. Establishing future maintenance responsibilities for the proposed installation.
- 4. Prescribing future use or dispositions of the proposed improvements in the event of abandonment or elimination of a grade crossing.
- 5. Establishing future repair and/or replacement responsibilities in the event of accidental destruction or damage to the installation.

### Section 9. Environmental Obligations

The State shall perform all work in accordance with the requirements of the current federal and State environmental regulations including the National Environmental Policy Act of 1969 (NEPA) as applicable.

### Section 10. Maintenance Obligations

The Local Agency will maintain and operate the improvements constructed under this agreement at its own cost and expense during their useful life, in a manner satisfactory to the State. The Local Agency will make proper provisions for such maintenance obligations each year. Such maintenance and operations shall be conducted in accordance with all applicable statutes, ordinances and regulations. The State will make periodic inspections of the Project to verify that such improvements are being adequately maintained.

### Section 11. Record Keeping

The State shall maintain a complete file of all records, documents, communications, and other written materials, which pertain to the costs incurred under this agreement. The State shall maintain such records for a period of three (3) years after the date of termination of this agreement or final payment hereunder, whichever is later, or for such further period as may be necessary to resolve any matters which may be pending. The State shall make such materials available for inspection at all reasonable times and shall permit duly authorized agents and employees of the Local Agency and FHWA (if applicable) to inspect the Project and to inspect, review and audit the Project records.

### **Section 12.** Termination Provisions

This agreement may be terminated as follows:

- A. <u>Termination for Convenience</u>. The State may terminate this agreement at any time the State determines that the purposes of the distribution of moneys under the agreement would no longer be served by completion of the Project. The State shall effect such termination by giving written notice of termination to the Local Agency and specifying the effective date thereof, at least twenty (20) days before the effective date of such termination.
- B. Termination for Cause. If, through any cause, the Local Agency shall fail to fulfill, in a timely and proper manner, its obligations under this agreement, or if the Local Agency shall violate any of the covenants, agreements, or stipulations of this agreement, the State shall thereupon have the right to terminate this agreement for cause by giving written notice to the Local Agency of its intent to terminate and at least ten (10) days opportunity to cure the default or show cause why termination is otherwise not appropriate. In the event of termination, all finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs and reports or other material prepared by the Local Agency under this agreement shall, at the option of the State, become its property, and the Local Agency shall be entitled to receive just and equitable compensation for any services and supplies delivered and accepted.

Notwithstanding the above, the Local Agency shall not be relieved of liability to the State for any damages sustained by the State by virtue of any breach of the agreement by the Local Agency, and the State may withhold payment to the Local Agency for the purposes of mitigating its damages until such time as the exact amount of damages due to the State from the Local Agency is determined.

If after such termination it is determined, for any reason, that the Local Agency was not in default or that the Local Agency's action/inaction was excusable, such termination shall be treated as a termination for convenience, and the

rights and obligations of the Parties shall be the same as if the agreement had been terminated for convenience, as described herein.

### Section 13. Legal Authority

The Local Agency warrants that it possesses the legal authority to enter into this agreement and that it has taken all actions required by its procedures, by-laws, and/or applicable law to exercise that authority, and to lawfully authorize its undersigned signatory to execute this agreement and to bind the Local Agency to its terms. The person(s) executing this agreement on behalf of the Local Agency warrants that such person(s) has full authorization to execute this agreement.

### Section 14. Representatives and Notice

The State will provide liaison with the Local Agency through the State's Region Director, Region 2, 905 Erie Avenue, Pueblo, CO 81001. Said Region Director will also be responsible for coordinating the State's activities under this agreement and will also issue a "Notice to Proceed" to the Local Agency for commencement of the work. All communications relating to the day-to-day activities for the work shall be exchanged between representatives of the State's Transportation Region 2 and the Local Agency. All communication, notices, and correspondence shall be addressed to the individuals identified below. Either Party may from time to time designate in writing new or substitute representatives.

If to the State:
David Watt, P.E.
CDOT Region 2 Engineering – North Program
1480 Quail Lake Loop
Colorado Springs, Colorado 80906
719-227-3202
david.watt@state.co.us

If to the Local Agency:
Kathleen Krager, Transportation Manager
City of Colorado Springs
Public Works Department
30 S. Nevada Avenue, Suite 401
Colorado Springs, Colorado 80903
719-385-7628
kkrager@springsgov.com

### Section 15. Successors

Except as herein otherwise provided, this agreement shall inure to the benefit of and be binding upon the Parties hereto and their respective successors and assigns.

### Section 16. Third Party Beneficiaries

It is expressly understood and agreed that the enforcement of the terms and conditions of this agreement, and all rights of action relating to such enforcement, shall be strictly reserved to the State and the Local Agency. Nothing contained in this agreement shall give or allow any claim or right of action whatsoever by any other third person. It is the express intention of the State and the Local Agency that any such person or entity, other than the State or the Local Agency receiving services or benefits under this agreement, shall be deemed an incidental beneficiary only.

### **Section 17.** Governmental Immunity

Notwithstanding any other provision of this agreement to the contrary, no term or condition of this agreement shall be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protection, or other provisions of the Colorado Governmental Immunity Act, § 24-10-101, et seq., C.R.S., as now or hereafter amended. The Parties understand and agree that liability for claims for injuries to persons or property arising out of negligence of the State of Colorado, its departments, institutions, agencies, boards, officials and employees is controlled and limited by the provisions of § 24-10-101, et seq., C.R.S., as now or hereafter amended and the risk management statutes, § 24-30-1501, et seq., C.R.S., as now or hereafter amended.

### Section 18. Severability

To the extent that this agreement may be executed and performance of the obligations of the Parties may be accomplished within the intent of the agreement, the terms of this agreement are severable, and should any term or provision hereof be declared invalid or become inoperative for any reason, such invalidity or failure shall not affect the validity of any other term or provision hereof.

### Section 19. Waiver

The waiver of any breach of a term, provision, or requirement of this agreement shall not be construed or deemed as a waiver of any subsequent breach of such term, provision, or requirement, or of any other term, provision or requirement.

### Section 20. Entire Understanding

This agreement is intended as the complete integration of all understandings between the Parties. No prior or contemporaneous addition, deletion, or other amendment hereto shall have any force or effect whatsoever, unless embodied herein by writing. No subsequent novation, renewal, addition, deletion, or other amendment hereto shall have any force or effect unless embodied in a writing executed and approved pursuant to the State Fiscal Rules.

### Section 21. Survival of Agreement Terms

Notwithstanding anything herein to the contrary, the Parties understand and agree that all terms and conditions of this agreement and the exhibits and attachments hereto which may require continued performance, compliance or effect beyond the termination date of the agreement shall survive such termination date and shall be enforceable by the State as provided herein in the event of such failure to perform or comply by the Local Agency.

### Section 22. Modification and Amendment

This agreement is subject to such modifications as may be required by changes in federal or State law, or their implementing regulations. Any such required modification shall automatically be incorporated into and be part of this agreement on the effective date of such change as if fully set forth herein. Except as provided above, no modification of this agreement shall be effective unless agreed to in writing by both Parties in an amendment to this agreement that is properly executed and approved in accordance with applicable law.

### Section 23. Disputes

Except as otherwise provided in this agreement, any dispute concerning a question of fact arising under this agreement, which is not disposed of by agreement, will be decided by the Chief Engineer of the Department of Transportation. The decision of the Chief Engineer will be final and conclusive unless, within 30 calendar days after the date of receipt of a copy of such written decision, the Local Agency mails or otherwise furnishes to the State a written appeal addressed to the Executive Director of the Department of Transportation. In connection with any appeal proceeding under this clause, the Local Agency shall be afforded an opportunity to be heard and to offer evidence in support of its appeal. Pending final decision of a dispute hereunder, the Local Agency shall proceed diligently with the performance of the agreement in accordance with the Chief Engineer's decision. The decision of the Executive Director or his duly authorized representative for the determination of such appeals will be final and conclusive and serve as final agency action. This dispute clause does not preclude consideration of questions of law in connection with decisions provided for herein. Nothing in this agreement, however, shall be construed as making final the decision of any administrative official, representative, or board on a question of law.

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OLA #: 331001631 Routing #: 17-HA2-XC-00001

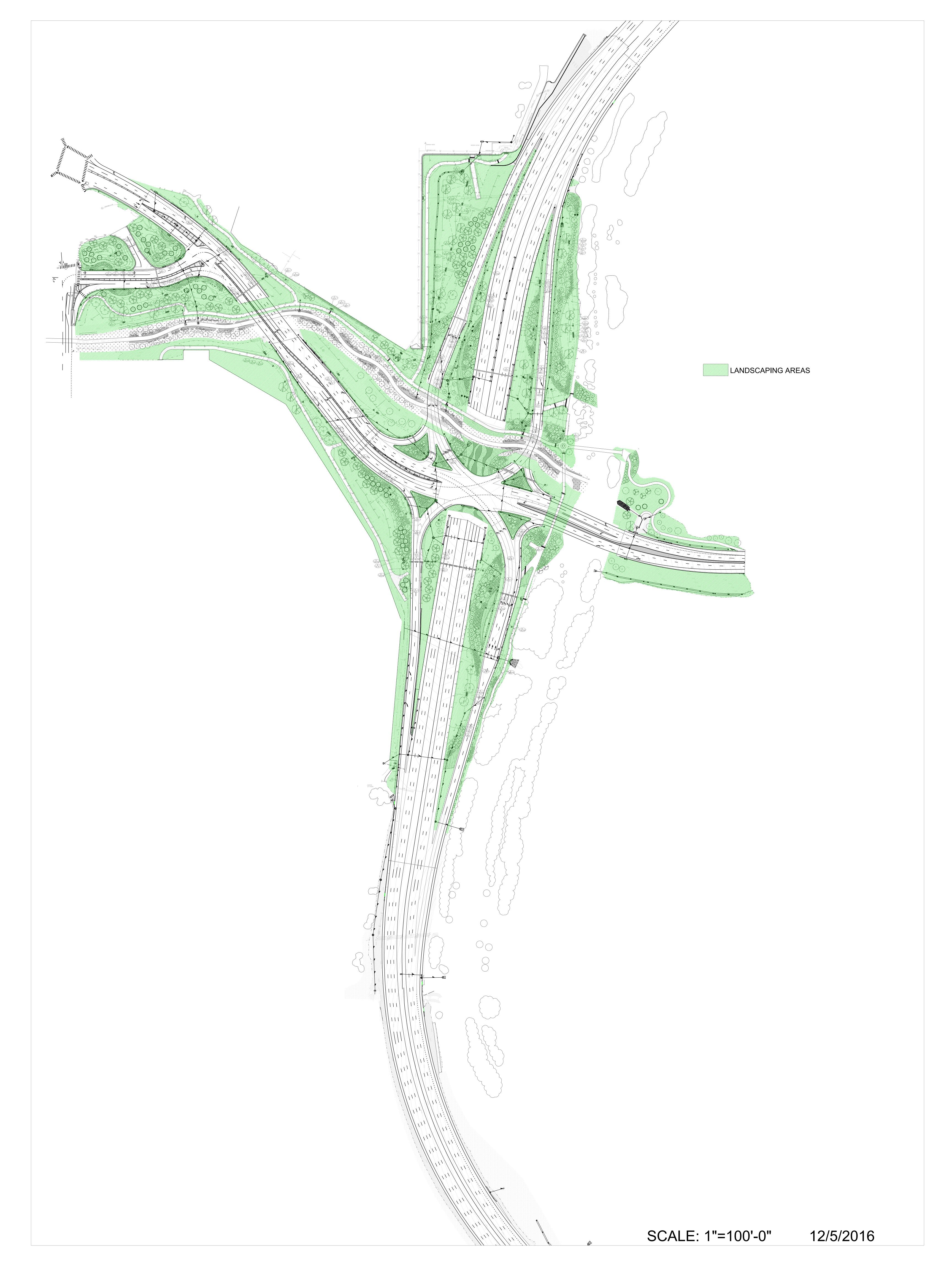
### THE PARTIES HERETO HAVE EXECUTED THIS CONTRACT

\* Persons signing for the Local Agency hereby swear and affirm that they are authorized to act on the Local Agency's behalf and acknowledge that the State is relying on their representations to that effect.

THE LOCAL AGENCY City of Colorado Springs  By: Title:	STATE OF COLORADO John W. Hickenlooper, GOVERNOR Colorado Department of Transportation
*Signature  Date:	By
2nd The Local Agency Signature [if Needed]	
By: Title:	
*Signature	
Date:	

### EXHIBIT A – SCOPE OF WORK

## SCOPE OF WORK



# **DEPARTMENT OF TRANSPORTATION STATE OF COLORADO**

CONSTRUCTION PLANS OF PROPOSED FEDERAL AID PROJECT NO. IM 0252-423 INTERSTATE HIGHWAY NO. 25 / US 24 **EL PASO COUNTY** CONSTRUCTION PROJECT CODE NO. 19039 Related Projects:

P. E. UNDER PROJECT:
Project Number
Project Code:

R.O.W. Projects:

R.O.W. Project Description

IM 0252-423 19039

RFC 24 - LANDSCAPE AND IRRIGATION - 07-07-2016

### **REVISION NOTES:**

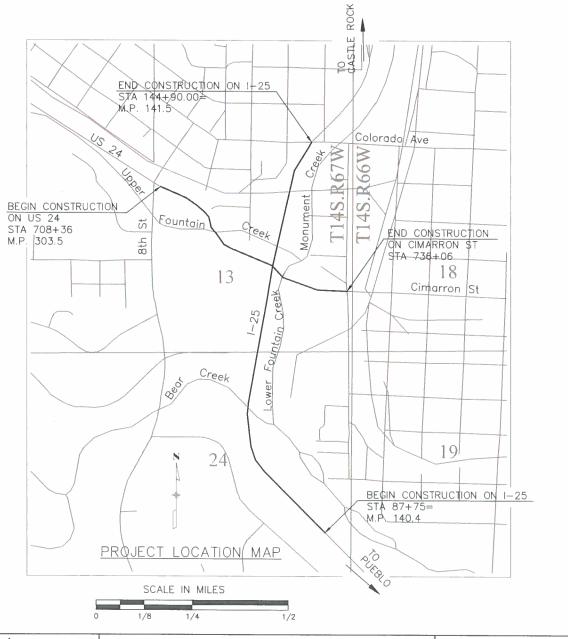
DESCRIPTION

SHEETS

### INDEX OF SHEETS

LD01-LD06 S01-S08 LS01-LS26 MP01-MP16 QW01-QW04 SB01-SB06 IR-1-IR-37

TITLE SHEET LANDSCAPE DETAILS SEEDING AND MULCHING PLANS LANDSCAPE PLANS MEDIAN PAVING PLANS QUADRANT WALL PLANS SB40 PLANS IRRIGATION PLANS



1	CONSULTING ENGINEERS ACRAEME	è
	TSIOUVARAS SIMMONS HOLDERNESS	,
	Horiz. Scale: As Noted Vert. Scale: As Not	ed
	File Name: 19039_Title SheetRFC.dwg	
	Print Date: 7/5/2016	

S	heet Revisions	
Date:	Comments	Init.

Colorado Department of Transportation 1480 Quail Lake Loop, Suite A Colorado Springs, CO 80906 Phone: 719—634—2323 FAX: 719—227—3298

DMW

Region 2

As Constructed		Contract Information		
1	Contractor:	KRAEMER NORTH AMER		
No Revisions:	Resident Engineer:	DAVE WATT, P.E.		
Revised:	Project Engineer:			
I I	PROJECT STARTED:	04-02-15 ACCEPTED:		
Void:	Cornments:			

# RFC 24 - LANDSCAPE AND IRRIGATION - 07-07-2016

Know what's below. Call before you dig.

### LANDSCAPE PLANS - QUANTITIES

DESCRIPTION	UNIT	UPLAND QTY.	SB40 QTY.	TOTAL QTY.
CLEARING AND GRUBBING	SF	561,200	0	561,200
SELECTIVE THINNING (TREE REMOVAL)	SF	307,960	0	307,960
SOIL PREP/IMPORT TOPSOIL (3" DEPTH)	CY	12,500	600	13,100
NATIVE SEED	SF	1,050,000	0	1,050,000
EROSION CONTROL BLANKET (NEDIA 1200) **	SF	142,250	66,300	208,550
RIPARIAN SEED	SF	32,000	66,300	98,300
1 1/2* ROCK MULCH	SF	17,000	0	17,000
5-12-INCH MTN. GRANITE ROCK	SF	19,600	0	19,600
GRAY STABILIZED CRUSHER FINES	SF	6,450	0	6,450
DECIDUOUS SHADE TREES (2" CAL.)	EA	50	0	50
ORNAMENTAL TREES (2" CAL.)	EA	90	0	90
EVERGREEN TREES (8' HT.)	EA	114	0	114
DECIDUOUS SHRUBS (#5)	EA	1,256	0	1,256
RIPARIAN WILLOW SHRUB PLANTINGS	EA	850	2,290	3,140
GRASSES (#1)	EA	2,165	0	2,165
LANDSCAPE MAINTENANCE	LS	1	1	1
5-12-INCH COLORADO ROSE ROCK	SF	4,850	0	4,850
ORNAMENTAL TREE (6 FOOT CLUMP)	EA	51	0	51
DECIDUOUS SHRUBS (1 QT.)	EA	189	381	570
GORILLA HAIR MULCH	SF	170,000	0	170,000
METAL LANDSCAPE BORDER (3/16 x 5-1/2")	LF	2,800	0	2,800
LANDSCAPE BOULDERS	EA	30	0	30
DORMANT LOG CUTTINGS	EA	0	168	168
DECORATIVE BOULDER WALL	LF	320	0	320
MEDIAN COVER MATERIAL (STAMPED BRICK)	SF	8,200	0	8,200
MEDIAN COVER MATERIAL (CUSTOM PATTERN)	SF	19,700	0	19,700
CONCRETE PAVEMENT (6") ***	SF	1,600	0	1,600
	<del></del>	1		

- \* INDICATES PAY ITEM THAT WAS NOT INCLUDED ON FORM K-1.
- \*\* EROSION CONTROL BLANKET SHALL BE USED FOR SLOPES STEEPER THAN 3:1 PER TECHNICAL REQUIREMENTS SECTION 17.2.10 SEEDING.
- \*\*\* CONCRETE PAVEMENT (6") ACCOUNTS FOR MAINTENANCE PARKING SLABS AT PORKCHOP ISLAND LOCATIONS.

### UPLAND PLANT SCHEDULE

KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	WATER USE
DECIDUOL	JS TREES		A STATE OF THE STA		1	
CE OC	17	CELTIS OCCIDENTALIS	WESTERN HACKBERRY	2" CAL	AS SHOWN	LOW
QU BI	33	QUERCUS BICOLOR	SWAMP WHITE OAK	2" CAL	AS SHOWN	LOW
ORNAMEN	ITAL TREES	•				
AC GI	24	ACER GINNALA 'FLAME'	AMUR MAPLE	2" CAL	AS SHOWN	LOW
AM GR	22	AMELANCHIER X GRANDIFLORA 'AUTUMN BRIL'	AUTUMN BRILLIANCE SERVICEBERRY	6' clump	AS SHOWN	LOW
AM GR	14	AMELANCHIER X GRANDIFLORA 'AUTUMN BRIL'	AUTUMN BRILLIANCE SERVICEBERRY	2" CAL	AS SHOWN	LOW
CR AM	29	CRATAEGUS AMBIGUA	RUSSIAN HAWTHORN	6' clump	AS SHOWN	LOW
CR AM	12	CRATAEGUS AMBIGUA	RUSSIAN HAWTHORN	2" CAL	AS SHOWN	LOW
PR PA	40	PRUNUS PADUS 'SUMMER GLOW'	PURPLE LEAF MAYDAY TREE	2" CAL	AS SHOWN	LOW
EVERGRE	EN TREES					
PI ED	59	PINUS EDULIS	PINON PINE	8' HT.	AS SHOWN	LOW
Pl NI	55	PINUS NIGRA	AUSTRIAN PINE	8' HT.	AS SHOWN	LOW
DECIDUOL	JS SHRUBS					
AM AL	19	AMELANCHIER ALNIFOLIA	SASKATOON SERVICEBERRY	5 GAL	8' O.C.	LOW
AM FR	47	AMORPHA FRUTICOSA	FALSE INDIGO	5 GAL	12' O.C.	LOW
CO SE	117	CORNUS SERICEA COLORADENSE	COLORADO DOGWOOD	5 GAL	9' O.C.	MED
EL CO	126	ELEAGNUS COMMUTATA	SILVERBERRY	5 GAL	8' O.C.	LOW
FR AL	114	FRANGULA ALNUS 'FINE LINE'	TALL FERNLEAF BUCKTHORN	5 GAL	5' O.C.	LOW
PR AM	108	PRUNUS AMERICANA	NATIVE PLUM	5 GAL	10' O.C.	LOW
PR BE	346	PRUNUS BESSEYII	WESTERN SANDCHERRY	5 GAL	6' O.C.	LOW
RI AU	76	RIBES AUREUM	GOLDEN CURRANT	5 GAL	6' O.C.	LOW
RH AR	303	RHUS AROMATICA 'GROW-LOW'	GROW-LOW SUMAC	5 GAL	6' O.C.	LOW
PERENNIA	ALS / GRASSES	3				•
CA AC	1,150	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER'	KARL FOERSTER FEATHER REED GRASS	1 GAL	3' O.C.	LOW
HE SE	686	HELICOTRICHON SEMPERVIRENS	BLUE AVENA GRASS	1 GAL	3' O.C.	LOW
PO FR	329	POTENTILLA FRUTICOSA 'YELLOW GEM'	YELLOW GEM POTENTILLA	1 GAL	2.5' O.C.	LOW

NOTE: SB40 PLANT SCHEDULE IS NOT SHOWN. SEE SB40 SHEETS FOR SB40 QUANTITIES.

### NATIVE SEED

BOTANICAL NAME *	COMMON NAME	LBS. p.
DALEA PURPUREUM PENSTEMON STRICTUS ACHNATERUM HYMENOIDES BOUTELOUA CURTIPENDULA BOUTELOUA GRACILIS BUCHLOE DACTYLOIDES CALAMOVILFA LONGIFOLIA ELYMUS LANCEOLATUS LANCEOLATUS 'CRITANA' NASSELLA VIRIDULA PASCOPYRUM SMITHII 'ARRIBA' SPOROBOLUS AIROIDES	PURPLE PRAIRIE CLOVER ROCKY MOUNTAIN PENSTEMON INDIAN RICEGRASS SIDEOATS GRAMA BLUE GRAMA BUFFALOGRASS PRAIRIE SANDREED THICKSPIKE WHEATGRASS GREEN NEEDLEGRASS WESTERN WHEATGRASS ALKALI SACATON	0.90 0.90 1.8 3.6 1.8 1.8 3.6 5.4 3.6 9.0 3.6

\* NOMENCLATURE FOLLOWS CITY OF COLORADO SPRINGS DRAINAGE CRITERIA MANUAL. 36.0 °

NOTE: RESEED ALL DISTURBED AREAS WITH MIX INDICATED ABOVE.

### SHEET INDEX

LD01-LD06 S01-S08 LS01-LS26 MP01-MP15 QW01-QW04 SB01-SB06

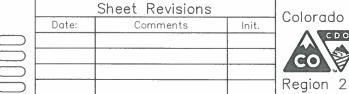
LANDSCAPE DETAILS SEEDING & MULCHING PLANS LANDSCAPE PLANS MEDIAN PAVING PLANS QUADRANT WALL PLANS SB40 PLANS

\*\* RATES ARE FOR DRILLED; DOUBLE IF HAND-BROADCASTED.

Print Date: 7/5/2016			
File Name: 19039_Landscap	eRFC.dwg		
Horiz. Scale: As Noted	Vert. Scale:	As Noted	

TSIOUVARAS SIMMONS HOLDERNESS CONSULTING ENGINEERS





Colorado Department of Transportation

7	Color	ado S	prings	Loop, , CO -2323	8090	6	27-3	3298
							DM	W

As Constructed	I-25/CIMARRON ST (US 24) INTERCHANGE		Project No./Code	
No Revisions:	LANDSCAPE	IM 0252-423		
Revised:	Designer:	Structure	19039	
	Detailer:	Numbers		-
Void:	Sheet Subset: LANDSCAPE	Subset Sheets: LD01 of 06	Sheet Number 24-1	ŀ

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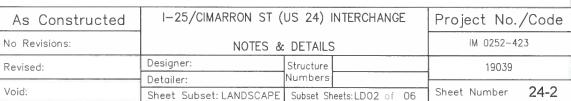
### Sheet Revisions Date: Comments Init. Vert. Scale: As Noted

Colorado Department of Transportation

Region 2

480 Quail Lake Loop, Suite A Colorado Springs, CO 80906 Phone: 719-634-2323 FAX: 719-227-3298

Revised: DMW Void:



### **GENERAL LANDSCAPE NOTES:**

- 1. ALL PLANT MATERIALS SHALL BE TRUE TO TYPE, SIZE, SPECIES, QUALITY, SYMMETRICAL FORM, HAVE FULL BRANCHING, AND FREE OF INJURY, BROKEN ROOT BALLS, PESTS, AND DISEASES, AS WELL AS CONFORM TO THE MINIMUM REQUIREMENTS DESCRIBED IN THE "AMERICAN STANDARDS FOR NURSERY STOCK."
- 2. STAKE ALL TREE LOCATIONS FOR APPROVAL BY CDOT PRIOR TO INSTALLATION.
- 3. NO SUBSTITUTIONS OF PLANT MATERIAL SHALL BE MADE WITHOUT CONSENT OF CDOT, ALL PLANT MATERIAL TAGS SHALL REMAIN ON TREES UNTIL FINAL ACCEPTANCE.
- 4. THE CONTRACTOR SHALL VERIFY THE LOCATION OF AND PROTECT ALL UTILITIES AND STRUCTURES PRIOR TO AND DURING WORK, DAMAGE TO UTILITIES AND STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE AND TO THE SATISFACTION OF THE CITY
- 5, PROPOSED TREES SHALL BE LOCATED A MINIMUM OF 15 FEET FROM WATER OR WASTEWATER MAINLINES AND A MINIMUM OF 6 FEET FROM ELECTRIC AND GAS DISTRIBUTION LINES.
- 6. CONTRACTOR SHALL OBTAIN A LABORATORY TOPSOIL ANALYSIS REPORT TO PROVIDE ANALYSIS OF SOIL FERTILITY AND RECOMMENDATIONS FOR SOIL AMENDMENTS, FERTILIZER PRODUCTS, AND APPLICATION RATES FOR PLANT BED AREAS. CONTRACTOR SHALL PROVIDE CITY PARKS A COPY OF SOILS REPORT.
- 7, ALL TOPSOIL SHALL BE A LOAM OR SANDY LOAM, IMPORTED TOPSOIL SHALL BE FURNISHED BY THE CONTRACTOR AND SHALL BE A NATURAL, FRIABLE SOIL REPRESENTATIVE OF PRODUCTIVE SOILS, ONSITE TOPSOIL MAY BE USED, BUT SHALL BE AMENDED TO MEET SPECIFICATIONS.
- 8. LANDSCAPE EDGING SHALL BE COMMERCIAL GRADE STEEL LANDSCAPE EDGING, COLOR TO BE DARK GREEN, EDGING SHALL BE 3/16" THICKNESS WITH A 5-1/2" MIN. DEPTH AND STAKED TO A MIN. 12" DEPTH. PROVIDE EDGING AROUND ALL AREAS INDICATED ON PLAN. THE TOP OF ALL EDGING MATERIALS SHALL BE SET FLUSH WITH FINISHED GRADE OF PLANT BED.
- 9. MULCHING (DECORATIVE) SHALL BE
  - (A) 1-1/2-INCH ROCK MULCH W/ GRAY OR TAN HUES, INSTALLED TO A UNIFORM DEPTH OF 4 INCHES, MULCH TO BE INSTALLED IN ORNAMENTAL GRASS BEDS, CONTRACTOR SHALL SUBMIT SAMPLE TO COOT FOR APPROVAL AT LEAST ONE WEEK PRIOR TO CONSTRUCTION
  - (B) 5-12-INCH COLORADO ROSE ROCK INSTALLED TO A DEPTH OF 12 INCHES, ROCK TO BE INSTALLED BENEATH I-25 BRIDGE. CONTRACTOR SHALL SUBMIT SAMPLE TO COOT FOR APPROVAL AT LEAST ONE WEEK PRIOR TO CONSTRUCTION (C) 5-12-INCH MOUNTAIN GRANITE ROCK INSTALLED TO A DEPTH OF 12 INCHES, ROCK TO BE INSTALLED BENEATH I-25 BRIDGE. CONTRACTOR SHALL SUBMIT SAMPLE TO COOT FOR APPROVAL AT LEAST ONE WEEK PRIOR TO CONSTRUCTION.
- 10. MULCHING SHALL BE GORILLA HAIR MULCH OR APPROVED EQUIVALENT AND HAVING MINIMUM DIMENSIONS OF 1/4-1/2 WIDTH AND 3-4 INCH LENGTH, MULCH SHALL BE INSTALLED TO A MINIMUM UNIFORM DEPTH OF 3 INCHES, GORILLA HAIR MULCH SHALL BE PLACED IN ALL PLANT BEDS AS INDICATED ON PLANS AND IN 6-FOOT DIAMETER TREE SAUCERS IN SEEDED AREAS (NOTE: SAUCER DIAMETER MAY BE REDUCED TO 4-FOOT DIA, ON 3:1 SLOPES AND GREATER), CONTRACTOR SHALL SUBMIT SAMPLE TO COOT FOR APPROVAL AT LEAST ONE WEEK PRIOR TO CONSTRUCTION.
- 11. THE INFORMATION SHOWN ON THESE PLANS CONCERNING THE TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO, THE CONTRACTOR SHALL CONTRACT THE UTILITY NOTIFICATION CENTER OF COLORADO AT 811 (1-800-922-1987) AT LEAST 3 DAYS (2 DAYS NOT INCLUDING THE DAY OF NOTIFICATION) PRIOR TO ANY EXCAVATION OR OTHER EARTHWORK
- 12. THE NOTES, DETAILS, DIMENSIONS, AND SPECS SHOWN ON THESE PLANS CONFORM TO CITY OF COLORADO SPRINGS STANDARDS AS WELL AS EXPLICIT PROJECT SPECIFICATIONS, WHERE CONFLICT OCCURS BETWEEN THE CITY STANDARDS AND THE PROJECT SPECIFICATIONS, THE PROJECT SPECS SHALL GOVERN
- 13. ENSURE ALL DECORATIVE BOULDER WALLS ARE MINIMUM 5'-0" FROM FACE OF CURB
- 14. REMOVE ALL TREE WRAP FROM TREES ON MARCH 31 IN PIKES PEAK REGION
- 15. SEE DRAINAGE PLANS FOR SLOPE PROTECTION



Horiz. Scale: As Noted 

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**TSIOUVARAS SIMMONS HOLDERNESS** CONSULTING ENGINEERS

7/5/2016

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### NOTES:

- MARK THE NORTH SIDE OF TREE IN THE NURSERY, AND ROTATE TREE TO FACE NORTH AT THE SITE WHENEVER POSSIBLE.
- AT TIME OF PLANTING, DO NOT REMOVE OR CUT LEADER AND PRUNE ONLY DEAD OR BROKEN BRANCHES, CROSS OVER BRANCHES, AND WEAK OR NARROW CROTCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED. HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.
- 3. STRUCTURAL PRUNING SHOULD NOT BEGIN UNTIL AFTER ESTABLISHMENT PERIOD,
- 4. KEEP PLANTS MOIST AND SHADED UNTIL PLANTING.
- 5. DO NOT FERTILIZE FOR AT LEAST ONE GROWING SEASON.
- 6. AMENDED BACKFILL SHALL BE 1/3 COMPOST (PREFERABLY CLASSIFIED) AND 2/3 NATIVE AND/OR IMPORTED TOPSOIL.
- 7. WRAP TRUNK ON EXPOSED SITES AND SPECIES WITH THIN BARK. USE ELECTRICAL OR DUCT TAPE, NOT TWINE.
- 8. COORDINATE WITH CITY FORESTRY FOR CURRENT INSECT AND DISEASE RECOMMENDATIONS PRIOR TO PLANTING.
- 9. DEEP WATER ALL PLANTS AT TIME OF PLANTING.

### NOTES:

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- WRAP TRUNK ON EXPOSED SITES AND SPECIES WITH THIN BARK. USE ELECTRICAL OR DUCT TAPE, NOT TWINE.
   OCTOBER 31 AND REMOVE MARCH 31 FOR THE PIKES PEAK REGION.
- 8. COORDINATE WITH CITY FORESTRY FOR CURRENT INSECT AND DISEASE RECOMMENDATIONS PRIOR TO PLANTING.
- 9. DEEP WATER ALL PLANTS AT TIME OF PLANTING.



1) DECIDUOUS TREE PLANTING DETAIL
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2 DECIDUOUS TREE PLANTING ON SLOPES DETAIL

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Region 2

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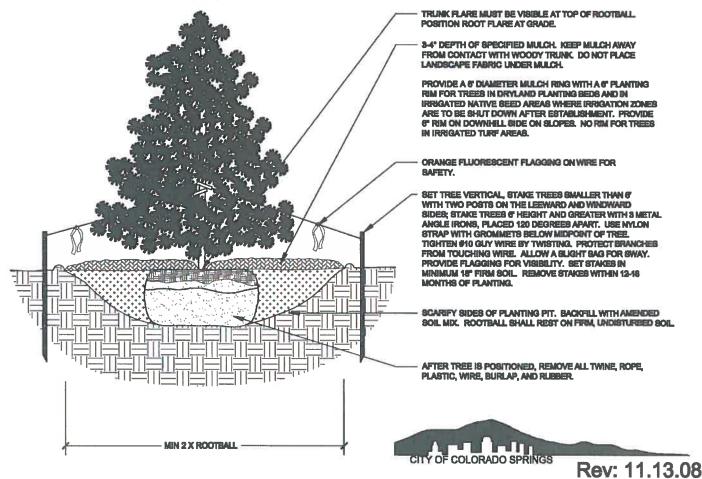
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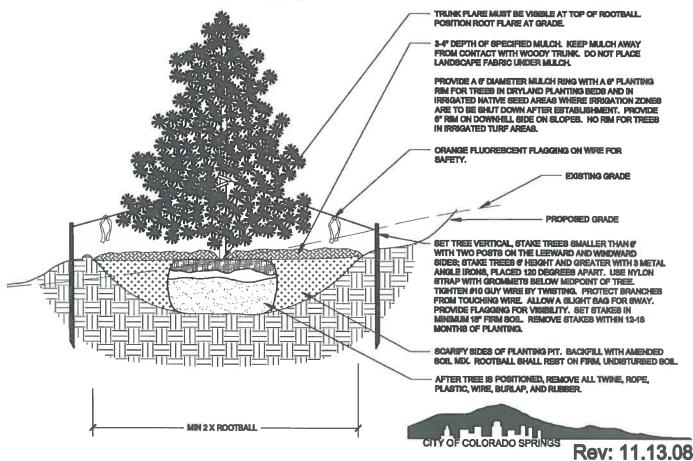
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### NOTES:

- 1. DO NOT REMOVE OR CUT LEADER.
- 2 PRUNE ONLY DEAD OR BROKEN BRANCHES IMMEDIATELY PRIOR TO PLANTING.
- 3. DO NOT REMOVE ANY DOUBLE LEADER, UNLESS OTHERWISE DIRECTED BY OWNERS REPRESENTATIVE.
- 4. KEEP PLANTS MOIST AND SHADED UNTIL PLANTING.
- 5. AMENDED BACKFILL SHALL BE 1/3 COMPOST (PREFERABLY CLASSIFIED) AND 2/3 NATIVE AND/OR IMPORTED TOPSOIL
- 6. MARK THE NORTH SIDE OF TREE IN THE NURSERY, AND ROTATE TREE TO FACE NORTH AT THE SITE WHENEVER POSSIBLE.
- 7. PINE AND SPRUCE TREES TO BE SPRAYED FOR IPS BARK BEETLE PRIOR TO PLANTING. COORDINATE WITH CITY FORESTRY FOR CURRENT INSECT AND DISEASE RECOMMENDATIONS PRIOR TO PLANTING.
- 8. ALL TREES TO BE DEEP WATERED AT TIME OF PLANTING.



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- AMENDED BACKFILL SHALL BE 1/3 COMPOST (PREFERABLY CLASSIFIED) AND 2/3 NATIVE AND/OR IMPORTED TOPSOIL.
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- 7. PINE AND SPRUCE TREES TO BE SPRAYED FOR IPS BARK BEETLE PRIOR TO PLANTING. COORDINATE WITH CITY FORESTRY FOR CURRENT INSECT AND DISEASE RECOMMENDATIONS PRIOR TO PLANTING.
- 8. ALL TREES TO BE DEEP WATERED AT TIME OF PLANTING.



EVERGREEN TREE PLANTING ON SLOPES DETAIL

As Constructed

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Region 2

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I-25/CIMARRON ST (US 24) INTERCHANGE

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**EVERGREEN TREE PLANTING DETAIL** 

24 - LANDSCAPE AND IRRIGATION - 07-07-2016

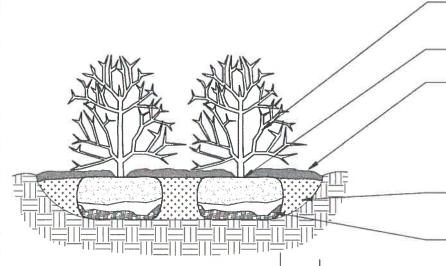
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- 1. PRUNE ONLY DEAD OR BROKEN BRANCHES AND WEAK OR NARROW CROTCHES.
- 2. KEEP PLANTS MOIST AND SHADED UNTIL PLANTING.
- 3. DO NOT FERTILIZE FOR AT LEAST ONE GROWING SEASON.
- 4. AMENDED BACKFILL SHALL BE 1/3 COMPOST (PREFERABLY CLASSIFIED) AND 2/3 NATIVE AND/OR IMPORTED TOPSOIL

12° MIN

- 5. ALL SHRUBS IN ROCK AREAS TO RECEIVE SHREDDED MULCH RINGS.
- 6. DEEP WATER ALL PLANTS AT TIME OF PLANTING.



SET SHRUBS VERTICAL. SHRUB SPACING AS PER PLANS. LAYOUT VARIES. FINISHED GRADE OF SHRUB BED TO BE 2" BELOW ADJACENT FINISH GRADE AT EDGE TO HOLD

PLANT TOP OF ROOTBALL AT GRADE.

3-4" SPECIFIED ORGANIC MULCH. PROVIDE 6" PLANTING RIM FOR SHRUBS NOT IN PLANTING BED. PROVIDE SAUCER ON DOWNHILL SIDE ON SLOPES. NO PLANTING RIM FOR SHRUBS IN PLANTING BED. KEEP MULCH AWAY FROM CONTACT WITH

SCARIFY SIDES OF PLANTING PIT. BACKFILL WITH AMENDED SOIL MDC. ROOTBALL SHALL REST ON FIRM, UNDISTURBED SOIL.

REMOVE ALL PACKAGING MATERIAL. FOR POT BOUND PLANTS ONLY: MAKE 4-5 VERTICAL CUTS IN ROOTBALL 1° DEEP. PLANT

FOR ROOT BIND AT BOTTOM OF BALL: SPLIT ROOTBALL VERTICALLY FROM BOTTOM HALFWAY TO TOP. SPREAD THE TWO HALVES OVER A MOUND OF SOIL IN THE PLANTING HOLE.



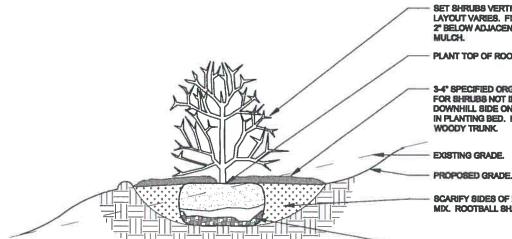
Rev: 11.13.08

### NOTES:

- 1. PRUNE ONLY DEAD OR BROKEN BRANCHES AND WEAK OR NARROW CROTCHES.
- 2. KEEP PLANTS MOIST AND SHADED UNTIL PLANTING.
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PLANT BED

12" MIN

SET SHRUBS VERTICAL. SHRUB SPACING AS PER PLANS. LAYOUT VARIES. FINISHED GRADE OF SHRUB BED TO BE 2" BELOW ADJACENT FINISH GRADE AT EDGE TO HOLD

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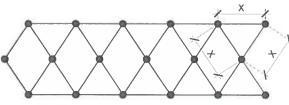
REMOVE ALL PACKAGING MATERIAL. FOR POT BOUND PLANTS ONLY: MAKE 4-5 VERTICAL CUTS IN ROOTBALL 1" DEEP. PLANT

FOR ROOT BIND AT BOTTOM OF BALL: SPLIT ROOTBALL VERTICALLY FROM BOTTOM HALFWAY TO TOP. SPREAD THE TWO HALVES OVER A MOUND OF SOIL IN THE PLANTING HOLE.



Rev: 11.13.08

SHRUB PLANTING ON SLOPES DETAIL



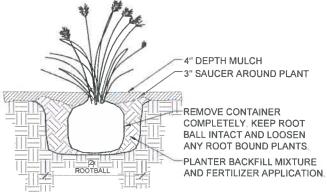
PLANT BED

1. FOR DIMENSIONS OF 'X', SEE PLANT SCHEDULE.

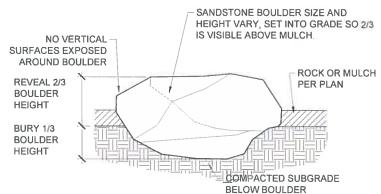
2. ALL SHRUB AND PERENNIAL PLANTINGS SHALL BE SPACED TRIANGULARLY AT THE DIMENSIONS INDICATED ON THE PLANT SCHEDULE.

PLANT SPACING DETAIL

SHRUB PLANTING DETAIL



PERENNIAL PLANTING DETAIL



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LANDSCAPE BOULDER

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LANDSCAPE AND IRRIGATION - 07-07-2016

24 =

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Figure 1: When removing a branch, always cut outside the branch bark ridge and collar. Do not make a flush cut.

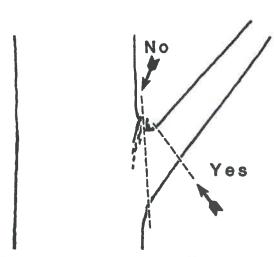


Figure 2: Branches that do not have a distinct collar should be cut at a right angle to the branch outside of the branch bark ridge.

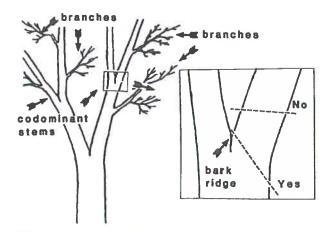


Figure 3: Trees have both branches and stems that look like branches, called, codominant stems as shown on the left. If a codominant stem must be removed, cut at an angle outside of the bark ridge as shown in the insert at right. Avoid leaving any stub.

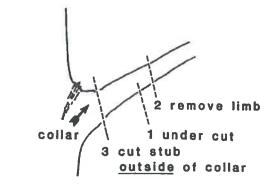


Figure 4: When removing heavy limbs, first make an undercut several inches outside of the collar. Then remove limb by a second cut an inch or so outside of the first cut. Remove stub with a third cut just outside of the collar. .

- 1, THE CONTRACTOR SHALL BE RESPONSIBLE TO SCHEDULE AND PARTICIPATE IN A WALK-THROUGH OF THE SITE WITH THE ENGINEER, CDOT, AND A CITY REPRESENTATIVE TO MARK/TAG TREES TO BE REMOVED OR
- 2, ALL TRIMMING, PRUNING AND REMOVAL WORK IS TO BE ACCOMPLISHED USING THE AMERICAN NATIONAL STANDARD INSTITUTE STANDARDS (ANSI A 300-1995 SECTION 5.3.3.2).
- 3. THIS WORK SHALL BE DONE BY A CONTRACTOR OR SUBCONTRACTOR WHO IS A QUALIFIED TREE SURGEON AND A MEMBER OF THE NATIONAL ARBORIST ASSOCIATION, THE FIRM'S OR INDIVIDUAL'S NAME AND QUALIFICATIONS SHALL BE SUBMITTED AT THE PRE-CONSTRUCTION CONFERENCE FOR THE ENGINEER'S APPROVAL. A LIST OF REFERENCES AND OTHER CLIENTS SHALL BE INCLUDED WITH THE QUALIFICATIONS STATEMENT, A WRITTEN DESCRIPTION OF WORK METHODS AND TIME SCHEDULES SHALL BE SUBMITTED AND APPROVED IN WRITING BY THE ENGINEER PRIOR TO WORK COMMENCING.
- 4, ALL WORK SHALL BE DONE ACCORDING TO THE FOLLOWING REQUIREMENTS:
  - 1, TRIMMING AND PRUNING SHALL BE DONE WITH PROPER, SHARP, CLEAN TOOLS IN SUCH A MANNER AS TO PRESERVE THE NATURAL CHARACTER OF THE TREE.
  - 2. ALL FINAL CUTS SHALL LEAVE NO PROJECTIONS ON OR OFF THE BRANCH AND SHALL NOT BE CUT SO CLOSE AS TO ELIMINATE THE BRANCH COLLAR.
  - 3. TO AVOID BARK STRIPPING, ALL BRANCHES 2 INCHES IN DIAMETER AND LARGER SHALL BE CUT USING THE 3-CUT METHOD, THESE BRANCHES SHALL BE LOWERED TO THE GROUND BY PROPER
  - 4. TOOLS USED ON TREES KNOWN OR FOUND TO BE DISEASED, SHALL BE DISINFECTED WITH ALCOHOL BEFORE THEY ARE USED ON OTHER TREES.
  - 5. STRUCTURAL WEAKNESSES, DECAYED TRUNK OR BRANCHES, OR SPLIT CROTCHES SHALL BE REPORTED TO THE ENGINEER
  - 6, WHEN CUTTING BACK OR TOPPING TREES, THE CONTRACTOR SHALL USE THE DROP-CROTCH METHOD AND AVOID CUTTING BACK TO SMALL SUCKERS, SMALLER LIMBS AND TWIGS SHALL BE REMOVED IN SUCH A MANNER SO AS TO LEAVE THE FOLIAGE PATTERN EVENLY DISTRIBUTED.
  - 7. WHEN REDUCING SIZE (CUT BACK OR TOPPING) NOT MORE THAN ONE-THIRD OF THE TOTAL AREA SHALL BE REDUCED AT A SINGLE OPERATION.
  - 8. CLIMBING SPIKES SHALL NOT BE USED ON TREES NOT SCHEDULED FOR REMOVAL
  - F. MAKE SMOOTH CUTS ON ANY SEVERED TREE ROOTS GREATER THAN 2 INCHES DIAMETER. DO NOT RIP OR TEAR, BY EXCAVATION EQUIPMENT, ROOTS OF TREES TO REMAIN.
  - G. FERTILIZERS, INSECT SPRAYS, OR OTHER CHEMICALS SHALL NOT BE APPLIED BEFORE OR DURING ROOT OR BRANCH PRUNING PROCESSES.
- 5. CONTRACTOR SHALL PROMPTLY REPORT ANY TREES DAMAGED OR SCARRED DURING CONSTRUCTION TO THE ENGINEER FOR ASSESSMENT OF DAMAGES. DAMAGED OR DESTROYED TREES THAT WERE SCHEDULED TO BE SAVED SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.

6, TREE STUMPS WITHIN THE ROADWAY PRISM OR WITHIN 10 FEET OF THE EDGES OF ROADWAY PAVEMENTS SHALL BE COMPLETELY REMOVED AND DISPOSED OFF THE PROJECT SITE, ALL OTHER TREE STUMPS WITHIN THE PROJECT SHALL BE GROUND 3 FEET BELOW FINISHED GRADE. THE AESTHETIC PLANS AND DETAILS PROVIDE LIMITS OF CLEARING/GRUBBING AND SELECTIVE THINNING ACTIVITIES.

7. WHEN TREES HAVE BEEN DAMAGED ABOVE 10 INCH CALIPER, CONTRACTOR SHALL BE LIABLE FOR APPRAISED VALUE BASED UPON THE OFFICIAL CURRENT PUBLICATION OF THE INTERNATIONAL SOCIETY
ARBORICHI TURE GUIDE FOR BLANT ARBORICAL C. THE VALUE ARBORICHI TURE. ARBORICULTURE, GUIDE FOR PLANT APPRAISALS. THE VALUE OF SUCH TREES OR SHRUBS SHALL CALCULATED ACCORDING TO THE FOLLOWING FORMULA:

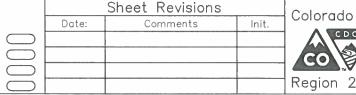
(TREE SIZE) X (SPECIES) X (LOCATION) X (CONDITION) X (ARBORIST) = TREE VALUE

TSIOUVARAS SIMMONS HOLDERNESS

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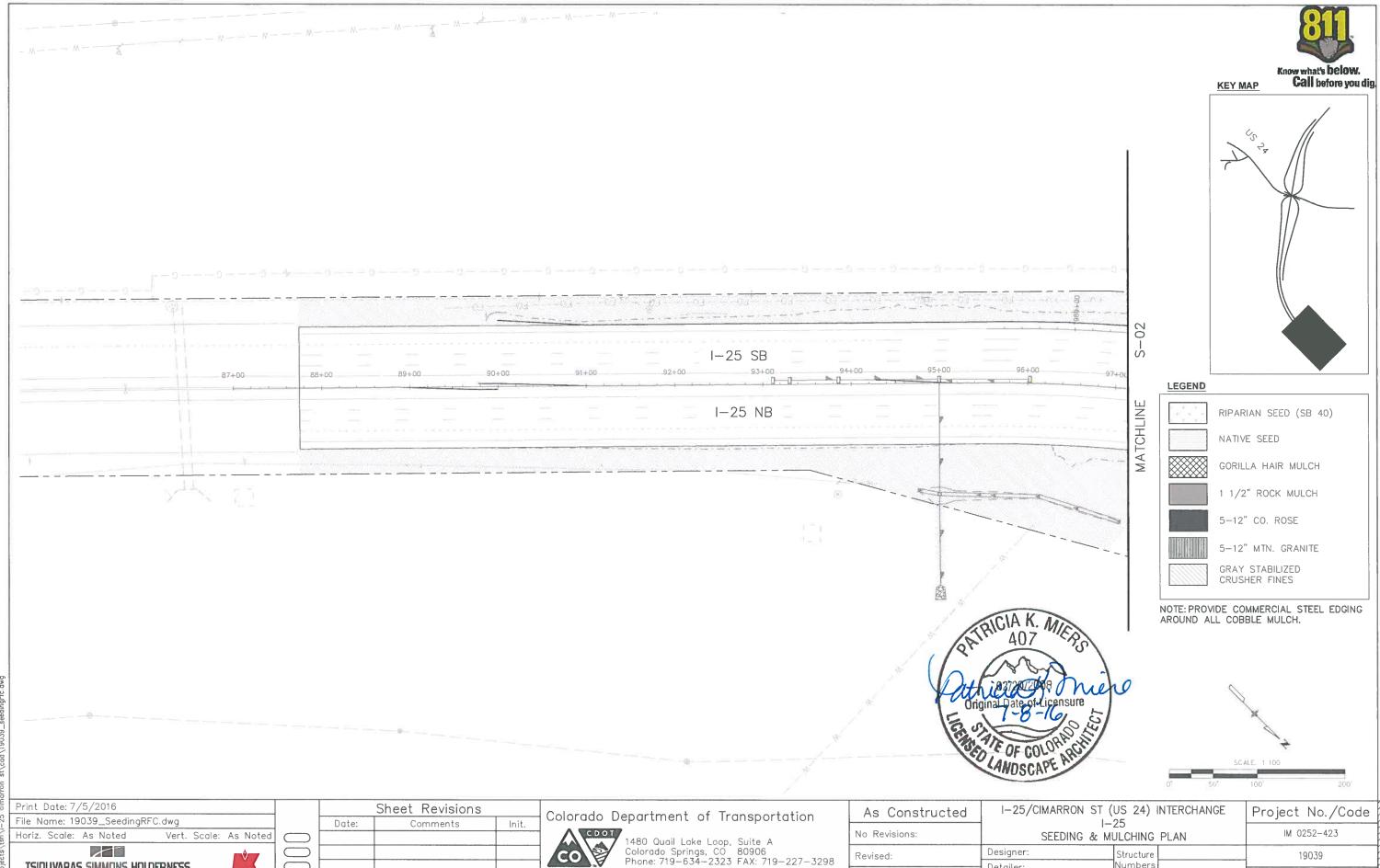




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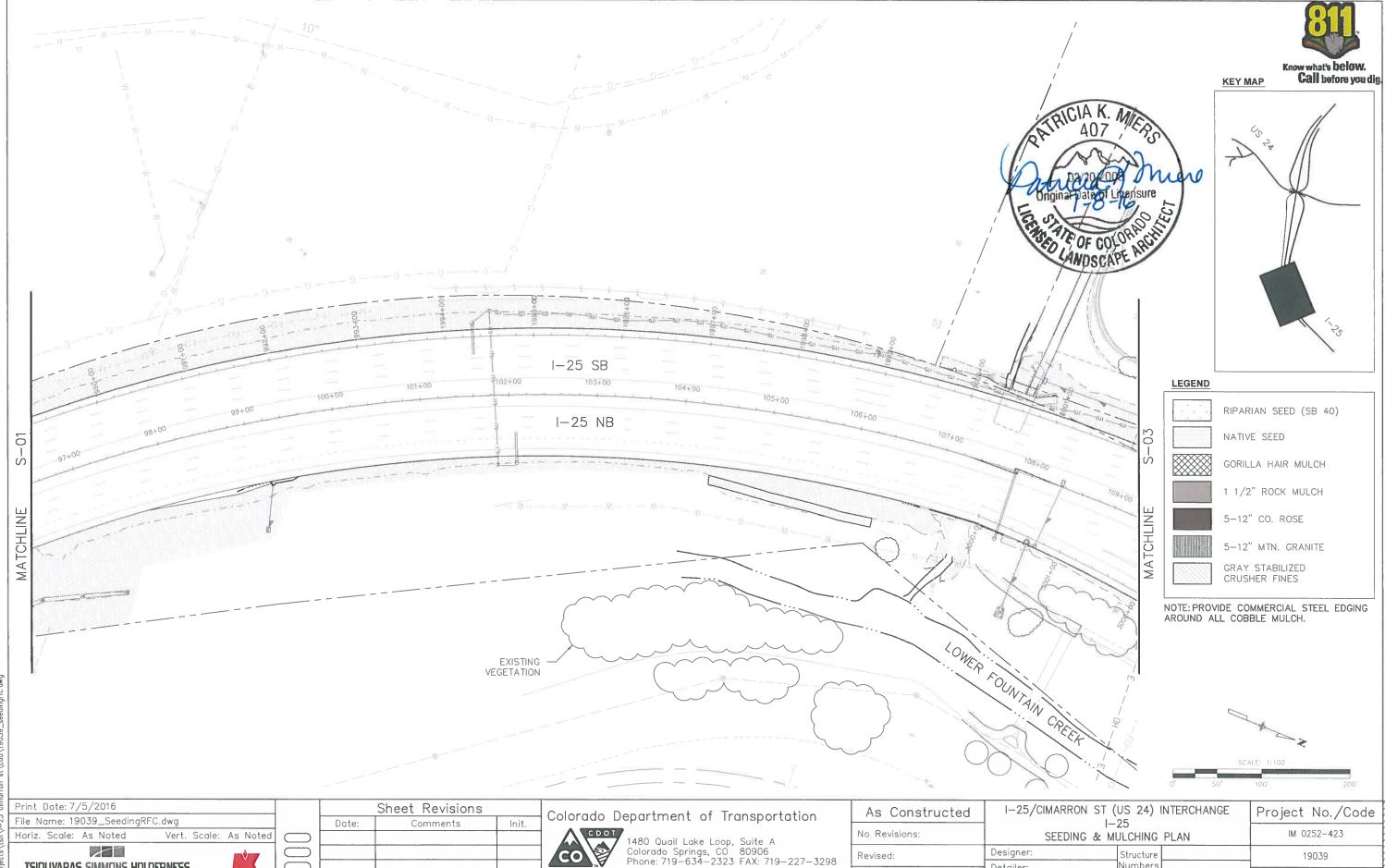
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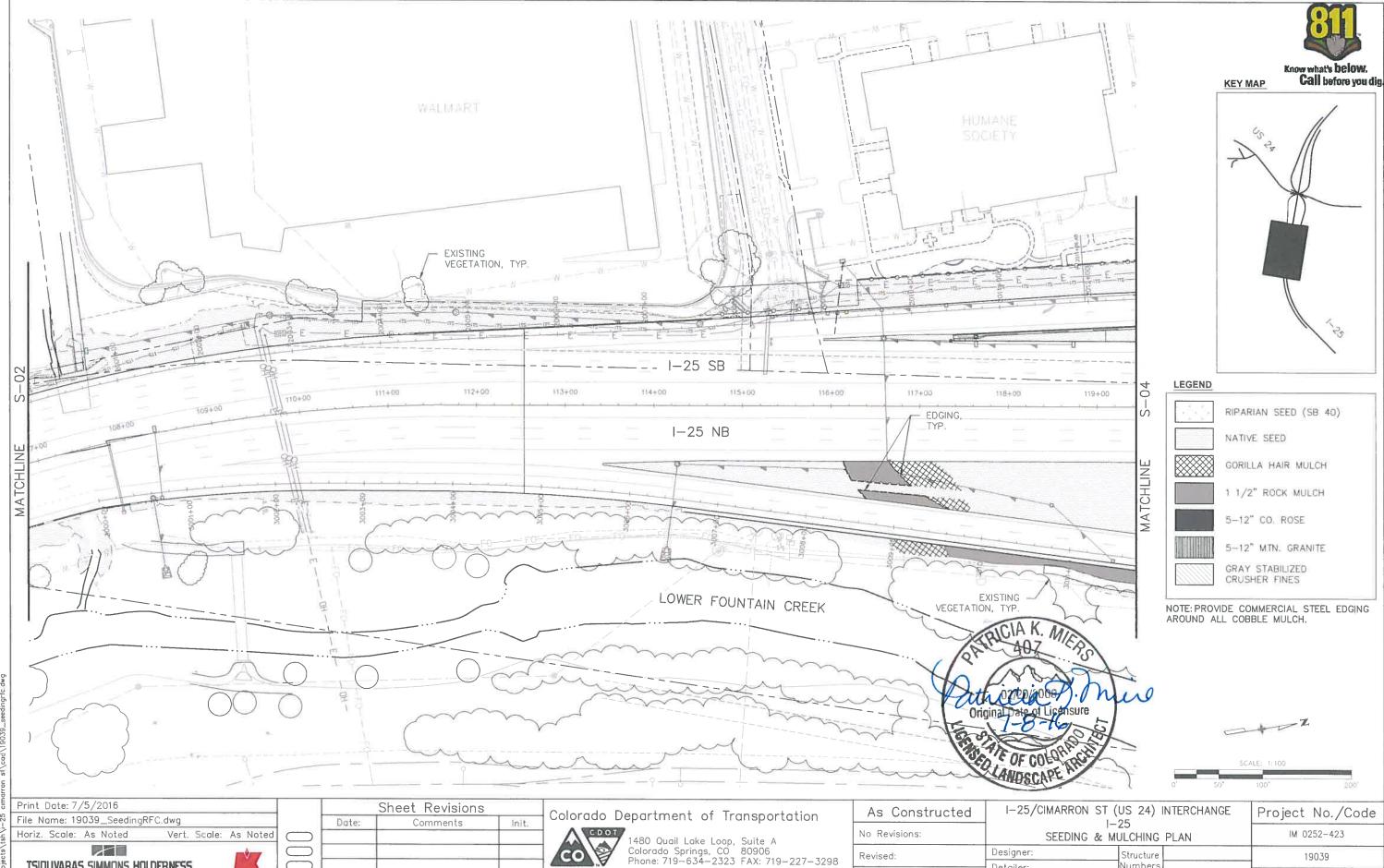
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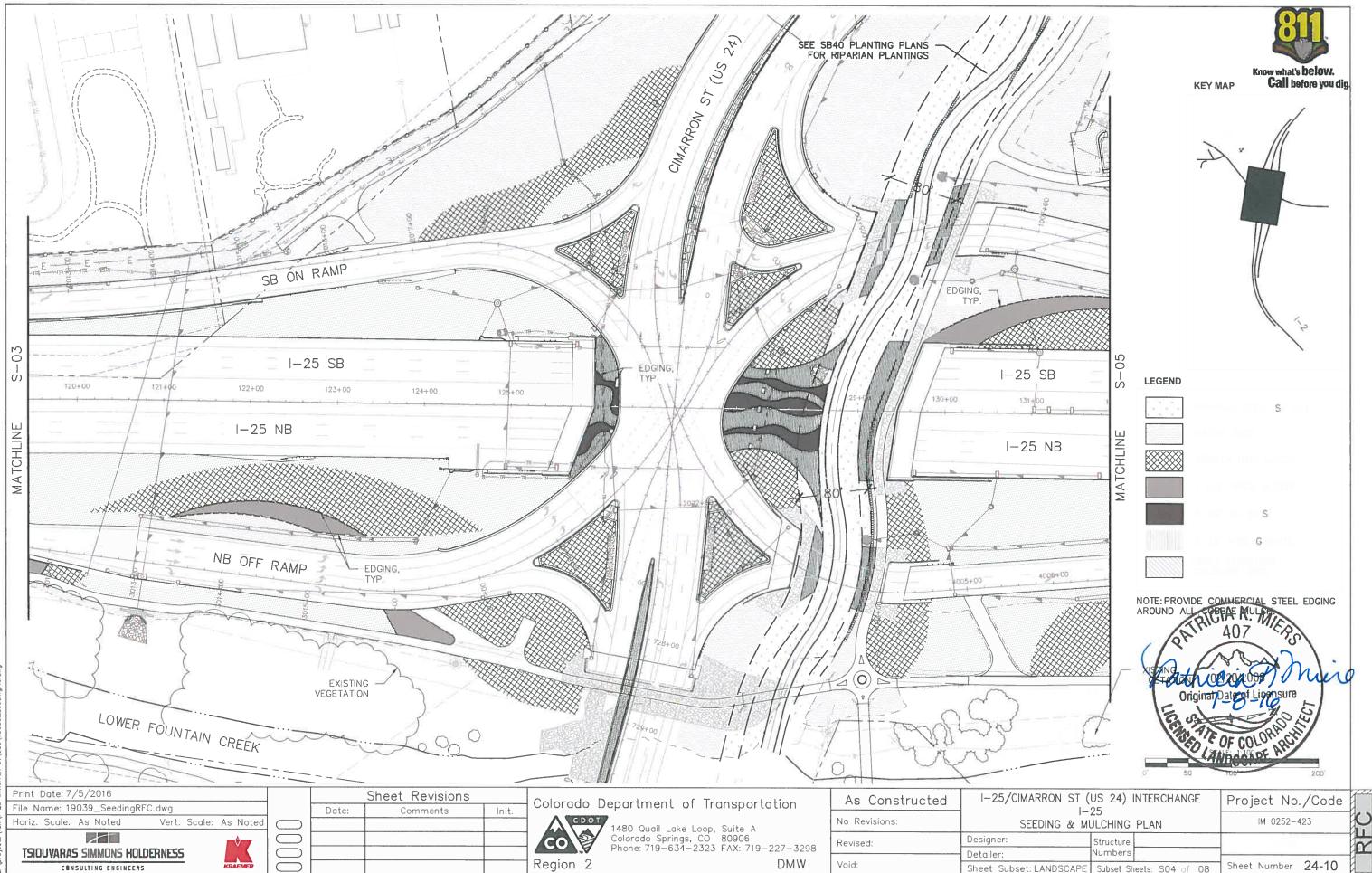
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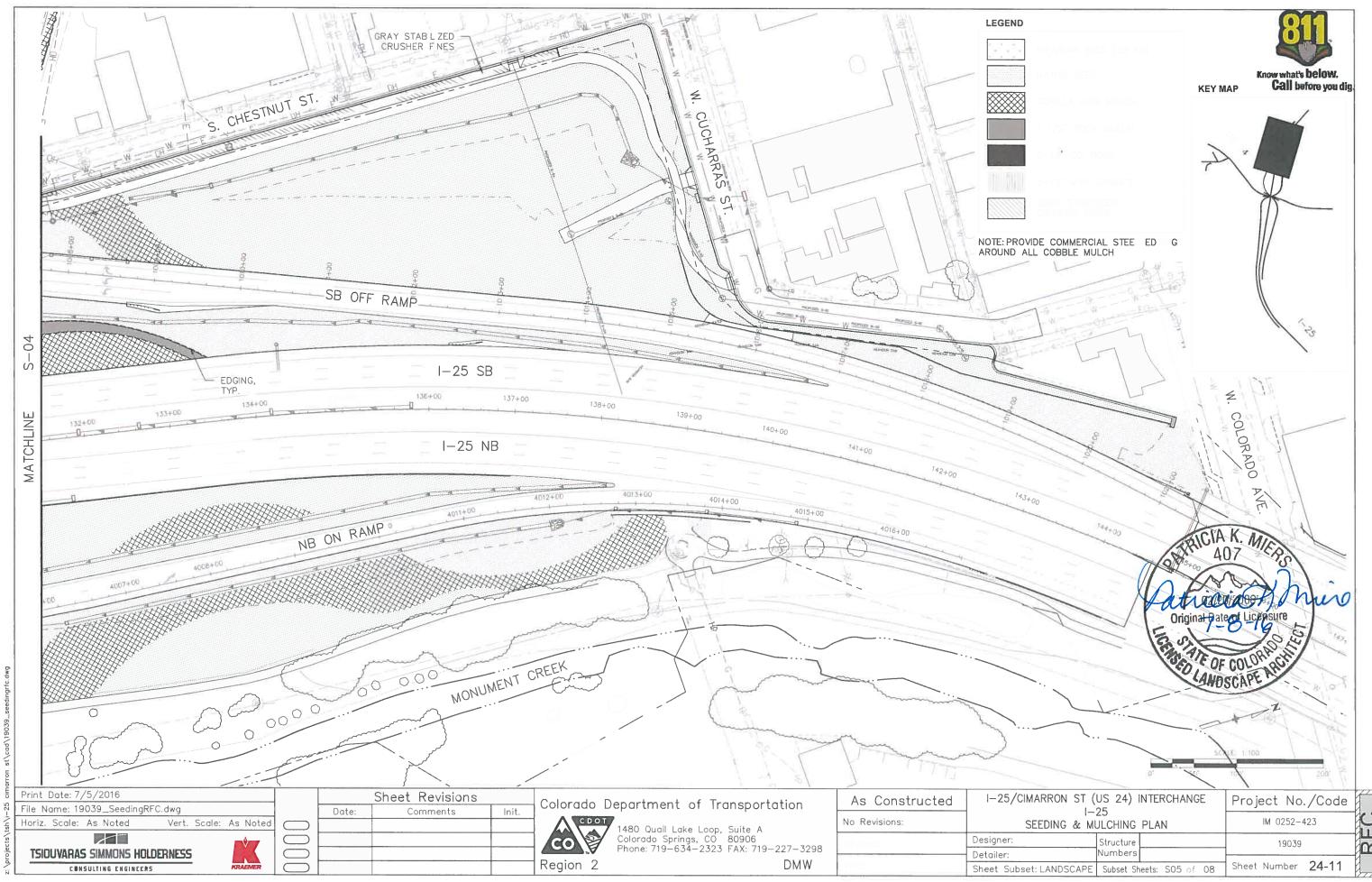
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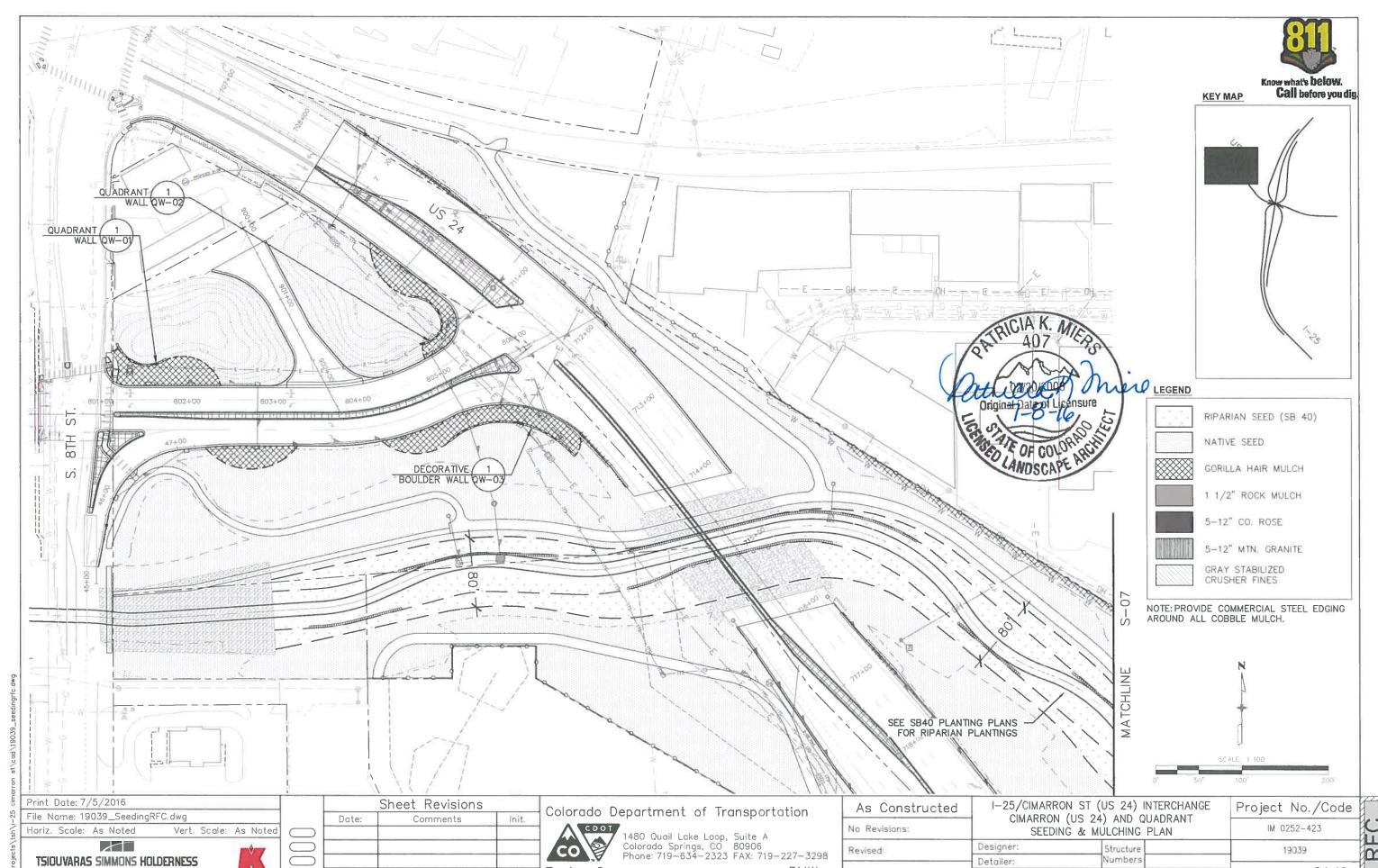
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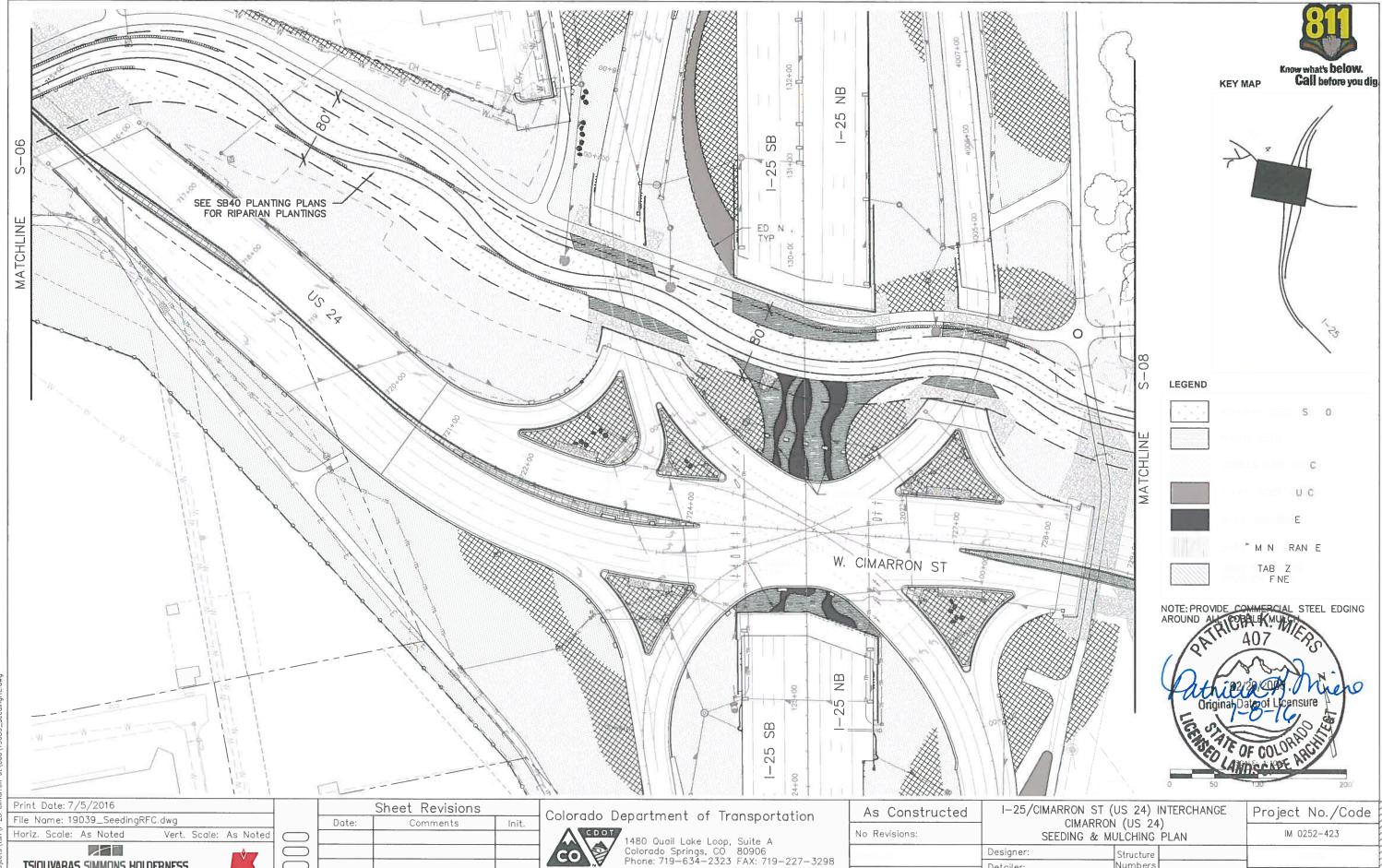


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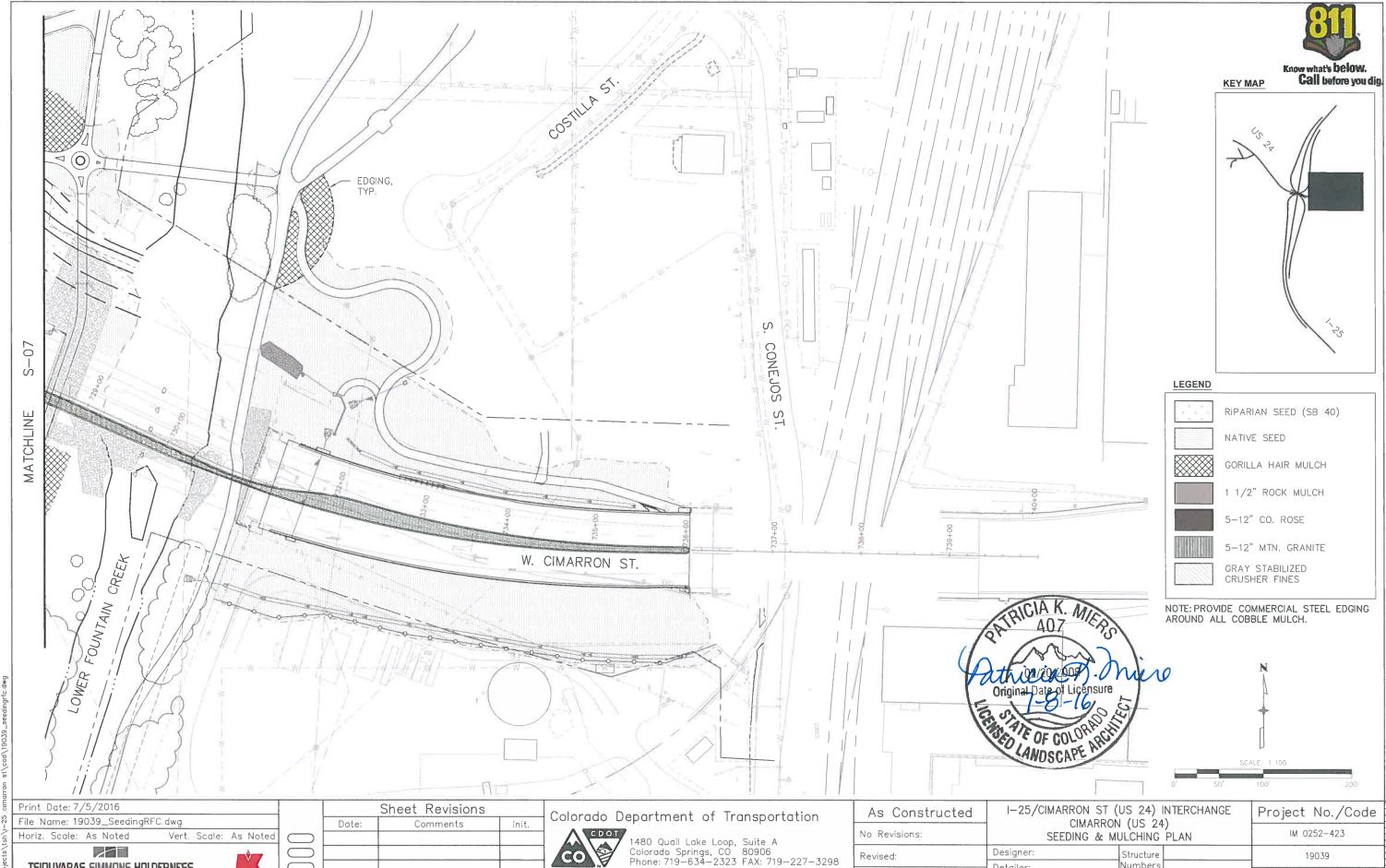
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**TSIOUVARAS SIMMONS HOLDERNESS** 

19039

Sheet Number 24-14



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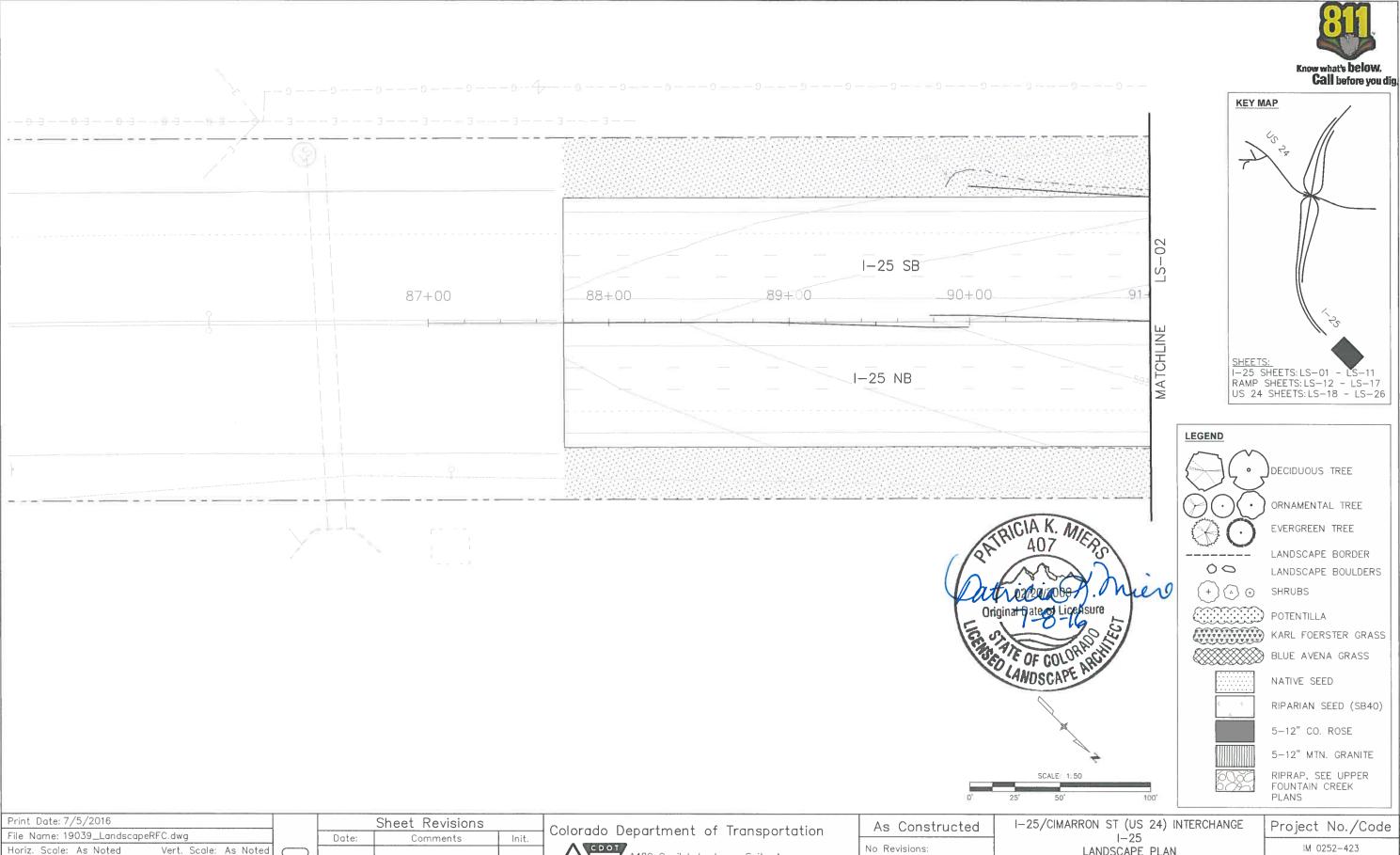
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CO

Region 2

**TSIOUVARAS SIMMONS HOLDERNESS** 



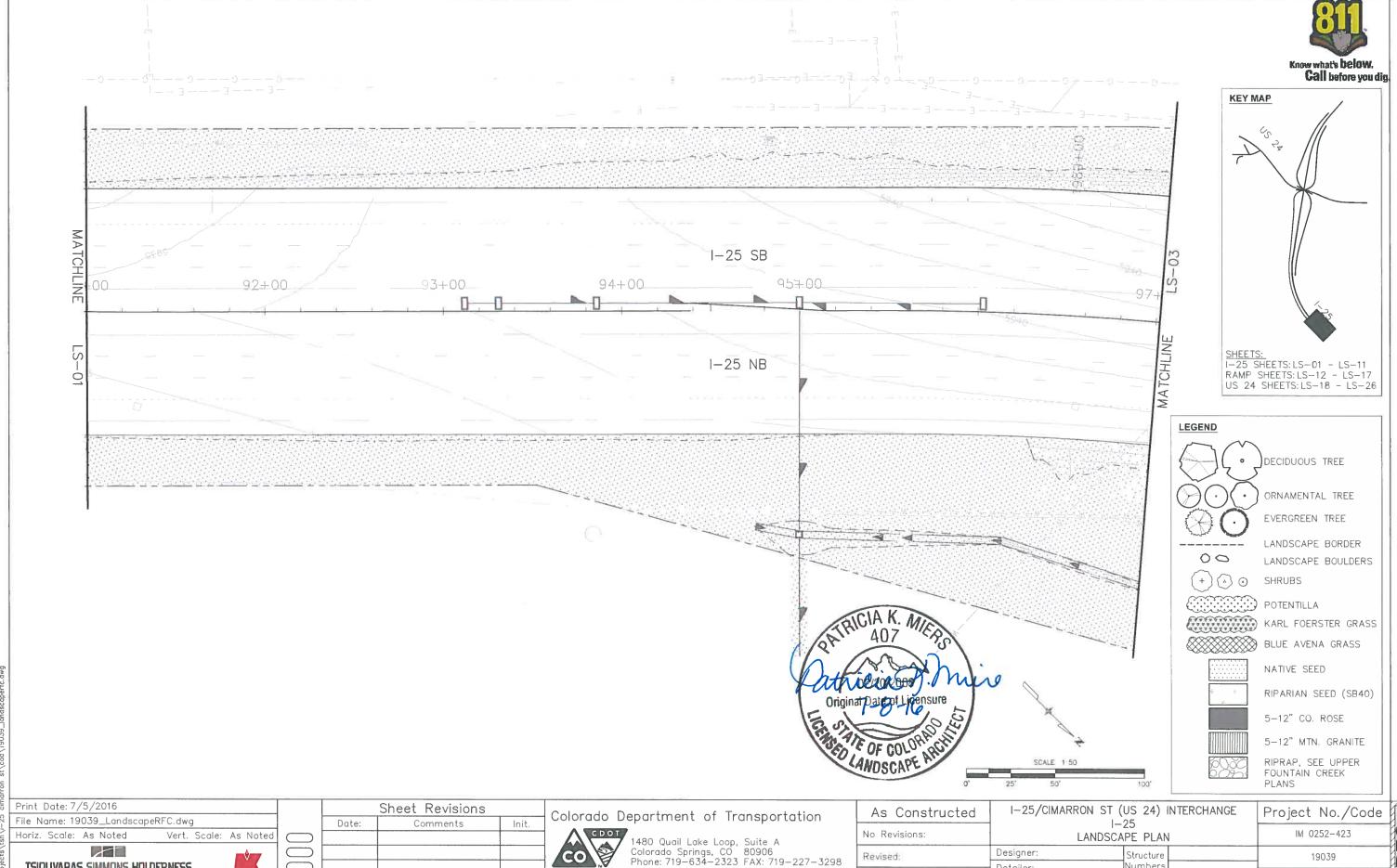
1480 Quail Lake Loop, Suite A Colorado Springs, CO 80906 Phone: 719—634—2323 FAX: 719—227—3298 DMW

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**TSIOUVARAS SIMMONS HOLDERNESS** 



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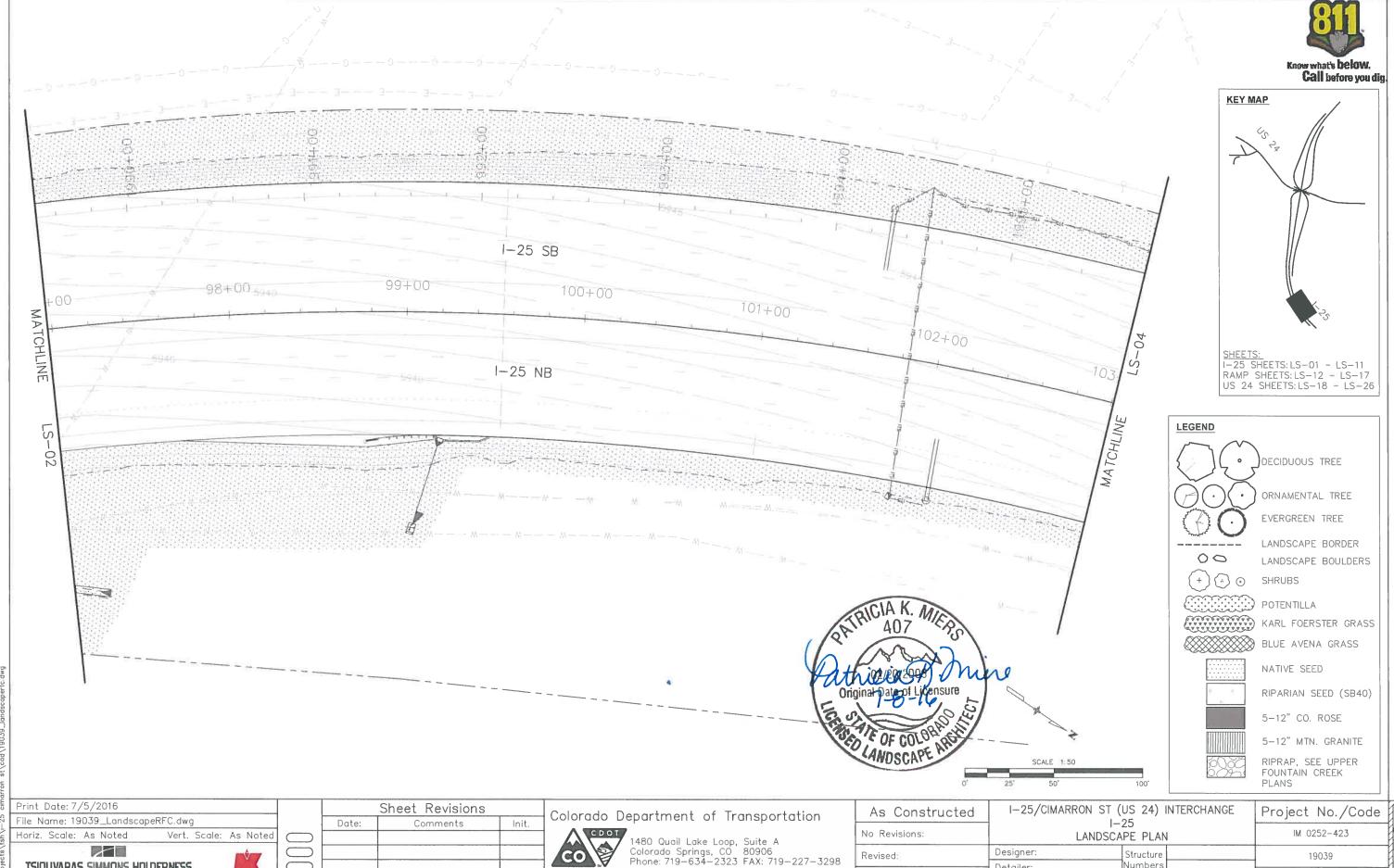
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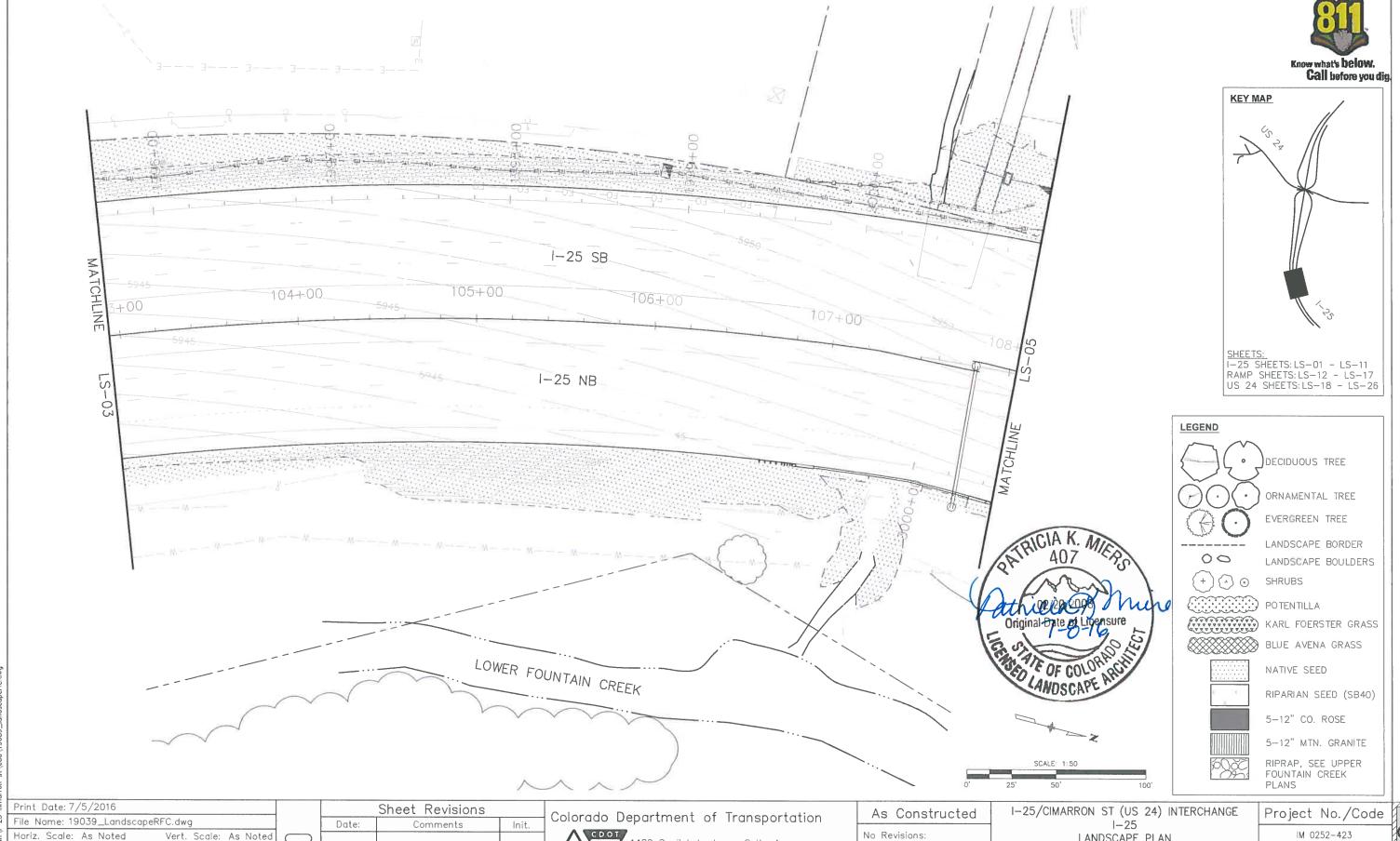
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Region 2

TSIOUVARAS SIMMONS HOLDERNESS



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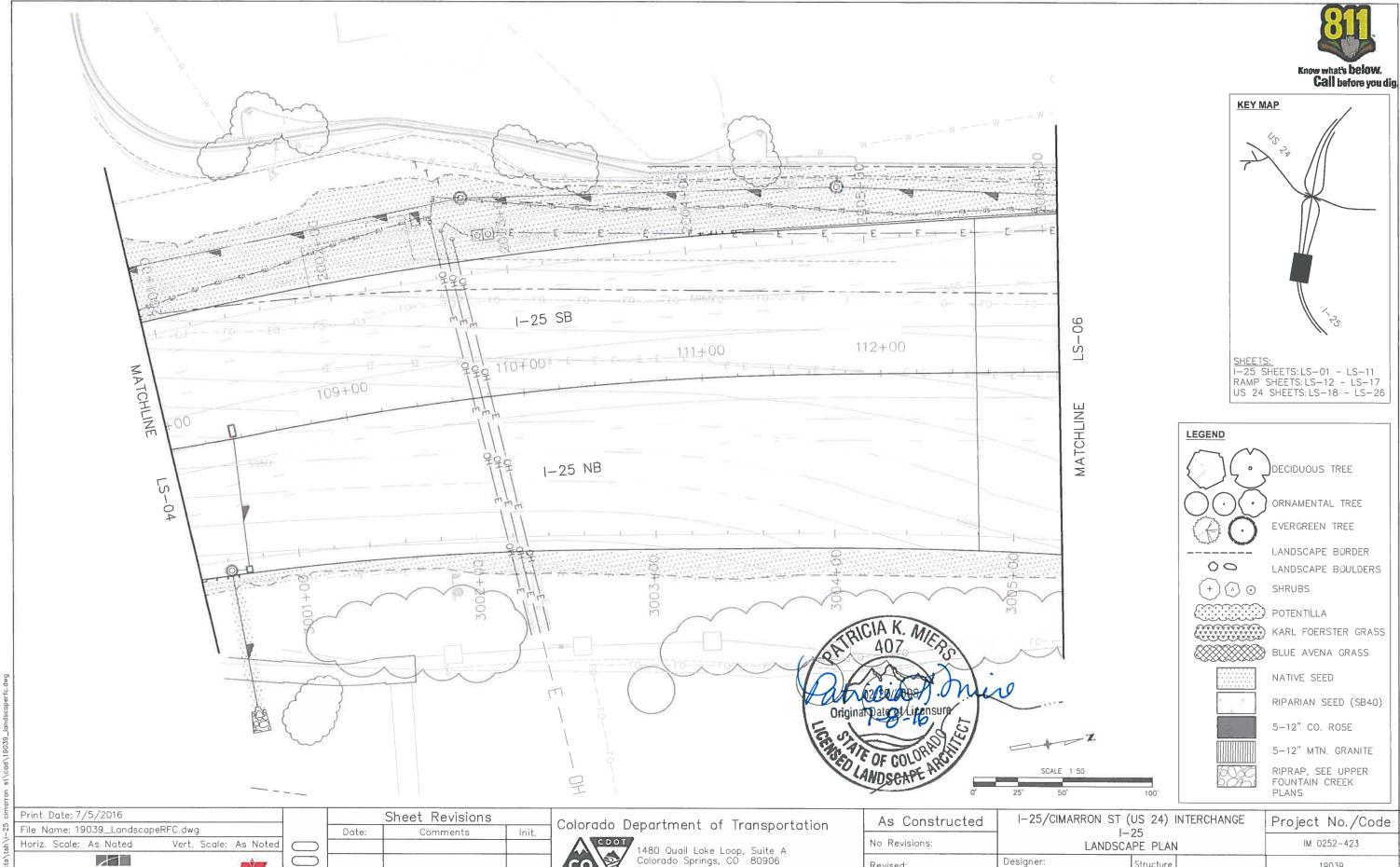
**TSIOUVARAS SIMMONS HOLDERNESS** 

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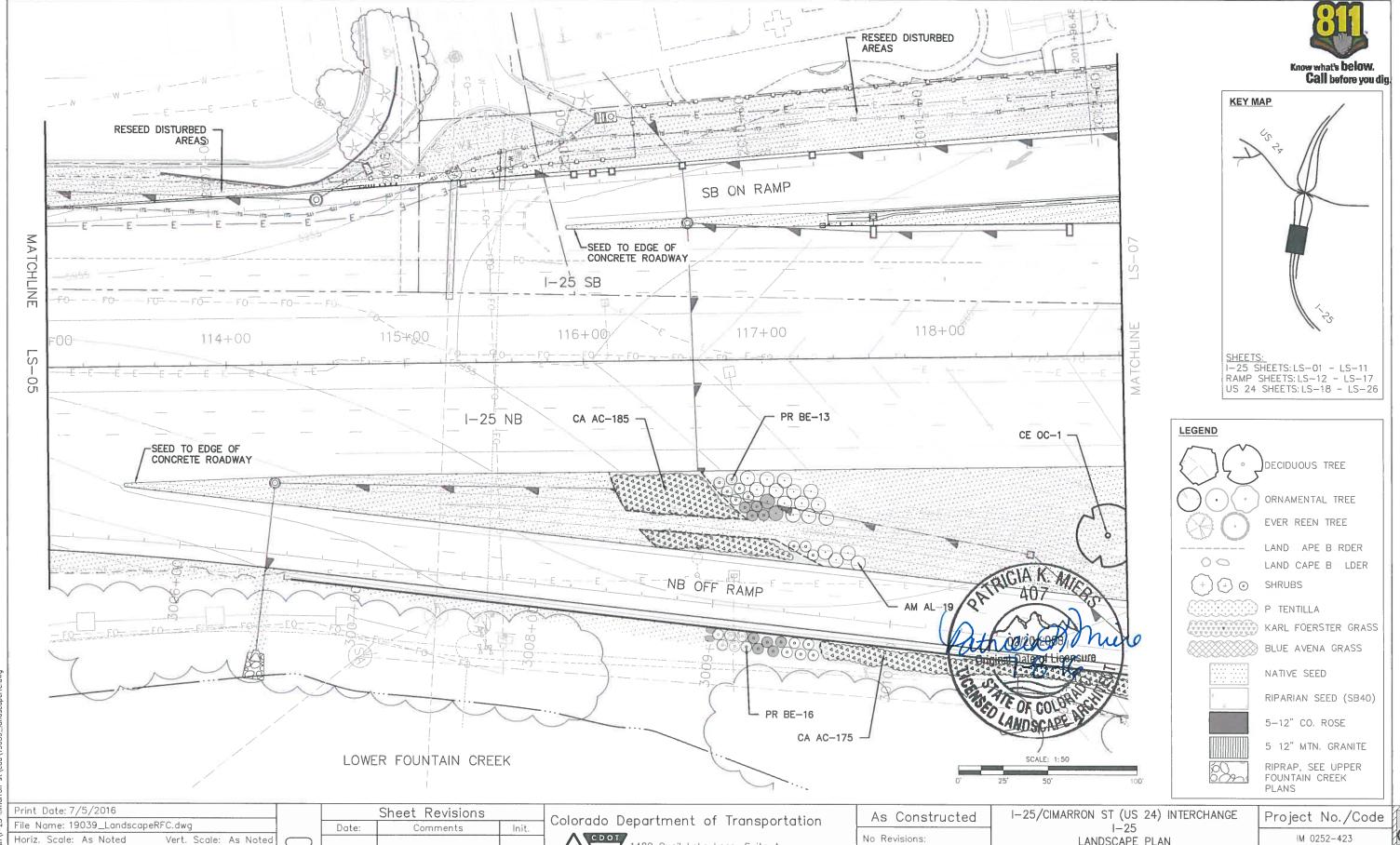


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TSIOUVARAS SIMMONS HOLDERNESS

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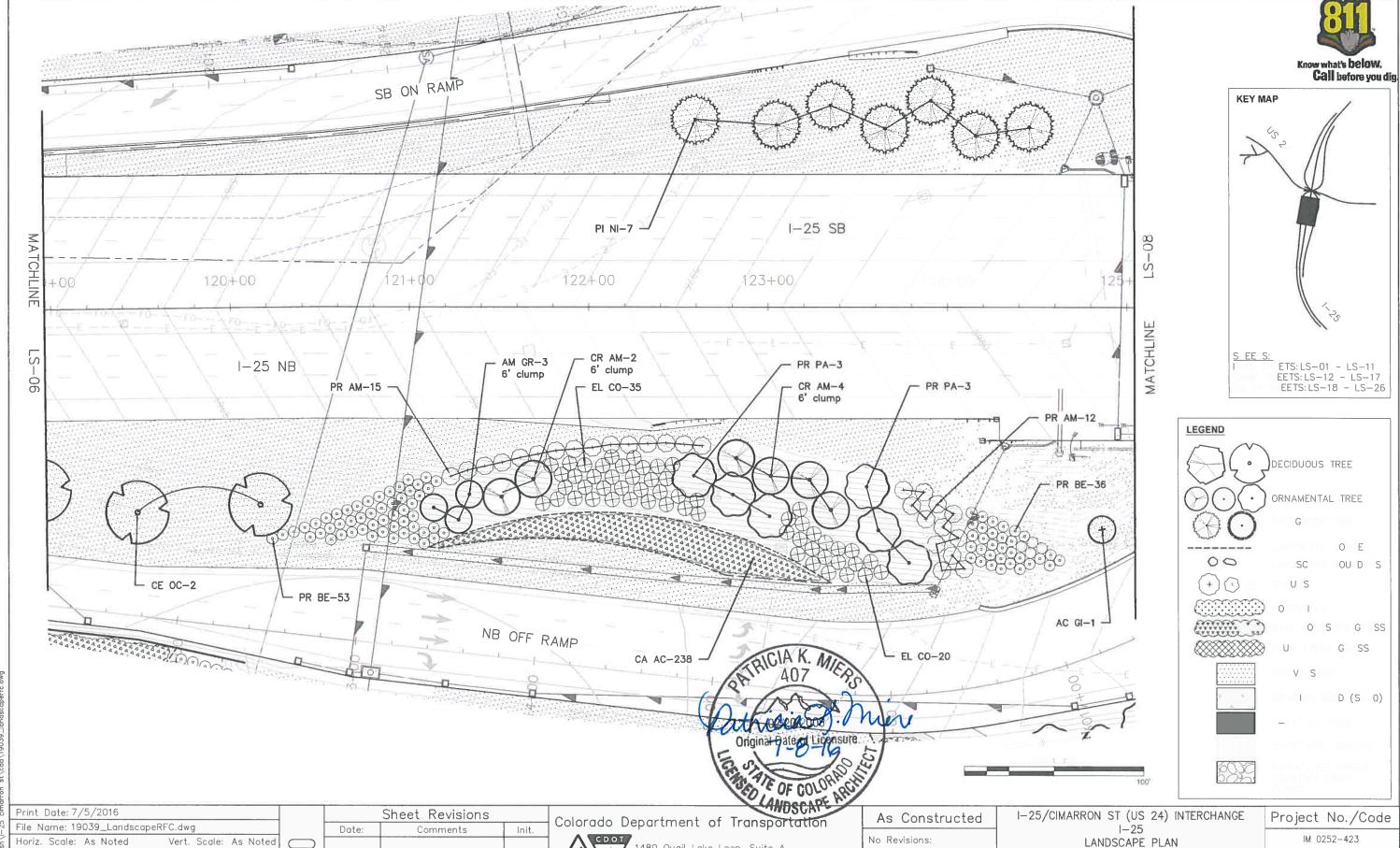
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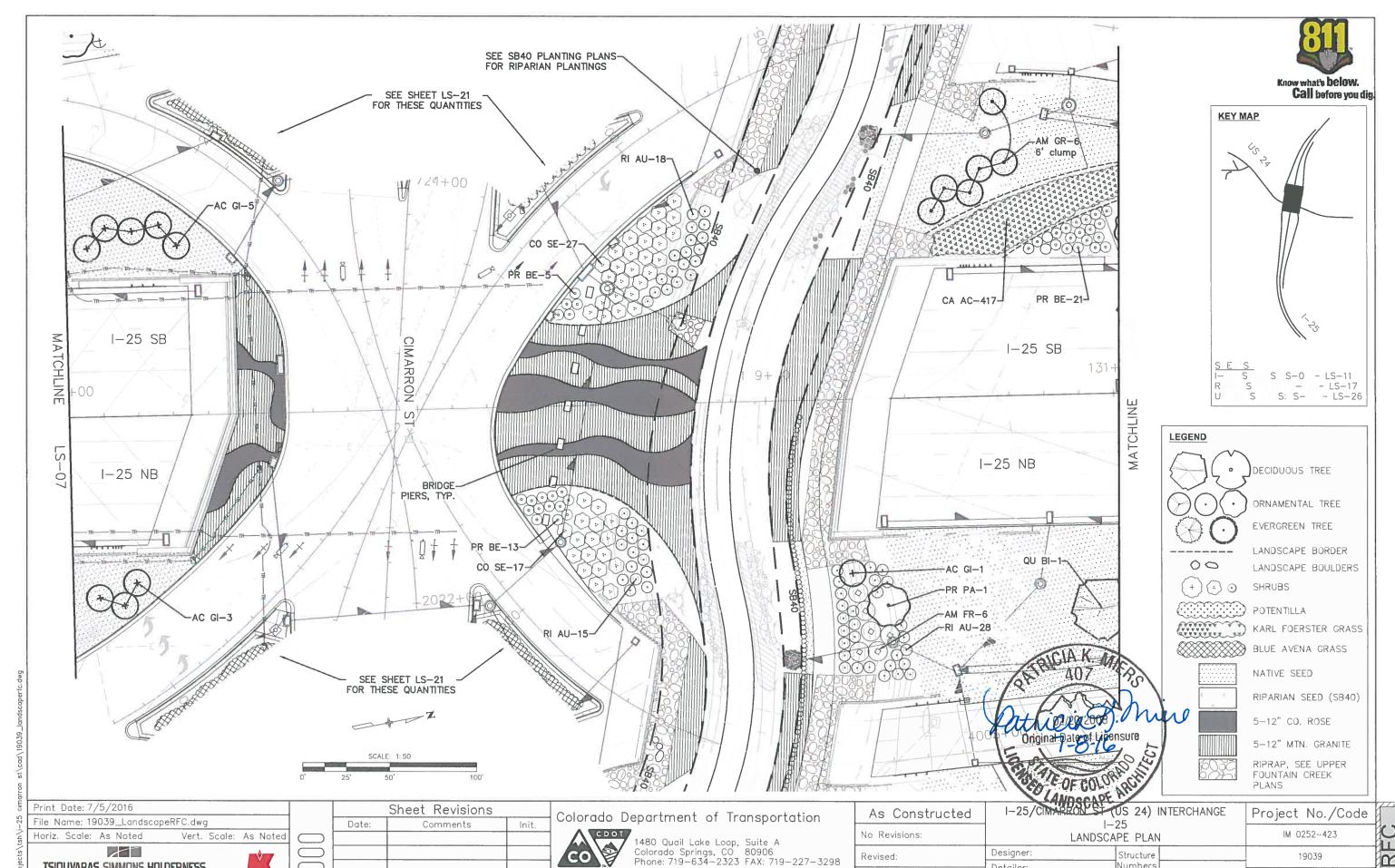
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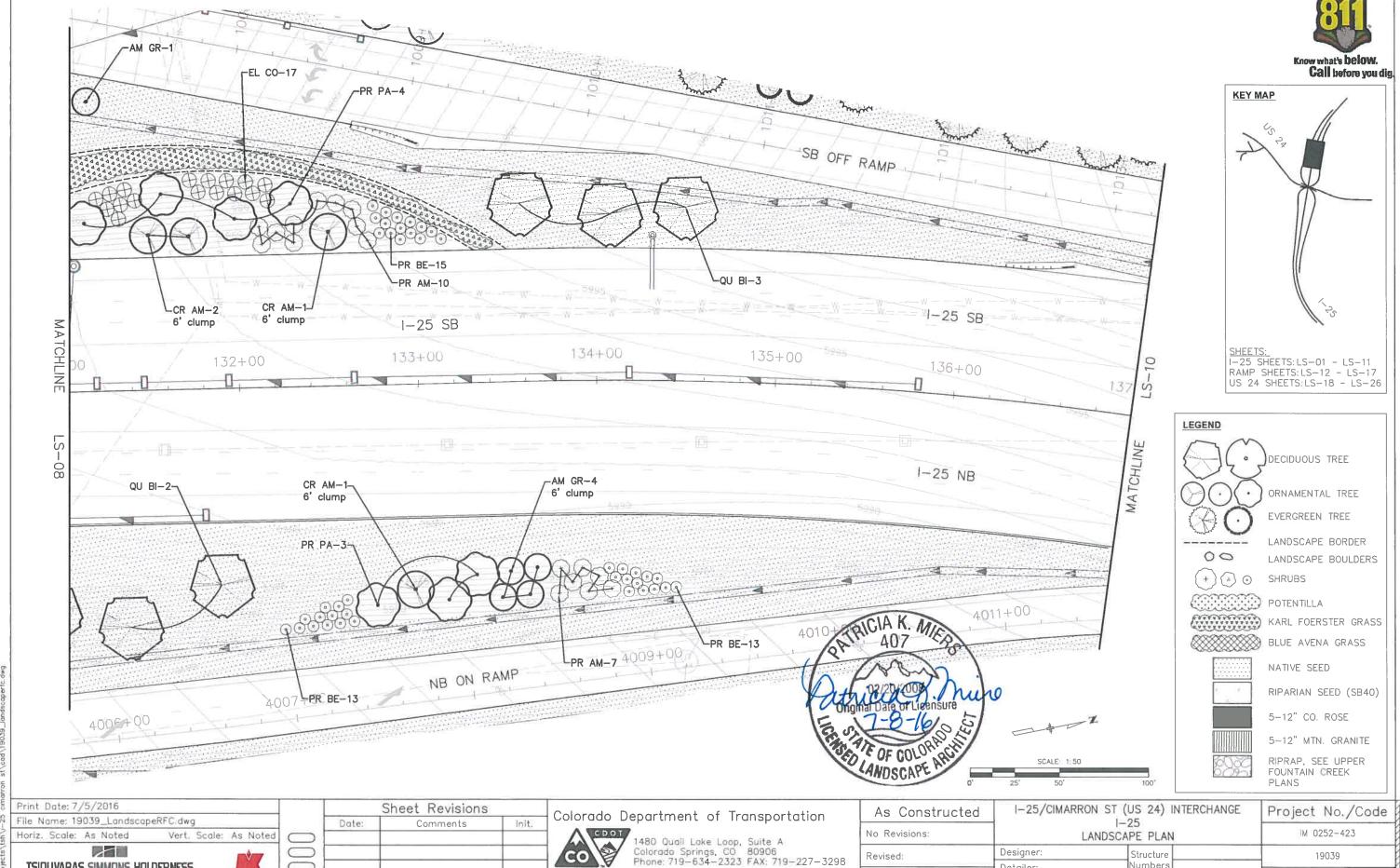
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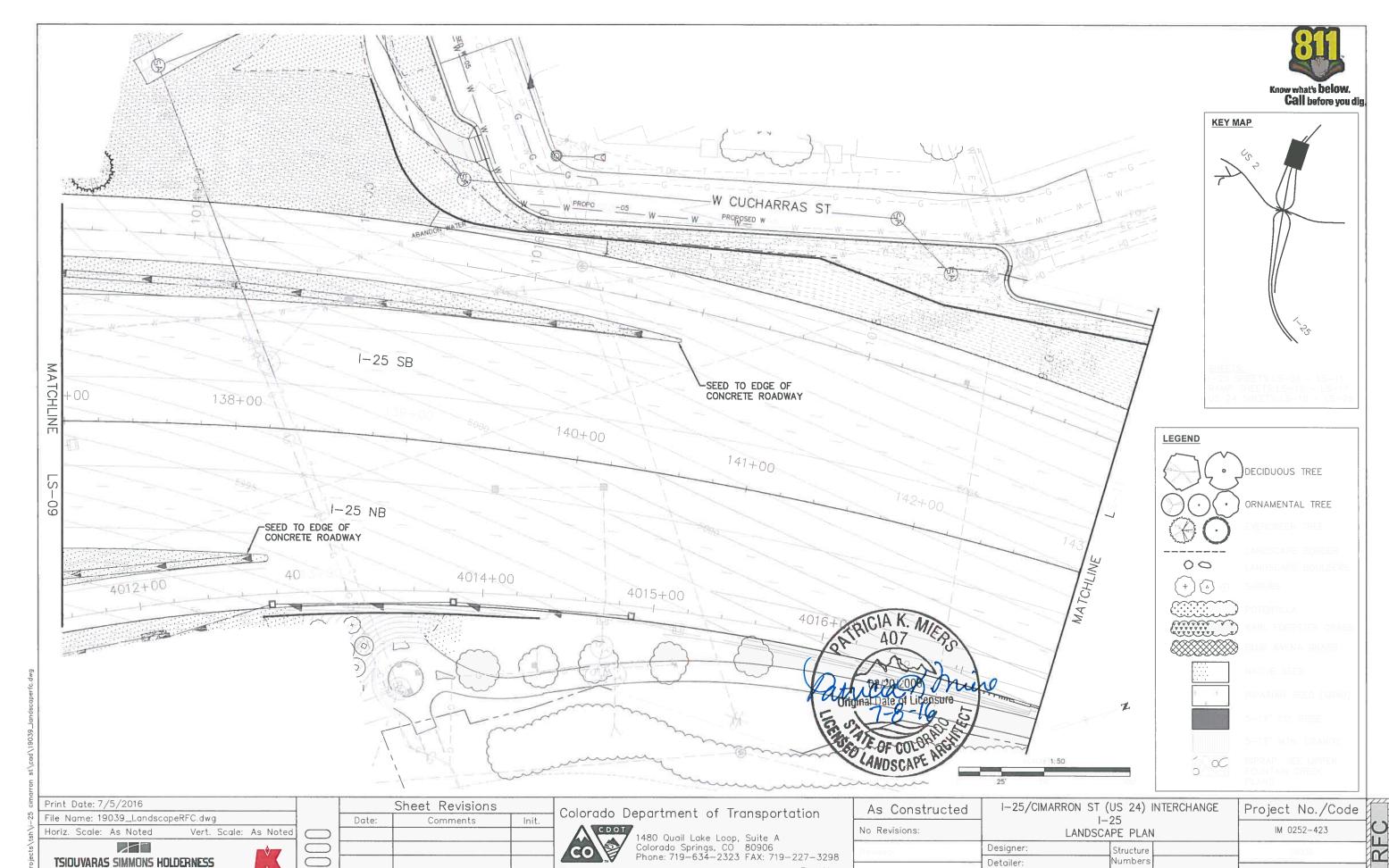
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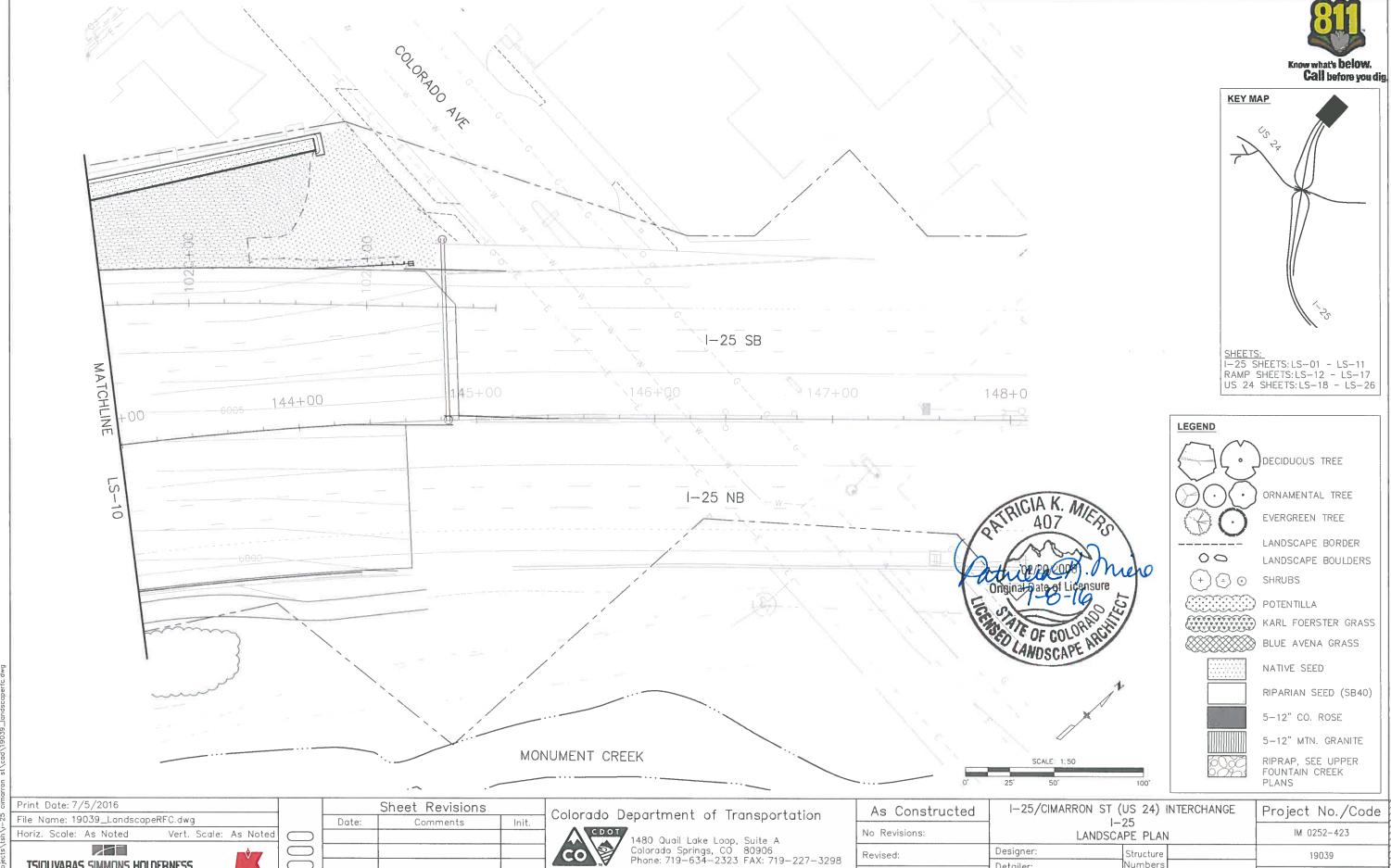
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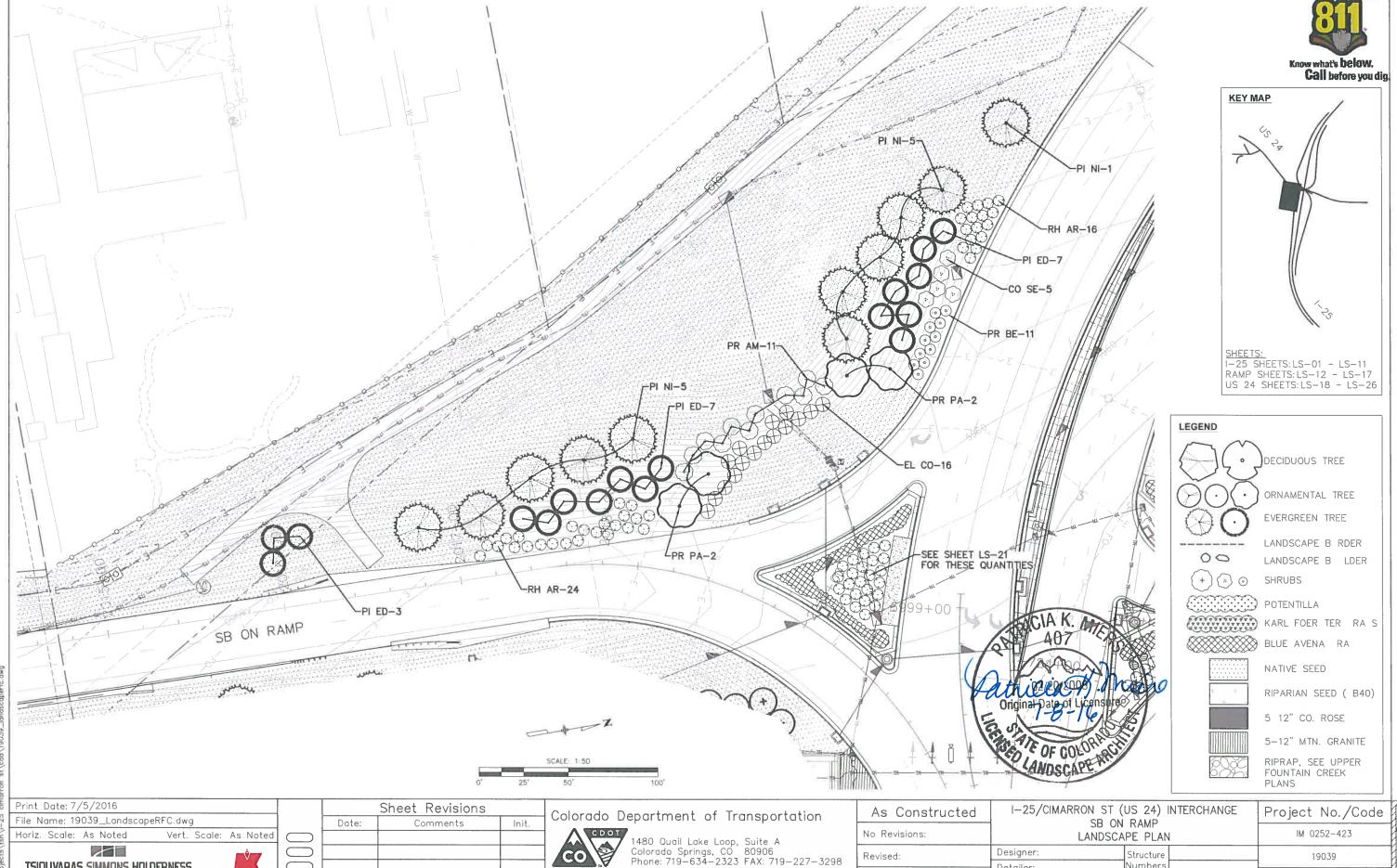
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**TSIOUVARAS SIMMONS HOLDERNESS** 

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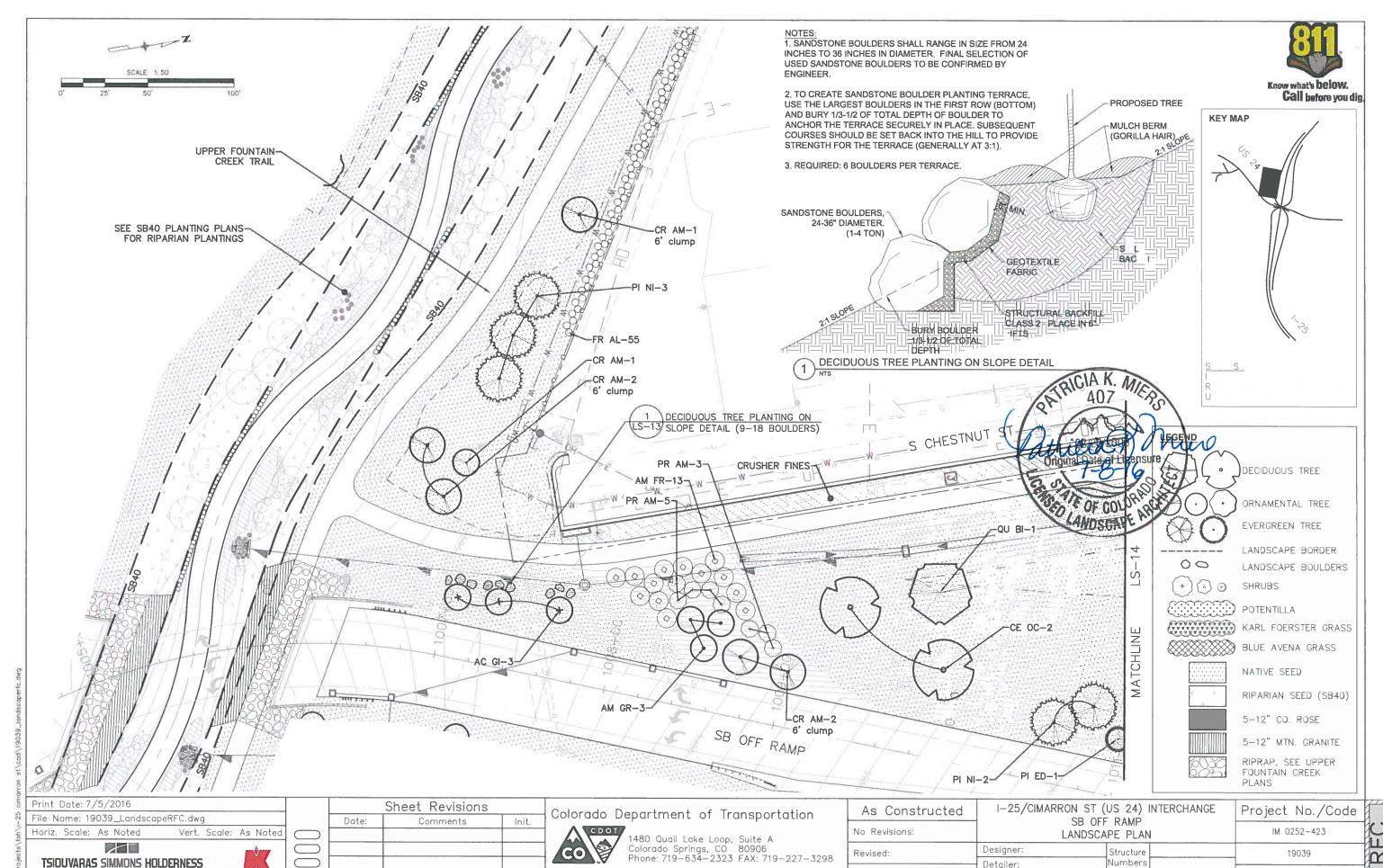
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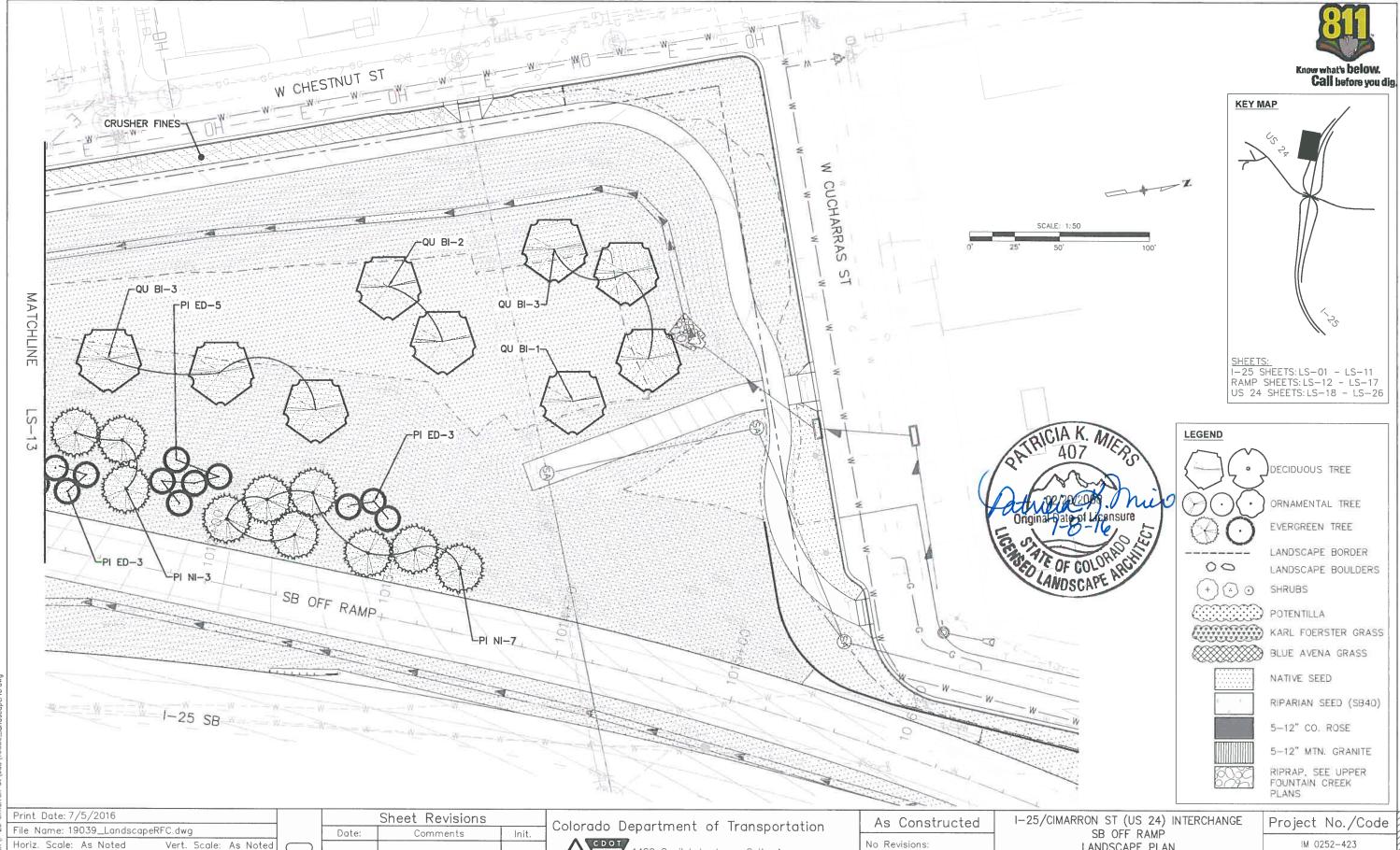
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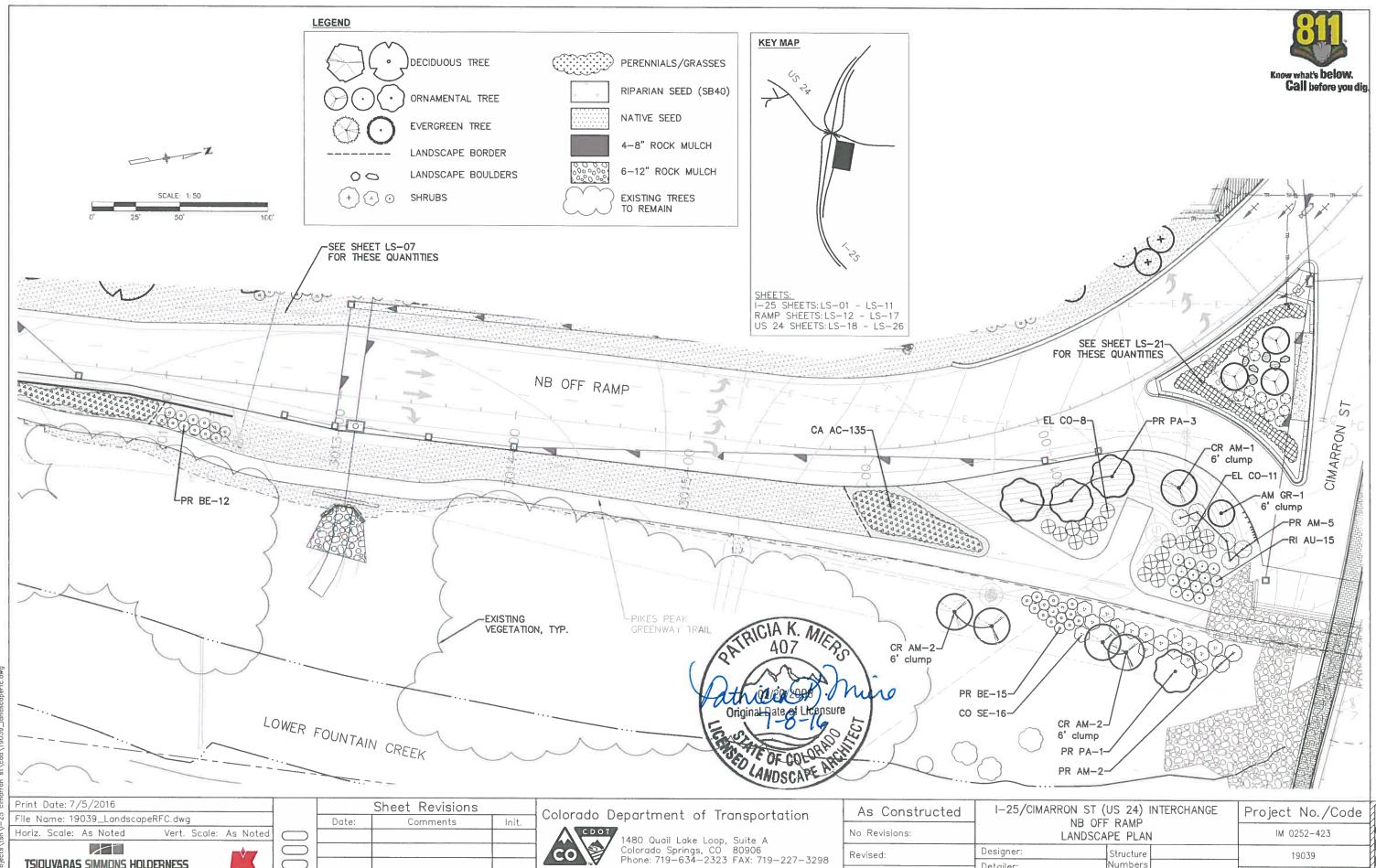


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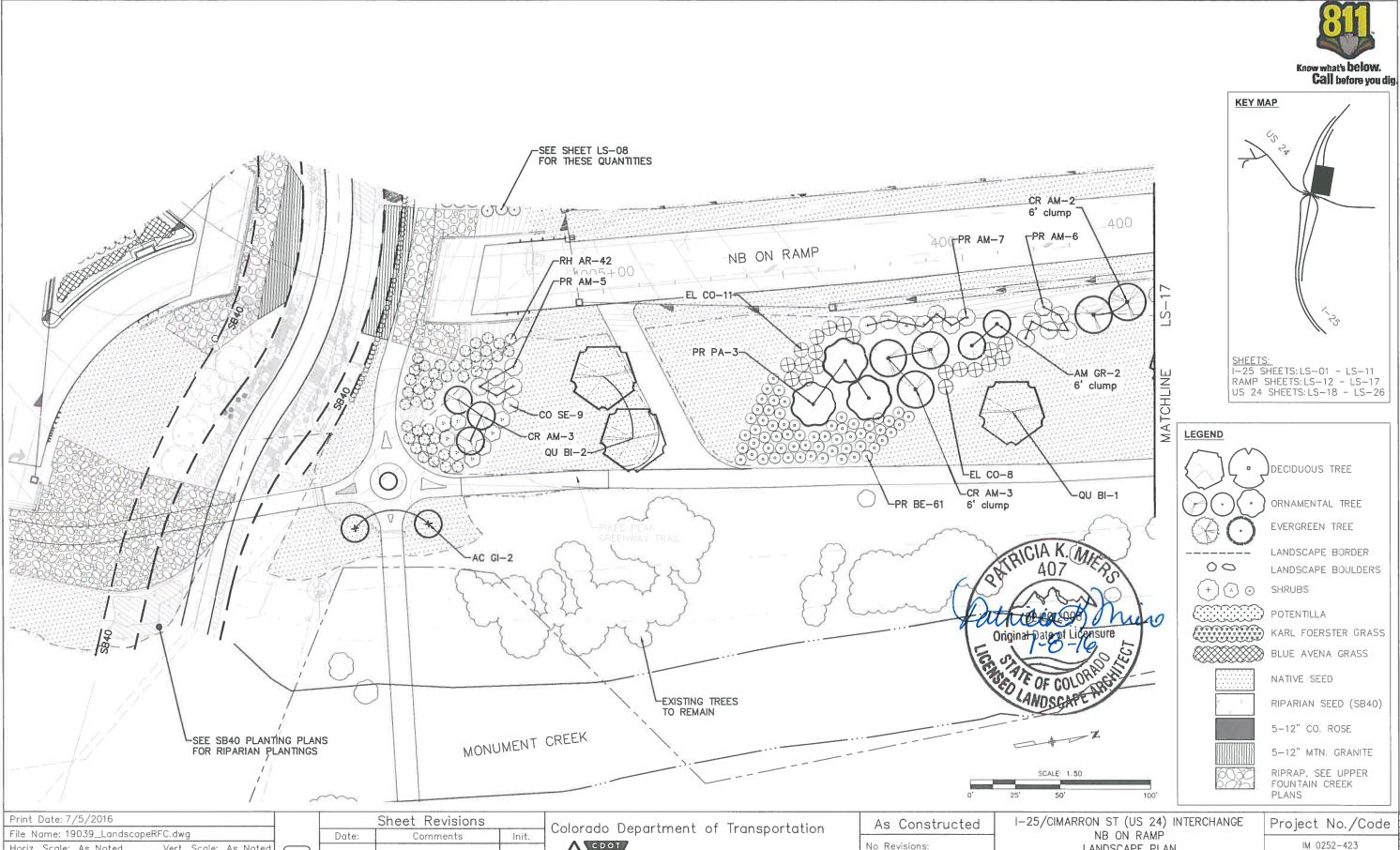
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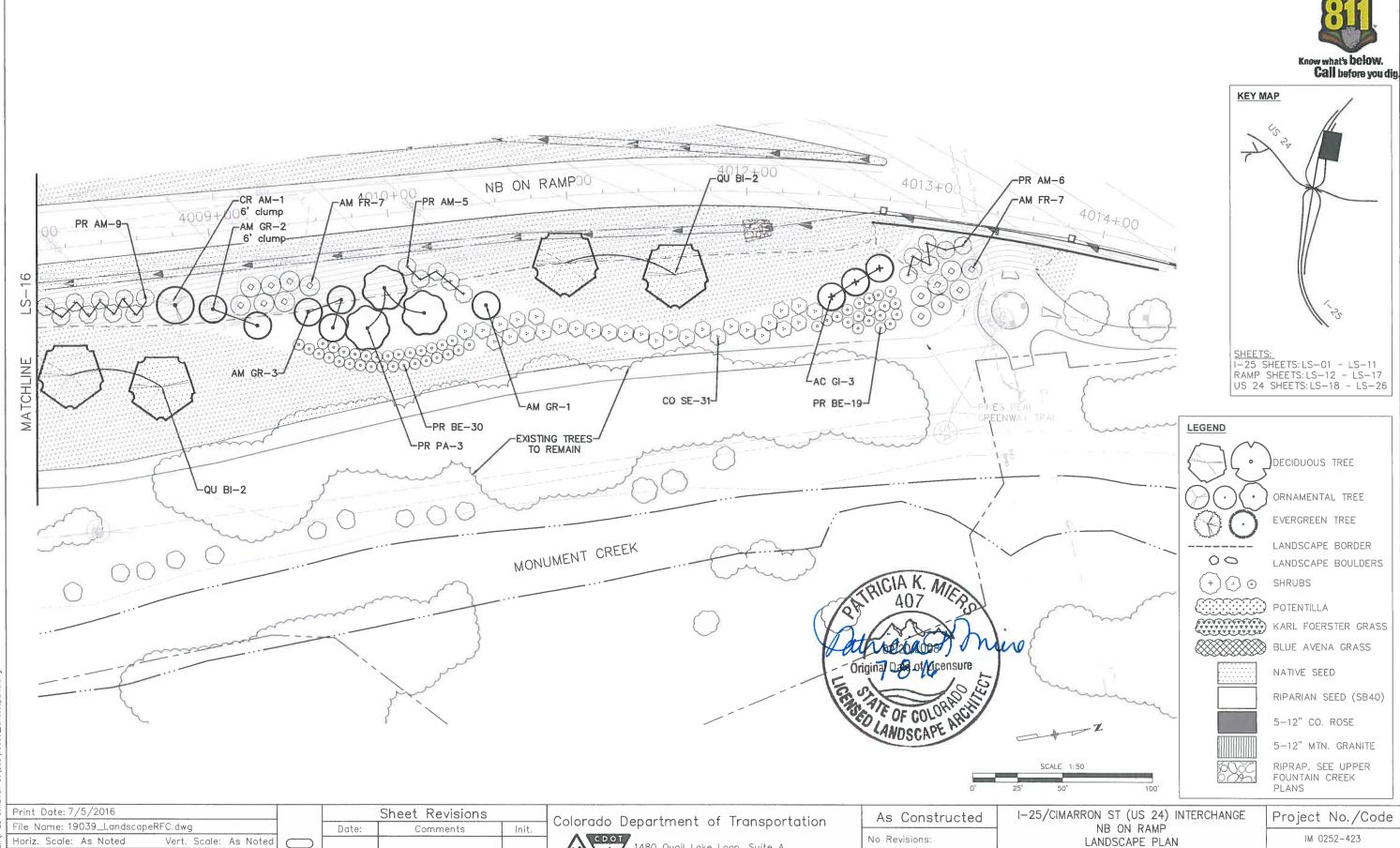
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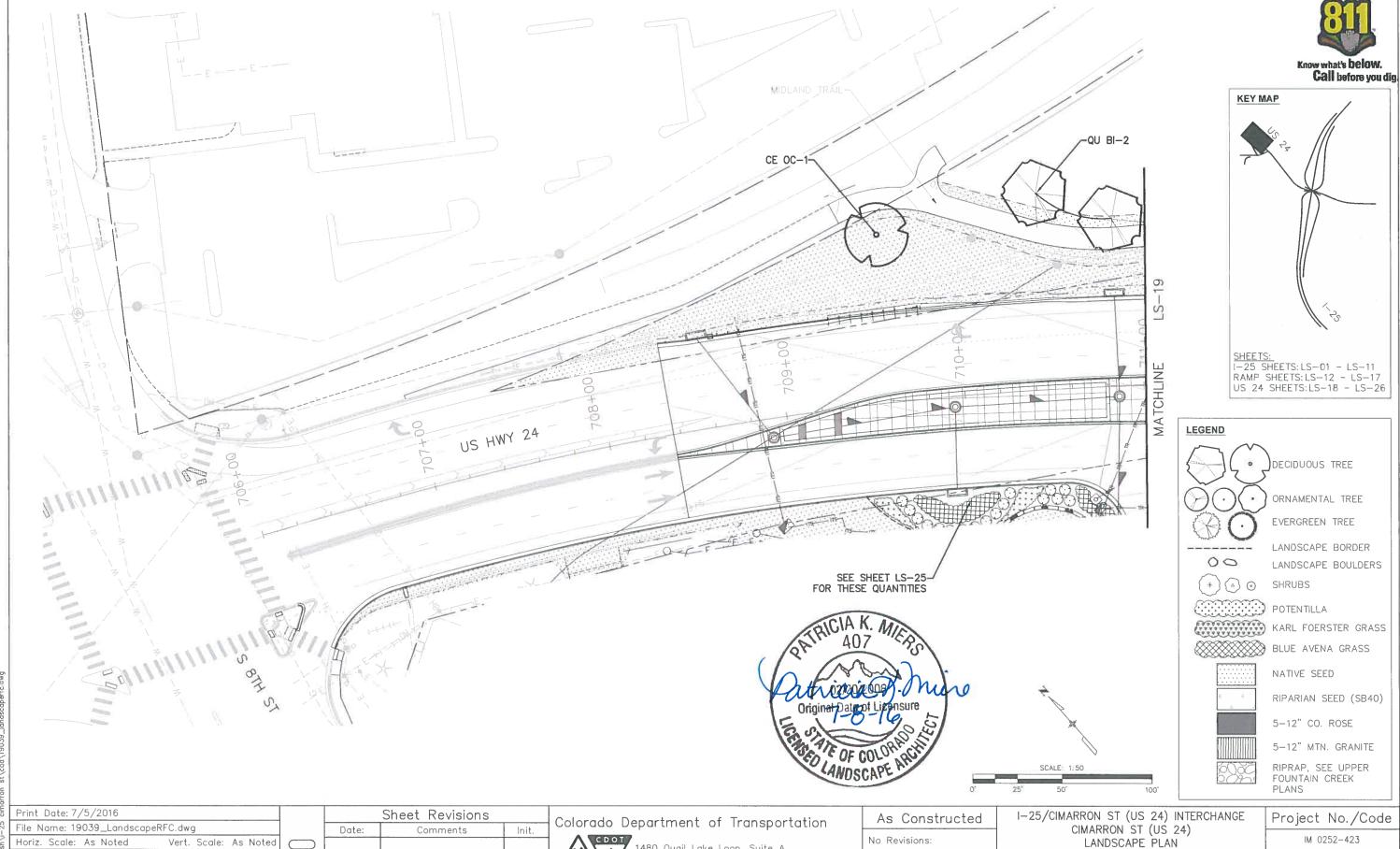
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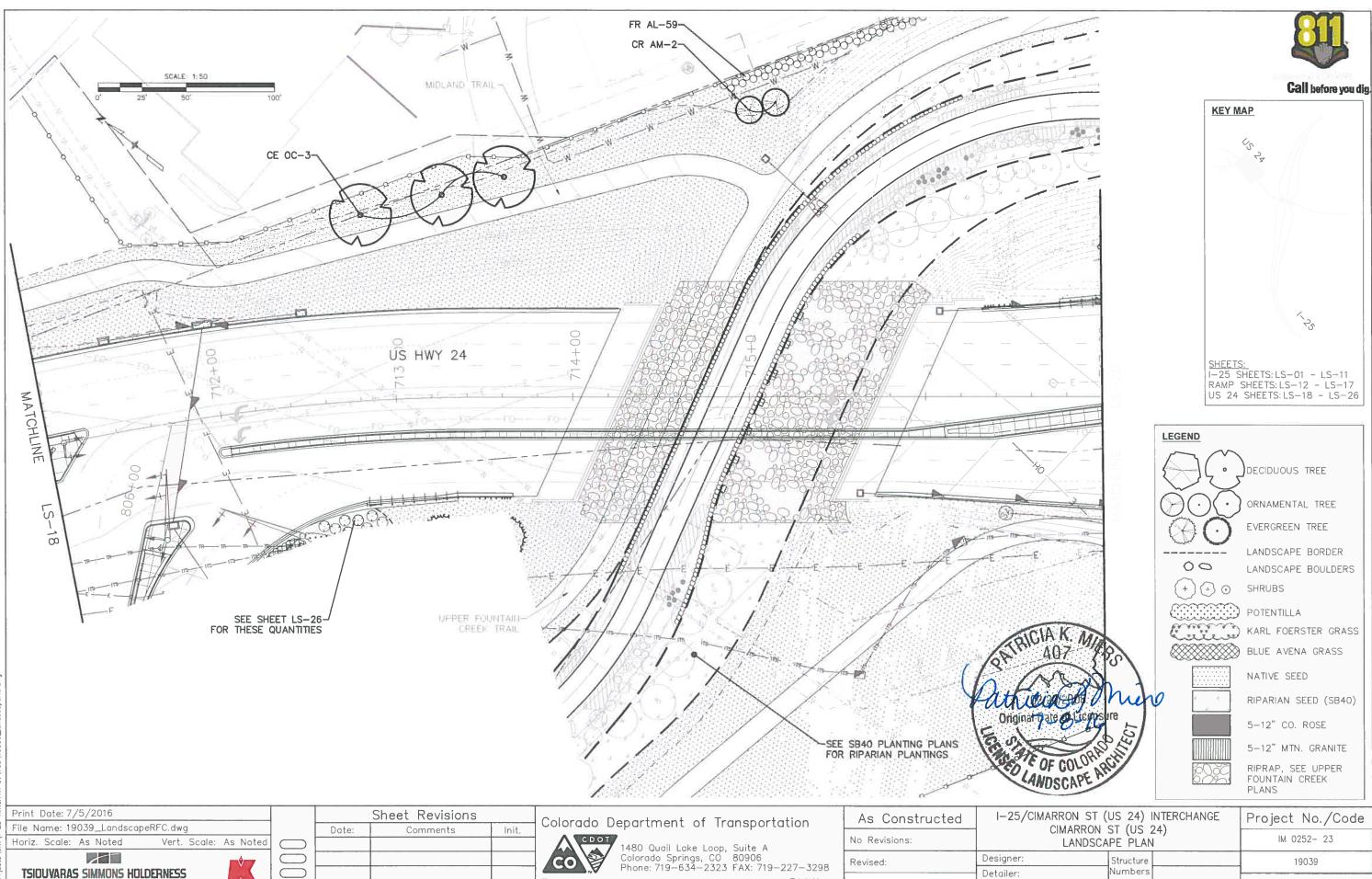
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TSIOUVARAS SIMMONS HOLDERNESS

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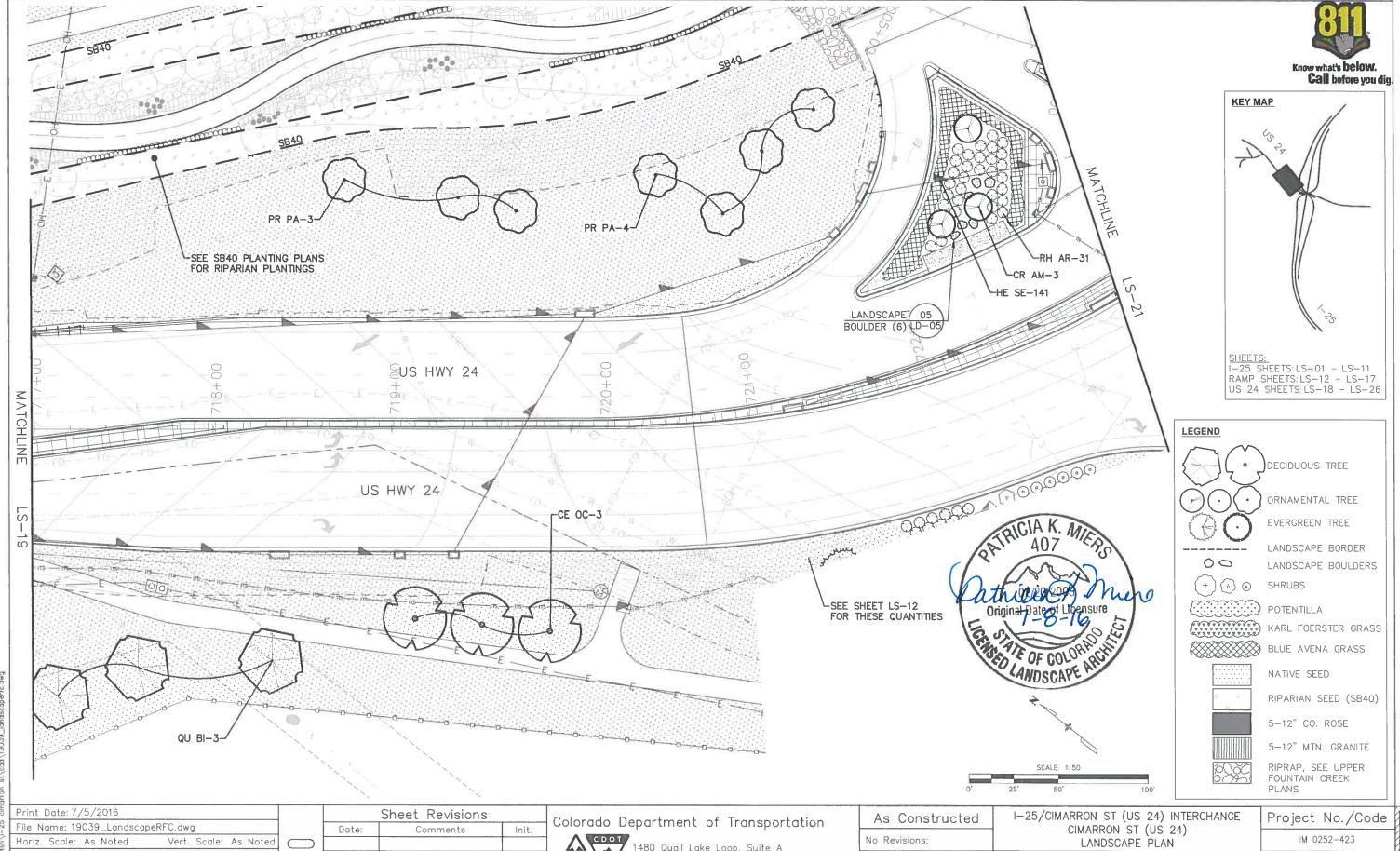
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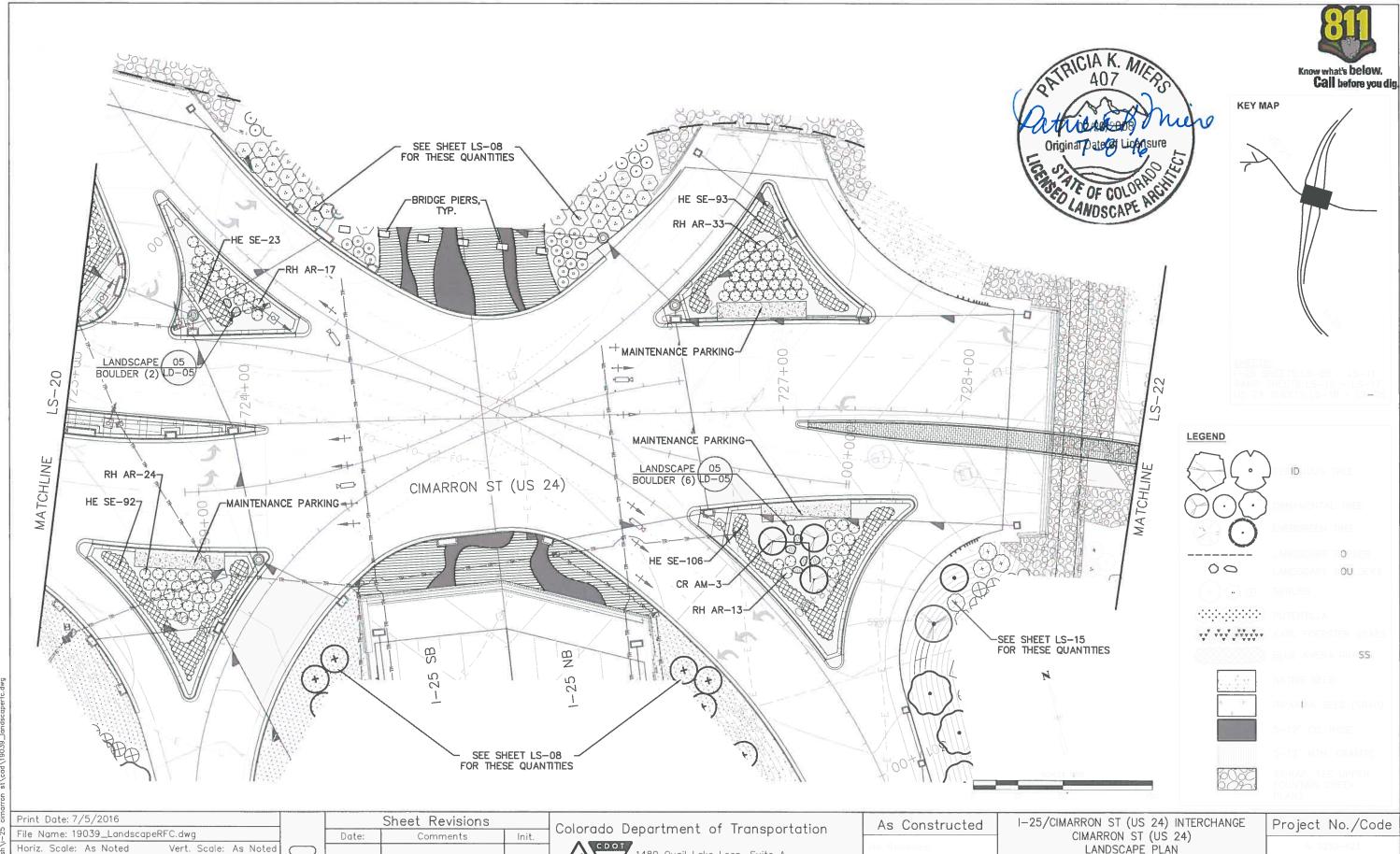
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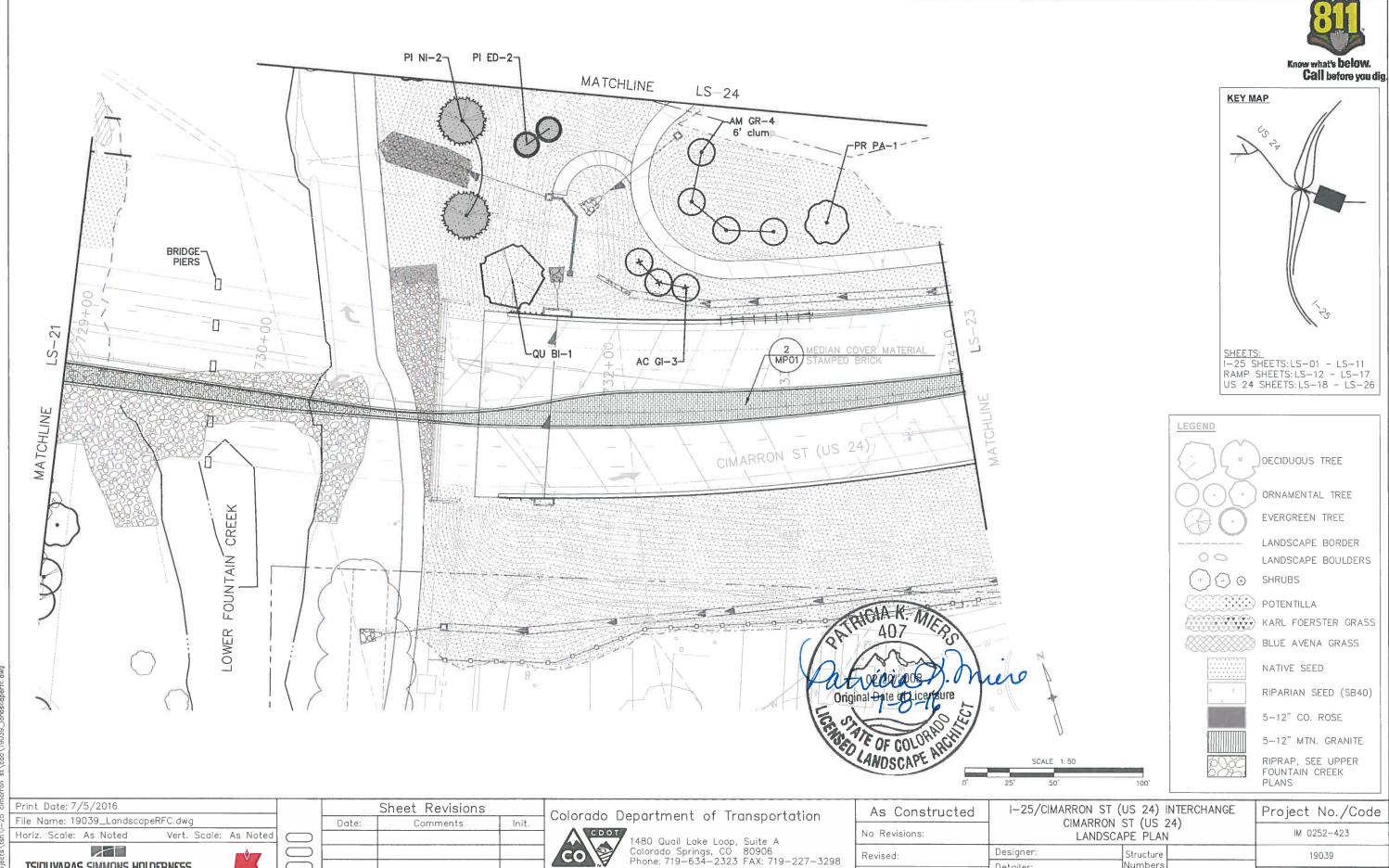
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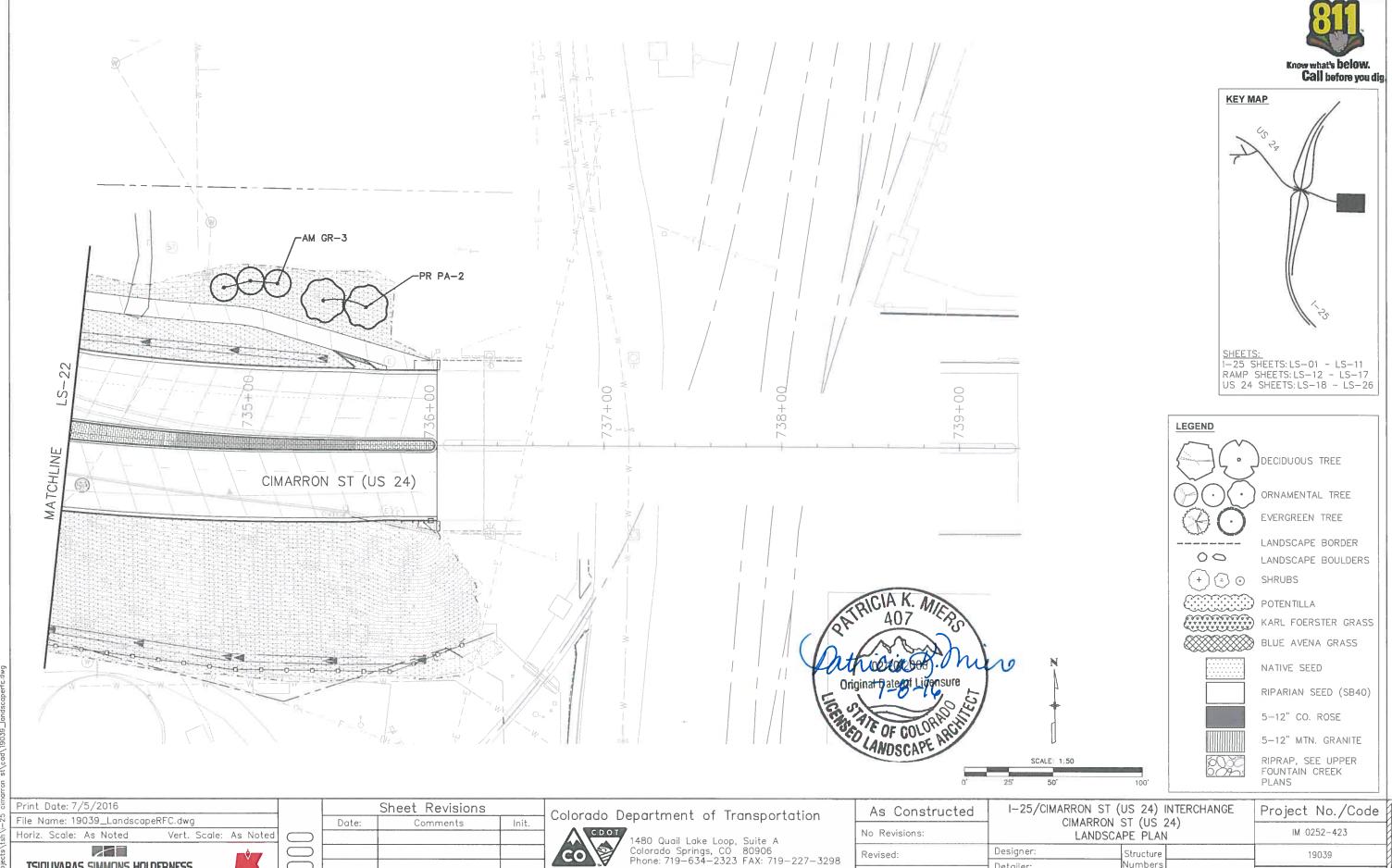
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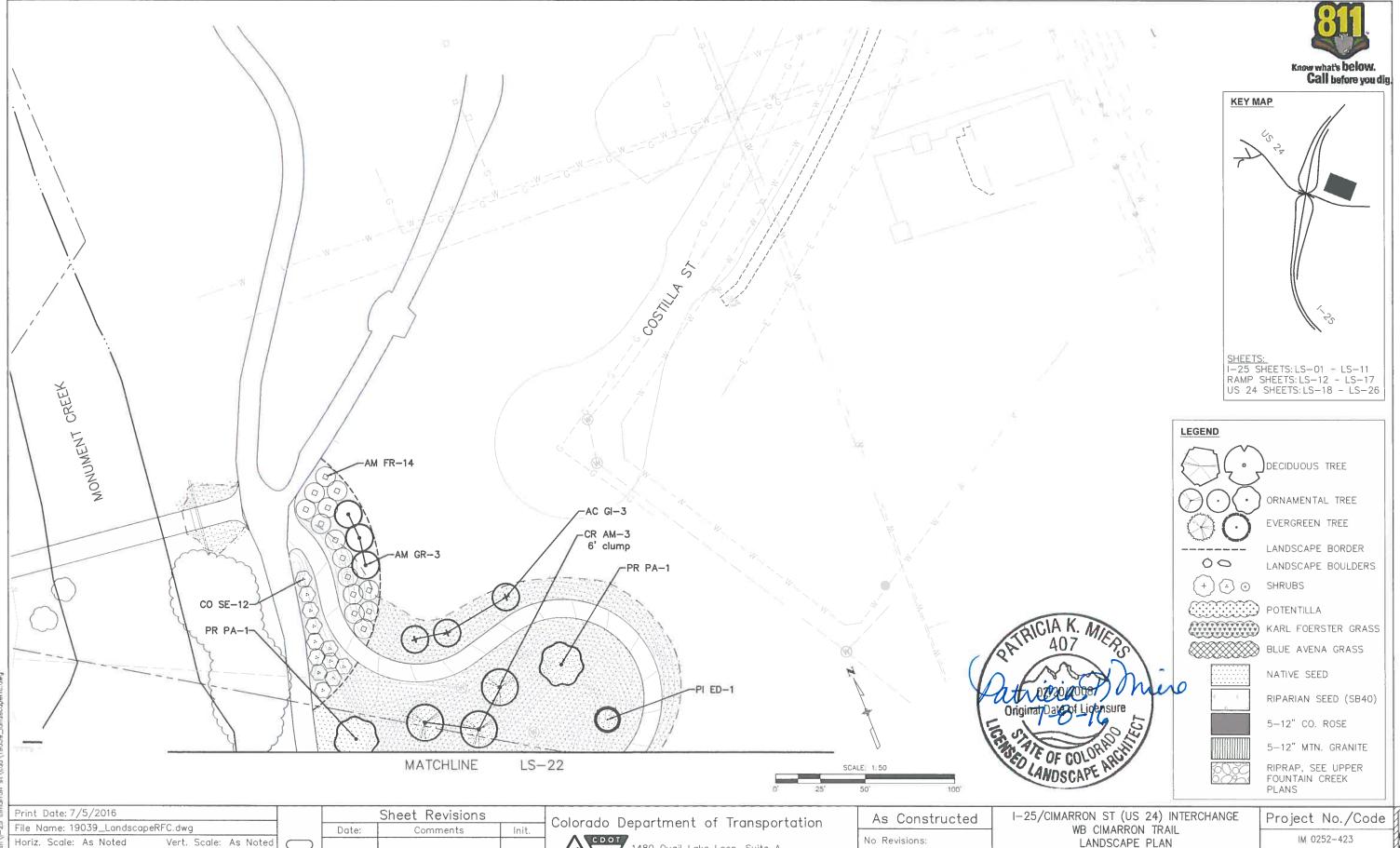
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TSIOUVARAS SIMMONS HOLDERNESS



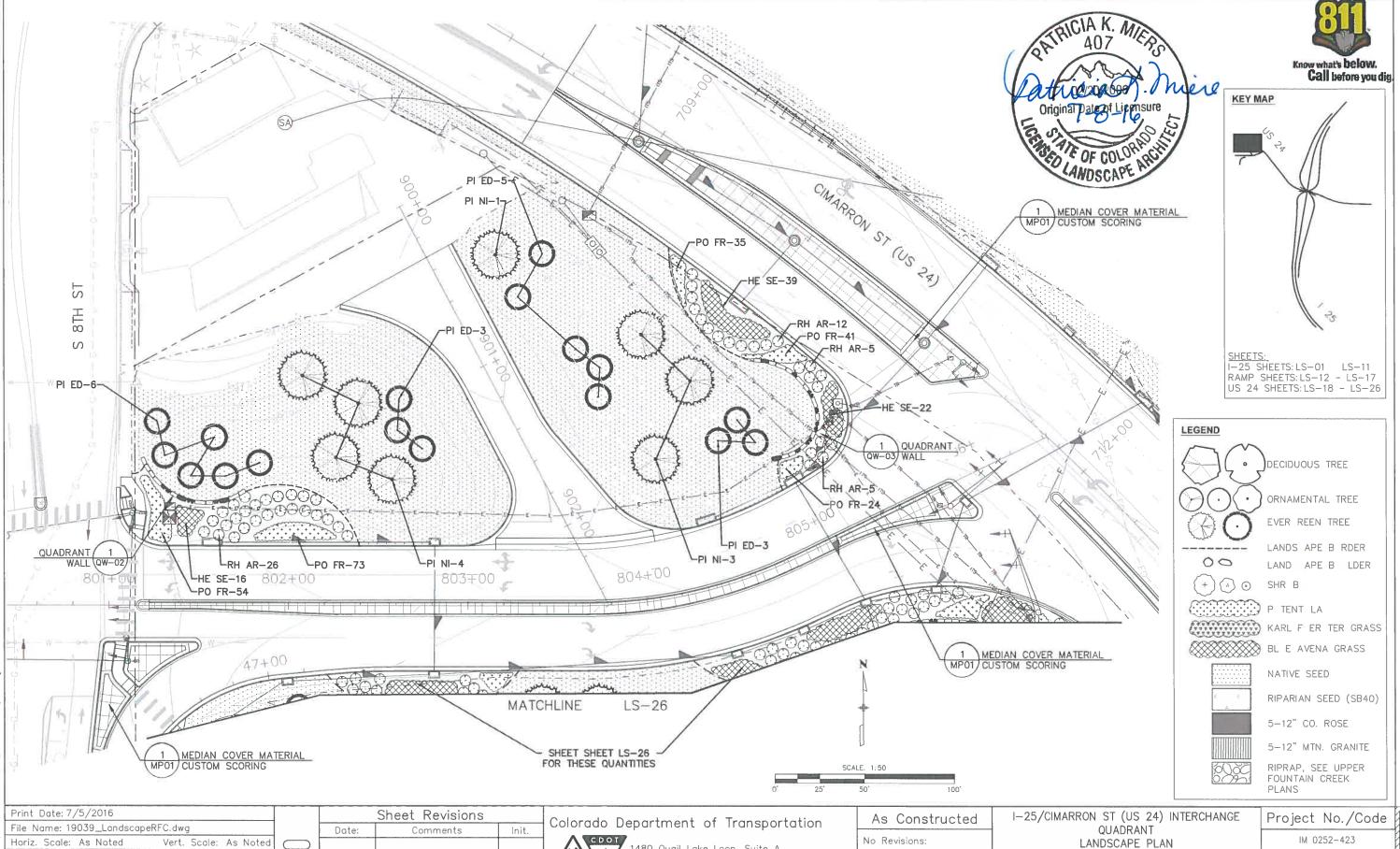
1480 Quail Lake Loop, Suite A Colorado Springs, CO 80906 Phone: 719-634-2323 FAX: 719-227-3298 Region 2

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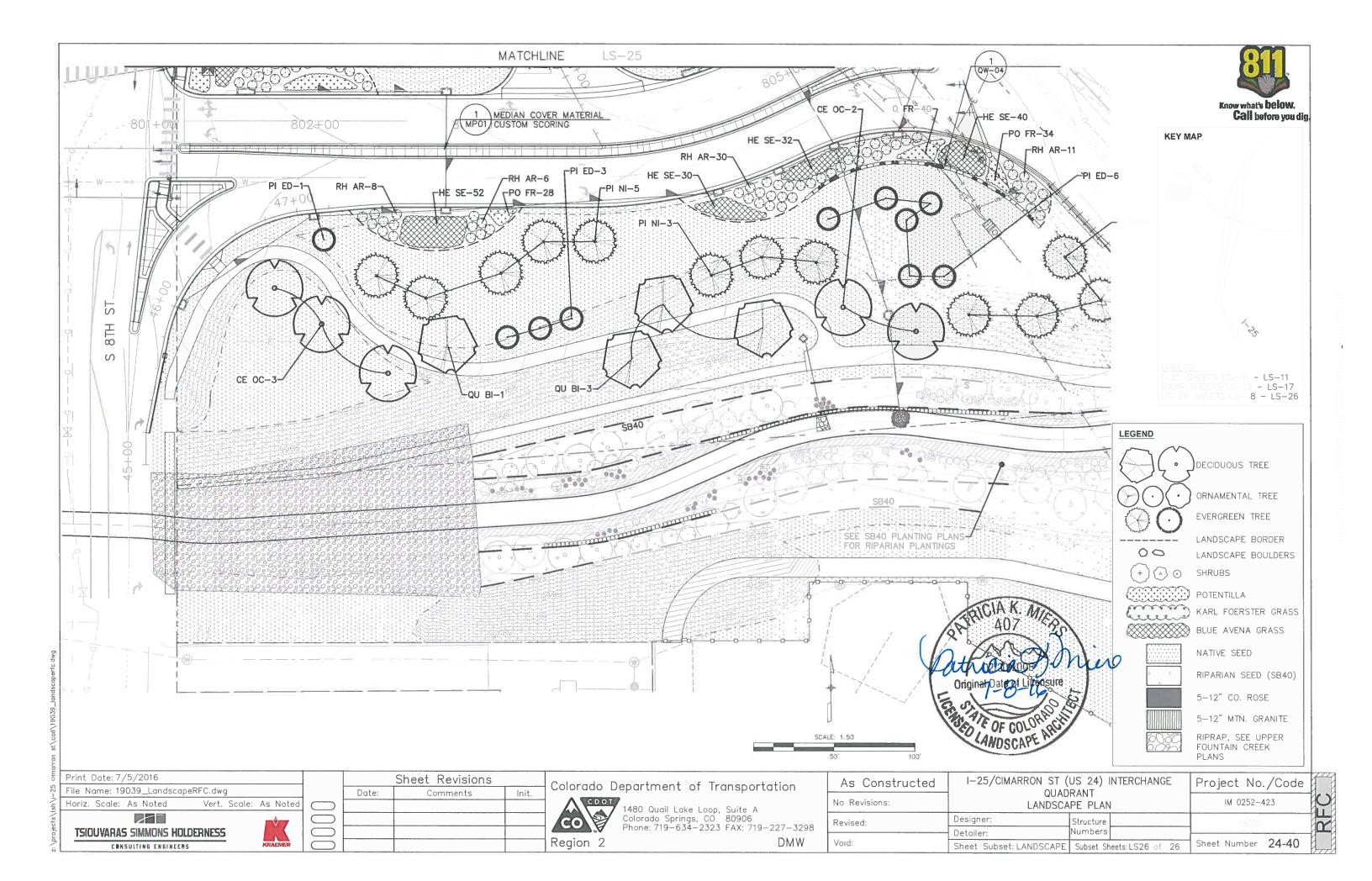
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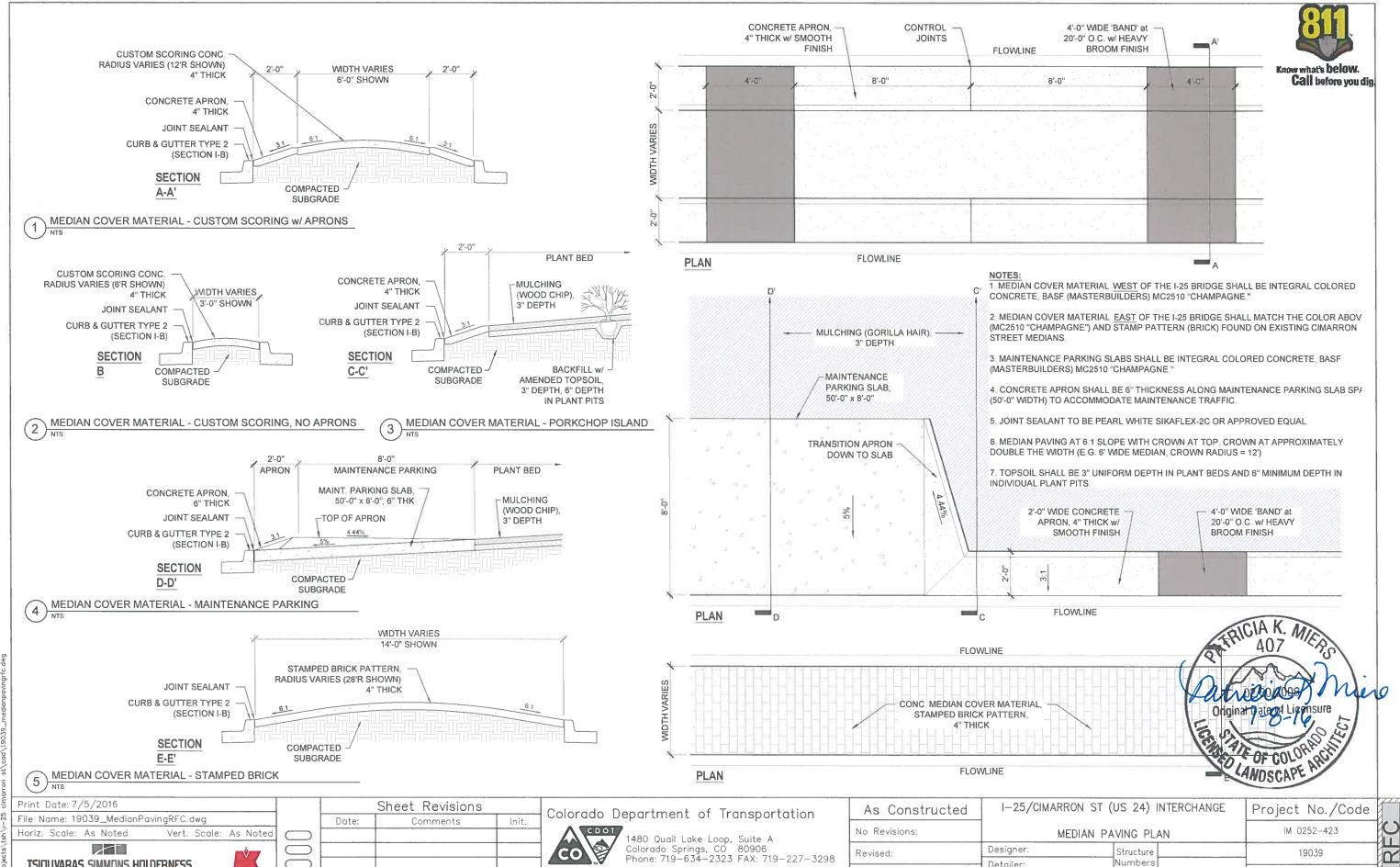


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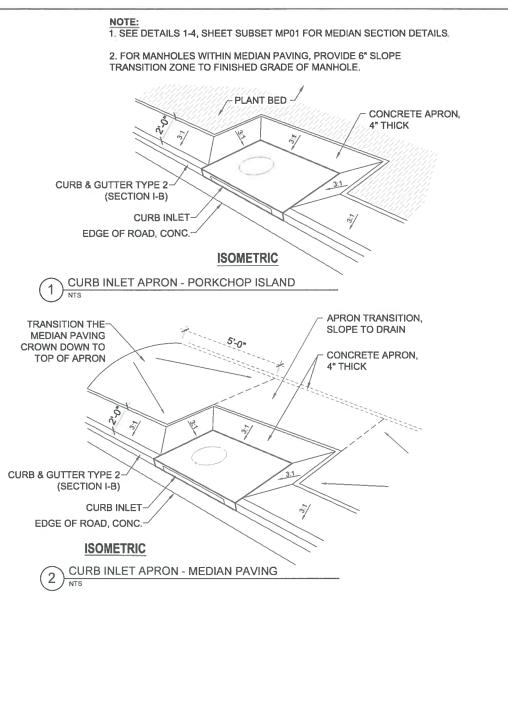


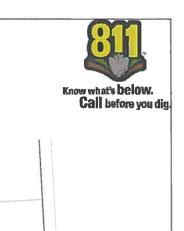
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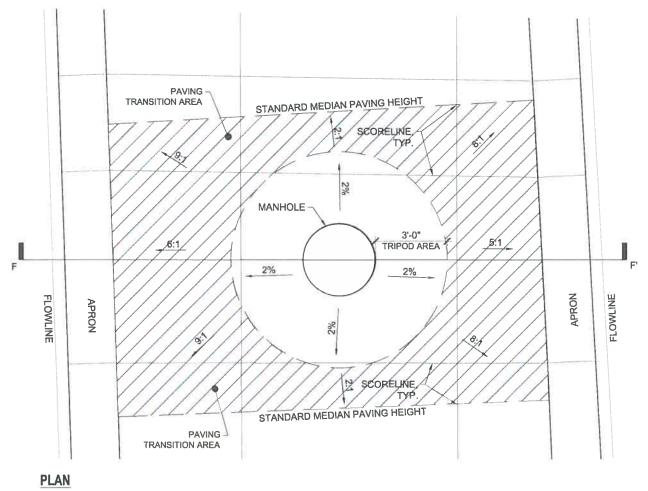
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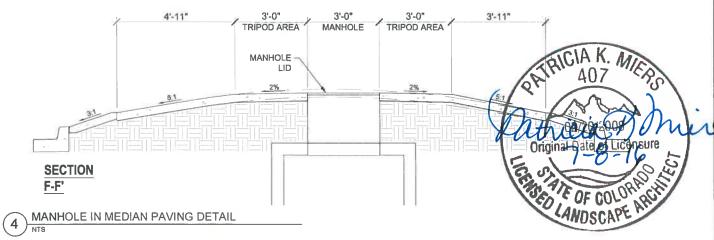
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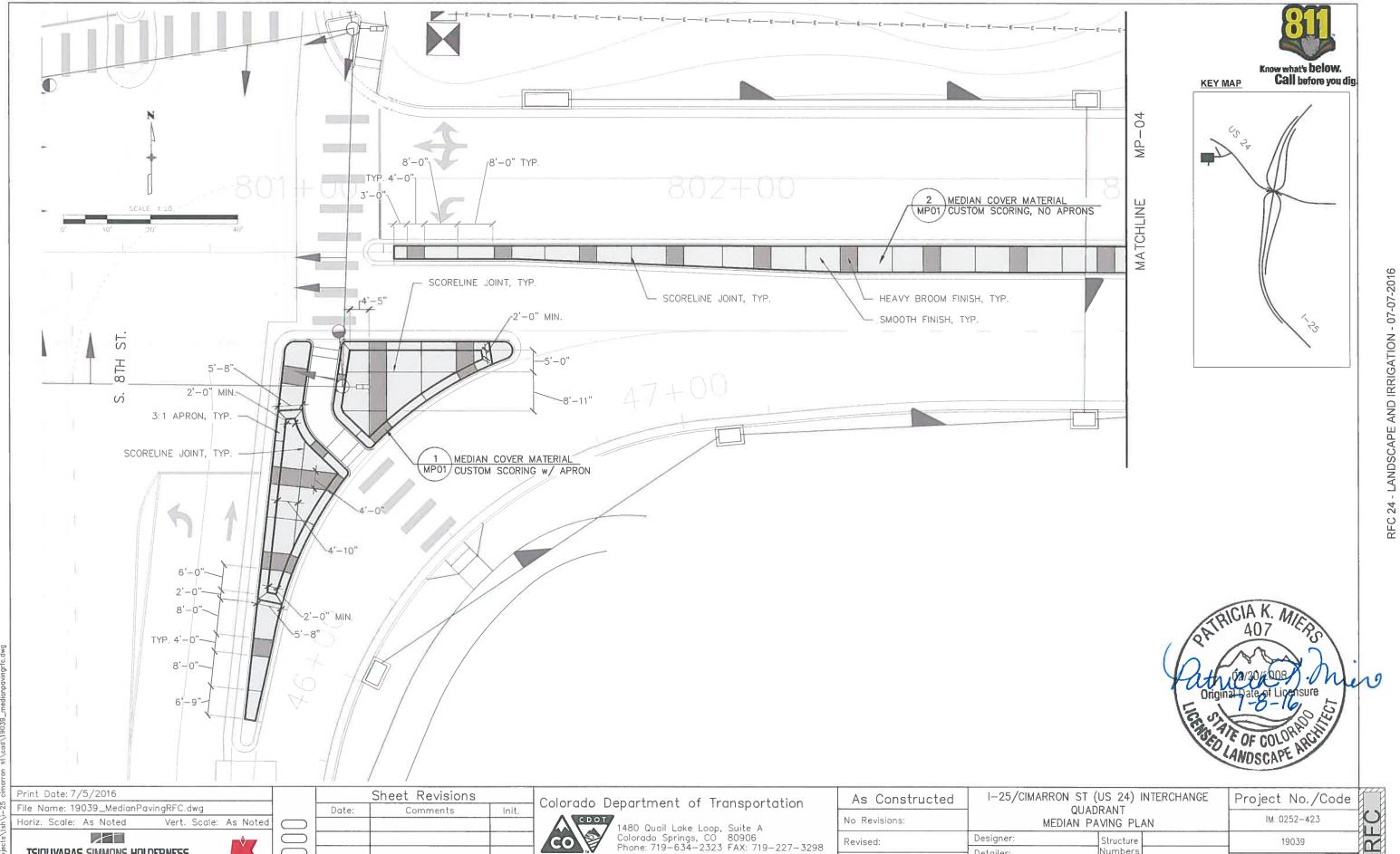
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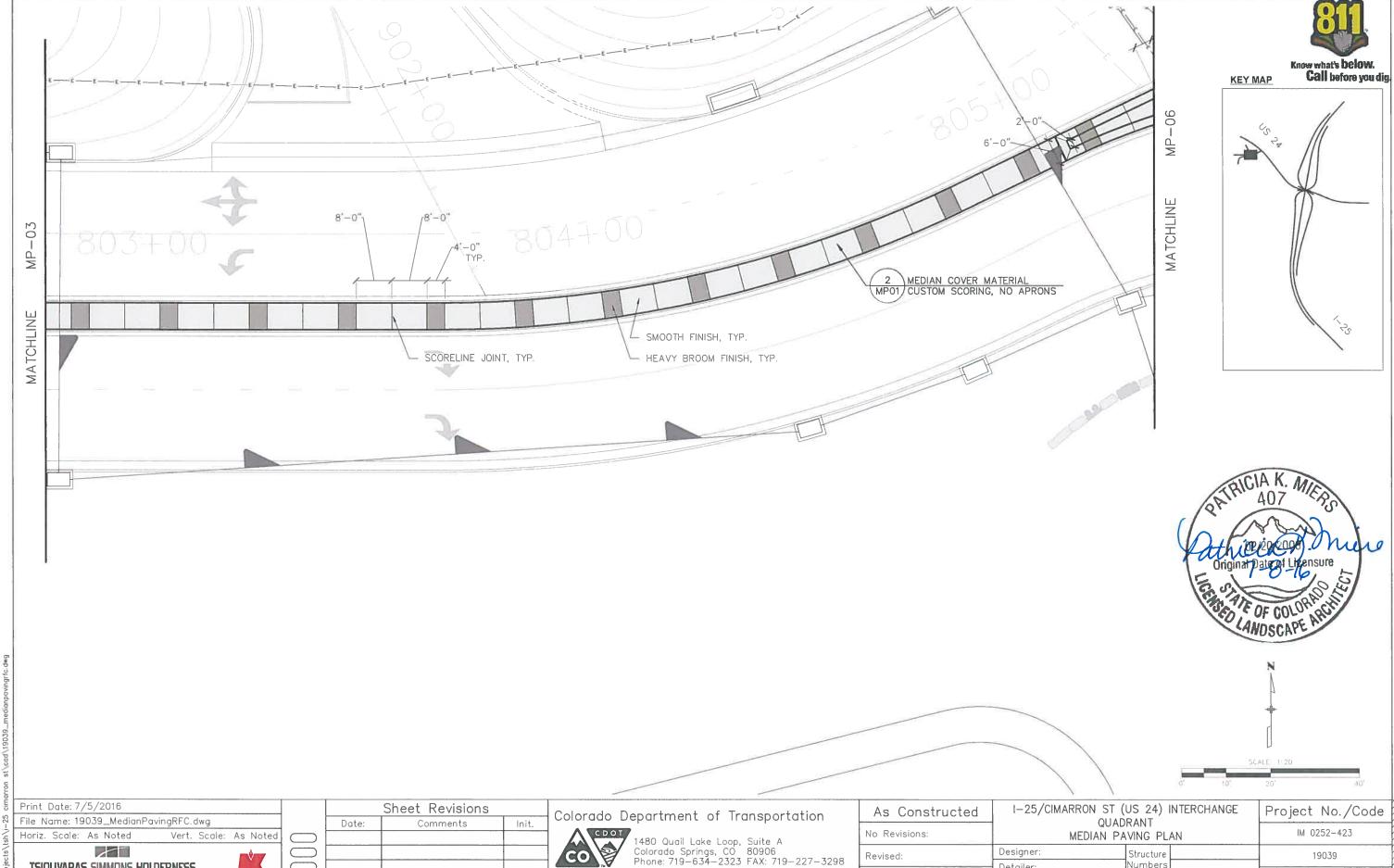
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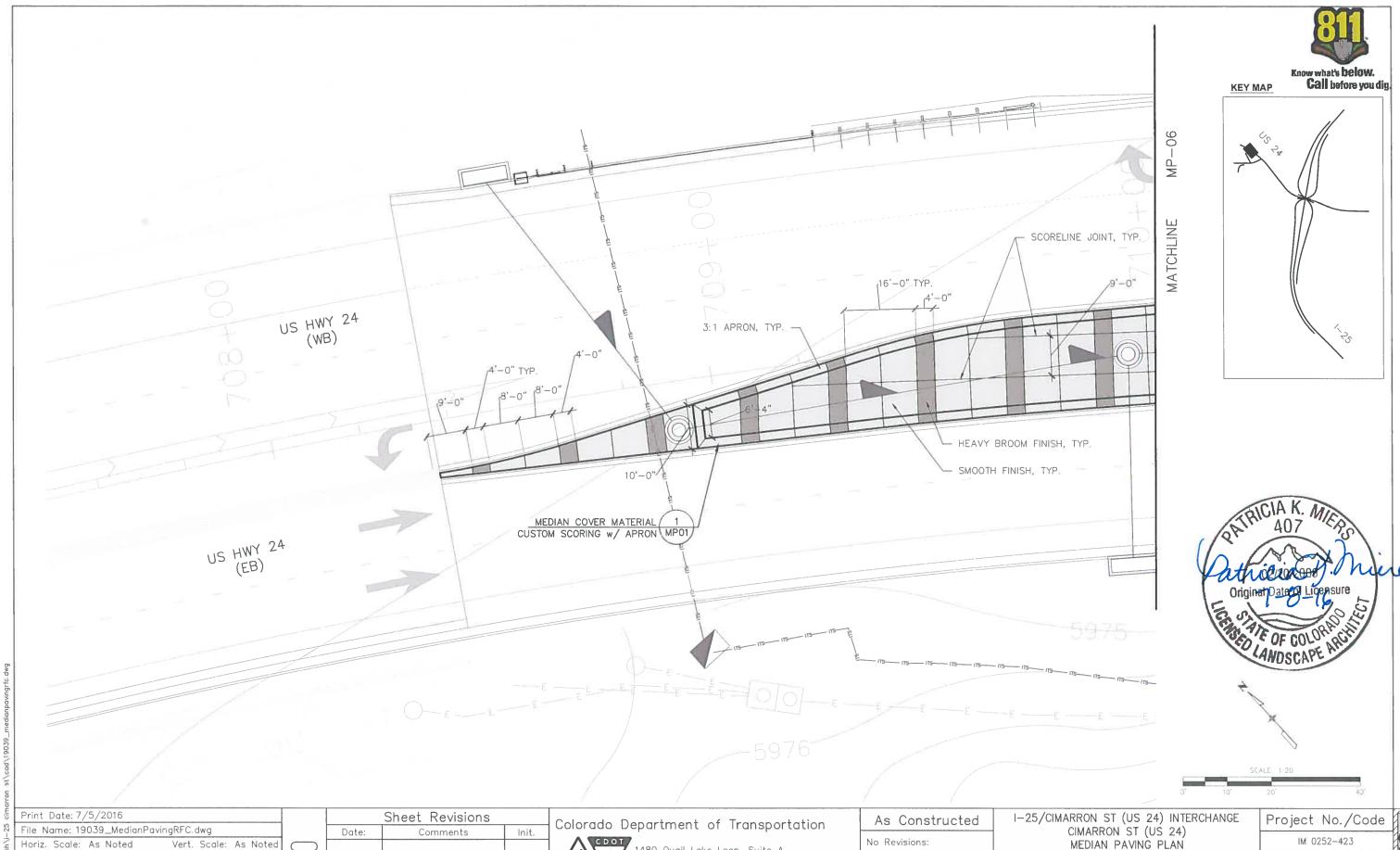
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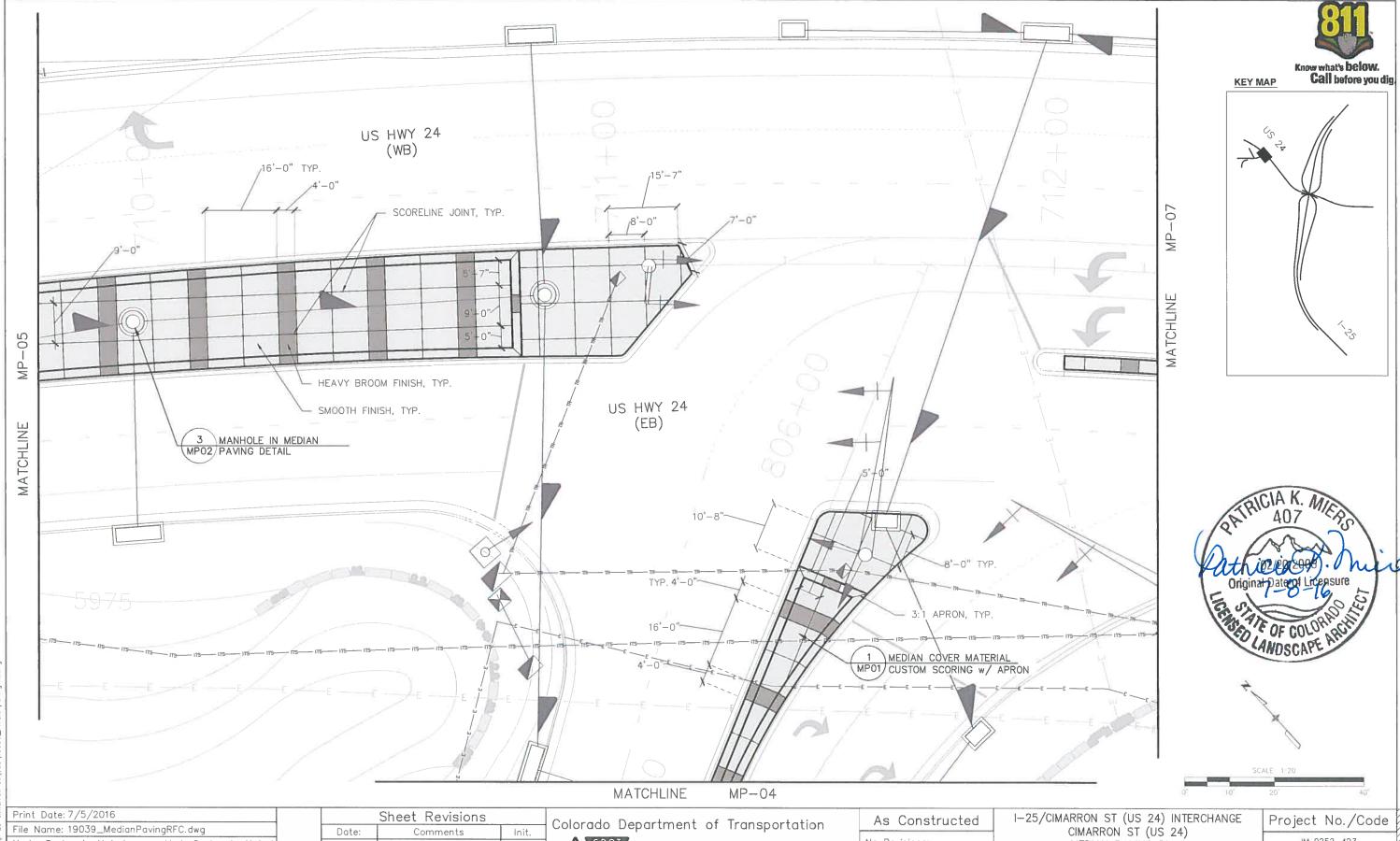
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Region 2

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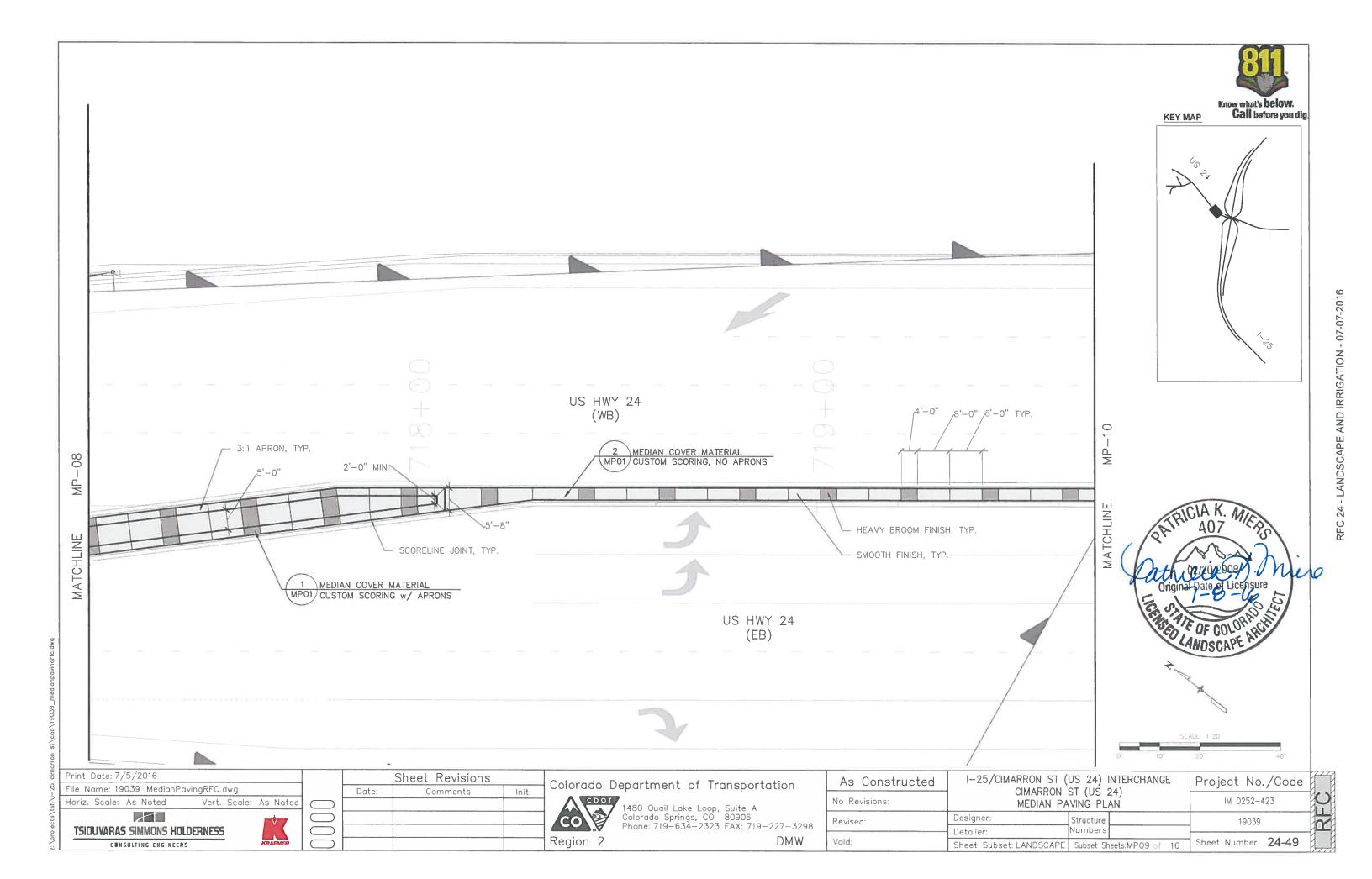
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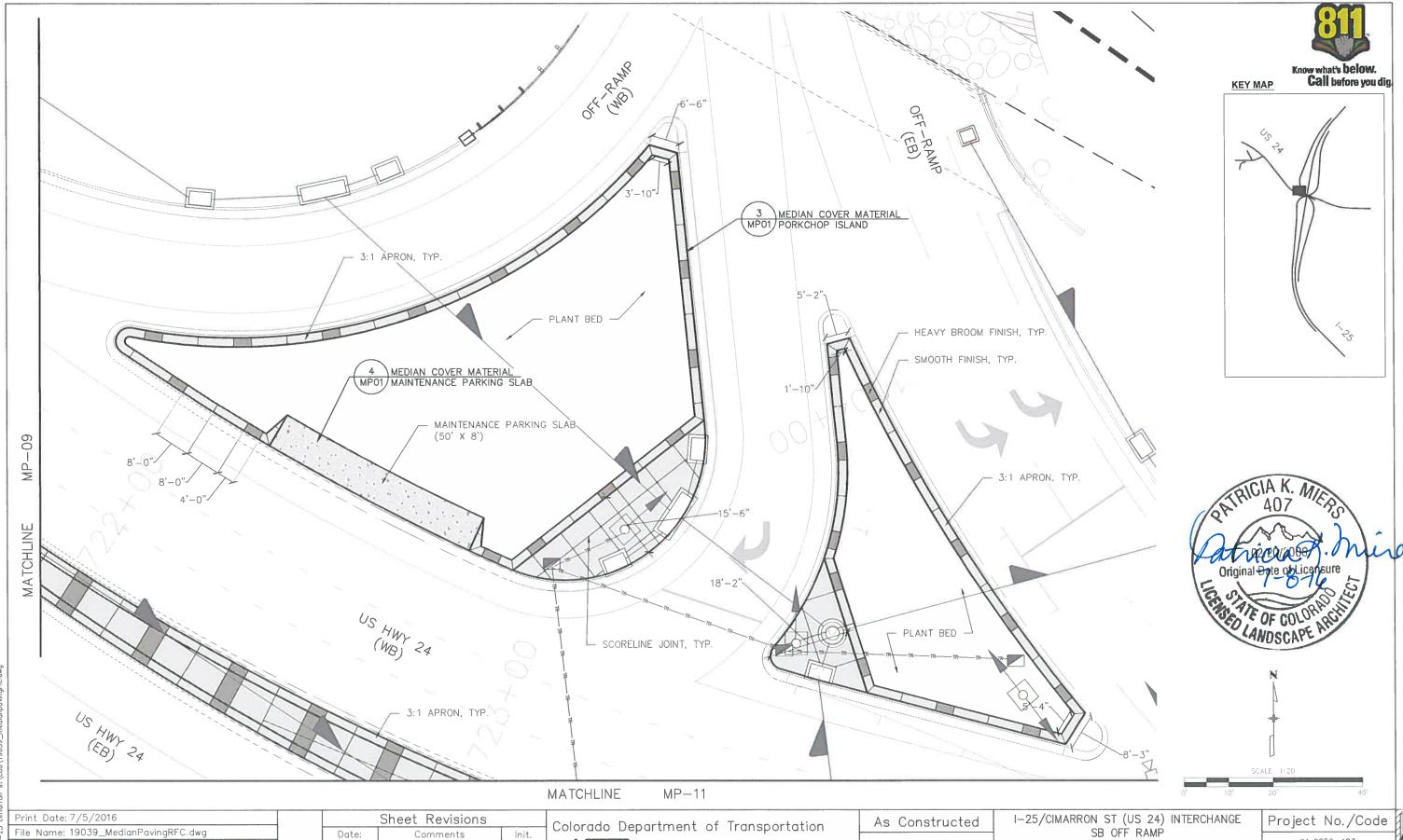
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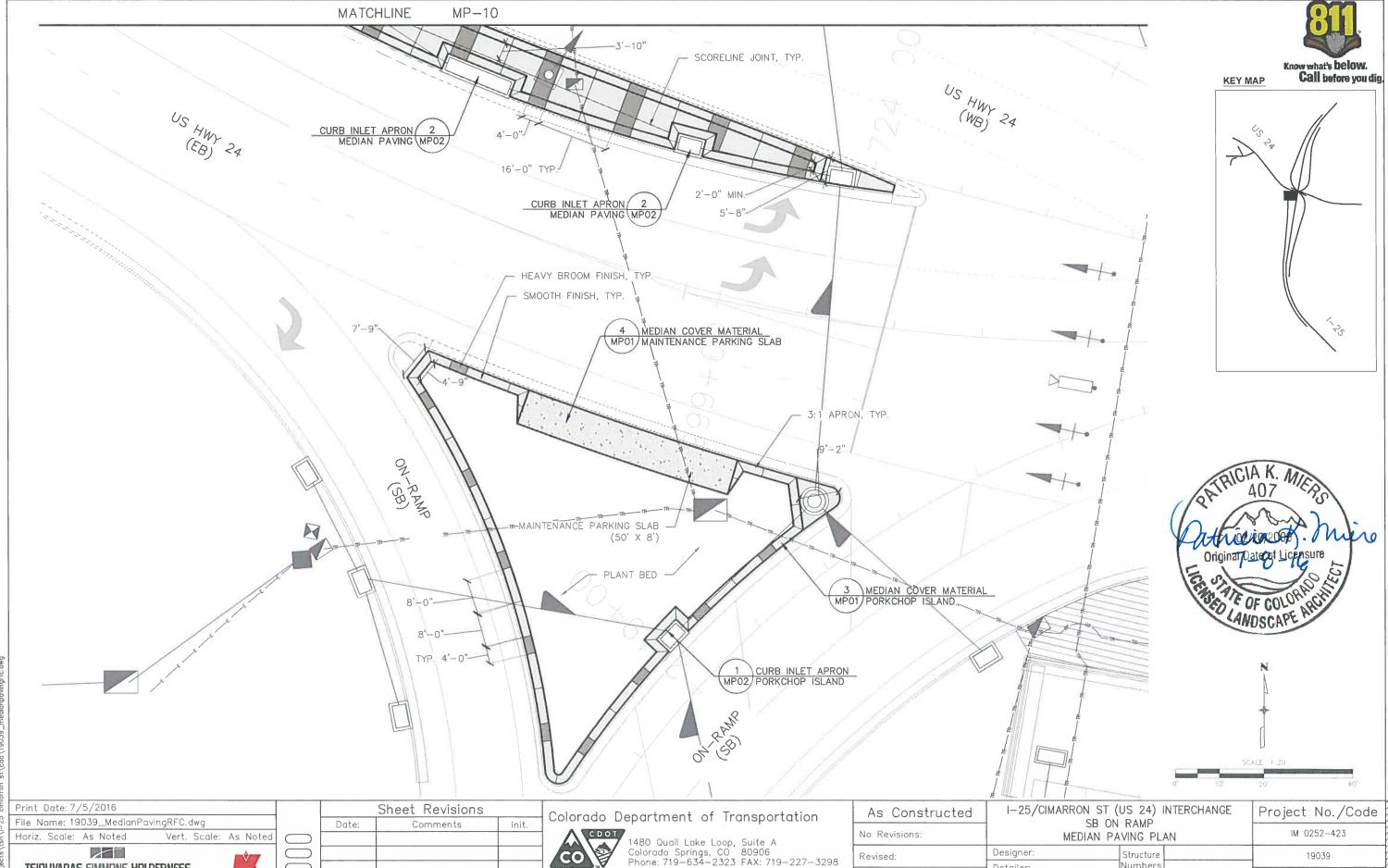
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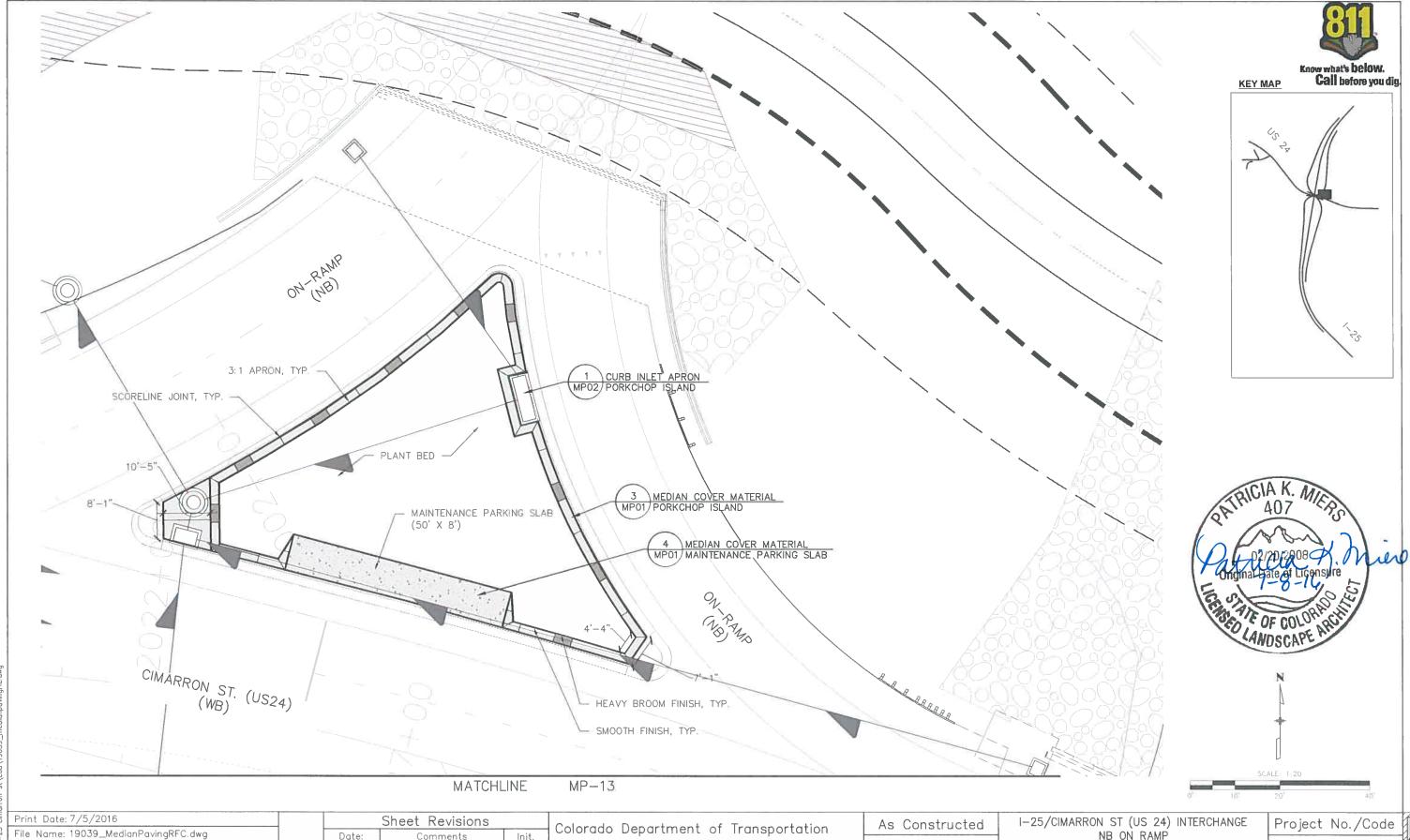
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Colorado Department of Transportation



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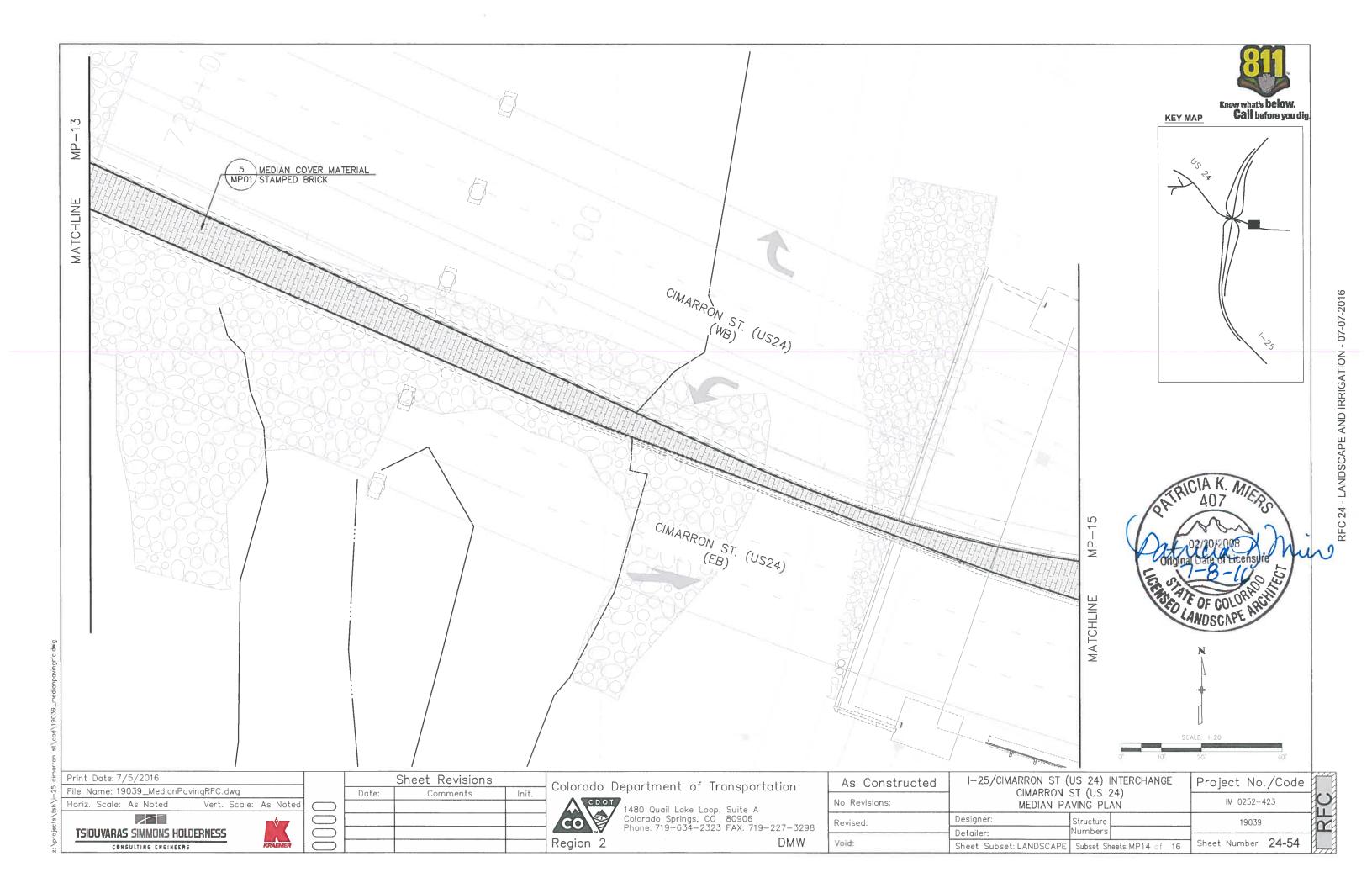
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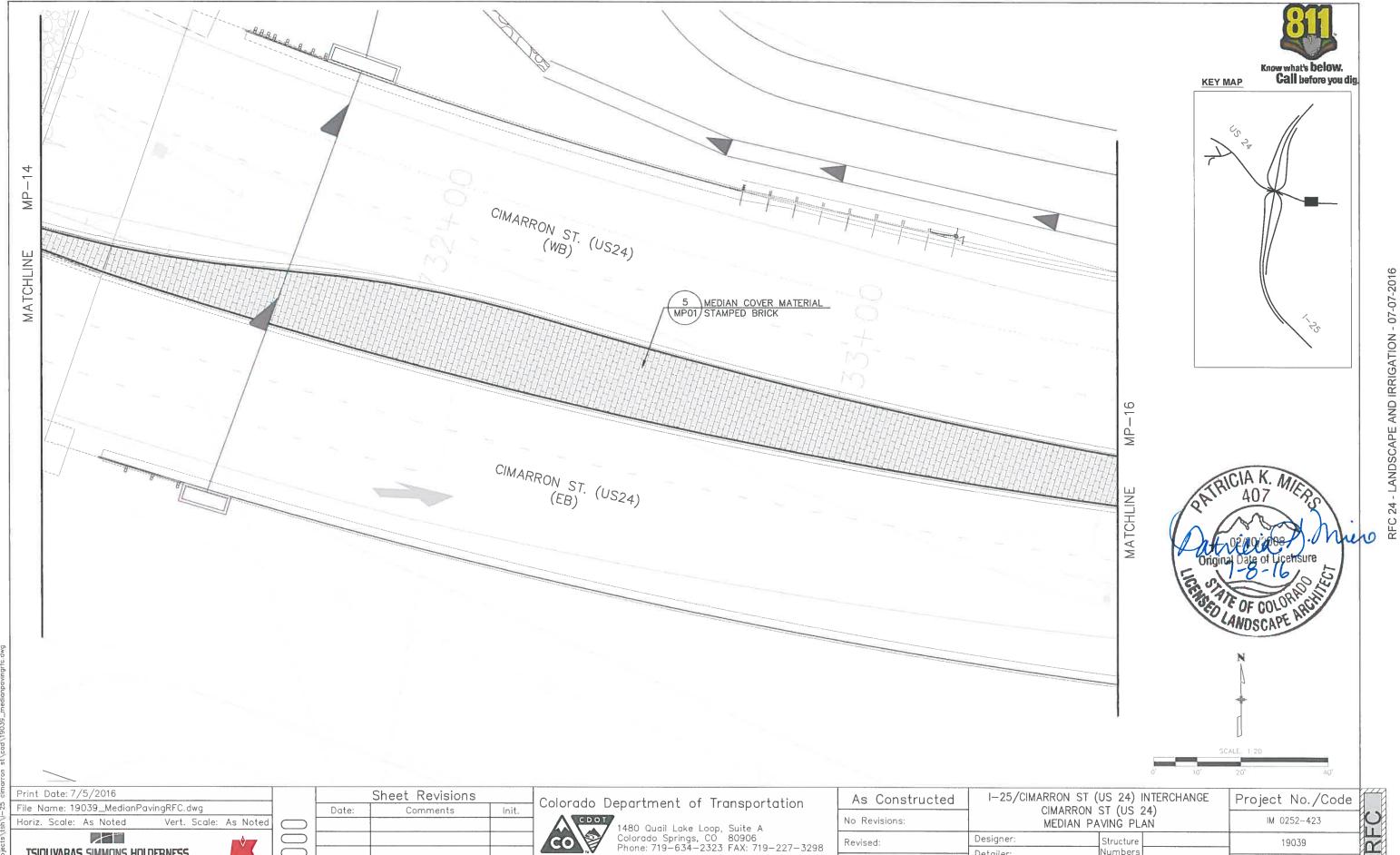
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TSIOUVARAS SIMMONS HOLDERNESS

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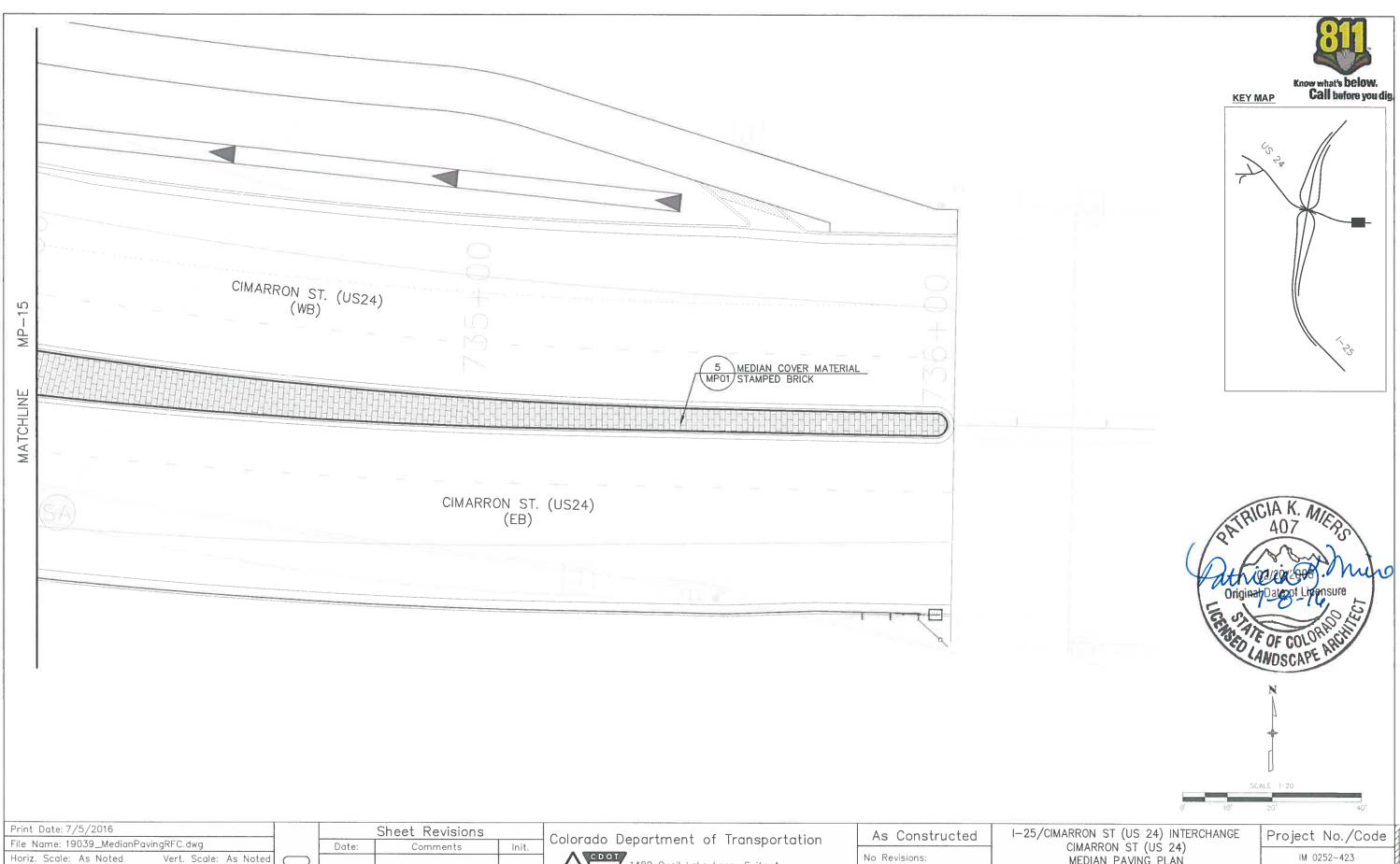
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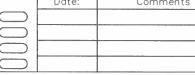
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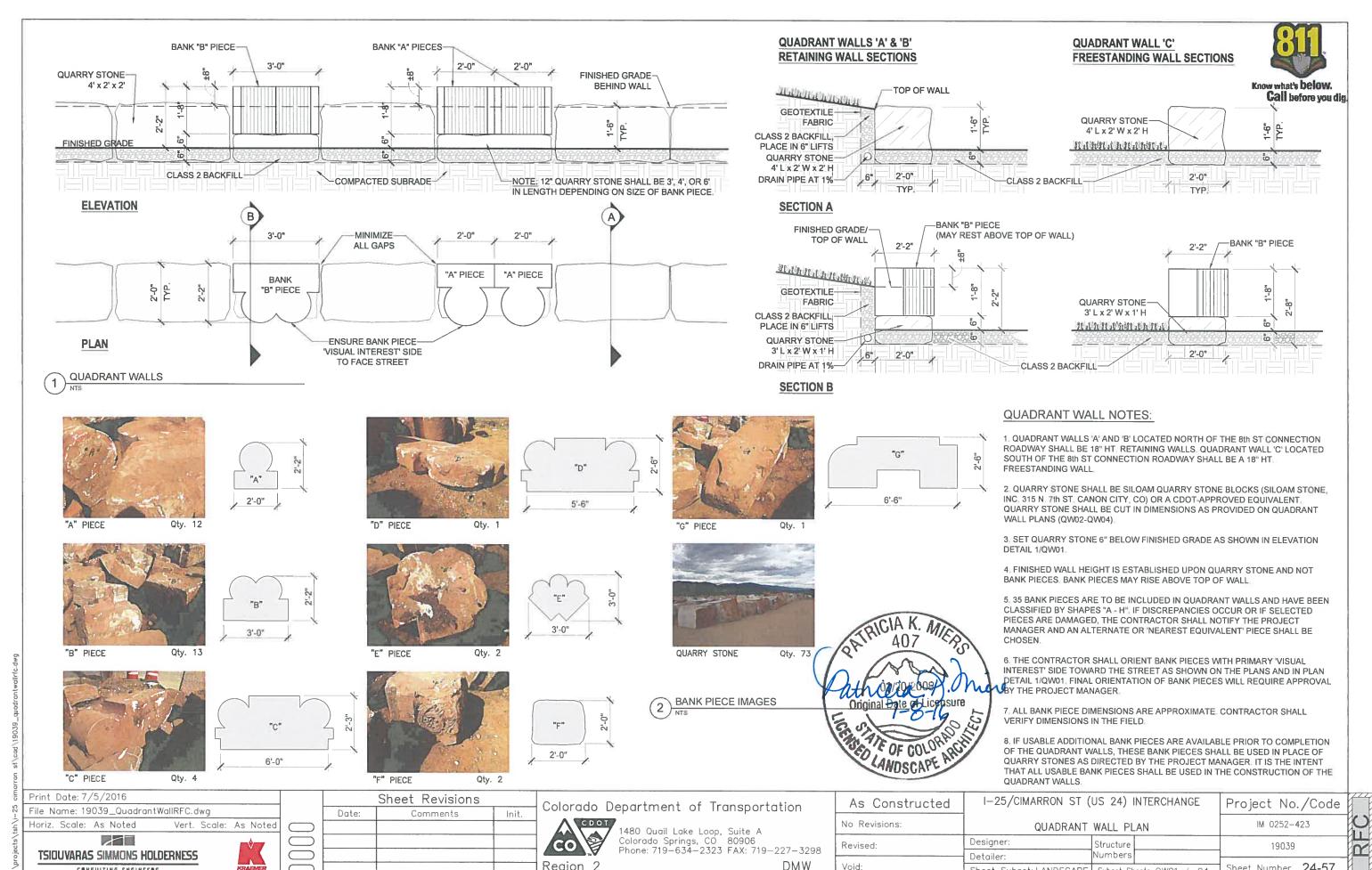
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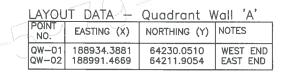
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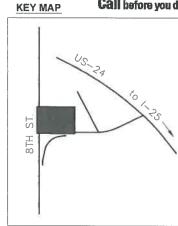
# Know what's **below. Call** before you dig.

# QUARRY STONE

ITEM/LENGTH	HEIGHT	QUANTITY
3' QUARRY STONE* 4' QUARRY STONE** 6' QUARRY STONE*** 4' QUARRY STONE 6' QUARRY STONE	12" 12" 12" 24"	3 1 2 6

- \* PLACED BENEATH BANK PIECE "B". \*\* PLACED BENEATH BANK PIECE "A", AND "F". \*\*\* PLACED BENEATH BANK PIECE "C", "D", "E", AND "G".

BANK PIECES						
ITEM/LENGTH	HEIGHT	QUANTITY				
BANK PIECE "A" BANK PIECE "B" BANK PIECE "C"	±20" ±20" ±20"	2 3 2				



J. 0,-0,-	R37'-0"		BANK PIECE "A" ±20" 2 BANK PIECE "B" ±20" 3 BANK PIECE "C" ±20" 2
S. HT8 S. S. S. T. S.	O'-0"	QW-02	
BANK "B"	PIECES  BANK "C" PIECE	1 QUADRANT QW-0) WALL DETAIL	
		BANK "C" PIECE - BANK "B" PIECE	
	22'-6"		

/-R37'-0"

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CONSULTING ENGINEERS	

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QUADRANT WALL 'A' 18" HT. RETAINING WALL TOP OF WALL: 5978.5 BOTTOM OF WALL: 5976.5

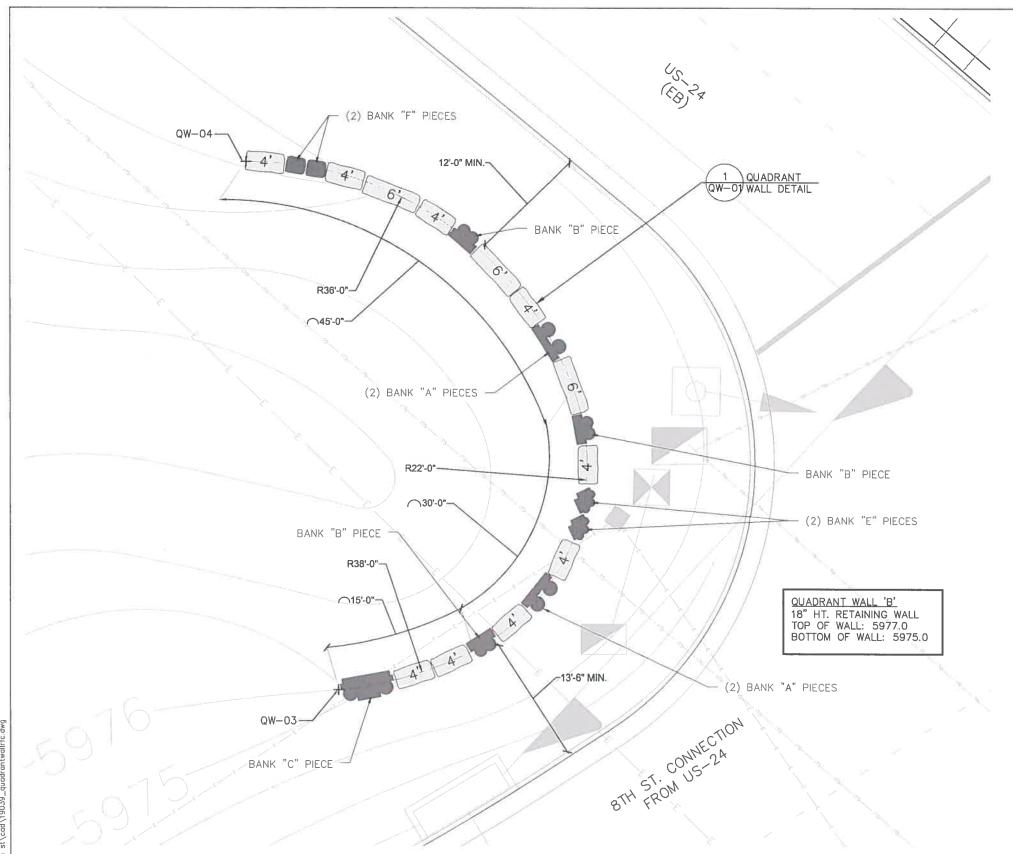
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8TH ST. CONNECTION FROM US-24

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As Constructed		ucted I-25/CIMARRON ST (US 24) IN		Project No./Code	7
	No Revisions:	QUADRANT WALL 'A'		IM 0252-423	
Revised: Designer: Structure			19039	7	
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		Sheet Subset: LANDSCAPE	Subset Sheets:QW02 of 04	Sheet Number 24-58	1



LAYOUT DATA - Quadrant Wall 'B' POINT NO. NORTHING (Y) NOTES EASTING (X) 189284.5789 189275.0145 64229.4648 64284.3788 SOUTH END NORTH END QW-03 QW-04

## QUARRY STONE

ITEM/LENGTH	HEIGHT	QUANTITY
3' QUARRY STONE* 4' QUARRY STONE** 6' QUARRY STONE*** 4' QUARRY STONE	12" 12" 12" 24"	3 3 2
6' QUARRY STONE	24"	3

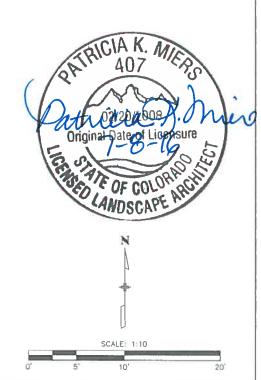
\* PLACED BENEATH BANK PIECE "B".
\*\* PLACED BENEATH BANK PIECE "A", AND "F".
\*\*\* PLACED BENEATH BANK PIECE "C", "D", "E", AND "G".

#### BANK PIECES

ITEM/LENGTH	HEIGHT	QUANTITY
BANK PIECE "A"	±20"	4
BANK PIECE "B"	±20"	3
BANK PIECE "C"	±20"	1
BANK PIECE "E"	±18"	2
BANK PIECE "F"	±24"	2

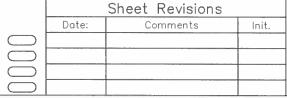






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File Name: 19039_QuadrantWallRFC.dwg				
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No Revisions:	QUADRANT	Γ WALL 'B'	IM 0252-423
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	Detailer:	Numbers	
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19039

Sheet Number 24-60

QUADRANT WALL 'C'

Sheet Subset: LANDSCAPE Subset Sheets:QW04 of 04

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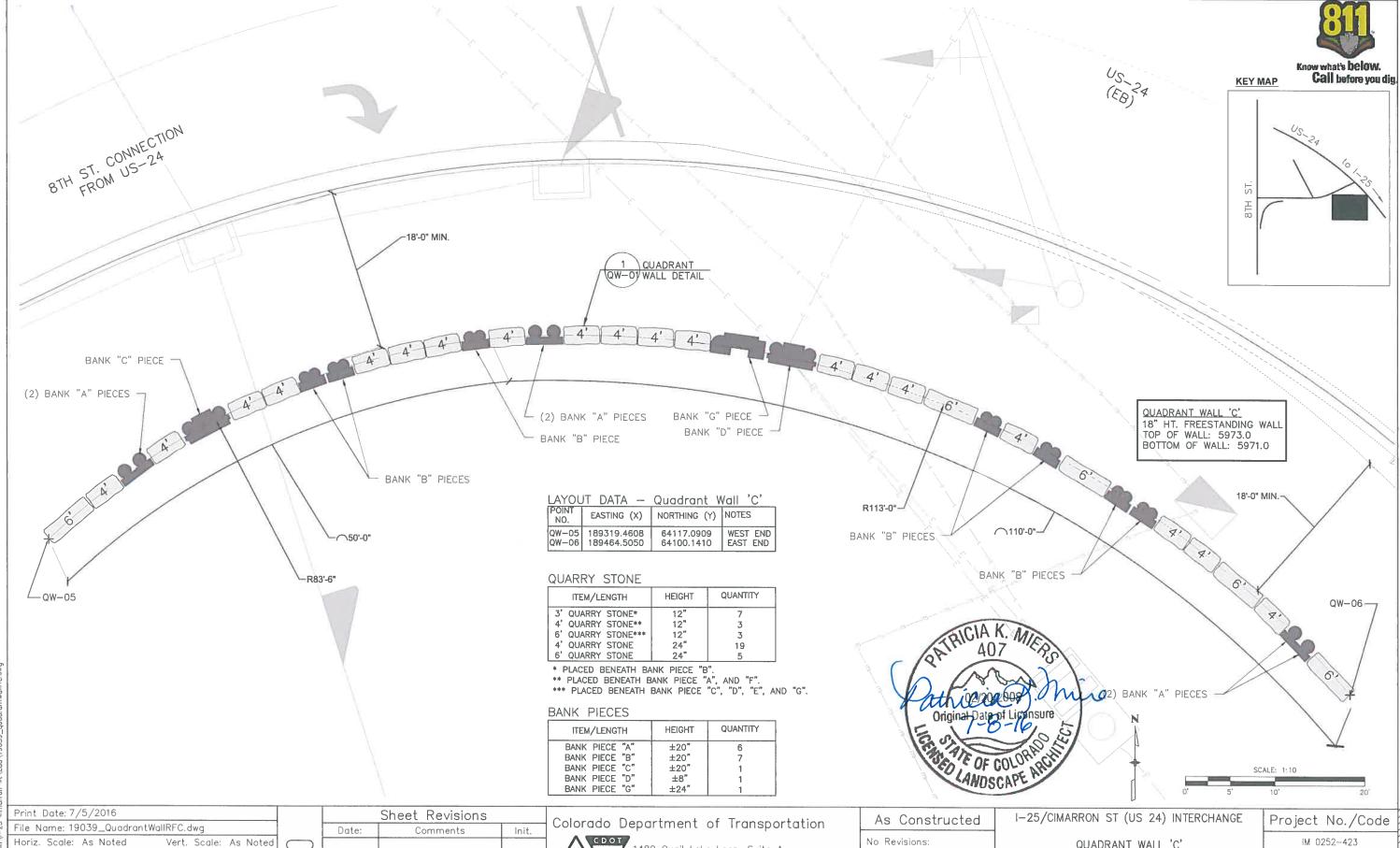
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### 1-25 CIMARRON DESIGN BUILD SB 40 TREE AND SHRUB INVENTORY

SURVEY AREA	TREE SPECIES	NATIVE	QUANTITY
North of Cimarron	Green Ash (Fraxinus pennsylvanica)	Υ	1
Fountain Creek	Plains Cottonwood (Populus deltoides)	Υ	30
rountain creek	Box Elder (Acer negundo )	Υ	1
South of Cimarron Fountain Creek	Plains Cottonwood ( <i>Populus deltoides</i> )	Υ	13
East of I-25	Plains Cottonwood (Populus deltoides)	Υ	23
Monument Creek	Black Locust (Robina pseudoacacia)	Υ	16
Western most	Green Ash (Fraxinus pennsylvanica)	Υ	2
South of Cimarron	Plains Cottonwood (Populus deltoides)	Υ	10
North of Cimarron	Green Ash (Fraxinus pennsylvanica)	Υ	27
	Plains Cottonwood (Populus deltoides)	Υ	33
	Black Locust (Robina pseudoacacia)	Υ	1
Southern most	Green Ash (Fraxinus pennsylvanica)	Υ	2
West of I-25	Plains Cottonwood (Populus deltoides)	Υ	8
	Pinyon pine (Pinus edulis)	Υ	1
		Total:	168

#### SENATE BILL 40 - RIPARIAN CORRIDOR NATIVE SHRUBS

SURVEY AREA	SHRUB SPECIES	NATIVE	AREA (SF)
North of Cimarron	Wax Currant (Ribes cereum)	Υ Υ	1,600
Fountain Creek			
South of Cimarron	Wax Currant (Ribes cereum)	Υ	700
Fountain Creek	Snowberry (Symphoricarpos albus)	Υ	300
East of I-25	Wax Currant (Ribes cereum)	Υ	600
Monument Creek	Sandbar Willow (Salix exigua)	Υ	1,200
Western most	Wild Plum (Prunus americana)	Υ	286
South of Cimarron			
North of Cimarron	Wild Plum (Prunus americana)	Υ	1,827
Southern most	Wild Plum (Prunus americana)	Υ	1,266
West of I-25	Wood's rose (Rosa woodsii)		
		Total =	7,779

#### SENATE BILL 40 - RIPARIAN CORRIDOR NON-NATIVE TREES

SURVEY AREA	TREE SPECIES	NATIVE	QUANTITY
North of Cimarron	Siberian Elm (Ulmus pumila)	N	76
Fountain Creek	Crack Willow (Salix fragilis)	N	7
	Russian Olive (Eleagnus angustifolia)	N	18
South of Cimarron	Siberian Elm (Ulmus pumila)	N	188
Fountain Creek	Crack Willow (Salix fragilis)	N	51
East of I-25	Siberian Elm (Ulmus pumila)	N	139
Monument Creek	Crack Willow (Salix fragilis)	N	2
	Russian Olive (Eleagnus angustifolia)	N	13
Western most	Siberian Elm (Ulmus pumila)	N	112
South of Cimarron	Crack willow (Salix fragilis)	N	6
North of Cimarron	Siberian Elm (Ulmus pumila)	N	70
	Crack willow (Salix fragilis)	N	6
	Russian Olive (Elaeagnus angustifolia)	N	1
East of I-25	Siberian Elm (Ulmus pumila)	N	74
	Russian Olive (Elaeagnus angustifolia)	N	10
Southern most	Siberian Elm (Ulmus pumila)	N	9
West of I-25	Crack willow (Salix fragilis)	N	3
		Total:	785

Non-Native Tree Replacement Policy is 4 Sandbar Willow Stakes per Tree (4 SF per stake) 785 Trees x 4 Willow Stakes = 3,140 willow stakes (3,140 x 4 SF = 12,560 SF) 3,140 **WOODY PLANTS TABLE** 

PLANT DORMANT LOG TREES AND 1 QUART SHRUBS LATE MARCH TO EARLY APRIL. PLANT SANDBAR WILLOW CUTTINGS BETWEEN NOVEMBER THRU APRIL WHEN DORMANT AND GROUND IS NOT FROZEN. FOLLOW PLANTING SPECIFICATIONS ON PLANS. FIELD LOCATION FOR TREES AND SHRUBS SHOULD BE PROVIDED BY PROJECT LANDSCAPE ARCHITECT,

SYM BOL	KEY	QTY	AREA SF	COMMONNAME	BOTANICAL NAME	SIZE	SPACING	COMMENTS
	*DECIDUOUS	REE	***************************************					
	PC	100	10,000	PLAINS COTTONWOOD	POPULUS DELTOIDES	Dormant Log	20° O.C.	Plant 2-5 feet above w ater
	PLW	68	6,800	PEACH LEAF WILLOW	SALIX AMYGDALOIDES	Dormant Log	10' O.C	Plant 2-5 feet above w ater
	TOTALS	168	16,800					
	DECIDUOUS	SHRUB (V	MLLOW)					
	SBW	3,140	12,560	SANDBAR WILLOW	SALIX EXIGUA	Outtings	2' O.C.	Plant 1 feet above w ater
	DECIDUOUS SHRUB							
	GC	125	1,125	GOLDEN CURRANT	RIBES AUREUM	1 QT.	4° O.C.	Plant 1 to 3 feet above water
	PCG	110	990	PRAIRE CORDGRASS	SPARTINA PECTINATA	1 QT.	2' O.C.	Plant 1 to 3 feet above water
	TLS	110	990	THREE LEAF SUMAC	RHUS TRILOBATA	1 QT.	3' O.C.	Plant 2 to 4 feet above water
	WC	125	1,125	WAX CURRANT	RIBES CEREUM	1 QT.	4' O.C.	Plant 1 to 3 feet above water
	DAW	50	1,800	DWARF ARCTIC WILLOW	SALIX PURPUREA NANA	1 QT.	6' O.C.	Plant 2 to 4 feet above water
	CLM	50	1,800	CURL-LEAF MTN. MAHOGANY	CERCOCARPUS LEDIFOLIUS	1 QT.	6' O.C.	Plant 2 to 4 feet above water
	TOTALS	570	7,830					



# WOODY PLANTS TABLE NOTE:

in areas as designated by the Project Engineer.

\* ALL WOODY DECIDUOUS SHRUBS ARE COLORADO DEER RESISTANT PLANTS AND ROCKY MOUNTAIN XERISCAPE PLANTS AND HAVE BEEN CHOSEN TO LIMIT WILDLIFE FORAGING WITHIN THE RIPARIAN CORRIDOR

## FOR REFERENCE ONLY: SEEDING (NATIVE UPLAND)

\*\* RATES ARE FOR DRILLED, DOUBLE IF HAND-BROADCASTED.

BOTANICAL NAME *  DALEA PURPUREUM PENSTEMON STRICTUS ACHNATERUM HYMENOIDES BOUTELOUA CURTIPENDULA BOUTELOUA GRACILIS BUCHLOE DACTYLOIDES CALAMOVILFA LONGIFOLIA ELYMUS LANCEOLATUS LANCEOLATUS 'CRITANA' NASSELLA VIRIDULA PASCOPYRUM SMITHII 'ARRIBA' SPOROBOLUS AIROIDES	COMMON NAME	LBS p/ ACRE
PENSTEMON STRICTUS ACHNATERUM HYMENOIDES BOUTELOUA CURTIPENDULA BOUTELOUA GRACILIS BUCHLOE DACTYLOIDES CALAMOVILFA LONGIFOLIA ELYMUS LANCEOLATUS LANCEOLATUS 'CRITANA' NASSELLA VIRIDULA PASCOPYRUM SMITHII 'ARRIBA'	PURPLE PRAIRIE CLOVER ROCKY MOUNTAIN PENSTEMON INDIAN RICEGRASS SIDEOATS GRAMA BLUE GRAMA BUFFALOGRASS PRAIRIE SANDREED THICKSPIKE WHEATGRASS GREEN NEEDLEGRASS WESTERN WHEATGRASS ALKALI SACATON	0.90 0.90 1.8 3.6 1.8 1.8 3.6 5.4 3.6 9.0 3.6
·		00.044

\* NOMENCLATURE FOLLOWS CITY OF COLORADO SPRINGS DRAINAGE CRITERIA MANUAL. 36.0 \*\*

SEEDING (NATIVE RIPARIAN GRASS, FORB AND SHRUB)

BOTANICAL NAME	COMMON NAME/VARIETY	LBS/AC - PLS
SHRUBS		
ATRIPLEX CANESCENS	FOURWING SALTBUSH	0.5
RHUS TRILOBATA	SKUNKBRUSH SUMAC	0.5
CHRYSOTHAMNUS NAUSEOSUS	RUBBER RABBITBRUSH	0.5
CERCOCARPUS LEDIFOLIUS	CURL-LEAF MOUNTAIN MAHOGANY	-
FORBS		
GAILLARDIA ARISTATA	BLANKETFLOWER	0.4
LIATRIS PUNCTATA	GAYFLOWER	0.4
LINUM LEWISH	BLUE FLAX	0.1
PETALOSTEMUM PURPUREUM	PURPLE PRAIRIE CLOVER, KANEB	0.4
RATIBIDA COLUMARIS	PRAIRIE CONEFLOWER, NATIVE	0.1
RIPARIAN GRASSES AND FORBS		
ANDROPOGON GERARDII	BIG BLUESTEM, KAW	1.0
BECMANNIA SYZIGACHNE	AMERICAN SLOUGHGRASS	2.5
BOUTELOUA CURTIPENDULA	SIDEOATS GRAMA, VAUGHN	
CALAMOVILFA LONGIFOLIA	PRAIRIE SANDREED, GOSHEN	
CAREX NEBRASCENSIS	NEBRASKA SEDGE	1.0
ELYMUS LANCEOLATUS SSP. LANCEOLATUS		
ELYMUS LANCEOLATUS	STREAMBANK WHEATGRASS, SODAR	
GLYCERIA STRIATA	FOWL MANNAGRASS	2.5
JUNCUS ARCTICUS	ARCTIC (BALTIC) RUSH	1.5
NASSELLA VIRIDULA	GREEN NEEDLEGRASS, LODORM	
PANICUM VIRGATUM	SWITCHGRASS, NEBRASKA 28	2.0
PASCOPYRUM SMITHII	WESTERN WHEATGRASS, ARRIBA	
POA PALUSTRIS	FOWL BLUEGRASS	3,5
SPARTINA PECTINATA	PRAIRIE CORDGRASS	2.0
SPOROBOLUS AIROIDES	ALKALI SACATON	20
	TOTAL SEED	36.0



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No Revisions:	SB 40 NOTES	AND DETAILS	IM 0252-423
Revised:	Designer: CS	Structure	19039
	Detailer: CS	Numbers	04.04
Void:	Sheet Subset: LANDSCAPE	Subset Sheets: SB01 of 06	Sheet Number 24-61



Print Date: 7/5/2016

File Name: 19039\_SB 40RFC.dwg









Sheet Revisions

RFC :

**Gall** before you dig

#### **SB 40 MITIGATION NOTES:**

PRECONSTRUCTION MEETING:

PRIOR TO RIPARIAN CONSTRUCTION COMMENCING A PRECONSTRUCTION MEETING SHALL OCCUR ON SITE BETWEEN THE PROJECT ENGINEER, CONTRACTOR, PROJECT LANDSCAPE ARCHITECT, AND PROJECT WETLAND BIOLOGIST. AT THIS MEETING THE FOLLOWING WILL BE DISCUSSED:

A. PERMITS

**B. ACCESS AREAS** 

C. PROTECTION OF EXISTING WOODY AND NON-WOODY VEGETATION AND WETLANDS, INCLUDING FLAGGING AREAS TO BE PROTECTED WITH PLASTIC FENCE (REFER TO PHASING PLANS FOR LOCATIONS OF PLASTIC FENCE).

RIPARIAN, RIVER AND WETLAND PROTECTION AND CONSTRUCTION:

PRIOR TO CONSTRUCTION COMMENCING THE CONTRACTOR SHALL PLACE PLASTIC FENCE TO PROTECT EXISTING VEGETATION (TREES, SHRUBS AND WETLANDS) NOT TO BE DISTURBED AND TO DELINEATE ACCESS AREAS TO LIMIT CONSTRUCTION TRAFFIC. NO DISTURBANCE OF SOIL OR STOCKPILING OF MATERIALS SHALL OCCUR WITHIN PROTECTED AREAS.

CLEARING AND GRUBBING OF SHRUBS AND VEGETATION THAT MAY DISTURB GROUND NESTING BIRDS SHALL BE COMPLETED BEFORE NESTING OR AFTER YOUNG HAVE FLEDGED. IF WORK ACTIVITIES ARE PLANNED BETWEEN APRIL 1 AND AUGUST 31, VEGETATION SHALL BE TRIMMED TO A HEIGHT OF SIX INCHES OR LESS PRIOR TO APRIL 1. ONCE VEGETATION HAS BEEN REMOVED AND/OR TRIMMED, APPROPRIATE MEASURES MUST BE IMPLEMENTED TO ENSURE VEGETATION DOES NOT GROW MORE THAN SIX INCHES.

PRIOR TO WORKING IN LIVE WATER, ANY HEAVY EQUIPMENT OR GEAR (BOOTS, WADERS, TOOLS, ETC.) THAT ARE TO BE USED IN OR NEAR THE WATERS ON THE PROJECT THAT WERE PREVIOUSLY IN ANOTHER STREAM, RIVER, LAKE, POND OR WETLANDS WITHIN 10 DAYS OF INITIATING WORK SHALL BE TREATED WITH ONE OF THE FOLLOWING PROCEDURES TO PREVENT THE SPREAD OF NEW ZEALAND MUD SNAILS AND OTHER AQUATIC HITCHHIKERS:

- 1. REMOVE ALL MUD AND DEBRIS FROM EQUIPMENT AND KEEP EQUIPMENT DRY FOR AT LEAST 10 DAYS OR
- 2. REMOVE ALL MUD AND DEBRIS FROM EQUIPMENT AND SPRAY/SOAK EQUIPMENT WITH A 1:1 SOLUTION OF FORMULA 409 HOUSEHOLD CLEANER AND WATER OR QUAT 4 OR SUPER HDQ NEUTRAL INSTITUTIONAL CLEANER (5 OUNCES PER GALLON OF WATER). TREATED EQUIPMENT MUST BE KEPT MOIST FOR AT LEAST 10 MINUTES, OR
- 3. REMOVE ALL MUD AND DEBRIS FROM EQUIPMENT AND SPRAY/SOAK EQUIPMENT WITH WATER TEMPERATURE GREATER THAN 120 DEGREES FAHRENHEIT FOR AT LEAST 10 MINUTES.

#### WETLAND PROTECTION, WILLOW CUTTING AND COTTONWOOD POLE PLANTING

WETLAND AREAS TEMPORARILY IMPACTED UNDER ACCESS AND CONSTRUCTION ROADS SHALL BE PROTECTED WITH GEOTEXTILE FABRIC. PRUNE WILLOWS AND TREES TO GROUND LEVEL PRIOR TO PLACEMENT OF GEOTEXTILE. ABOVE THE FABRIC PLACE 12 INCHES OF LOOSE STRAW AND MINIMUM OF 2 FT. OF EMBANKMENT. AFTER CONSTRUCTION ACTIVITIES ARE COMPLETE, SOIL, STRAW AND GEOTEXTILE SHALL BE CAREFULLY REMOVED, AS DIRECTED. THE FINAL LIFT SHALL BE REMOVED USING A TOOTHLESS BACKHOE. STRAW AND GEOTEXTILE BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE. EXCESS FILL SHALL NOT BE WASTED IN WETLAND OR FLOODPLAIN AREA. STRAW AND GEOTEXTILE AND REMOVAL OF STRAW AND GEOTEXTILE SHALL BE INCLUDED IN THE PRICE OF THE WORK.

IT IS ESTIMATED THAT 3,140 SANDBAR WILLOW CUTTINGS WILL BE REQUIRED ON THE PROJECT. ALL WILLOW STAKES SHALL BE PLACED IN AREAS WITH A MINIMUM OF 1 FT. OF SOIL. IT IS ESTIMATED THAT 80 COTTONWOOD AND 68 PEACHLEAF WILLOW (DORMANT LOG CUTTINGS) WILL BE REQUIRED ON THE PROJECT WITHIN THE FOUNTAIN CREEK AND UPPER FOUNTAIN CREEK SECTIONS. AN ADDITIONAL 20 COTTONWOOD TREES WILL BE PLANTED ALONG MONUMENT CREEK IN AREAS AS DESIGNATED BY THE PROJECT LANDSCAPE ARCHITECT. TREE AND SHRUB PLANTINGS SHALL BE PLANTED IN THE AREAS AS SHOWN ON THE PLANS WITH PLANTING LOCATIONS AS STAKED IN THE FIELD BY THE PROJECT LANDSCAPE ARCHITECT. IMMEDIATELY AFTER PLANTING (SAME DAY) EACH TREE SHALL HAVE ANIMAL PROTECTION FENCE INSTALLED AS SHOWN IN THE DETAILS WITH COST OF ANIMAL PROTECTION INCLUDED IN THE COST OF THE TREE.

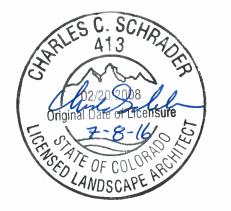
SEEDING AND PLANTING WILL BE REQUIRED FOR AREAS AS SHOWN ON THE PLANS. THE PLANTING AND SEEDING SITES SHALL BE VEGETATED BY PLACING WILLOW CUTTINGS ON 2' CENTERS THROUGHOUT THE DESIGNATED AREA. AREAS SHALL ALSO BE SEEDED WITH THE SEED MIX AS SHOWN IN THE SB40 PLANTING PLANS.

SEED APPLICATION: HAND BROADCAST AT DOUBLE THE SEEDING RATE AND RAKE .25 TO .5 INCHES INTO THE TOPSOIL. DO NOT HYDROSEED. SEED BAG LABELS SHALL CONFORM TO CURRENT STATE AND FEDERAL REGULATIONS. ALL SEED BAG LABELS SHALL BE SAVED AND PROVIDED TO THE OWNER'S CONSTRUCTION MANAGER (OR PROJECT MANAGER).

ALL PLANTS ARE TO BE EXAMINED UPON ARRIVAL BY WETLAND BIOLOGIST OR PROJECT LANDSCAPE ARCHITECT TO ASSURE PROPER AND HEALTHY PLANTS. WOOD CHIP MULCH SHALL BE USED ON ALL TUBELING-1 QT. PLANT MATERIAL BUT SHALL NOT BE USED ON WILLOW AND COTTONWOOD CUTTINGS.

#### SB 40 RIPARIAN AND WETLAND PAY ITEMS

PAY ITEM	DESCRIPTION	UNIT	QUANTITY
212	SEEDING (RIPARIAN)	AC	2.54
212	SEEDING (SHRUBS)	LB	5.6
214	DECIDUOUS SHRUB (TUBELING-1 QT.)	EA	570
214	WILLOW CUTTINGS	EA	3,140
214	DORMANT LOG CUTTING	EA	168





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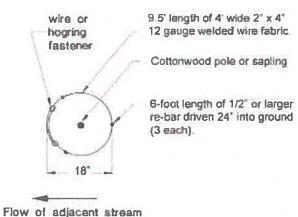
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WILLOW CUTTING DETAIL AND NOTES (Not to Scale)

WILLOW CUTTING DETAIL AND NOTES NOT TO SCALE

WILLOW CUTTINGS SHALL BE PLACED 2' O.C. IN THE SPRING WHILE DORMANT. CUTTINGS SHALL BE PLANTED TO A MINIMUM DEPTH OF 20' TO PREVENT WILLOW CUTTINGS FROM WASHING DOWNSTREAM IN STORM EVENTS. HOLES SHALL BE BACKFILLED WITH NATIVE MATERIAL AND WATERED TO ENSURE NO AIR POCKETS REMAIN.

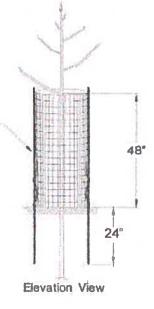


Plan View

18° dia double wrapped beaver protection sleeve made from 9.5' length of 4' wide 12 gauge 2X4" welded wire fabric, fastened with wire or hogrings. Anchor sleeve upstream and downstream with a six foot lengths of # 4 or larger rebar, driven 2' into the soil and hog ringed or wired in two or three places to the sleeve.

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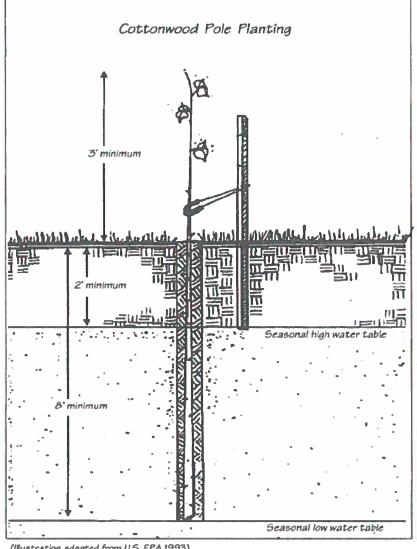


#### **Beaver Protection Detail**

(Illustration adapted from Urban Drainage and Flood Control District, Soil Bioengineering or Shoreline Stabilization - Section 32 93 43, 03/2012)

#### DORMANT LOG CUTTING DETAIL (COTTONWOOD AND PEACH LEAF WILLOW)

- 1. COLLECT DORMANT STEMS 11-12' LONG, GREATER THAN 3" IN DIAMETER AND CUT BASE AT 45" ANGLE
- 2. TRIM TIP WITH A FLAT CUT AND PAINT TO REDUCE MOISTURE LOSS
- 3. STORE BUTTS IN WATER OR WRAP IN WET BURLAP AT ALL TIMES
- 4. PLANT IN SITES WITH SAND, GRAVEL OR SMALL COBBLES ABOVE AND IN THE WATER TABLE
- 5. AUGER HOLE 6" IN DIAMETER TO THE DEPTH OF THE LOWEST ANTICIPATED GROWING SEASON WATER TABLE OR USE A "STINGER" TO POKE A HOLE LARGE AND DEEP ENOUGH FOR POLE PLANTINGS
- 6 SCORE THE BASE OF THE STEMS
- 7. PLACE POLE INTO HOLE WITH 3-4' ABOVE GROUND
- 8. BACKFILL COMPLETELY WITH DRY SURFACE SOIL TO MINIMIZE FORMATION OF AIR POCKETS
- 9. STAKE THE POLES TO PREVENT WIND DAMAGE
- 10. PROTECT WITH 2"X4" WELDED WIRE MESH FENCE 4' HIGH FOR BEAVER. ALSO UTILIZE WIRE FENCING TO AVOID TRAMPLING OR BROWSING BY GRAZING WILDLIFE. TO BE PAID FOR AS COST OF TREE REPLACEMENT (DORMANT LOG CUTTINGS)





design group, inc.

(Illustration adapted from U.S. EPA 1993)

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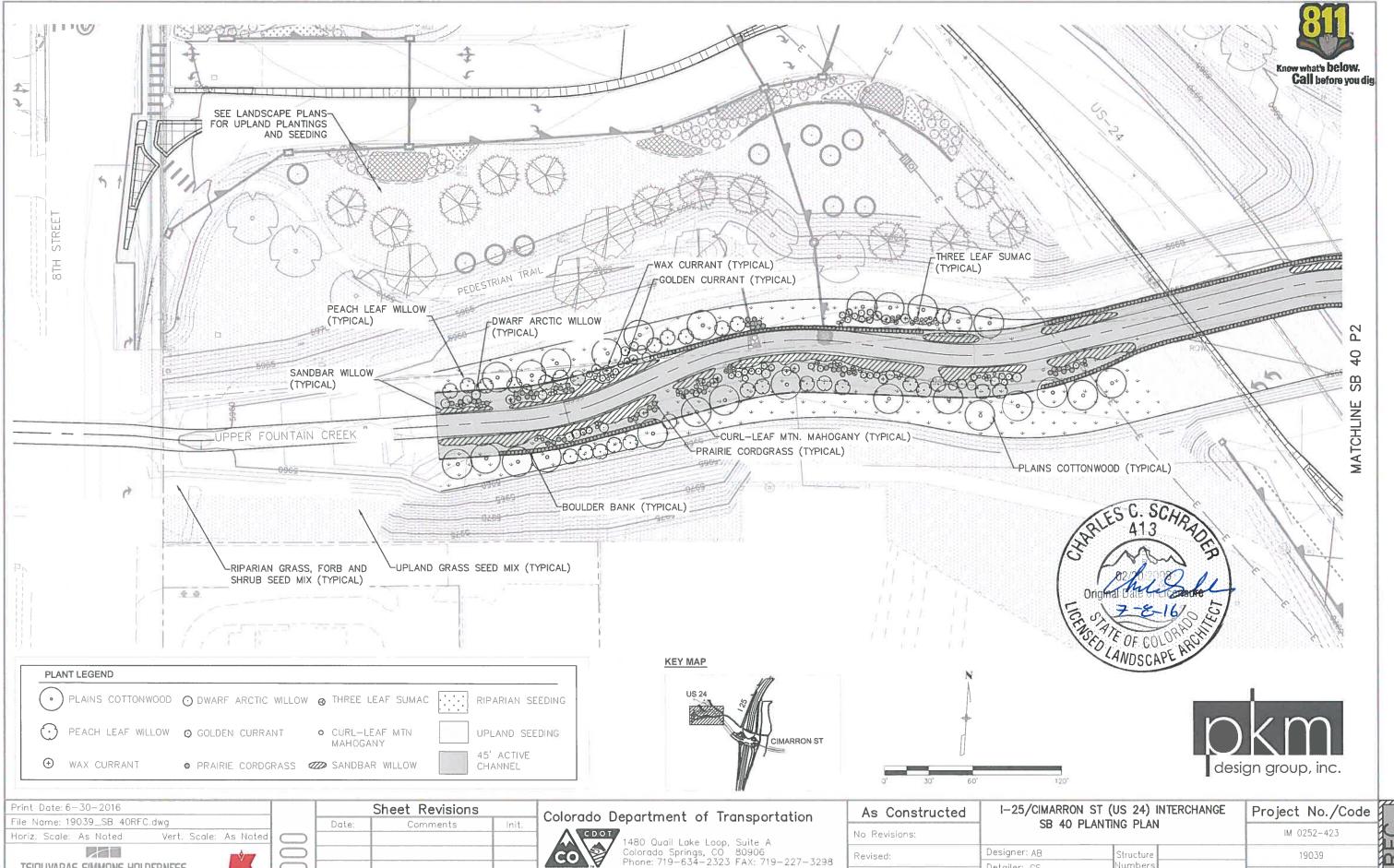




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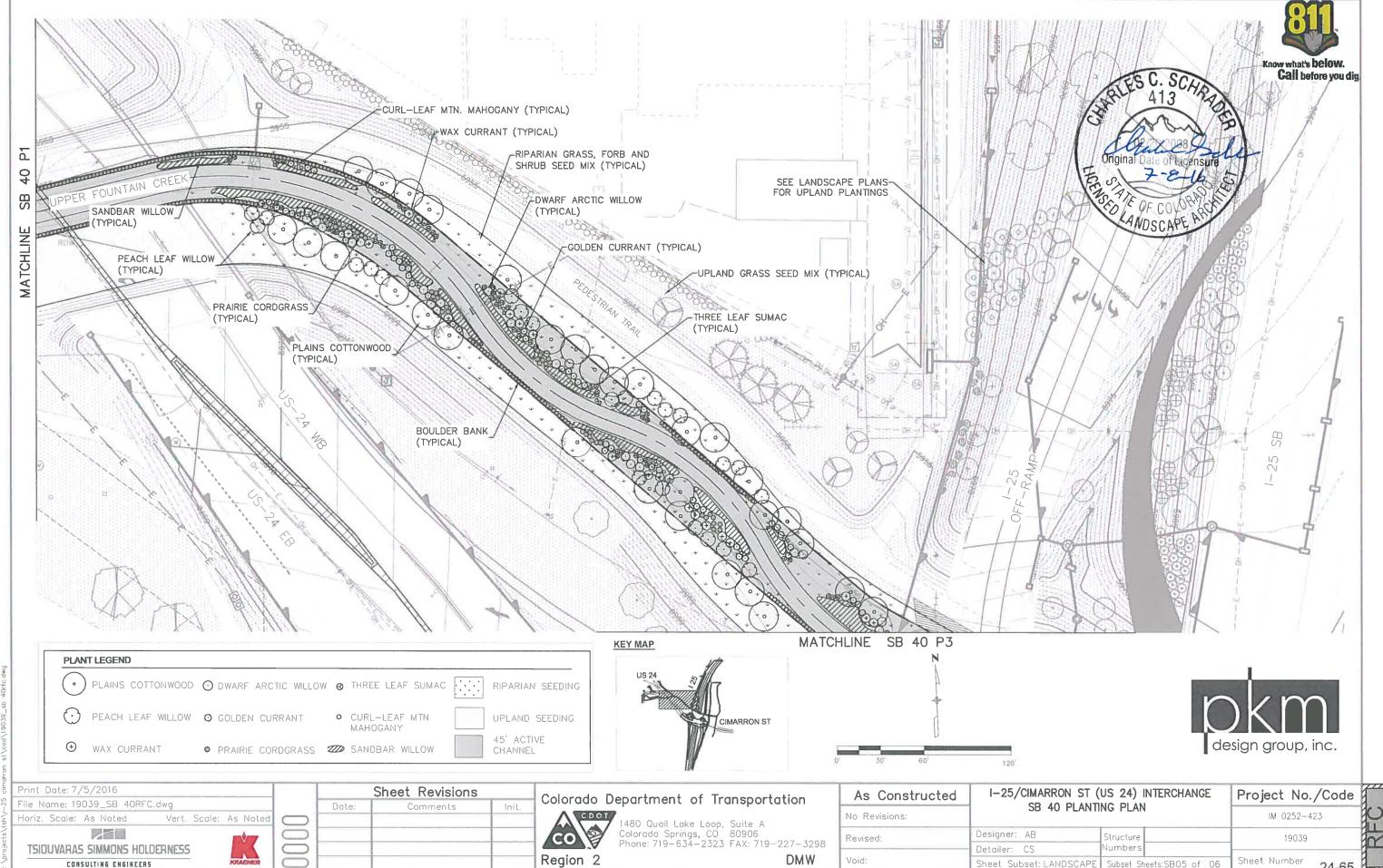
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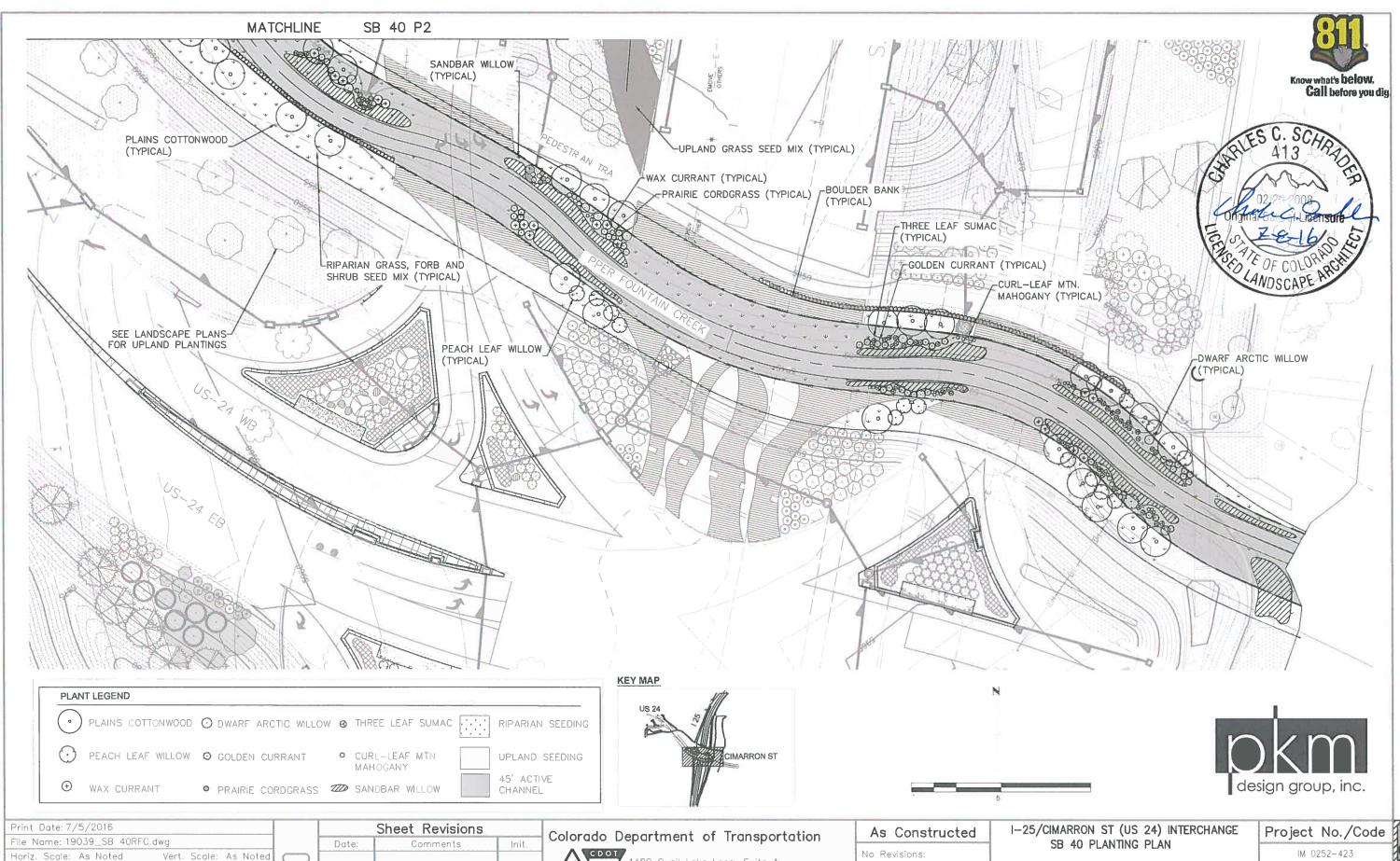
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### Irrigation Construction Notes

- ALL BASE INFORMATION HAS BEEN TAKEN FROM DRAWINGS PREPARED BY PKM DESIGN
- 2. REFER TO TECHNICAL SPECIFICATIONS AND CONSTRUCTION DETAILS FOR INSTALLATION PROCEDURES.
- 3. CONTRACTOR SHALL FIELD VERIFY PRESSURE AT BACKFLOW PREVENTER LOCATION FOR EACH TAP PRIOR TO ORDERING MATERIALS OR STARTING ANY IRRIGATION INSTALLATION AND NOTIFY CONSULTANT OF ANY DIFFERENCES FROM STATED PRESSURE. IF CONTRACTOR FAILS TO NOTIFY CONSULTANT HE ASSUMES FULL RESPONSIBILITY FOR ANY SYSTEM ALTERATIONS. EACH SYSTEM HAS BEEN DESIGNED FOR A STATIC PRESSURE OF XXX PSI.

AVAIL. PRESSURE PT. OF CONNECTION REQUIRED PRESSURE X PSI xx PSI xx PSI X PSI

4. CONTRACTOR SHALL COORDINATE INSTALLATION OF SLEEVING WITH INSTALLATION OF CONCRETE FLATWORK AND PAVING. ALL SLEEVING IS BY CONTRACTOR UNLESS OTHERWISE NOTED. UNLESS NOTED OTHERWISE ON IRRIGATION PLANS INSTALL SLEEVING BASED ON

PIPE SIZE OR WIRE QUANTITY 1-2" PVC SLEEVE 1-4" PVC SLEEVE 2-1/2" - 3" PIPING 1-6" PVC SLEEVE 1-2" PVC SLEEVE TWO-WIRE CABLE

NOTE: EACH LENGTH OF SLEEVED PIPE SHOWN SHALL BE BOUTED THROUGH SEPARATE SLEEVE. IRRIGATION WIRE BUNDLE SHALL BE ROUTED IN SEPARATE SLEEVE/CONDUIT WITHOUT IRRIGATION PIPING

- WHERE NOT NOTED ON IRRIGATION PLANS CONTRACTOR TO INSTALL PLASTIC 15 SERIES NOZZLES ON POP-UP SPRAY HEADS SPACED GREATER THAN 12 FEET. INSTALL 12 SERIES NOZZLES ON POP-UP SPRAY HEADS SPACED 10-12 FEET. INSTALL 10 SERIES NOZZLES NOZZLES ON ALL POP-UP SPRAY HEADS SPACED 8-10 FEET. INSTALL 8 SERIES NOZZLES ON POP-UP SPRAY HEADS SPACED 8 FEET AND LESS.
- 6. REFER TO PLANTING PLAN FOR EXACT TREE LOCATIONS AND QUANTITIES, TREES SHOWN ON RRIGATION PLANS ARE APPROXIMATE
- CONTRACTOR SHALL REPAIR OF REPLACE ANY EXISTING IRRIGATION EQUIPMENT, TURF, PLANT MATERIAL OR SITE FEATURES DAMAGED DURING NEW INSTALLATION. REPLACEMENT OR REPAIR OF DAMAGED EQUIPMENT OR MATERIAL SHALL BE DETERMINED BY THE OWNER AND THE
- VALVE BOXES SHALL BE LOCATED 36" MINIMUM FROM CENTERLINE OF ALL SWALES, 24" MINIMUM FROM EDGES OF ALL WALKS, CURBS, DRIVES AND OTHER HARD SURFACE AREAS.
- 9. REFER TO IRRIGATION TECHNICAL SPECIFICATIONS FOR PLANTING AND IRRIGATION LAY-OUT
- 10. LATERAL PIPING DIAMETERS SHALL INCLUDE 1", 1 1/2", 2" AND 2 1/2". 3/4" AND 1 1/4" DIAMETER LATERAL PIPE IS NOT ACCEPTABLE.

#### 11. CONTROLLER LOCATIONS "A", "B" and "C"

PEDESTAL MOUNT ONE WEATHERTRAK ET-PRO3 SERIES 96 STATION TWO-WIRE CONTROLLER AT NOICATED LOCATION. 120 VOLT ELECTRICAL POWER IS AVAILABLE AT INDICATED ELECTRIC
POLE. ELECTRICAL POWER AND CONNECTION TO CONTROLLER IS BY CONTRACTOR WITH WORK CONFORMING TO LOCAL CODE. FEES AND PERMITS ASSOCIATED WITH WORK ARE TO BE OBTAINED AND PAID BY CONTRACTOR. FINAL LOCATION OF CONTROLLER SHALL BE REVIEWED AND APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.

TWO-WIRE CARLE SHALL BE PAIGE ELECTRIC P7389D CARLE (12 GA.) - NO EXCEPTIONS CABLE COLORS SHALL BE AS FOLLOWS: CONTROLLER "A" - ONE RED/ONE BLACK (PART NO. 170117BKRD), CONTROLLER "B" - ONE BLACK/ONE BLUE (PART NO. P170117BKBU), CONTROLLER "C" - ONE RED/ONE BLACK (PART, NO. 170117BKRD.

#### 12. POINTS OF CONNECTION 1 and 2

TIE ONTO 2" IBRIGATION WATER METER AT INDICATED LOCATION. EXTEND 2" K SOFT COPPER AT 60" DEPTH TO BACKFLOW PREVENTER LOCATION. INSTALL ONE 2" REDUCED PRESSURE BACKFLOW PREVENTER AND ENCLOSURE, ONE QUICK COUPLING VALVE, ONE 2" MASTER VALVE, ONE 2" FLOW SENSOR, ONE 2" GATE VALVE, SECOND QUICK COUPLING VALVE AND EXTEND CLASS 200 PVC MAINLINE AS SHOWN. WORK SHALL CONFORM TO LOCAL CODE. FEES AND PERMITS ASSOCIATED WITH WORK ARE TO BE OBTAINED AND PAID BY CONTRACTOR. FINAL LOCATION OF BACKFLOW PREVENTER SHALL BE REVIEWED AND APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO START OF WORK.

FLOW SENSORS AND MASTER VALVES SHALL BE DIRECTLY CONNECTED (I.E. NO DECODERS) TO CONTROLLERS THROUGH INSTALLATION OF 14 GA. CONVENTIONAL IRRIGATION WIRE (FOR MASTER VALVES) AND PAIGE ELECTRIC P7171D-A CABLE (FOR FLOW SENSORS).

#### 13. POINTS OF CONNECTION 3

INSTALL 3/4" TAP INTO EXISTING WATER MAIN AT APPROXIMATE LOCATION. EXTEND 3/4" K SOFT COPPER AT 60" DEPTH TO BACKFLOW PREVENTER LOCATION. INSTALL ONE 3/4" REDUCED PRESSURE BACKELOW PREVENTER AND ENCLOSURE, ONE QUICK COUPLING VALVE, ONE 1 MASTER VALVE, ONE 1" FLOW SENSOR, ONE 1" GATE VALVE, SECOND QUICK COUPLING VALVE AND EXTEND CLASS 200 PVC MAINLINE AS SHOWN. WORK SHALL CONFORM TO LOCAL CODE. FEES AND PERMITS ASSOCIATED WITH WORK ARE TO BE OBTAINED AND PAID BY CONTRACTOR. FINAL LOCATION OF BACKFLOW PREVENTER SHALL BE REVIEWED AND APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO START OF WORK.
FLOW SENSOR AND MASTER VALVE SHALL BE DIRECTLY CONNECTED (I.E. NO DECODERS) TO CONTROLLER THROUGH INSTALLATION OF 14 GA. CONVENTIONAL IRRIGATION WIRE (FOR

MASTER VALVES) AND PAIGE ELECTRIC P7171D-A CABLE (FOR FLOW SENSORS

14. ALL WIRE & TWO-WIRE CABLE SPLICES SHALL COMPLETED WITH INSTALLATION OF 3M CO. DBR/Y-6 WATERTIGHT SPLICE KITS (NO EQUALS)

## Irrigation Equipment and Materials Schedule

SYMBOL	MANUFACTURER	MODEL NO.	DESCRIPTION	DETAIL NO.	COMMENTS
•.	RAIN BIRD	1806-SAM-PRS W/ TORO PRECISION NOZZ	POP-UP SPRAY HEAD	1	
• T	HUNTER	PROS-06-PRS40-CV W/ MP-Corner NOZZ	POP-UP HEAD W/ ROTARY NOZZLE	1	
• u	HUNTER	PROS-06-PRS40-CV W/ MP1000-90 NOZZ	POP-UP HEAD W/ ROTARY NOZZLE	1	
● Bi	HUNTER	PROS-06-PRS40-CV W/ MP2000-90 NOZZ	POP-UP HEAD W/ ROTARY NOZZLE	1	
● R	HUNTER	PROS-06-PRS40-CV W/ MP2000-360 NOZZ	POP-UP HEAD W/ ROTARY NOZZLE	1	
● ß	HUNTER	PROS-06-PRS40-CV W/ MP3000-90 NOZZ	POP-UP HEAD W/ ROTARY NOZZLE	1	
● Gy	HUNTER	PROS-06-PRS40-CV-R W/ MP3000-360 NOZZ	POP-UP HEAD W/ ROTARY NOZZLE	1	
● 3.5tA	HUNTER	I-20-04 W/ 3.5LA NOZZLE	GEAR DRIVEN ROTOR	2	
● 2.5	HUNTER	I-20-04 W/ 2.5 NOZZLE	GEAR DRIVEN ROTOR	2	
●3.0	HUNTER	I-20-04 W/ 3.0 NOZZLE	GEAR DRIVEN ROTOR	2	
● 4.0	HUNTER	1-20-04 W/ 4.0 NOZZLE	GEAR DRIVEN ROTOR	2	
●5.0	HUNTER	I-20-04 W/ 5.0 NOZZLE	GEAR DRIVEN ROTOR	2	
● 6.0	HUNTER	I-20-04 W/ 6.0 NOZZLE	GEAR DRIVEN ROTOR	2	
●8.0	HUNTER	I-20-04 W/ 8,0 NOZZLE	GEAR DRIVEN ROTOR	2	
• 7	HUNTER	1-25-04 W/ 7 NOZZLE	GEAR DRIVEN ROTOR	2	
●10	HUNTER	1-25-04 W/ 10 NOZZLE	GEAR DRIVEN ROTOR	2	
● 13	HUNTER	1-25-04 W/ 13 NOZZLE	GEAR DRIVEN ROTOR	2	
● 15	HUNTER	1-25-04 W/ 15 NOZZLE	GEAR DRIVEN ROTOR	2	
<b>O</b> 5	HUNTER	I-25-04 W/ 5 NOZZLE	GEAR DRIVEN ROTOR	2	
R	HUNTER	WRF-CLIK	WIRELESS RAIN/FREEZE SENSOR	-	
Ď	NIBCO	P-619-W SERIES	GATE VALVE	8	
•	RAIN BIRD	EFB-CP SERIES - SIZE PER PLAN NOTE	MASTER VALVE	4	
ŏ	WEATHERTRAK	ET-PRO3 2-WIRE	ELECTRIC DECODER CONTROLLER W/ S.S. CABINET AND PEDESTAL	13	
	FEBCO	825YA - SIZ EPE RPLAN NOTES	BACKFLOW PREVENTER	10 & 11	
(M)		2" - BY OTHERS/ 3/4" BY IRRIG. CONTRACTOR	WATER METER		
Ŭ.	RAIN BIRD	XCZ-100-PRB-COM	DRIP VALVE ASSEMBLY	15	
		CLASS 160 SOLVENT WELD - 1" DIA. UNLESS NOTED OTHERWISE	PVC LATERAL	9	
		CLASS 200 SOLVENT WELD	PVC MAINLINE	6 & 9	
<b>\/</b> \	RAIN BIRD	XBS-075	POLY DRIP TUBING	16	
		CLASS 200 SOLVENT WELD	NEW PVC SLEEVING		
		EXISTING	IRRIGATION SLEEVING		
•	RAIN BIRD	PEB SERIES	ELECTRIC CONTROL VALVE	7	
A	APCO	#50 - 1" DIA.	AIR RELEASE VALVE	12	
<b>♦</b>		LINE SIZE	DRIP LINE BLOW-OUT STUB	14	
<b>\display</b>	WEATHERTRAK	LSP-1TURF	SURGE PROTECTOR/GROUND ROD	17	
▼	RAIN BIRD	44 RC	QUICK COUPLING VALVE	8	
F	CREATIVE SENSOR TECH.	FSI-T SERIES - SIZE PER PLAN NOTE	FLOW SENSOR	5	
0	NETAFIM	TLCV-06-12	TREE DRIP RING	17	
		CONTROLLER & STATION N CONTROL VALVE SIZE	0.	1	



IRRIGATION DESIGN 7114 W. JEFFERSON AVENUE, LAKEWOOD, COLORADO 80235 FAX: 303 989 5814

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8,480

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Colorado Department of Transportation

1480 Quail Lake Loop, Colorado Springs, CO	
Phone: 719-634-2323	
	DMW

DESCRIPTION

3/4 inch Copper Pipe

3/4 inch Plastic Pipe (Polydrip line)

2 inch Copper Pipe

1 inch Plastic Pipe

2 inch Plastic Pipe

3 inch Plastic Pipe

4 inch Plastic Pipe

6 inch Plastic Pipe

Drip Emitter

1 inch Air and Vacuum Valve

1/2 inch Pop-Up Rotary Sprinkler

3/4 inch Pop-Up Rotary Sprinkler

1 inch Pop-Up Rotary Sprinkler

1 inch Quick-Coupler Valve

3/4 inch Backflow Preventer

1 inch Automatic Control Valve

2 inch Automatic Control Valve

1-1/2 inch Automatic Control Valve

Control Wire 24 Volt (with surge arrestors)

2 inch Backflow Preventer

3/4 inch Drain Valve

Power Source Wire

1-1/2 inch Gate Valve

2 inch Gate Valve

3 inch Gate Valve

3/4 inch Water Meter

1 inch Flow Sensor

2 inch Flow Sensor

Weather Station (rain sensor)

96 Station Automatic Controller

Master Controller (Master Valve - 2 inch)

Master Controller (Master Valve - 1 inch)

\*\* 3" pipe (Mainline) was included in irrigation sleeve plans

As Constructed

1-1/2 inch Check Valve

Emitter Valve Assembly 6 inch Pop-Up Spray Sprinkler

1-1/2 inch Plastic Pipe

2-1/2 inch Plastic Pipe

619-40060

619-40160

619-50060

619-50080

619-50120

619-50160

619-50200

619-50240

619-50320

619-50480

619-71508

623-00164

623-00165

623-00206 623-00304

623-00306

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623-01706

623-01716

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RFC 24 - LANDSCAPE AND IRRIGATION - 07-07-2016

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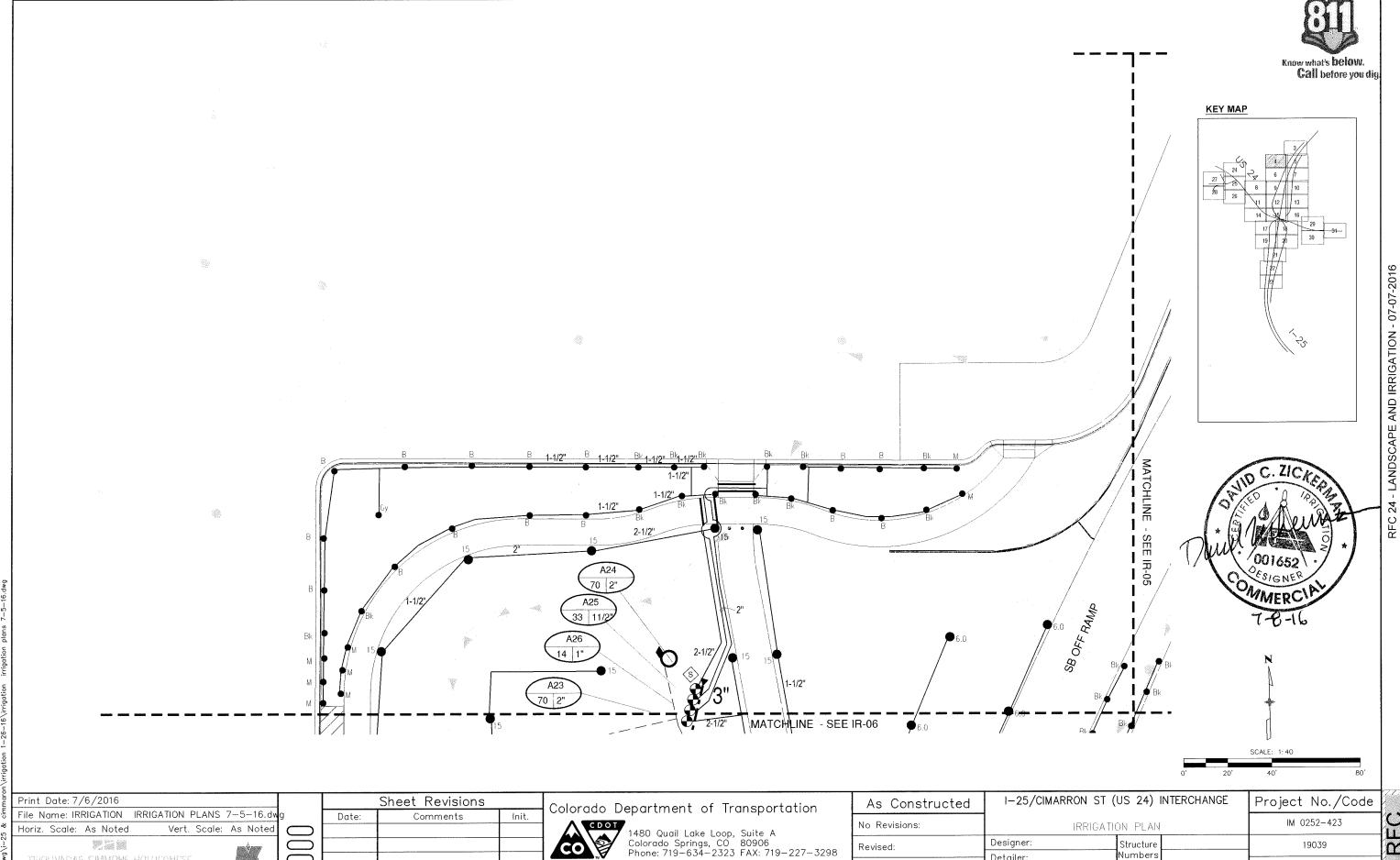
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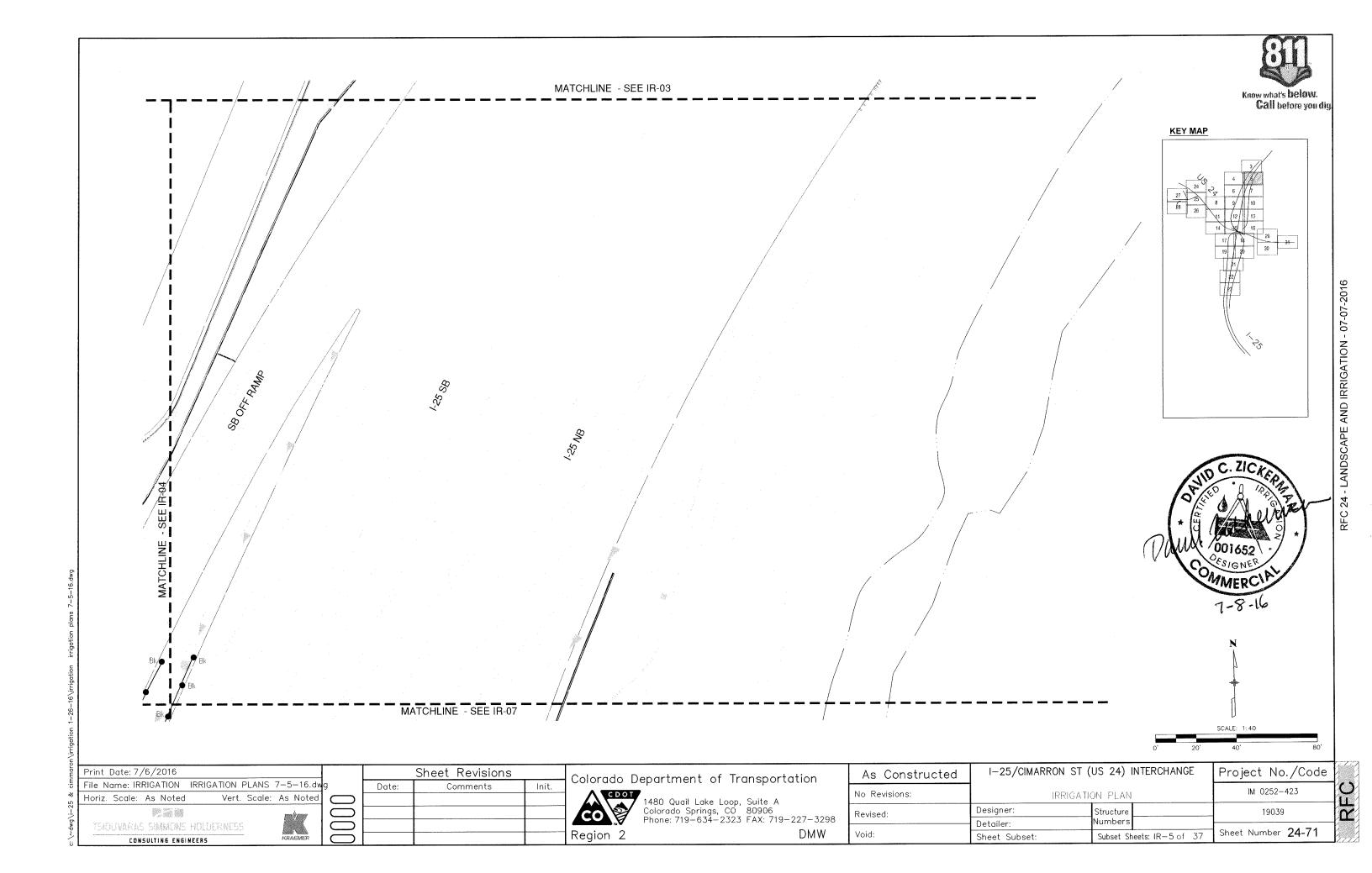
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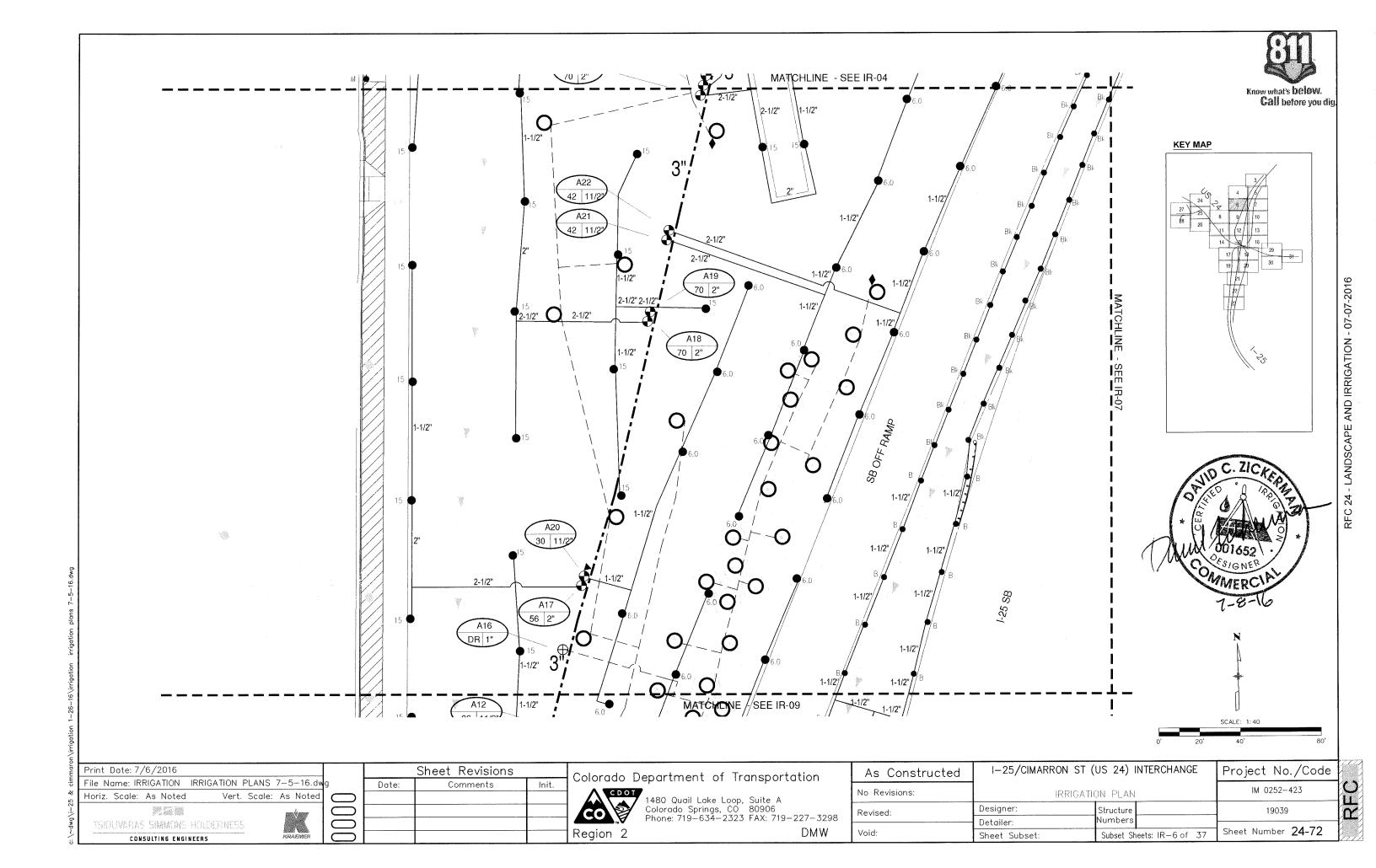
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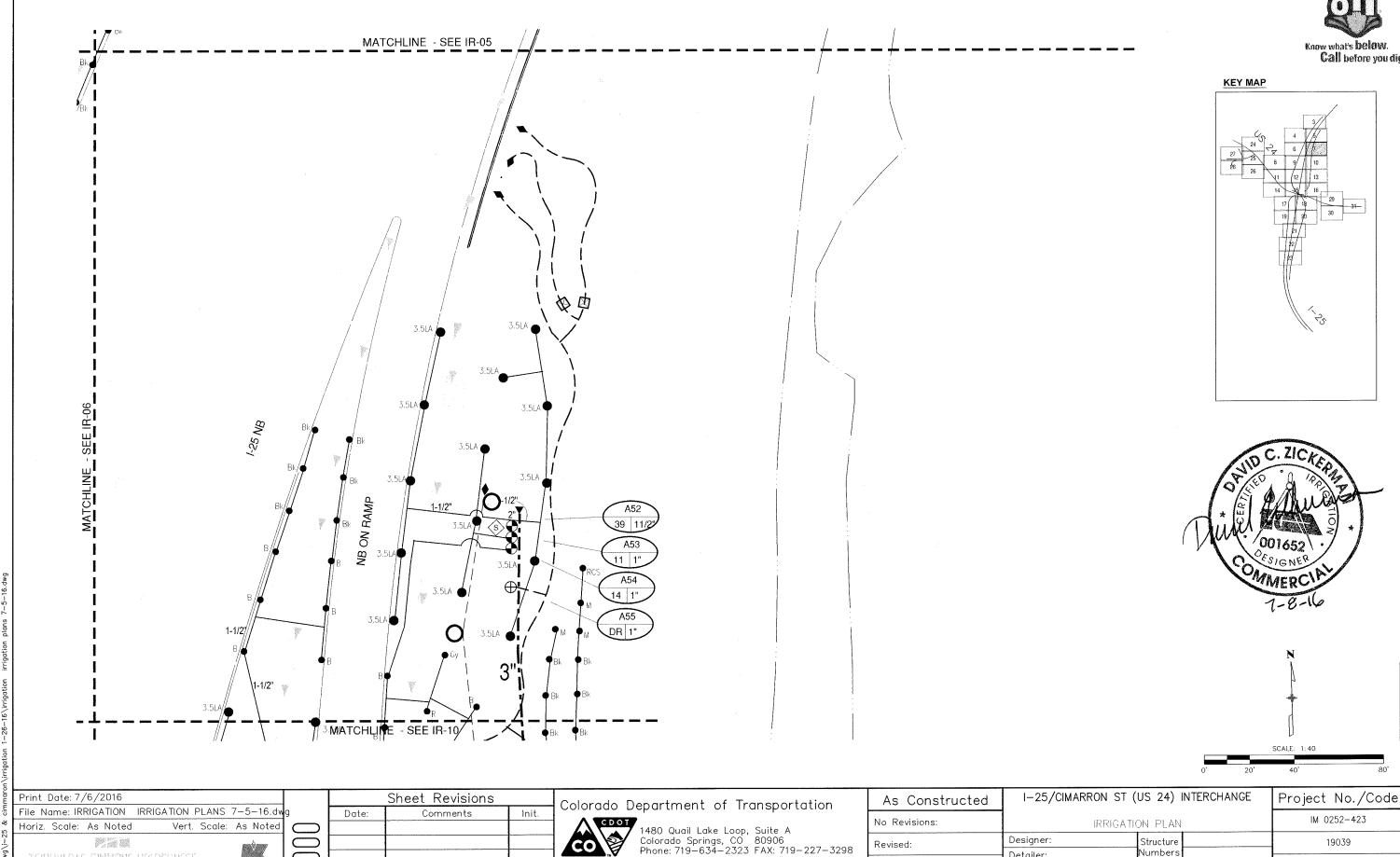
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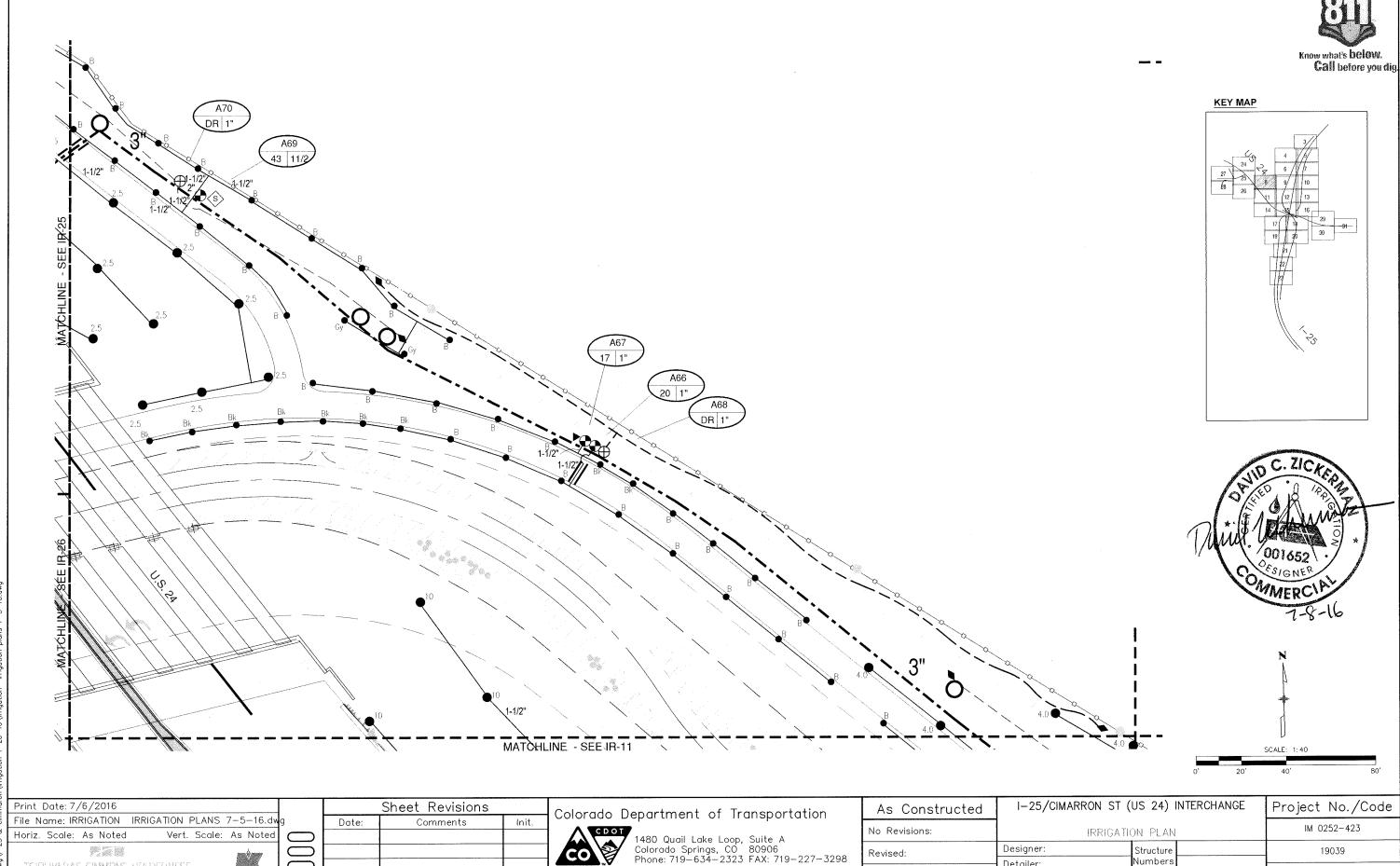
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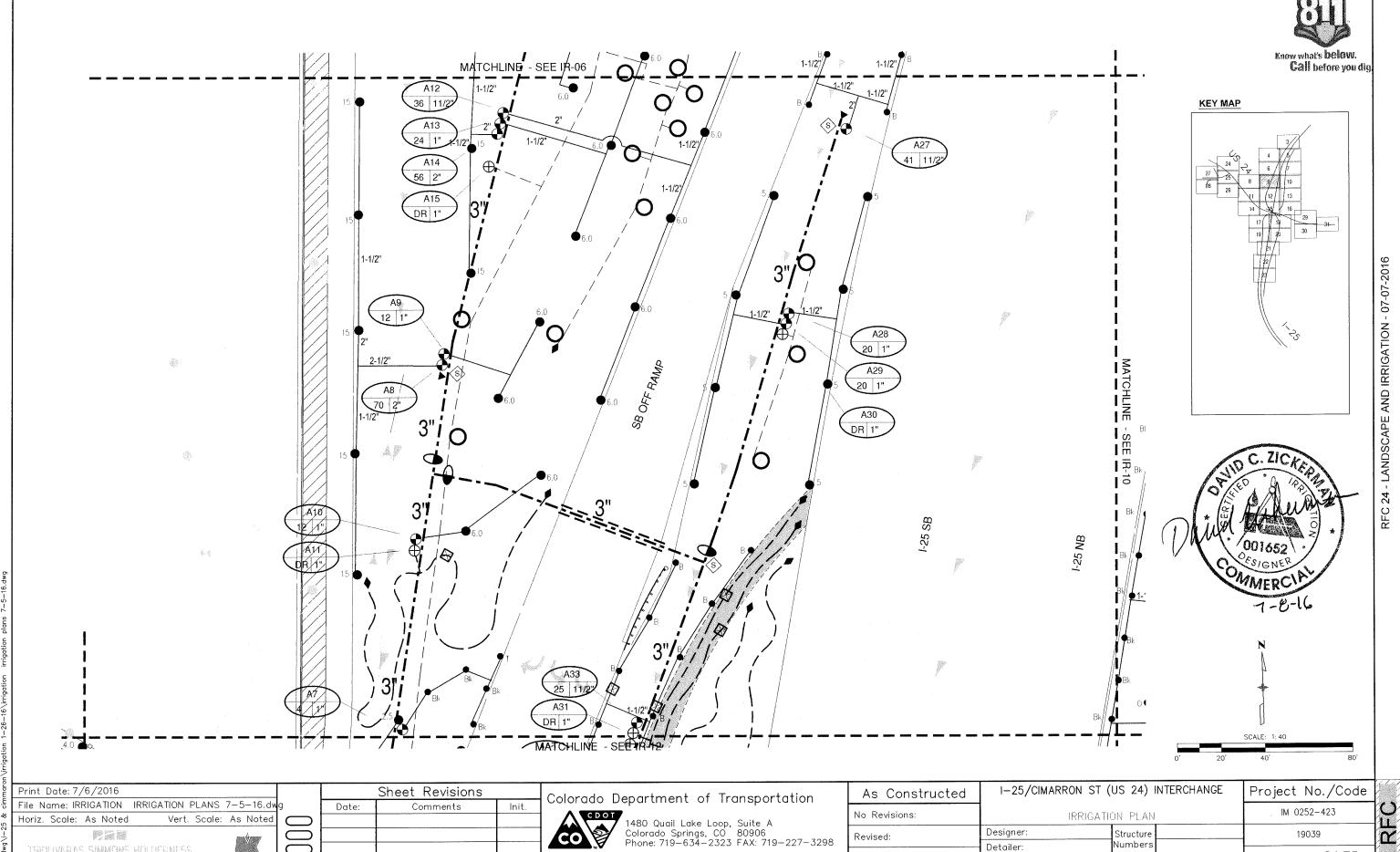


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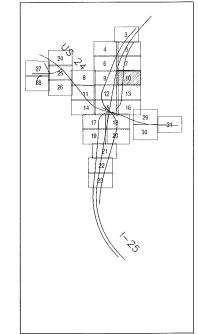
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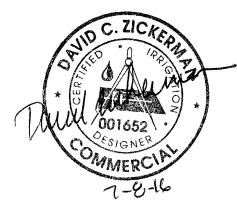
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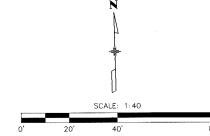
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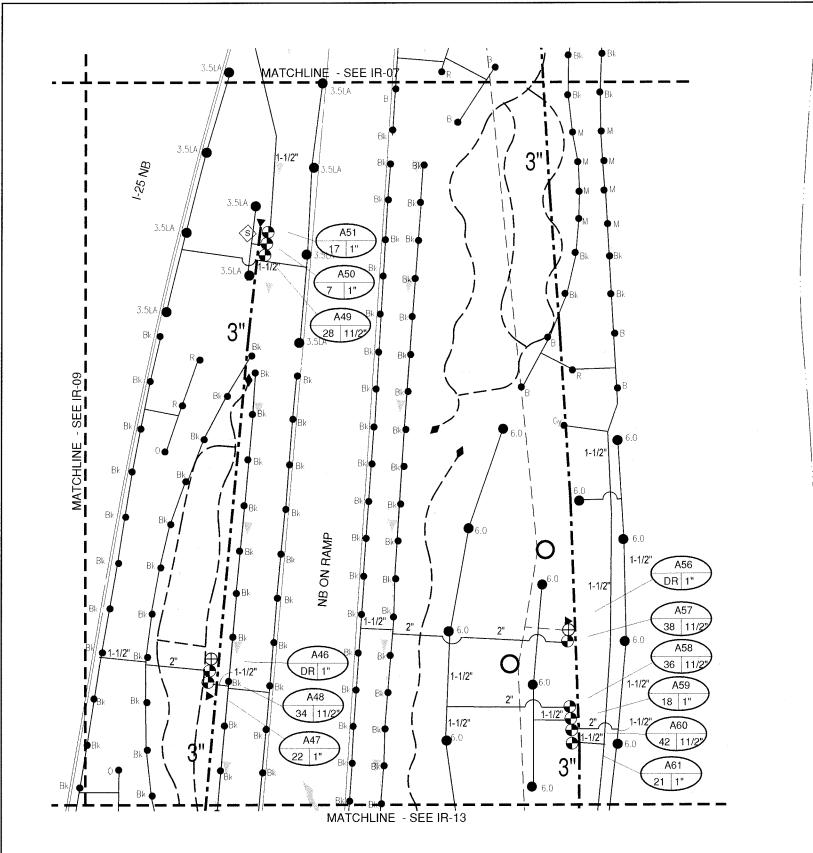
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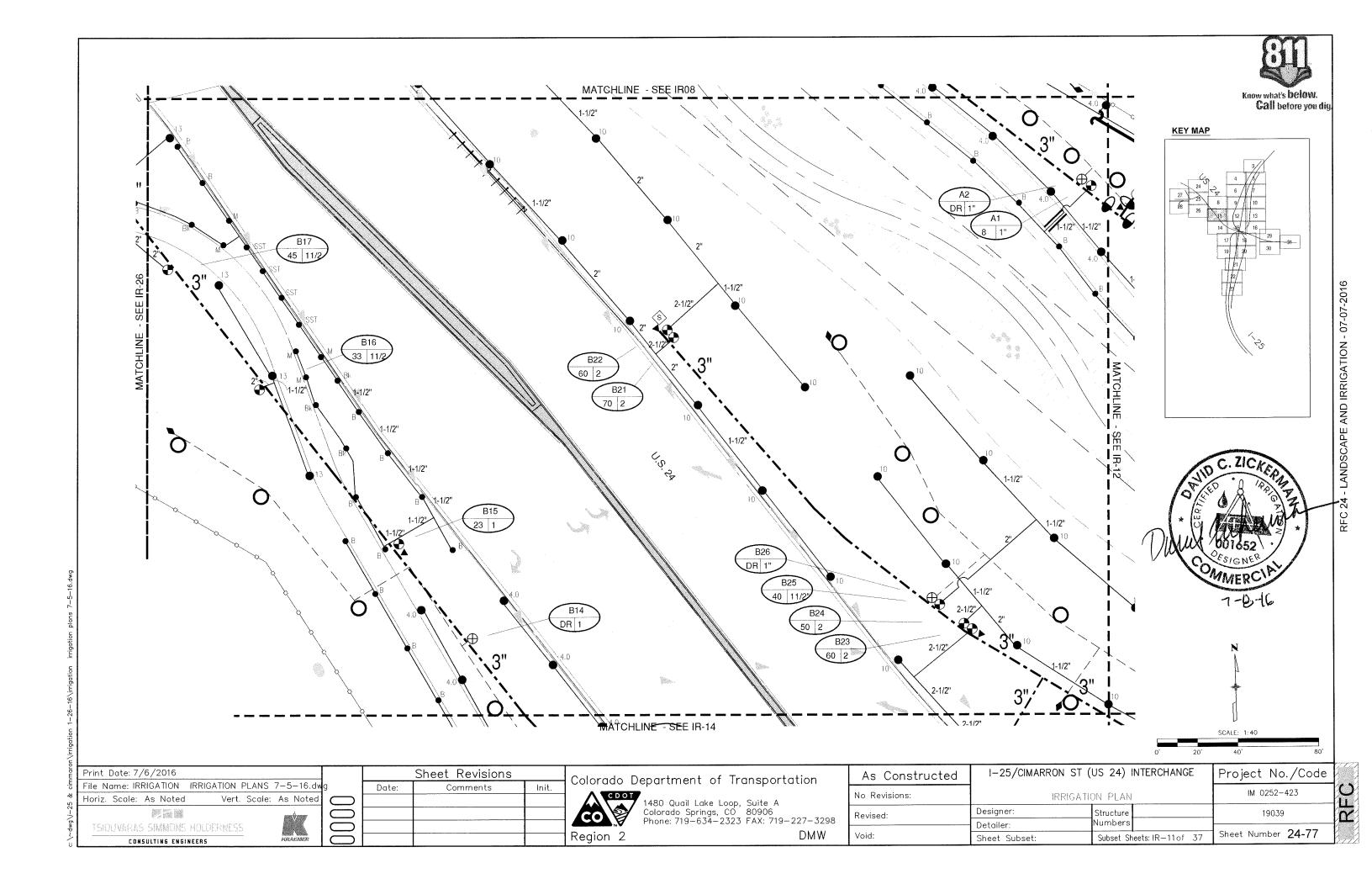
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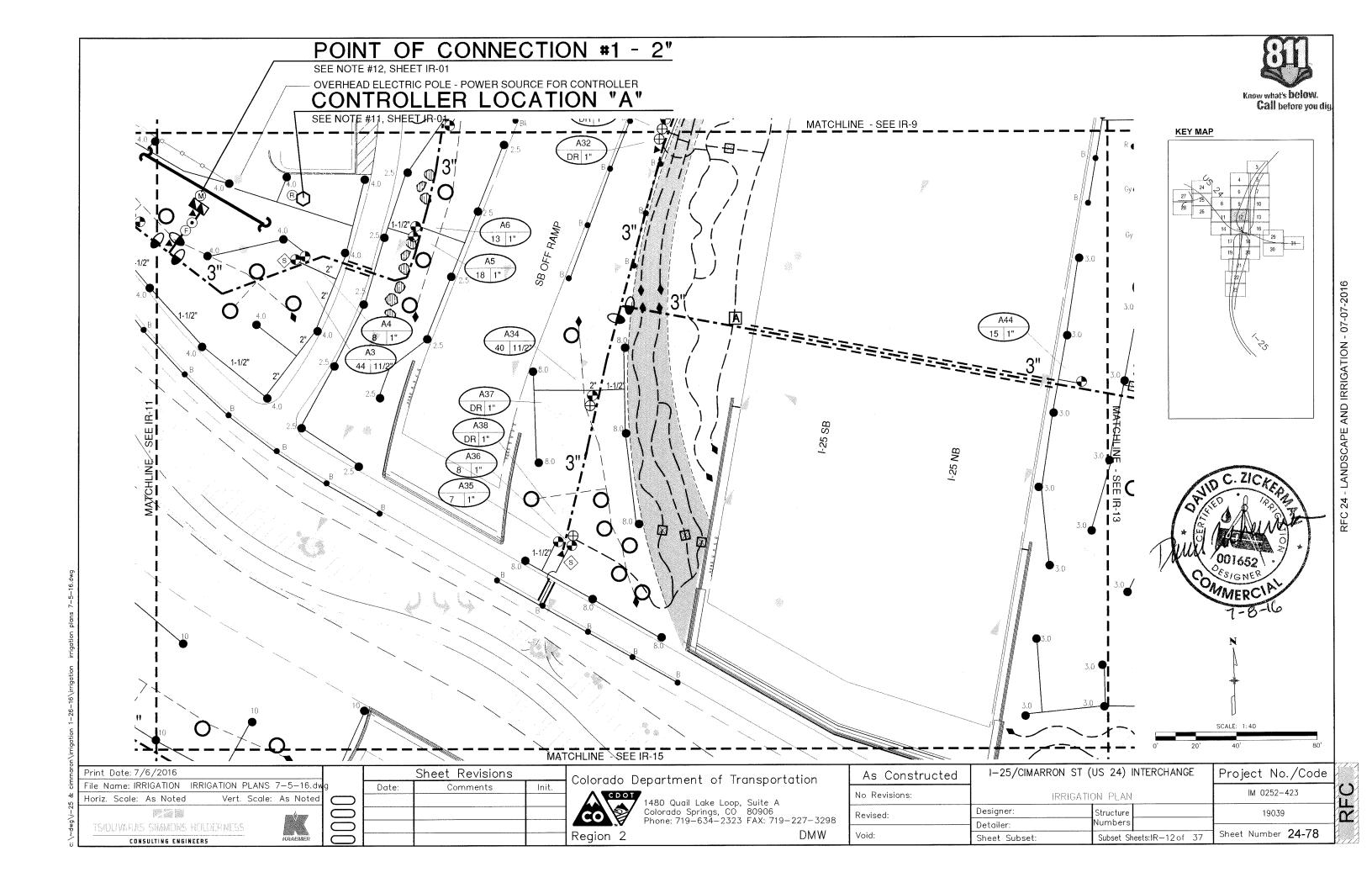
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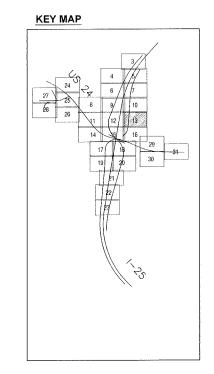
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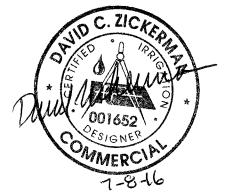
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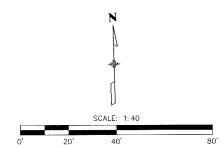
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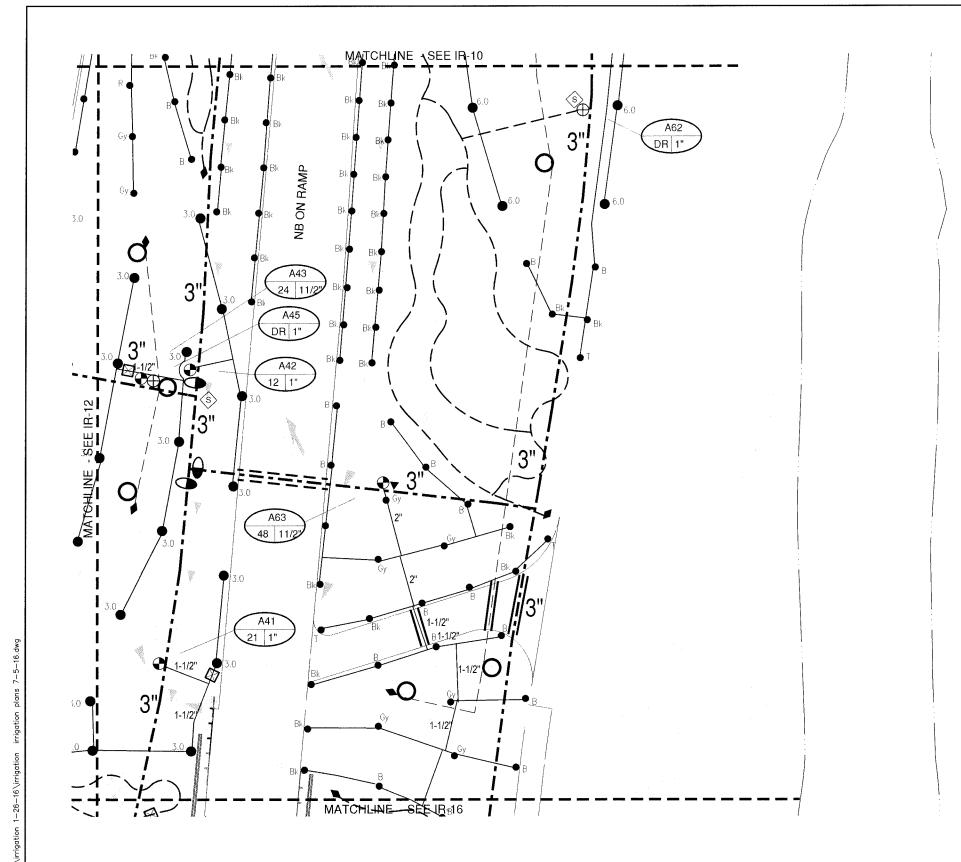












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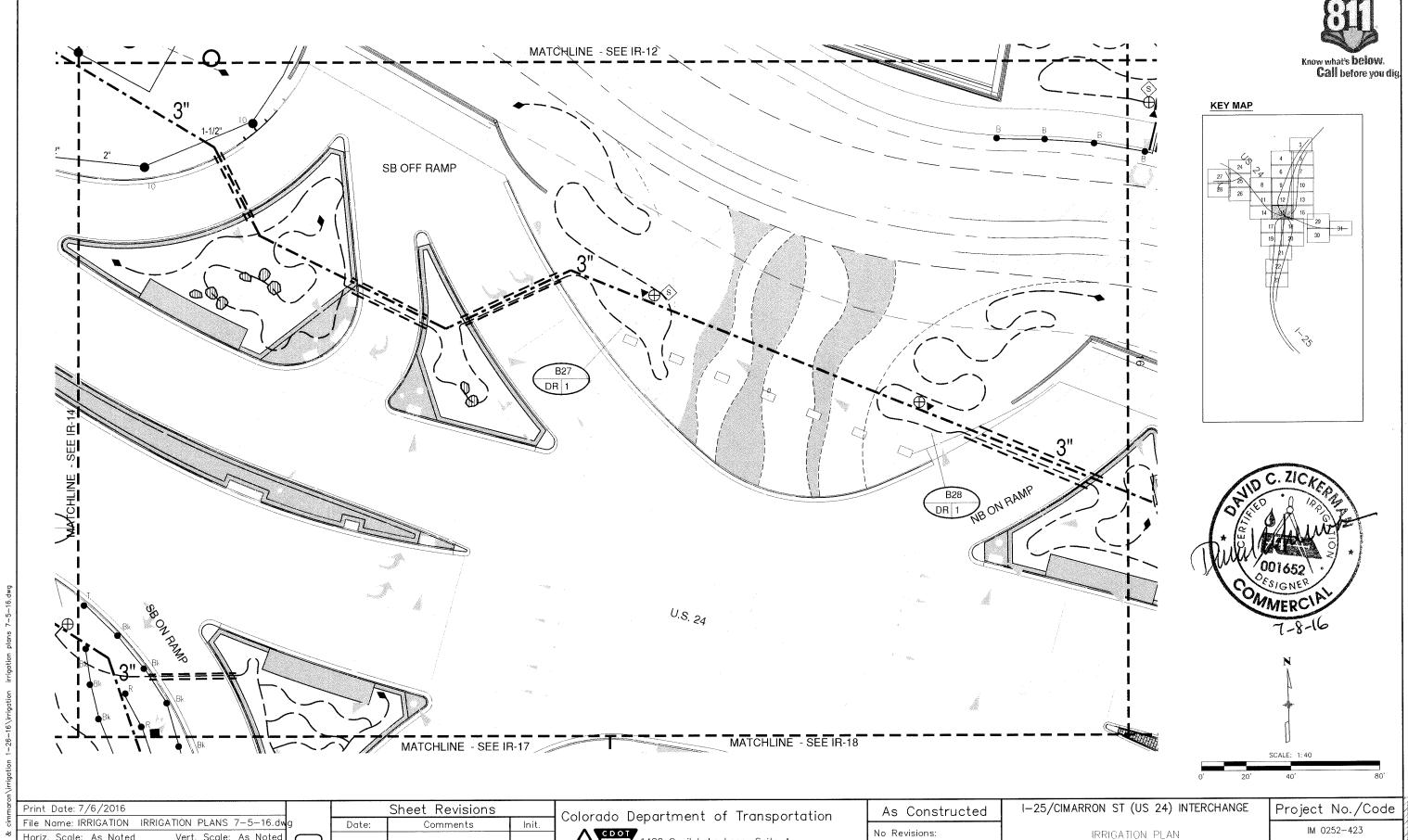
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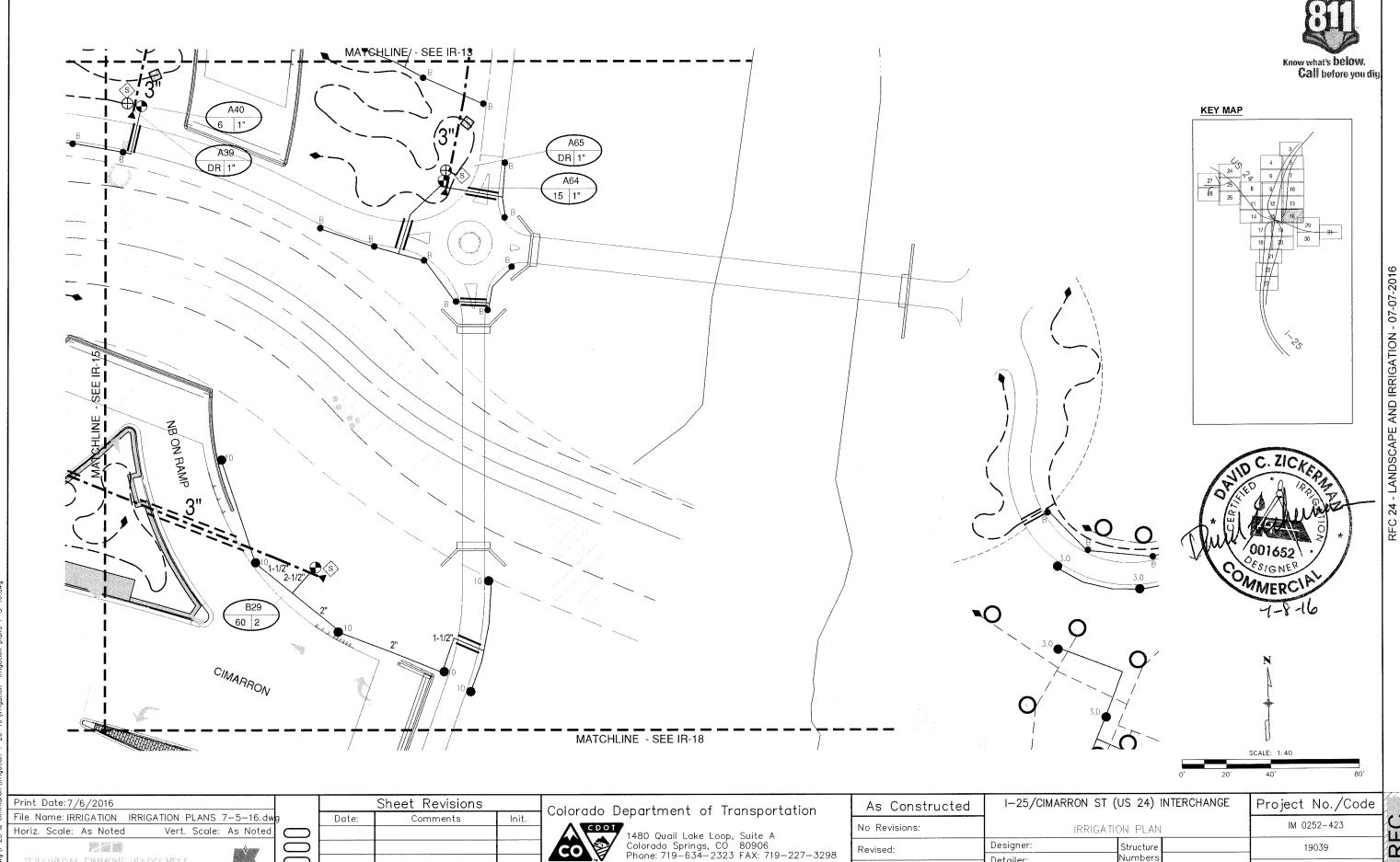
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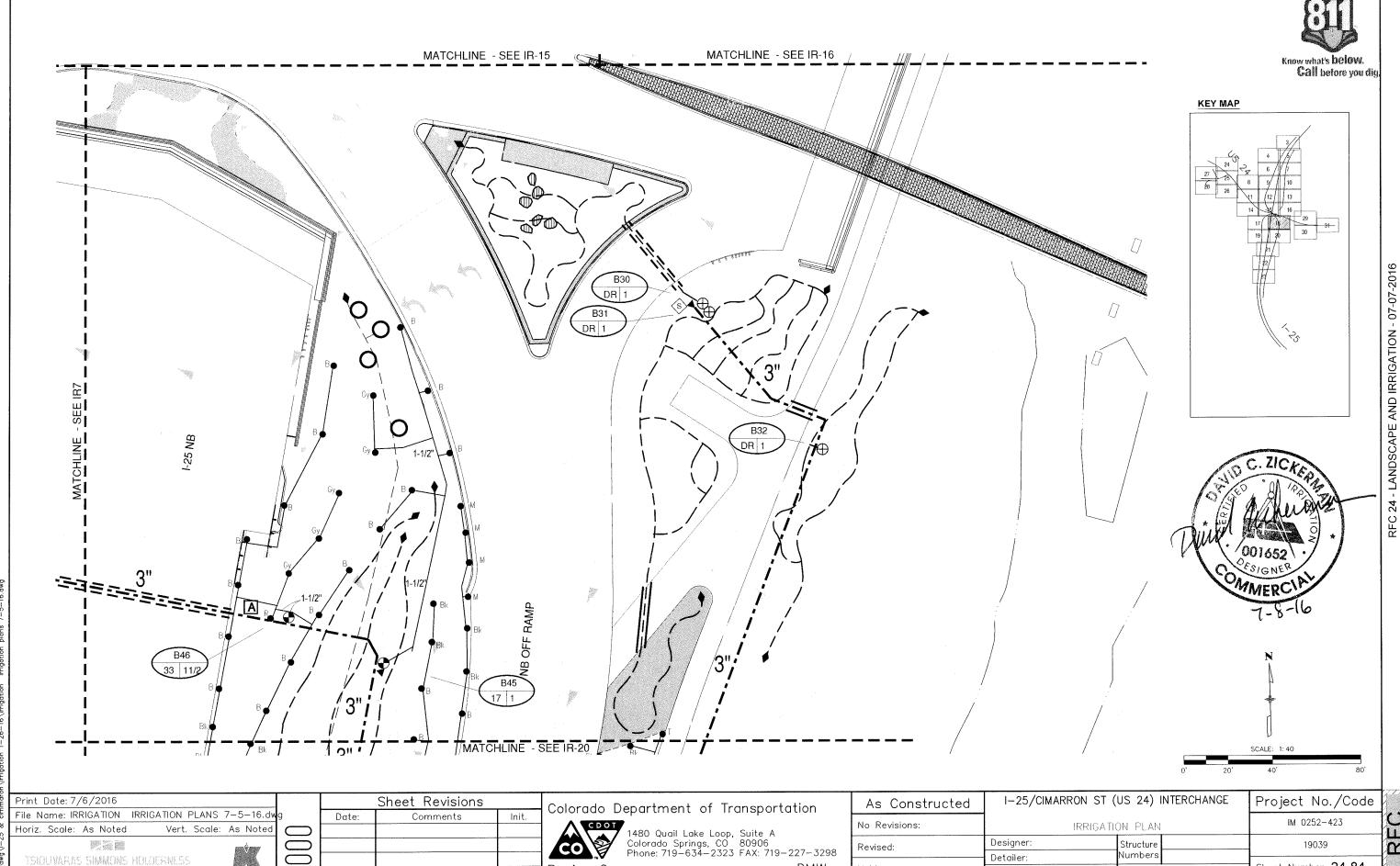
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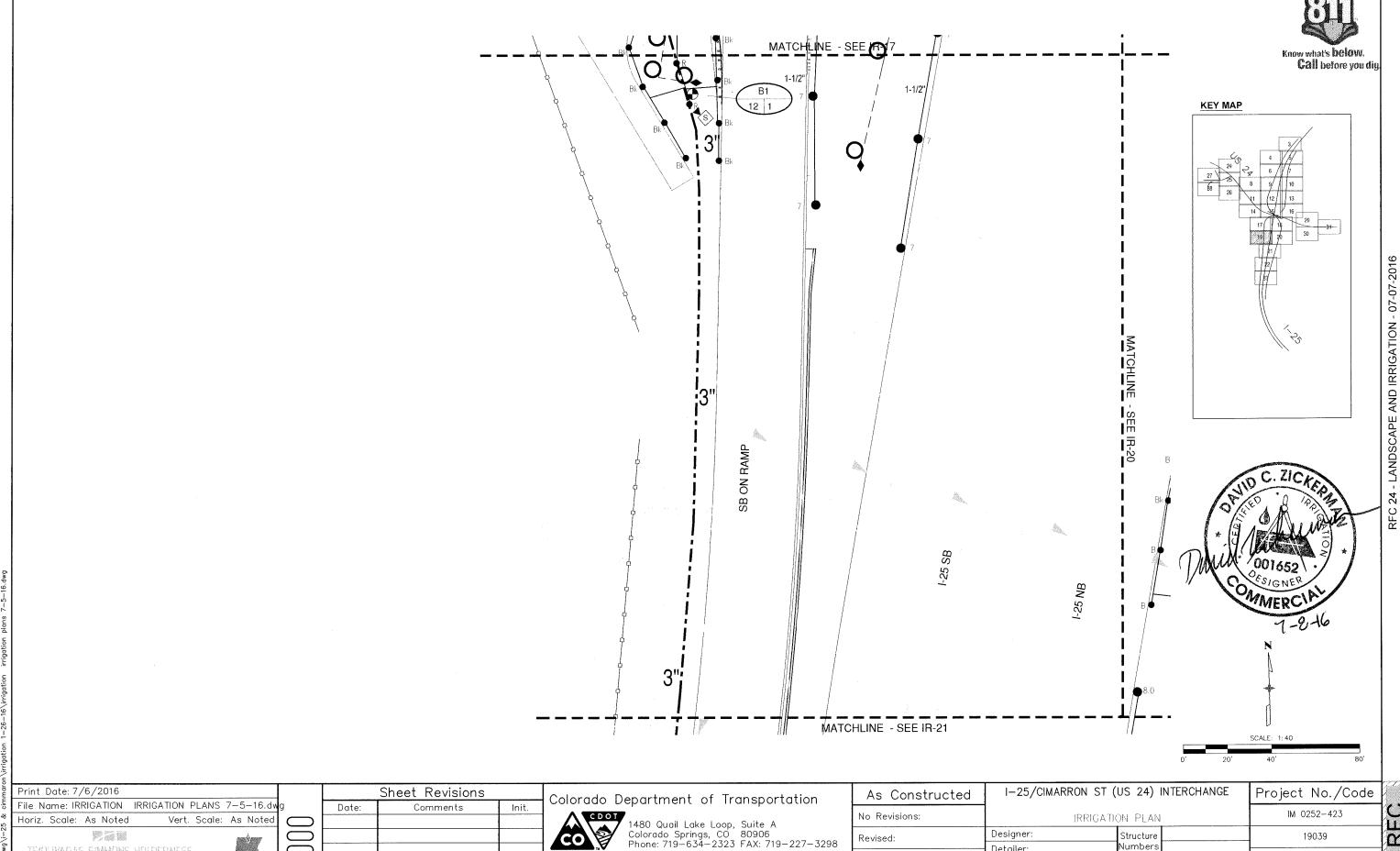
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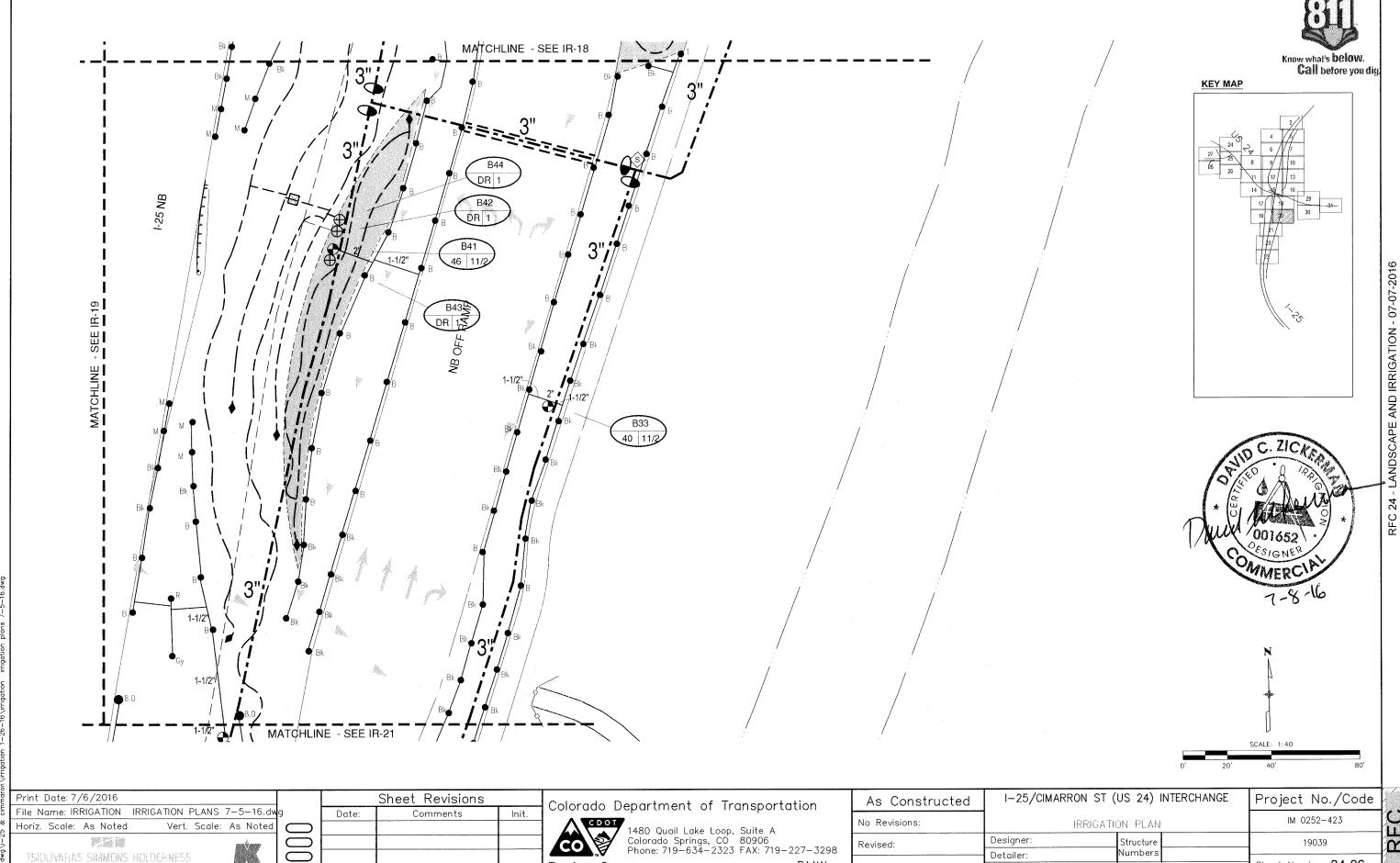
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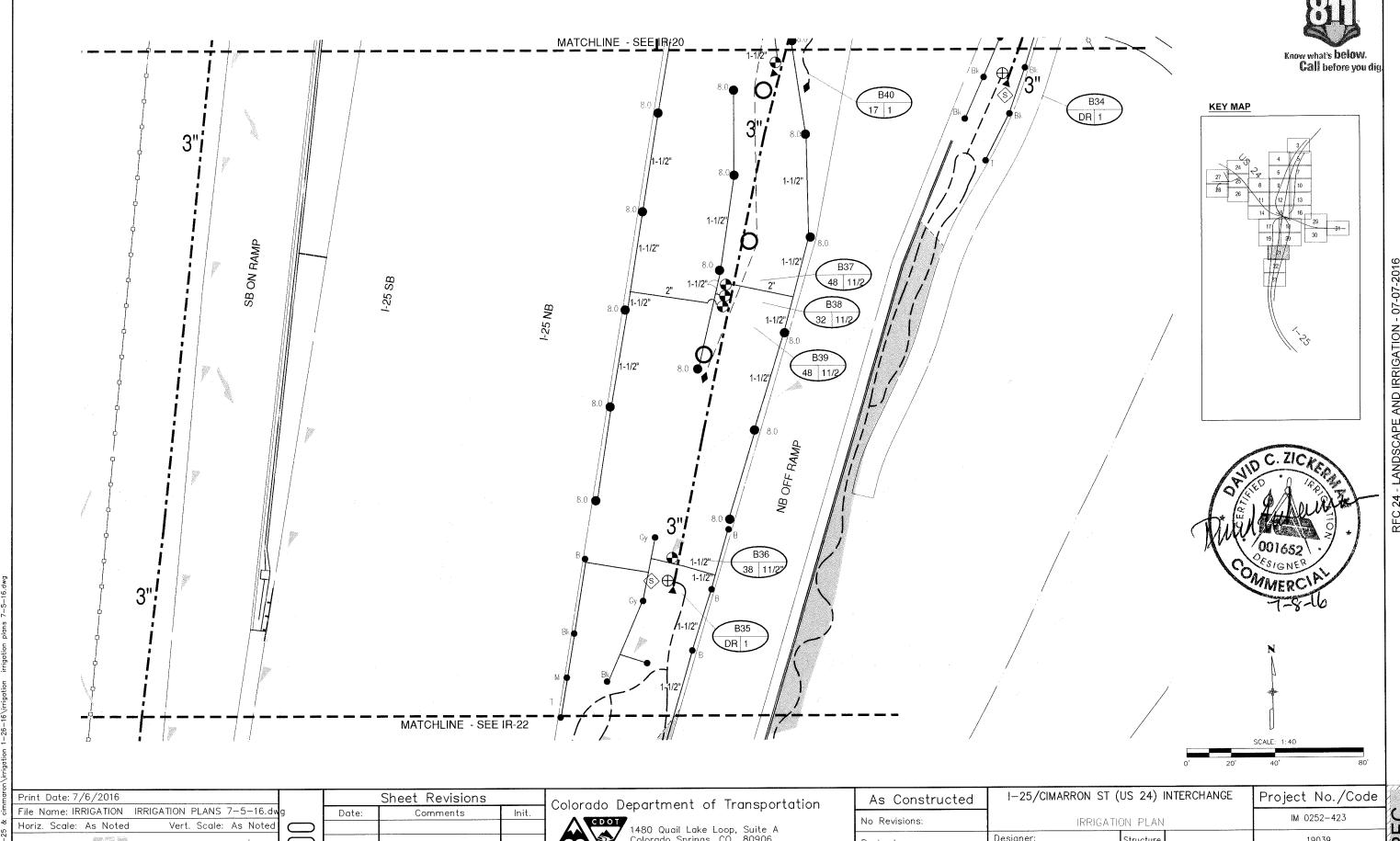
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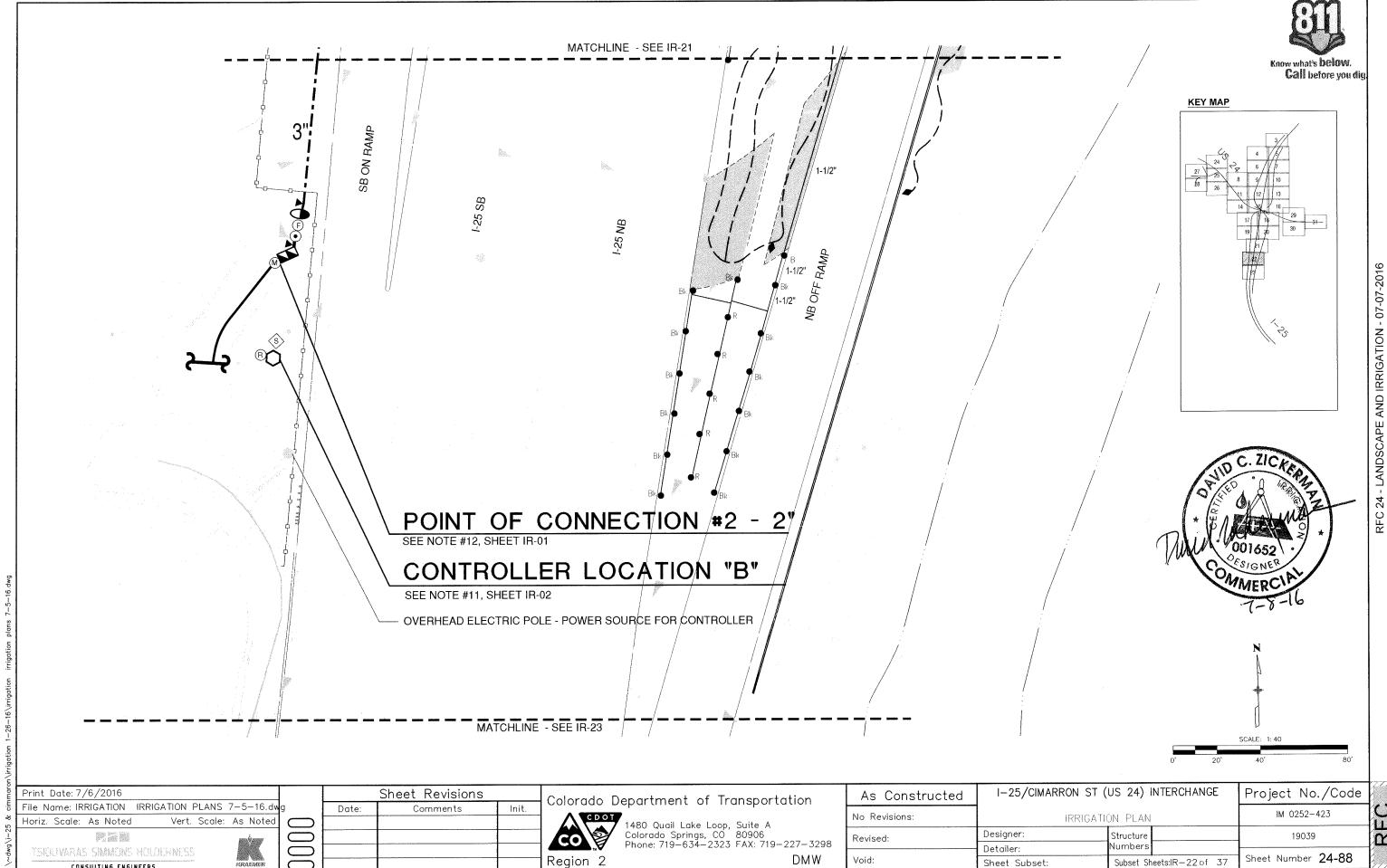
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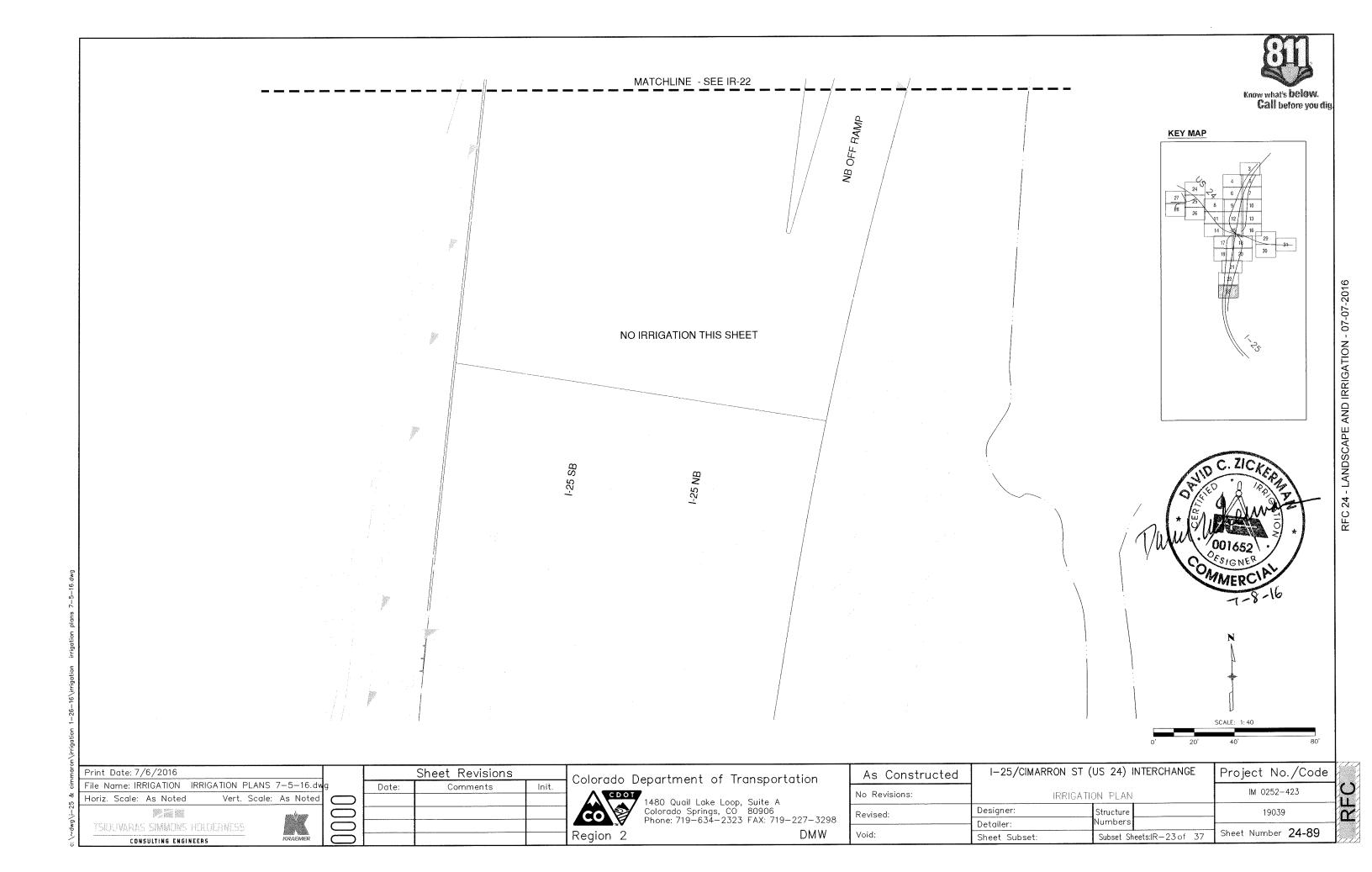


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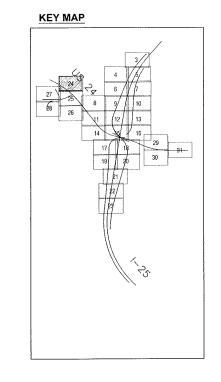
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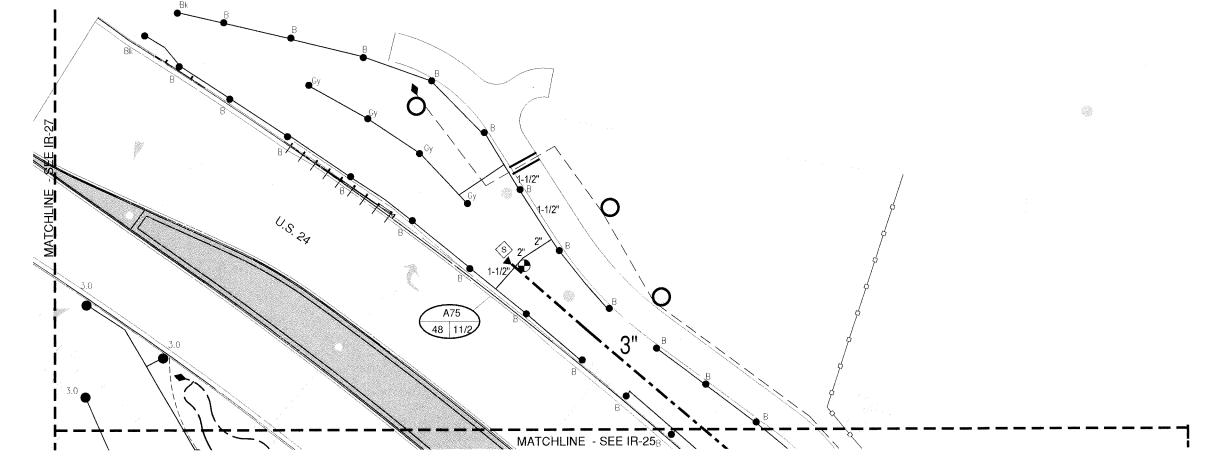
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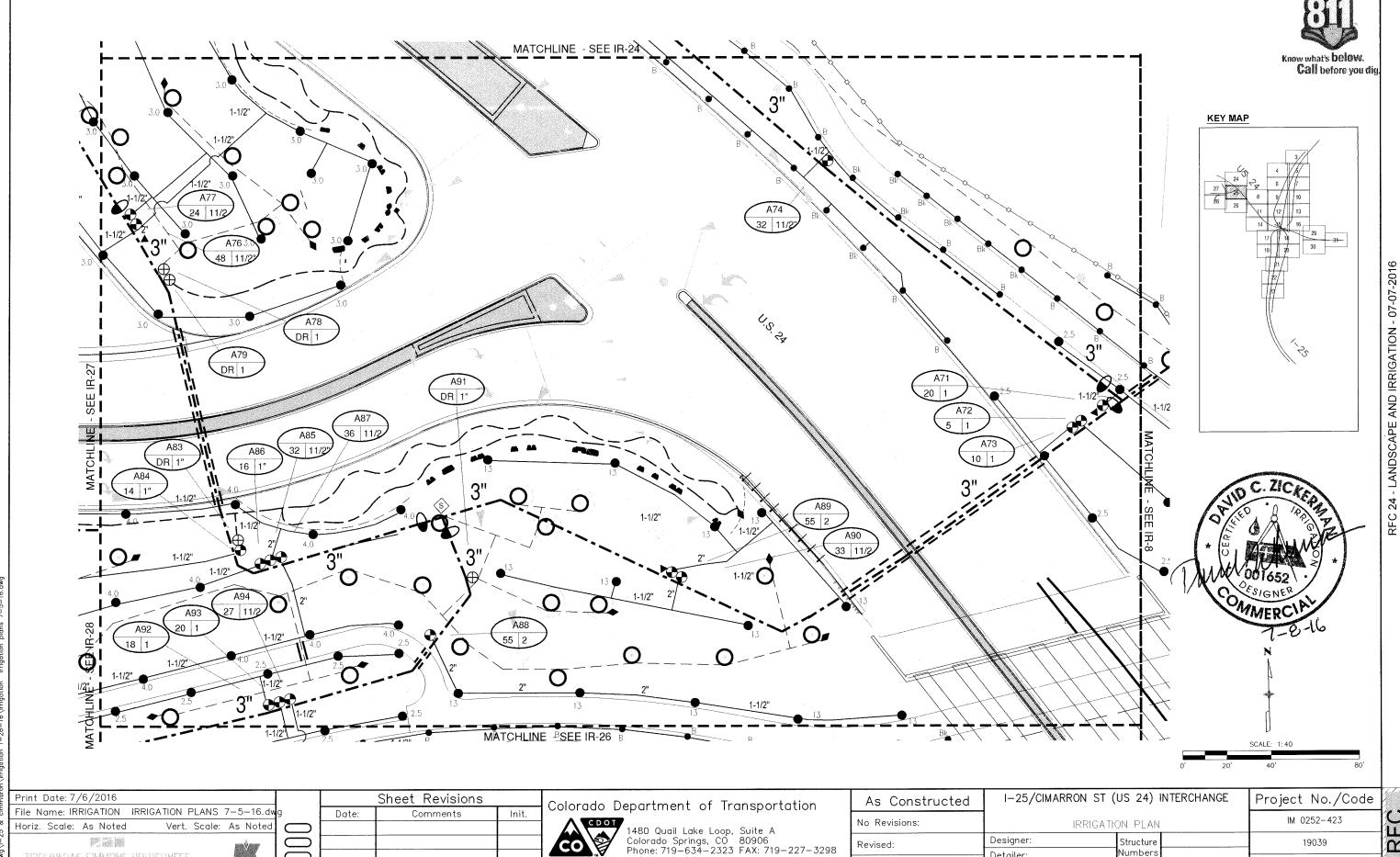
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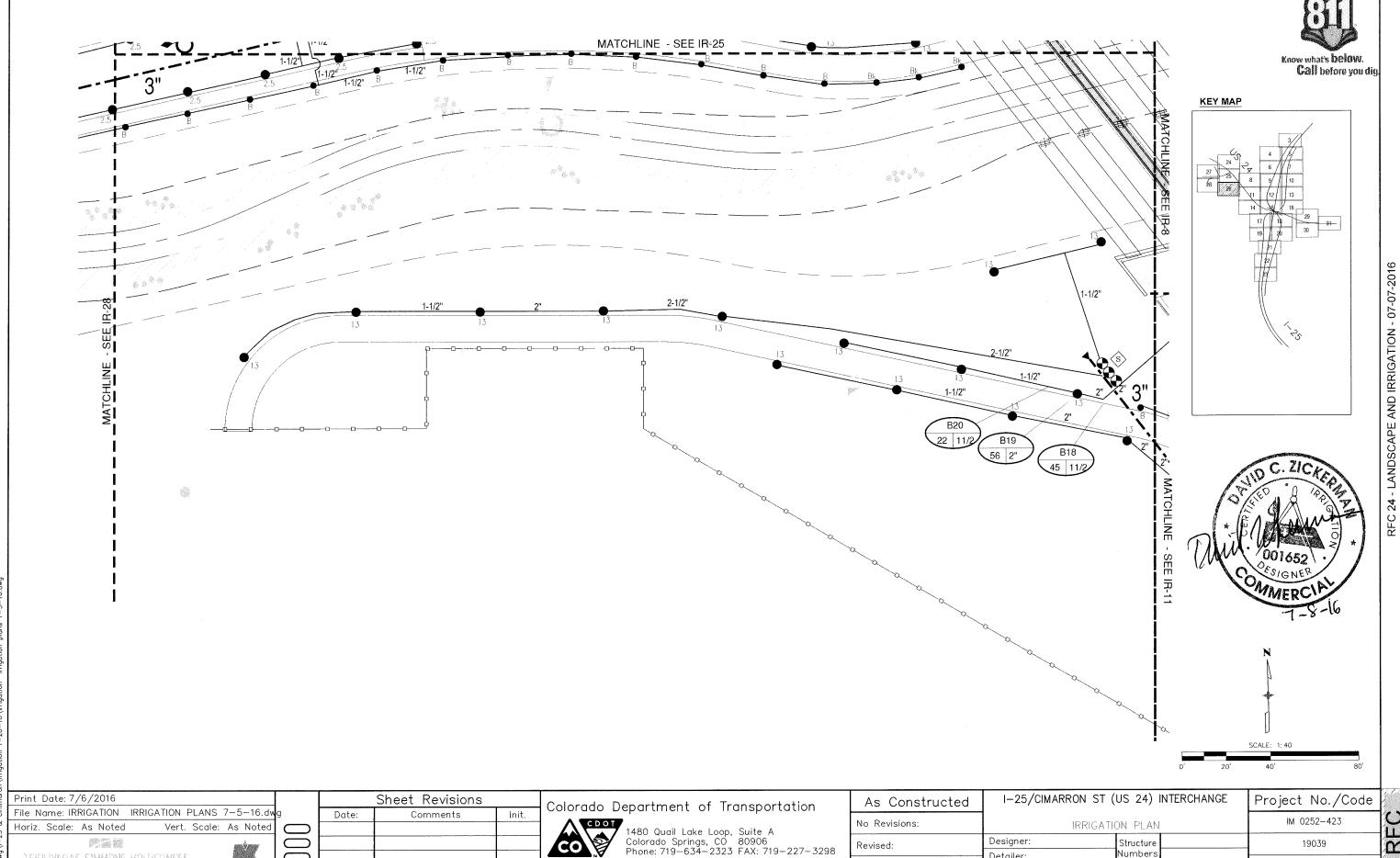
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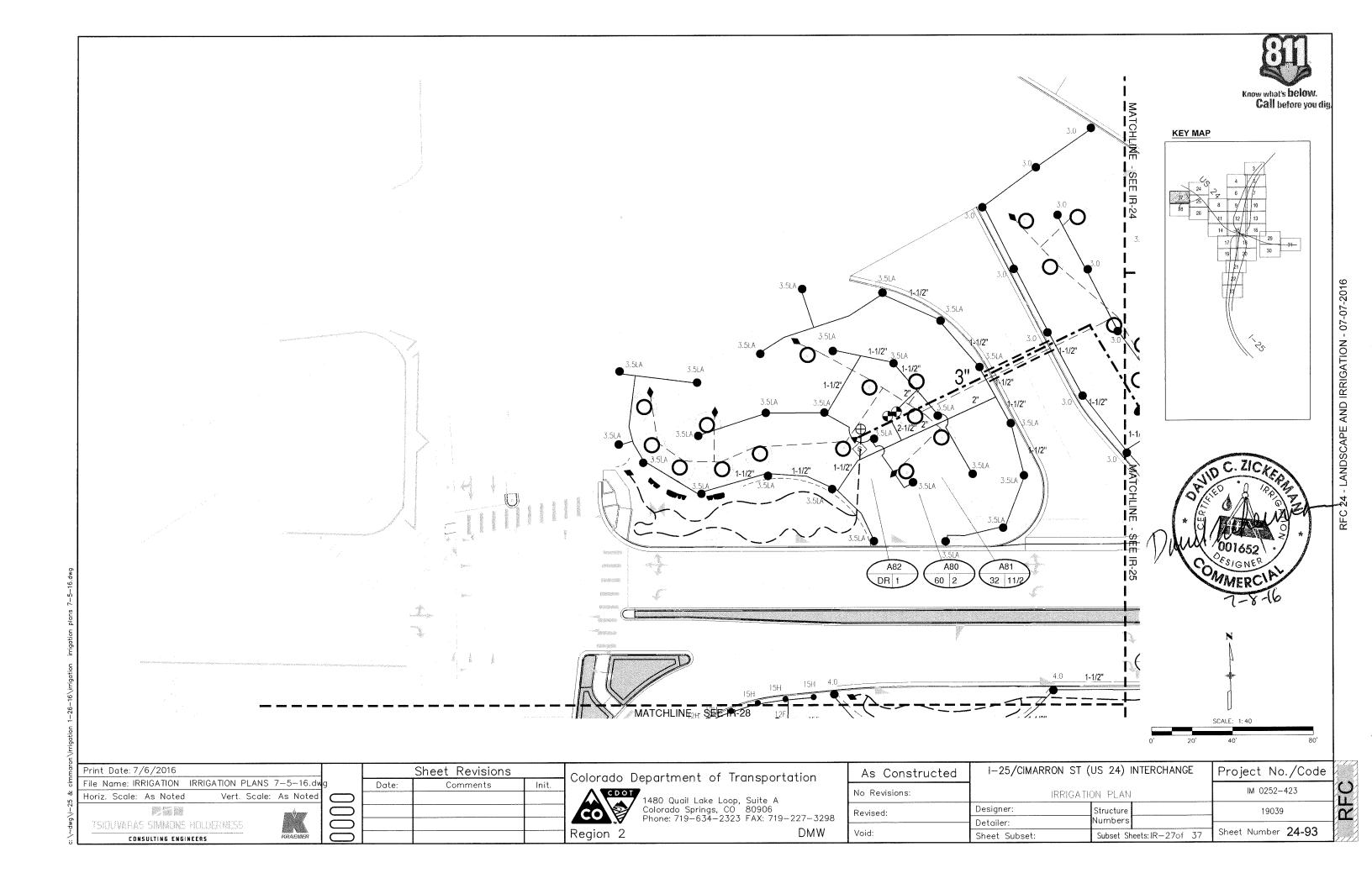
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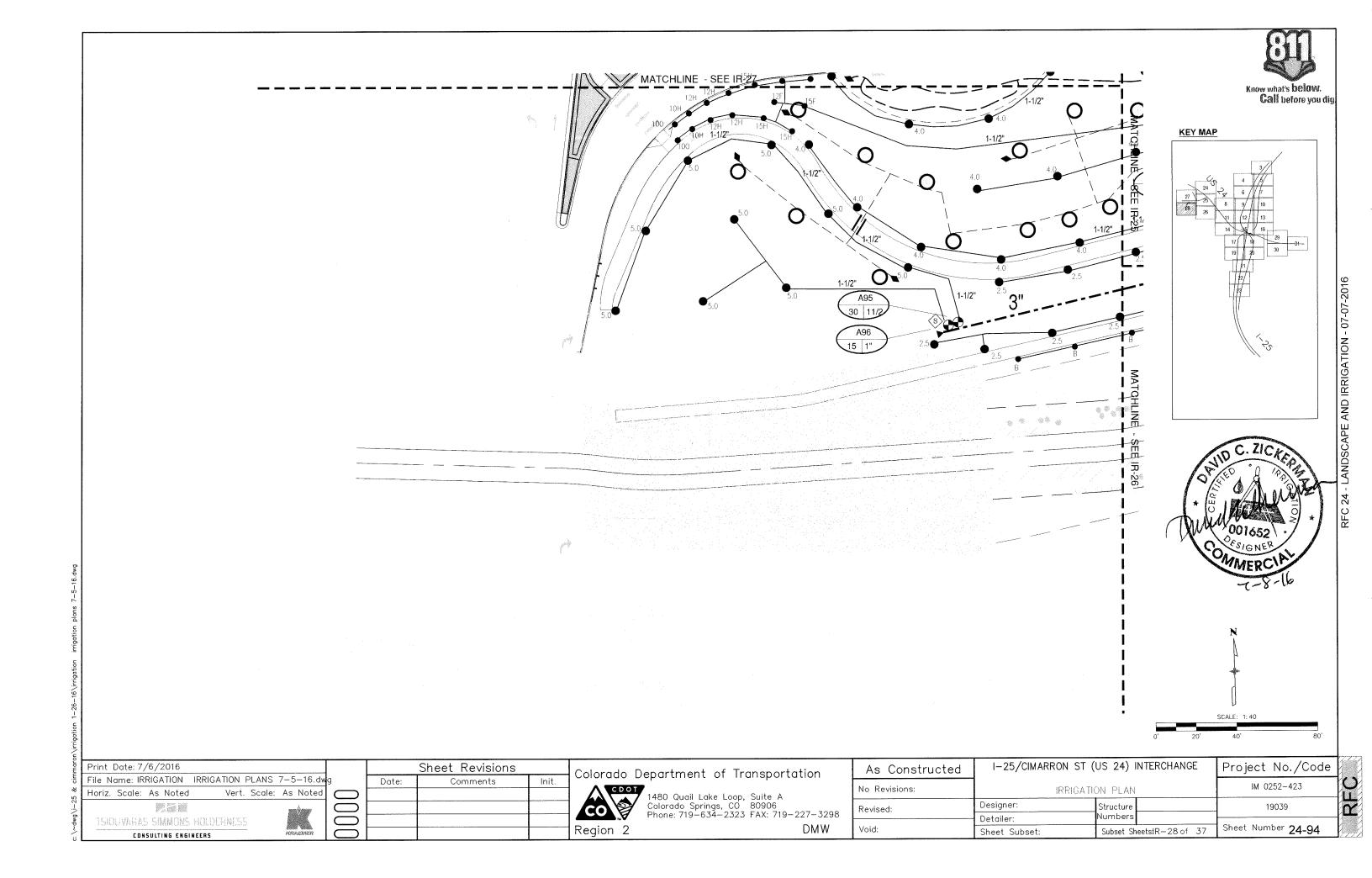
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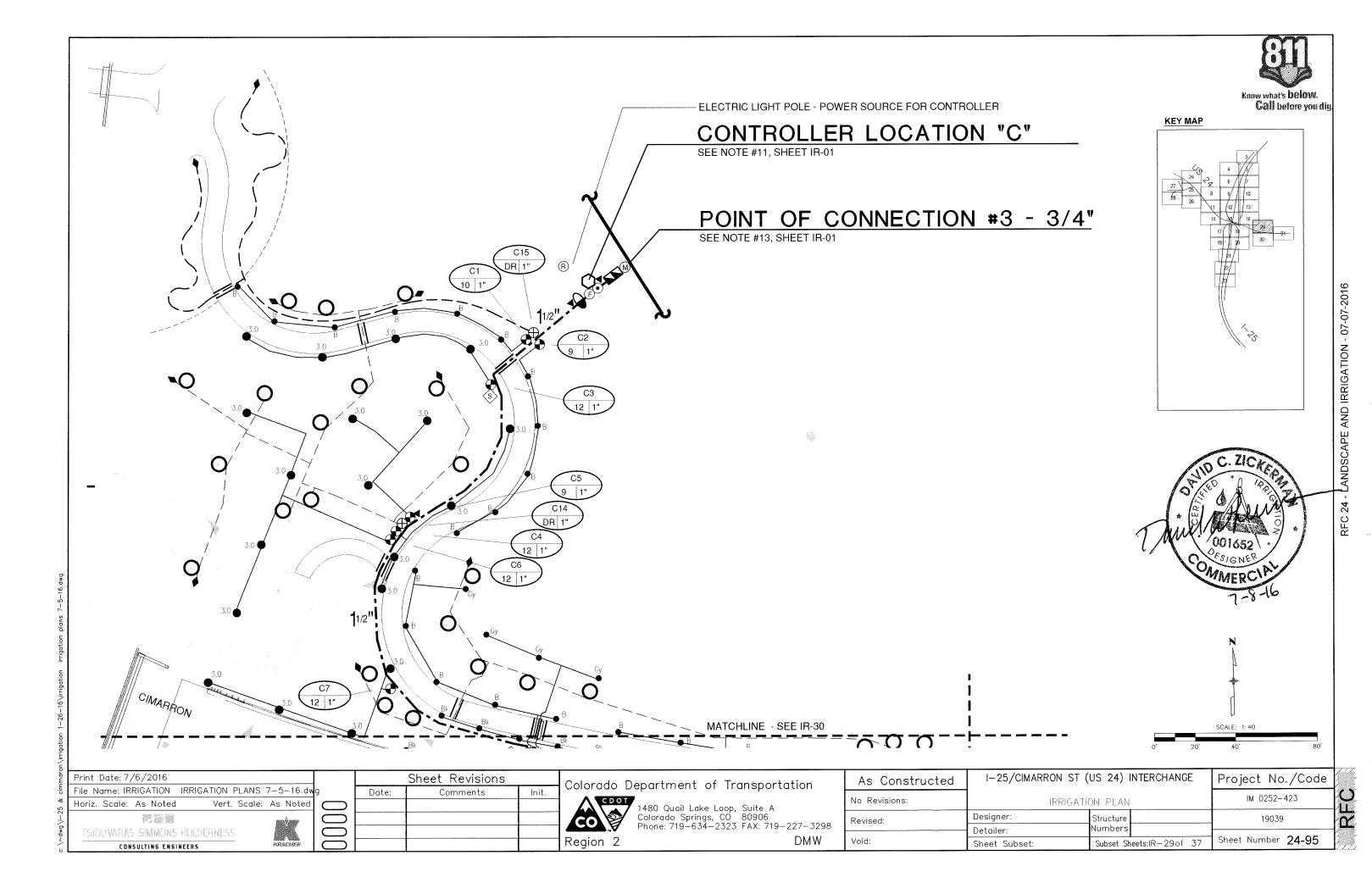
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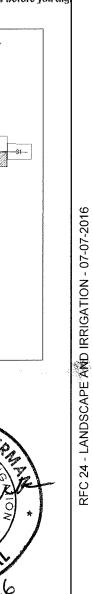
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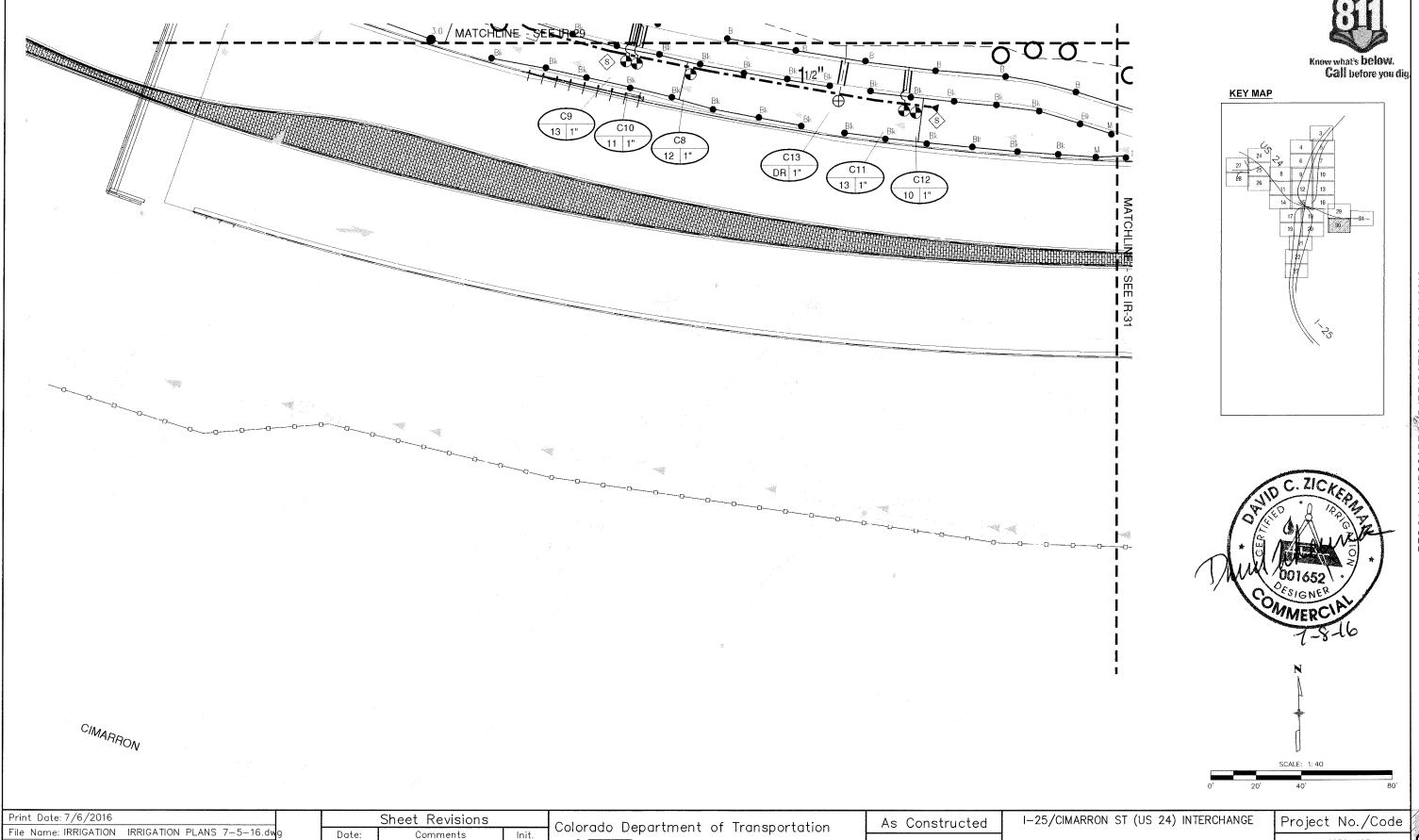
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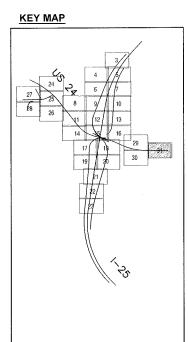
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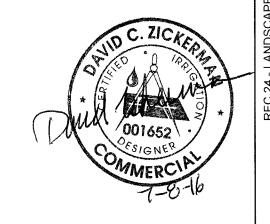
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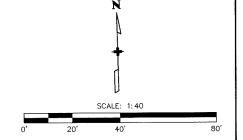
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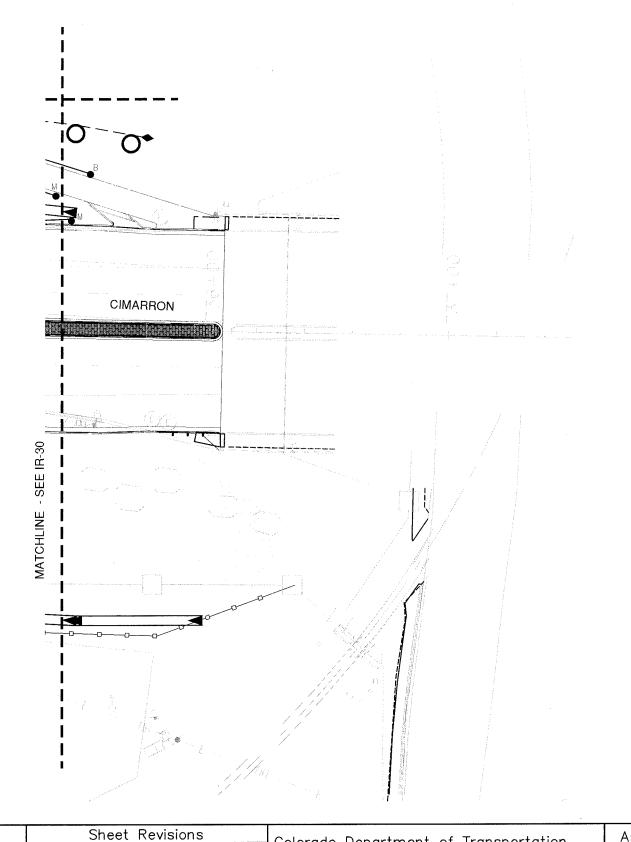
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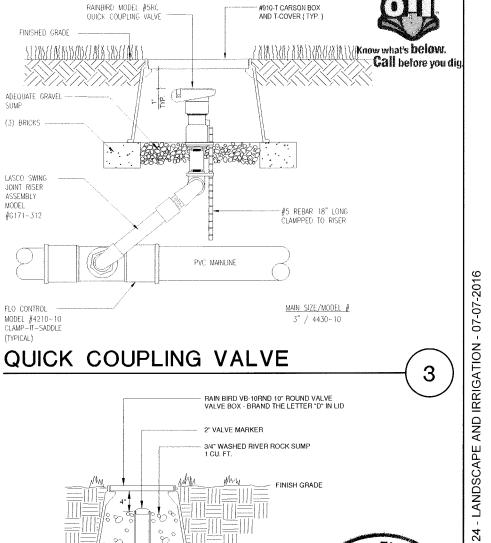


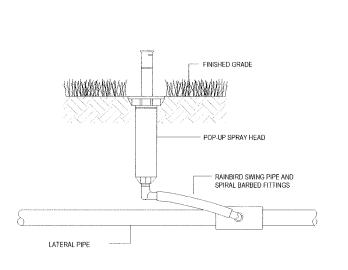
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#### FINISHED GRADE HUNTER 'I-25 SERIES' ROTOR HUNTER 1-20 SERIES' ROTOR 3/4" DIAMETER 90° PVC THREADED 90° PVC THREADED ELBOW SCHEDULE 80 FLBOW PVC NIPPLE THREADED OUTLET TEE OR SCHEDULE 80 PVC NIPPLE ( 8" MINIMUM MARLEX ST 90° MARLEX ST 90° LENGTH) - MARLEX ST 90° SCH 80-10° PVC NIPPLE END VIEW SIDE VIEW

## POP-UP SPRAY HEAD

GEAR DRIVEN ROTOR

FINISH GRADE RAIN BIRD VB-JMB JUMBO RECT. VALVE BOX W/ EXTENSION - BRAND "MV" INTO VALVE BOX LID. WATERPROOF WIRE SPLICE KIT - RE: SPECS ELECTRIC MASTER CONTROL VALVE REFER TO EQUIPMENT SCHEDULE FOR MANUFACTURER, MODEL # AND DIAMETER SLIPXMIPT SCH. 40 PVC ADAPTER (2) PRESSURE MAINLINE TWO-WIRE CABLE 3/4" WASHED RIVER ROCK SUMP - ADD TO BOTTOM OF VALVE AND PIPING NOTE: CENTER BOX OVER VALVE ASSEMBLY APPLY NON-HARDENING THREAD SEALANT CONTAINING NO PETROLEUM DISTILLATES TO ALL MALE-THREADED FITTINGS (SPEARS BLUE 75 OR EQUAL) PROVIDE DIRECT CONNECTION (I.E. NO DECODER REQUIRED) OF

WATERTIGHT WIRE SPLICES RAIN BIRD VB-JMB BOX WITH EXTENSIONS AS REQUIRED. BRAND "FS" INTO VALVE BOX LID. VALVE BOX SHALL NOT REST DIRECTLY ON FLOW SENSOR CABLE FLOW SENSOR - REFER TO EQUIPMENT SCHEDULE FOR MANUFACTURER, MODEL & DIAMETER FINISH GRADE TWO-WIRE CABLE PER MANUFACTURER'S RECOMMENDATIONS RAIN MASTER EV-CAB-SEND CABLE PROVIDE ADDITIONAL CABLE WITHIN BOX TO ALLOW REMOVAL OF SENSING UNIT FROM BOX FOR MAINTENANCE PURPOSES. 3/4" GRAVEL SUMP - 2 CU. FT. 10x PIPE DIA. MIN. UPSTREAM REFER TO PLANS FOR PIPE DIAMETER NO FITTINGS INCLUDING REDUCER BUSHINGS, TEES, ELLS, ETC, SHALL BE INSTALLED WITHIN "METER RUN" SEGMENT OF PIPING DIAMETER OF FLOW SENSOR TEE AND "METER RUN" PIPING SHALL BE EQUAL. NO REDUCER BUSHINGS, ADAPTERS, ETC. SHALL BE INSTALLED WITHIN FLOW SENSOR TEE. VALVE BOX SHALL NOT REST OF TOP OF FLOW SENSOR CABLE PROVIDE DIRECT CONNECTION (I.E. NO DECODER REQUIRED) OF CONTROLLER TO CONTROLLER THROUGH INSTALLATION OF PAIGE ELECTRIC P7171D-A CABLE

3/4" WASHED RIVER ROCK SUMP 1 CU. FT. - FINISH GRADE - 2" CL160 PVC ACCESS SLEEVE -LENGTH AS REQUIRED 3/4" FxF SCH.80 PVC 90 ELL (2 3/4"xCL PVC NIPPLE SCH. 80 3/4"x6" BRASS NIPPLE - LENG TO PROVIDE ADEQUATE CL 3/4" BRASS GLOBE VALVE SOIL BLANKET COVERIN 3/4"x4" PVC NIPPLE SCH. 80 3/4" WASHED RIVER ROCK SUMP SEE TECHNICAL SPECIFICATIONS FOR SUMP SIZE PVC PRESSURE MAINLINE

APPLY NON-HARDENING THREAD SEALANT CONTAINING NO

PETROLEUM DISTILLATES TO ALL MALE-THREADED FITTINGS (SPEARS BLUE 75 OR EQUAL)

FLOW SENSOR

CO

Region 2

MANUAL DRAIN VALVE

MODEL

5

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MASTER VALVE

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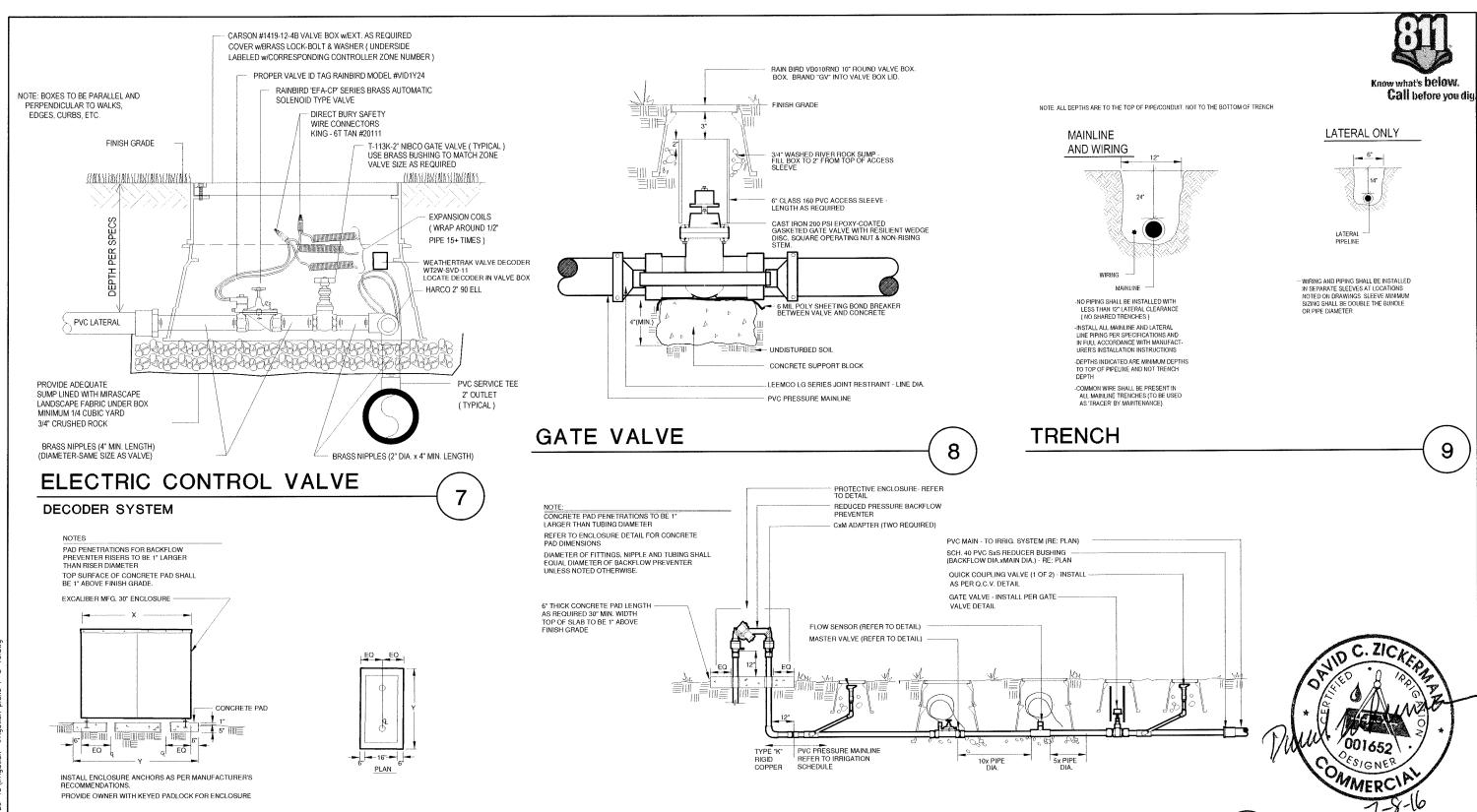
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**BACKFLOW ENCLOSURE** 

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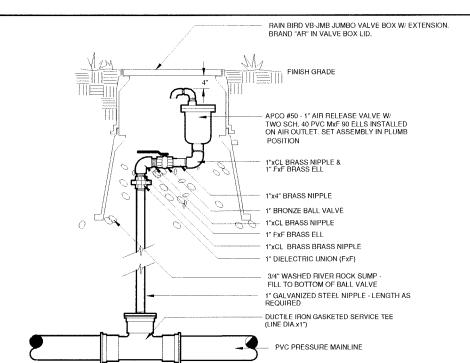
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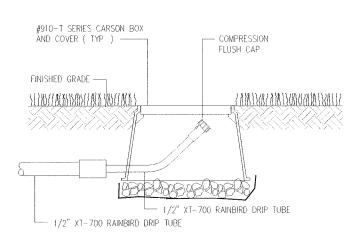
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NOTE: AIR RELEASE ASSEMBLY SHALL REST ON GRAVEL SUMP FIELD-LOCATE AIR RELEASE AT HIGH POINT IN MAINLINE PIPING APPLY NON-HARDENING THREAD SEALANT CONTAINING NO PETROLEUM DISTILLATES TO ALL MALE-THREADED FITTINGS (SPEARS BLUE 75 OR EQUAL)

## AIR RELEASE VALVE



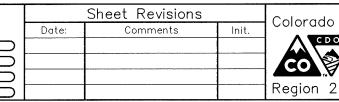
DRIP LINE BLOW-OUT STUB

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2" PVC CONDUIT W/ SWEEP ELL - DECODER CABLE

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#### - PAIGE P7389D DECODER CABLE - PROVIDE 24" LOOP OF ADDITIONAL CABLE WITHIN ENCLOSURE PLAN VIEW CONCRETE MOUNTING PAD W/ ANCHORS CADWELD GT1161G "ONE SHOT" WELD (GROUND ROD CLAMP IS NOT ACCEPTABLE) FINISH GRADE 5/8"x8 FT, COPPER-CLAD GROUNDING ROD & 10" ROUND VALVE BOX CONTINUOUS #6 BARE COPPER GROUNDING WIRE 3/4" PVC CONDUIT W/ SWEEP ELL - GROUND WIRE 3/4" PVC CONDUIT W/ SWEEP ELL - 120v SERVICE -

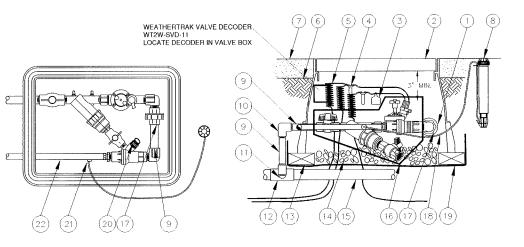
COPPER GROUNDING PLATE (4"x96"x0.0626")

GROUND ENHANCEMENT MATERIAL PER MANUFACTURER'S RECOMMENDATIONS

SPECIFIED CONTROLLER AND S.S. PEDESTAL- RE: SCHEDULE

DISCONNECT SWITCH & RECEPTACLE

## **ELECTRIC CONTROLLER - TWO-WIRE SYSTEM**



INSTALLER TO PROVIDE A MINIMUM  $1/2" \times 4"$  HOSE LENGTH WITH CONNECTOR ATTACHED TO FLUSH ADAPTER AND COILED INSIDE VALVE BOX TO ALLOW FOR FLUSHING TO ABOVE GROUND DISCHARGE AS REQUIRED.

1)PVC SCH 80 NIPPLE (CLOSE)

CONTRACTOR TO GROUND AND PROVIDE SURGE

INSTALL A DISCONNECT SWITCH AND 120 VOLT GFI RECEPTACLE WITHIN PEDESTAL

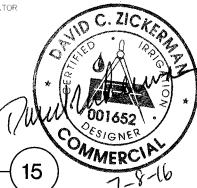
PROTECTION FOR CONTROLLER IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND GROUNDING

ALL ELECTRICAL WORK TO CONFORM TO LOCAL CODE.

- 2 VALVE BOX WITH COVER: CARSON #1220 JUMBO SERIES
- (3)ID TAG: RAIN BIRD SERIES
- (4) WATER PROOF CONNECTION RAIN BIRD SPLICE-1 (1 OF 2)
- (5)30-INCH LINEAR LENGTH OF WIRE, COILED
- (6)FINISH GRADE
- (7) TOP OF MULCH
- (8) MICRO SPRAY POP-UP: RAIN BIRD XP-600X WITH SHUTOFF NOZZLE PAINT ORANGE FOR ZONE INDICATOR
- 9)PVC SCH 80 NIPPLE (LENGTH AS REOUIRED)
- (10)PVC SCH 40 ELL
- (1)PVC SCH 80 NIPPLE (2-INCH LENGTH, HIDDEN) AND PVC SCH 40 ELL
- (12)PVC SCH 40 TEE OR ELL
- (13)BRICK (1 OF 4)
- (14)3.0-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL

### (15)PVC MAINLINE

- (16) CONTROL ZONE KIT: RAIN BIRD MODEL XCZ-100COM
- 17)PVC SCH 80 UNION FOR SERVICING ASSEMBLY (18) RAINBIRD DT-025 DISTRIBUTION TUBING
- (19)LANDSCAPE FABRIC WRAP
- (20) 3/4" BRASS MPTXHOSE TREAD ADAPTER
- (21)1/4" SELF-PIERCING BARB CONNECTOR: RAIN BIRD
- SPB-025
  (22)1/2" POLYETHYLENE TUBING:
  RAIN BIRD XERI-TUBE 700



DRIP VALVE ASSEMBLY - DECODER SYSTEM

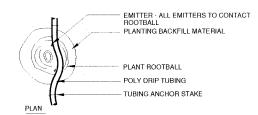
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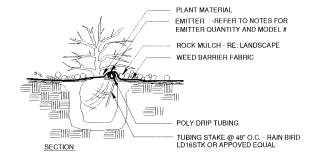
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NOTE:

DRIP EMITTER

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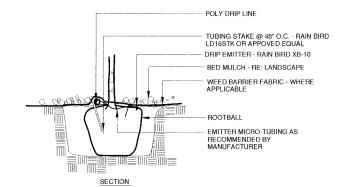
INSTALL EMITTERS ON OPPOSING SIDES OF ROOTBALL.

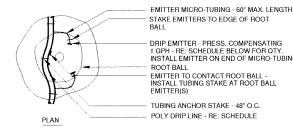
FLUSH ALL LINES THOROUGHLY PRIOR TO EMITTER INSTALLATION.

IF PLANTING ON A 4:1 SLOPE OR GREATER, INSTALL EMITTERS ON UPHILL

INSTALL TWO 1/2 GPH EMITTERS PER 5 GAL. SHRUB. ONE 1 GPH EMITTER PER 1 GAL. PLANT

#### SHRUB AND VINE PLANTINGS IN BED AREAS





STAKE EMITTERS TO EDGE OF ROOT DRIP EMITTER - PRESS. COMPENSATING 1 GPH - RE: SCHEDULE BELOW FOR QTY. INSTALL EMITTER ON END OF MICRO-TUBING

ROOT BALL EMITTER TO CONTACT ROOT BALL -INSTALL TUBING STAKE AT ROOT BALL EMITTER(S) TUBING ANCHOR STAKE - 48" O.C.

POLY DRIP LINE - RE: SCHEDULE

INSTALL EMITTERS EQUALLY AROUND ROOTBALL. EMITTERS SHALL BE INSTALLED TO CLEAR FINISHED GRADE BY A MINIMUM OF 1" AND A MAXIMUM OF 2". FLUSH ALL LINES THOROUGHLY, INCLUDING EMITTER TUBING, PRIOR TO INSTALLING EMITTERS.

IF PLANTING ON A 4:1 SLOPE OR GREATER, INSTALL EMITTERS ON UPHILL

SIDE OF ROOTBALL.

RAIN BIRD VB-10RND 10" ROUND VALVE BOX

-CAD-WELD (ROD CLAMP IS NOT ACCEPTABLE)

#6 BARE COPPER WIRE (FROM

(MOKMOKIMNOMIKATA)

3/4" CRUSHED GRAVEL SUMP (2 C.U. FT.)

5/8" x8 FT. COPPER-CLAD GROUNDING ROD

1 1/2" CAL. TREE 2" CAL. TREE 2 1/2" CAL. TREE

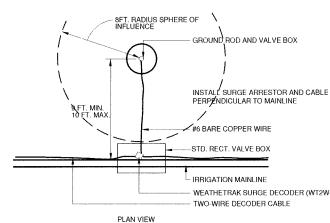
EMITTER SCHEDULE

TWO 1 GPH EMITTERS THREE 1 GPH EMITTERS
THREE 1 GPH EMITTERS FOUR 1 GPH EMITTERS SIX 1 GPH EMITTERS

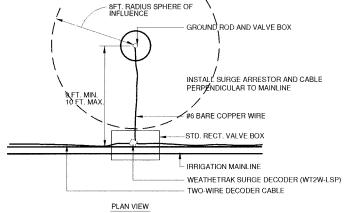
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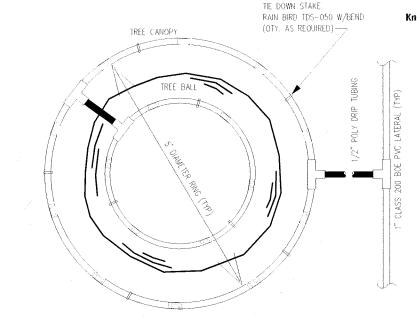
#### TREE PLANTINGS IN BED AREAS



GROUND ROD SHALL LOCATED SUCH THAT MAINLINE, TWO-WIRE CABLE AND VALVE DECODERS LIE OUTSIDE OF SPHERE OF INFLU-ENCE (TYP. ALL LOCATIONS)



NOTE: BURY ALL TUBING w/2" NATIVE SOIL & MINIMUM 4" MULCH TO AID IN VANDALISM CONTROL



NOTE: 3" CALIPER TREES & LARGER REQUIRE DOUBLE LOOP, ALL SMALLER REQUIRE ONLY 5' DIAMETER LOOP.

NOTE: CENTER RING ON TREE TRUNK USING LDP-09-24 RAINBIRD DRIPLINE TUBING. MINIMUM OF SIX PORTS PER TREE.

# DRIP RING - TREES IN NATIVE SEED



## TWO-WIRE SURGE ARRESTOR

LOCATIONS SHOWN ON PLANS

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GROUND ROD SHALL BE INSTALLEDAT LOCATION PERPENDICULAR TO MAINLINE. GROUND SHALL BE LOCATED 9 FT. FROM MAINLINE TRENCH

TEST EARTH TO GROUND RESISTANCE AT ALL GROUND POINTS. EARTH TO GROUND RESISTANCE MUST BE LESS THAN 50 OHMS.

GROUND ROADS SHALL BE PLACED AR 500 FT. INTERVALS AND AT

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ONE HO.	PLANTTYPE	IRRIGATION DE SCRIPTION	APPROX. PRECIP. RATE (M./HR.)	APPROXIMATE FLOW RATE (GPM)
A1	Native Grass	MP Rotator nozzles	0.45	8
A2	Trees	Drip		1
<b>A</b> 3	Native Grass	I-20 rotor w/ 4.0 nozz 180d	0 45	44
Α4	Native Grass	1-20 rotor w/ 4.0 nozz 360d	0,28	8
A5	Native Grass	i-20 rotor w/ 2.5 no zzle 180d	0.45	18
	Native Grass	i-20 rotor w/ 2.5 nozzle 180d	0.45	13
A7	Native Grass	MP Rotator nozzles	0.45	4
A8	Native Grass	I-25 rotor with 15 nozzle 180d	0.98	70
A9	  Native Grass	I-20 rotor w/ 6.0 nozzle 360d	0.36	12
A10	Native Grass	I-20 rotor w/ 6.0 nozzle 180d	0 72	12
A11	Shrub Bed	Drip		3
	Native Grass	I-20 rotor w/ 6.0 nozzle 180d	0.72	36
	Native Grass	I-20 rotor w/ 6.0 no zzle 360d	0.36	24
	Native Grass	I-25 rotor with 15 nozzle 360d	0.49	56
A15	Trees	Drip	0.10	2
A16	Trees	Drip	and the state of t	4
		I-25 rotor with 15 nozzle 180d	0.98	56
A17	Native Grass		10 mg	70
	Native Grass	1-25 rotor with 15 nozzle 360d	0.49	
	Native Grass	1-25 rotor with 15 nozzle 360d	0.49	70
	Native Grass	1-20 rotor w/ 6.0 nozzie 360d	0.36	30
	Native Grass	I-20 rotor w/ 6.0 nozzle 360d	0.36	42
	Native Grass	I-20 rotor w/ 6.0 nozzle 180d	0.72	42
	Native Grass	I-25 rotor with 15 nozzle 180d	0.98	70
	Native Grass	I-25 rotor with 15 nozzle 180d	0.98	70
A25	Native Grass	MP Rotator nozzles	0.45	33
A26	Native Grass	MP Rotator nozzles	0.45	14
A27	Native Grass	MP Rotator nozzles	0.45	41
A28	Native Grass	I-25 rotor w/ 5 nozzle 180d	0.55	20
A29	Native Grass	I-25 rotor w/ 5 nozzle 180d	0.55	20
A30	Trees	Drip		1
A31	Shrub Bed	Drip		7
A32	Shrub Bed	Drip		4
A33	Native Grass	MP Rotator nozzles	0.45	25
A34	Native Grass	I-20 rotor w/ 8.0 no zzle 180d	0 92	40
A35	Native Grass	I-20 rotor w/ 8.0 no zzle 180d	0.92	7
A36	Native Grass	MP Rotator nozzles	0 45	8
A37	Trees	Drip		1
A38	Shrub Bed	Drip		7
A39	Shrub Bed	Drip		2
A40	Native Grass	MP Rotator nozzles	0.45	6
A41	Native Grass	I-20 rotor w/ 3.0 nozzle 180d	0.45	21
A42	Native Grass	1-20 rotor w/ 3.0 no zzle 180d	0.45	12
A43	Native Grass	i 1-20 rotor w/ 3.0 no zzle 360d	0.22	24
A44	Native Grass	i-20 rotor w/ 3.0 nozzle 180d	0.45	15
A45	Trees	Drip	Total and the second se	1
A46	Shrub Bed	Drip		2
	Native Grass	MP Rotator nozzles	0.45	22
	Native Grass	MP Rotator nozzles	0.45	34
	Native Grass	I-20 rotor w/3 5LA nozzłe 180d	0.67	28
	Native Grass	1-20 rotor w/ 3,5LA nozzle 360d	0.33	7

A51   Native Grass		1	:		
A55 Native Grass	A51	Native Grass	MP Rotator nozzles	0 45	17
A544 Native Grass A56 Sirub Bed A56 Tires Drup 1 A57 Native Grass A56 Native Grass L20 notor w 6 0 nozzle 1800 A57 Native Grass L20 notor w 6 0 nozzle 1800 A58 Native Grass L20 notor w 6 0 nozzle 1800 A58 Native Grass L20 notor w 6 0 nozzle 1800 A57 Native Grass A58 Native Grass L20 notor w 6 0 nozzle 1800 A57 Native Grass A58 Native Grass A58 Native Grass A59 Native Grass A60 Native Grass A59 Native Grass A60 Native Grass A61 Native Grass A62 Native Grass A63 Native Grass A64 Native Grass A65 Sirub Bed A66 Native Grass A67 Native Grass A68 Native Grass A68 Native Grass A68 Native Grass A69 Native Grass A69 Native Grass A69 Native Grass A69 Native Grass A70 Tires A71 Native Grass A72 Native Grass A73 Native Grass A74 Native Grass A75 Native Grass A76 Native Grass A77 Native Grass A78 Native Grass A78 Native Grass A79 Native Gra	A52	Native Grass	I-20 rotor w/3.5LA nozzle 180d	0.67	39
A5.6         Strub Red         Drip         5           A5.6         Trees         Drip         1           A5.7         Native Grass         M.P. Rotator nozzles         0.45         38           A5.8         Native Grass         1.20 notor will 0 nozzle 1800         0.72         36           A5.9         Native Grass         1.20 notor will 0 nozzle 1800         0.72         42           A6.0         Native Grass         1.20 notor will 0 nozzle 1800         0.72         42           A6.1         Native Grass         M.P. Rotator nozzles         0.45         21           A6.2         Strub Bed         Drip         3         3           A6.3         Native Grass         M.P. Rotator nozzles         0.45         15           A6.6         Strub Bed         Drip         2         2           A6.6         Strub Bed         Drip         3         3           A6.7         Native Grass         M.P. Rotator nozzles         0.45         17           A6.8         Strub Bed         Drip         3         3           A7.0         Trees         Drip         4         4           A6.8         Native Grass         1.20 notor will 2 nozzle 1800	A53	Native Grass	I-20 rotor w/ 3.5LA nozzle 360d	0.33	11
A66   Tirees	A54	Native Grass	MP Rotator nozzles	0 45	14
A67         Institute Grass         IMP Rotation nozzles         0.45         38           A58         Native Grass         1-20 notor w 6.0 nozzle 180d         0.72         36           A59         Native Grass         1-20 notor w 6.0 nozzle 180d         0.72         36           A60         Native Grass         1-20 notor w 6.0 nozzle 180d         0.72         42           A61         Native Grass         IMP Rotation nozzles         0.45         221           A62         Shub Bed         Drip         3           A63         Native Grass         MP Rotation nozzles         0.45         48           A64         Native Grass         MP Rotation nozzles         0.46         15           A66         Native Grass         MP Rotation nozzles         0.45         20           A66         Native Grass         MP Rotation nozzles         0.45         20           A67         Native Grass         MP Rotation nozzles         0.45         20           A68         Shrub Bed         Drip         1         1           A70         Trees         Drip         1         1           A71         Native Grass         1-20 notor w 2.5 nozzle 180d         0.45         20 <t< td=""><td>A55</td><td>Shrub Bed</td><td>Onp</td><td></td><td>5</td></t<>	A55	Shrub Bed	Onp		5
A56         Native Grass         I-20 rotor w 6 0 no.zde 180d         0.72         36           A59         Native Grass         I-20 rotor w 6 0 no.zde 180d         0.36         18           A60         Native Grass         I-20 rotor w 6 0 no.zde 180d         0.72         42           A61         Native Grass         MP Rotator no.zdes         0.45         21           A62         Shrub Bed         Drip         3         3           A63         Native Grass         MP Rotator no.zdes         0.45         48           A64         Native Grass         MP Rotator no.zdes         0.45         15           A66         Shrub Bed         Drip         2         2           A66         Native Grass         MP Rotator no.zdes         0.45         17           A68         Shrub Bed         Drip         3         3           A70         Trees         Drip         1         3           A68         Shrub Bed         Drip         1         3           A70         Trees         Drip         1         4           A71         Native Grass         I-20 rotor w 2.5 no.zde 180d         0.45         20           A72         Native Grass	A56	Trees	Dnp		1
A59         Native Grass         1-20 rotor w/6 0 no zale 360d         0.36         18           A60         Native Grass         1-20 rotor w/6 0 no zale 180d         0.72         42           A61         Native Grass         MP Rotator nozzles         0.45         21           A62         Strub Bed         Drip         3           A63         Native Grass         MP Rotator nozzles         0.45         48           A64         Native Grass         MP Rotator nozzles         0.45         15           A66         Shrub Bed         Drip         2         2           A67         Native Grass         MP Rotator nozzles         0.45         12           A67         Native Grass         MP Rotator nozzles         0.45         12           A68         Shrub Bed         Drip         3         3           A70         Trees         Drip         3         4           A68         Shrub Bed         Drip         3         4           A70         Trees         Drip         3         4           A70         Trees         Drip         1         4           A71         Native Grass         1-20 rotor w/2 5 nozzle 180d         0.45	A57	Native Grass	MP Rotator nozzles	0 45	38
A60         Native Grass         I-20 motor will 6 0 mozzle 180d         0.72         42           A61         Native Grass         MP Rotator nozzles         0.45         21           A62         Shrub Bed         Drip         3           A63         Native Grass         MP Rotator nozzles         0.45         48           A64         Native Grass         MP Rotator nozzles         0.45         15           A65         Shrub Bed         Drip         2         2           A67         Native Grass         MP Rotator nozzles         0.45         17           A68         Shrub Bed         Drip         3         3           A67         Native Grass         MP Rotator nozzles         0.45         12           A68         Shrub Bed         Drip         3         4           A69         Native Grass         MP Rotator nozzles         0.45         43           A70         Trees         Drip         1         1           A71         Native Grass         I-20 rotor will 2 nozzle 180d         0.45         20           A73         Native Grass         I-20 rotor will 3 nozzle 180d         0.46         48           A75         Native Grass	A58	Native Grass	I-20 rotor w/ 6 0 nozzle 180d	0.72	36
A81         Native Grass         MP Rotator nozzles         0.45         21           A62         Shrub Bed         Drip         3           A63         Native Grass         MP Rotator nozzles         0.45         48           A64         Native Grass         MP Rotator nozzles         0.45         15           A66         Shrub Bed         Drip         2         2           A67         Native Grass         MP Rotator nozzles         0.45         177           A67         Native Grass         MP Rotator nozzles         0.45         177           A68         Shrub Bed         Drip         3         3           A69         Native Grass         MP Rotator nozzles         0.45         177           A68         Shrub Bed         Drip         1         4           A70         Trees         Drip         1         4           A71         Native Grass         1.20 rotor w 2.5 nozzle 180d         0.45         20           A72         Native Grass         1.20 rotor w 2.5 nozzle 180d         0.45         10           A73         Native Grass         1.20 rotor w 2.5 nozzle 180d         0.45         48           A75         Native Grass	A59	Native Grass	I-20 rotor w/ 6.0 no zzle 360d	0,36	18
A62         Shrub Bed         Drip         3           A63         Native Grass         MP Rotator nozzles         0.45         48           A64         Native Grass         MP Rotator nozzles         0.45         15           A66         Shrub Bed         Drip         2         2           A67         Native Grass         MP Rotator nozzles         0.45         17           A68         Shrub Bed         Drip         3         3           A69         Native Grass         MP Rotator nozzles         0.45         17           A68         Shrub Bed         Drip         3         3           A70         Trees         Drip         3         3           A71         Native Grass         I-20 rotor w 2.5 nozzle 180d         0.45         20           A72         Native Grass         I-20 rotor w 2.5 nozzle 180d         0.45         20           A73         Native Grass         I-20 rotor w 2.5 nozzle 180d         0.45         10           A73         Native Grass         I-20 rotor w 2.5 nozzle 180d         0.45         48           A74         Native Grass         I-20 rotor w 3.0 nozzle 180d         0.45         48           A75         Native G	A60	Native Grass	I-20 rotor w/ 6 0 no zzle 180d	0 72	42
A63         Native Grass         MP Rotator nozzles         0.45         48           A64         Native Grass         MP Rotator nozzles         0.45         15           A65         Shrub Bed         Drip         2           A66         Native Grass         MP Rotator nozzles         0.45         20           A67         Native Grass         MP Rotator nozzles         0.45         17           A68         Shrub Bed         Drip         3         3           A69         Native Grass         MP Rotator nozzles         0.45         43           A70         Trees         Drip         1         1           A71         Native Grass         L-20 rotor w 2.5 nozzle 180d         0.45         20           A72         Native Grass         L-20 rotor w 2.5 nozzle 180d         0.45         10           A73         Native Grass         L-20 rotor w 2.5 nozzle 180d         0.45         10           A74         Native Grass         L-20 rotor w 2.5 nozzle 180d         0.45         48           A75         Native Grass         L-20 rotor w 3.0 nozzle 180d         0.45         48           A76         Native Grass         L-20 rotor w 3.0 nozzle 180d         0.23         24 <td>A61</td> <td>Native Grass</td> <td>MP Rotator nozzles</td> <td>0.45</td> <td>21</td>	A61	Native Grass	MP Rotator nozzles	0.45	21
A64         Native Grass         MP Rotator nozzles         0.45         15           A66         Shrub Bed         Drip         2           A67         Native Grass         MP Rotator nozzles         0.45         20           A67         Native Grass         MP Rotator nozzles         0.45         17           A68         Shrub Bed         Drip         3           A69         Native Grass         IMP Rotator nozzles         0.45         43           A70         Trees         Drip         1         43           A71         Native Grass         I-20 rotor w 2.5 nozzle 180d         0.45         20           A72         Native Grass         I-20 rotor w 2.5 nozzle 180d         0.45         20           A73         Native Grass         I-20 rotor w 2.5 nozzle 180d         0.45         10           A74         Native Grass         I-20 rotor w 2.5 nozzle 180d         0.45         32           A75         Native Grass         I-20 rotor w 2.5 nozzle 180d         0.45         32           A75         Native Grass         I-20 rotor w 3.0 nozzle 360d         0.23         24           A75         Native Grass         I-20 rotor w 3.0 nozzle 180d         0.46         48      <	A62	Shrub Bed	Drip		3
A65         Shrub Bed         Drip         2           A66         Native Grass         MP Rotator nozzles         0.45         20           A67         Native Grass         MP Rotator nozzles         0.45         17           A68         Shrub Bed         Drip         3           A69         Native Grass         MP Rotator nozzles         0.45         43           A70         Trees         Drip         1         1           A71         Native Grass         1-20 rotor w 2.5 nozzle 180d         0.45         20           A72         Native Grass         1-20 rotor w 2.5 nozzle 180d         0.45         10           A73         Native Grass         1-20 rotor w 2.5 nozzle 180d         0.45         10           A74         Native Grass         1-20 rotor w 3.0 nozzle 180d         0.45         32           A75         Native Grass         1-20 rotor w 3.0 nozzle 180d         0.46         48           A77         Native Grass         1-20 rotor w 3.0 nozzle 180d         0.23         24           A78         Trees         Drip         4         48           A79         Shrub Bed         Drip         3         3         32           A81	A63	Native Grass	MP Rotator nozzles	0 45	48
A66         Native Grass         MP Rotator nozzles         0.45         20           A67         Native Grass         MP Rotator nozzles         0.46         17           A68         Shrub Bed         Drip         3           A69         Native Grass         LMP Rotator nozzles         0.45         43           A70         Trees         Drip         1         1           A71         Native Grass         1-20 rotor w 2.5 nozzle 180d         0.45         20           A72         Native Grass         1-20 rotor w 2.5 nozzle 180d         0.45         10           A73         Native Grass         1-20 rotor w 2.5 nozzle 180d         0.45         10           A74         Native Grass         1-20 rotor w 3.0 nozzle 180d         0.45         10           A75         Native Grass         1-20 rotor w 3.0 nozzle 180d         0.46         48           A75         Native Grass         1-20 rotor w 3.0 nozzle 180d         0.23         24           A77         Trees         Drip         3         3         3           A78         Trees         Drip         3         3         3         3         3           A80         Shrub Bed         Drip         2	A64	Native Grass	MP Rotator nozzles	0 45	15
A67         Native Grass         MP Rotator nozzles         0.45         17           A68         Shrub Bed         Drip         3           A69         Native Grass         MP Rotator nozzles         0.45         43           A70         Trees         Drip         1         1           A71         Native Grass         1-20 rotor w/ 2.5 nozzle 180d         0.45         20           A72         Native Grass         1-20 rotor w/ 2.5 nozzle 180d         0.45         20           A73         Native Grass         1-20 rotor w/ 2.5 nozzle 180d         0.45         10           A74         Native Grass         1-20 rotor w/ 2.5 nozzle 180d         0.45         10           A75         Native Grass         1-20 rotor w/ 3.0 nozzle 180d         0.45         48           A75         Native Grass         1-20 rotor w/ 3.0 nozzle 180d         0.46         48           A76         Native Grass         1-20 rotor w/ 3.0 nozzle 180d         0.46         48           A77         Native Grass         1-20 rotor w/ 3.0 nozzle 180d         0.23         24           A78         Trees         Drip         3         3         3           A80         Native Grass         1-20 rotor w/ 3.0 nozzle 180d </td <td>A65</td> <td>Shrub Bed</td> <td>Drip</td> <td></td> <td>2</td>	A65	Shrub Bed	Drip		2
A68         Strub Bed         Drip         3           A69         Native Grass         IMP Rotator nozzles         0.45         43           A70         Trees         Drip         1           A71         Native Grass         I-20 rotor w/ 2.5 nozzle 180d         0.45         20           A72         Native Grass         I-20 rotor w/ 2.5 nozzle 180d         0.22         5           A73         Native Grass         I-20 rotor w/ 2.5 nozzle 180d         0.45         10           A74         Native Grass         I-20 rotor w/ 2.5 nozzle 180d         0.45         32           A75         Native Grass         I-20 rotor w/ 3.0 nozzle 180d         0.46         48           A76         Native Grass         I-20 rotor w/ 3.0 nozzle 360d         0.23         24           A77         Trees         Drip         4         48           A77         Native Grass         I-20 rotor w/ 3.5 LA nozzle 180d         0.67         60           A80         Native Grass         I-20 rotor w/ 3.5 LA nozzle 180d         0.67         60           A81         Native Grass         I-20 rotor w/ 3.5 LA nozzle 180d         0.33         32           Trees         Drip         2         2         2	A66	Native Grass	MP Rotator nozzles	0 45	20
A69         Native Grass         MP Rotator nozzles         0.45         43           A70         Trees         Drip         1           A71         Native Grass         i-20 rotor w/ 2.5 nozzle 180d         0.45         20           A72         Native Grass         i-20 rotor w/ 2.5 nozzle 180d         0.45         20           A73         Native Grass         i-20 rotor w/ 2.5 nozzle 180d         0.45         10           A74         Native Grass         MP Rotator nozzles         0.45         32           A75         Native Grass         i-20 rotor w/ 3.0 nozzle 180d         0.46         48           A76         Native Grass         i-20 rotor w/ 3.0 nozzle 360d         0.23         24           A77         Trees         Drip         4         48           A77         Trees         Drip         4         48           A78         Trees         Drip         3         24           A79         Shrub Bed         Drip         3         3         32           A81         Native Grass         i-20 rotor w/ 3.5 i.A nozzle 360d         0.33         32           A82         Trees         Drip         2         2           A83         Sh	A67	Native Grass	MP Rotator nozzles	0.45	17
A70         Trees         Drip         1           A71         Native Grass         i-20 rotor w 2.5 nozde 180d         0.45         20           A72         Native Grass         i-20 rotor w 2.5 nozde 360d         0.22         5           A73         Native Grass         i-20 rotor w 2.5 nozde 180d         0.45         10           A74         Native Grass         MP Rotator nozdes         0.45         32           A75         Native Grass         i-20 rotor w 3.0 nozde 180d         0.46         48           A76         Native Grass         i-20 rotor w 3.0 nozde 360d         0.23         24           A77         Native Grass         i-20 rotor w 3.5 LA nozde 180d         0.46         48           A77         Native Grass         i-20 rotor w 3.5 LA nozde 180d         0.67         60           A81         Native Grass         i-20 rotor w 3.5 LA nozde 180d         0.67         60           A82         Trees         Drip         2         2           A83         Native Grass         i-20 rotor w 3.5 LA nozde 180d         0.67         60           A84         Native Grass         i-20 rotor w 3.5 LA nozde 180d         0.67         60           A85         Native Grass         i-20 rotor w 4	A68	Shrub Bed	Drip		3
A71         Native Grass         i-20 rotor w 2.5 nozzle 180d         0.45         20           A72         Native Grass         i-20 rotor w 2.5 nozzle 180d         0.22         5           A73         Native Grass         i-20 rotor w 2.5 nozzle 180d         0.45         10           A74         Native Grass         MP Rotator nozzles         0.45         32           A75         Native Grass         i-20 rotor w 3.0 nozzle 180d         0.46         48           A76         Native Grass         i-20 rotor w 3.0 nozzle 360d         0.23         24           A77         Trees         Drip         4         48           A78         Trees         Drip         4         48           A79         Shrub Bed         Drip         3         3         32           A80         Native Grass         i-20 rotor w/3.5 LA nozzle 180d         0.67         60           A81         Native Grass         i-20 rotor w/3.5 LA nozzle 180d         0.67         60           A82         Trees         Drip         2         2           A83         Native Grass         i-20 rotor w/3.5 LA nozzle 180d         0.67         60           A84         Native Grass         i-20 rotor w/4.0 nozzle 180d	A69	Native Grass	MP Rotator nozzles	0.45	43
A72         Native Grass         I-20 rotor w 2.5 nozzle 180d         0.22         5           A73         Native Grass         I-20 rotor w 2.5 nozzle 180d         0.45         10           A74         Native Grass         MP Rotator nozzles         0.45         32           A75         Native Grass         I-20 rotor w/ 3.0 nozzle 180d         0.46         48           A76         Native Grass         I-20 rotor w/ 3.0 nozzle 180d         0.46         48           A77         Native Grass         I-20 rotor w/ 3.0 nozzle 360d         0.23         24           A78         Trees         Drip         4           A79         Shrub Bed         Drip         3           A80         Native Grass         I-20 rotor w/ 3.5 LA nozzle 180d         0.67         60           A81         Native Grass         I-20 rotor w/ 3.5 LA nozzle 360d         0.33         32           A82         Trees         Drip         2         2           A83         Shrub Bed         Drip         2         2           A84         Native Grass         I-20 rotor w/ 4.0 nozzle 180d         0.56         32           A85         Native Grass         I-20 rotor w/ 4.0 nozzle 180d         0.56         36	A70	Trees	Drìp		1
A73         Native Grass         I-20 rotor w/ 2.5 nozzle 180d         0.45         10           A74         Native Grass         MP Rotator nozzles         0.45         32           A75         Native Grass         I-20 rotor w/ 3.0 nozzle 180d         0.46         48           A76         Native Grass         I-20 rotor w/ 3.0 nozzle 180d         0.46         48           A77         Native Grass         I-20 rotor w/ 3.0 nozzle 360d         0.23         24           A78         Trees         Drip         4           A79         Shrub Bed         Drip         3           A80         Native Grass         I-20 rotor w/ 3.5 LA nozzle 180d         0.67         60           A81         Native Grass         I-20 rotor w/ 3.5 LA nozzle 360d         0.33         32           A82         Trees         Drip         2           A83         Shrub Bed         Drip         2           A84         Native Grass         I-20 rotor w/ 4.0 nozzle 180d         0.56         32           A85         Native Grass         I-20 rotor w/ 4.0 nozzle 180d         0.56         32           A86         Native Grass         I-20 rotor w/ 4.0 nozzle 180d         0.56         36           A88	A71	Native Grass	I-20 rotor w/ 2.5 no zzle 180d	0 45	20
A74         Native Grass         MP Rotator nozzles         0.45         32           A75         Native Grass         MP Rotator nozzles         0.45         48           A76         Native Grass         1-20 rotor w/ 3.0 nozzle 180d         0.46         48           A77         Native Grass         1-20 rotor w/ 3.0 nozzle 360d         0.23         24           A78         Trees         Drip         4           A80         Native Grass         1-20 rotor w/ 3.5 LA nozzle 180d         0.67         60           A81         Native Grass         1-20 rotor w/ 3.5 LA nozzle 360d         0.33         32           A82         Trees         Drip         2           A83         Shrub Bed         Drip         2           A84         Native Grass         1-20 rotor w/ 3.5 LA nozzle 360d         0.33         32           A85         Shrub Bed         Drip         2         2           A84         Native Grass         1-20 rotor w/ 4.0 nozzle 180d         0.56         32           A85         Native Grass         1-20 rotor w/ 4.0 nozzle 180d         0.56         36           A86         Native Grass         1-20 rotor w/ 4.0 nozzle 180d         0.56         36           A87	A72	Native Grass	I-20 rotor w/ 2.5 nozzle 360d	0.22	5
A75         Native Grass         MP Rotator nozzles         0.45         48           A76         Native Grass         1-20 rotor w/ 3.0 no zzle 180d         0.46         48           A77         Native Grass         1-20 rotor w/ 3.0 no zzle 360d         0.23         24           A78         Trees         Drip         4           A79         Shrub Bed         Drip         3           A80         Native Grass         1-20 rotor w/ 3.5 LA nozzle 180d         0.67         60           A81         Native Grass         1-20 rotor w/ 3.5 LA nozzle 360d         0.33         32           A82         Trees         Drip         2           A83         Shrub Bed         Drip         2           A84         Native Grass         1-20 rotor w/ 3.5 LA nozzle 360d         0.33         32           A85         Shrub Bed         Drip         2         2           A84         Native Grass         1-20 rotor w/ 3.5 LA nozzle 360d         0.33         32           A85         Native Grass         1-20 rotor w/ 4.0 nozzle 180d         0.56         32           A86         Native Grass         1-20 rotor w/ 4.0 nozzle 180d         0.56         36           A88         Native Grass	A73	Native Grass	I-20 rotor w/ 2.5 nozzle 180d	0.45	10
A76         Native Grass         1-20 rotor w/ 3.0 nozzle 180d         0.46         48           A77         Native Grass         1-20 rotor w/ 3.0 nozzle 360d         0.23         24           A78         Trees         Drip         4           A79         Shrub Bed         Drip         3           A80         Native Grass         1-20 rotor w/ 3.5 LA nozzle 180d         0.67         60           A81         Native Grass         1-20 rotor w/ 3.5 LA nozzle 360d         0.33         32           A82         Trees         Drip         2           A83         Shrub Bed         Drip         2           A84         Native Grass         1-20 rotor w/ 4.0 nozzle 180d         0.56         32           A85         Native Grass         1-20 rotor w/ 4.0 nozzle 180d         0.56         32           A86         Native Grass         1-20 rotor w/ 4.0 nozzle 180d         0.56         36           A87         Native Grass         1-20 rotor w/ 4.0 nozzle 180d         0.56         36           A88         Native Grass         1-25 rotor w/ 4.0 nozzle 180d         0.56         36           A88         Native Grass         1-25 rotor w/ 4.0 nozzle 180d         0.56         36           A89	A74	Native Grass	MP Rotator nozzles	0.45	32
A77         Native Grass         1-20 rotor w/ 3.0 nozzle 360d         0.23         24           A78         Trees         Drip         4           A79         Shrub Bed         Drip         3           A80         Native Grass         1-20 rotor w/ 3.5 LA nozzle 180d         0.67         60           A81         Native Grass         1-20 rotor w/ 3.5 LA nozzle 360d         0.33         32           A82         Trees         Drip         2           A83         Shrub Bed         Drip         2           A84         Native Grass         Pop-up Head w/ Toro Precison nozz         1.00         14           A85         Native Grass         1-20 rotor w/ 4.0 nozzle 180d         0.56         32           A86         Native Grass         1-20 rotor w/ 4.0 nozzle 360d         0.28         16           A87         Native Grass         1-20 rotor w/ 4.0 nozzle 180d         0.56         36           A88         Native Grass         1-25 rotor w/ 13 nozzle 180d         0.89         55           A89         Native Grass         1-25 rotor w/ 13 nozzle 180d         0.44         33           A91         Trees         Drip         5           A92         Native Grass         1-20	A75	Native Grass	MP Rotator nozzles	0.45	48
A78         Trees         Drip         4           A79         Shrub Bed         Drip         3           A80         Native Grass         1-20 rotor w/ 3.5 LA nozzle 180d         0.67         60           A81         Native Grass         1-20 rotor w/ 3.5 LA nozzle 360d         0.33         32           A82         Trees         Drip         2           A83         Shrub Bed         Drip         2           A84         Native Grass         Pop-up Head w/ Toro Precison nozz         1.00         14           A85         Native Grass         1-20 rotor w/ 4.0 nozzle 180d         0.56         32           A86         Native Grass         1-20 rotor w/ 4.0 nozzle 180d         0.28         16           A87         Native Grass         1-20 rotor w/ 4.0 nozzle 180d         0.56         36           A88         Native Grass         1-25 rotor w/ 13 nozzle 180d         0.89         55           A89         Native Grass         1-25 rotor w/ 13 nozzle 180d         0.89         55           A90         Native Grass         1-25 rotor w/ 2.5 nozzle 180d         0.45         18           A91         Trees         Drip         5           A92         Native Grass         1-20	A76	Native Grass	I-20 rotor w/ 3.0 nozzle 180d	0.46	48
A79 Shrub Bed Drip 3 A80 Native Grass 1-20 rotor w/ 3 5LA nozzle 180d 0 67 60 A81 Native Grass 1-20 rotor w/ 3 5LA nozzle 360d 0 33 32 A82 Trees Drip 2 A83 Shrub Bed Drip 2 A84 Native Grass 1-20 rotor w/ 4 0 nozzle 180d 0 56 32 A85 Native Grass 1-20 rotor w/ 4 0 nozzle 180d 0 56 32 A86 Native Grass 1-20 rotor w/ 4 0 nozzle 180d 0 56 32 A87 Native Grass 1-20 rotor w/ 4 0 nozzle 180d 0 56 36 A88 Native Grass 1-20 rotor w/ 4 0 nozzle 180d 0 56 36 A88 Native Grass 1-25 rotor w/ 13 nozzle 180d 0 89 55 A89 Native Grass 1-25 rotor w/ 13 nozzle 180d 0 89 55 A90 Native Grass 1-25 rotor w/ 13 nozzle 180d 0 44 33 A91 Trees Drip 5 A92 Native Grass 1-20 rotor w/ 2 5 nozzle 180d 0 45 18 A93 Native Grass 1-20 rotor w/ 2 5 nozzle 180d 0 45 20 A94 Native Grass 1-20 rotor w/ 2 5 nozzle 180d 0 45 27 A95 Native Grass 1-20 rotor w/ 5 0 nozzle 180d 0 63 30	A77	Native Grass	I-20 rotor w/ 3.0 nozzle 360d	0.23	24
A80         Native Grass         I-20 rotor w/ 3.5LA nozzle 180d         0.67         60           A81         Native Grass         I-20 rotor w/ 3.5LA nozzle 360d         0.33         32           A82         Trees         Drip         2           A83         Shrub Bed         Drip         2           A84         Native Grass         Pop-up Head w/ Toro Precison nozz         1.00         1.4           A85         Native Grass         I-20 rotor w/ 4.0 nozzle 180d         0.56         32           A86         Native Grass         I-20 rotor w/ 4.0 nozzle 360d         0.28         16           A87         Native Grass         I-20 rotor w/ 4.0 nozzle 180d         0.56         36           A88         Native Grass         I-25 rotor w/ 13 nozzle 180d         0.89         55           A89         Native Grass         I-25 rotor w/ 13 nozzle 180d         0.49         33           A91         Trees         Drip         5           A92         Native Grass         I-20 rotor w/ 2.5 nozzle 180d         0.45         18           A93         Native Grass         I-20 rotor w/ 2.5 nozzle 180d         0.45         20           A94         Native Grass         I-20 rotor w/ 5.0 nozzle 180d         0.45	A78	Trees	Drip		4
A81         Native Grass         I-20 rotor w/ 3 5LA nozzle 360d         0 33         32           A82         Trees         Drip         2           A83         Shrub Bed         Drip         2           A84         Native Grass         Pop-up Head w/ Toro Precison nozz         1 00         14           A85         Native Grass         I-20 rotor w/ 4 0 nozzle 180d         0 56         32           A86         Native Grass         I-20 rotor w/ 4 0 nozzle 360d         0 28         16           A87         Native Grass         I-20 rotor w/ 4 0 nozzle 180d         0 56         36           A88         Native Grass         I-25 rotor w/ 13 nozzle 180d         0 89         55           A89         Native Grass         I-25 rotor w/ 13 nozzle 180d         0 89         55           A90         Native Grass         I-25 rotor w/ 13 nozzle 180d         0 .44         33           A91         Trees         Drip         5           A92         Native Grass         I-20 rotor w/ 2 5 nozzle 180d         0 .45         18           A93         Native Grass         I-20 rotor w/ 2 5 nozzle 180d         0 .45         20           A94         Native Grass         I-20 rotor w/ 5 0 nozzle 180d         0 .45	A79	Shrub Bed	Drip		3
A82         Trees         Drip         2           A83         Shrub Bed         Drip         2           A84         Native Grass         Pop-up Head w/ Toro Precison nozz         1 00         14           A85         Native Grass         1-20 rotor w/ 4 0 nozzle 180d         0 56         32           A86         Native Grass         1-20 rotor w/ 4 0 nozzle 360d         0 28         16           A87         Native Grass         1-20 rotor w/ 4 0 nozzle 180d         0 56         36           A88         Native Grass         1-25 rotor w/ 13 nozzle 180d         0 89         55           A89         Native Grass         1-25 rotor w/ 13 nozzle 180d         0 89         55           A90         Native Grass         1-25 rotor w/ 13 nozzle 360d         0 44         33           A91         Trees         Drip         5           A92         Native Grass         1-20 rotor w/ 2 5 nozzle 180d         0 45         18           A93         Native Grass         1-20 rotor w/ 2 5 nozzle 180d         0 45         20           A94         Native Grass         1-20 rotor w/ 5 0 nozzle 180d         0 45         27           A95         Native Grass         1-20 rotor w/ 5 0 nozzle 180d         0 63	A80	Native Grass	I-20 rotor w/ 3.5LA nozzle 180d	0.67	60
A83         Shrub Bed         Drip         2           A84         Native Grass         Pop-up Head w/ Toro Precison nozz         1 00         14           A85         Native Grass         I-20 rotor w/ 4 0 nozzle 180d         0 56         32           A86         Native Grass         I-20 rotor w/ 4 0 nozzle 360d         0 28         16           A87         Native Grass         I-20 rotor w/ 4 0 nozzle 180d         0 56         36           A88         Native Grass         I-25 rotor w/ 13 nozzle 180d         0 89         55           A89         Native Grass         I-25 rotor w/ 13 nozzle 180d         0 89         55           A90         Native Grass         I-25 rotor w/ 13 nozzle 360d         0 44         33           A91         Trees         Drip         5           A92         Native Grass         I-20 rotor w/ 2 5 nozzle 180d         0 45         18           A93         Native Grass         I-20 rotor w/ 2 5 nozzle 180d         0 45         20           A94         Native Grass         I-20 rotor w/ 5 0 nozzle 180d         0 45         27           A95         Native Grass         I-20 rotor w/ 5 0 nozzle 180d         0 63         30	A81	Native Grass	I-20 rotor w/3 5LA nozzle 360d	0 33	32
A84       Native Grass       Pop-up Head w/ Toro Precison nozz       1 00       14         A85       Native Grass       I-20 rotor w/ 4 0 nozzle 180d       0 56       32         A86       Native Grass       I-20 rotor w/ 4 0 nozzle 360d       0 28       16         A87       Native Grass       I-20 rotor w/ 4 0 nozzle 180d       0 56       36         A88       Native Grass       I-25 rotor w/ 13 nozzle 180d       0 89       55         A89       Native Grass       I-25 rotor w/ 13 nozzle 180d       0 89       55         A90       Native Grass       I-25 rotor w/ 13 nozzle 360d       0 44       33         A91       Trees       Drip       5         A92       Native Grass       I-20 rotor w/ 2 5 nozzle 180d       0 45       18         A93       Native Grass       I-20 rotor w/ 2 5 nozzle 180d       0 45       20         A94       Native Grass       I-20 rotor w/ 5 0 nozzle 180d       0 45       27         A95       Native Grass       I-20 rotor w/ 5 0 nozzle 180d       0 63       30	A82	Trees	Drip		2
A85         Native Grass         I-20 rotor w/ 4.0 nozzle 180d         0.56         32           A86         Native Grass         I-20 rotor w/ 4.0 nozzle 360d         0.28         16           A87         Native Grass         I-20 rotor w/ 4.0 nozzle 180d         0.56         36           A88         Native Grass         I-25 rotor w/ 13 nozzle 180d         0.89         55           A89         Native Grass         I-25 rotor w/ 13 nozzle 180d         0.89         55           A90         Native Grass         I-25 rotor w/ 13 nozzle 360d         0.44         33           A91         Trees         Drip         5           A92         Native Grass         I-20 rotor w/ 2.5 nozzle 180d         0.45         18           A93         Native Grass         I-20 rotor w/ 2.5 nozzle 180d         0.45         20           A94         Native Grass         I-20 rotor w/ 2.5 nozzle 180d         0.45         27           A95         Native Grass         I-20 rotor w/ 5.0 nozzle 180d         0.63         30	A83	Shrub Bed	Drip		2
A86         Native Grass         I-20 rotor w/ 4.0 nozzle 360d         0.28         16           A87         Native Grass         I-20 rotor w/ 4.0 nozzle 180d         0.56         36           A88         Native Grass         I-25 rotor w/ 13 nozzle 180d         0.89         55           A89         Native Grass         I-25 rotor w/ 13 nozzle 180d         0.89         55           A90         Native Grass         I-25 rotor w/ 13 nozzle 360d         0.44         33           A91         Trees         Drip         5           A92         Native Grass         I-20 rotor w/ 2.5 nozzle 180d         0.45         18           A93         Native Grass         I-20 rotor w/ 2.5 nozzle 180d         0.45         20           A94         Native Grass         I-20 rotor w/ 5.0 nozzle 180d         0.63         30	A84	Native Grass	Pop-up Head w/Toro Precison nozz	1.00	14
A87       Native Grass       I-20 rotor w/ 4.0 no zzle 180d       0.56       36         A88       Native Grass       I-25 rotor w/ 13 no zzle 180d       0.89       55         A89       Native Grass       I-25 rotor w/ 13 no zzle 180d       0.89       55         A90       Native Grass       I-25 rotor w/ 13 no zzle 360d       0.44       33         A91       Trees       Drip       5         A92       Native Grass       I-20 rotor w/ 2.5 no zzle 180d       0.45       18         A93       Native Grass       I-20 rotor w/ 2.5 no zzle 180d       0.45       20         A94       Native Grass       MP Rotator nozzles       0.45       27         A95       Native Grass       I-20 rotor w/ 5.0 no zzle 180d       0.63       30	A85	Native Grass	I-20 rotor w/ 4.0 nozzłe 180d	0.56	32
A88         Native Grass         I-25 rotor w/ 13 nozzle 180d         0.89         55           A89         Native Grass         I-25 rotor w/ 13 nozzle 180d         0.89         55           A90         Native Grass         I-25 rotor w/ 13 nozzle 360d         0.44         33           A91         Trees         Drip         5           A92         Native Grass         I-20 rotor w/ 2.5 nozzle 180d         0.45         18           A93         Native Grass         I-20 rotor w/ 2.5 nozzle 180d         0.45         20           A94         Native Grass         MP Rotator nozzles         0.45         27           A95         Native Grass         I-20 rotor w/ 5.0 nozzle 180d         0.63         30	A86	Native Grass	I-20 rotor w/ 4.0 nozzle 360d	0.28	16
A89       Native Grass       I-25 rotor w/ 13 nozzle 180d       0.89       55         A90       Native Grass       I-25 rotor w/ 13 nozzle 360d       0.44       33         A91       Trees       Drip       5         A92       Native Grass       I-20 rotor w/ 2.5 nozzle 180d       0.45       18         A93       Native Grass       I-20 rotor w/ 2.5 nozzle 180d       0.45       20         A94       Native Grass       MP Rotator nozzles       0.45       27         A95       Native Grass       I-20 rotor w/ 5.0 nozzle 180d       0.63       30	A87	Native Grass	I-20 rotor w/ 4.0 nozzle 180d	0.56	36
A90         Native Grass         I-25 rotor w/ 13 nozzle 360d         0.44         33           A91         Trees         Drip         5           A92         Native Grass         I-20 rotor w/ 2.5 nozzle 180d         0.45         18           A93         Native Grass         I-20 rotor w/ 2.5 nozzle 180d         0.45         20           A94         Native Grass         MP Rotator nozzles         0.45         27           A95         Native Grass         I-20 rotor w/ 5.0 nozzle 180d         0.63         30	88A	Native Grass	I-25 rotor w/ 13 no zzle 190d	0 89	55
A91         Trees         Drip         5           A92         Native Grass         1-20 rotor w/ 2.5 no zzle 180d         0.45         18           A93         Native Grass         1-20 rotor w/ 2.5 no zzle 180d         0.45         20           A94         Native Grass         MP Rotator no zzles         0.45         27           A95         Native Grass         1-20 rotor w/ 5.0 no zzle 180d         0.63         30	A89	Native Grass	I-25 rotor w/ 13 nozzle 180d	0.89	55
A92       Native Grass       I-20 rotor w/ 2.5 nozzle 180d       0.45       18         A93       Native Grass       I-20 rotor w/ 2.5 nozzle 180d       0.45       20         A94       Native Grass       MP Rotator nozzles       0.45       27         A95       Native Grass       I-20 rotor w/ 5.0 nozzle 180d       0.63       30	A90	Native Grass	1-25 rotor w/ 13 nozzle 360d	0.44	33
A93         Native Grass         1-20 rotor w/ 2.5 nozzle 180d         0.45         20           A94         Native Grass         MP Rotator nozzles         0.45         27           A95         Native Grass         1-20 rotor w/ 5.0 nozzle 180d         0.63         30	A91	Trees	Drip		5
A94         Native Grass         MP Rotator nozzles         0.45         27           A95         Native Grass         I-20 rotor w: 5.0 no zzle 180d         0.63         30	A92	Native Grass	l-20 rotor w/ 2 5 nozzle 180d	0.45	18
A95 Native Grass I-20 rotor w: 5.0 no zzle 180d 0.63 30	A93	Native Grass	1-20 rotor w/ 2.5 nozzle 180d	0.45	20
	A94	Native Grass	MP Rotator nozzles	0.45	. 27
A96   Native Grass   1-20 rotor w/ 5 0 no zzle 180d   0.32   15	A95	Native Grass	I-20 rotor w/ 5.0 no zzle 180d	0.63	30
	A96	Native Grass	I-20 rotor w/ 5 0 nozzte 180d	0.32	15

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Colorado	Department of Transportation
CO	1480 Quail Lake Loop, Suite A Colorado Springs, CO 80906 Phone: 719-634-2323 FAX: 719-227-3298

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No Revisions:	IRRIGATION	CONTROLLER CHART	IM 0252-423
As Constructed	I-25/CIMARRON	Project No./Code	

## CONTROLLER "B"

ZONE NO.	PLANT TYPE	IRRIGATION DE SCRIPTION	APPROX. PRECIP. RATE (IN /HR.)	APPROXIMATE FLOW RAT (GPM)
B1	Native Grass	MP Rotator nozzles	0.45	12
B2	Native Grass	I-20 rotor w/ 3.0 nozzle 180d	0.46	24
<b>B</b> 3	Native Grass	1-20 rotor w/ 3.0 no zzle 360d	0 23	: :
84	Native Grass	I-20 rotor w/ 3.0 nozzle 180d	0.46	27
85	Trees	Drip		2
86	Shrub Bed	Drip		4
B7	Native Grass	MP Rotator no zzles	0 45	16
88	Native Grass	I-20 rotor w/ 3.0 no zzłe 180d	0.46	24
B9	Native Grass	1-20 rotor w/ 6 0 nozzłe 360d	0.36	33
B10	Native Grass	I-20 rotor w/ 4.0 no zzłe 360d	0.56	16
B11	Native Grass	I-20 rotor w/ 4 0 no zzłe 180d	0.56	36
B12	  Native Grass	1-20 rotor w/ 4.0 no zzle 180d	0.56	36
B13	Native Grass	MP Rotator nozzles	0.45	22
B14	Trees	Drip		1
a constantinate to	Native Grass	MP Rotator nozzies	0.45	23
B16	Native Grass	i-25 rotor w/ 13 no zzle 180d	0.89	33
B17	Native Grass	i-25 rotor w/ 13 no zzle 180d	0.89	45
B18	Native Grass	I-25 rotor w/ 13 no zale 180 d	0.89	46
819	Native Grass	I-25 rotor w/ 13 nozzle 180d	0.89	56
B20	Native Grass	I-25 rotor w/ 13 nozzle 180d	0.89	22
B21	Native Grass	I-25 rotor w/ 10 no zzle 180d	0.86	70
B22	Native Grass	I-25 rotor w/ 10 nozzłe 360d	0 43	60
B23	Native Grass	I-25 rotor w/ 10 nozzle 180d	0.86	60
B24	Native Grass	1-25 rotor w/ 10 no zzle 360d	0.43	50
B25	Native Grass	1-25 rotor w/ 10 nozzle 360d	0.43	40
B26	Trees	Drip		1
B27	Shrub Bed	Drip		3
B28	Shrub Bed	Drip		3
B29	Native Grass	I-25 rotor w/ 10 no zzle 180d	0.86	60
B30	Shrub Bed	Drip		2
B31	Shrub Bed	Drip		4
B32	Shrub Bed	Drip		1
B33	Native Grass	MP Rotator nozzles	0.45	40
B34	Shrub Bed	Drip		6
B35	Shrub Bed	Drip		4
B36	Native Grass	MP Rotator nozzles	0.45	38
B37	Native Grass	I-20 rotor w/ 8.0 nozzle 180d	0.92	48
B38	Native Grass	I-20 rotor w/ 8.0 nozzle 360d	0.46	32
B39	Native Grass	(-20 rotor w/ 8.0 nozzle 180d	0.92	48
B40	Native Grass	MP Rotator no zzles	0.45	17
B41	Native Grass	MP Rotator nozzles	0.45	46
B42	Trees	Drip	0.40	1
B43	Shrub Bed	Drip		4
				·
B44	Shrub Bed Native Grass	Drip MP Potator pozzles	0.45	6
B45		MP Rotator nozzies		17
B46	Native Grass	MP Rotator nozzles	0.45	33
B47	Native Grass	I-25 rotor w/7 nozzle 180d	0.70	49
B48	Native Grass	I-25 rotor w/7 nozzle 360d	0.35	14
B49	Native Grass	I-25 rotor w/7 nozzle 180d	0.70	49
850	Native Grass	MP Rotator nozzles	0 45	13
B51	Trees	Drip		2

## CONTROLLER "C"

ZONE NO.	PLANT TYPE	JRRIGATION DESCRIPTION	APPROX. PRECIP. RATE (IH./HR.)	APPROXIMATE FLOW RAT (GPM)
C1	Native Grass	MP Rotator nozzles	0 45	- 10
C2	Native Grass	MP Rotator nozzies	0 46	9
C3	Native Grass	I-20 rotor w <sup>2</sup> 3 0 nozzle 180d	0.46	12
C4	Native Grass	1-20 rotor w/ 3.0 nozzle 180d	0.46	12
C5	Native Grass	I-20 rotor w/ 3.0 nozzle 360d	0.23	, ,
C6	Native Grass	I-20 rotor w/ 3 0 nozzie 360d	0.23	. 12
C7	Native Grass	I-20 rotor w/3 0 nozzle 180d	0.46	12
C8	Native Grass	MP Rotator nozzies	0 45	12
C9	Native Grass	MP Rotator nozzies	0.45	1:
C10	Native Grass	MF Rotator nozzies	0.45	1
G11	Native Grass	MP Rotator nozzles	0.45	1:
C 12	Native Grass	MP Rotator nozzies	0.45	16
C 13	Trees	Drip	C DESCRIPTION OF THE PARTY OF T	
C14	Trees	Drip	TO A COMMISSION OF THE COMMISS	
C15	Shrub Bed	Orip	D. C.	1



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Sheet Revisions

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Colorado Department of Transportation

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No Revisions:	IRRIGATION C	CONTROLLER CHARTS	IM 0252-423
As Constructed	I-25/CIMARRON S	Project No./Code	

#### **EXHIBIT B – LOCAL AGENCY RESOLUTION**

## **Colorado Springs Code Regulations**

Below is a link to the City code which contains the information you requested. <a href="http://www.sterlingcodifiers.com/codebook/index.php?book">http://www.sterlingcodifiers.com/codebook/index.php?book</a> id=855&chapter id=62560#s740 223

## 1.2.313: CONTRACTS: © ==

- A. The Mayor shall have the power and duty to approve and execute, by signature, all contracts of, or on behalf of, the City, subject only to approval as to form by the City Attorney's Office in accord with section 1.2.404 of this article.
- B. It shall be the Mayor's duty to ensure that all City contracts are procured in compliance with the requirements of this Code and any related rules and regulations approved by City Council.
- C. The Mayor shall see that the terms and conditions imposed in favor of the City, and in the best interests of the citizens, in any contract or agreements be faithfully kept and fully performed. Upon knowledge of any violation of a contract or agreement, the Mayor shall make a report to the City Attorney.
- D. The Mayor may delegate, by administrative regulation, the Mayor's signatory authority for the approval and execution of contracts to the Mayoral appointees where the contractual matters fall within their area of responsibility. With the Mayor's prior approval, the Mayoral appointees may further delegate signatory authority for those purposes authorized by the Mayor.
- E. No City contract shall be approved or executed under this section unless and until sufficient funds have been appropriated by the City Council and are available for the contract. (Ord. 11-18)