SECTION H: LANDSCAPE

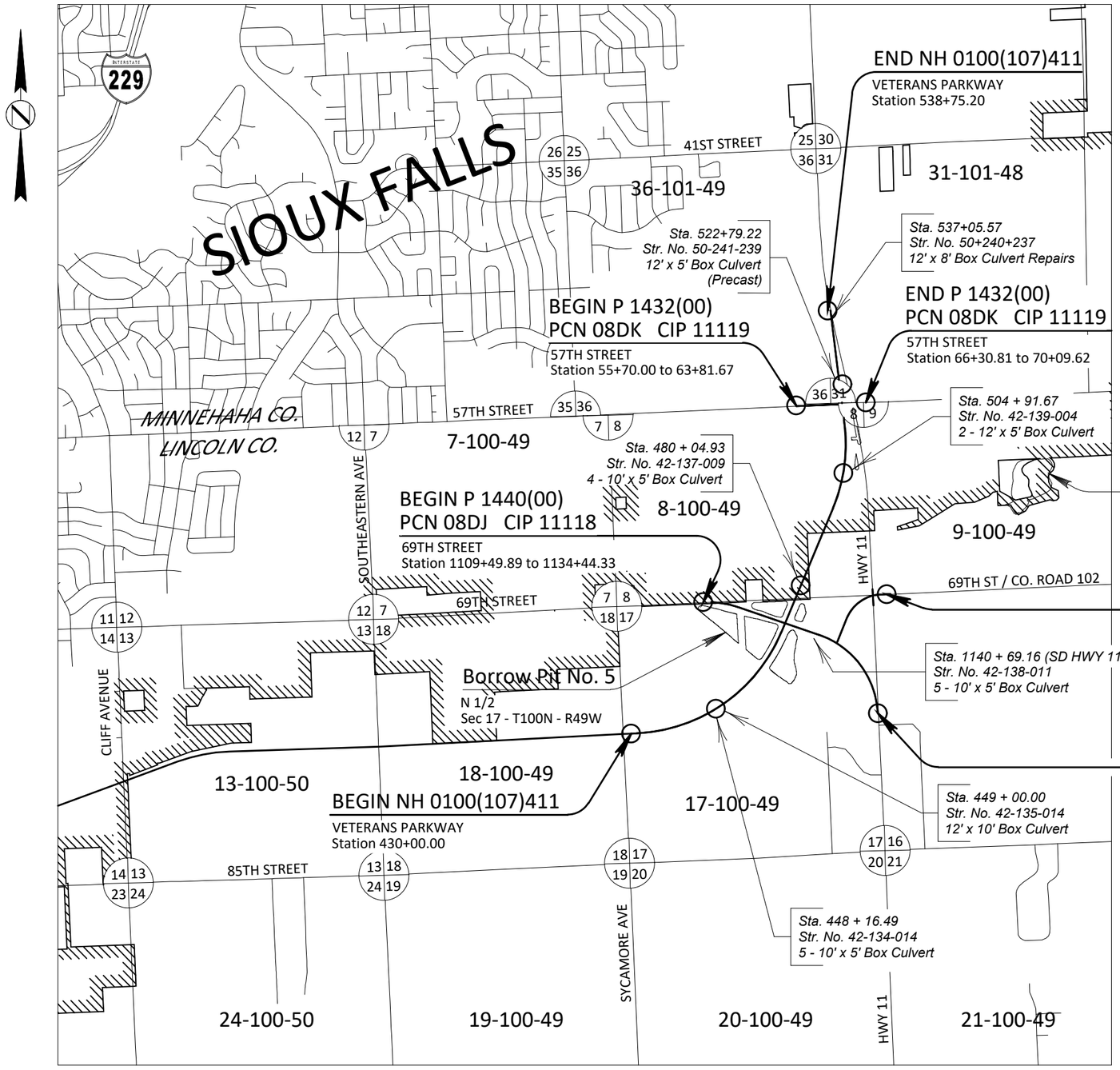
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H1	H39

FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

INDEX OF SHEETS



Borrow Pit No. 8
(Jamison)
SE 1/4
Sec 9 - T100N - R49W

NH 0100(107)411
PCN 01VA
69TH STREET / CO. ROAD 102
Station 901+00.95 to 916+22.57

NH 0100(107)411
PCN 01VA
SD HWY 11
Station 1136+69.40 to
1169+47.00

REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
8-29-25

CONFLUENCE HDR

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H2	H39

FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025
REV DATE: 10/31/2025
INITIAL: ETE

FOR BIDDING PURPOSES ONLY

SECTION H ESTIMATE OF QUANTITIES
(ALL ITEMS NON-PARTICIPATING)

Bid Item Number	Item	Quantity				Unit
		PCN 01VA Veterans Parkway	PCN 08DJ E 69TH Street	PCN 08DK E 57TH Street	Total	
120E6300	Water for Vegetation	1,868.0	-	-	1,868.0	MGal
230E0020	Contractor Furnished Topsoil	15,612	768	288	16,668	CuYd
730E0251	Special Permanent Seed Mixture 1	1,848	80	70	1,998	Lb
731E0100	Fertilizing	6,358	273	235	6,866	Lb
732E0200	Fiber Mulching	4.4	0.2	0.2	4.8	Ton
735E0110	1 Gallon Perennial Plant, Furnish and Plant	2,132	-	253	2,385	Each
735E2225	2.5" Caliper Deciduous Tree, Furnish and Plant	-	15	-	15	Each
735E5010	1 Gallon Ornamental Grass, Furnish and Plant	2,543	180	169	2,892	Each
900E5150	Landscape Edging	2,492	38	38	2,568	Ft
900E5151	Ornamental Landscaping Boulders	-	-	11	11	Each
900E5152	Weed Barrier Fabric	1,312	-	175	1,487	SqYd
900E5157	4" Depth Shredded Bark Mulch	1,717.0	181.0	175.0	2,073.0	SqYd
900E5430	Irrigation System	-	Lump Sum	Lump Sum	Lump Sum	LS

SCOPE OF WORK
This work includes the installation of Contractor furnished and installed landscape plants and trees in fabric covered and mulched plant beds, installation of Contractor furnished topsoil, seed. Installation of concrete landscape edging and placing ornamental landscape boulders, excavation, backfill and irrigation system installation in medians along Veterans Parkway, E 57th Street and E 69th Street.

TOPSOIL (MEDIANS)
Refer to Section D for topsoil quantities in medians between Stations 1140+00 and 1164+00.

Contractor Furnished Topsoil: Topsoil placed in median will be screened and pulverized and meet the requirements of the following table:

TOPSOIL REQUIREMENTS

	Minimum	Maximum
Material Passing #10 Sieve	95%	-
Clay	5%	50%
Silt	10%	70%
Sand and Gravel	10%	60%
Organic Matter (as determined by weight)	4%	15%
pH (ASTM D 5268)	6.0	8.0

The topsoil provided will be smooth, uniform, and free of stones 1 inch or larger in any dimension, roots and other extraneous or undesirable material harmful to plant growth. The Contractor to provide test results a minimum of 1 month prior to installation. Allow time for alternative source and testing if initial source does not meet requirements. Texture will be determined by the method described in the AASHTO T 88.

PLANT SCHEDULE – PCN 01VA VETERANS PARKWAY

Key	Qty	Plant Type	Size	Spacing
		Perennials/ Grasses		
CA	2,132	Calamagrostis x acutiflora 'Karl Foerster' Karl Foerster Feather Reed Grass	#1 CONT.	20 inches
EA	411	Elymus arenarius 'Blue Dune' Blue Dune Lyme Grass	#1 CONT.	36 inches
HR	2,132	Hemerocallis 'Rocket City' Rocket City Daylily	#1 CONT.	20 inches

PLANT SCHEDULE – PCN 08DJ E 69TH STREET

Key	Qty	Plant Type	Size	Spacing
		Deciduous Tree		
GD	7	Gymnocladus diocus 'Espresso' Espresso Kentucky Coffeetree	2.5" CAL B&B	
UJ	2	Ulmus japonica x pumila 'New Horizon' New Horizon Elm	2.5" CAL B&B	
UP	6	Ulmus americana 'Princeton' Princeton Elm	2.5" CAL B&B	
		Perennials/ Grasses		
EA	180	Elymus arenarius 'Blue Dune' Blue Dune Lyme Grass	#1 CONT.	36 inches

PLANT SCHEDULE – PCN 08DK E 57TH STREET

Key	Qty	Plant Type	Size	Spacing
		Perennials/ Grasses		
CA	169	Calamagrostis x acutiflora 'Karl Foerster' Karl Foerster Feather Reed Grass	#1 CONT.	20 inches
HR	145	Hemerocallis 'Rocket City' Rocket City Daylily	#1 CONT.	20 inches
NP	108	Nepeta x faassenii 'Purrsian Blue' PP23,788 Purrsian Blue Catmint	#1 CONT.	20 inches

GENERAL PLANTING
Verify all plant locations on site with Landscape Architect prior to installation.

All substitutions to be approved by Engineer through correspondence with the Landscape Architect prior to bidding.

CITY OF SIOUX FALLS PARKS & RECREATION
Landscape Architect and City of Sioux Falls Parks and Recreation will be contacted a minimum of 48 hours advance notice for the following progress inspections prior to continuing with work.

1. Topsoil and preliminary grading inspection prior to planting.
2. Water meter and backflow inspection.
3. Initial Tree Planting, (5 Trees).
4. Final tree planting, grading and irrigation inspection prior to sodding.

City of Sioux Falls Parks & Recreation Contacts:
Tim Hall - 605-201-4801 or Josh Johnson - 605-261-2775

LANDSCAPE ARCHITECT
Contact Confluence with a minimum of 48 hours advance notice where notes indicate field verification or approval by Landscape Architect. 605-339-1205

QUALITY ASSURANCE
Installer will be required to maintain an experienced full-time Supervisor with at least three years of experience on project site when work is in progress. Payment will be incidental to the contract unit price for the applicable Section H Bid Item.

MYCORRHIZAL INOCULUM
Mycorrhizal inoculum will consist of mycorrhizal fungi spores and mycorrhizal fungi-infected root fragments in a solid carrier. The carrier may include organic materials, calcinated clay, or other materials consistent with application and good plant growth. The supplier will provide certification of the fungal species claimed and the live propagule count. The inoculum will include the following fungal species:

25% *Glomus intraradices*
25% *Glomus aggregatum or deserticola*
25% *Glomus mosseae*
25% *Glomus etunicatum*

FERTILIZING (MEDIANS)
The Contractor will apply an all-natural slow-release fertilizer prior to seeding or placing sod. The all-natural fertilizer will have a minimum guaranteed analysis of 4-4-4 and be USDA Certified BioBased. It should provide a minimum of 4% (N) nitrogen with a minimum water insoluble nitrogen (WIN) fraction of 2.07%, a minimum of 4% (P2O5) available phosphate, a minimum of 4% (K2O) soluble potash, and a maximum carbon to nitrogen ratio (C:N ratio) of 5:1. The all-natural fertilizer will be free of weed-seed and pathogens accomplished through thermophilic composting, and not mechanical or chemical sterilization, to assure presence of beneficial soil microbiology. The fertilizer will have a near neutral pH, a low salt index, a low biological oxygen demand, contain organic humic and fulvic acids, and have high aerobic organism counts. The fertilizer will also be stable, free of bad odors, and be unattractive as a food source for animals. It should also be in a granular form that is easily spread.

The fertilizer will be applied at a rate of 1,500 pounds per acre in accordance with the manufacturer's recommended method of application.

REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
12-22-25

CONFLUENCE HDR

FERTILIZING (MEDIANS) - CONTINUED
The all-natural slow-release fertilizer will be as shown below or an approved equal:

Product	Manufacturer
Sustane	Sustane Corporate Headquarters Cannon Falls, Minnesota Phone: 1-800-352-9245 www.sustane.com
Perfect Blend	Perfect Blend, LLC Bellevue, WA Phone: 1-866-456-8890 www.perfect-blend.com
Nature Safe	Nature Safe Fertilizers Irving, TX Phone: 1-605-759-5622 www.naturesafe.com

SEEDING (MEDIANS)
Refer to notes in Section D for areas not identified in Section H Plans.

When to Plant:
Spring: April – June 15
Fall: August – Early September
Dormant: November – Freeze Up

Special Permanent Seed Mixture 1 (Medians) will consist of the following:

Scientific Name	Variety	Pure Live Seed (PLS) (Pounds/1000SF)
Turf Type Tall Fescue	Minimum of 3 varieties	10
	Total:	10

SEEDBED PREPARATION (MEDIANS)
The initial preparation of the newly graded area for seeding must consist of removing existing grass, vegetation and turf. Do not mix into topsoil. Loosen soil to a depth of at least 6 inches. Remove stones larger than 1" in any dimension, sticks, roots, trash and other extraneous matter. Grade the planting areas to a smooth, uniform surface that is loose and uniformly fine textured. Grade to within +/- 0.5" of the finish elevation. Roll and rake, remove ridges, pulverize soil clods to less than 1" and fill depressions to meet finish grades. The Contractor will need prior authorization from the Engineer to commence seeding. Seedbed preparation will be incidental to the "Special Permanent Seed Mixture 1" bid item.

WEED CONTROL DURING CONSTRUCTION (MEDIANS)
Refer to Section B for general weed control notes and specifications.

Do not inoculate areas seeded with Special Permanent Seed Mixture 1 as identified on the Section H Plans.

If the Contractor chooses to inoculate weeds, the inoculation must be performed in accordance with the manufacturer's recommendations and all applicable federal, state, and local laws and ordinances. The Contractor is responsible for keeping all required chemical application records, and must provide them to the Engineer upon request. The inoculation product must be approved by the Engineer prior to application.

WEED CONTROL FOR FINAL RESTORATION (MEDIANS)
Refer to Section B for general weed control notes and specifications.

Do not inoculate areas seeded with Special Permanent Seed Mixture 1 identified on the Section H Plans. If areas are dormant seeded, this requirement will remain in effect until the following spring.

If the Contractor chooses to inoculate weeds, the inoculation must be performed in accordance with the manufacturer's recommendations and all applicable federal, state, and local laws and ordinances. The Contractor is responsible for keeping all required chemical application records, and must provide them to the Engineer upon request. The inoculation product must be approved by the Engineer prior to application.

FIBER MULCHING (MEDIANS)
Fiber mulch will be applied in a separate operation following permanent seeding.

An additional 2% by weight of tackifier will be added to the fiber mulch product selected from the approved product list. If the product selected has guar gum tackifier included, then the additional 2% of tackifier will be guar gum. If the product selected has synthetic tackifier included, then the additional 2% of tackifier will be synthetic.

Fiber mulch will be applied at the rate of 2000 pounds per acre.

The Contractor will allow the fiber mulch to cure a minimum of 18 hours prior to watering or any storm event to ensure proper cohesion between the soil and fiber particles.
All costs for the additional tackifier added to the fiber mulch including labor, equipment, and materials will be incidental to the contract unit price per pound or ton for "Fiber Mulching".

The fiber mulch provided will be from the approved product list. The approved product list for fiber mulch may be viewed at the following internet site:

http://apps.sd.gov/HC60ApprovedProducts/main.aspx

PLANTS, TREES AND SHRUBS
General Notes: All plants, trees, and shrubs will conform to or exceed minimum quality standards as defined by the American Nursery and Landscape Association, current edition of American Standard for Nursery Stock, and will be purchased from a Landscape Nursery. Plants, trees, and shrubs furnished will be of the same genus, species, cultivar, and size as specified in the plans. Species and variety may be substituted only by the approval of the Engineer. Each plant, tree, and shrub will have an identification label.

All plants, trees, and shrubs will bear the same relationship to the finished grade as the plant's original grade before digging. All plants, trees, and shrubs will be planted in accordance with all the drawings and specifications included in the plans.

Planting locations for each individual species will be identified prior to planting. Location will be approved by the Engineer prior to installation.

Hand dig tree planting pits when in close proximity to existing utilities.

All plants, trees, and shrubs will be fertilized.

Within 2 hours after being planted, plants, trees, and shrubs will be watered to thoroughly saturate the backfill soil as this provides settlement and filling of voids in the backfill.

As soon as the initial planting is completed, the Engineer will visually inspect plants, trees, and shrubs for health, vigor, and condition, and will at that time accept or reject them.

The Contractor will provide a one year warranty for all plants, trees, and shrubs. After one year from initial planting, the Engineer will make an inspection and dead, unhealthy, or otherwise not acceptable plants, trees, and shrubs will be replaced by the Contractor at no additional cost to the Project.

All costs for furnishing, handling, storing, fertilizing, and planting the plants, trees, and shrubs including the materials, equipment, labor, preparation of the ground, initial watering if irrigation system is not in place, clean up of the planted areas, and the warranty, will be incidental to the contract unit price per each for the corresponding "Plant, Tree, and Shrub, Furnish and Plant" contract item.

The City of Sioux Falls Parks Department will monitor the trees during the warranty period. If a tree meets the criteria below, the Park Forestry Supervisor will advise the Engineer of the need to meet on site to confirm that the tree is dead. A picture of the dead tree will then be taken, and the tree will be removed by the City of Sioux Falls Forestry Crew. The Engineer will follow up with the Contractor to have the tree replaced at no additional cost to the Project.

Criteria for identifying a dead tree:

- Leaves are brown during the summer.
- Tree loses its leaves during the summer.
- Buds are dry and brittle.
- Brittle branches that break when bent.
- The surface beneath the bark of the tree is brown. To check, take a pocket knife and scrape the surface just below the bark. If the surface beneath the bark is green, then the tree is not dead.

Staking of trees will be required for all trees planted on the project. Stacks will be placed in line with the median direction for mowing. Staking of trees will be incidental to the contract unit price per each tree. No hose and wire will be used for staking.

All costs for furnishing, handling, storing, fertilizing, and planting the plants, trees, and shrubs including the materials, equipment, labor, preparation of the ground, initial watering if irrigation system is not in place, clean up of the planted areas, and the warranty, will be incidental to the contract unit price per each for the corresponding "Plant, Tree, and Shrub, Furnish and Plant" contract item.

REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
8-29-25

CONFLUENCE HDR

PLANTS, TREES AND SHRUBS - CONTINUED

Plant and Plant Area Maintenance: The Contractor is responsible for maintaining all plants and plant beds for a period of 45 days after installation, per the following:

1) The Contractor is responsible for controlling weeds and mowing all newly seeded and landscaping areas until a uniform perennial vegetative cover with a density of 70% of the native cover for unpaved areas and areas not covered by permanent structures has been established. The Contractor will also spray and remove any weeds that are present prior to seeding and installing the landscaping areas. If areas are seeded in late fall, this requirement will remain in effect the following spring.

2) Mow turf as soon as top growth is tall enough to cut and continue throughout the 45 day maintenance period. Repeat mowing to maintain height appropriate for species without cutting more than 1/3 of grass height. Remove no more than 1/3 of grass-leaf growth in initial or subsequent mowings. Document and notify the Sioux Falls Parks Department and Engineer in writing upon completion.

3) Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, mulching, resetting to proper grades or vertical position and performing other operations as required to establish healthy, viable plantings. Spray or treat as required to keep trees and plants free of insects and disease.

4) Fill settled areas with planting soil as necessary. Remove and replace landscape and mulch materials damaged or lost in areas.

5) Protect plants from damage due to landscape operations and operations of other Contractors and trades. Maintain protection during installation and maintenance periods. Treat, repair or replace damaged planting.

6) All costs, labor and materials for the aforementioned plant and plant area maintenance work will be incidental to the landscaping bid items.

7) When maintenance period has not elapsed before the end of the growing season, or if turf is not fully established, continue maintenance during next growing season.

8) Notify the City of Sioux Falls Parks Department and Engineer in writing upon termination of required maintenance services. **The Contractor will continue maintenance services until written notification is provided.**

Mulch Rings and Tree Watering Bags: Trees located in lawn areas will receive a shredded cedar mulch ring with a minimum diameter of 4 feet and a minimum thickness of 4 inches placed around each individual tree.

A 20 gallon Tree Watering Bag will be provided and installed with each tree installed. Watering Bags will be a Treegator Slow Release Watering Bag, www.treegator.com, or approved equal. Each tree bag will be refilled at least once per week during the maintenance period.

All costs for furnishing, handling, and placing the mulch rings and watering bags including the materials, equipment, labor and incidentals necessary will be incidental to the contract unit price per each for tree bid items. Watering will be paid under the “Water for Vegetation” bid item.

WATER FOR VEGETATION (MEDIANS)

Plants, Trees and Shrubs: The Contractor is required to provide adequate water for all newly non-irrigated planted landscape material for a period of 45 days after installation.

Included in the estimate of quantities is 636 MGAL’s of water for vegetation for the landscape material. This quantity was calculated based on 20 gallons of water per week per non-irrigated tree, plus 18 total gallons for each non-irrigated plant and shrub. See Irrigation Plan for irrigation extents. More or less water for vegetation may be required to ensure adequate growth of the landscape material at the end of the 45 day maintenance period.

An inspection will be performed at the end of the 45 day maintenance period to ensure the landscape material is alive and growing. Maintenance and replacement will be at the expense of the Contractor. Replaced landscape material will be watered as required for original plantings at the expense of the Contractor.

Seed: The Contractor is required to provide adequate water for all newly non-irrigated seeded areas for a period of 45 days after installation, and until a uniform, perennial vegetative cover with a density of 70% of the native grasses has been established.

The Contractor will be required to maintain the soil and mulch in a moist condition to a depth of at least 1 inch below the surface to ensure proper growth of the seed. The water application rate should allow the water to soak into the ground without runoff. The Contractor will use a fine spray and low pressure to avoid erosion and runoff. Multiple passes may be needed. The Contractor will be responsible to repair any areas of erosion or bare spots at no additional cost to the City.

The Contractor will be required to program and adjust the irrigation system as required to maintain a moist condition throughout the seeded areas and well into the underlying soil bed to ensure proper root growth. The water application rate should allow the water to soak into the ground without runoff. The city will provide water applied through the irrigation system.

An inspection will be performed at the end of the 45 day maintenance period to ensure the seed is alive and growing. Maintenance and replacement will be at the expense of the Contractor. Replaced seed will be watered as required for the original seed at the expense of the Contractor.

Included in the estimate of quantities is 1,232 MGAL’s of water for vegetation for the seeded areas. This quantity was calculated based on 60 gallons of water per square yard of seeded area, which assumes the Contractor will apply 0.5” of water over the seeded areas 3-4 times per week. This quantity is for estimating purposes only. More or less water for vegetation may be required to ensure adequate grass growth within the seeded areas at the end of the 45 day maintenance period.

If the Contractor fails to provide adequate water for the newly seeded areas, the Contractor will be required to reseed and maintain the area for an additional 45 days at no additional expense to the City. No payment will be made for reseeding, watering, or other associated costs during the additional 45 day maintenance period.

WATER SCHEDULE – PCN 01VA VETERANS PARKWAY

Station Start	Station End	MGAL
Plants, Trees and Shrubs		
433+00	549+00	636.0
Seed		
433+00	549+00	1,190.0

WATER SCHEDULE – PCN 01VA SD HIGHWAY 11

Refer to Section D for water for vegetation quantities for all medians located between stations 1136+00 and 1168+00.

WATER SCHEDULE – PCN 08DK E 57TH STREET

All plants, trees, shrubs, and seeding within the medians will be watered using the installed irrigation system.

WATER SCHEDULE – PCN 08DJ E 69TH STREET

All plants, trees, shrubs, and seeding within the medians will be watered using the installed irrigation system.

WEED BARRIER FABRIC/LANDSCAPE FABRIC

Weed barrier fabric will be placed at the areas specified in the plans.

Weed barrier fabric will be anchored to the ground with 6” U shaped staples. The staples will be placed at a 4’-0” spacing along all edges, overlaps, and throughout the area of weed barrier fabric. The weed barrier fabric will be overlapped 4” between rolls.
Weed barrier fabric will be measured to the nearest square yard. Measurement of the overlaps will not be made.

The weed barrier fabric will be provided from the list below or an approved alternate:

Weed Barrier Fabric/Landscape Fabric

Product	Manufacturer
SRW Pro Plus V	SRW Products 1-800-752-9326 | www.srwproducts.com
Pro 5	DeWitt Company Inc. 1-800-888-9669 | www.dewittcompany.com
Stronghold Woven Black Needle Punch 5.0 Oz	Cherokee Manufacturing 1-800-798-9473 | www.cherokeemfg.com

SHREDDED BARK MULCH – PLANT BEDS

Mulch will be placed in all plant beds to a depth of 4"after plants are planted. Mulch used will be Gorilla Hair Mulch, undyed, and composed of redwood or cedar bark shredded to create a stringy fibrous mulch. Mulch to be uniformly graded, remove all chunks larger than 6" in any dimension. Submit sample for approval prior to delivery to project site.

All costs for furnishing, handling, and placing the shredded bark mulch including the materials, equipment, labor, and incidentals necessary will be incidental to the contract unit price per square yard for “4” Depth Shredded Bark Mulch”.

LANDSCAPE EDGING

Class M6 Concrete will be used in construction of the landscape edging.

All rebar will conform to ASTM A615 Grade 60 and the Standard Specification Sections 480 and 1010. All rebar will have a minimum of 3” clear cover.

The cost for all materials, labor, and incidentals necessary to construct the landscape edging will be incidental to the contract unit price per linear foot for the bid item “Landscape Edging”.

ORNAMENTAL LANDSCAPING BOULDERS

Boulder sizes will be between ±2' x 4' and ±3' x 5' 'natural block' shaped Sioux Quartzite with a height between 20” and 24", hand selected from quarry with uniform top and bottom surfaces. Furnish and install boulders at the locations indicated in the Section H Landscape Plan.

Boulders to have a minimum weight of 1.05 tons.

All costs for furnishing, handling, and placing the boulders including the aggregate base course, materials, equipment, labor, and incidentals necessary will be incidental to the contract unit price each for “Ornamental Landscaping Boulders”.

IRRIGATION SYSTEM

An irrigation system must be installed where indicated on the Section H Plans to irrigate landscape medians.

All costs, labor, and materials to furnish and install a fully functional irrigation system will be paid for at the contract lump sum price for ‘Irrigation System’. This bid item will include, but not be limited to, all costs, labor, and materials to furnish and install all excavation, backfill, backflow meter and enclosure, piping, fittings, controls, irrigation equipment, and testing.

REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
8-27-25

CONFLUENCE HDR

IRRIGATION SYSTEM - CONTINUED
Location of Sprinklers and Specialties: Comply with the general layout shown on Section H Irrigation Plans including pipe sizing and valve locations as related to the irrigation head layout. Make minor adjustments necessary to avoid plantings and obstructions such as trees, signs and light poles. Maintain 100 percent head-to-head coverage of turf and planting areas. Overspray onto buildings, sidewalks and parking or driveways is not permitted. Sprinkler lines shown on the drawings are diagrammatic and may conflict with pavement or other constructed features for clarity purposes only. Irrigation symbols are oversized for clarity.

All work called for on the Drawings by schedules, notes or details must be furnished and installed whether or not specifically listed in the irrigation schedule. Quantities are given for information only; verify quantities.

Do not willfully install irrigation when it is obvious in the field that unknown obstructions, grade differences, or discrepancies in area dimensions exist that might not have been considered in design. Such obstructions or differences must immediately be brought to the attention of the Engineer. In the event this notification is not performed, the Contractor assumes full responsibility for all necessary revision.

System Design:
Existing water pressure is estimated at 88 PSI, residual at 1,590 GPM. Information provided by City of Sioux Falls GIS fire hydrant test at 5100 E 69th Street on September 13, 2023. Available water pressure after completion of new water main is unknown. 65 PSI is required for optimal irrigation performance. Contractor to verify pressure and notify the Engineer of any discrepancies prior to beginning work.

All disturbed areas will be restored to finished grade and prepared for landscape. Hand grading and raking should be expected within the medians. Grading will be approved by the City of Sioux Falls Parks Department and the Engineer prior to proceeding with landscape or irrigation.

Water Source:
The water service line location has been determined by the Engineer and is shown on the utility plans. The utility Contractor will coordinate the tap and provide the irrigation water service to finished grade. The irrigation Contractor will furnish all above grade piping, fittings, valves, water meters, backflow preventers, and all other appurtenances necessary to provide a functional irrigation water source.

Water Meters:
The City of Sioux Falls has assigned the following addresses to water meter locations:

Meter #	Station	Address	Meter Size	Backflow Size
1	1119+46.80	5298 E 69th Street	1”	1”
2	1124+01.00	5398 E 69th Street	1”	1”

The water meters must be purchased by the Contractor from the City of Sioux Falls and will be equipped by the City with the MTU system (wireless read-out system). The water meter with the MTU system will be installed by the City within the backflow and meter enclosure. Contact Steve Menholt (605-367-8814) of the City of Sioux Falls to schedule this installation. The City of Sioux Falls will verify the water meter size for the design flow.

Backflow Prevention:
Backflow prevention is required as defined by the City of Sioux Falls Cross Connection Control Program. A backflow prevention assembly will be installed per standard plate 900.19. The backflow prevention assembly must be tested by an ABPA certified backflow assembly tester approved by the City of Sioux Falls prior to being put into service.

Enclosure:
The backflow preventer, meter and miscellaneous plumbing will be installed within a lockable top and side accessible aluminum enclosure with a fold down front panel that is easily removed to
allow for unobstructed access for equipment testing and maintenance. Size the enclosure to allow 6-inch minimum clearance around all equipment when closed. Install and anchor to a concrete pad 6-inches larger than the combined enclosure and controller pedestal footprint in all directions. Enclosures must be installed uniformly throughout the project, all facing the same direction.

Products:
Use only new materials of brands and types noted on Drawings and specified herein, or approved equals. No substitutions will be allowed without prior written approval from the Engineer. Equipment or materials installed or furnished without prior approval will be rejected and removed at the Contractor's expense.

Swing Pipe for Spray and Rotor Sprinkler Heads with 1/2-inch inlet: 1/2-inch x 12-inch preassembled swing pipe with four swing elbows.

Swing Joints for Sprinkler Heads with 3/4-inch and 1-inch inlet: Pre-fabricated PVC sprinkler riser for connections between water service and sprinkler head(s) with ACME thread and O-ring sealed rotating sections per ASTM F2768.

Drip Irrigation Specialties:
- Flush Cap: manufacturer's standard barbed fitting with manually removable threaded cap located at the end of each run to assist with drip zone winterization.
- Operation Indicator: 6-inch pop up indicator with 1/2-inch bottom inlet activated when system pressure exceeds 12 PSI.
- Air Relief Valve: constructed of UV-protected and corrosion-resistant material with an operating range up to 80 PSI.

Installation Requirements:
All irrigation equipment and piping to be installed per manufacturer’s written recommendations as well as all federal, state, and local laws and ordinances that may apply. Any deviation from these requirements must be documented in writing prior to changes in the work.

Excavation must be sufficient depth and width to permit proper pipe and equipment installation at the elevations intended with ample space for joining. All lines must have a minimum clearance of 6-inches from each other and from other utilities. Parallel lines must not be installed directly adjacent or over one another.

Trenches for pipe lines must provide minimum cover from finished grade as follows:
- Cover Over Installed Mainline Piping: 18-inches.
- Cover Over Installed Lateral Piping: 12-inches.
- Cover Over Installed Sleeve Piping: 18-inches.
- Maximum Cover Over Installed Piping: 24-inches.

Backfill only after piping has been tested, reviewed, and accepted. Excavated soil may be used as backfill. Remove stones larger than 1-1/2 inches in any dimension and sticks, roots, trash, and other extraneous matter. In rocky soil provide sand backfill material around and under the piping and risers by hand to a height of 6" above all piping. Backfill must be compacted to 95% minimum density by mechanical tamping. Trench must be free of water during backfilling operation. Pipe joints will not be located under roads or pavement. Sleeves will be a minimum diameter of 2- inch or 2 sizes larger than pipe, whichever is larger. A second, parallel, sleeve will be installed as a spare with both ends capped.

14-AWG copper wire, U.L. approved for direct burial and compatible with control system specified. Decoders will be compatible with control system and provided in single-station configurations. All connections will be made with 3M DBR/Y-6 watertight wire connectors. Install control wire/cable in same trench as irrigation piping wherever possible. Place wire/cable in trench adjacent to, or below, mainlines but not above. Install with slack to allow for thermal expansion and contraction. Install expansion coils at zone valves long enough so valve bonnet may be removed for maintenance.

Boxes for control valves and irrigation specialties will be PE or ABS and 15”x21”x12” deep for control valves and 10” diameter for quick couplers and isolation valves. Valve box lids will be PE or ABS and lettered with the text ‘IRRIGATION’. The bottom of the box will be supported by a concrete paver foundation and a minimum of 4” deep layer of clean 1/2” crushed rock drainage material. **Concrete pavers and drainage material must be installed prior to setting the valve box.**

Set valves and valve boxes to align with adjacent site features (curbs, mow edges, etc.). Where multiple valve boxes occur in a group, align valve and valve boxes to be parallel to the adjacent valves in the group. Adjust valve boxes to finished grade. Do not locate valve boxes within 5-feet of light poles, trees, traffic signs, mow edges, etc. **Install unions and isolation ball valves adjacent to each valve for serviceability.**

Testing:
Before testing, all piping is to be thoroughly flushed. Prior to acceptance of work, all pressure piping and fittings will be subjected to a hydrostatic pressure test of 150 psi. This test will include all mainline and lateral piping for a minimum of one hour. Leaks and/or imperfections developing under said pressure will be remedied by the Contractor before final acceptance of the work.

Pressure will be maintained while the entire installation is inspected. The Contractor will provide all work connected with the tests. Including temporary above ground piping to connect a riser from each lateral so that the entire system can be tested simultaneously.

The completed system will be adjusted and balanced to result in uniform distribution of water throughout the irrigated area.

After system is 100% installed, perform a coverage test to determine whether water coverage and operation of the system is adequate for planting, without areas of excessive flooding, dry spots, areas of insufficient overlap, or excessive overspray. If the irrigation system is determined by City to be inadequate due to Contractor’s workmanship or materials, it will be replaced or repaired at Contractor’s expense and both pressure and coverage tests repeated until accepted.

All equipment, materials, and labor necessary to complete the testing will be incidental to the contract lump sum price for “Irrigation System”.

Record Documents:
The Contractor is responsible for documenting changes to the design. Record work that is installed differently than shown on the construction shop drawings. Record pipe and wiring network alterations and location changes to equipment. Keep documents current. Do not permanently cover work until as-built information is recorded. Turn over the “Record Drawings” to the Engineer. Completion of the Record Drawings will be a prerequisite for irrigation system substantial completion and final payment.

Warranty:
For a period of one year from project completion the Contractor will guarantee irrigation materials, equipment, and workmanship against defects. Fill and repair depressions, restore landscape or structural features damaged by the settlement of irrigation trenches or excavation. Repair damage to the premises caused by a defective item or poor workmanship. Make repairs within 7 days of notification from the owner’s representative.

Irrigation Contractor will review winterization procedures for irrigation system with the City’s representative. Winterization and spring start up services during the first full year of operation are considered part of this contract.

REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
8.27.25

CONFLUENCE HDR

Landscape Plan

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H6	H39

FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

REGISTERED LANDSCAPE ARCHITECT
REG. NO.
8518
CHAD W.
KUCKER
SOUTH DAKOTA
8-29-25

CONFLUENCE HDR

Landscape Plan

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H7	H39

FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

0 20 40

PLANT SCHEDULE - VETERANS PARKWAY

KEY	QTY		SIZE	NOTES
		PERENNIALS/GRASSES		
CA	2,132	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER' FEATHER REED GRASS	#1 CONT.	20" SPACING
EA	411	ELYMUS ARENARIUS 'BLUE DUNE' BLUE DUNE LYME GRASS	#1 CONT.	36" SPACING
HR	2,132	HEMEROCALLIS 'ROCKET CITY' ROCKET CITY DAYLILY	#1 CONT.	20" SPACING

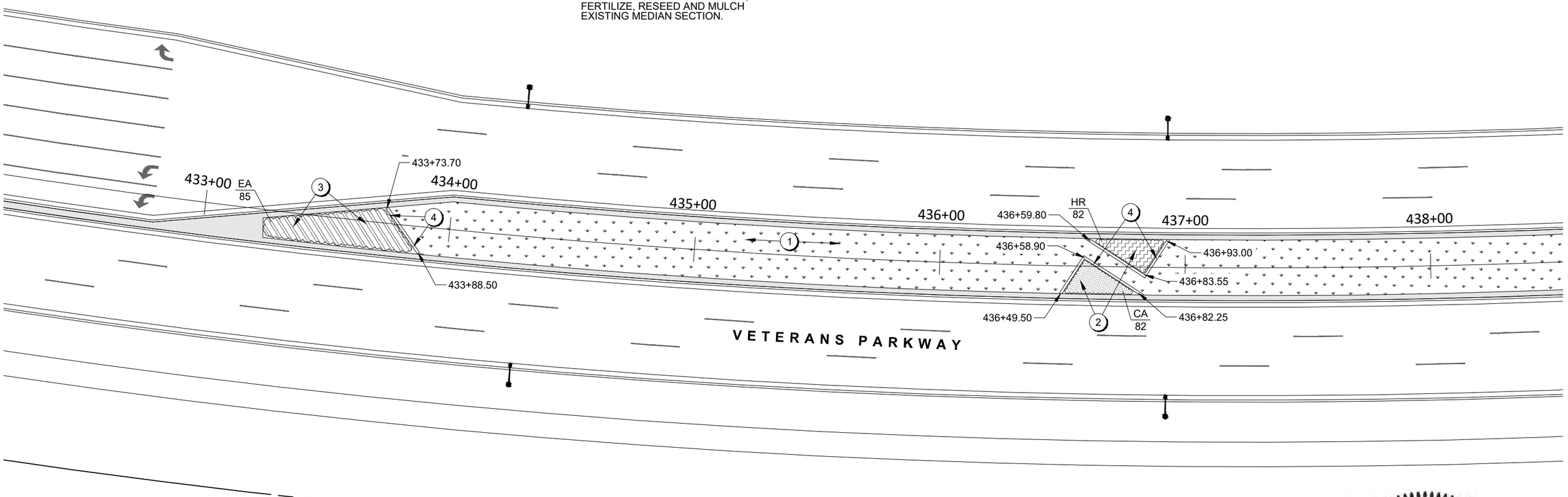
KEYNOTES

1. CONTRACTOR FURNISHED TOPSOIL, FERTILIZE, SEED AND MULCH MEDIAN.
2. PLANT BED WITH WEED BARRIER FABRIC AND SHREDDED BARK MULCH.
3. PLANT BED WITH SHREDDED BARK MULCH, NO WEED BARRIER FABRIC.
4. LANDSCAPE EDGING
5. REMOVE EXISTING TURF GRASS, FERTILIZE, RESEED AND MULCH EXISTING MEDIAN SECTION.

LEGEND

TURF TYPE TALL FESCUE

PERENNIAL/ GRASS



REGISTERED LANDSCAPE ARCHITECT
REG. NO.
8518
CHAD W.
KUCKER
SOUTH DAKOTA
8-29-25

CONFLUENCE HDR

Landscape Plan

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H8	H39

FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

0 20 40

PLANT SCHEDULE - VETERANS PARKWAY

KEY	QTY		SIZE	NOTES
		PERENNIALS/GRASSES		
CA	2,132	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER' FEATHER REED GRASS	#1 CONT.	20" SPACING
EA	411	ELYMUS ARENARIUS 'BLUE DUNE' BLUE DUNE LYME GRASS	#1 CONT.	36" SPACING
HR	2,132	HEMEROCALLIS 'ROCKET CITY' ROCKET CITY DAYLILY	#1 CONT.	20" SPACING

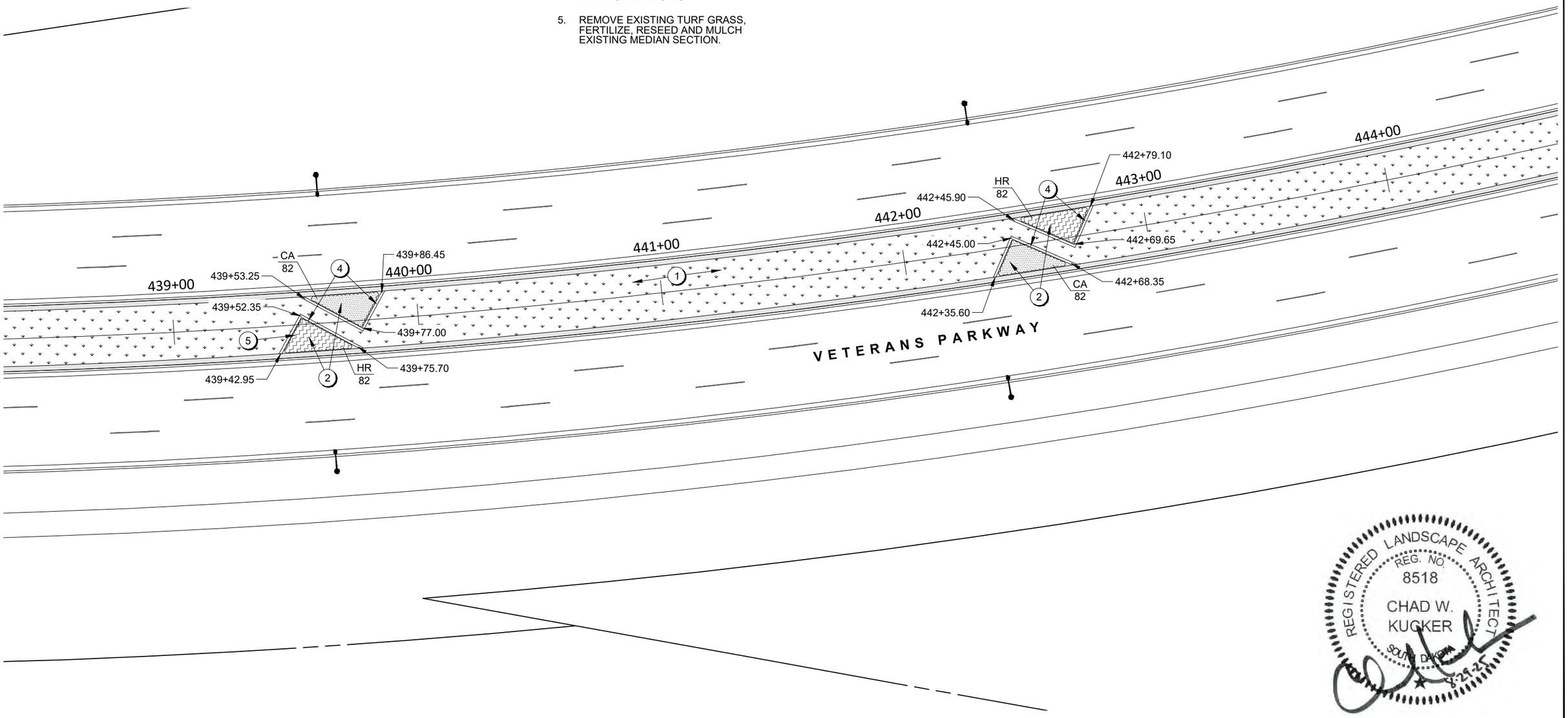
KEYNOTES

1. CONTRACTOR FURNISHED TOPSOIL, FERTILIZE, SEED AND MULCH MEDIAN.
2. PLANT BED WITH WEED BARRIER FABRIC AND SHREDDED BARK MULCH.
3. PLANT BED WITH SHREDDED BARK MULCH, NO WEED BARRIER FABRIC.
4. LANDSCAPE EDGING
5. REMOVE EXISTING TURF GRASS, FERTILIZE, RESEED AND MULCH EXISTING MEDIAN SECTION.

LEGEND

TURF TYPE TALL FESCUE

PERENNIAL/ GRASS



REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
8-29-25

CONFLUENCE HDR

Landscape Plan

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H9	H39

FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

0 20 40

PLANT SCHEDULE - VETERANS PARKWAY

KEY	QTY		SIZE	NOTES
		PERENNIALS/GRASSES		
CA	2,132	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER' FEATHER REED GRASS	#1 CONT.	20" SPACING
EA	411	ELYMUS ARENARIUS 'BLUE DUNE' BLUE DUNE LYME GRASS	#1 CONT.	36" SPACING
HR	2,132	HEMEROCALLIS 'ROCKET CITY' ROCKET CITY DAYLILY	#1 CONT.	20" SPACING

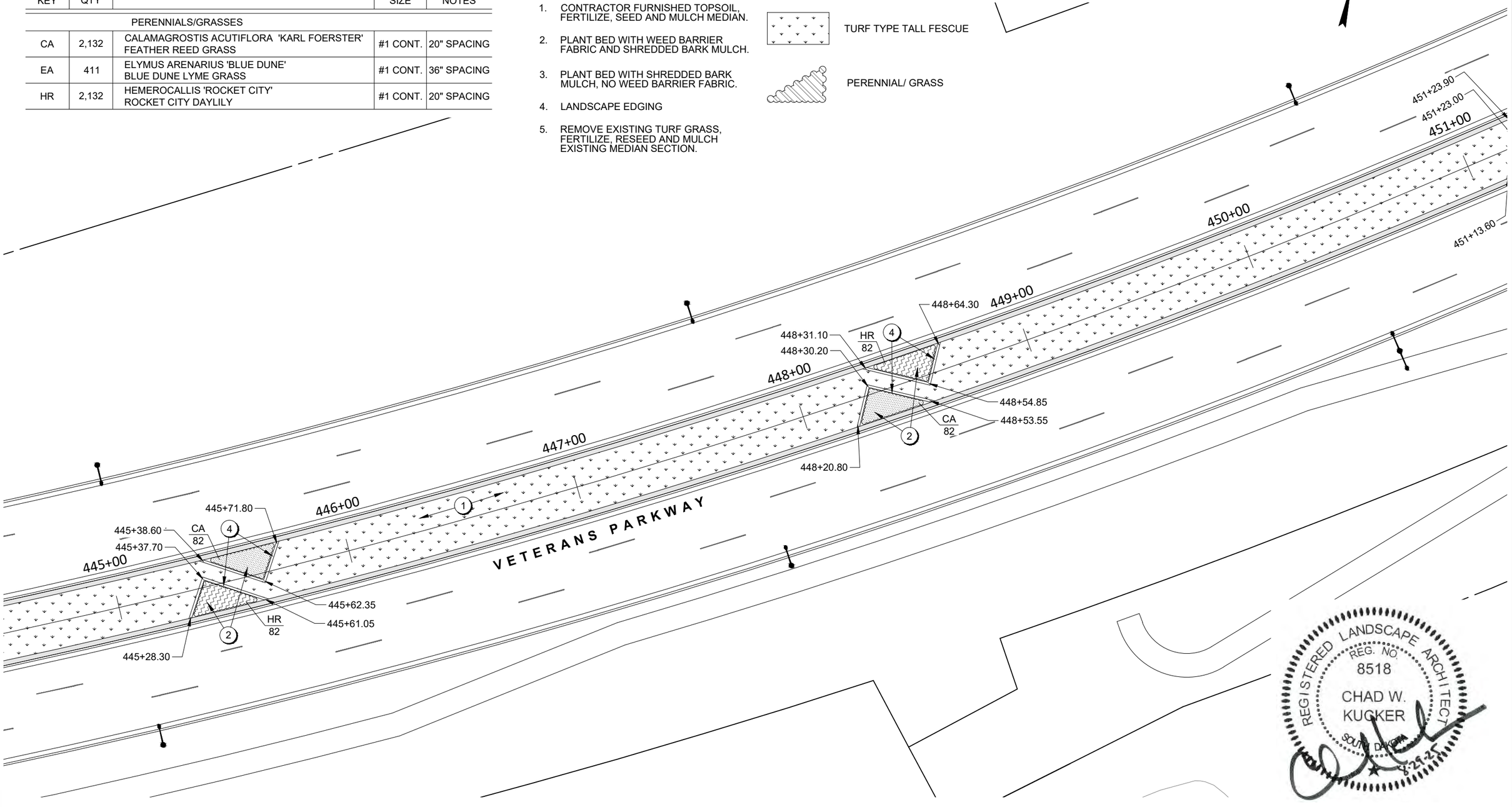
(#) KEYNOTES

1. CONTRACTOR FURNISHED TOPSOIL, FERTILIZE, SEED AND MULCH MEDIAN.
2. PLANT BED WITH WEED BARRIER FABRIC AND SHREDDED BARK MULCH.
3. PLANT BED WITH SHREDDED BARK MULCH, NO WEED BARRIER FABRIC.
4. LANDSCAPE EDGING
5. REMOVE EXISTING TURF GRASS, FERTILIZE, RESEED AND MULCH EXISTING MEDIAN SECTION.

LEGEND

TURF TYPE TALL FESCUE

PERENNIAL/ GRASS



REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
8-29-25

CONFLUENCE HDR

Landscape Plan

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H10	H39

FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

0 20 40

PLANT SCHEDULE - VETERANS PARKWAY

KEY	QTY		SIZE	NOTES
		PERENNIALS/GRASSES		
CA	2,132	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER' FEATHER REED GRASS	#1 CONT.	20" SPACING
EA	411	ELYMUS ARENARIUS 'BLUE DUNE' BLUE DUNE LYME GRASS	#1 CONT.	36" SPACING
HR	2,132	HEMEROCALLIS 'ROCKET CITY' ROCKET CITY DAYLILY	#1 CONT.	20" SPACING

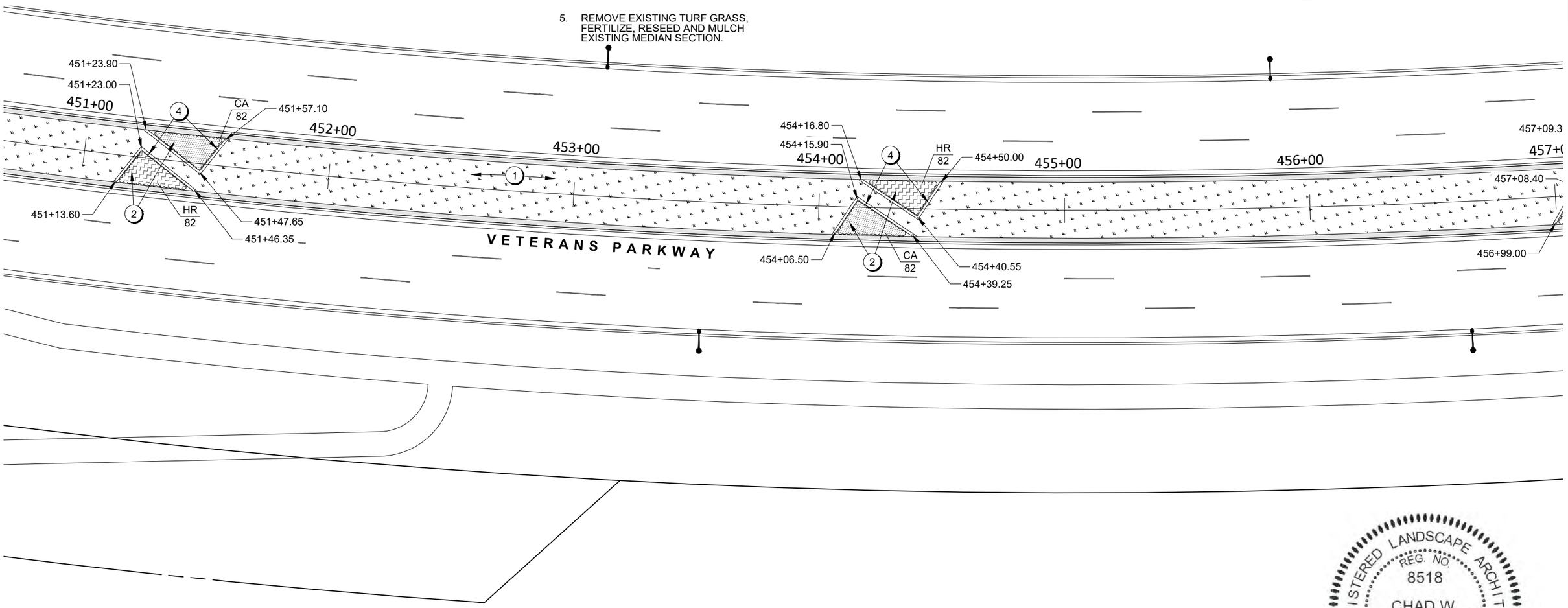
(#) KEYNOTES

1. CONTRACTOR FURNISHED TOPSOIL, FERTILIZE, SEED AND MULCH MEDIAN.
2. PLANT BED WITH WEED BARRIER FABRIC AND SHREDDED BARK MULCH.
3. PLANT BED WITH SHREDDED BARK MULCH, NO WEED BARRIER FABRIC.
4. LANDSCAPE EDGING
5. REMOVE EXISTING TURF GRASS, FERTILIZE, RESEED AND MULCH EXISTING MEDIAN SECTION.

LEGEND

TURF TYPE TALL FESCUE

PERENNIAL/ GRASS



REGISTERED LANDSCAPE ARCHITECT
REG. NO.
8518
CHAD W.
KUCKER
SOUTH DAKOTA
8-29-25

CONFLUENCE HDR

Landscape Plan

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H11	H39

FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

0 20 40

PLANT SCHEDULE - VETERANS PARKWAY

KEY	QTY		SIZE	NOTES
		PERENNIALS/GRASSES		
CA	2,132	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER' FEATHER REED GRASS	#1 CONT.	20" SPACING
EA	411	ELYMUS ARENARIUS 'BLUE DUNE' BLUE DUNE LYME GRASS	#1 CONT.	36" SPACING
HR	2,132	HEMEROCALLIS 'ROCKET CITY' ROCKET CITY DAYLILY	#1 CONT.	20" SPACING

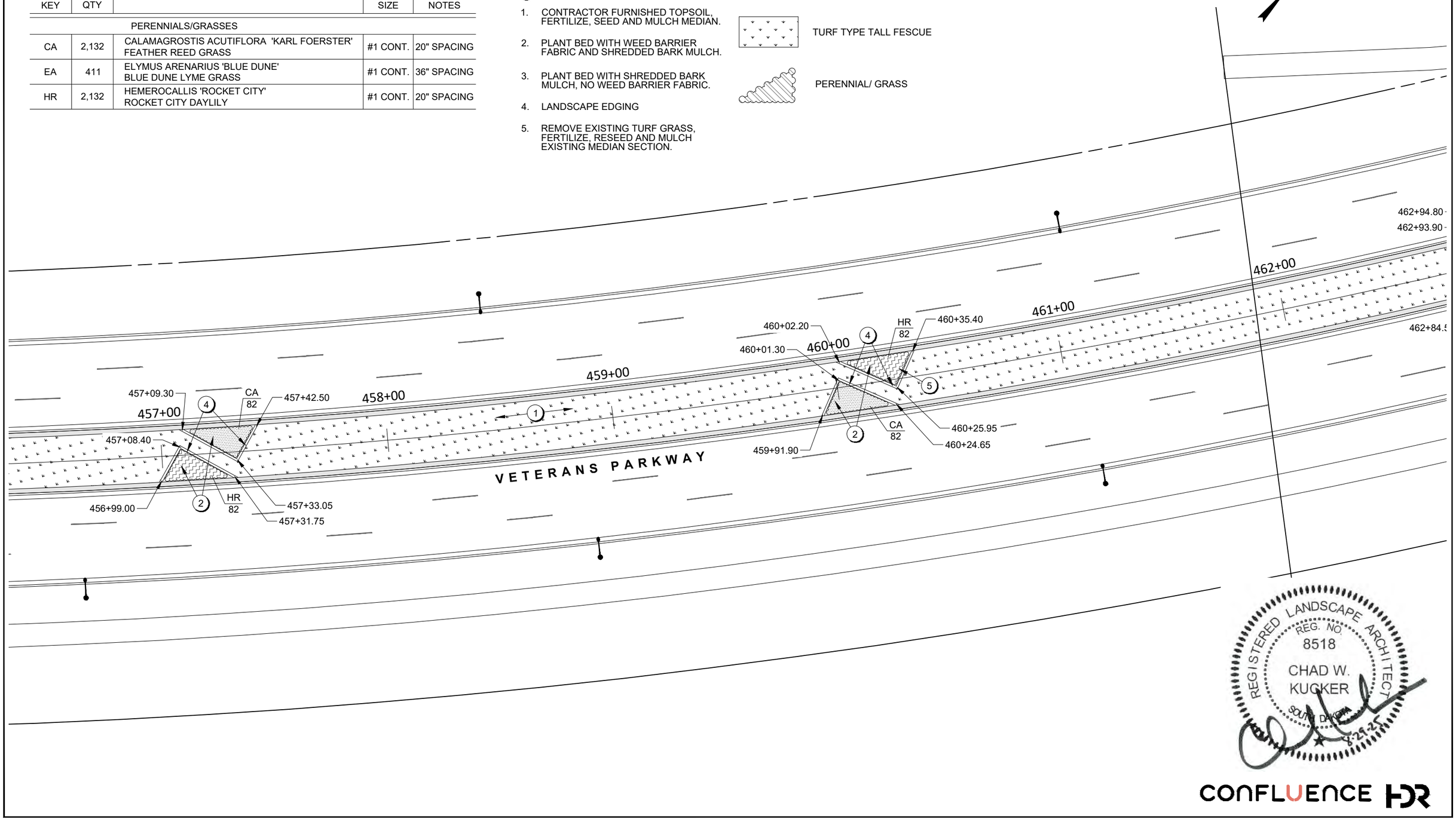
(#) KEYNOTES

1. CONTRACTOR FURNISHED TOPSOIL, FERTILIZE, SEED AND MULCH MEDIAN.
2. PLANT BED WITH WEED BARRIER FABRIC AND SHREDDED BARK MULCH.
3. PLANT BED WITH SHREDDED BARK MULCH, NO WEED BARRIER FABRIC.
4. LANDSCAPE EDGING
5. REMOVE EXISTING TURF GRASS, FERTILIZE, RESEED AND MULCH EXISTING MEDIAN SECTION.

LEGEND

TURF TYPE TALL FESCUE

PERENNIAL/ GRASS



REGISTERED LANDSCAPE ARCHITECT
REG. NO.
8518
CHAD W.
KUCKER
SOUTH DAKOTA
4-25-25

CONFLUENCE HDR

Landscape Plan

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H12	H39

FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

0 20 40

PLANT SCHEDULE - VETERANS PARKWAY

KEY	QTY		SIZE	NOTES
		PERENNIALS/GRASSES		
CA	2,132	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER' FEATHER REED GRASS	#1 CONT.	20" SPACING
EA	411	ELYMUS ARENARIUS 'BLUE DUNE' BLUE DUNE LYME GRASS	#1 CONT.	36" SPACING
HR	2,132	HEMEROCALLIS 'ROCKET CITY' ROCKET CITY DAYLILY	#1 CONT.	20" SPACING

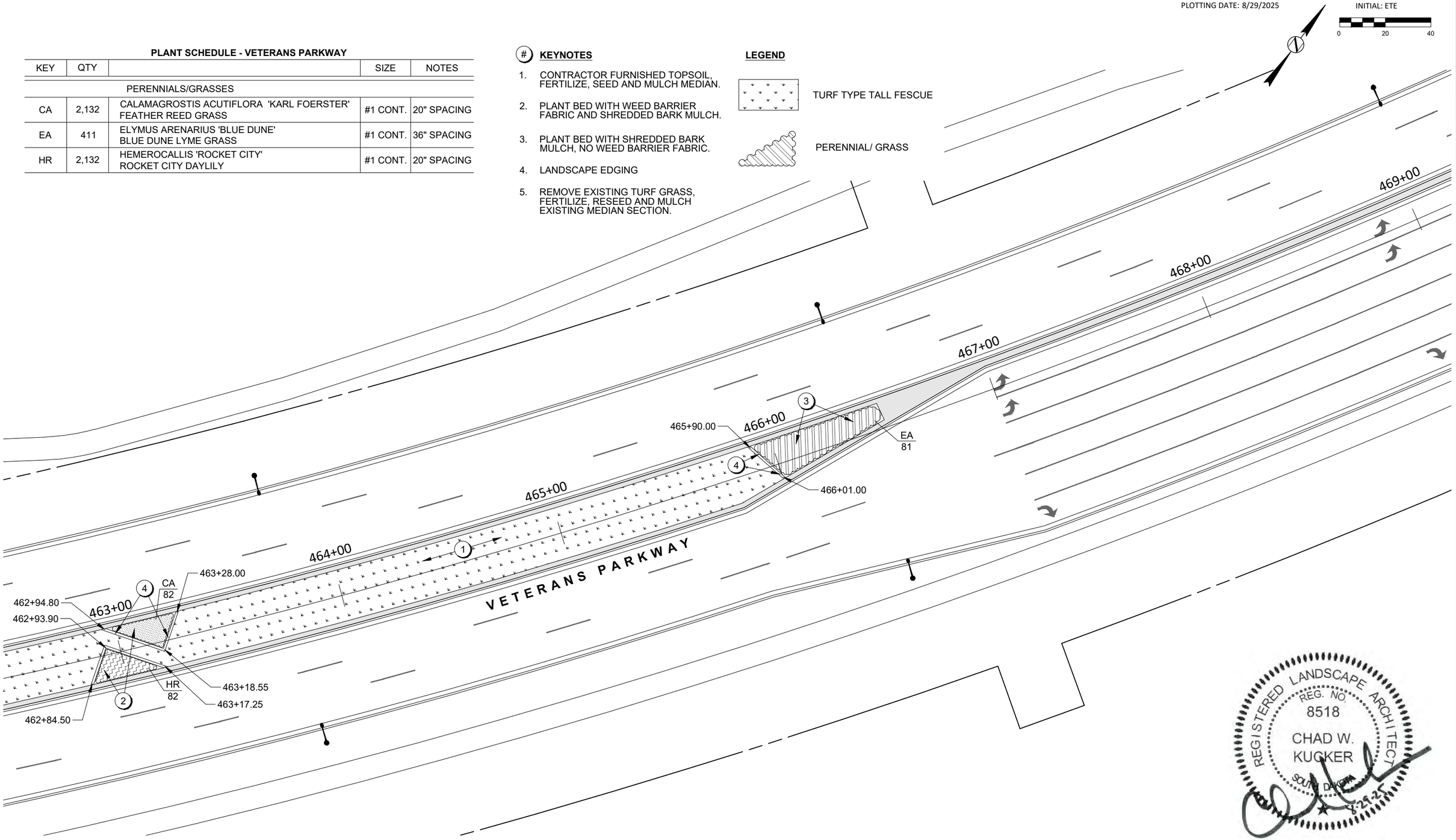
(#) KEYNOTES

1. CONTRACTOR FURNISHED TOPSOIL, FERTILIZE, SEED AND MULCH MEDIAN.
2. PLANT BED WITH WEED BARRIER FABRIC AND SHREDDED BARK MULCH.
3. PLANT BED WITH SHREDDED BARK MULCH, NO WEED BARRIER FABRIC.
4. LANDSCAPE EDGING
5. REMOVE EXISTING TURF GRASS, FERTILIZE, RESEED AND MULCH EXISTING MEDIAN SECTION.

LEGEND

TURF TYPE TALL FESCUE

PERENNIAL/ GRASS



REGISTERED LANDSCAPE ARCHITECT
REG. NO.
8518
CHAD W.
KUCKER
SOUTH DAKOTA
8-29-25

CONFLUENCE HDR

Landscape Plan

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H13	H39

FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

0 20 40

PLANT SCHEDULE - VETERANS PARKWAY

KEY	QTY		SIZE	NOTES
		PERENNIALS/GRASSES		
CA	2,132	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER' FEATHER REED GRASS	#1 CONT.	20" SPACING
EA	411	ELYMUS ARENARIUS 'BLUE DUNE' BLUE DUNE LYME GRASS	#1 CONT.	36" SPACING
HR	2,132	HEMEROCALLIS 'ROCKET CITY' ROCKET CITY DAYLILY	#1 CONT.	20" SPACING

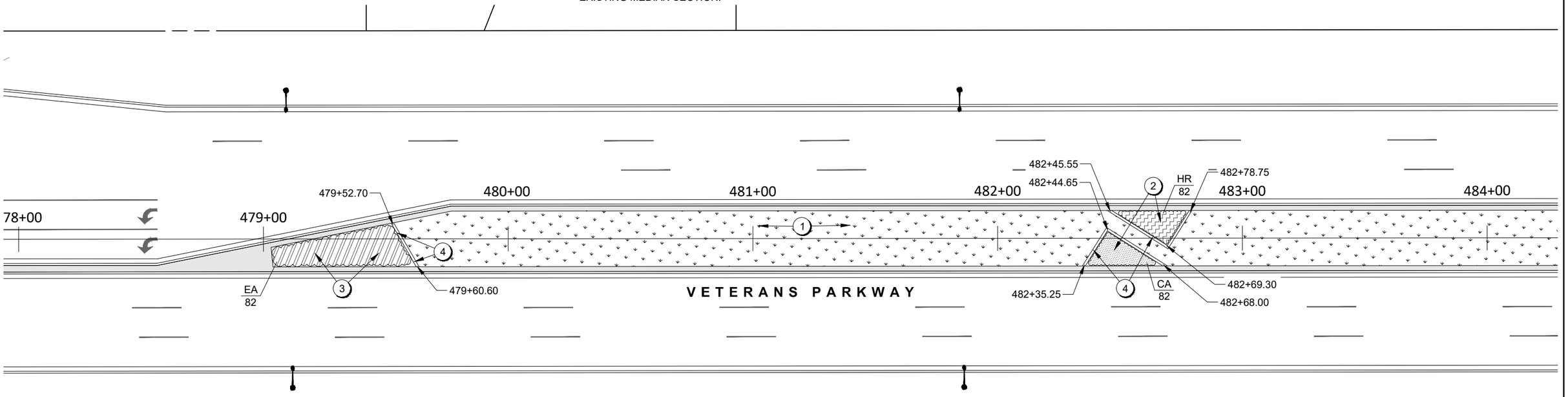
(#) KEYNOTES

1. CONTRACTOR FURNISHED TOPSOIL, FERTILIZE, SEED AND MULCH MEDIAN.
2. PLANT BED WITH WEED BARRIER FABRIC AND SHREDDED BARK MULCH.
3. PLANT BED WITH SHREDDED BARK MULCH, NO WEED BARRIER FABRIC.
4. LANDSCAPE EDGING
5. REMOVE EXISTING TURF GRASS, FERTILIZE, RESEED AND MULCH EXISTING MEDIAN SECTION.

LEGEND

TURF TYPE TALL FESCUE

PERENNIAL/ GRASS



REGISTERED LANDSCAPE ARCHITECT
REG. NO.
8518
CHAD W.
KUCKER
SOUTH DAKOTA
8-29-25

CONFLUENCE HDR

FOR BIDDING PURPOSES ONLY

Landscape Plan

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H14	H39

FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

0 20 40

PLANT SCHEDULE - VETERANS PARKWAY

KEY	QTY		SIZE	NOTES
		PERENNIALS/GRASSES		
CA	2,132	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER' FEATHER REED GRASS	#1 CONT.	20" SPACING
EA	411	ELYMUS ARENARIUS 'BLUE DUNE' BLUE DUNE LYME GRASS	#1 CONT.	36" SPACING
HR	2,132	HEMEROCALLIS 'ROCKET CITY' ROCKET CITY DAYLILY	#1 CONT.	20" SPACING

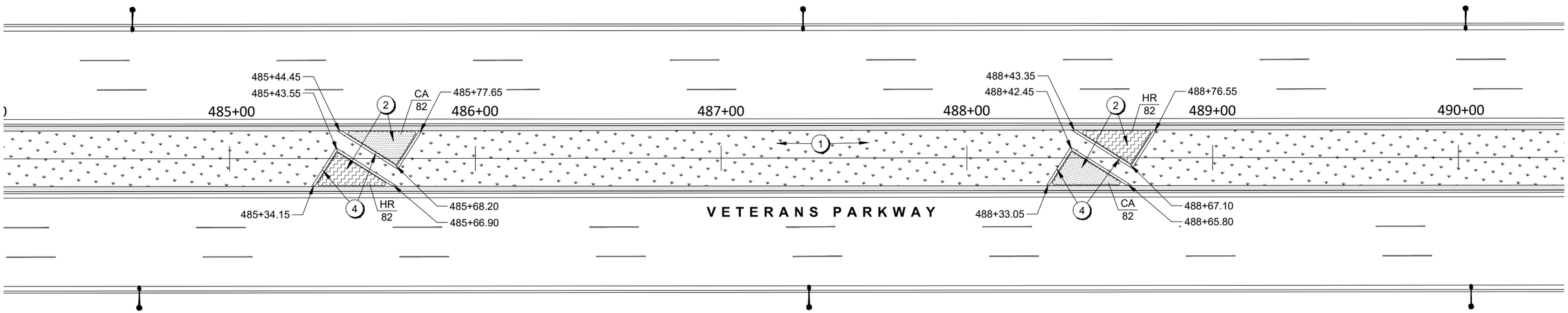
(#) KEYNOTES

1. CONTRACTOR FURNISHED TOPSOIL, FERTILIZE, SEED AND MULCH MEDIAN.
2. PLANT BED WITH WEED BARRIER FABRIC AND SHREDDED BARK MULCH.
3. PLANT BED WITH SHREDDED BARK MULCH, NO WEED BARRIER FABRIC.
4. LANDSCAPE EDGING
5. REMOVE EXISTING TURF GRASS, FERTILIZE, RESEED AND MULCH EXISTING MEDIAN SECTION.

LEGEND

TURF TYPE TALL FESCUE

PERENNIAL/ GRASS



REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
8-25-25

CONFLUENCE HDR

Landscape Plan

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H15	H39

FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

0 20 40

PLANT SCHEDULE - VETERANS PARKWAY

KEY	QTY		SIZE	NOTES
		PERENNIALS/GRASSES		
CA	2,132	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER' FEATHER REED GRASS	#1 CONT.	20" SPACING
EA	411	ELYMUS ARENARIUS 'BLUE DUNE' BLUE DUNE LYME GRASS	#1 CONT.	36" SPACING
HR	2,132	HEMEROCALLIS 'ROCKET CITY' ROCKET CITY DAYLILY	#1 CONT.	20" SPACING

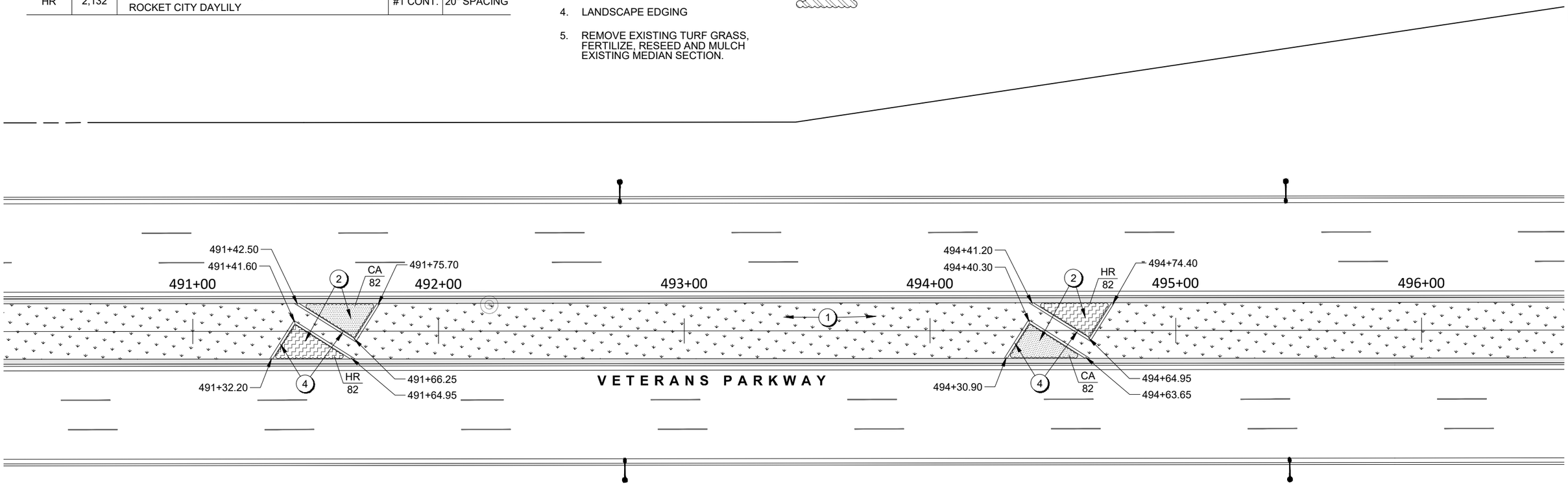
(#) KEYNOTES

1. CONTRACTOR FURNISHED TOPSOIL, FERTILIZE, SEED AND MULCH MEDIAN.
2. PLANT BED WITH WEED BARRIER FABRIC AND SHREDDED BARK MULCH.
3. PLANT BED WITH SHREDDED BARK MULCH, NO WEED BARRIER FABRIC.
4. LANDSCAPE EDGING
5. REMOVE EXISTING TURF GRASS, FERTILIZE, RESEED AND MULCH EXISTING MEDIAN SECTION.

LEGEND

TURF TYPE TALL FESCUE

PERENNIAL/ GRASS



REGISTERED LANDSCAPE ARCHITECT
REG. NO.
8518
CHAD W.
KUCKER
SOUTH DAKOTA
8-29-25

CONFLUENCE HDR

Landscape Plan

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H16	H39

FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

0 20 40

PLANT SCHEDULE - VETERANS PARKWAY

KEY	QTY		SIZE	NOTES
		PERENNIALS/GRASSES		
CA	2,132	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER' FEATHER REED GRASS	#1 CONT.	20" SPACING
EA	411	ELYMUS ARENARIUS 'BLUE DUNE' BLUE DUNE LYME GRASS	#1 CONT.	36" SPACING
HR	2,132	HEMEROCALLIS 'ROCKET CITY' ROCKET CITY DAYLILY	#1 CONT.	20" SPACING

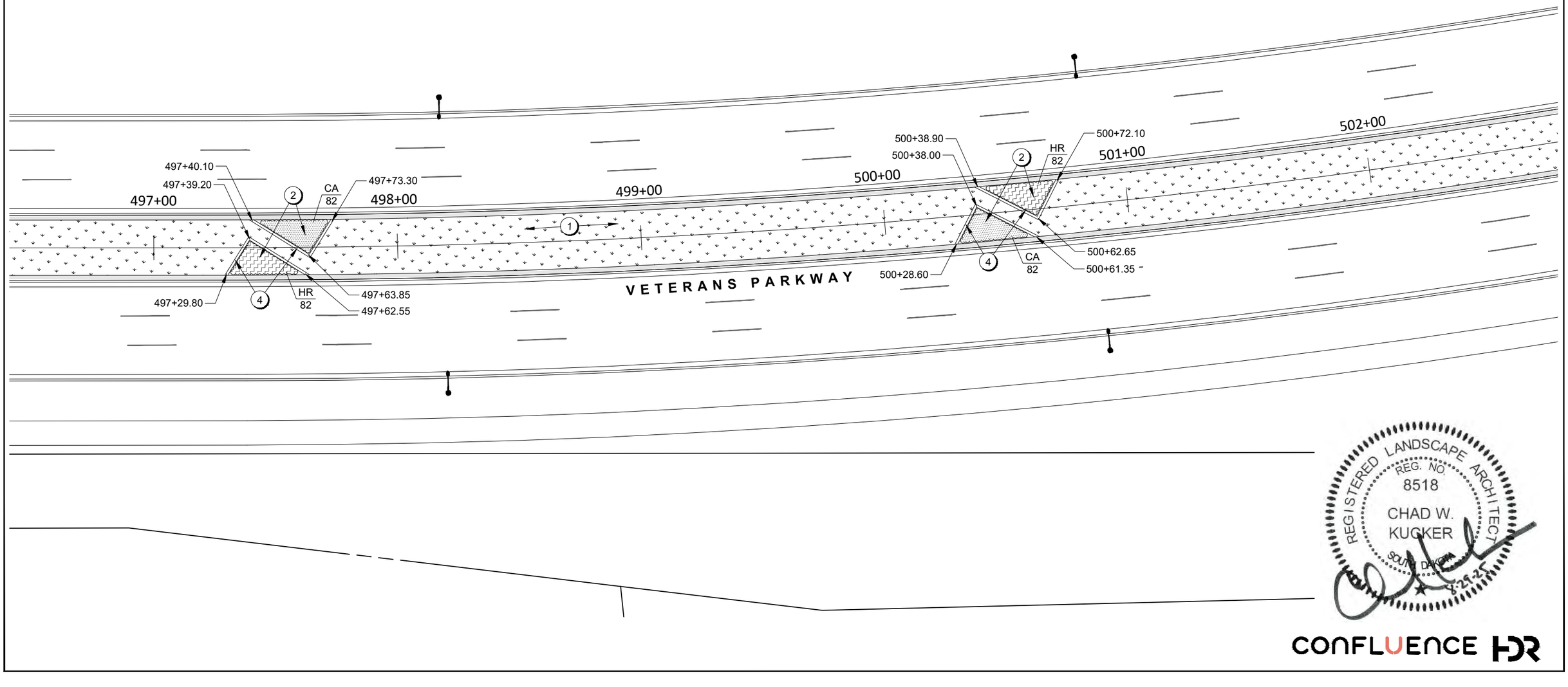
KEYNOTES

1. CONTRACTOR FURNISHED TOPSOIL, FERTILIZE, SEED AND MULCH MEDIAN.
2. PLANT BED WITH WEED BARRIER FABRIC AND SHREDDED BARK MULCH.
3. PLANT BED WITH SHREDDED BARK MULCH, NO WEED BARRIER FABRIC.
4. LANDSCAPE EDGING
5. REMOVE EXISTING TURF GRASS, FERTILIZE, RESEED AND MULCH EXISTING MEDIAN SECTION.

LEGEND

TURF TYPE TALL FESCUE

PERENNIAL/ GRASS



REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
8-29-25

CONFLUENCE HDR

Landscape Plan

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H17	H39

FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

0 20 40

PLANT SCHEDULE - VETERANS PARKWAY

KEY	QTY		SIZE	NOTES
		PERENNIALS/GRASSES		
CA	2,132	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER' FEATHER REED GRASS	#1 CONT.	20" SPACING
EA	411	ELYMUS ARENARIUS 'BLUE DUNE' BLUE DUNE LYME GRASS	#1 CONT.	36" SPACING
HR	2,132	HEMEROCALLIS 'ROCKET CITY' ROCKET CITY DAYLILY	#1 CONT.	20" SPACING

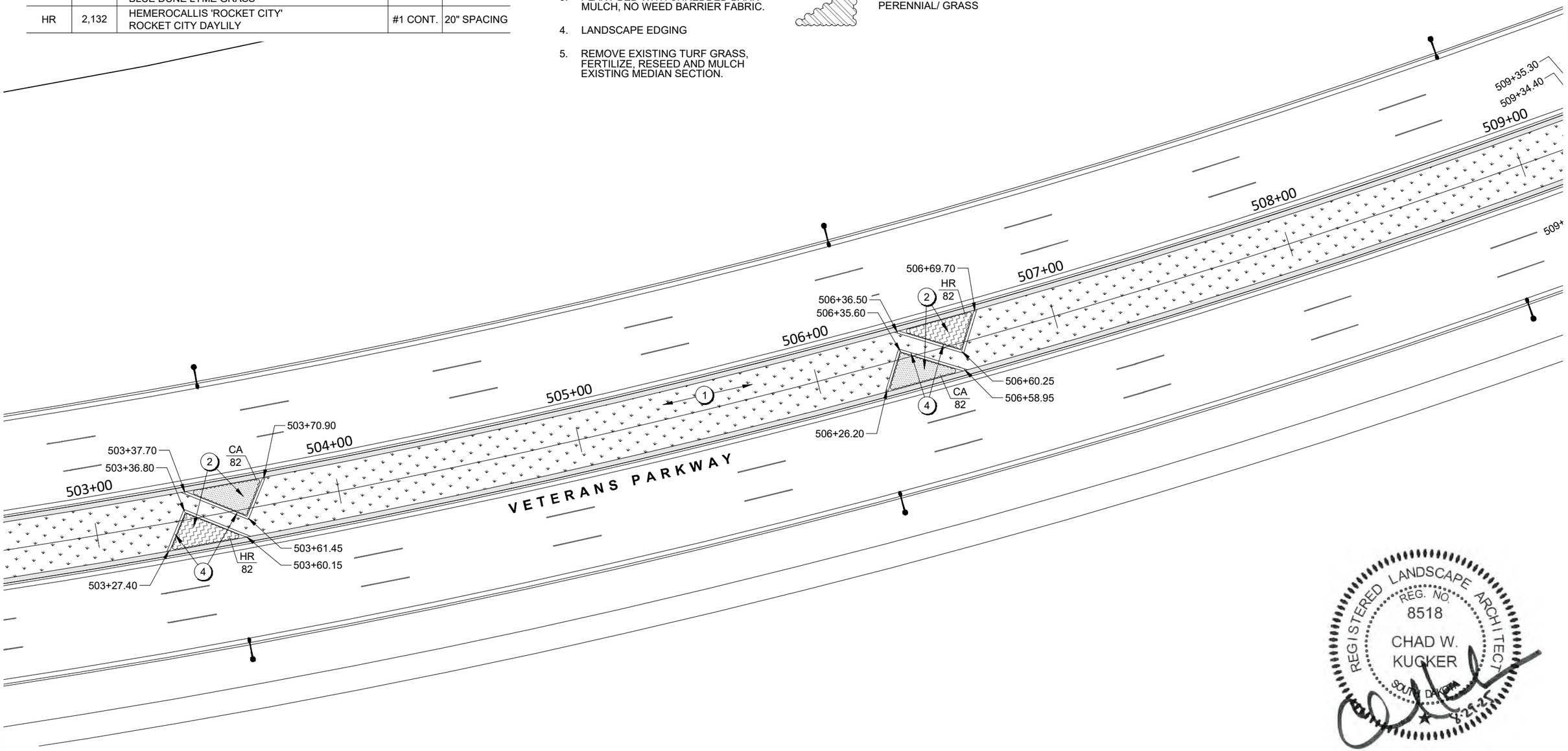
(#) KEYNOTES

1. CONTRACTOR FURNISHED TOPSOIL, FERTILIZE, SEED AND MULCH MEDIAN.
2. PLANT BED WITH WEED BARRIER FABRIC AND SHREDDED BARK MULCH.
3. PLANT BED WITH SHREDDED BARK MULCH, NO WEED BARRIER FABRIC.
4. LANDSCAPE EDGING
5. REMOVE EXISTING TURF GRASS, FERTILIZE, RESEED AND MULCH EXISTING MEDIAN SECTION.

LEGEND

TURF TYPE TALL FESCUE

PERENNIAL/ GRASS



REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
8-29-25

CONFLUENCE HDR

Landscape Plan

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H18	H39

FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

0 20 40

PLANT SCHEDULE - VETERANS PARKWAY

KEY	QTY		SIZE	NOTES
		PERENNIALS/GRASSES		
CA	2,132	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER' FEATHER REED GRASS	#1 CONT.	20" SPACING
EA	411	ELYMUS ARENARIUS 'BLUE DUNE' BLUE DUNE LYME GRASS	#1 CONT.	36" SPACING
HR	2,132	HEMEROCALLIS 'ROCKET CITY' ROCKET CITY DAYLILY	#1 CONT.	20" SPACING

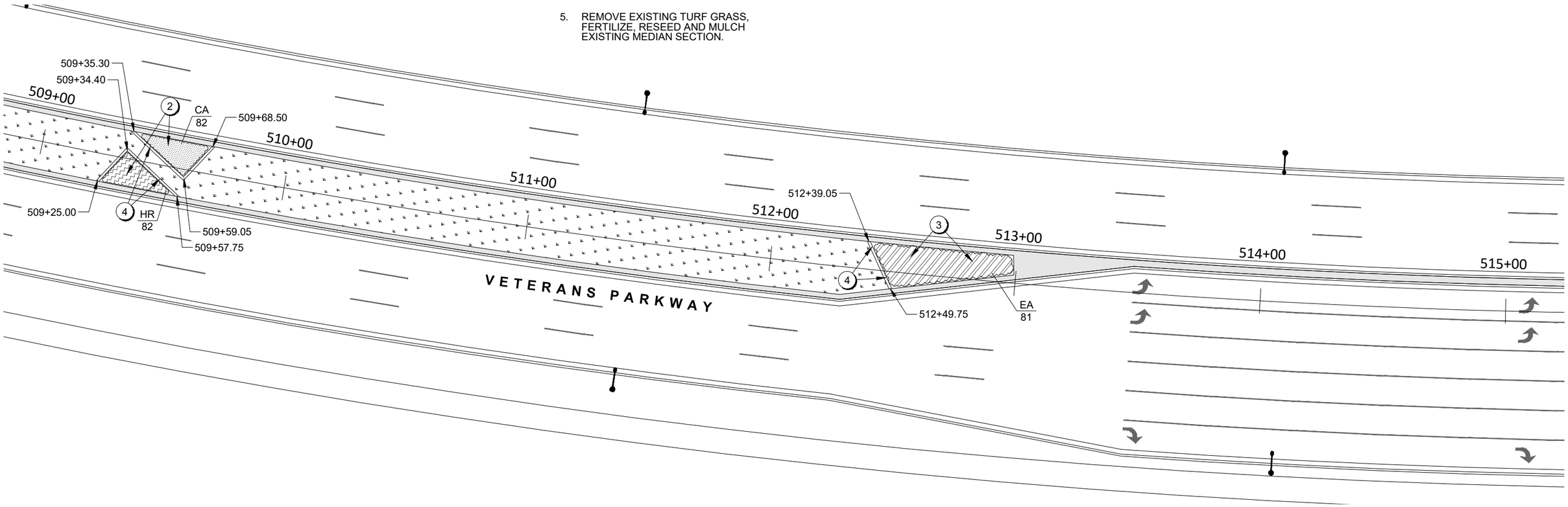
(#) KEYNOTES

1. CONTRACTOR FURNISHED TOPSOIL, FERTILIZE, SEED AND MULCH MEDIAN.
2. PLANT BED WITH WEED BARRIER FABRIC AND SHREDDED BARK MULCH.
3. PLANT BED WITH SHREDDED BARK MULCH, NO WEED BARRIER FABRIC.
4. LANDSCAPE EDGING
5. REMOVE EXISTING TURF GRASS, FERTILIZE, RESEED AND MULCH EXISTING MEDIAN SECTION.

LEGEND

TURF TYPE TALL FESCUE

PERENNIAL/ GRASS



REGISTERED LANDSCAPE ARCHITECT
REG. NO.
8518
CHAD W.
KUCKER
SOUTH DAKOTA
8-29-25

CONFLUENCE HDR

Landscape Plan

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H19	H39

FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

0 20 40

PLANT SCHEDULE - VETERANS PARKWAY

KEY	QTY		SIZE	NOTES
		PERENNIALS/GRASSES		
CA	2,132	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER' FEATHER REED GRASS	#1 CONT.	20" SPACING
EA	411	ELYMUS ARENARIUS 'BLUE DUNE' BLUE DUNE LYME GRASS	#1 CONT.	36" SPACING
HR	2,132	HEMEROCALLIS 'ROCKET CITY' ROCKET CITY DAYLILY	#1 CONT.	20" SPACING

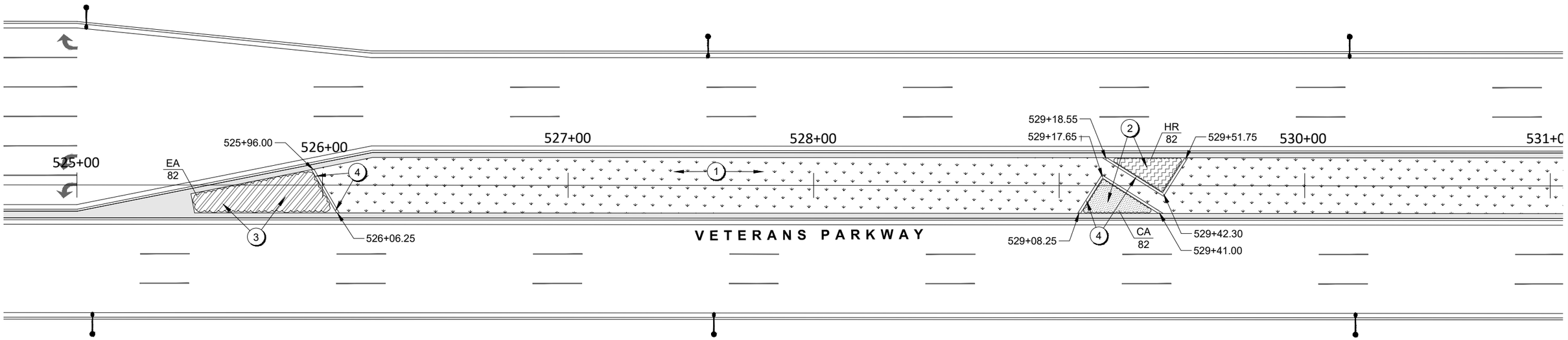
(#) KEYNOTES

1. CONTRACTOR FURNISHED TOPSOIL, FERTILIZE, SEED AND MULCH MEDIAN.
2. PLANT BED WITH WEED BARRIER FABRIC AND SHREDDED BARK MULCH.
3. PLANT BED WITH SHREDDED BARK MULCH, NO WEED BARRIER FABRIC.
4. LANDSCAPE EDGING
5. REMOVE EXISTING TURF GRASS, FERTILIZE, RESEED AND MULCH EXISTING MEDIAN SECTION.

LEGEND

TURF TYPE TALL FESCUE

PERENNIAL/ GRASS



CONFLUENCE HDR

Landscape Plan

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H20	H39

FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

0 20 40

PLANT SCHEDULE - VETERANS PARKWAY

KEY	QTY		SIZE	NOTES
		PERENNIALS/GRASSES		
CA	2,132	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER' FEATHER REED GRASS	#1 CONT.	20" SPACING
EA	411	ELYMUS ARENARIUS 'BLUE DUNE' BLUE DUNE LYME GRASS	#1 CONT.	36" SPACING
HR	2,132	HEMEROCALLIS 'ROCKET CITY' ROCKET CITY DAYLILY	#1 CONT.	20" SPACING

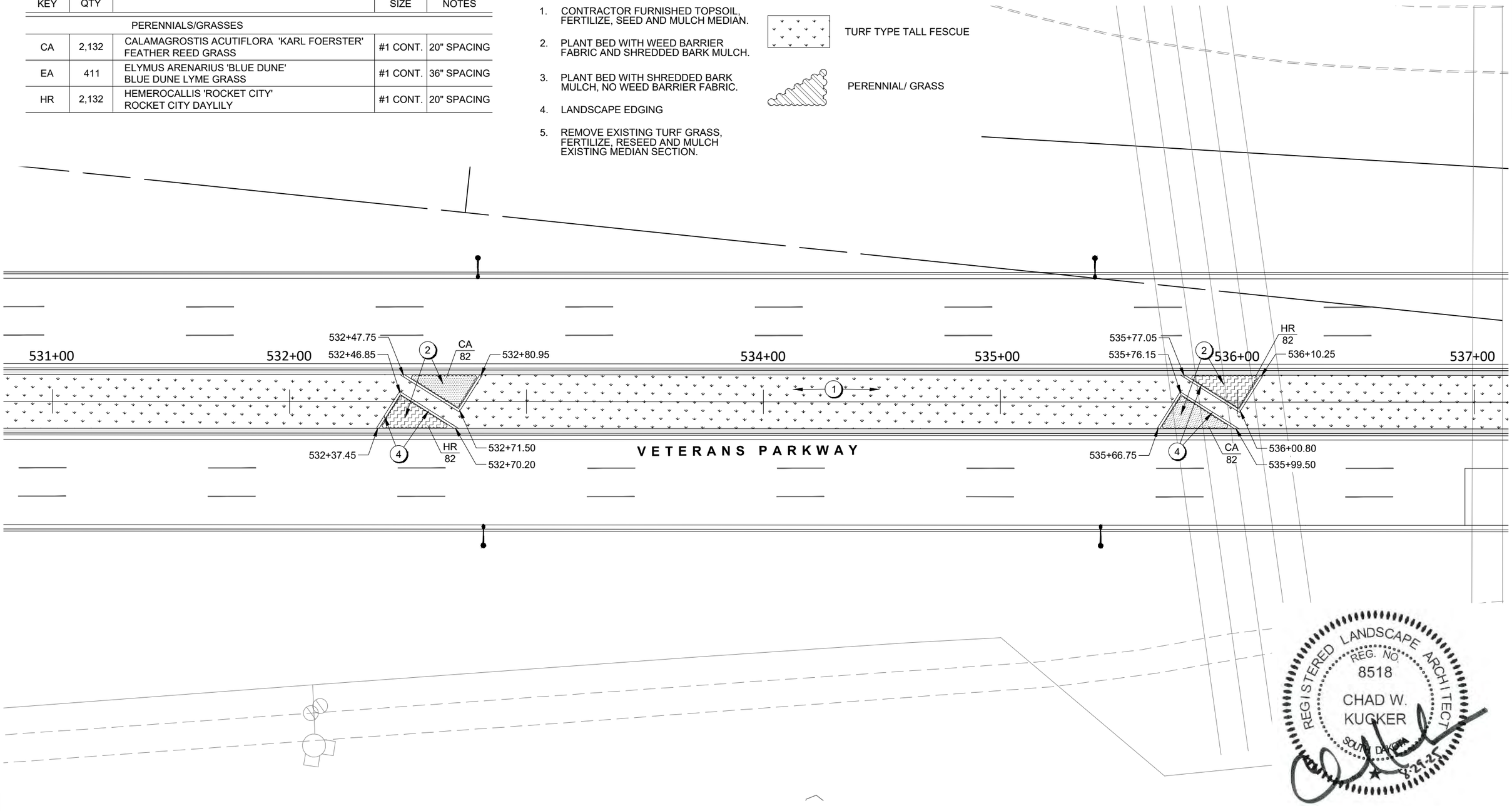
(#) KEYNOTES

1. CONTRACTOR FURNISHED TOPSOIL, FERTILIZE, SEED AND MULCH MEDIAN.
2. PLANT BED WITH WEED BARRIER FABRIC AND SHREDDED BARK MULCH.
3. PLANT BED WITH SHREDDED BARK MULCH, NO WEED BARRIER FABRIC.
4. LANDSCAPE EDGING
5. REMOVE EXISTING TURF GRASS, FERTILIZE, RESEED AND MULCH EXISTING MEDIAN SECTION.

LEGEND

TURF TYPE TALL FESCUE

PERENNIAL/ GRASS



REGISTERED LANDSCAPE ARCHITECT
REG. NO.
8518
CHAD W.
KUCKER
SOUTH DAKOTA
11-21-25

CONFLUENCE HDR

Landscape Plan

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H21	H39

FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

0 20 40

PLANT SCHEDULE - VETERANS PARKWAY

KEY	QTY		SIZE	NOTES
		PERENNIALS/GRASSES		
CA	2,132	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER' FEATHER REED GRASS	#1 CONT.	20" SPACING
EA	411	ELYMUS ARENARIUS 'BLUE DUNE' BLUE DUNE LYME GRASS	#1 CONT.	36" SPACING
HR	2,132	HEMEROCALLIS 'ROCKET CITY' ROCKET CITY DAYLILY	#1 CONT.	20" SPACING

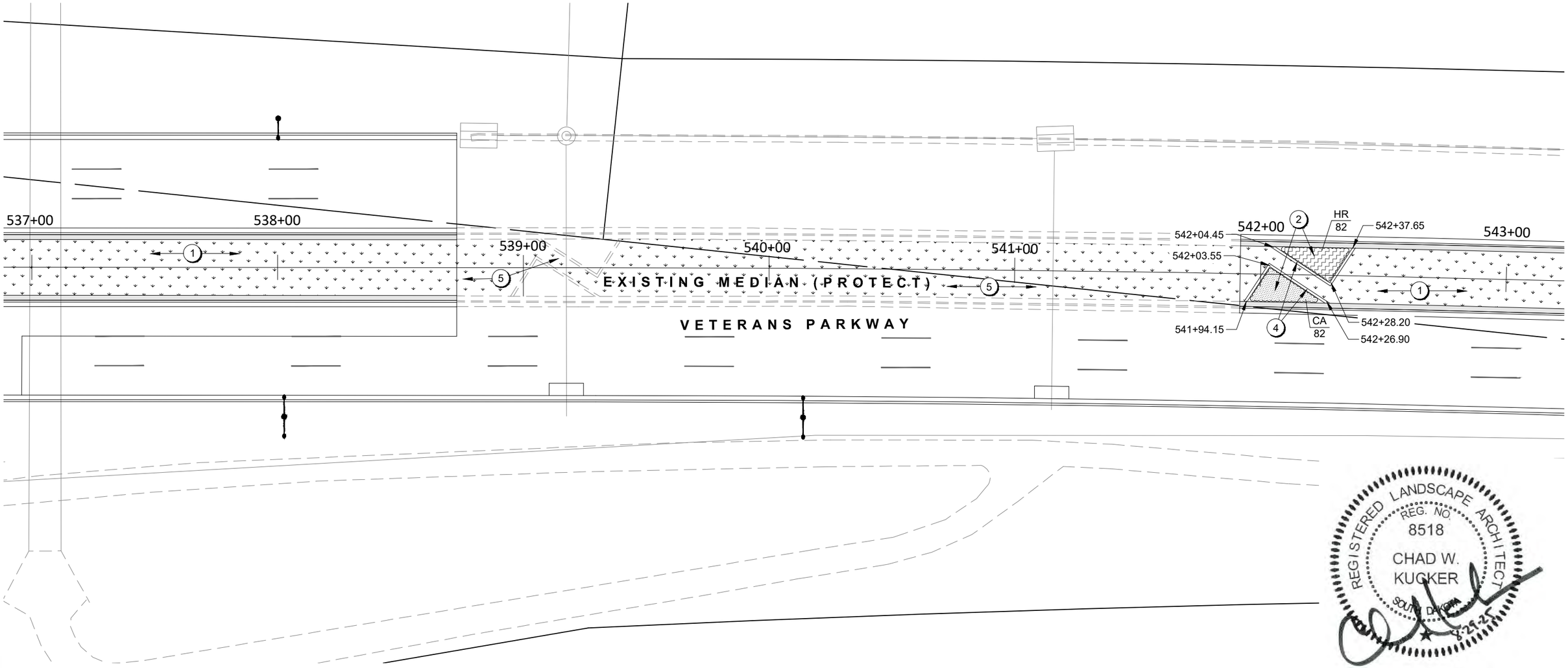
(#) KEYNOTES

1. CONTRACTOR FURNISHED TOPSOIL, FERTILIZE, SEED AND MULCH MEDIAN.
2. PLANT BED WITH WEED BARRIER FABRIC AND SHREDDED BARK MULCH.
3. PLANT BED WITH SHREDDED BARK MULCH, NO WEED BARRIER FABRIC.
4. LANDSCAPE EDGING
5. REMOVE EXISTING TURF GRASS, FERTILIZE, RESEED AND MULCH EXISTING MEDIAN SECTION.

LEGEND

TURF TYPE TALL FESCUE

PERENNIAL/ GRASS



REGISTERED LANDSCAPE ARCHITECT
REG. NO.
8518
CHAD W.
KUCKER
SOUTH DAKOTA
8-26-25

CONFLUENCE HDR

Landscape Plan

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H22	H39

FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

0 20 40

PLANT SCHEDULE - VETERANS PARKWAY

KEY	QTY		SIZE	NOTES
		PERENNIALS/GRASSES		
CA	2,132	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER' FEATHER REED GRASS	#1 CONT.	20" SPACING
EA	411	ELYMUS ARENARIUS 'BLUE DUNE' BLUE DUNE LYME GRASS	#1 CONT.	36" SPACING
HR	2,132	HEMEROCALLIS 'ROCKET CITY' ROCKET CITY DAYLILY	#1 CONT.	20" SPACING

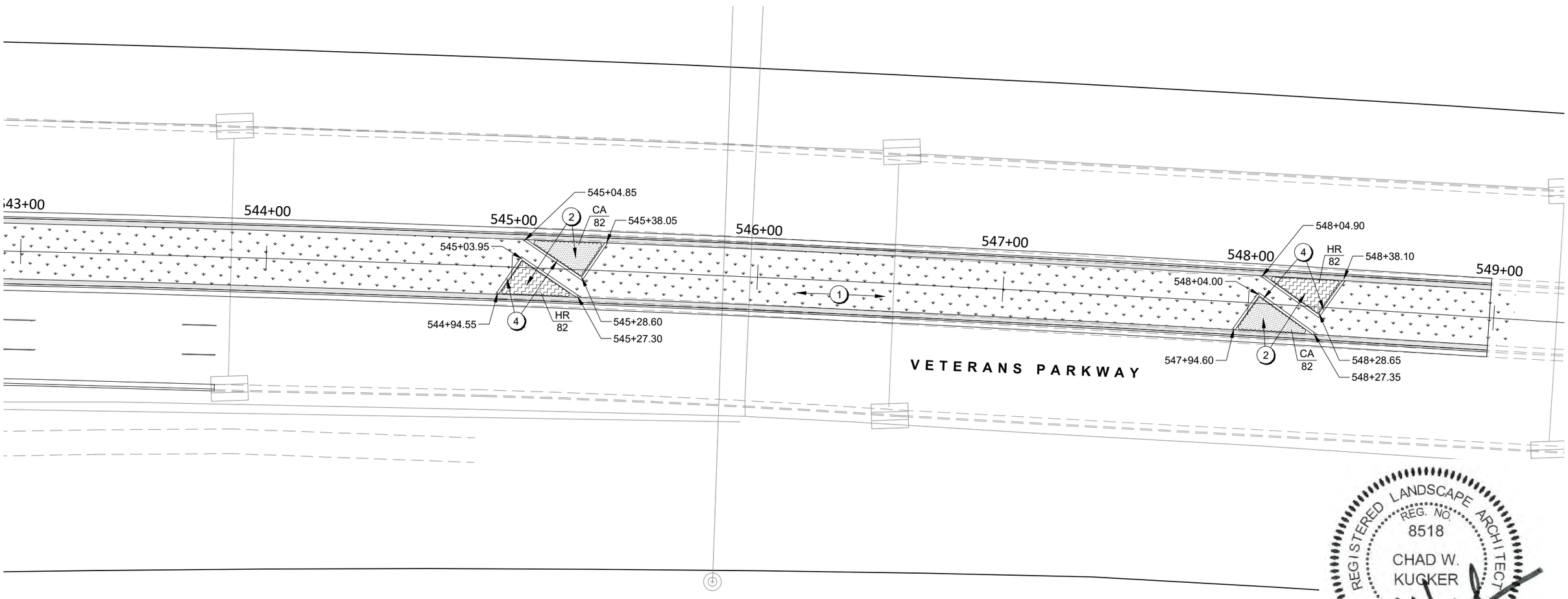
(#) KEYNOTES

1. CONTRACTOR FURNISHED TOPSOIL, FERTILIZE, SEED AND MULCH MEDIAN.
2. PLANT BED WITH WEED BARRIER FABRIC AND SHREDDED BARK MULCH.
3. PLANT BED WITH SHREDDED BARK MULCH, NO WEED BARRIER FABRIC.
4. LANDSCAPE EDGING
5. REMOVE EXISTING TURF GRASS, FERTILIZE, RESEED AND MULCH EXISTING MEDIAN SECTION.

LEGEND

TURF TYPE TALL FESCUE

PERENNIAL/ GRASS



REGISTERED LANDSCAPE ARCHITECT
REG. NO.
8518
CHAD W.
KUCKER
SOUTH DAKOTA
8-25-25

CONFLUENCE HDR

Landscape Plan

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H23	H39

FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

0 20 40

PLANT SCHEDULE - E 57TH STREET

KEY	QTY		SIZE	NOTES
		PERENNIALS/GRASSES		
CA	169	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER' FEATHER REED GRASS	#1 CONT.	20" SPACING
HR	145	HEMEROCALLIS 'ROCKET CITY' ROCKET CITY DAYLILY	#1 CONT.	20" SPACING
NP	108	NEPETA X FAASSENII 'PURRSIAN BLUE' PP23,788 PURRSIAN BLUE CATMINT	#1 CONT.	20" SPACING

(#) KEYNOTES

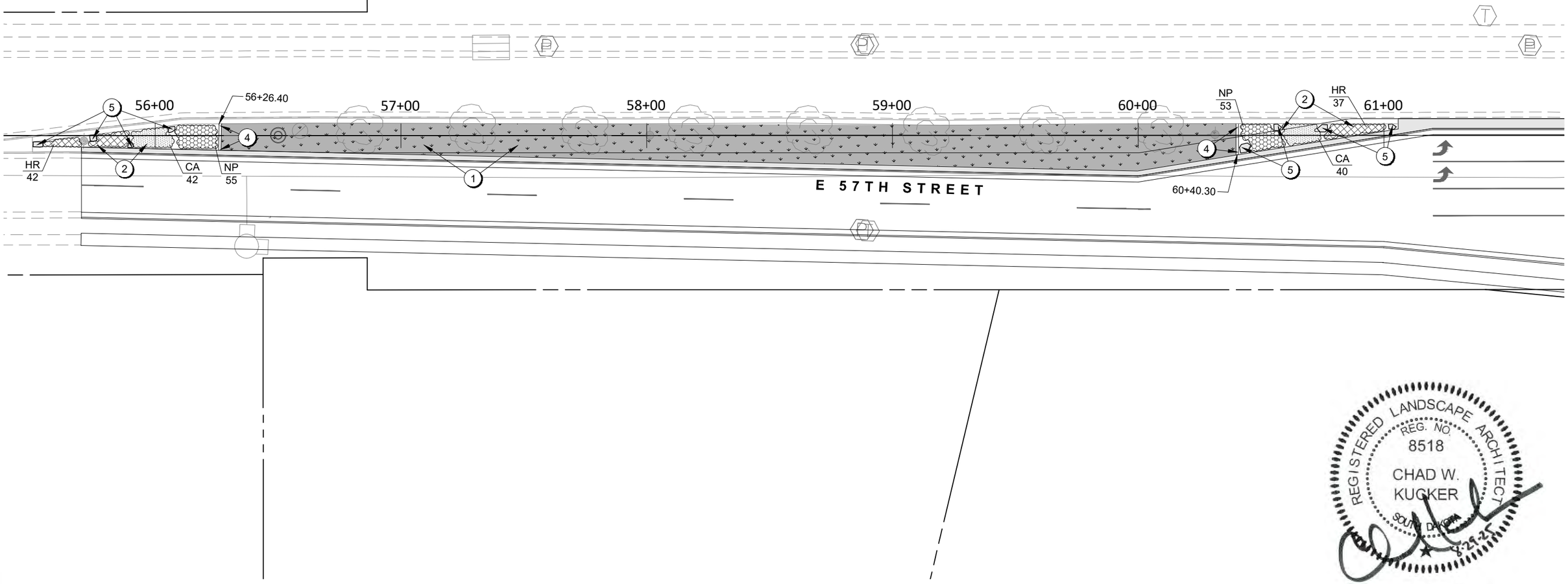
1. CONTRACTOR FURNISHED TOPSOIL, FERTILIZE, SEED AND MULCH MEDIAN.
2. PLANT BED WITH WEED BARRIER FABRIC AND SHREDDED BARK MULCH.
3. PLANT BED WITH SHREDDED BARK MULCH, NO WEED BARRIER FABRIC.
4. LANDSCAPE EDGING.
5. SALVAGED ORNAMENTAL LANDSCAPING BOULDER.
6. ORNAMENTAL LANDSCAPING BOULDER.
7. FERTILIZE, SEED AND MULCH SECTION OF EXISTING MEDIAN DISTURBED BY CONSTRUCTION.

LEGEND

TURF TYPE TALL FESCUE (NON-IRRIGATED)

TURF TYPE TALL FESCUE (IRRIGATED)

PERENNIAL/ GRASS



REGISTERED LANDSCAPE ARCHITECT
REG. NO.
8518
CHAD W.
KUCKER
SOUTH DAKOTA
8-26-25

CONFLUENCE HDR

Landscape Plan

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H24	H39

FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

0 20 40

PLANT SCHEDULE - E 57TH STREET

KEY	QTY		SIZE	NOTES
		PERENNIALS/GRASSES		
CA	169	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER' FEATHER REED GRASS	#1 CONT.	20" SPACING
HR	145	HEMEROCALLIS 'ROCKET CITY' ROCKET CITY DAYLILY	#1 CONT.	20" SPACING
NP	108	NEPETA X FAASSENII 'PURRSIAN BLUE' PP23,788 PURRSIAN BLUE CATMINT	#1 CONT.	20" SPACING

(#) KEYNOTES

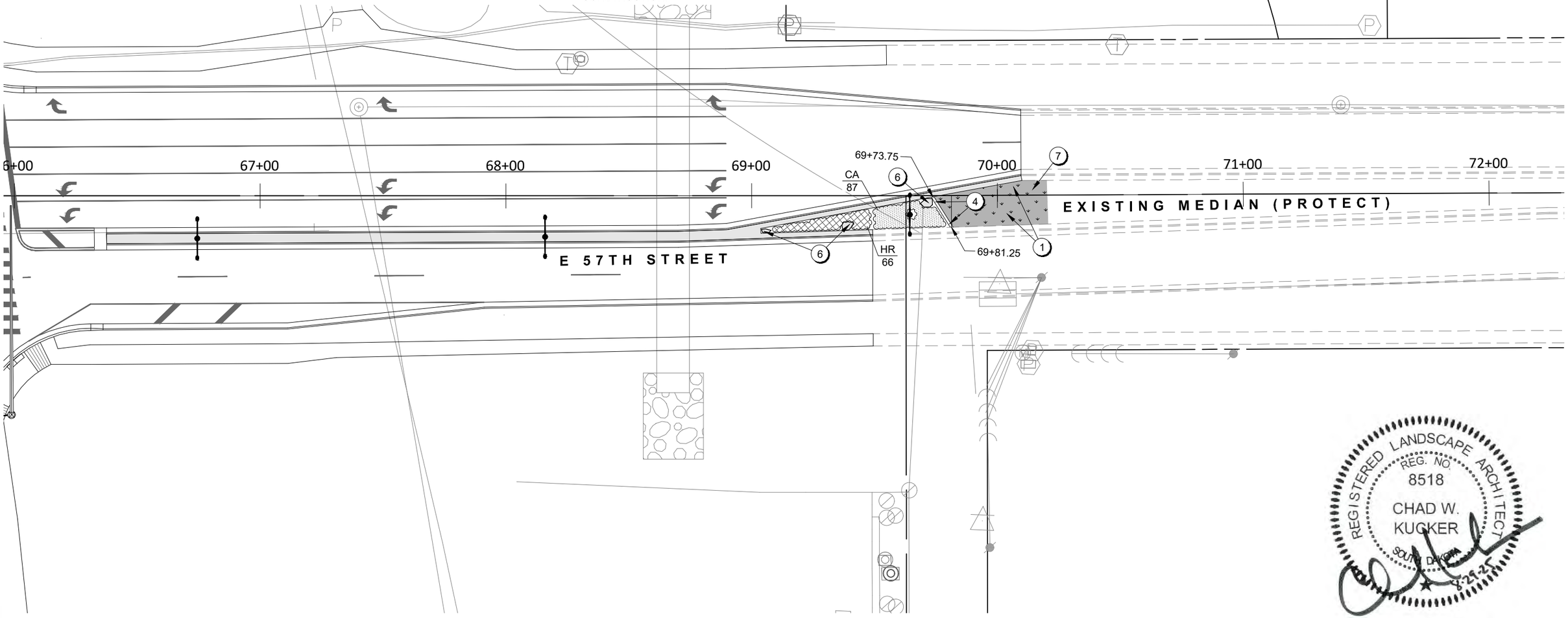
1. CONTRACTOR FURNISHED TOPSOIL, FERTILIZE, SEED AND MULCH MEDIAN.
2. PLANT BED WITH WEED BARRIER FABRIC AND SHREDDED BARK MULCH.
3. PLANT BED WITH SHREDDED BARK MULCH, NO WEED BARRIER FABRIC.
4. LANDSCAPE EDGING.
5. SALVAGED ORNAMENTAL LANDSCAPING BOULDER.
6. ORNAMENTAL LANDSCAPING BOULDER.
7. FERTILIZE, SEED AND MULCH SECTION OF EXISTING MEDIAN DISTURBED BY CONSTRUCTION.

LEGEND

TURF TYPE TALL FESCUE (NON-IRRIGATED)

TURF TYPE TALL FESCUE (IRRIGATED)

PERENNIAL/ GRASS



REGISTERED LANDSCAPE ARCHITECT
REG. NO.
8518
CHAD W.
KUCKER
SOUTH DAKOTA
8-29-25

CONFLUENCE HDR

Landscape Plan

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H25	H39

FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

0 20 40

PLANT SCHEDULE - E 69TH STREET

KEY	QTY		SIZE	NOTES
		DECIDUOUS TREE		
GD	7	GYMNOCLADUS DIOCUS 'ESPRESSO' ESPRESSO KENTUCKY COFFEETREE	2.5" CAL B&B	
UJ	2	ULMUS JAPONICA X PUMILA 'NEW HORIZON' NEW HORIZON ELM	2.5" CAL B&B	
UP	6	ULMUS AMERICANA 'PRINCETON' PRINCETON ELM	2.5" CAL B&B	
		PERENNIALS/GRASSES		
EA	180	ELYMUS ARENARIUS 'BLUE DUNE' BLUE DUNE LYME GRASS	#1 CONT.	36" SPACING

(#) KEYNOTES

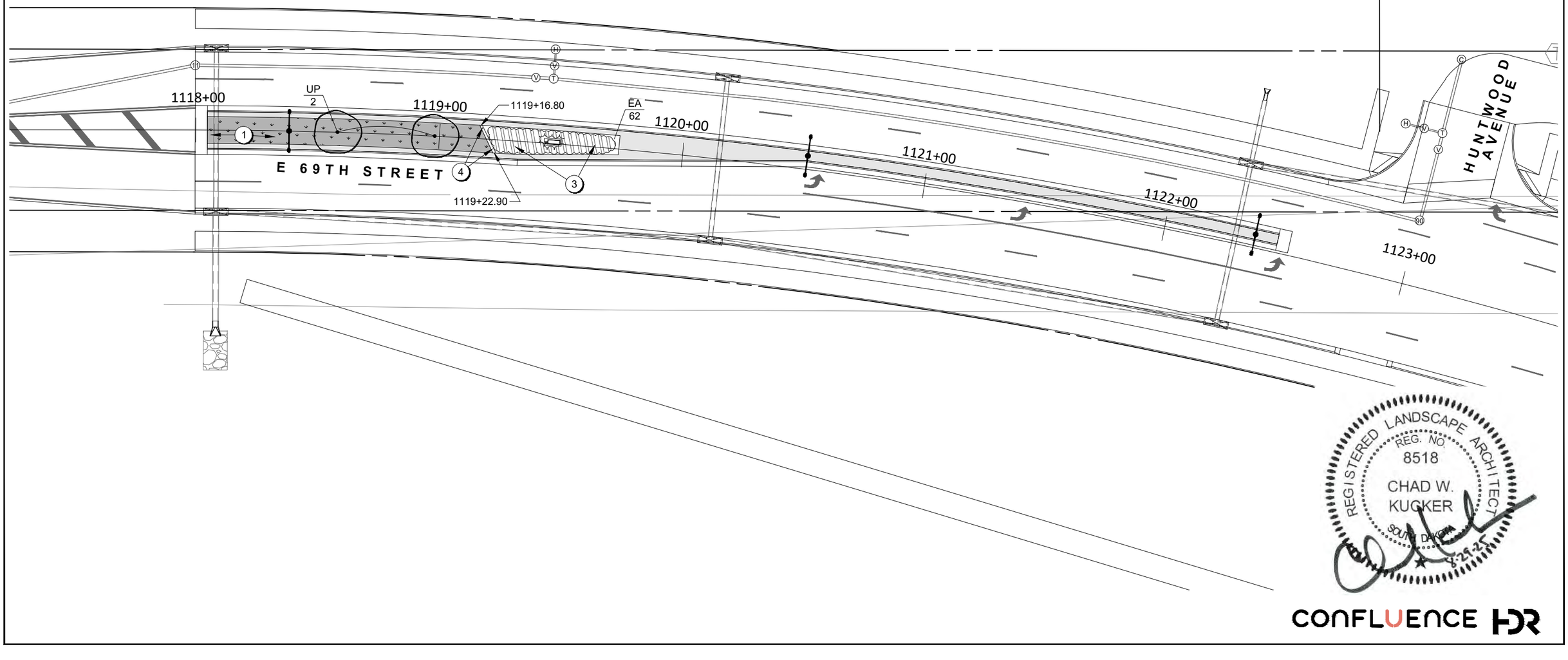
1. CONTRACTOR FURNISHED TOPSOIL, FERTILIZE, SEED AND MULCH MEDIAN.
2. PLANT BED WITH WEED BARRIER FABRIC AND SHREDDED BARK MULCH.
3. PLANT BED WITH SHREDDED BARK MULCH, NO WEED BARRIER FABRIC.
4. LANDSCAPE EDGING.
5. SALVAGED ORNAMENTAL LANDSCAPING BOULDER.
6. ORNAMENTAL LANDSCAPING BOULDER.
7. FERTILIZE, SEED AND MULCH SECTION OF EXISTING MEDIAN DISTURBED BY CONSTRUCTION.

LEGEND

TURF TYPE TALL FESCUE (NON-IRRIGATED)

TURF TYPE TALL FESCUE (IRRIGATED)

PERENNIAL/ GRASS



REGISTERED LANDSCAPE ARCHITECT
REG. NO.
8518
CHAD W.
KUCKER
SOUTH DAKOTA
8.29.25

CONFLUENCE HDR

Landscape Plan

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H26	H39

FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

0 20 40

PLANT SCHEDULE - E 69TH STREET

KEY	QTY		SIZE	NOTES
		DECIDUOUS TREE		
GD	7	GYMNOCLADUS DIOCUS 'ESPRESSO' ESPRESSO KENTUCKY COFFEETREE	2.5" CAL B&B	
UJ	2	ULMUS JAPONICA X PUMILA 'NEW HORIZON' NEW HORIZON ELM	2.5" CAL B&B	
UP	6	ULMUS AMERICANA 'PRINCETON' PRINCETON ELM	2.5" CAL B&B	
		PERENNIALS/GRASSES		
EA	180	ELYMUS ARENARIUS 'BLUE DUNE' BLUE DUNE LYME GRASS	#1 CONT.	36" SPACING

(#) KEYNOTES

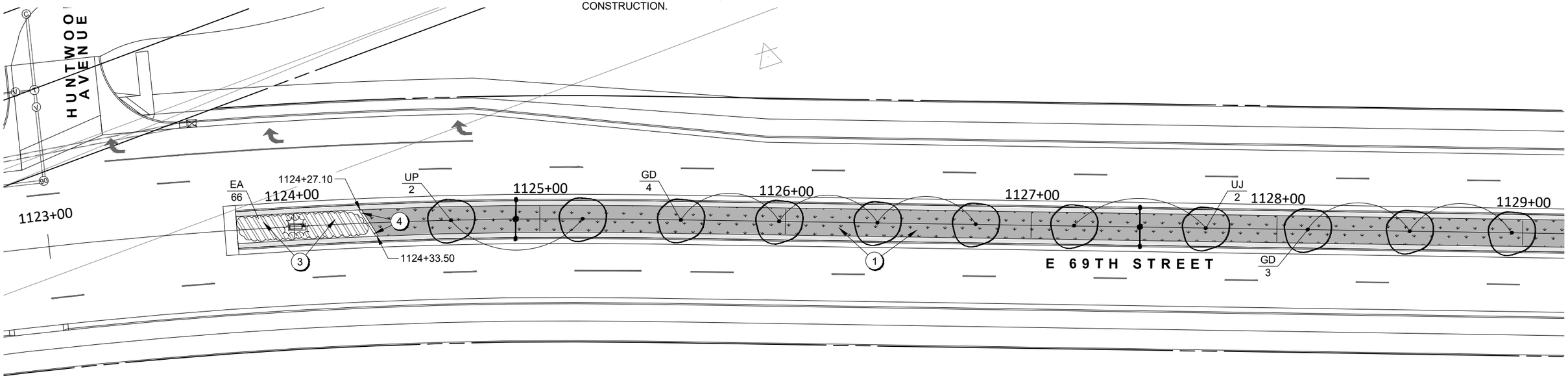
1. CONTRACTOR FURNISHED TOPSOIL, FERTILIZE, SEED AND MULCH MEDIAN.
2. PLANT BED WITH WEED BARRIER FABRIC AND SHREDDED BARK MULCH.
3. PLANT BED WITH SHREDDED BARK MULCH, NO WEED BARRIER FABRIC.
4. LANDSCAPE EDGING.
5. SALVAGED ORNAMENTAL LANDSCAPING BOULDER.
6. ORNAMENTAL LANDSCAPING BOULDER.
7. FERTILIZE, SEED AND MULCH SECTION OF EXISTING MEDIAN DISTURBED BY CONSTRUCTION.

LEGEND

TURF TYPE TALL FESCUE (NON-IRRIGATED)

TURF TYPE TALL FESCUE (IRRIGATED)

PERENNIAL/ GRASS



REGISTERED LANDSCAPE ARCHITECT
REG. NO.
8518
CHAD W.
KUCKER
SOUTH DAKOTA
8-29-25

CONFLUENCE HDR

Landscape Plan

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H27	H39

FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

0 20 40

PLANT SCHEDULE - E 69TH STREET

KEY	QTY		SIZE	NOTES
		DECIDUOUS TREE		
GD	7	GYMNOCLADUS DIOCUS 'ESPRESSO' ESPRESSO KENTUCKY COFFEETREE	2.5" CAL B&B	
UJ	2	ULMUS JAPONICA X PUMILA 'NEW HORIZON' NEW HORIZON ELM	2.5" CAL B&B	
UP	6	ULMUS AMERICANA 'PRINCETON' PRINCETON ELM	2.5" CAL B&B	
		PERENNIALS/GRASSES		
EA	180	ELYMUS ARENARIUS 'BLUE DUNE' BLUE DUNE LYME GRASS	#1 CONT.	36" SPACING

(#) KEYNOTES

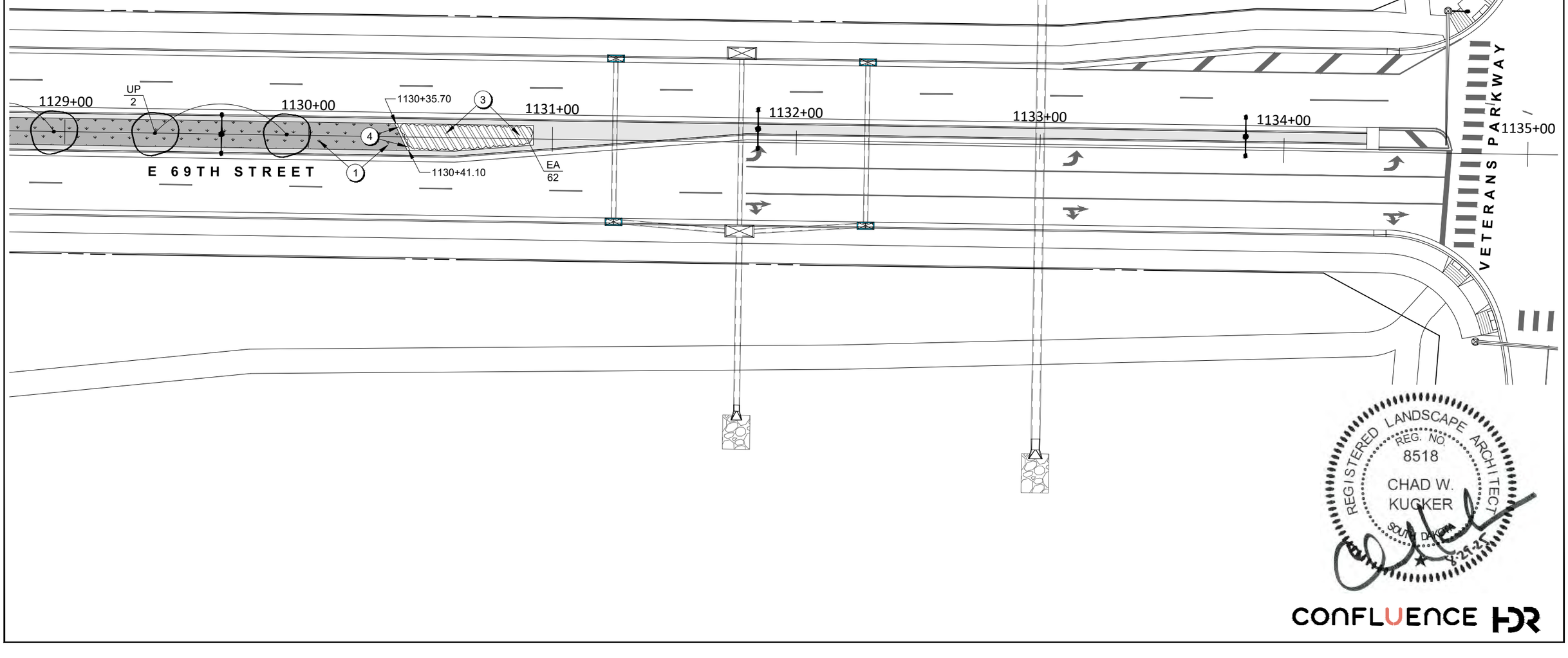
1. CONTRACTOR FURNISHED TOPSOIL, FERTILIZE, SEED AND MULCH MEDIAN.
2. PLANT BED WITH WEED BARRIER FABRIC AND SHREDDED BARK MULCH.
3. PLANT BED WITH SHREDDED BARK MULCH, NO WEED BARRIER FABRIC.
4. LANDSCAPE EDGING.
5. SALVAGED ORNAMENTAL LANDSCAPING BOULDER.
6. ORNAMENTAL LANDSCAPING BOULDER.
7. FERTILIZE, SEED AND MULCH SECTION OF EXISTING MEDIAN DISTURBED BY CONSTRUCTION.

LEGEND

TURF TYPE TALL FESCUE (NON-IRRIGATED)

TURF TYPE TALL FESCUE (IRRIGATED)

PERENNIAL/ GRASS



REGISTERED LANDSCAPE ARCHITECT
REG. NO.
8518
CHAD W.
KUCKER
SOUTH DAKOTA
8-29-25

CONFLUENCE HDR

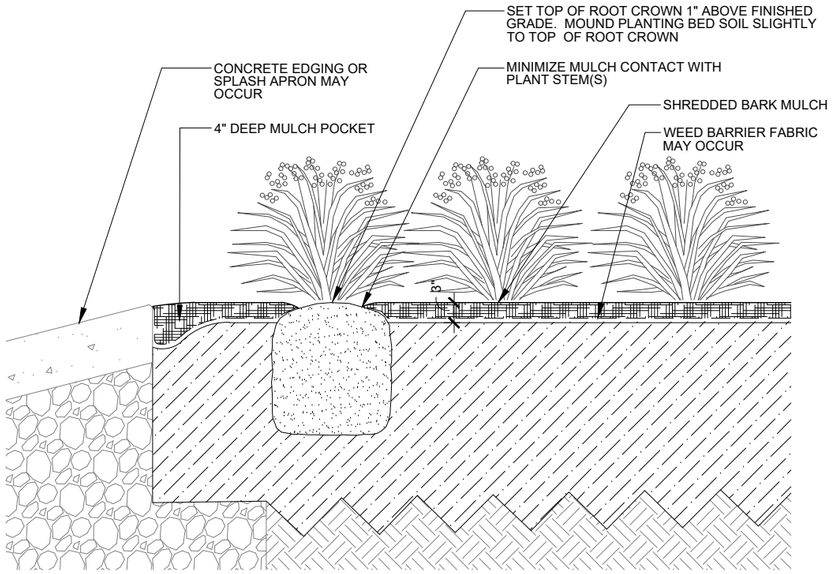
Landscape Details

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H28	H39

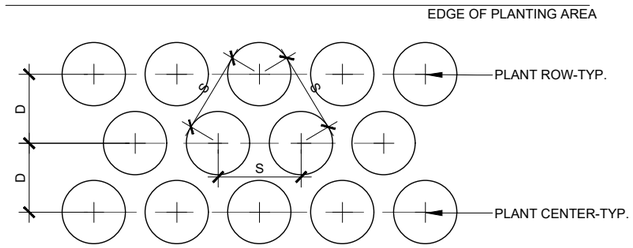
FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

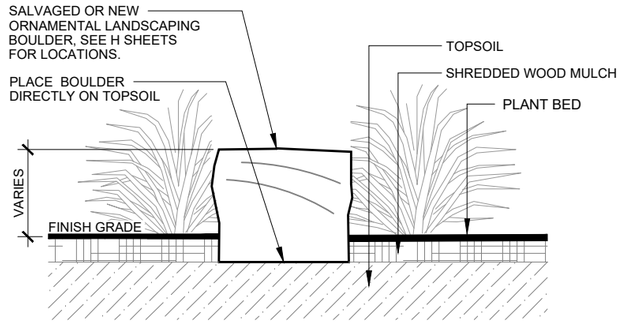


2 H28 **PLANT BEDS** SCALE: 3/4" = 1'-0"

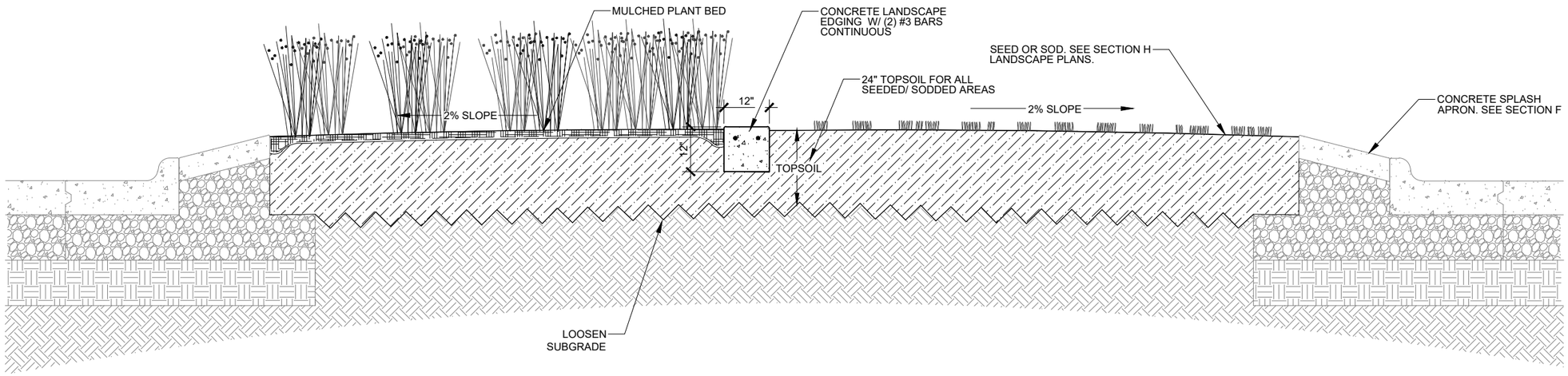
TRIANGULAR SPACING - 'S'	DISTANCE BETWEEN ROWS - 'D'
20"	17"
24" (2')	21"
36" (3')	31"



3 H28 **PLANT SPACING** SCALE: 3/4" = 1'-0"



4 H28 **ORNAMENTAL LANDSCAPING BOULDER** SCALE: 1/2" = 1'-0"



1 H28 **MEDIAN SECTION** SCALE: 3/8" = 1'-0"

REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
12-29-25

CONFLUENCE HDR

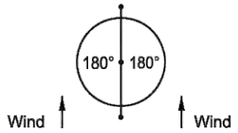
Landscape Standard Plates

FOR BIDDING PURPOSES ONLY

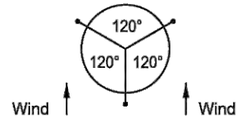
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H29	H39

FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

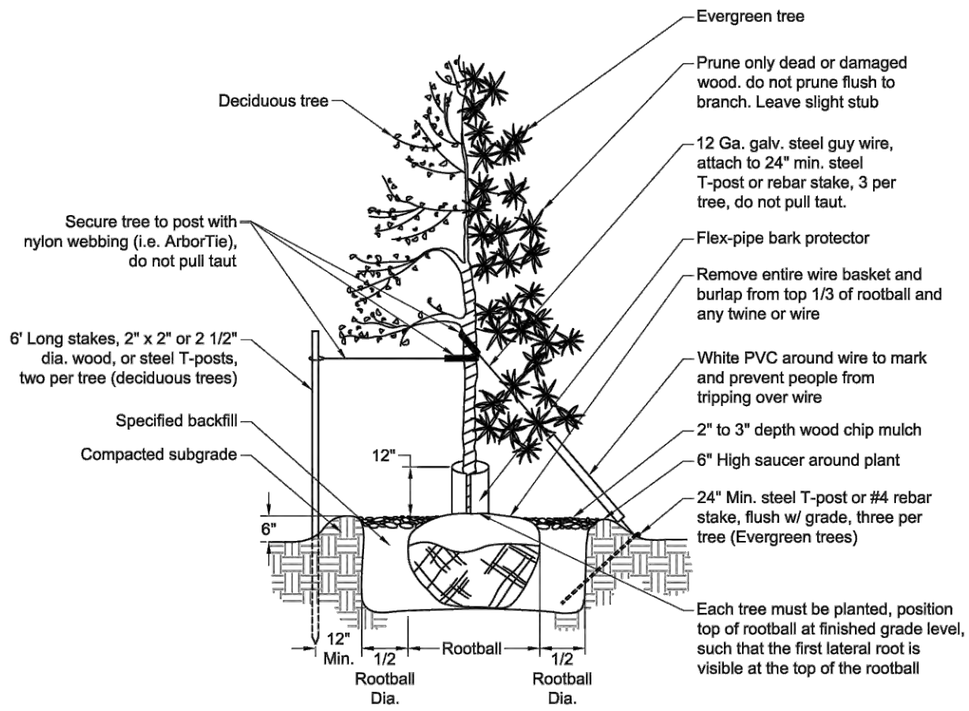


Guying Pattern For
Deciduous Tree Planting



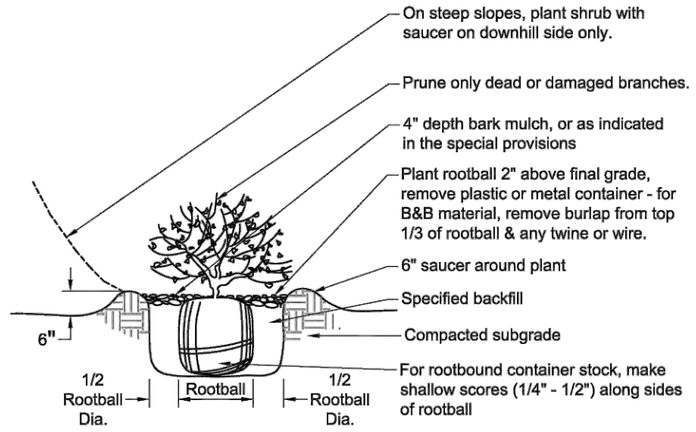
For trees on 4:1 or steeper slopes, place 2 guys upslope, one downslope; otherwise place for prevailing wind.

Guying Pattern For
Evergreen Tree Planting



Deciduous and Evergreen
Tree Planting and Guying Detail

(Guy and stake deciduous trees 2" and larger caliper and coniferous trees over 4' ht.)
Not to scale



Shrub Planting Detail

Not to scale

Revised: February 2021

Tree Planting

CITY OF SIOUX FALLS
PUBLIC WORKS
Providing a Better Quality of Life for You!

Specification Reference	Plate Number
No. Special	1100.01 SP

CONFLUENCE HDR

Irrigation Plan

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H30	H39

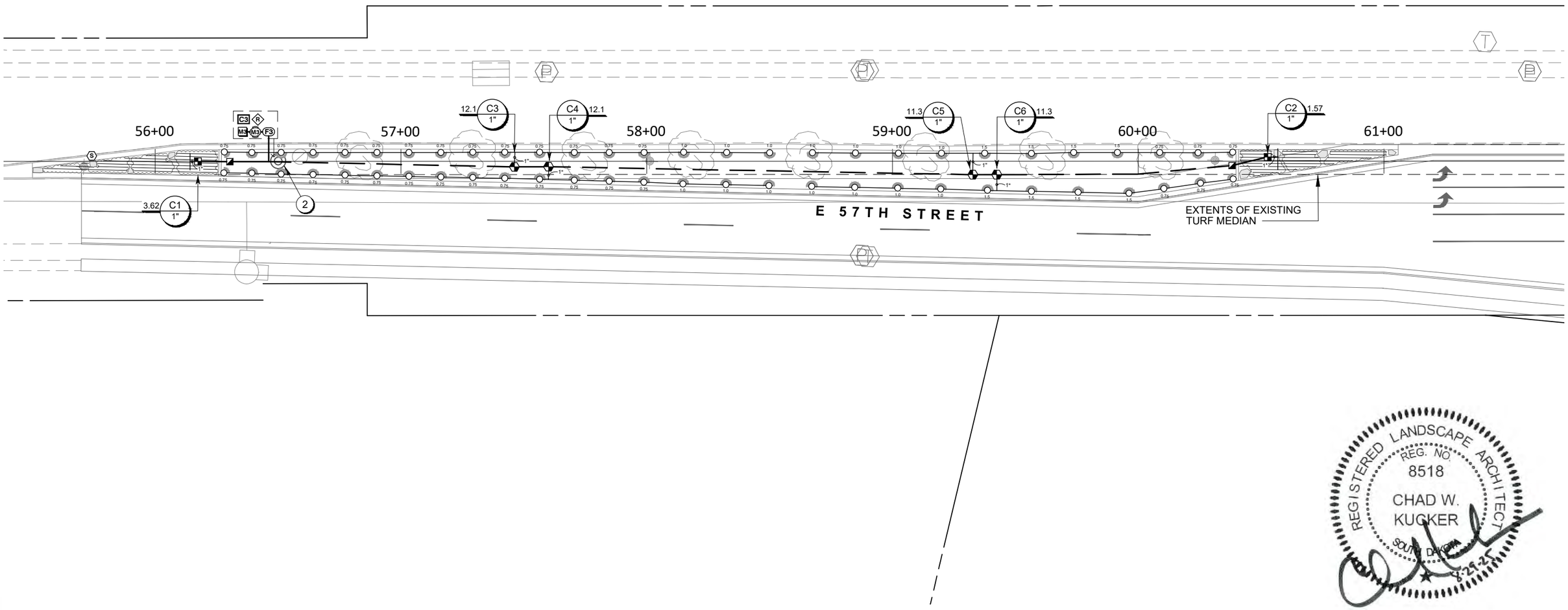
FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

0 20 40

KEYNOTES

1. IRRIGATION METER, BACKFLOW, ENCLOSURE AND CONTROLLER.
2. USE EXISTING IRRIGATION METER, BACKFLOW AND ENCLOSURE.
3. ADD NEW HEADS TO EXISTING IRRIGATION ZONES. MODIFY EXISTING IRRIGATION WHERE DISTURBED BY CONSTRUCTION.
4. ADD NEW DRIP ZONE TO EXISTING MAINLINE AND EXISTING CONTROLLER.



REGISTERED LANDSCAPE ARCHITECT
REG. NO.
8518
CHAD W.
KUCKER
SOUTH DAKOTA
8-29-25

CONFLUENCE HDR

Irrigation Plan

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H31	H39

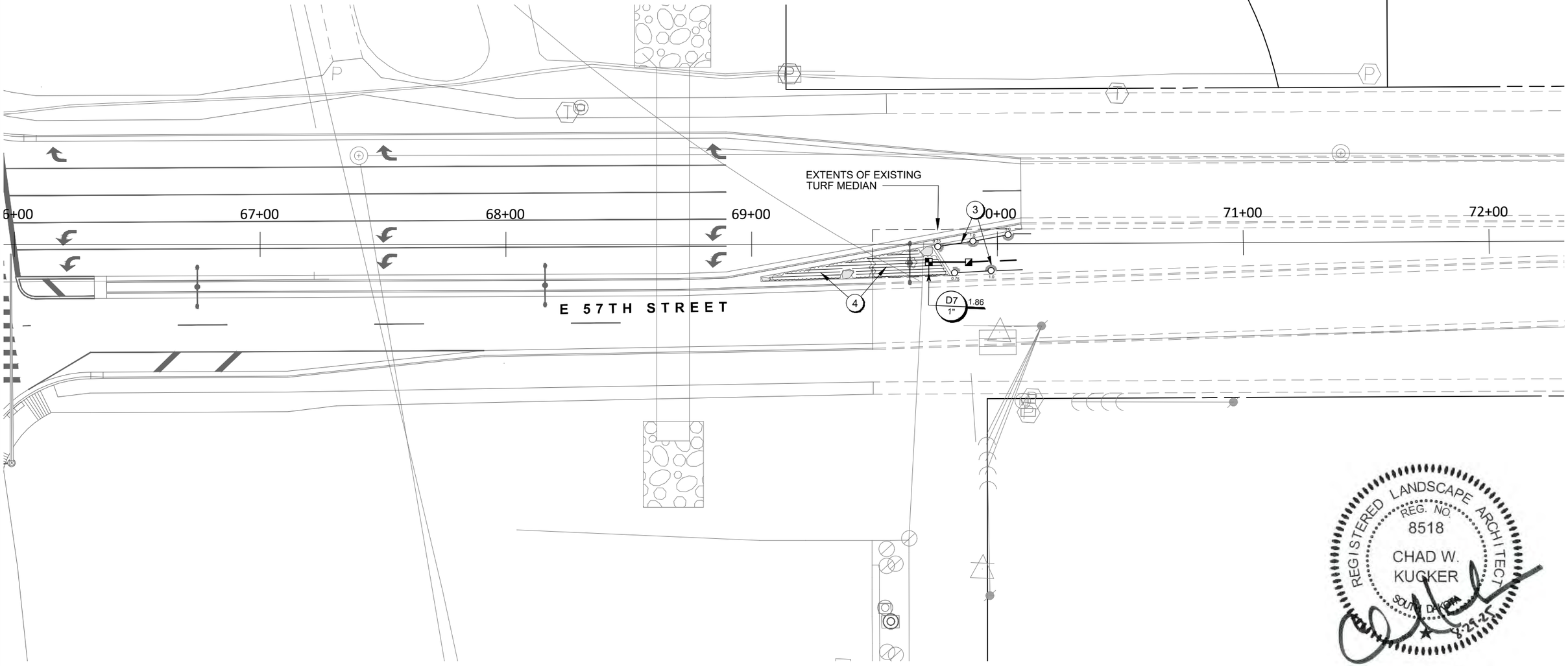
FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

0 20 40

KEYNOTES

1. IRRIGATION METER, BACKFLOW, ENCLOSURE AND CONTROLLER.
2. USE EXISTING IRRIGATION METER, BACKFLOW AND ENCLOSURE.
3. ADD NEW HEADS TO EXISTING IRRIGATION ZONES. MODIFY EXISTING IRRIGATION WHERE DISTURBED BY CONSTRUCTION.
4. ADD NEW DRIP ZONE TO EXISTING MAINLINE AND EXISTING CONTROLLER.



REGISTERED LANDSCAPE ARCHITECT
REG. NO.
8518
CHAD W. KUCKER
SOUTH DAKOTA
4-25-25

CONFLUENCE HDR

Irrigation Plan

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H32	H39

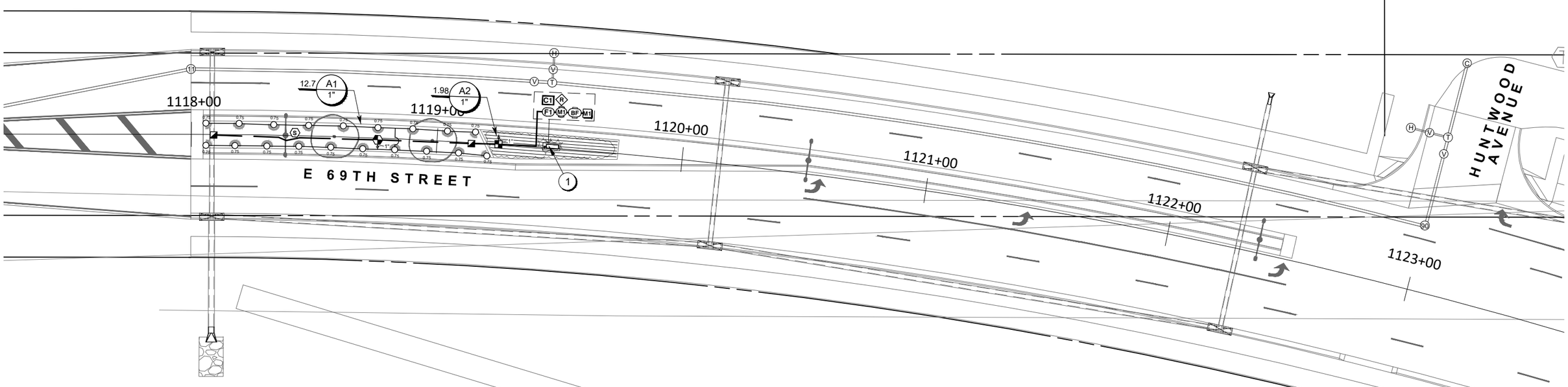
FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

0 20 40

(#) KEYNOTES

1. IRRIGATION METER, BACKFLOW, ENCLOSURE AND CONTROLLER.
2. USE EXISTING IRRIGATION METER, BACKFLOW AND ENCLOSURE.
3. ADD NEW HEADS TO EXISTING IRRIGATION ZONES. MODIFY EXISTING IRRIGATION WHERE DISTURBED BY CONSTRUCTION.
4. ADD NEW DRIP ZONE TO EXISTING MAINLINE AND EXISTING CONTROLLER.



REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
8.29.25

CONFLUENCE HDR

Irrigation Plan

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H33	H39

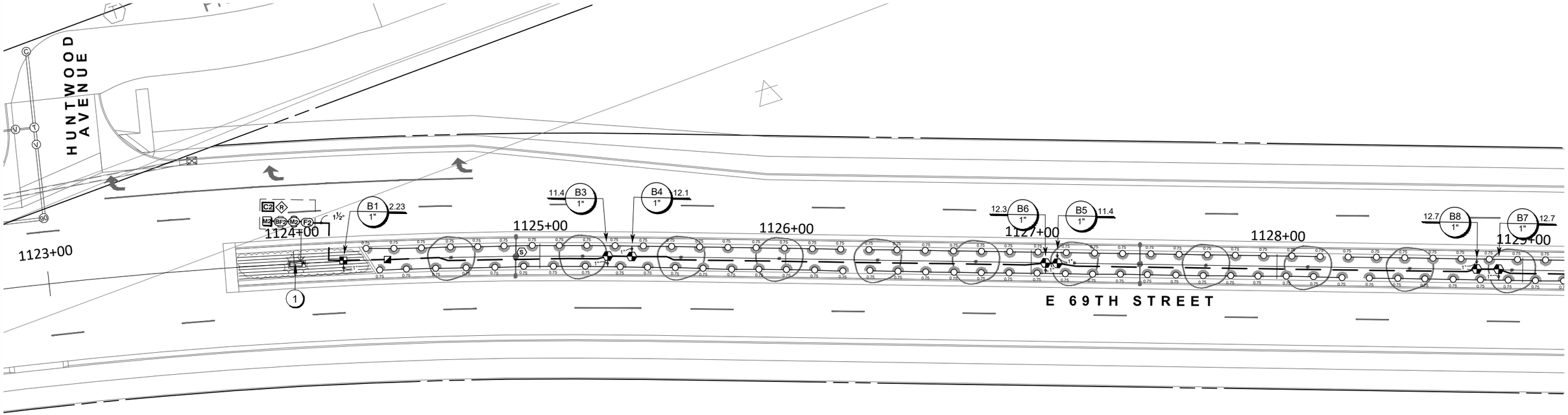
FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

0 20 40

KEYNOTES

1. IRRIGATION METER, BACKFLOW, ENCLOSURE AND CONTROLLER.
2. USE EXISTING IRRIGATION METER, BACKFLOW AND ENCLOSURE.
3. ADD NEW HEADS TO EXISTING IRRIGATION ZONES. MODIFY EXISTING IRRIGATION WHERE DISTURBED BY CONSTRUCTION.
4. ADD NEW DRIP ZONE TO EXISTING MAINLINE AND EXISTING CONTROLLER.



REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
12-29-25

CONFLUENCE HDR

Irrigation Plan

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H34	H39

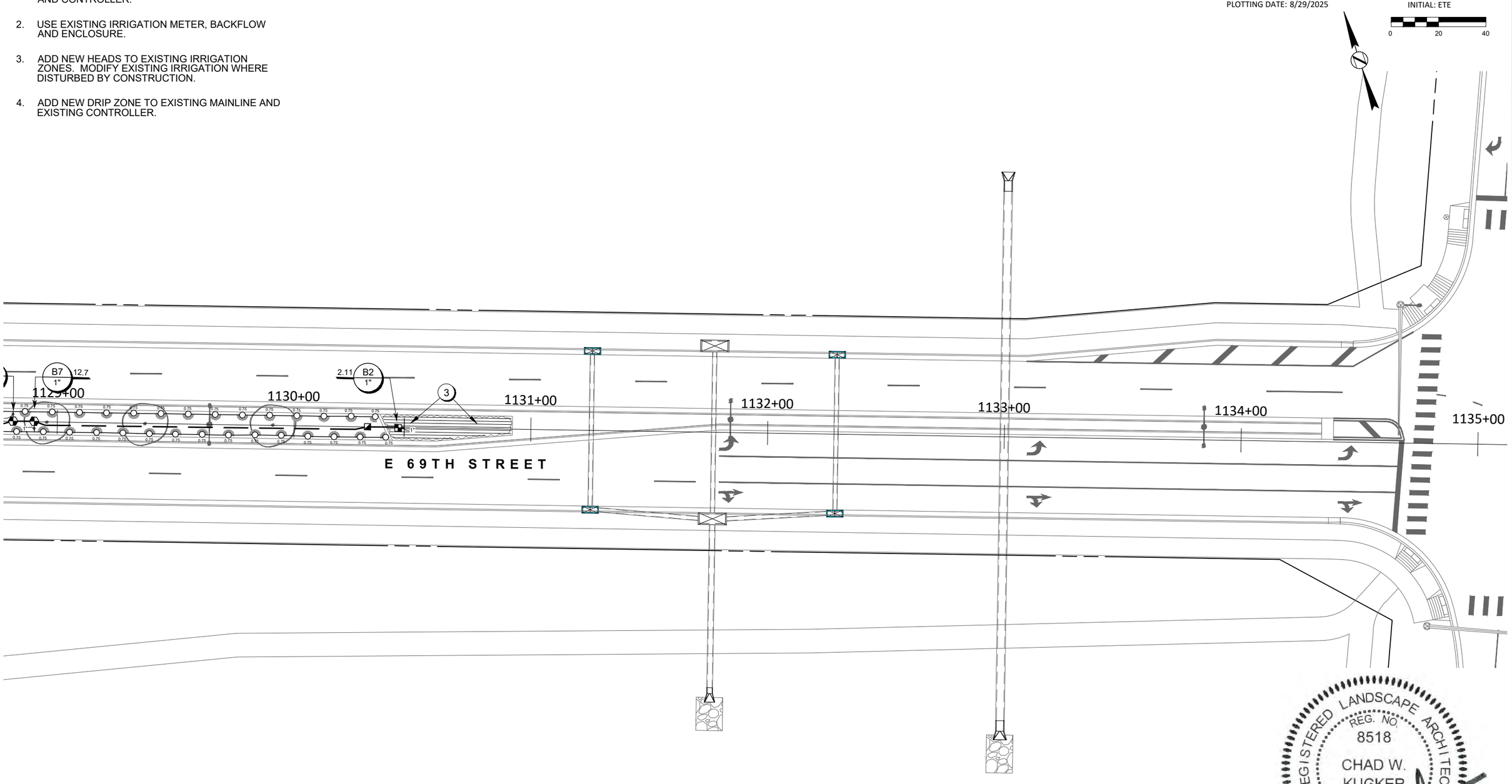
FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

0 20 40

KEYNOTES

1. IRRIGATION METER, BACKFLOW, ENCLOSURE AND CONTROLLER.
2. USE EXISTING IRRIGATION METER, BACKFLOW AND ENCLOSURE.
3. ADD NEW HEADS TO EXISTING IRRIGATION ZONES. MODIFY EXISTING IRRIGATION WHERE DISTURBED BY CONSTRUCTION.
4. ADD NEW DRIP ZONE TO EXISTING MAINLINE AND EXISTING CONTROLLER.



REGISTERED LANDSCAPE ARCHITECT
REG. NO.
8518
CHAD W.
KUCKER
SOUTH DAKOTA
8-29-25

CONFLUENCE HDR

Irrigation Schedules

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H35	H39

FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

IRRIGATION SCHEDULE

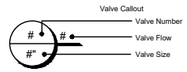
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI	GPM	RADIUS
○	RAIN BIRD 3504-PC 0.75 TURF ROTOR, 4-INCH POP-UP.	158	35	0.67	15'
○	RAIN BIRD 3504-PC 1.0 TURF ROTOR, 4-INCH POP-UP.	22	35	0.92	19'
○	RAIN BIRD 3504-PC 1.5 TURF ROTOR, 4-INCH POP-UP.	8	35	1.28	21'

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
▪	HUNTER ICZ-101-25-LF 1" DRIP CONTROL ZONE KIT. 1-INCH ICV GLOBE VALVE WITH 1-INCH HY100 FILTER SYSTEM. PRESSURE REGULATION: 25 PSI. FLOW RANGE: .5 GPM TO 15 GPM. 150 MESH STAINLESS STEEL SCREEN.	6
▤	AREA TO RECEIVE DRIPLINE HUNTER HDL-06-18-CV HDL-06-18-CV: HUNTER DRIPLINE W/ 0.6 GPH EMITTERS AT 18" O.C. CHECK VALVE, DARK BROWN TUBING WITH GRAY STRIPING. DRIPLINE LATERALS SPACED AT 18" APART, WITH EMITTERS OFFSET FOR TRIANGULAR PATTERN. INSTALL WITH HUNTER PLD BARBED OR PLD-LOC FITTINGS.	1,734 LF

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
◆	HUNTER PGV-100G WITH ACCUSYNC-40 1" 1-INCH PLASTIC ELECTRIC REMOTE CONTROL VALVE. GLOBE CONFIGURATION, WITH ACCUSYNC FIXED 40 PSI PRESSURE REGULATOR.	11
◪	HUNTER HQ-44RC 1" QUICK COUPLER VALVE, YELLOW RUBBER COVER, RED BRASS AND STAINLESS STEEL, WITH 1-INCH NPT INLET, 2-PIECE BODY.	7
M1	HUNTER ICV-G 1" ELECTRIC MASTER VALVE, GLOBE CONFIGURATION.	1
M2	HUNTER ICV-G 1" ELECTRIC MASTER VALVE, GLOBE CONFIGURATION.	1
M3	HUNTER ICV-G 1" ELECTRIC MASTER VALVE, GLOBE CONFIGURATION.	1
BF	ZURN 375XL 1" REDUCED PRESSURE PRINCIPLE ASSEMBLY.	1
BF2	ZURN 375XL 1" REDUCED PRESSURE PRINCIPLE ASSEMBLY.	1
C1	HUNTER I2C-0800-M/ICC-PED/EZDM 8 STATION OUTDOOR CONTROLLER WITH EZDM DECODER OUTPUT MODULE. GRAY METAL ENCLOSURE AND PEDESTAL.	1
C2	HUNTER I2C-0800-M/ICC-PED/EZDM 8 STATION OUTDOOR CONTROLLER WITH EZDM DECODER OUTPUT MODULE. GRAY METAL ENCLOSURE AND PEDESTAL.	1
C3	HUNTER I2C-0800-M/ICC-PED/EZDM 8 STATION OUTDOOR CONTROLLER WITH EZDM DECODER OUTPUT MODULE. GRAY METAL ENCLOSURE AND PEDESTAL.	1
D	HUNTER EZ-1 SINGLE STATION EZ DECODER FOR USE WITH EZDM DECODER MODULE ONLY. TO BE INSTALLED ON UNIVERSAL DECODER STAKE KIT (DECSTAKE10).	17
R	HUNTER ROAMXL-R RECEIVER ONLY. ROAM REMOTE ALLOWS FOR CONTROLLER OPERATION UP TO 2 MILES. REMOTE TRANSMITTER IS NOT REQUIRED.	3
S	HUNTER WR-CLIK RAIN SENSOR, INSTALL WITHIN 1000 FT OF CONTROLLER, IN LINE OF SIGHT. 22-28 VAC/VDC 100 MA POWER FROM TIMER TRANSFORMER. MOUNT TO LIGHT POLE.	3

IRRIGATION SCHEDULE

F1	HUNTER HFS-100 FLOW SENSOR, 1IN. SCHEDULE 40 SENSOR BODY, 24 VAC, 2 AMP.	1
F2	HUNTER HFS-100 FLOW SENSOR, 1IN. SCHEDULE 40 SENSOR BODY, 24 VAC, 2 AMP.	1
F3	HUNTER HFS-100 FLOW SENSOR, 1IN. SCHEDULE 40 SENSOR BODY, 24 VAC, 2 AMP.	1
M1	WATER METER 1"	1
M2	WATER METER 1"	1
M3	WATER METER 1" USE EXISTING WATER METER AND BACKFLOW	1
———	IRRIGATION LATERAL LINE: HDPE PE4710 DR 15 1"	2,296 LF
— — —	IRRIGATION MAINLINE: PVC CLASS 200 SDR 21 1 1/2"	1,312 LF



VALVE SCHEDULE

NUMBER	MODEL	SIZE	TYPE	GPM	PSI	PSI @ POC	PRECIP
A1	HUNTER PGV-100G WITH ACCUSYNC-40	1"	TURF ROTOR	12.73	37.3	55.7	0.83 in/h
A2	HUNTER ICZ-101-25-LF	1"	AREA FOR DRIPLINE	1.98	33.0	49.3	0.43 in/h
B1	HUNTER ICZ-101-25-LF	1"	AREA FOR DRIPLINE	2.23	33.2	49.5	0.43 in/h
B2	HUNTER ICZ-101-25-LF	1"	AREA FOR DRIPLINE	2.11	33.1	49.5	0.43 in/h
B3	HUNTER PGV-100G WITH ACCUSYNC-40	1"	TURF ROTOR	11.39	37.3	55.7	0.62 in/h
B4	HUNTER PGV-100G WITH ACCUSYNC-40	1"	TURF ROTOR	12.06	37.5	56.0	0.74 in/h
B5	HUNTER PGV-100G WITH ACCUSYNC-40	1"	TURF ROTOR	11.39	37.4	56.4	0.64 in/h
B6	HUNTER PGV-100G WITH ACCUSYNC-40	1"	TURF ROTOR	12.31	37.6	56.8	0.58 in/h
B7	HUNTER PGV-100G WITH ACCUSYNC-40	1"	TURF ROTOR	12.73	38.2	58.2	0.6 in/h
B8	HUNTER PGV-100G WITH ACCUSYNC-40	1"	TURF ROTOR	12.73	38.2	58.2	0.59 in/h
C1	HUNTER ICZ-101-25-LF	1"	AREA FOR DRIPLINE	3.62	34.1	36.6	0.43 in/h
C2	HUNTER ICZ-101-25-LF	1"	AREA FOR DRIPLINE	1.57	33.0	35.3	0.43 in/h
C3	HUNTER PGV-100G WITH ACCUSYNC-40	1"	TURF ROTOR	12.14	37.5	41.9	0.71 in/h
C4	HUNTER PGV-100G WITH ACCUSYNC-40	1"	TURF ROTOR	12.14	37.7	42.1	0.71 in/h
C5	HUNTER PGV-100G WITH ACCUSYNC-40	1"	TURF ROTOR	11.31	37.7	42.5	0.63 in/h
C6	HUNTER PGV-100G WITH ACCUSYNC-40	1"	TURF ROTOR	11.31	37.5	42.3	0.62 in/h
D7	HUNTER ICZ-101-25-LF	1"	AREA FOR DRIPLINE	1.86	33		0.43 in/h

CRITICAL ANALYSIS

Generated: 2025-08-29 09:47

P.O.C. NUMBER: 01
Water Source Information:

FLOW AVAILABLE
Water Meter Size: 1"
Flow Available 19.24 GPM

PRESSURE AVAILABLE
Static Pressure at POC: 65 PSI
Elevation Change: 5.00 ft
Service Line Size: 1"
Length of Service Line: 20 ft
Pressure Available: 61 PSI

DESIGN ANALYSIS
Maximum Station Flow: 12.73 GPM
Flow Available at POC: 19.24 GPM
Residual Flow Available: 6.51 GPM

Critical Station: A1
Design Pressure: 35 PSI
Friction Loss: 0.51 PSI
Fittings Loss: 0.05 PSI
Elevation Loss: 0 PSI
Loss through Valve: 1.74 PSI
Pressure Req. at Critical Station: 37.3 PSI
Loss for Fittings: 0.04 PSI
Loss for Main Line: 0.35 PSI
Loss for POC to Valve Elevation: 0 PSI
Loss for Backflow: 14 PSI
Loss for Master Valve: 3 PSI
Loss for Water Meter: 0.97 PSI
Critical Station Pressure at POC: 55.7 PSI
Pressure Available: 61 PSI
Residual Pressure Available: 5.35 PSI

P.O.C. NUMBER: 02
Water Source Information:

FLOW AVAILABLE
Water Meter Size: 1"
Flow Available 19.24 GPM

PRESSURE AVAILABLE
Static Pressure at POC: 65 PSI
Elevation Change: 5.00 ft
Service Line Size: 1"
Length of Service Line: 20 ft
Pressure Available: 61 PSI

DESIGN ANALYSIS
Maximum Station Flow: 12.73 GPM
Flow Available at POC: 19.24 GPM
Residual Flow Available: 6.51 GPM

Critical Station: B8
Design Pressure: 35 PSI
Friction Loss: 1.35 PSI
Fittings Loss: 0.13 PSI
Elevation Loss: 0 PSI
Loss through Valve: 1.74 PSI
Pressure Req. at Critical Station: 38.2 PSI
Loss for Fittings: 0.18 PSI
Loss for Main Line: 1.82 PSI
Loss for POC to Valve Elevation: 0 PSI
Loss for Backflow: 14 PSI
Loss for Master Valve: 3 PSI
Loss for Water Meter: 0.97 PSI
Critical Station Pressure at POC: 58.2 PSI
Pressure Available: 61 PSI
Residual Pressure Available: 2.81 PSI

P.O.C. NUMBER: 03
Water Source Information: Use Existing Water Meter and Backflow

FLOW AVAILABLE
Water Meter Size: 1"
Flow Available 19.24 GPM

PRESSURE AVAILABLE
Static Pressure at POC: 65 PSI
Elevation Change: 5.00 ft
Service Line Size: 1"
Length of Service Line: 20 ft
Pressure Available: 61 PSI

DESIGN ANALYSIS
Maximum Station Flow: 12.14 GPM
Flow Available at POC: 19.24 GPM
Residual Flow Available: 7.1 GPM

Critical Station: C5
Design Pressure: 35 PSI
Friction Loss: 0.77 PSI
Fittings Loss: 0.08 PSI
Elevation Loss: 0 PSI
Loss through Valve: 1.82 PSI
Pressure Req. at Critical Station: 37.7 PSI
Loss for Fittings: 0.09 PSI
Loss for Main Line: 0.89 PSI
Loss for POC to Valve Elevation: 0 PSI
Loss for Backflow: 0 PSI
Loss for Master Valve: 3 PSI
Loss for Water Meter: 0.83 PSI
Critical Station Pressure at POC: 42.5 PSI
Pressure Available: 61 PSI
Residual Pressure Available: 18.5 PSI

CONFLUENCE HDR

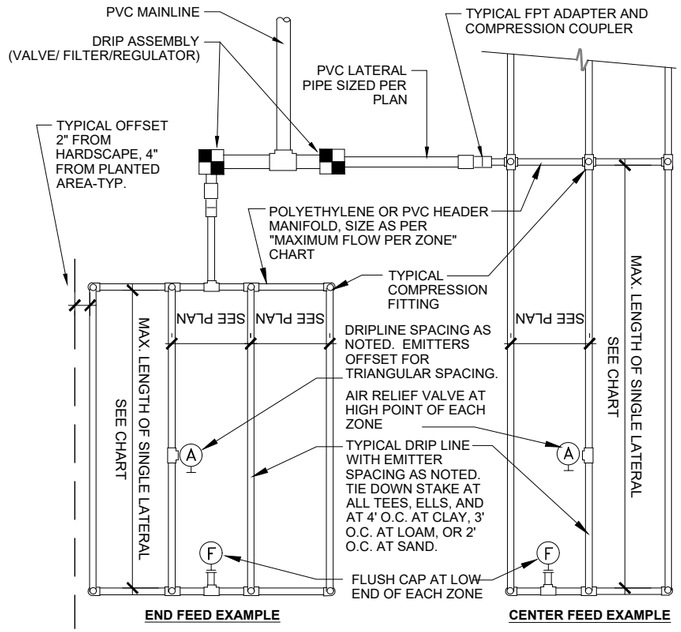
Irrigation Details

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H36	H39

FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE



MAXIMUM LATERAL LENGTH (FEET)

INLET PSI	EMITTER SPACING								
	0.4 GPH			0.6 GPH			1.0 GPH		
	12"	18"	24"	12"	18"	24"	12"	18"	24"
15	289	401	502	173	240	300	126	176	222
20	354	494	620	230	320	402	169	235	295
25	405	563	706	265	373	471	197	276	346
30	441	621	783	299	417	523	218	308	390
35	481	671	842	333	462	580	240	337	425
40	508	719	910	342	483	611	263	362	452
45	542	755	949	364	518	657	271	384	486
50	558	784	988	387	543	685	288	401	503

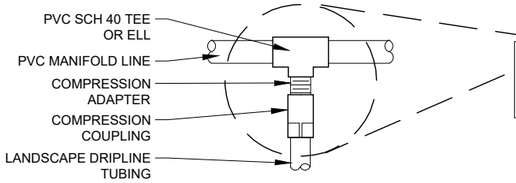
FLOW PER 100 FT (GPM)

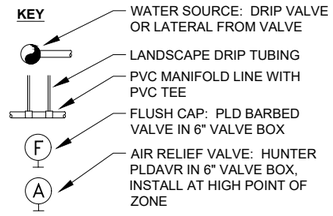
EMITTER FLOW	12" SPACING	18" SPACING	24" SPACING
0.4 GPH	0.67 GPM	0.44 GPM	0.33 GPM
0.6 GPH	1.0 GPM	0.67 GPM	0.50 GPM
1.0 GPH	1.67 GPM	1.11 GPM	0.83 GPM

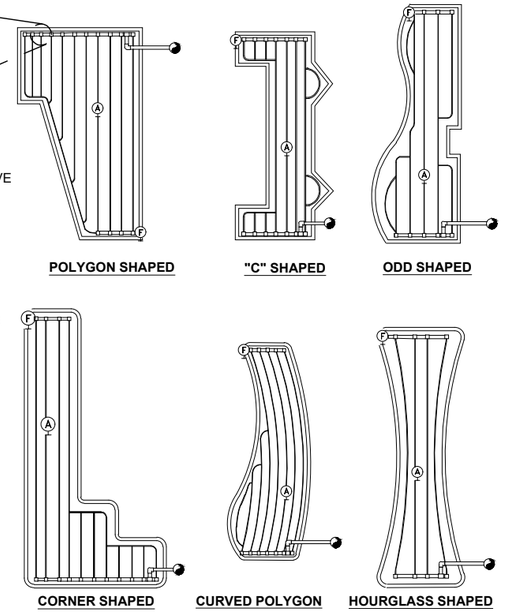
MAXIMUM FLOW PER ZONE

SCH. 40 PVC HEADER		
PIPE SIZE	MAX GPM*	PSI LOSS**
1/2"	4.7 GPM	7.7 PSI
3/4"	8.3 GPM	5.6 PSI
1"	13.5 GPM	4.2 PSI
1-1/2"	33.9 GPM	2.9 PSI
2"	52.4 GPM	1.9 PSI
POLY HEADER		
PIPE SIZE	MAX GPM*	PSI LOSS**
1/2"	4.7 GPM	8.8 PSI
3/4"	8.3 GPM	6.3 PSI
1"	13.5 GPM	4.8 PSI
1-1/2"	33.9 GPM	2.9 PSI
2"	52.4 GPM	2.2 PSI

*GPM @ 5 FPS VELOCITY
**LOSS PER 100 FT

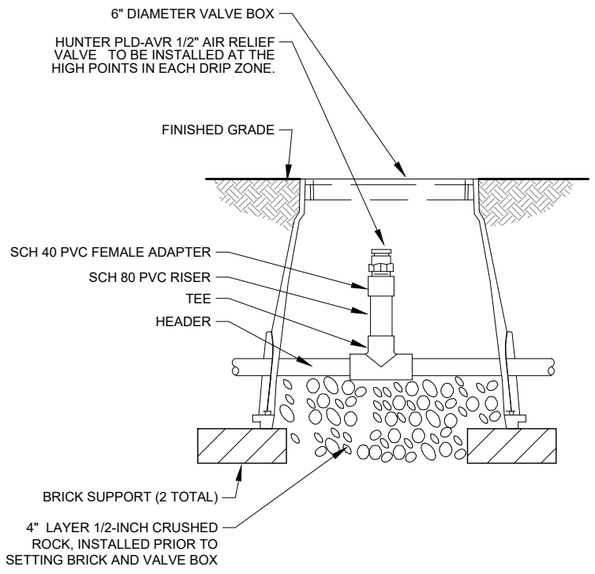




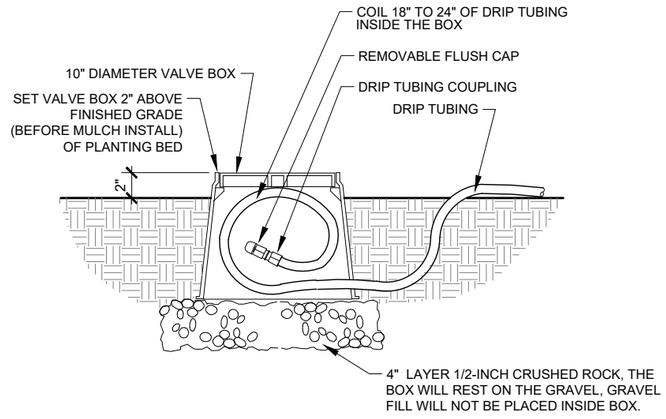


SLOPED CONDITION NOTE:
1. DRIPLINE LATERALS SHOULD FOLLOW THE CONTOURS OF THE SLOPE WHEREVER POSSIBLE.
2. INSTALL AIR RELIEF VALVE PERPENDICULAR TO THE DRIPLINE AT ITS HIGHEST POINT.
3. SPACE ROWS NORMALLY AT THE TOP TWO-THIRDS OF THE SLOPE AND GRADUALLY INCREASE THE SPACING UP TO 25 PERCENT AS APPROACHING THE BOTTOM THIRD.
4. WHEN ELEVATION CHANGE IS 10 FEET OR MORE, ZONE THE BOTTOM OF THE SLOPE ON A SEPARATE VALVE.

1 H36 **DRIPLINE** NOT TO SCALE



2 H36 **AIR RELIEF VALVE** NOT TO SCALE



NOTE:
1. LOCATE FLUSH CAP ASSEMBLY AT THE END OF EACH DRIP LINE.
2. ENSURE THAT THE COILED TUBING IS OF SUFFICIENT LENGTH TO COMPLETELY EXTEND OUT OF THE VALVE BOX WHEN FLUSHING.

3 H36 **DRIP FLUSH ASSEMBLY** NOT TO SCALE

CONFLUENCE HDR

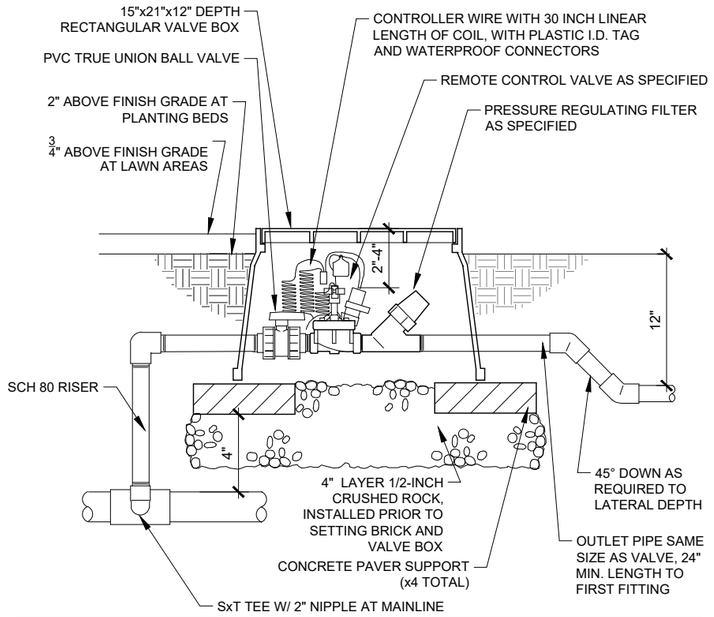
Irrigation Details

FOR BIDDING PURPOSES ONLY

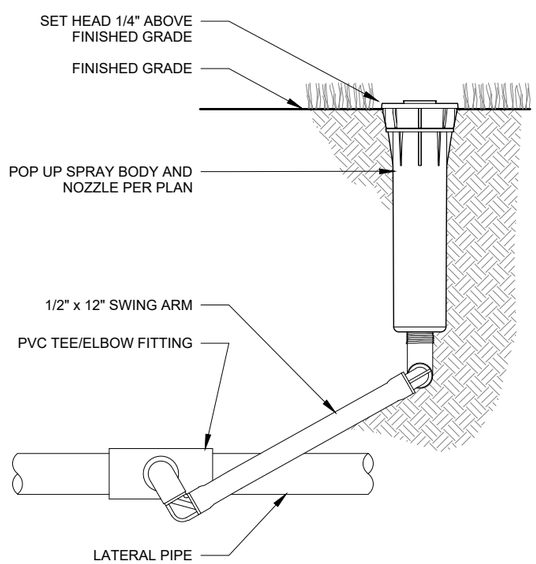
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H37	H39

FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

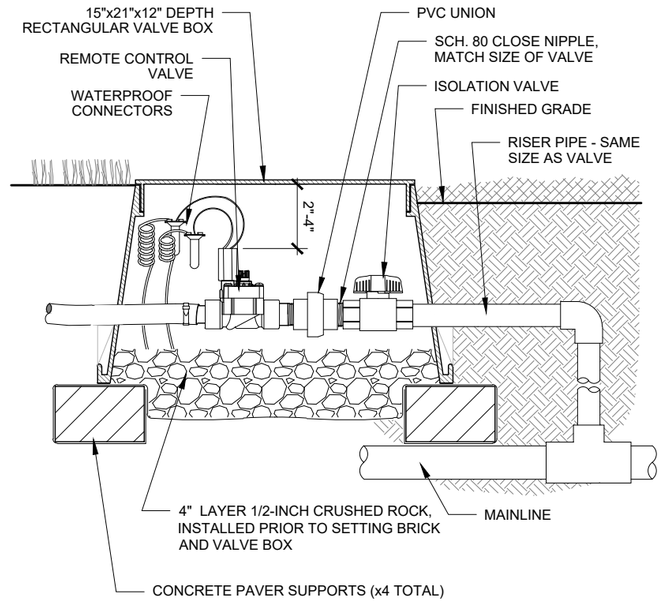
REV DATE:
INITIAL: ETE



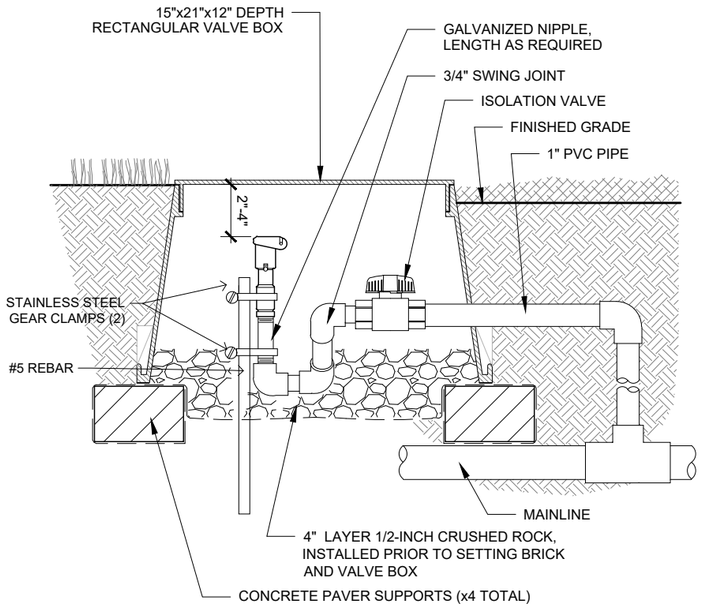
1 H37 **DRIP VALVE** NOT TO SCALE



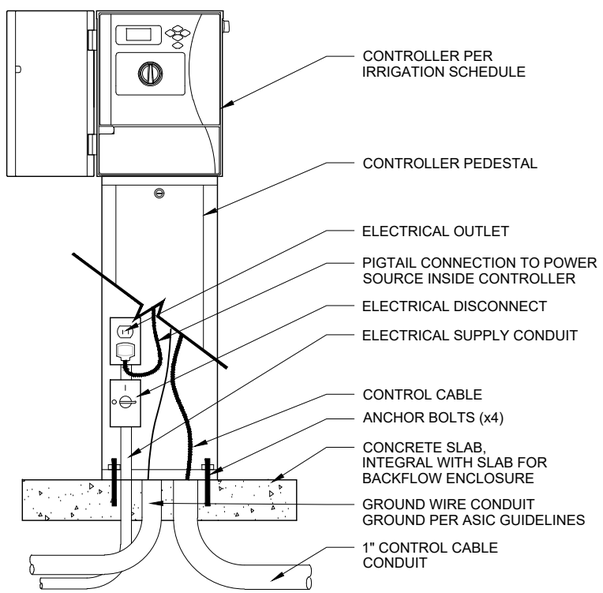
2 H37 **SPRAY HEAD** NOT TO SCALE



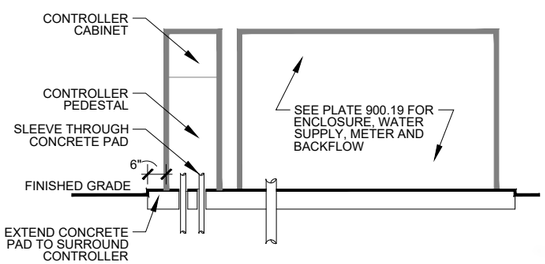
3 H37 **CONTROL VALVE** NOT TO SCALE



4 H37 **QUICK COUPLING VALVE** NOT TO SCALE



5 H37 **CONTROLLER PEDESTAL** NOT TO SCALE



5 H37 **IRRIGATION CONTROLS** NOT TO SCALE

REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
8-29-25

CONFLUENCE HDR

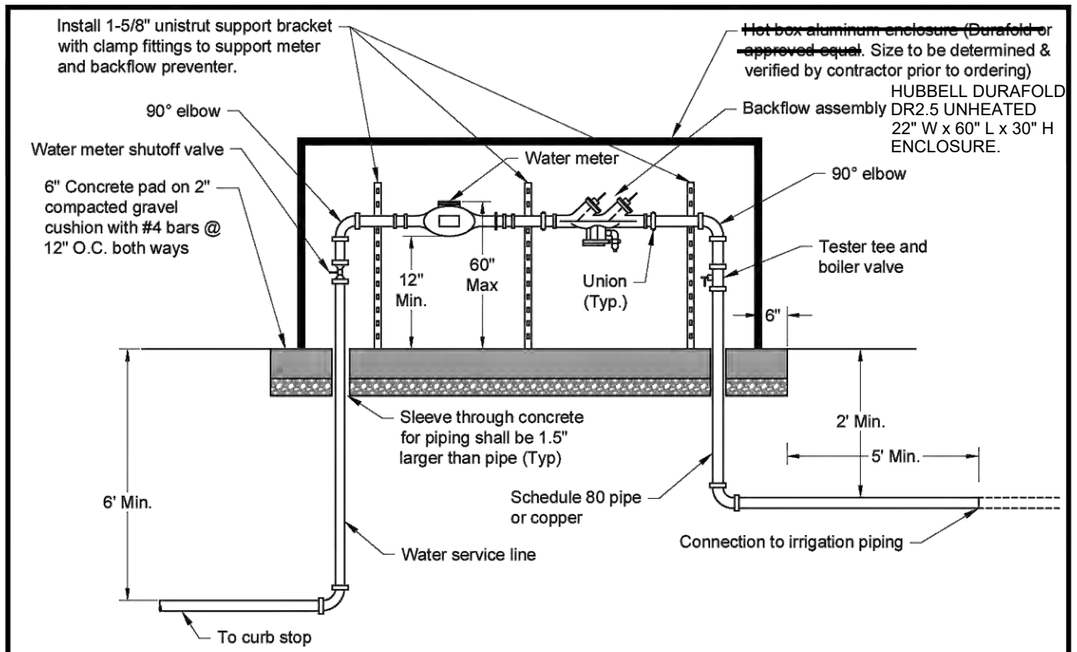
Irrigation Standard Plates

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H38	H39

FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE



General Notes:

1. All enclosures are to be installed and connected onto a concrete base per manufacturer's recommendations and as detailed above. Concrete pad to be constructed with class M6 concrete and footprint shall be 6" beyond enclosure on all sides.
2. All backflow assemblies shall be tested by a Water Division approved, certified backflow technician prior to being put into service
3. Meter and backflow will be removed by owner during winterization procedures and stored. Install accordingly to allow annual removal.
4. Submit shop drawings for approval of aluminum enclosure. Contractor is responsible for providing size recommendations to ensure 12" of interior clearance around all piping and equipment.
5. All piping and fittings inside enclosure shall conform to city ordinance and engineering design standards. No galvanized or steel materials allowed upstream of the containment backflow preventer. All fittings and nipples on copper services must be brass or copper and must be flared or threaded NOT soldered, braised, or "pro pressed".
6. All piping downstream of the backflow preventer must be copper or schedule 80 PVC. This piping shall extend to a minimum of 2' below concrete slab and a minimum of 5' away from the slab before connection to irrigation piping.
8. Keep meters and backflow assemblies centered (L&R) in enclosure.
9. For assemblies 3/4" - 2", Wilkins 375XL RP for high hazard, ~~or the Wilkins 350XL DC for low hazard~~, shall be used. For questions on hazard level contact Water Program Coordinator at 605-373-6951.
10. The meter, backflow preventer, and misc. pipe and fittings shall be enclosed as detailed above. Enclosure must be orientated parallel to traffic lanes, and be located at beginning or end of median. For questions on placement contact Park Central Services Supervisor at 605-367-8151
11. All costs associated with construction of the meter and backflow enclosure, including the enclosure, concrete base, rebar, and misc hardware shall be included in the ~~unit price per "Meter and Backflow Enclosure."~~ CONTRACT LUMP SUM FOR "IRRIGATION SYSTEM"
12. All costs associated with meter and backflow enclosure piping from the curb stop through meter and backflow assembly, to 5' outside the enclosure, shall be included in the ~~unit price per "Meter and Backflow Enclosure."~~ CONTRACT LUMP SUM FOR "IRRIGATION SYSTEM"
13. Must have Water Department approval of water meter and backflow assembly.

Issued: June 2025

CITY OF SIOUX FALLS PUBLIC WORKS Providing a Better Quality of Life for You!	**Roadway Irrigation Water Meter & Backflow Assembly with Enclosure**	Specification Reference No. 900	Plate Number 900.19

CONFLUENCE HDR

Irrigation Standard Plates

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0100(107)411 P 1440(00) & P 1432(00)	H39	H39

FILE: 20441-01 Veterans Parkway
PLOTTING DATE: 8/29/2025

REV DATE:
INITIAL: ETE

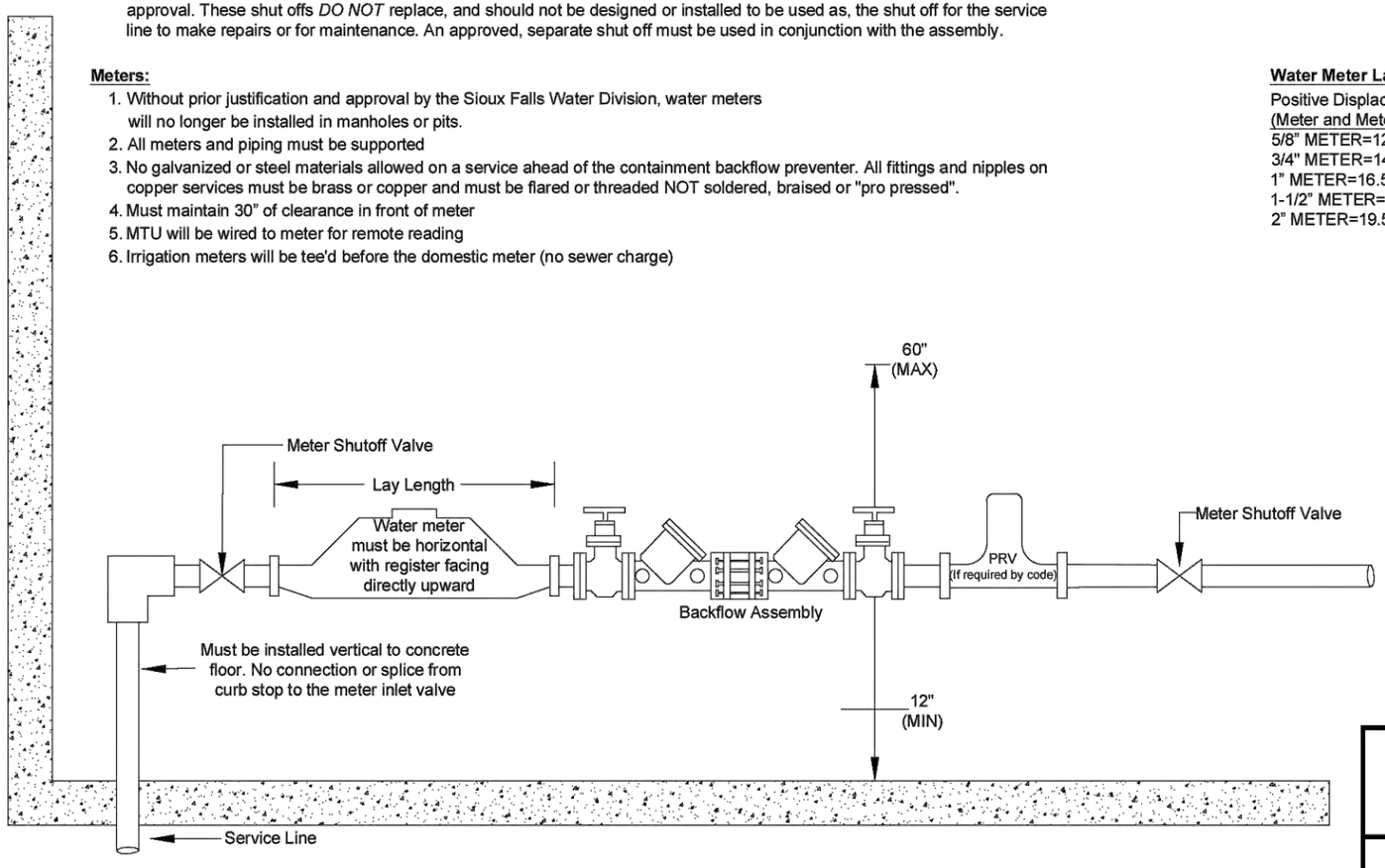
Notes:

Backflow:

1. All assemblies shall be installed a minimum of 12 inches above the floor, from the lowest point of the assembly, and less than 60 inches above the floor from the highest point of the assembly. (30"-36" Ideal Height of Assembly)
2. A minimum of 12 inches of clear space shall be maintained above the assembly to allow for servicing check valves and for operation of shut-off valves. More distance will be required for larger assemblies.
3. A minimum of 30 inches of clear space shall be maintained between the front side of the assembly and the nearest wall or obstruction. More distance will be required for larger assemblies.
4. At least 12 inches clearance shall be maintained from the test cocks of the assembly to the nearest wall or obstruction.
5. Containment Backflow Preventers must be installed immediately *following* the water meter (or as close to as possible) and before any branch piping. PRVs must be installed after meter and backflow.
6. Assemblies must *NOT* be installed directly above, or where their operation, testing and maintenance may result in damage to the water meter. (unless otherwise approved in writing by the Water Division)
7. Multiple assemblies installed in a manifold or parallel manner shall not be installed one directly over another. Assemblies must be side by side or at a 45 degree angle and comply with all of the requirements in this section. (unless otherwise approved in writing by the Water Division)
8. Shut off valves on a backflow assembly from the factory are an integral part of the assembly and factor into the assemblies' approval. These shut offs *DO NOT* replace, and should not be designed or installed to be used as, the shut off for the service line to make repairs or for maintenance. An approved, separate shut off must be used in conjunction with the assembly.

Meters:

1. Without prior justification and approval by the Sioux Falls Water Division, water meters will no longer be installed in manholes or pits.
2. All meters and piping must be supported
3. No galvanized or steel materials allowed on a service ahead of the containment backflow preventer. All fittings and nipples on copper services must be brass or copper and must be flared or threaded NOT soldered, braised or "pro pressed".
4. Must maintain 30" of clearance in front of meter
5. MTU will be wired to meter for remote reading
6. Irrigation meters will be tee'd before the domestic meter (no sewer charge)



The Water Division must be called to have the water meter set once all construction activities and all piping, including both inlet and outlet sides of the water meter, is finished.

Water Meter Shutoff Valves

Water meter shutoff valve types shall be as follows:
Shutoff valves 1" in diameter or less shall be a ball valve.
Shutoff valves 1.5" in diameter shall be a full flow gate valve or ball valve.
Shutoff valves 2" in diameter shall be a full flow gate valve.

Water Meter Lay Lengths

Positive Displacement (Meter and Meter Connections)	Ultrasonic (Meter and Meter Connections)	Compound (Meter Only)
5/8" METER=12.5"	1-1/2" METER=15.5"	3" METER=17"
3/4" METER=14.75"	2" METER=19.5"	4" METER=20"
1" METER=16.5"		6" METER=24"
1-1/2" METER=15.5"		
2" METER=19.5"		

Issued: March 2021

Single Water Meter & Backflow Installation (Commercial)

CITY OF SIOUX FALLS
PUBLIC WORKS
Providing a Better Quality of Life for You!

Specification Reference	Plate Number
No. 900	900.21

CONFLUENCE HDR