SECTION H: LANDSCAPE PLANS

FOR BIDDING PURPOSES ONLY

SD DOT	PROJECT	SECTION	SHEET
	EM 0292(88)73 IM 2292(104)0	H	H1

20206 COVER SHEET.dwg
PLOTTING DATE: 07/03/2025

INDEX OF SHEETS

END EM 0292(88)73
Station 106+06.35
located 1103.12 feet south and
1959.66 feet west of the northeast
corner of Section 18 -Township 100 North -
Range 50 West of the 5th P.M.
MRM (029 N) 75.17+0.032

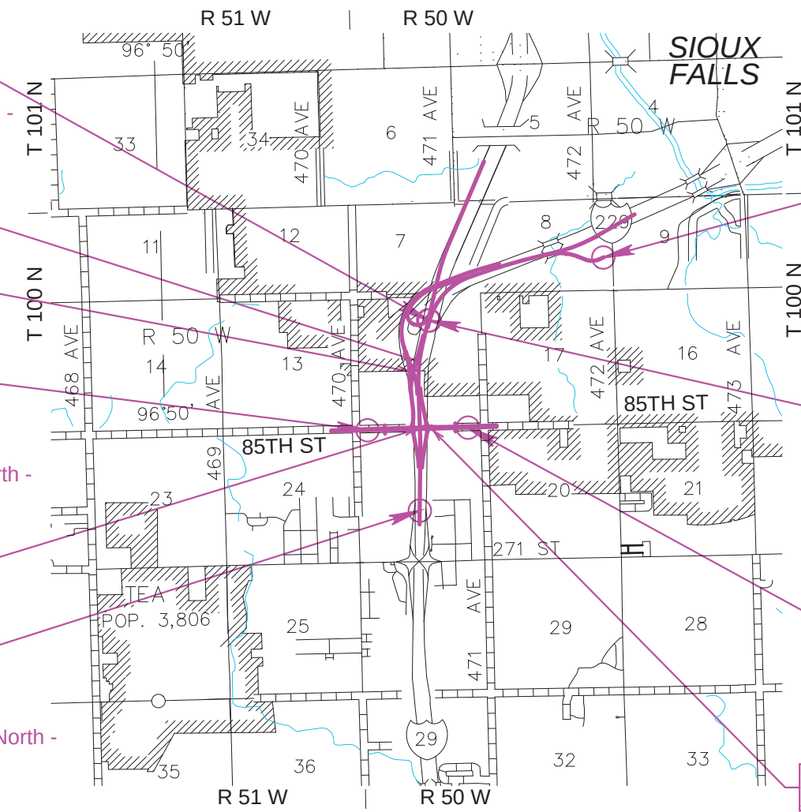
Sta. 0+01.50 to Sta. 6+65.00
M.S.E. Large Panel Retaining Wall

Sta. 60+35.34 to Sta. 63+50.03
Str. No. 42-065-016
312'-11⅜" Steel Girder Bridge
Concrete Barrier Curb and Gutter

BEGIN EM 0292(88)73
85TH STREET
Station 299+35.00
located 20.50 feet south and
499.13 feet east of the northwest
corner of Section 19 - Township 100 North -
Range 50 West of the 5th P.M.

Sta. 318+79.74 to Sta. 321+55.24
Str. No. 42-065-020
276'-6" Steel Girder Bridge
Concrete Barrier Curb and Gutter

BEGIN EM 0292(88)73
Station 30+27.82
located 2117.41 feet north and
2376.09 feet east of the southwest
corner of Section 19 - Township 100 North -
Range 50 West of the 5th P.M.
MRM (029 N) 73.38+0.364



END IM 2292(104)0
I-229 RAMP C LOUISE AVENUE
Station 43+87.81
located 1411.81 feet north and
4960.21 feet east of the southwest
corner of Section 8 -Township 100 North -
Range 50 West of the 5th P.M.
MRM (229 N1) 00.92+0.000

BEGIN IM 2292(104)0
I-229 RAMP B
Station 19+34.15
located 1115.22 feet south and
1906.32 feet west of the northeast
corner of Section 18 -Township 100 North -
Range 50 West of the 5th P.M.
MRM (229 N) 00.00+00.032

END EM 0292(88)73
85TH STREET
Station 339+30.00
located 33.11 feet south and
600.68 feet west of the northwest
corner of Section 20 - Township 100 North -
Range 50 West of the 5th P.M.

Sta. 324+45.77
Str. No. 42-066-020
11'x10' Box Culvert

REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
5.16.25

CONFLUENCE SEH

SD DOT	PROJECT	SECTION	SHEET
	EM 0292(88)73 IM2292(104)0	H	H2

SECTION H ESTIMATE OF QUANTITIES – PCN 06JQ

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
120E6300	Water for Vegetation	195.0	MGal
230E0020	Contractor Furnished Topsoil	4,517	CuYd
380E2566	6" Barrier Type Colored Median PCC Pavement	4,347.0	SqYd
380E2576	6" Barrier Type Colored and Patterned Median PCC Pavement	907.0	SqYd
680E0206	6" Perforated PVC Drain Pipe with Sleeve	1,980	Ft
680E0226	6" PVC Outlet Pipe	237	Ft
680E2500	Porous Backfill	1,182.0	Ton
730E0208	Type E Permanent Seed Mixture	8	Lb
730E0212	Type G Permanent Seed Mixture	5	Lb
731E0100	Fertilizing	1,210	Lb
732E0300	Bonded Fiber Matrix	1.3	Ton
733E0100	Sodding	2,870	SqYd
735E0110	1 Gallon Perennial Plant, Furnish and Plant	553	Each
735E2225	2.5" Caliper Deciduous Tree, Furnish and Plant	42	Each
735E5010	1 Gallon Ornamental Grass, Furnish and Plant	1,500	Each
900E2030	Miscellaneous Work	1	Site
900E5150	Landscape Edging	392	Ft
900E5151	Ornamental Landscaping Boulders	16	Each
900E5152	Weed Barrier Fabric	612	SqYd
900E5157	4" Depth Shredded Bark Mulch	1,402.0	SqYd
900E5161	Planter	Lump Sum	LS
900E5163	Ornamental Landscape Feature	18	Each
900E5430	Irrigation System	Lump Sum	LS
900E6010	Precast Concrete Welcome Sign, Furnish	2	Each
900E6011	Precast Concrete Welcome Sign, Install	2	Each

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 and installed precast concrete planter walls, concrete landscape edging, excavation, underdrain pipe, concrete footings and foundations, and irrigation system, and installation of Contractor furnished and installed colored concrete in the medians, stamped colored concrete in the medians, and colored concrete splash apron.

CONTRACTOR FURNISHED TOPSOIL - MEDIAN

Topsoil placed in medians will be screened and pulverized and meet the following requirements:

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 will submit to the Engineer the prospective source of topsoil at least 1 month prior to time of placement to allow adequate time for inspecting, testing, and approving the source. A companion topsoil test may be preformed on site after placement. Texture will be determined by the method described in AASHTO T 88.

All costs to furnish and place the Contractor furnished topsoil will be incidental to the contract unit price per cubic yard for "Contractor Furnished Topsoil".

LANDSCAPE ARCHITECT

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

PLANT SCHEDULE

Key	Qty	Plant Type	Size	Spacing
Canopy Trees				
GD	13	Gymnocladus dioicus Kentucky Coffeetree	2.5" Cal	B&B
UA	11	Ulmus americana 'Princeton' Princeton Elm	2.5" Cal	B&B
QB	4	Quercus bicolor Swamp White Oak	2.5" Cal	B&B
QW	14	Quercus x warei 'Long' Regal Prince Oak	2.5" Cal	B&B
Perennials				
HS	273	Hemerocallis 'Stella Supreme' Stella Supreme Daylily	#1	1'-8" O.C
HR	280	Hemerocallis 'Rocket City' Rocket City Daylily	#1	1'-8" O.C
Ornamental Grasses				
CA	1022	Calamagrostis x acutiflora 'Karl Foerster' Feather Reed Grass	#1	1'-8" O.C.
EA	478	Elymus arenarius 'Blue Dune' Blue Dune Lyme Grass	#1	3'-6" O.C.

GENERAL PLANTING

Verify all plant locations on site with Engineer and 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. 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

QUALITY ASSURANCE

Installer will be required to maintain an experienced full-time Supervisor with at least 3 years of experience at the project site when work is in progress. Payment will be incidental to the contract unit price for the applicable Section H bid item.

PLANTS & TREES

All plants and trees will conform to or exceed minimum quality standards as defined by the American Nursery and Landscaping Association, current edition of American Standard for Nursery Stock, and must be purchased from a Landscape Nursery. Plants and trees 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 Landscape Architect. Each plant and trees will have an identification label.

All plants and trees will bear the same relationship to the finished grade as the plant's original grade before digging. All plants and trees 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 must be approved by the Landscape Architect prior to installation. Hand dig tree planting pits when in close proximity to existing utilities. All plants and trees will be fertilized.

Within 2 hours after being planted, plants and trees 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 Landscape Architect will visually inspect plants and trees for health, vigor, and condition, and will at that time accept or reject them.

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

All costs for furnishing, handling, storing, fertilizing, and planting the plants and trees, 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 and Tree, 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 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 at the project site and will be incidental to the cost of the tree. No hose and wire will be used for staking.

Plant and Plant Area Maintenance: The Contractor is responsible for maintaining all plants and plant beds until the entire project is complete and accepted by the Owner, per the following:

1) The Contractor is responsible for controlling weeds and mowing all newly seeded, sodded 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 must also spray and remove any weeds that are present prior to seeding, sodding and installing the landscaping areas. If areas are seeded in late fall, this requirement will remain in effect the following spring.

2) 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.

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

4) 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.

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

Mulch Rings and Tree Watering Bags: Trees located in lawn areas will receive a mulch ring with a minimum diameter of 3 feet and a minimum thickness of 4 inches placed around each individual tree.

A 20 gallon Tree Watering Bag must be provided and installed with each tree installed. Watering Bags will be a Treegator Slow Release Watering Bag. www.treegator.com or an approved equal. Each tree bag must be refilled by the Contractor at least once per week during the maintenance period. Included in the estimate of quantities is 5 MGAL's of water for filling watering bags. This quantity was calculated based on 15 gallons of water per tree, which assumes the Contractor will fill the watering bags at least 1 time per week. This quantity is for estimating purposes only.

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.

REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
7.23.25

WATER FOR VEGETATION

Seed: The Contractor is required to provide adequate water for all newly non-irrigated seeded areas identified in the Section H Plans 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.

Included in the estimate of quantities is 190 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 (if required).

Sod: The Contractor is required to provide adequate water for all newly sodded areas for a period of 45 days after installation.

The Contractor will be required to program and adjust the irrigation system as required to maintain a moist condition throughout the thickness of the sod 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 sod is alive and growing. Maintenance and replacement will be at the expense of the Contractor. Replaced sod must be watered as required for the original sod at the expense of the Contractor.

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

The Contractor will be required to program and adjust the irrigation system as required to maintain a moist condition throughout the plant bed or root area of the tree 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 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.

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".

WEED BARRIER FABRIC

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

Weed barrier fabric must be anchored to the ground with 6" U shaped staples. The staples must be placed at a 4' spacing along all edges, overlaps, and throughout the area of weed barrier fabric. The weed barrier fabric must be overlapped 4" between rolls.

Weed barrier fabric will be measured to the nearest square yard. Measurement of the overlaps will not be made.

All costs for furnishing, handling, and placing the weed barrier fabric including the materials, equipment, labor, and incidentals necessary will be incidental to the contract unit price per square yard for "Weed Barrier Fabric".

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

Weed Barrier 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

SHREDDED BARK MULCH

Shredded bark mulch must be placed at a thickness of 4 inches in areas shown on the plans after plants are planted.

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".

SEEDBED PREPARATION

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 appropriate Seed Mixture bid item.

MISCELLANEOUS WORK

The contract unit price per site for "Miscellaneous Work" will include, but not be limited to the following work in the medians for plant beds, sodded areas, and areas seeded with Type G and Type E mixtures as identified on the Section H Plans:

- Extra mobilization, labor, and materials for application of weed control
- Weed control during construction
- Weed control for final restoration

WEED CONTROL DURING CONSTRUCTION

The Contractor will be responsible to control all legumes, noxious weeds in the medians for plant beds, sodded areas, and areas seeded with Type G and Type E mixtures as identified on the Section H Plans throughout the duration of the project. Legumes, noxious weeds and grass must be controlled by hand pulling, mowing, and/or inoculation. **Do not inoculate areas seeded with Type E or Type G Seed Mixes 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.

The amount of weed control required on the project will be at the discretion of the Engineer. All materials, equipment, tools, labor, and other appurtenances required to control all legumes, noxious weeds, and grass throughout the duration of the project will be paid for at the contract unit price per Site for "Miscellaneous Work" bid item.

WEED CONTROL FOR FINAL RESTORATION

Legumes and noxious weeds must be controlled in the medians for plant beds, sodded areas, and areas seeded with Type G and Type E mixtures as identified on the Section H Plans by hand pulling, mowing, and/or inoculation for the duration of the 45 day maintenance period and until a uniform, perennial vegetative cover with a density of 70% of the native grasses has been established.

Do not inoculate areas seeded with Type E or Type G Seed Mixes 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.

More than one weed control application may be required depending on site conditions. The amount of weed control required on the project will be at the discretion of the Engineer. A pre-emergent application is recommended.

All materials, equipment, tools, labor and other appurtenances required to control all legumes and noxious weeds throughout the 45 day maintenance period and until a uniform, perennial vegetative cover with a density of 70% of the native grasses has been established will be paid for at the contract unit price per Site for "Miscellaneous Work" bid item.

MYCORRHIZAL INOCULUM

Refer to notes Section D for areas not identified in Section H Plans.

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 a minimum 25% the fungal species *Rhizophagus intraradices*. The remaining 75% may include other endomycorrhizal fungal species.

All Type G and Type E seed will be inoculated by the seed supplier with a minimum of 100,000 live propagules of mycorrhizal fungi per acre. All costs of inoculating the seed will be incidental to the contract unit price per pound for the corresponding permanent seed mixture.

Prior to placing sod, apply a minimum of 25,000 live propagules of inoculum per 1,000 square feet on bare soil. All costs of inoculating for the sod will be incidental to the contract unit price per square yard for "Sodding".

The mycorrhizal inoculum will be as shown below or an approved equal:

Product	Manufacturer
MycoApply	Mycorrhizal Applications, Inc. Grants Pass, OR Phone: 1-866-476-7800 www.mycorrhizae.com
AM 120 Multi Species Blend	Reforestation Technologies Int. Gilroy, CA Phone: 1-800-784-4769 www.reforest.com
LALRISE Prime and Max WP	Lallemand Specialties Inc. Milwaukee, WI Phone: 1-844-590-7781 www.lallemandplantcare.com

REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
7-3-25

FERTILIZING

Refer to notes Section D for areas not identified in Section H Plans.

The Contractor will apply an all-natural slow-release fertilizer prior to seeding, planting, 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% (P_2O_5) available phosphate, a minimum of 4% (K_2O) 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.

Sod: The application rate for areas to be sodded is 9 pounds per 1,000 square feet.

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

PERMANENT SEEDING

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

Type E Permanent Seed Mixture must consist of the following:

Grass Species	Scientific Name	Pure Live Seed (PLS) (Pounds/Acre)
Western Wheatgrass	Arriba, Flintlock, Rodan, Rosana, Walsh	7
Green Needlegrass	*Lodorm, AC Mallard, Ecovar*	4
Sideoats Grama	*Butte, Pierre*	3
Blue Grama	*Bad River*	2
Canada Wildrye	*Mandan*	2
Wildflowers		
Dotted Gayfeather	*Liatris punctata*	0.50
Black-eyed Susan	*Rudbeckia hirta*	0.50
Blue Flax	*Linum lewisii*	0.50
Pale Purple Coneflower	*Echinacea angustifolia*	0.50
Wild Bergamot	*Monarda fistulosa*	0.50
Purple Prairie Clover	*Dalea purpurea*	0.50
Plains Coreopsis	*Coreopsis tinctoria*	0.50
Western Yarrow	*Achillea millefolium var. occidentalis*	0.50
	Total:	22

Type G Permanent Seed Mixture must consist of the following:

Grass Species	Variety	Pure Live Seed (PLS) (Pounds/Acre)
Western Wheatgrass	Arriba, Flintlock, Rodan, Rosana, Walsh	7
Switchgrass	Dacotah, Forestburg, Nebraska 28, Pathfinder, Summer, Sunburst, Trailblazer	3
Indiangrass	Holt, Tomahawk, Chief, Nebraska 54	3
Big Bluestem	Bison, Bonilla, Champ, Sunnyview, Rountree, Bonanza	3
Canada Wild Rye	Mandan	2
	Total:	18

SODDING

Sod must be placed in the medians as shown in Section H and at locations determined by the Engineer during construction.

Sodding will conform to Section 733 of the SDDOT Standard Specifications for Roads and Bridges. The sod will consist of a minimum of 3 Kentucky Bluegrass cultivars and may not be grown on peat. A letter of confirmation of sod seed varieties and material source will be submitted to the Engineer. When preparing the surface, the soil will be loosened to a minimum depth of 2 inches prior to placement of the sod.

All materials, equipment, labor, and incidentals necessary will be incidental to the contract unit price per square yard for "Sodding".

BONDED FIBER MATRIX

Refer to notes in Section D for areas not identified in Section H Plans. The application area is the same as the Type E Permanent Seed Mixture and Type G Permanent Seed Mixture.

Bonded Fiber Matrix (BFM) must consist of a continuous layer of elongated fiber strands held together by a water restraint bonding agent. It must be hydraulically applied and conform to the SD Standard Specifications for Road and Bridges Section 732.2C. It must be dyed an appropriate color to allow visual metering for its application. The material must be supplied to the project in packages marked by the manufacturer. Appropriate documentation must be given to the Engineer for prior approval before application.

The Bonded Fiber Matrix must be spray-applied at a rate of 3900 lbs/acre, utilizing standard hydraulic seeding equipment in successive layers as to achieve 100% coverage of all exposed soil. The mix must consist of 50 pounds bonded fiber matrix to 125 gallons water unless otherwise specified by the Engineer. It must be installed by a Contractor certified by the manufacturer's recommendations. Bonded fiber matrix must be placed on a given area as soon as possible or within 48 hours after seeding. The Bonded Fiber Matrix will not be applied immediately before, during or after rainfall, such that the matrix will have the opportunity to dry for up to 24 hours after installation. It will be measured to the nearest 0.1 ton of mulch applied. Bonded fiber matrix will be paid for at the contract unit price per ton. Payment will be full compensation for furnishing, hauling, placing and for materials, equipment, labor, tools and incidentals necessary.

The Contractor will use a bonded fiber matrix from the approved products list, or an approved equal. The approved product list for bonded fiber matrix may be viewed at the following internet site:

http://sddot.com/business/certification/products/Default.aspx

UNDERDRAIN PIPE

The underdrain pipe will be installed as described below and as shown on the plans. The underdrain pipe will be 6" Perforated PVC Drain Pipe that meets requirements as set forth in SDDOT Specifications Section 680. The underdrain pipe will have a sock wrap material installed around the pipe.

The sock wrap material will be an approved strong, rough, porous, polyester or other approved knitting fabric which completely covers and is secured to the pipe in such a way as to prevent infiltration of trench backfill material. Material will meet the requirements of ASTM D3786 and ASTM D737.

The drainage fabric wrap around the underdrain pipe trench will be Type B Drainage Fabric material that meet the requirements as set forth in SDDOT Standard Specifications Section 831.

The underdrain pipe will empty into the storm sewer inlets as indicated on the drawings. If underdrain pipe crosses under pavement it must be 6" PVC Outlet Pipe. The outlet pipe will be cast into the storm sewer inlets with an elevation approved by the Engineer. Within the inlet, the ends of the underdrain pipe will have rodent guards installed over the pipe end, at the interface of the underdrain pipe and storm sewer inlet wall.

Rodent guards will be 6" x 6" 23 gauge galvanized steel wire mesh, 1/4" mesh spacing (Keystone LG Hardware Cloth or equal). Wire mesh will be fastened to the storm sewer inlet wall with 4-3/16"x1 ¾" masonry tapping screws and 3/16"x1 ¼" fender washers. The rodent guard will cover the entire opening in the drop inlet.

The porous backfill for the underdrain pipe trench will be washed natural rock meeting the gradation requirements of type "Size # 1A" as specified in Section 820 - Coarse Aggregate for use in Portland Cement Concrete of the SDDOT Standard Specifications or Roads and Bridges, Current Edition. Porous Backfill will be paid at the contact unit price per "6" Perforated PVC Drain Pipe with Sleeve" and "6" PVC Outlet Pipe"

All costs for the underdrain pipe will be included in the contract unit price per linear foot for "6" Perforated PVC Drain Pipe with Sleeve" and "6" PVC Outlet Pipe". See Section H Landscape Plan for locations. This must include, but not be limited to, the following items:

- 6" underdrain pipe
- Sock wrap around the underdrain pipe
- Drainage fabric wrap around the porous backfill
- Trenching and backfilling
- Connecting to the storm sewer inlets
- Rodent guards installed within the storm inlets
- All other appurtenances, equipment, materials and labor to furnish and install the underdrain pipe

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.

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 67 PSI, information provided by City of Sioux Falls 2021 Hydrant Model for hydrant WH-19676 at the NE corner of Tallgrass Avenue and 85th Street. Available water pressure after completion of new water main is unknown. 75 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.

IRRIGATION SYSTEM (CONTINUED)

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	410+33.50	5942 W 85th Street	1”	1”
2	430+47.40	5350 W 85th Street	1”	1”
3	439+34.40	5098 W 85th 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 6” deep layer of clean 3/8” crushed rock or pea gravel 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.

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 28”, hand selected from quarry with uniform top and bottom surfaces. Furnish and install boulders at the locations indicated in the Section H Plans.

Boulders to have a minimum weight of 1.10 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”.

ORNAMENTAL LANDSCAPE FEATURE

Metal Fabrications: Welding procedures and personnel will be qualified according to AWS D1.1, "Structural Welding Code--Steel."

Stainless-Steel Pipe: ASTM A 312/A 312M, Grade TP 316L Finish: Directional Satin Finish: No. 4

Concrete footings must be class M-6 as detailed in Specifications Section 462. Footings are designed for assumed allowable soil bearing capacity of 2,500 psf.

All costs to fabricate and install including, pipe, coil, excavation, and concrete footings will be paid at the unit price per each for ‘Ornamental Landscape Feature’

COLORED CONCRETE

The Contractor will construct up to three 5’x5’ mock-up panels of both the colored concrete and stamped colored concrete at off-site locations selected by the Engineer at least 60 days prior to starting final placement of the colored concrete. The purpose of these mock-up panels is to refine the color to the satisfaction of the Engineer. The mock-up panels are included in the quantities for the “6” Barrier Type Colored Median PCC Pavement” and “6” Barrier Type Colored and Patterned Median PCC Pavement” items.

Subject to the Engineer’s approval of the mock-up panels, the colored concrete will have the integral color for **Davis Colors #677 Kailua** or an equal approved by the Engineer. See Section H Layout Plan for the colored concrete locations. Modification of the color formula may be required based on the results of the initial mock up panel(s).

Rate of integral color per cubic yard of concrete will be in accordance with manufacturer’s recommendations to achieve the desired color. The colored concrete must be cured according to the manufacturer’s recommendations with two coats of a non-yellowing acrylic curing and sealing compound. The curing and sealing compound will meet ASTM C309 specifications. The curing and sealing product will be DECRA-SEAL, SpecChem Cure & Seal WB, or an equal approved by the Engineer.

DECRA-SEAL	SpecChem Cure & Seal WB
W.R. Meadows, Inc.	SpecChem
1-800-342-5976	816-968-5600
www.wrmeadows.com	www.specchem.com

No white pigmented cure will be used. The Contractor will protect the colored concrete to ensure no white pigmented curing compound comes in contact with the colored concrete. All costs for furnishing, handling, and applying the curing and sealing compound, and liquid integral color, including the materials, equipment, labor, and incidentals necessary will be incidental to the contract unit price per square yard for the “6” Barrier Type Colored Median PCC Pavement” and “6” Barrier Type Colored and Patterned Median PCC Pavement” items.

6” BARRIER TYPE COLORED MEDIAN PCC PAVEMENT

Concrete for 6” Barrier Type Colored Median PCC Pavement will comply with the specifications for Class M6 Concrete.

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. Expansion joints will be included and will conform to Section 651.

This bid item will be used for the section H Layout Plan keynotes “2’-0” Colored Concrete Splash Apron”, “5’-0” Colored Concrete Splash Apron”, “6” Barrier Type Colored Median PCC Pavement”.

All costs for furnishing and placing the 6” Barrier Type Colored Median PCC Pavement and constructing the expansion and control joints including labor, equipment and materials will be incidental to the contract unit price square yard for “6” Barrier Type Colored Median PCC Pavement”.

TABLE OF 6" BARRIER TYPE COLORED MEDIAN PCC PAVEMENT

Station	to	Station	L/R	Quantity (SqYd)
299+35.0		305+61.6	L	491.7
304+87.0		307+66.9	L	158.7
306+20.7		306+63.9	R	141.4
405+98.4		406+27.7	L	63.6
306+89.2		316+37.7	L	948.9
416+50.3		417+59.6	L	256.1
316+59.0		317+82.85	R	193.2
322+39.1		323+43.8	L	205.9
422+49.4		423+39.0	R	197.4
323+76.8		333+78.9	L	1035.7
332+96.4		335+61.1	L	137.9
434+6.8		434+40.3	L	101.2
334+36.7		334+78.1	R	121.5
334+86.1		339+30.0	L	290.2
340+79.1		340+95.1	L	3.6
			Total:	4,347.0

6" BARRIER TYPE COLORED AND PATTERNED MEDIAN PCC PAVEMENT

Concrete for 6" Barrier Type Colored and Patterned Median PCC Pavement will comply with the specifications for Class M6 Concrete.

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.

Subject to the Engineer's approval of the mock-up panels, the colored and patterned concrete will have the stamp pattern of **FM-540S-PRO London Cobble** or an equal approved by the Engineer. See Section H Layout Plan for the colored and patterned concrete locations.

The release agent (liquid or powder) and method of stamping will be applied per manufacturer recommendations. The Contractor will construct a test area of colored and stamped concrete. These areas will be at least 5 feet by 5 feet. The purpose of these areas is to refine the colors and patterns and demonstrate adequate knowledge of the stamping process to the satisfaction of the Engineer.

The test area will match actual placements including the same concrete placement techniques, stamps, release agent, curing, and personnel. The test area may be left in place if determined acceptable; if any changes are needed for further placement the test area will be removed. Any cost for the test area will be incidental to the "6" Barrier Type Colored and Patterned Median PCC Pavement" bid item.

Expansion joints will be included and will conform to Section 651.

This bid item will be used for the section H Layout Plan keynote "6" Barrier Type Colored and Patterned Median PCC Pavement".

All costs for furnishing, handling, stamping, liquid integral color, applying the curing and sealing compound, and including the materials, equipment, labor, and incidentals necessary will be incidental to the contract unit price per square yard for "6" Barrier Type Colored and Patterned Median PCC Pavement".

TABLE OF 6" BARRIER TYPE COLORED AND PATTERNED MEDIAN PCC PAVEMENT

Station	to	Station	L/R	Quantity (SqYd)
315+64.2		316+20.4	L	46.6
416+35.3		417.33.3	L	169.2
316+00		317+57.4	R	306.6
417+66.2		417+78.0	L	6.7
422+53.6		422+64.0	L	5.4
322+57.0		324+3.7	L	179.5
422+74.4		423+64.9	R	138.2
323+92.9		324+43.9	L	54.8
			Total:	907.0

BASE COURSE

See section F for costs, quantities, and specifications.

JOINTS IN COLORED CONCRETE PAVEMENT

Transverse contraction joints will be formed at intervals of approximately 10 feet by means of a grooving tool, to a depth of at least 1/4 the thickness of the colored concrete pavement.

Expansion Joints to occur every 75' or less for all Colored Nonreinforced PCC Pavement and 6" Barrier Type Colored Median PCC Pavement. See detail 5/H18 for joint measurements.

Joint Sealants:
Concrete: Urethane Joint Sealant ASTM C 920
Type: multicomponent (M); Grade: P
Class: 50; Uses Related to Exposure: Traffic (T).
Color: limestone, except where joint is bounded on two sides by colored concrete, in this case the joint will match the lighter of the adjacent colored concrete

Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin), Type B (bicellular material with a surface skin), or any of the preceding types, as approved in writing by joint-sealant manufacturer for joint application indicated, and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions. Remove laitance and form-release agents from concrete. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.

Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.

1. Do not leave gaps between ends of sealant backings.
2. Do not stretch, twist, puncture, or tear sealant backings.
3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.

Install sealants using proven techniques that comply with the following and at the same time backings are installed:

1. Place sealants so they directly contact and fully wet joint substrates.
2. Completely fill recesses in each joint configuration.
3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces. Provide concave joint profile per Figure 8A in ASTM C 1193, unless otherwise indicated.

Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

PLANTER

All costs, labor, and materials to furnish and install the architectural precast concrete will be paid at the contract lump sum price for "Planter". This bid will include, but is not limited to, excavation, reinforcing, concrete, precast concrete, waterproofing, and joint sealants. Landscape plant material, weed barrier fabric, and mulch will be paid under their respective bid items.

Architectural Precast Concrete
American Artstone
2025 N Broadway, New Ulm, MN 56073
507-233-3700
www.american-artstone.com

Manufacturer/Fabricator assumes responsibility for engineering architectural precast concrete units to comply with performance requirements, including grade beam span between pier footings. This responsibility includes preparation of Shop Drawings and comprehensive engineering analysis by a qualified Professional Engineer licensed in the State of South Dakota. Comply with ACI 318 and design recommendations of PCI MNL 120, "PCI Design Handbook - Precast and Prestressed Concrete," applicable to types of architectural precast concrete units indicated.

For manufacturing procedures and testing requirements, quality-control recommendations, and dimensional tolerances for types of units required, comply with PCI MNL 117, "Manual for Quality Control for Plants and Production of Architectural Precast Concrete Products."

Submit Shop Drawings detail indicating fabrication and installation of architectural precast concrete units. Indicate locations, plans, elevations, dimensions, shapes, and cross sections of each unit. Indicate joints, reveals, and extent and location of each surface finish. Indicate details at unit corners.

1. Indicate separate face and backup mixture locations and thicknesses.
2. Indicate welded connections by AWS standard symbols. Detail loose and cast-in hardware and connections.
3. Indicate locations, tolerances, and details of anchorage devices to be embedded in or attached to structure or other construction.
4. Comprehensive engineering analysis signed and sealed by the qualified professional Engineer responsible for its preparation. Show governing panel types, connections, and types of reinforcement, including special reinforcement.

Samples: Provide samples for each type of finish indicated on exposed surfaces of architectural precast concrete units, in sets of 3, illustrating full range of finish, color, and texture variations expected. When other faces of precast concrete unit are exposed, include Samples illustrating workmanship, color, and texture of backup concrete as well as facing concrete.

Finish: Acid Etch.
Concrete color is anticipated to be a purple-gray to complement selected colored concrete color. Actual color to be selected from full range of Dynamic Color Solutions color capabilities (excluding bright white or black). Submit color strip kit.

Ensure exposed-to-view finish surfaces of precast units are uniform in color and appearance.

Precast Architectural Concrete Units: Comply with PCI MNL-120, PCI MNL-122, PCI MNL-123, PCI MNL-135, and ACI 318.

1. Concrete Face Mix: Minimum 5000 psi, 28 day strength, air entrained to 5 to 7 percent; comply with ACI 301.
2. Design Loads: Static loads, anticipated dynamic loading, including positive and negative wind loads, thermal movement loads, and erection forces as defined by applicable code.
3. Calculate structural properties of units in accordance with ACI 318.

Provide connections that accommodate movement and thermal movement and adjust to misalignment of structure without unit distortion or damage.

Cement: ASTM C150/C150M, Type I - Normal Portland type.
Fine and Coarse Structural Aggregates: ASTM C33.
Lightweight Structural Aggregate: ASTM C330.
Color Additives: Pure, concentrated mineral pigments specifically intended for mixing into concrete and complying with ASTM C979/C979M.

Connecting and Support Devices; Anchors and Inserts: Clean surfaces of rust, scale, grease, and foreign matter. A666 316L stainless steel.

Maintain consistent quality during manufacture. Fabricate connecting devices, plates, angles, items fit to steel framing members, inserts, bolts, and accessories. Fabricate to permit initial placement and final attachment. Embed reinforcing steel, anchors, inserts plates, angles, and other cast-in items.

Locate hoisting devices to permit removal after erection. Cure units to develop concrete quality, and to minimize appearance blemishes such as non-uniformity, staining, or surface cracking.

Erect units without damage to shape or finish. Replace or repair damaged panels. Erect units level and plumb within allowable tolerances. Align and maintain uniform horizontal and vertical joints as erection progresses. When units require adjustment beyond design or tolerance criteria, discontinue affected work; advise Engineer. Weld units in place. Perform welding in accordance with AWS D1.1/D1.1M. Touch-up field welds and scratched or damaged primed painted surfaces.

Exposed Joint Dimension: 3/4 inch. Adjust units so that joint dimensions are within tolerances. Erect members level and plumb within allowable tolerances. Conform to PCI MNL-135. Plan Location from Building Grid Datum: Plus or minus 3/8 in.

PLANTER (CONTINUED)

Top Elevation from Nominal Top Elevation: Plus or minus 3/8 inch. Maximum Plumb Variation Over Height of Structure or 100 ft (whichever is less): Plus or minus 1/2 inch. Exposed Joint Dimension: Plus or minus 3/16 inch. Maximum Jog in Alignment of Matching Faces or Edges: Plus or minus 3/16 inch. Differential Bowing or Camber as Erected Between Similar Adjacent Members: Plus or minus 3/16 inch.

Void Form: Corrugated paper carton for concrete construction.

Waterproofing: Flexible, bituminous, roll-type waterproofing membrane, 56 mil polymeric waterproofing membrane on a heavy duty, four-mil, cross-laminated polyethylene carrier film. Install per manufacturer's written instructions.
Product: WR Meadows MEL-ROL, or equal

Joint Sealants: Masonry: Urethane Joint Sealant ASTM C 920
Type: multicomponent (M); Grade: nonsag (NS)
Class: 50; Uses Related to Exposure: Nontraffic (NT)
Color: submit color strip kit

Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin), Type B (bicellular material with a surface skin), or any of the preceding types, as approved in writing by joint-sealant manufacturer for joint application indicated, and of size and density to control sealant depth ¬and otherwise contribute to producing optimum sealant performance.

Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions. Remove laitance and form-release agents from concrete. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.

Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.

1. Do not leave gaps between ends of sealant backings.
2. Do not stretch, twist, puncture, or tear sealant backings.
3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.

Install sealants using proven techniques that comply with the following and at the same time backings are installed:

1. Place sealants so they directly contact and fully wet joint substrates.
2. Completely fill recesses in each joint configuration.
3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

Tooling of Non-sag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint. Remove excess sealant from surfaces adjacent to joints.

Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces. Provide concave joint profile per Figure 8A in ASTM C 1193, unless otherwise indicated. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

PRECAST CONCRETE WELCOME SIGN

Precast Concrete Welcome Sign, Furnish

Work for this bid item includes, but is not limited to, all labor, materials, and equipment required to furnish the precast concrete base and illuminated sign boxes.

Precast Concrete Welcome Sign, Install

Work for this bid item includes, but is not limited to, all labor, materials, and equipment required to install concrete footing, precast base, illuminated sign boxes, and make final electrical connections. The monument sign will be constructed according to plans and details, and all required shop drawings must be submitted and approved by the Landscape Architect.

Precast Concrete Base: See precast concrete requirements in the "Planter" Bid Item Notes. Precast Concrete Base to be manufactured by the same manufacturer of the "Planter" precast walls, and match the color.

Illuminated Sign Boxes: Aluminum Sheet and Plate: ASTM B 209, alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with at least the strength and durability properties of Alloy 5005-H32.

Aluminum Extrusions: ASTM B 221, alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with at least the strength and durability properties of Alloy 6063-T5.

Polycarbonate Sheet: Makrolon, a Bayer Material Science product, manufactured by extrusion process, coated on both surfaces with abrasion-resistant coating:

- Impact Resistance: 16 ft-lbf/in. per ASTM D 256, Method A.
- Tensile Strength: 9,000 lbf/sq. in. per ASTM D 638
- Flexural Modulus of Elasticity: 340,000 lbf/sq. in. per ASTM D 790
- Heat Deflection: 265 deg F at 264 lbf/sq. in. per ASTM D 648
- Abrasion Resistance: 1.5 percent maximum haze increase for 100 revolutions of a Taber abrader with a load of 500 g per ASTM D 1044

Applied Vinyl: Die-cut characters from vinyl film of nominal thickness of 3 mils with pressure-sensitive adhesive backing, suitable for exterior applications.

Exterior Box Signs: Provide smooth sign panel surfaces constructed to remain flat under installed conditions within a tolerance of plus or minus 1/16 inch measured diagonally from corner to corner, complying with the following requirements:

- Aluminum Sheet: 0.080 inch thick
- Face Color: As selected by Landscape Architect from manufacturer's full range. Provide a minimum of 4 weeks for color selection.
- Light Source: SloanLED SignBOX 3

Extruded Aluminum Frames: Mitered with concealed anchors and welded.

- Profile: Quadrilateral
- Corner Condition: Square
- Manufacturer's standard noncorroding anchors for substrates encountered.

Baked Enamel Finish: AA-C12C42R1x (Chemical Finish: cleaned with inhibited chemicals; Chemical Finish: acid-chromate-fluoride-phosphate conversion coating; Organic Coating: as specified below). Apply baked enamel complying with paint manufacturer's written instructions for cleaning, conversion coating, and painting. Thermosetting, modified acrylic enamel primer/topcoat system complying with AAMA 2603 except with a minimum dry film thickness of 1.5 mils, medium gloss.

Comply with AWS standards for practices in shop welding. Provide welds behind finished surfaces without distortion or discoloration of exposed side. Clean exposed welded surfaces of welding flux and dress exposed and contact surfaces. Welding procedures and personnel will be qualified according to AWS D1.2, "Structural Welding Code – Aluminum".

Repair scratches and other damage which might have occurred during installation. Replace components where repairs were made but are still visible to the unaided eye from a distance of 10 feet. Remove temporary coverings and protection to adjacent work areas. Clean installed products in accordance with the manufacturer's instructions prior to Owner's acceptance.

FOR BIDDING PURPOSES ONLY

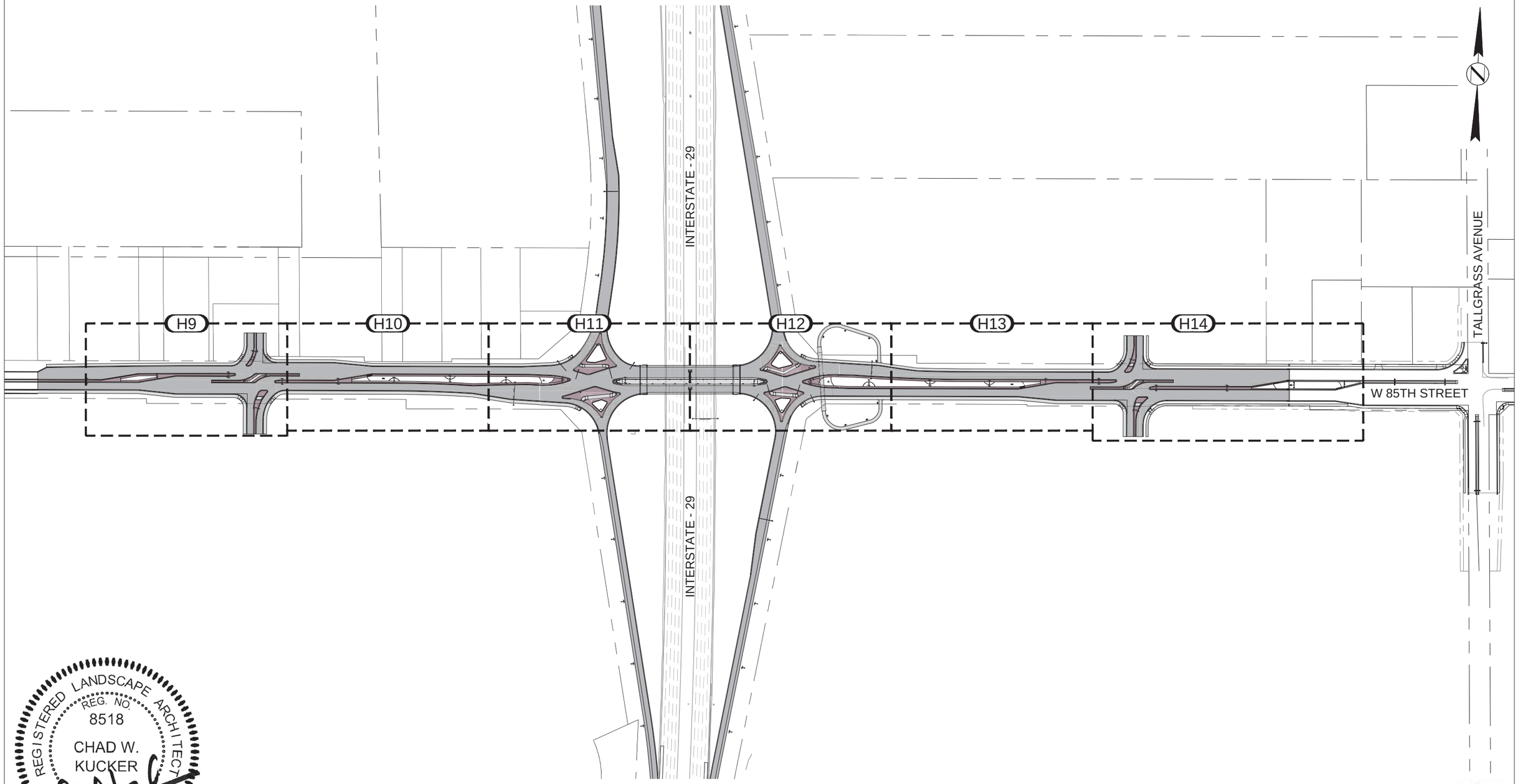
85th Street DDI Key Plan: Streetscape Layout Plan

SD DOT	PROJECT	SECTION	SHEET
	EM 0292(88)73 IM 2292(104)0	H	H8

20206 LAYOUT.dwg
PLOTTING DATE: 07/03/2025

REV DATE: 07/23/2025
INITIAL: CWK

0 150 300



REGISTERED LANDSCAPE ARCHITECT
REG. NO.
8518
CHAD W.
KUCKER
SOUTH DAKOTA
7.23.25

CONFLUENCE SEH

FOR BIDDING PURPOSES ONLY

85th Street DDI: Streetscape Layout Plan

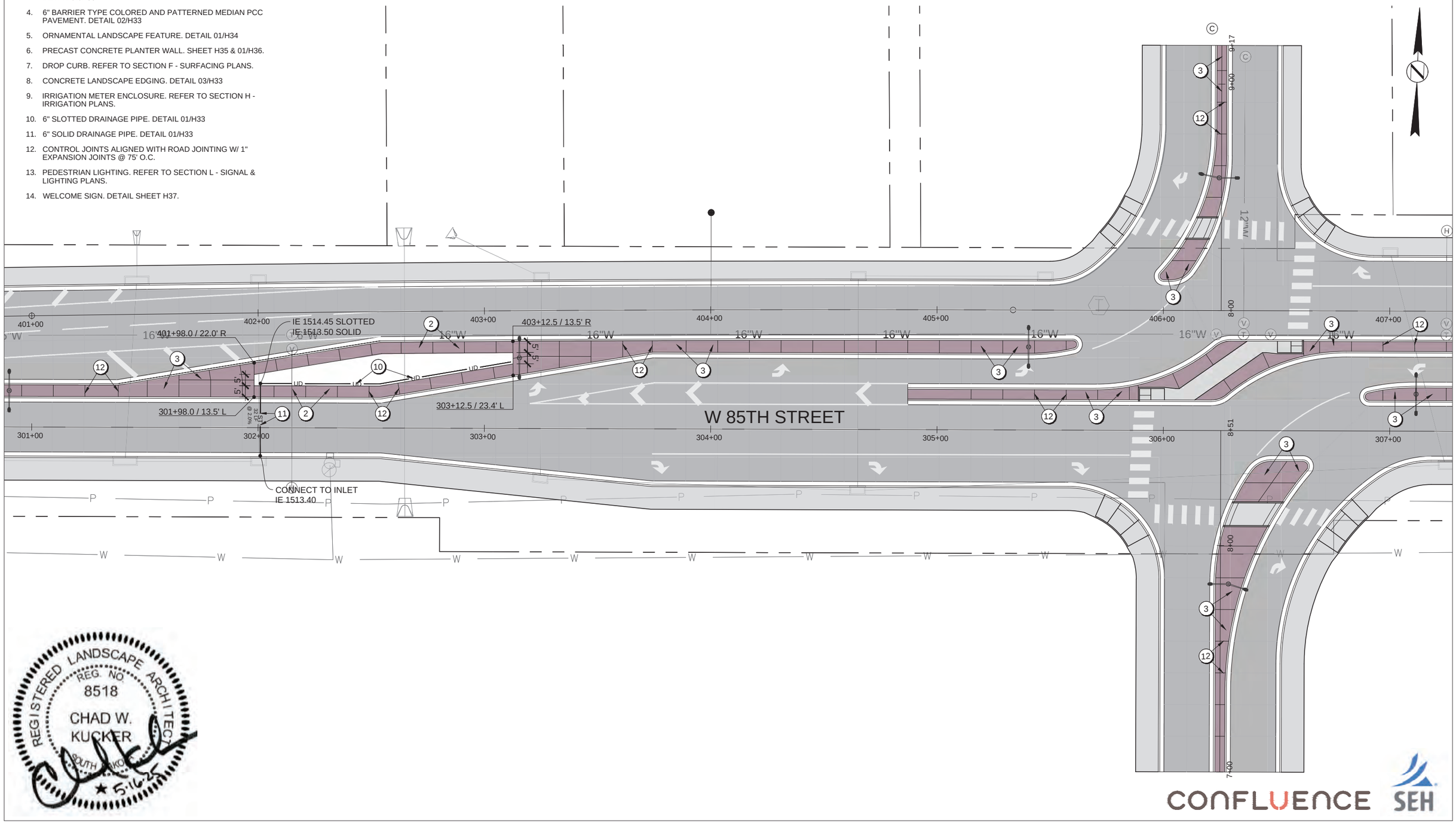
SD DOT	PROJECT	SECTION	SHEET
	EM 0292(88)73 IM 2292(104)0	H	H9

20206 LAYOUT.dwg
PLOTTING DATE: 07/03/2025

0 20 40

KEYNOTES

1. 2'-0" COLORED CONCRETE SPLASH APRON. DETAIL 05/H33
2. 5'-0" COLORED CONCRETE SPLASH APRON. DETAIL 04/H33
3. 6" BARRIER TYPE COLORED MEDIAN PCC PAVEMENT. DETAIL 02/H33
4. 6" BARRIER TYPE COLORED AND PATTERNED MEDIAN PCC PAVEMENT. DETAIL 02/H33
5. ORNAMENTAL LANDSCAPE FEATURE. DETAIL 01/H34
6. PRECAST CONCRETE PLANTER WALL. SHEET H35 & 01/H36.
7. DROP CURB. REFER TO SECTION F - SURFACING PLANS.
8. CONCRETE LANDSCAPE EDGING. DETAIL 03/H33
9. IRRIGATION METER ENCLOSURE. REFER TO SECTION H - IRRIGATION PLANS.
10. 6" SLOTTED DRAINAGE PIPE. DETAIL 01/H33
11. 6" SOLID DRAINAGE PIPE. DETAIL 01/H33
12. CONTROL JOINTS ALIGNED WITH ROAD JOINTING W/ 1" EXPANSION JOINTS @ 75' O.C.
13. PEDESTRIAN LIGHTING. REFER TO SECTION L - SIGNAL & LIGHTING PLANS.
14. WELCOME SIGN. DETAIL SHEET H37.



REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
5-16-25

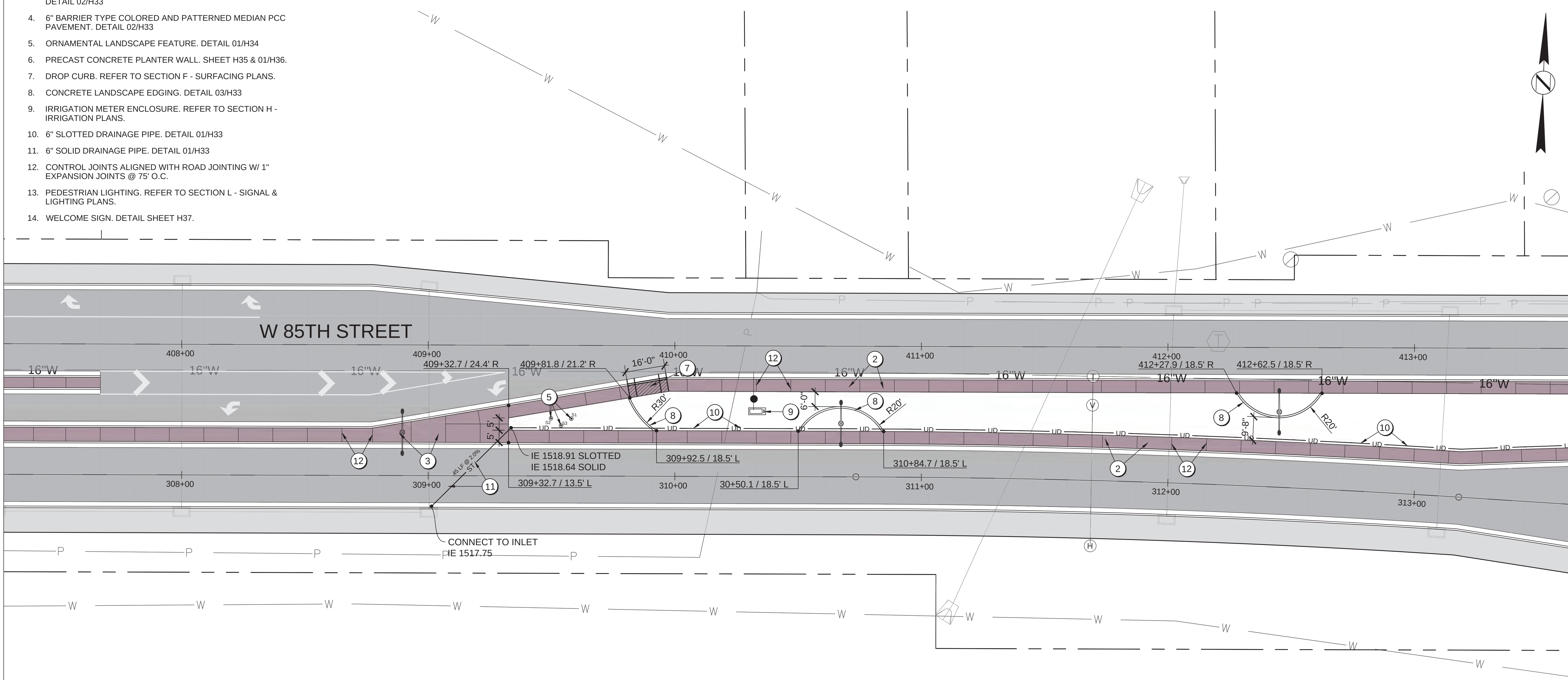
CONFLUENCE SEH

85th Street DDI: Streetscape Layout Plan

SD DOT
PROJECT: EM 0292(88)73 IM 2292(104)0
SECTION: H
SHEET: H10
20206 LAYOUT.dwg
PLOTTING DATE: 07/03/2025
REV DATE: 07/23/2025
INITIAL: CWK

KEYNOTES

1. 2'-0" COLORED CONCRETE SPLASH APRON. DETAIL 05/H33
2. 5'-0" COLORED CONCRETE SPLASH APRON. DETAIL 04/H33
3. 6" BARRIER TYPE COLORED MEDIAN PCC PAVEMENT. DETAIL 02/H33
4. 6" BARRIER TYPE COLORED AND PATTERNED MEDIAN PCC PAVEMENT. DETAIL 02/H33
5. ORNAMENTAL LANDSCAPE FEATURE. DETAIL 01/H34
6. PRECAST CONCRETE PLANTER WALL. SHEET H35 & 01/H36.
7. DROP CURB. REFER TO SECTION F - SURFACING PLANS.
8. CONCRETE LANDSCAPE EDGING. DETAIL 03/H33
9. IRRIGATION METER ENCLOSURE. REFER TO SECTION H - IRRIGATION PLANS.
10. 6" SLOTTED DRAINAGE PIPE. DETAIL 01/H33
11. 6" SOLID DRAINAGE PIPE. DETAIL 01/H33
12. CONTROL JOINTS ALIGNED WITH ROAD JOINTING W/ 1" EXPANSION JOINTS @ 75' O.C.
13. PEDESTRIAN LIGHTING. REFER TO SECTION L - SIGNAL & LIGHTING PLANS.
14. WELCOME SIGN. DETAIL SHEET H37.



REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
7.23.25

CONFLUENCE SEH

FOR BIDDING PURPOSES ONLY

85th Street DDI: Streetscape Layout Plan

SD DOT	PROJECT	SECTION	SHEET
	EM 0292(88)73 IM 2292(104)0	H	H11

20206 LAYOUT.dwg
PLOTTING DATE: 07/03/2025

REV DATE: 07/23/2025
INITIAL: CWK

0 20 40

KEYNOTES

1. 2'-0" COLORED CONCRETE SPLASH APRON. DETAIL 05/H33
2. 5'-0" COLORED CONCRETE SPLASH APRON. DETAIL 04/H33
3. 6" BARRIER TYPE COLORED MEDIAN PCC PAVEMENT. DETAIL 02/H33
4. 6" BARRIER TYPE COLORED AND PATTERNED MEDIAN PCC PAVEMENT. DETAIL 02/H33
5. ORNAMENTAL LANDSCAPE FEATURE. DETAIL 01/H34
6. PRECAST CONCRETE PLANTER WALL. SHEET H35 & 01/H36.
7. DROP CURB. REFER TO SECTION F - SURFACING PLANS.
8. CONCRETE LANDSCAPE EDGING. DETAIL 03/H33
9. IRRIGATION METER ENCLOSURE. REFER TO SECTION H - IRRIGATION PLANS.
10. 6" SLOTTED DRAINAGE PIPE. DETAIL 01/H33
11. 6" SOLID DRAINAGE PIPE. DETAIL 01/H33
12. CONTROL JOINTS ALIGNED WITH ROAD JOINTING W/ 1" EXPANSION JOINTS @ 75' O.C.
13. PEDESTRIAN LIGHTING. REFER TO SECTION L - SIGNAL & LIGHTING PLANS.
14. WELCOME SIGN. DETAIL SHEET H37.

40+98.1 / 13.1' L
CAPPED END
IE 1539.35
IE 1538.95 SLOTTED
IE 1538.45 SOLID
CAPPED END
IE 1539.20
4+55.2 / 11.5' R
40+47.8 / 11.8' L
CONNECT TO INLET
IE 1538.25
40 LF @ 1.0% UD
25 LF @ 1.0% UD
40 LF @ 1.0%
414+00
415+00
415+26.0 / 19.7' R
415+78.3 / 20.5' R
416+00
416+13.8 / 22.0' R
4+00
5+00
40+00
41+00
318+00
319+00
320+00
417+00
317+00
418+00
419+00
420+00
45+80
45+00
44+00
W 85TH STREET
I-29 SOUTH
16"W
R20'
R30'
10'-2"
314+4.5 / 26.7' L
314+39.0 / 29.6' L
315+35.3 / 33.5' L
315+64.2 / 33.5' L
314+00
315+00
316+00
3+00
CONNECT TO INLET
IE 1538.39
14 LF @ 2.0% UD
33 LF @ 1.0% UD
44+64.7 / 31.0' L
4+67.1 / 11.4' L
IE 1539.17 SLOTTED
IE 1538.67 SOLID
CAPPED END
IE 1539.50
5+3.7 / 11.3' L

REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
7.23.25

CONFLUENCE SEH

FOR BIDDING PURPOSES ONLY

85th Street DDI: Streetscape Layout Plan

PROJECT	SECTION	SHEET
EM 0292(88)73 IM 2292(104)0	H	H12

20206 LAYOUT.dwg
PLOTTING DATE: 07/03/2025

REV DATE: 07/23/2025
INITIAL: CWK

0 20 40

KEYNOTES

1. 2'-0" COLORED CONCRETE SPLASH APRON. DETAIL 05/H33
2. 5'-0" COLORED CONCRETE SPLASH APRON. DETAIL 04/H33
3. 6" BARRIER TYPE COLORED MEDIAN PCC PAVEMENT. DETAIL 02/H33
4. 6" BARRIER TYPE COLORED AND PATTERNED MEDIAN PCC PAVEMENT. DETAIL 02/H33
5. ORNAMENTAL LANDSCAPE FEATURE. DETAIL 01/H34
6. PRECAST CONCRETE PLANTER WALL. SHEET H35 & 01/H36.
7. DROP CURB. REFER TO SECTION F - SURFACING PLANS.
8. CONCRETE LANDSCAPE EDGING. DETAIL 03/H33
9. IRRIGATION METER ENCLOSURE. REFER TO SECTION H - IRRIGATION PLANS.
10. 6" SLOTTED DRAINAGE PIPE. DETAIL 01/H33
11. 6" SOLID DRAINAGE PIPE. DETAIL 01/H33
12. CONTROL JOINTS ALIGNED WITH ROAD JOINTING W/ 1" EXPANSION JOINTS @ 75' O.C.
13. PEDESTRIAN LIGHTING. REFER TO SECTION L - SIGNAL & LIGHTING PLANS.
14. WELCOME SIGN. DETAIL SHEET H37.

W 85TH STREET

I-29 NORTH

2+93.4 / 11.7' L
CAPPED END
IE 1538.45

IE 1538.10 SLOTTED
IE 1538.60 SOLID

10+95.9 / 42.0' R

2+42.8 / 14.5' L

CONNECT TO INLET
IE 1538.50

423+90.6 / 21.9' R

CONNECT TO INLET
IE 1540.25

424+44.3 / 20.5' R

424+71.7 / 20.5' R

324+30.2 / 20.5' L

324+83.7 / 20.3' L

325+73.9 / 18.5' L

326+12.6 / 18.5' L

35+24.3 / 14.5' R

3+19.8 / 13.0' L

IE 1541.40 SLOTTED
IE 1540.90 SOLID

34+83.5 / 14.6' R

CAPPED END
IE 1541.80

CONFLUENCE SEH

85th Street DDI: Streetscape Layout Plan

FOR BIDDING PURPOSES ONLY

SD DOT	PROJECT	SECTION	SHEET
	EM 0292(88)73 IM 2292(104)0	H	H13

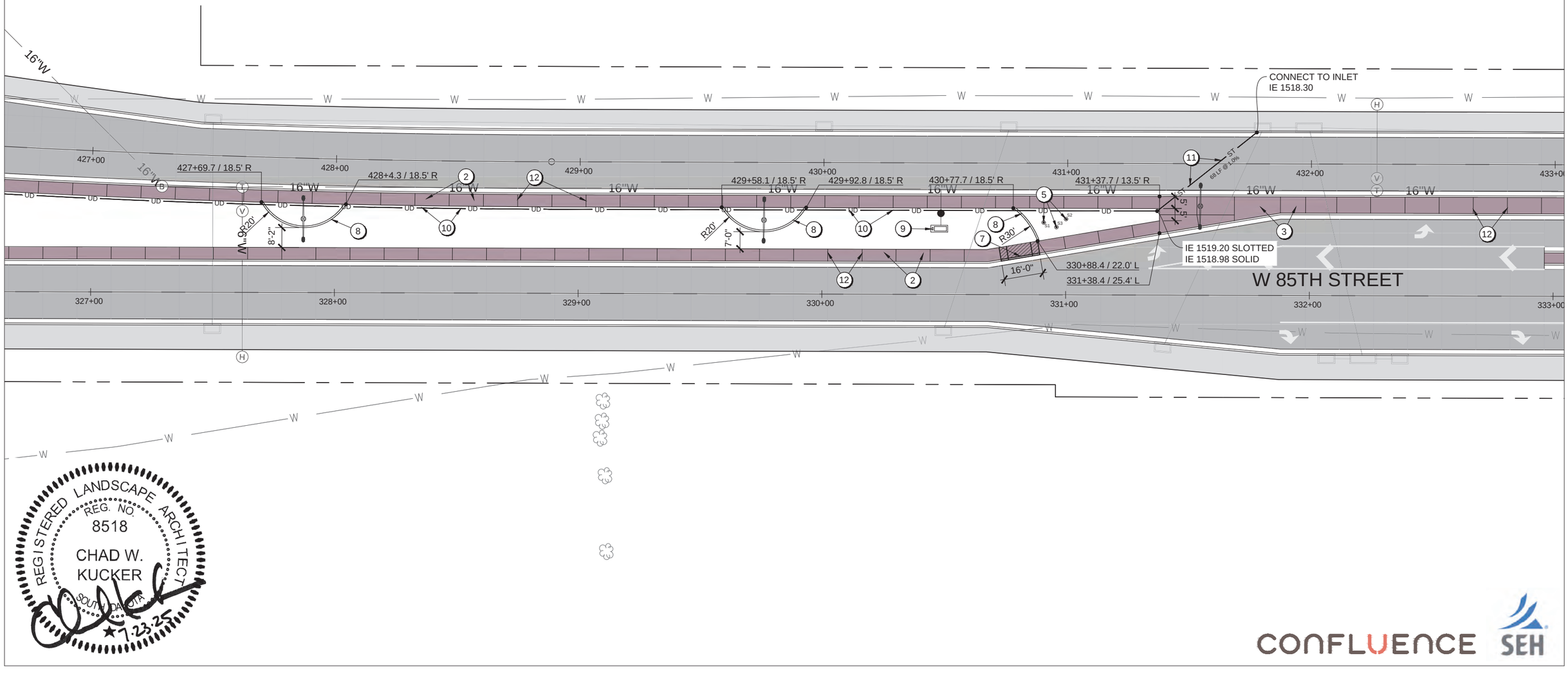
20206 LAYOUT.dwg
PLOTTING DATE: 07/03/2025

REV DATE: 07/23/2025
INITIAL: CWK

0 20 40

KEYNOTES

1. 2'-0" COLORED CONCRETE SPLASH APRON. DETAIL 05/H33
2. 5'-0" COLORED CONCRETE SPLASH APRON. DETAIL 04/H33
3. 6" BARRIER TYPE COLORED MEDIAN PCC PAVEMENT. DETAIL 02/H33
4. 6" BARRIER TYPE COLORED AND PATTERNED MEDIAN PCC PAVEMENT. DETAIL 02/H33
5. ORNAMENTAL LANDSCAPE FEATURE. DETAIL 01/H34
6. PRECAST CONCRETE PLANTER WALL. SHEET H35 & 01/H36.
7. DROP CURB. REFER TO SECTION F - SURFACING PLANS.
8. CONCRETE LANDSCAPE EDGING. DETAIL 03/H33
9. IRRIGATION METER ENCLOSURE. REFER TO SECTION H - IRRIGATION PLANS.
10. 6" SLOTTED DRAINAGE PIPE. DETAIL 01/H33
11. 6" SOLID DRAINAGE PIPE. DETAIL 01/H33
12. CONTROL JOINTS ALIGNED WITH ROAD JOINTING W/ 1" EXPANSION JOINTS @ 75' O.C.
13. PEDESTRIAN LIGHTING. REFER TO SECTION L - SIGNAL & LIGHTING PLANS.
14. WELCOME SIGN. DETAIL SHEET H37.



REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
7.23.25

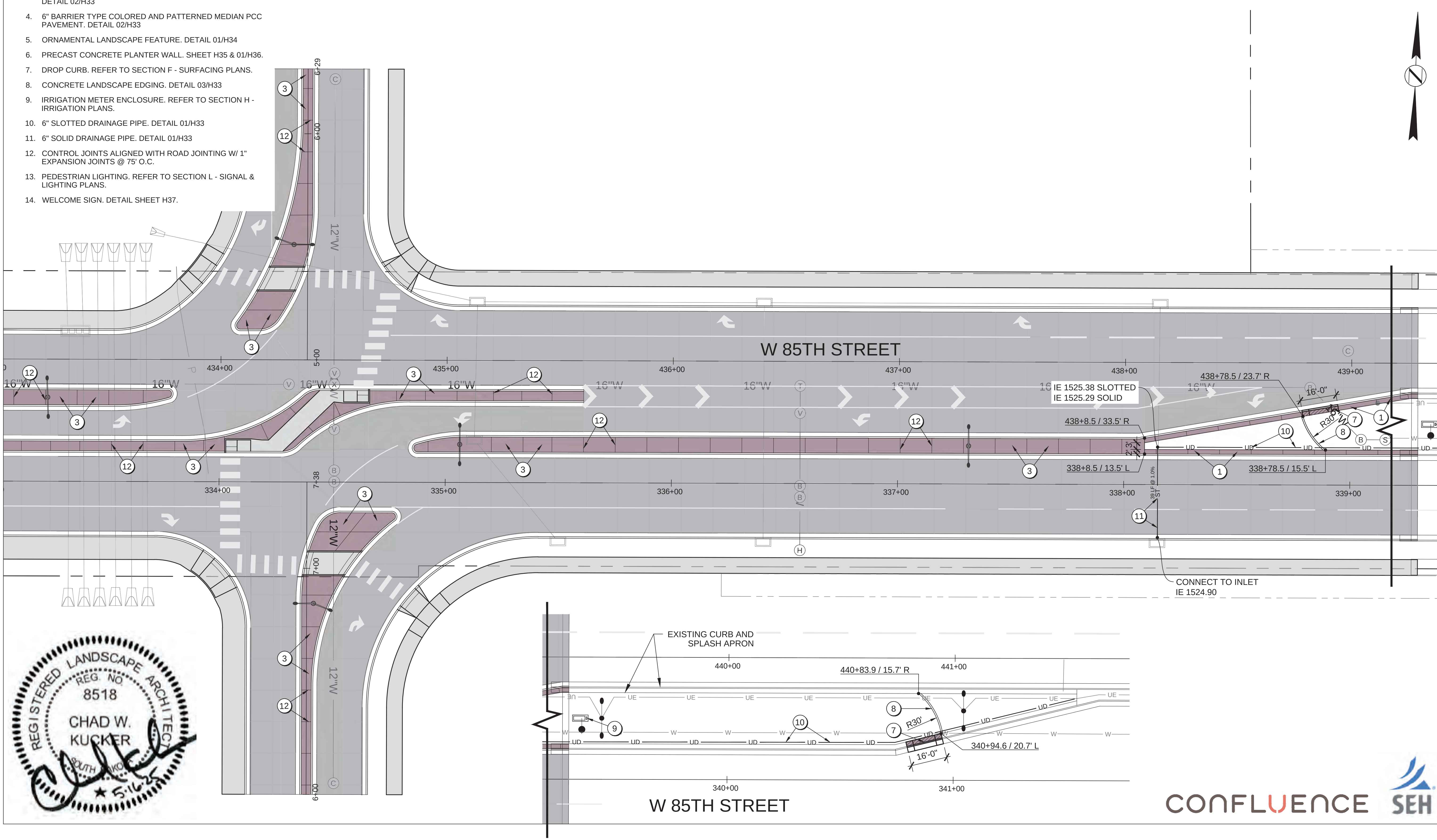
CONFLUENCE SEH

85th Street DDI: Streetscape Layout Plan

FOR BIDDING PURPOSES ONLY

KEYNOTES

1. 2'-0" COLORED CONCRETE SPLASH APRON. DETAIL 05/H33
2. 5'-0" COLORED CONCRETE SPLASH APRON. DETAIL 04/H33
3. 6" BARRIER TYPE COLORED MEDIAN PCC PAVEMENT. DETAIL 02/H33
4. 6" BARRIER TYPE COLORED AND PATTERNED MEDIAN PCC PAVEMENT. DETAIL 02/H33
5. ORNAMENTAL LANDSCAPE FEATURE. DETAIL 01/H34
6. PRECAST CONCRETE PLANTER WALL. SHEET H35 & 01/H36.
7. DROP CURB. REFER TO SECTION F - SURFACING PLANS.
8. CONCRETE LANDSCAPE EDGING. DETAIL 03/H33
9. IRRIGATION METER ENCLOSURE. REFER TO SECTION H - IRRIGATION PLANS.
10. 6" SLOTTED DRAINAGE PIPE. DETAIL 01/H33
11. 6" SOLID DRAINAGE PIPE. DETAIL 01/H33
12. CONTROL JOINTS ALIGNED WITH ROAD JOINTING W/ 1" EXPANSION JOINTS @ 75' O.C.
13. PEDESTRIAN LIGHTING. REFER TO SECTION L - SIGNAL & LIGHTING PLANS.
14. WELCOME SIGN. DETAIL SHEET H37.



REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
5-16-25

CONFLUENCE SEH

FOR BIDDING PURPOSES ONLY

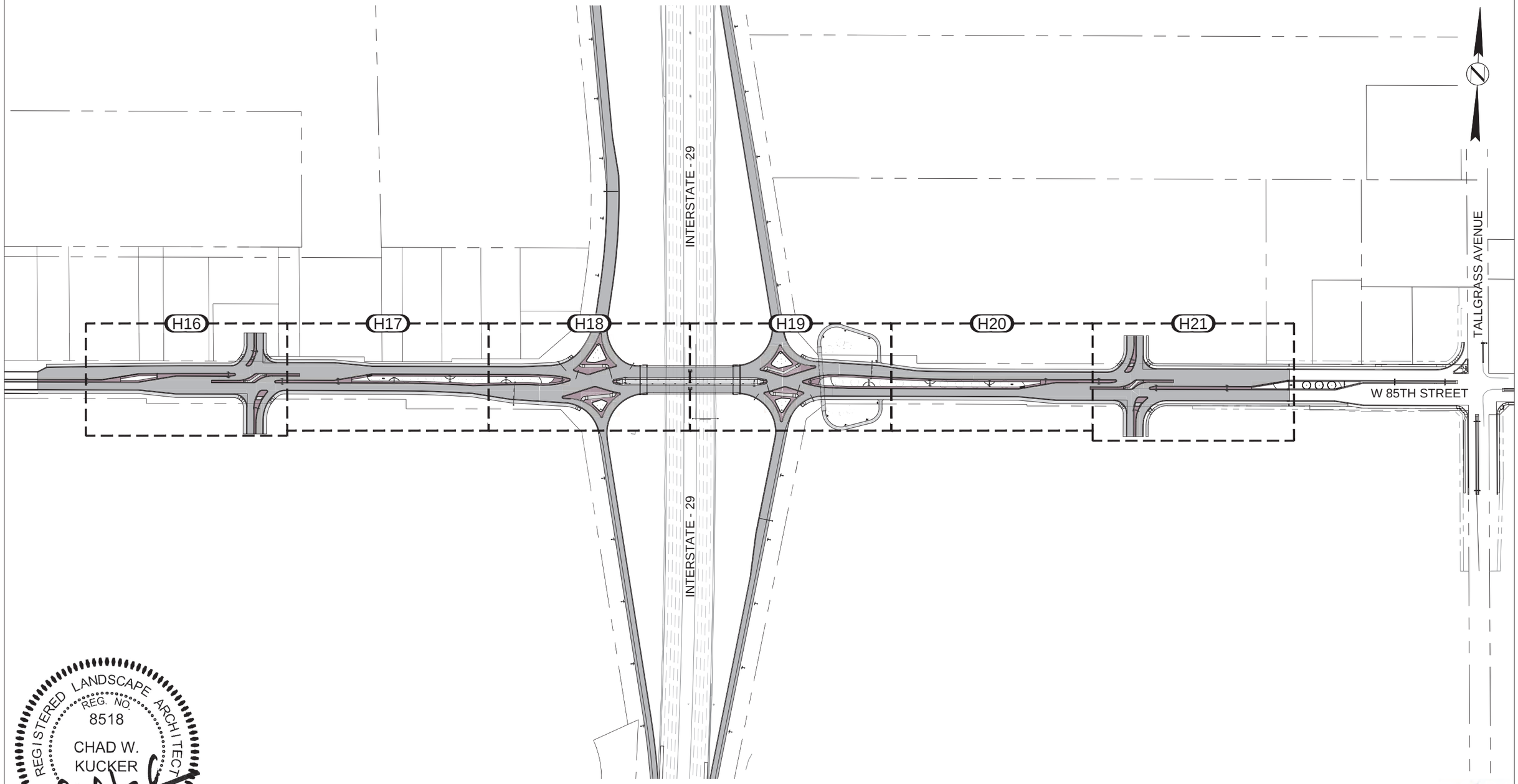
85th Street DDI Key Plan: Streetscape Planting Plan

SD DOT	PROJECT	SECTION	SHEET
	EM 0292(88)73 IM 2292(104)0	H	H15

20206 PLANTING.dwg
PLOTTING DATE: 07/03/2025

REV DATE: 07/23/2025
INITIAL: CWK

0 150 300



REGISTERED LANDSCAPE ARCHITECT
REG. NO.
8518
CHAD W.
KUCKER
SOUTH DAKOTA
7.23.25

CONFLUENCE SEH

FOR BIDDING PURPOSES ONLY

85th Street DDI: Streetscape Planting Plan

PROJECT	SECTION	SHEET
EM 0292(88)73 IM 2292(104)0	H	H16

20206 PLANTING.dwg
PLOTTING DATE: 07/03/2025

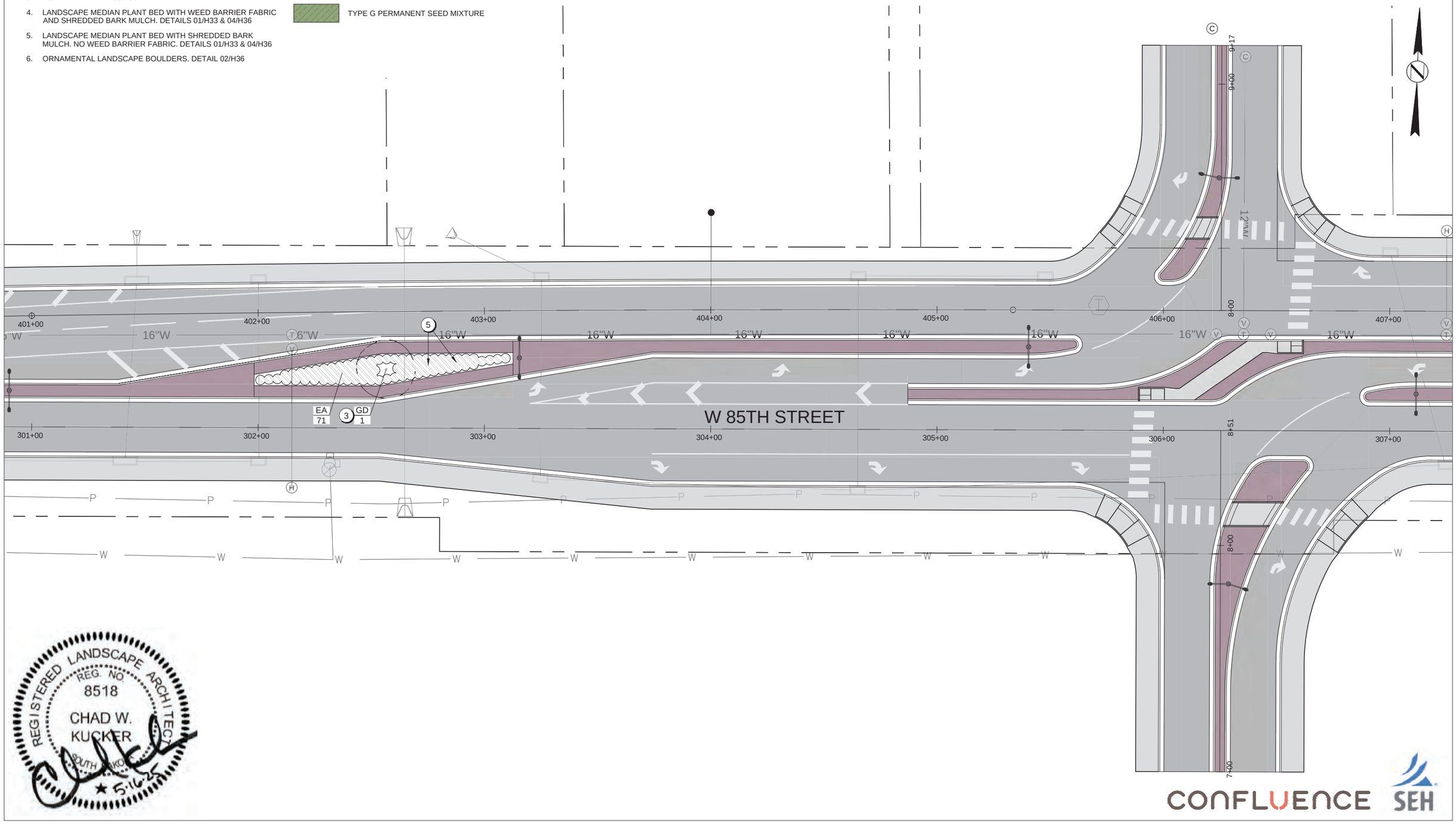
0 20 40

KEYNOTES

1. LANDSCAPE MEDIAN WITH SOD. REFER TO SEEDING KEY. DETAIL 01/H33
2. TURF SEEDING. REFER TO SEEDING KEY.
3. B&B TREE. DETAIL 03/H36
4. LANDSCAPE MEDIAN PLANT BED WITH WEED BARRIER FABRIC AND SHREDDED BARK MULCH. DETAILS 01/H33 & 04/H36
5. LANDSCAPE MEDIAN PLANT BED WITH SHREDDED BARK MULCH. NO WEED BARRIER FABRIC. DETAILS 01/H33 & 04/H36
6. ORNAMENTAL LANDSCAPE BOULDERS. DETAIL 02/H36

TURF KEY

- SOD
- TYPE E PERMANENT SEED MIXTURE
- TYPE G PERMANENT SEED MIXTURE



REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
5-16-25

CONFLUENCE SEH

FOR BIDDING PURPOSES ONLY

85th Street DDI: Streetscape Planting Plan

SD DOT	PROJECT	SECTION	SHEET
	EM 0292(88)73 IM 2292(104)0	H	H17

20206 PLANTING.dwg
PLOTTING DATE: 07/03/2025

REV DATE: 07/23/2025
INITIAL: CWK

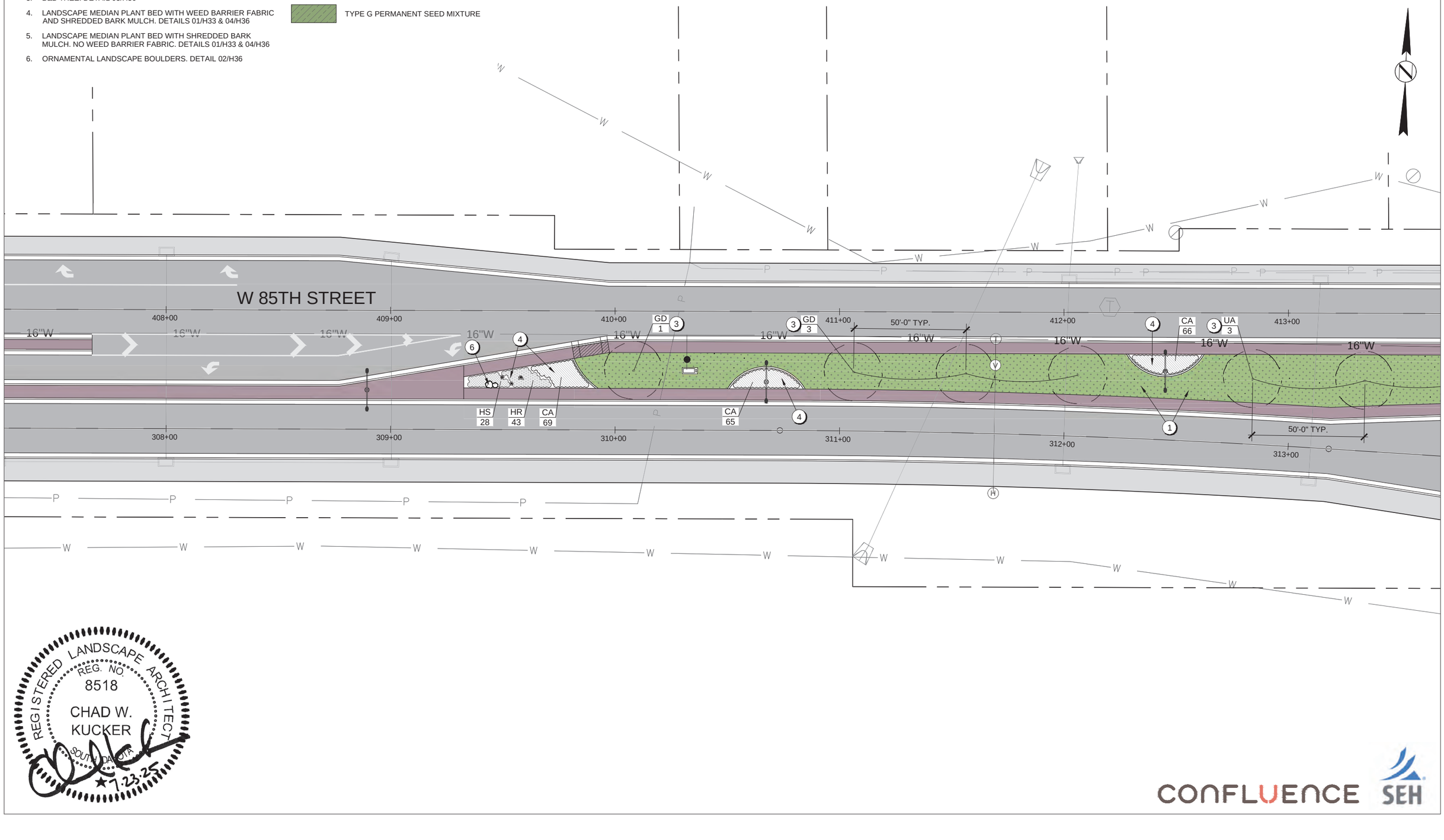
0 20 40

KEYNOTES

1. LANDSCAPE MEDIAN WITH SOD. REFER TO SEEDING KEY. DETAIL 01/H33
2. TURF SEEDING. REFER TO SEEDING KEY.
3. B&B TREE. DETAIL 03/H36
4. LANDSCAPE MEDIAN PLANT BED WITH WEED BARRIER FABRIC AND SHREDDED BARK MULCH. DETAILS 01/H33 & 04/H36
5. LANDSCAPE MEDIAN PLANT BED WITH SHREDDED BARK MULCH. NO WEED BARRIER FABRIC. DETAILS 01/H33 & 04/H36
6. ORNAMENTAL LANDSCAPE BOULDERS. DETAIL 02/H36

TURF KEY

- SOD
- TYPE E PERMANENT SEED MIXTURE
- TYPE G PERMANENT SEED MIXTURE



REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
7.23.25

CONFLUENCE SEH

FOR BIDDING PURPOSES ONLY

85th Street DDI: Streetscape Planting Plan

PROJECT	SECTION	SHEET
EM 0292(88)73 IM 2292(104)0	H	H18

20206 PLANTING.dwg
PLOTTING DATE: 07/03/2025

REV DATE: 07/23/2025
INITIAL: CWK

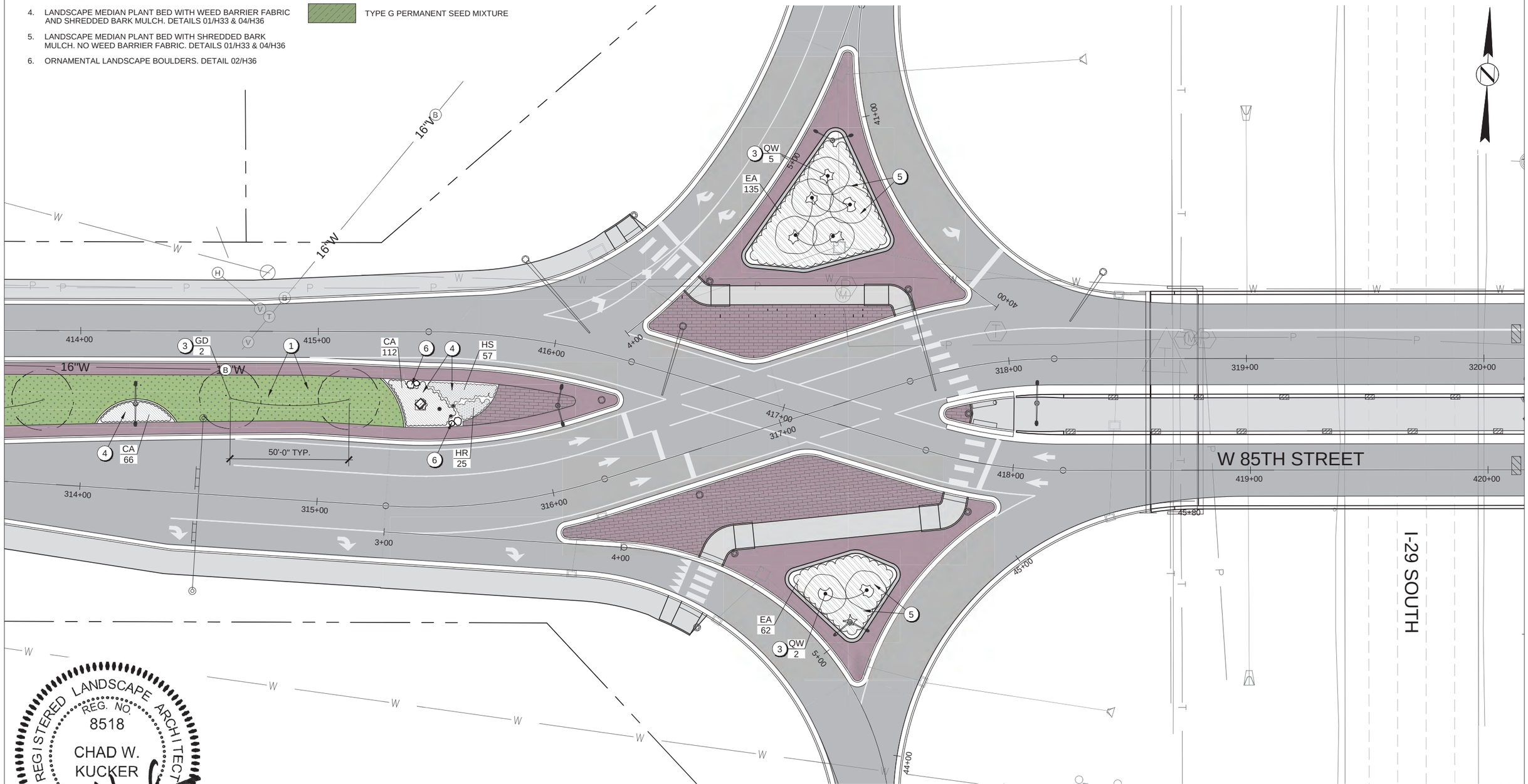
0 20 40

KEYNOTES

1. LANDSCAPE MEDIAN WITH SOD. REFER TO SEEDING KEY. DETAIL 01/H33
2. TURF SEEDING. REFER TO SEEDING KEY.
3. B&B TREE. DETAIL 03/H36
4. LANDSCAPE MEDIAN PLANT BED WITH WEED BARRIER FABRIC AND SHREDDED BARK MULCH. DETAILS 01/H33 & 04/H36
5. LANDSCAPE MEDIAN PLANT BED WITH SHREDDED BARK MULCH. NO WEED BARRIER FABRIC. DETAILS 01/H33 & 04/H36
6. ORNAMENTAL LANDSCAPE BOULDERS. DETAIL 02/H36

TURF KEY

- SOD
- TYPE E PERMANENT SEED MIXTURE
- TYPE G PERMANENT SEED MIXTURE



REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
7.23.25

CONFLUENCE SEH

FOR BIDDING PURPOSES ONLY

85th Street DDI: Streetscape Planting Plan

SD DOT	PROJECT	SECTION	SHEET
	EM 0292(88)73 IM 2292(104)0	H	H19

20206 PLANTING.dwg
PLOTTING DATE: 07/03/2025

REV DATE: 07/23/2025
INITIAL: CWK

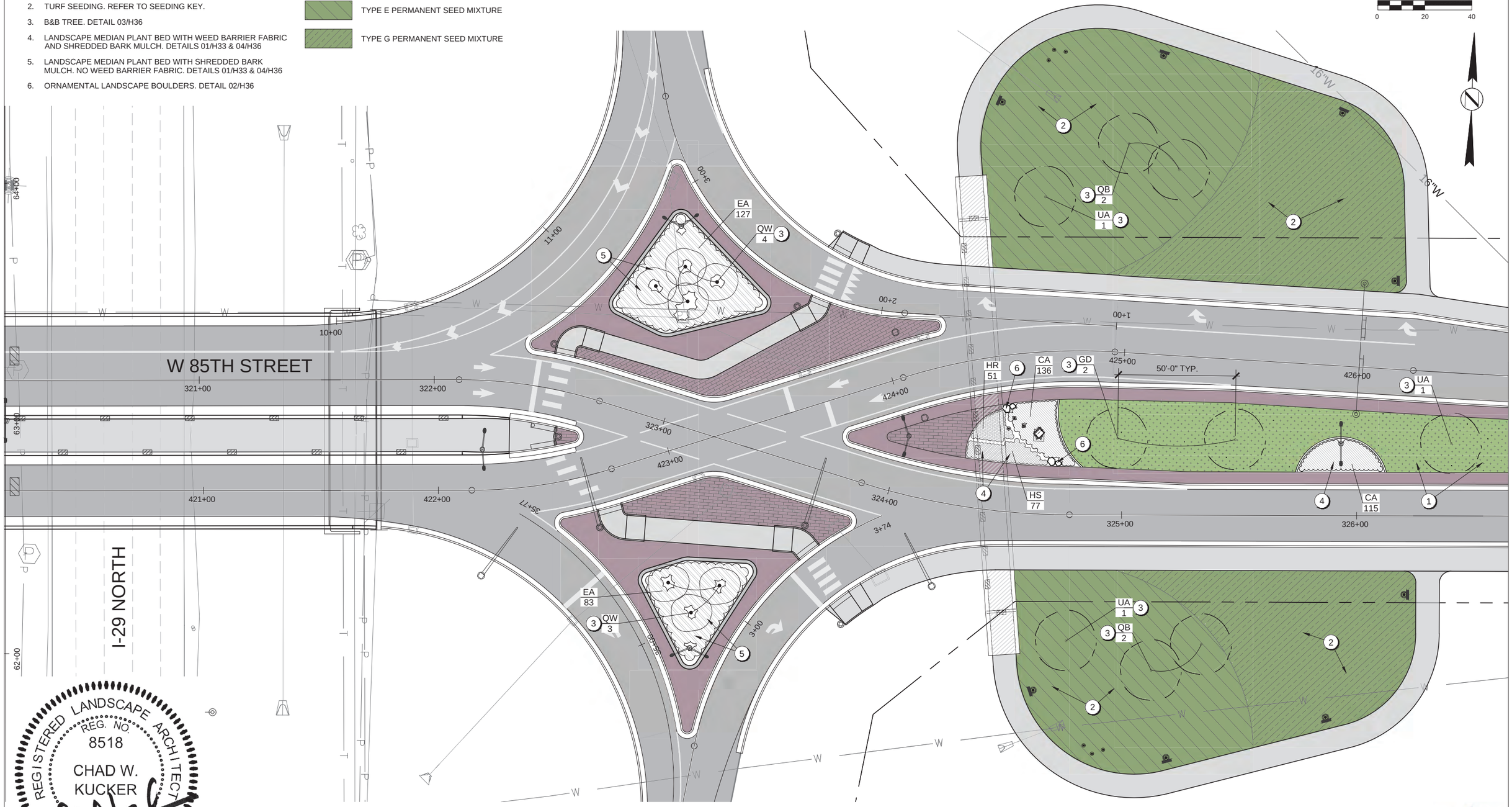
0 20 40

KEYNOTES

1. LANDSCAPE MEDIAN WITH SOD. REFER TO SEEDING KEY. DETAIL 01/H33
2. TURF SEEDING. REFER TO SEEDING KEY.
3. B&B TREE. DETAIL 03/H36
4. LANDSCAPE MEDIAN PLANT BED WITH WEED BARRIER FABRIC AND SHREDDED BARK MULCH. DETAILS 01/H33 & 04/H36
5. LANDSCAPE MEDIAN PLANT BED WITH SHREDDED BARK MULCH. NO WEED BARRIER FABRIC. DETAILS 01/H33 & 04/H36
6. ORNAMENTAL LANDSCAPE BOULDERS. DETAIL 02/H36

TURF KEY

- SOD
- TYPE E PERMANENT SEED MIXTURE
- TYPE G PERMANENT SEED MIXTURE



REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
7.23.25

CONFLUENCE SEH

FOR BIDDING PURPOSES ONLY

85th Street DDI: Streetscape Planting Plan

SD DOT	PROJECT	SECTION	SHEET
	EM 0292(88)73 IM 2292(104)0	H	H20

20206 PLANTING.dwg
PLOTTING DATE: 07/03/2025

REV DATE: 07/23/2025
INITIAL: CWK

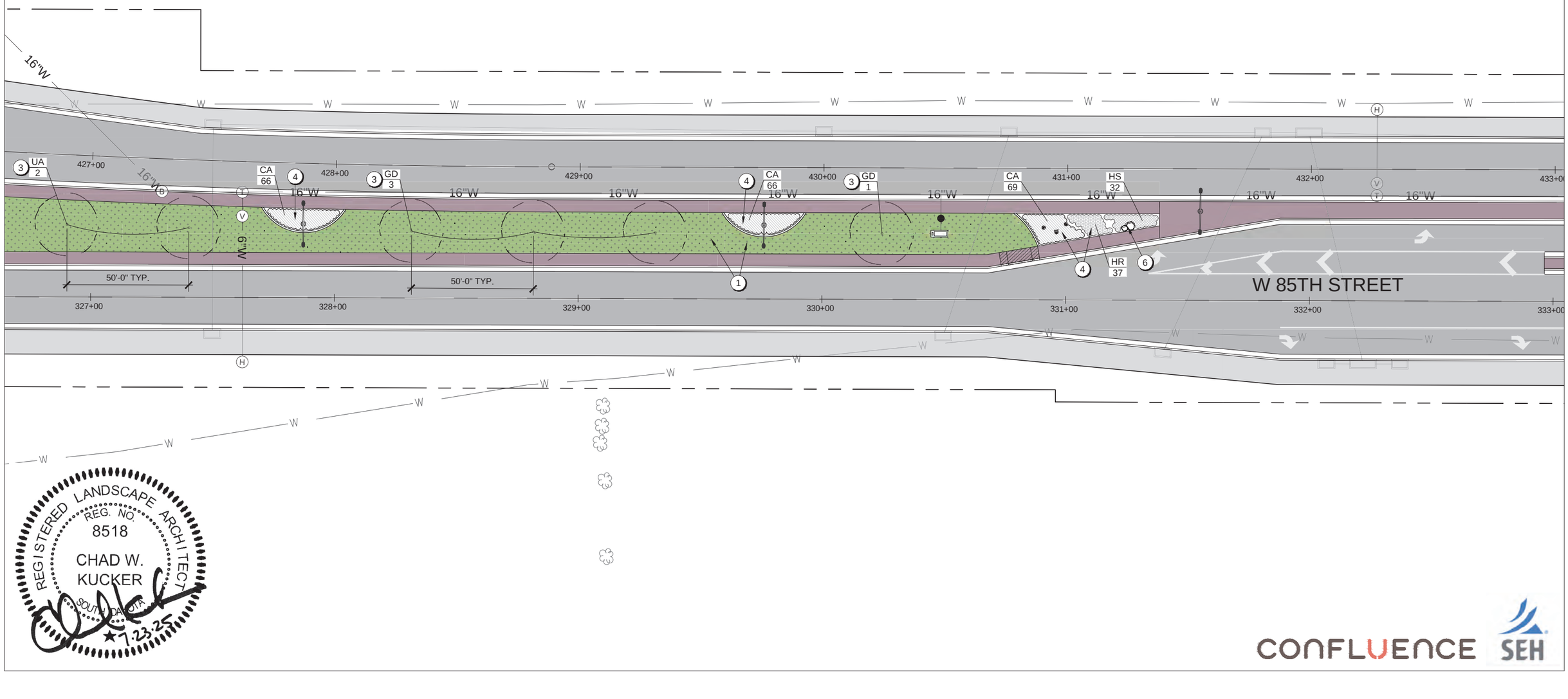
0 20 40

KEYNOTES

1. LANDSCAPE MEDIAN WITH SOD. REFER TO SEEDING KEY. DETAIL 01/H33
2. TURF SEEDING. REFER TO SEEDING KEY.
3. B&B TREE. DETAIL 03/H36
4. LANDSCAPE MEDIAN PLANT BED WITH WEED BARRIER FABRIC AND SHREDDED BARK MULCH. DETAILS 01/H33 & 04/H36
5. LANDSCAPE MEDIAN PLANT BED WITH SHREDDED BARK MULCH. NO WEED BARRIER FABRIC. DETAILS 01/H33 & 04/H36
6. ORNAMENTAL LANDSCAPE BOULDERS. DETAIL 02/H36

TURF KEY

- SOD
- TYPE E PERMANENT SEED MIXTURE
- TYPE G PERMANENT SEED MIXTURE



REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
7.23.25

CONFLUENCE SEH

FOR BIDDING PURPOSES ONLY

85th Street DDI: Streetscape Planting Plan

SD DOT	PROJECT	SECTION	SHEET
	EM 0292(88)73 IM 2292(104)0	H	H21

20206 PLANTING.dwg
PLOTTING DATE: 07/03/2025

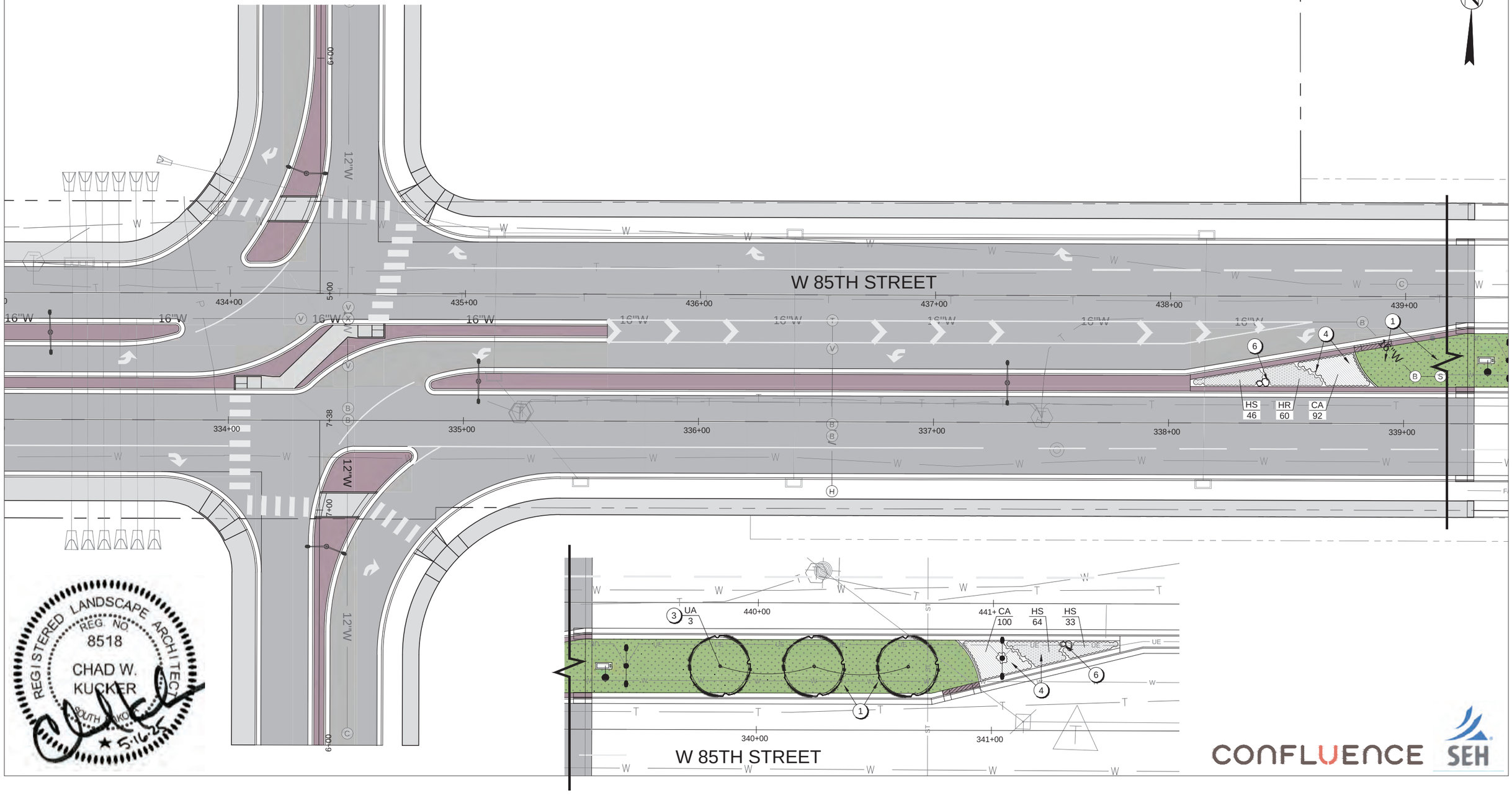
0 20 40

KEYNOTES

1. LANDSCAPE MEDIAN WITH SOD. REFER TO SEEDING KEY. DETAIL 01/H33
2. TURF SEEDING. REFER TO SEEDING KEY.
3. B&B TREE. DETAIL 03/H36
4. LANDSCAPE MEDIAN PLANT BED WITH WEED BARRIER FABRIC AND SHREDDED BARK MULCH. DETAILS 01/H33 & 04/H36
5. LANDSCAPE MEDIAN PLANT BED WITH SHREDDED BARK MULCH. NO WEED BARRIER FABRIC. DETAILS 01/H33 & 04/H36
6. ORNAMENTAL LANDSCAPE BOULDERS. DETAIL 02/H36

TURF KEY

- SOD
- TYPE E PERMANENT SEED MIXTURE
- TYPE G PERMANENT SEED MIXTURE



REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
5-16-25

CONFLUENCE SEH

FOR BIDDING PURPOSES ONLY

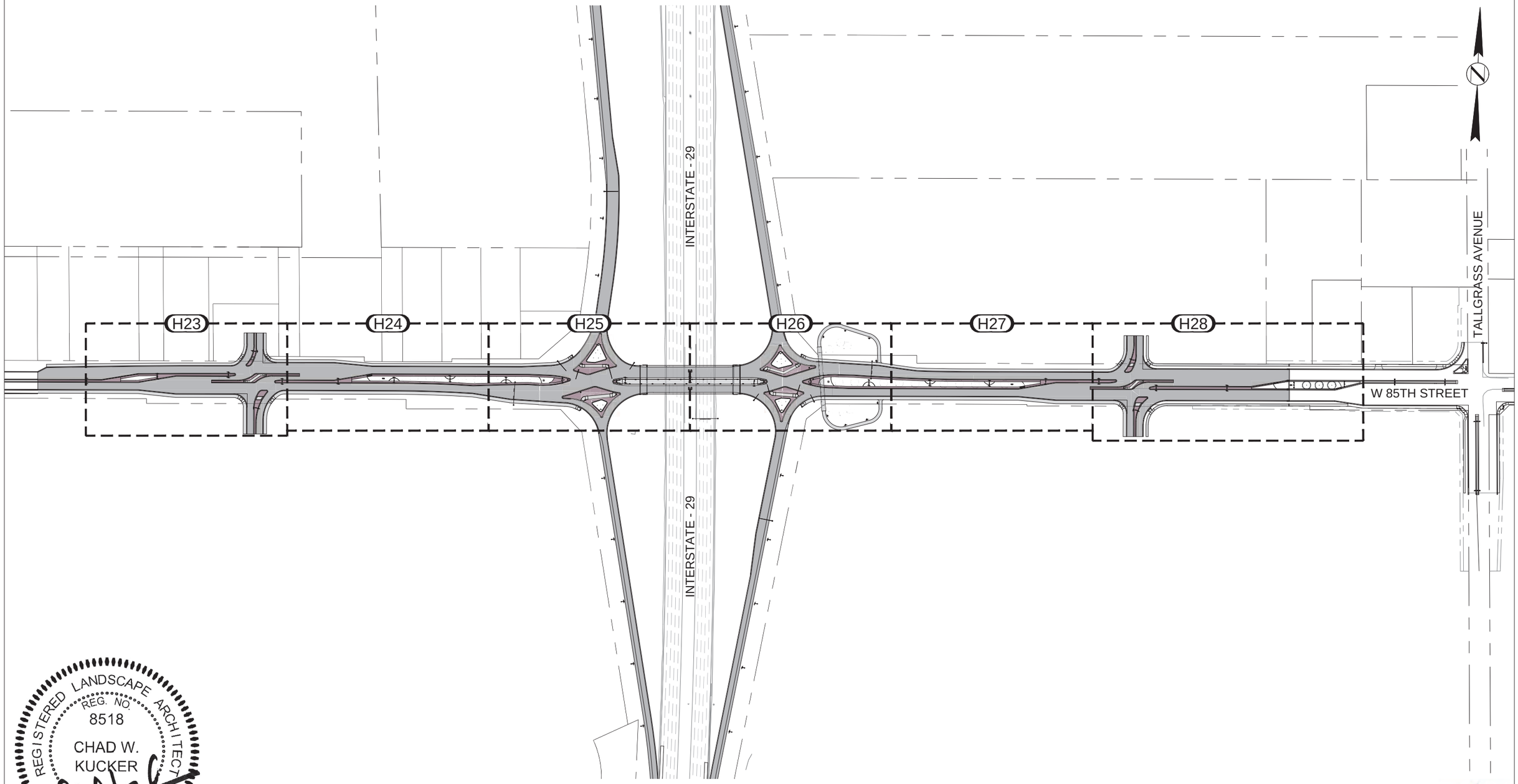
85th Street DDI Key Plan: Streetscape Irrigation Plan

PROJECT	SECTION	SHEET
EM 0292(88)73 IM 2292(104)0	H	H22

20206 IRRIGATION.dwg
PLOTTING DATE: 07/03/2025

REV DATE: 07/23/2025
INITIAL: CWK

0 150 300



REGISTERED LANDSCAPE ARCHITECT
REG. NO.
8518
CHAD W.
KUCKER
SOUTH DAKOTA
7.23.25

CONFLUENCE SEH

FOR BIDDING PURPOSES ONLY

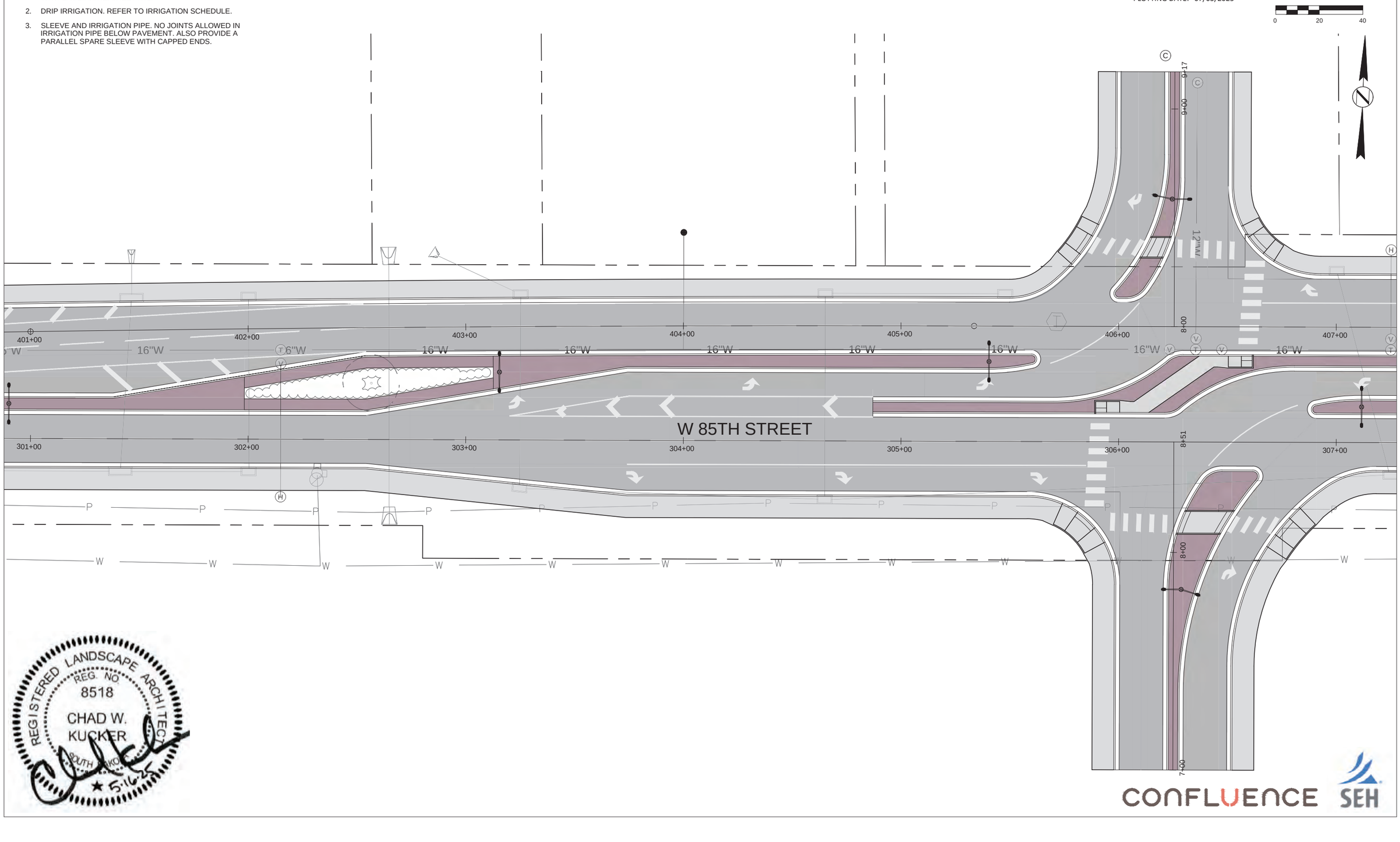
85th Street DDI: Streetscape Irrigation Plan

SD DOT	PROJECT	SECTION	SHEET
	EM 0292(88)73 IM 2292(104)0	H	H23

20206 IRRIGATION.dwg
PLOTTING DATE: 07/03/2025

KEYNOTES

1. IRRIGATION WATER METER & BACKFLOW ASSEMBLY WITH ENCLOSURE. SHEET H31.
2. DRIP IRRIGATION. REFER TO IRRIGATION SCHEDULE.
3. SLEEVE AND IRRIGATION PIPE. NO JOINTS ALLOWED IN IRRIGATION PIPE BELOW PAVEMENT. ALSO PROVIDE A PARALLEL SPARE SLEEVE WITH CAPPED ENDS.



REGISTERED LANDSCAPE ARCHITECT
REG. NO.
8518
CHAD W.
KUCKER
SOUTH DAKOTA
5-16-25

CONFLUENCE SEH

FOR BIDDING PURPOSES ONLY

85th Street DDI: Streetscape Irrigation Plan

SD DOT	PROJECT	SECTION	SHEET
	EM 0292(88)73 IM 2292(104)0	H	H24

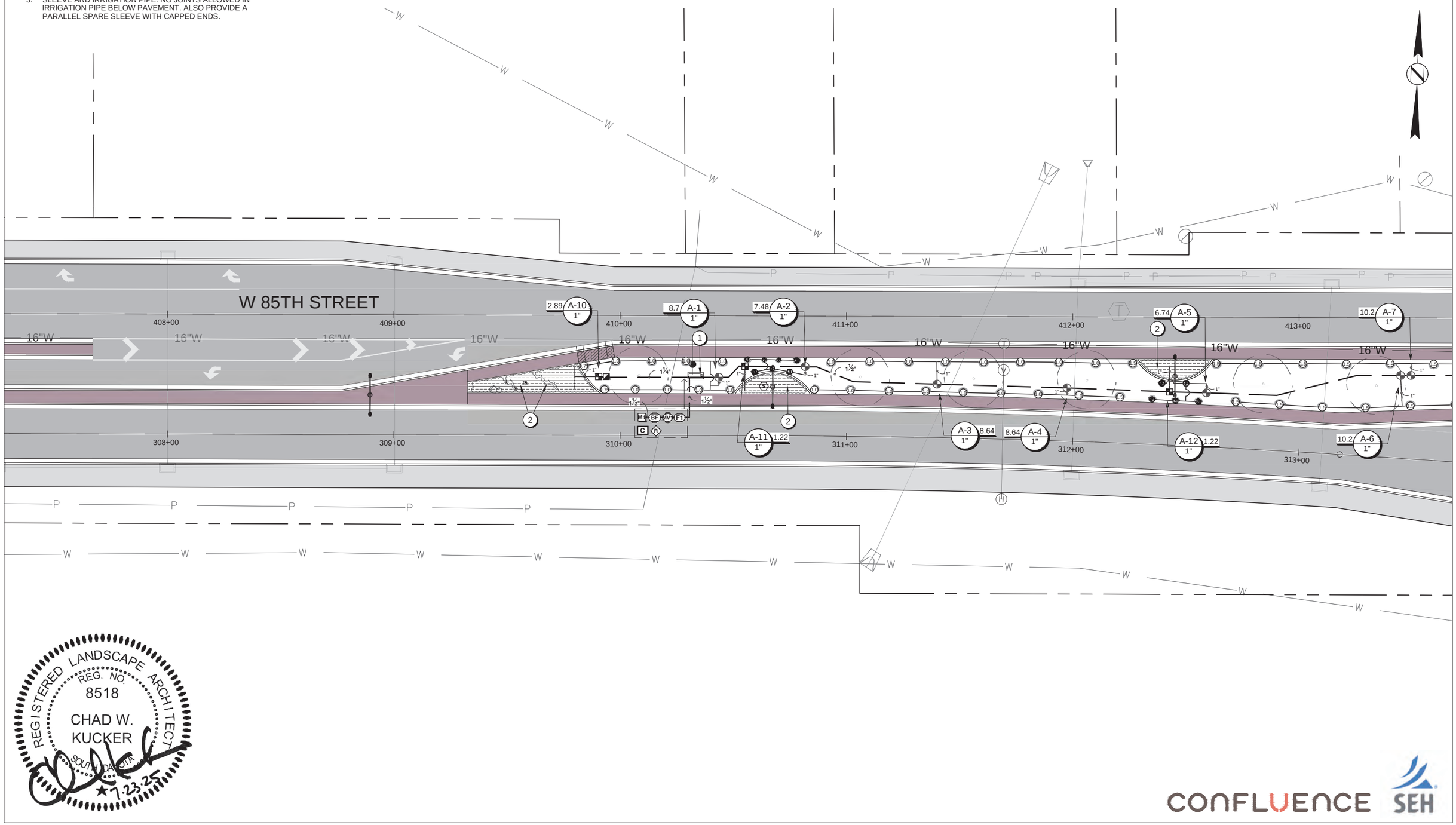
20206 IRRIGATION.dwg
PLOTTING DATE: 07/03/2025

REV DATE: 07/23/2025
INITIAL: CWK

0 20 40

KEYNOTES

1. IRRIGATION WATER METER & BACKFLOW ASSEMBLY WITH ENCLOSURE. SHEET H31.
2. DRIP IRRIGATION. REFER TO IRRIGATION SCHEDULE.
3. SLEEVE AND IRRIGATION PIPE. NO JOINTS ALLOWED IN IRRIGATION PIPE BELOW PAVEMENT. ALSO PROVIDE A PARALLEL SPARE SLEEVE WITH CAPPED ENDS.



REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
7.23.25

CONFLUENCE SEH

FOR BIDDING PURPOSES ONLY

85th Street DDI: Streetscape Irrigation Plan

SD DOT	PROJECT	SECTION	SHEET
	EM 0292(88)73 IM 2292(104)0	H	H25

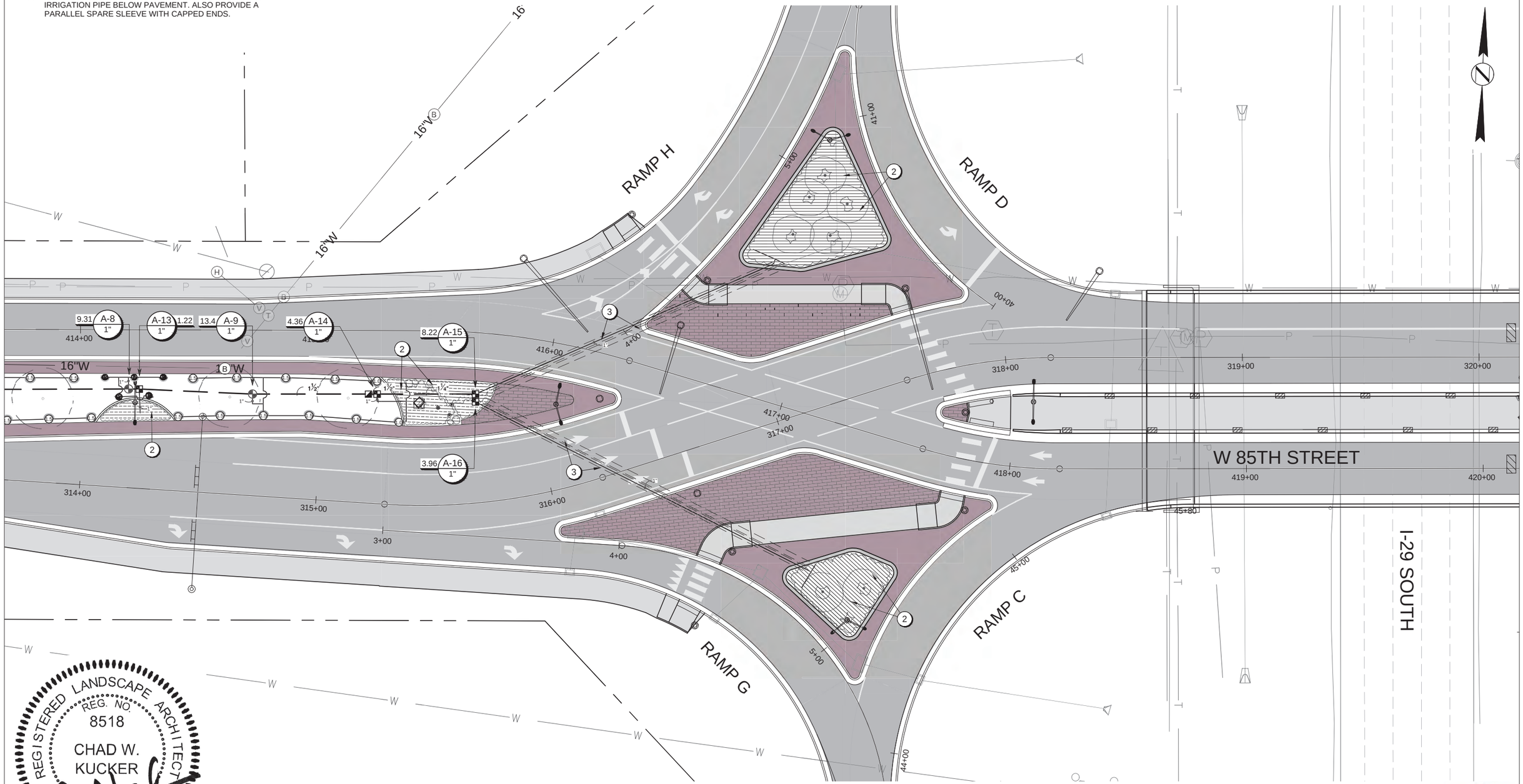
20206 IRRIGATION.dwg
PLOTTING DATE: 07/03/2025

REV DATE: 07/23/2025
INITIAL: CWK

0 20 40

KEYNOTES

1. IRRIGATION WATER METER & BACKFLOW ASSEMBLY WITH ENCLOSURE. SHEET H31.
2. DRIP IRRIGATION. REFER TO IRRIGATION SCHEDULE.
3. SLEEVE AND IRRIGATION PIPE. NO JOINTS ALLOWED IN IRRIGATION PIPE BELOW PAVEMENT. ALSO PROVIDE A PARALLEL SPARE SLEEVE WITH CAPPED ENDS.



REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
7.23.25

CONFLUENCE SEH

FOR BIDDING PURPOSES ONLY

85th Street DDI: Streetscape Irrigation Plan

SD DOT	PROJECT	SECTION	SHEET
	EM 0292(88)73 IM 2292(104)0	H	H26

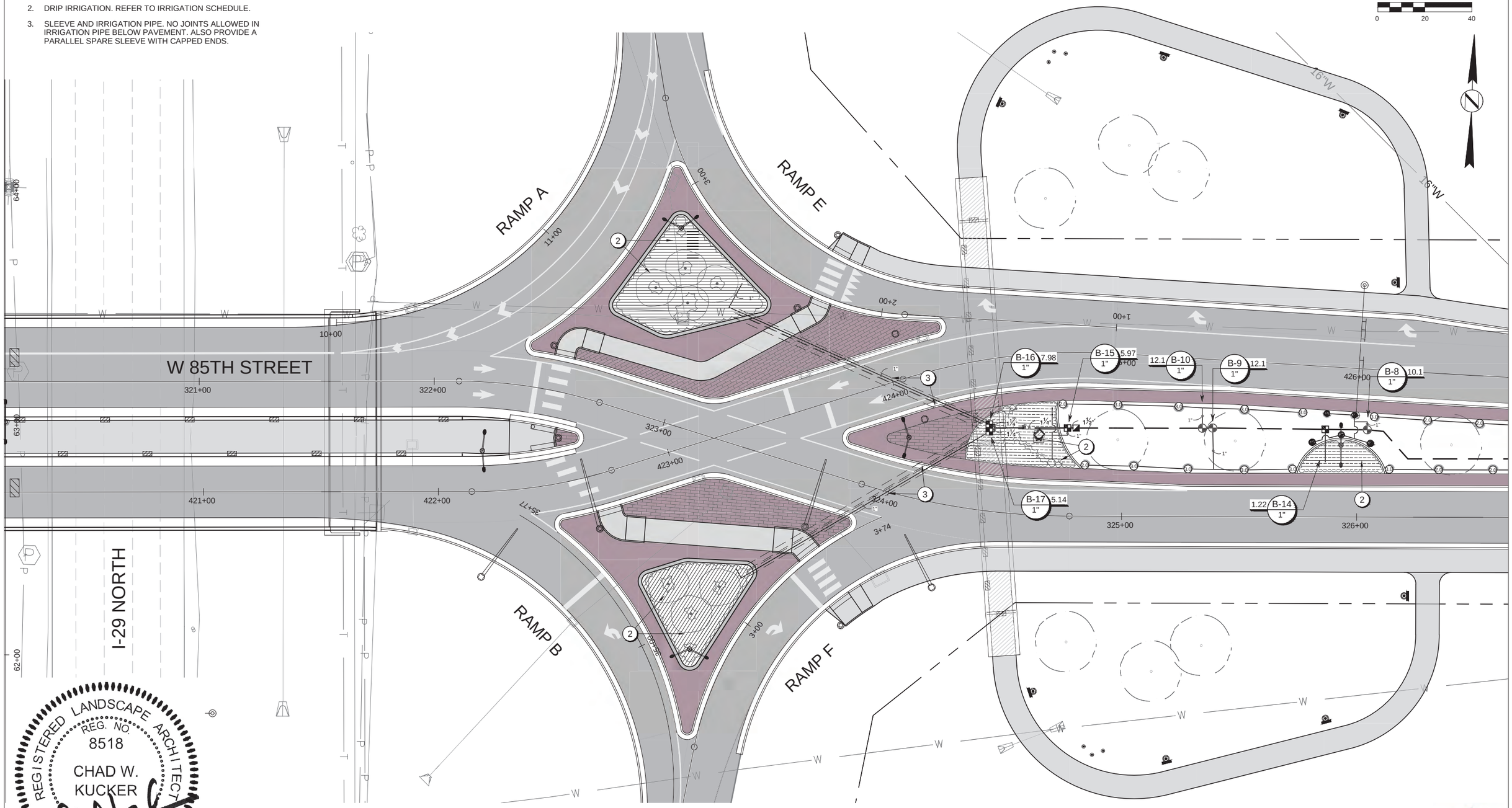
20206 IRRIGATION.dwg
PLOTTING DATE: 07/03/2025

REV DATE: 07/23/2025
INITIAL: CWK

0 20 40

KEYNOTES

1. IRRIGATION WATER METER & BACKFLOW ASSEMBLY WITH ENCLOSURE. SHEET H31.
2. DRIP IRRIGATION. REFER TO IRRIGATION SCHEDULE.
3. SLEEVE AND IRRIGATION PIPE. NO JOINTS ALLOWED IN IRRIGATION PIPE BELOW PAVEMENT. ALSO PROVIDE A PARALLEL SPARE SLEEVE WITH CAPPED ENDS.



REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
7.23.25

CONFLUENCE SEH

85th Street DDI: Streetscape Irrigation Plan

FOR BIDDING PURPOSES ONLY

SD DOT	PROJECT	SECTION	SHEET
	EM 0292(88)73 IM 2292(104)0	H	H27

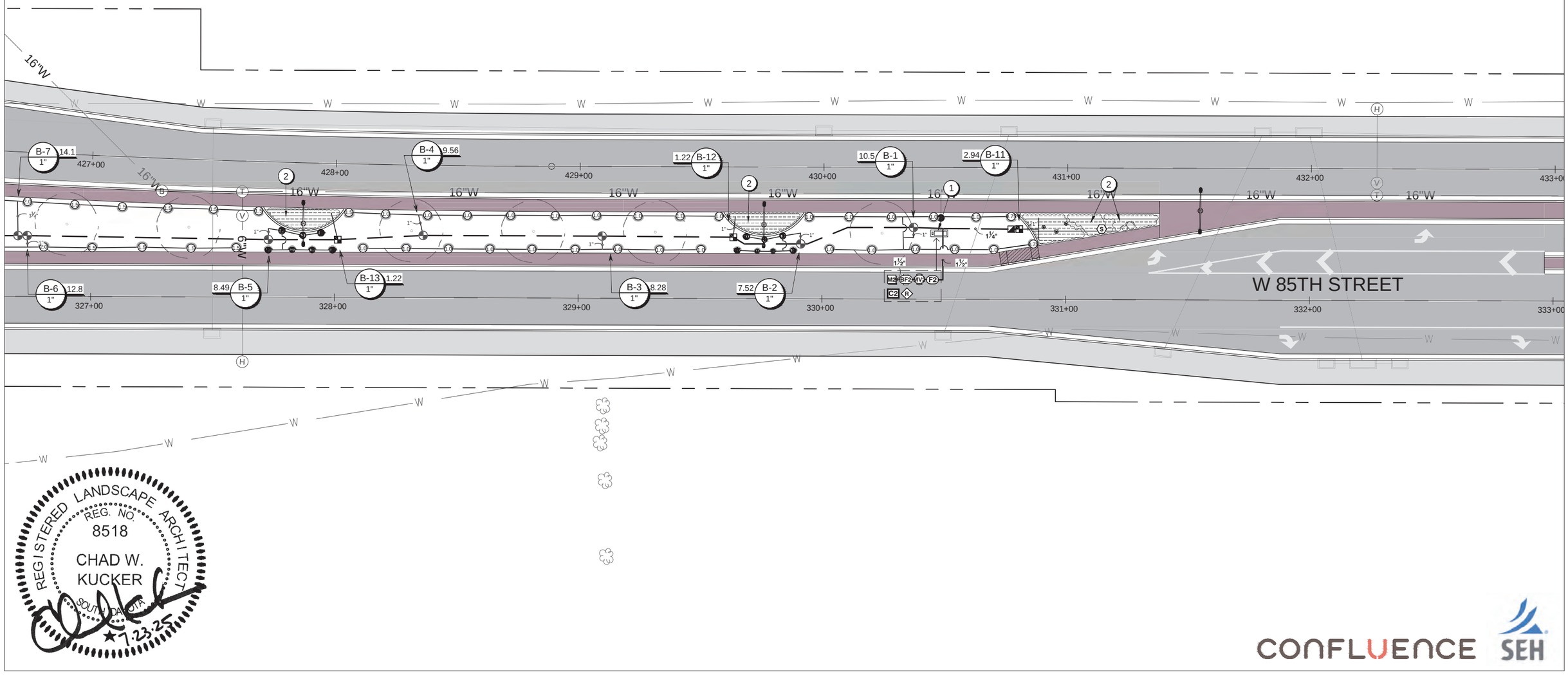
20206 IRRIGATION.dwg
PLOTTING DATE: 07/03/2025

REV DATE: 07/23/2025
INITIAL: CWK

0 20 40

KEYNOTES

1. IRRIGATION WATER METER & BACKFLOW ASSEMBLY WITH ENCLOSURE. SHEET H31.
2. DRIP IRRIGATION. REFER TO IRRIGATION SCHEDULE.
3. SLEEVE AND IRRIGATION PIPE. NO JOINTS ALLOWED IN IRRIGATION PIPE BELOW PAVEMENT. ALSO PROVIDE A PARALLEL SPARE SLEEVE WITH CAPPED ENDS.



REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
7.23.25

CONFLUENCE SEH

FOR BIDDING PURPOSES ONLY

85th Street DDI: Streetscape Irrigation Plan

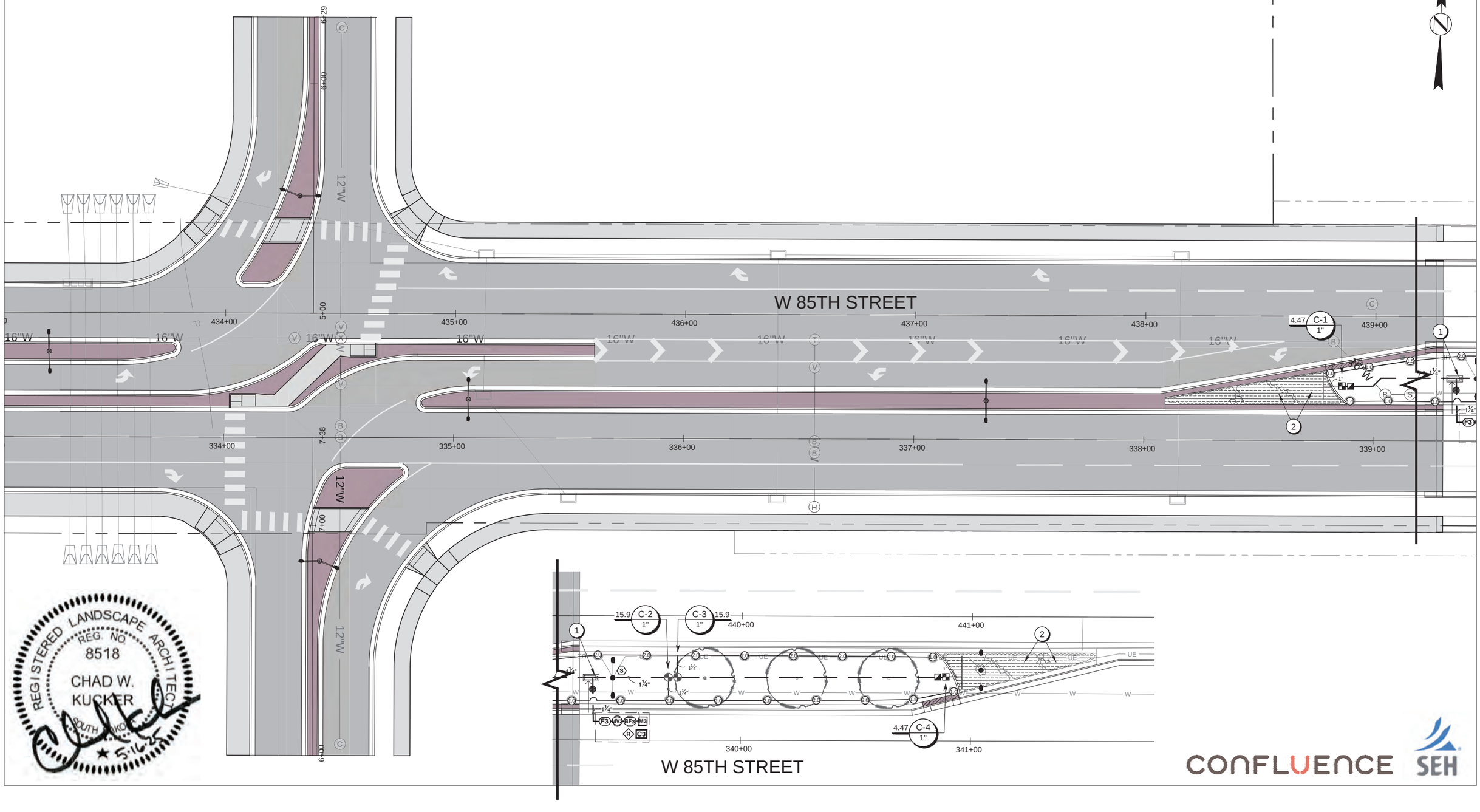
SD DOT	PROJECT	SECTION	SHEET
	EM 0292(88)73 IM 2292(104)0	H	H28

20206 IRRIGATION.dwg
PLOTTING DATE: 07/03/2025

0 20 40

KEYNOTES

1. IRRIGATION WATER METER & BACKFLOW ASSEMBLY WITH ENCLOSURE. SHEET H31.
2. DRIP IRRIGATION. REFER TO IRRIGATION SCHEDULE.
3. SLEEVE AND IRRIGATION PIPE. NO JOINTS ALLOWED IN IRRIGATION PIPE BELOW PAVEMENT. ALSO PROVIDE A PARALLEL SPARE SLEEVE WITH CAPPED ENDS.



REGISTERED LANDSCAPE ARCHITECT
REG. NO. 8518
CHAD W. KUCKER
SOUTH DAKOTA
5-16-25

CONFLUENCE SEH

20206 IRRIGATION.dwg
PLOTTING DATE: 07/03/2025

REV DATE: 07/23/2025
INITIAL: CWK

IRRIGATION SCHEDULE

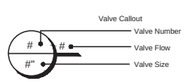
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
Q T H F	RAIN BIRD 1804-PRS 8 SERIES MPR TURF SPRAY 4 IN. POP-UP SPRINKLER. PRESSURE REGULATING.	4	30
Q T H F	RAIN BIRD 1804-PRS 10 SERIES MPR TURF SPRAY 4 IN. POP-UP SPRINKLER. PRESSURE REGULATING.	6	30
Q T H IQ F	RAIN BIRD 1804-PRS 12 SERIES MPR TURF SPRAY 4 IN. POP-UP SPRINKLER. PRESSURE REGULATING.	6	30
Q T H IQ F	RAIN BIRD 1804-PRS 15 SERIES MPR TURF SPRAY 4 IN. POP-UP SPRINKLER. PRESSURE REGULATING.	4	30
4 6 8 10 12 15 16	RAIN BIRD 1804-PRS ADJ TURF SPRAY 4 IN. POP-UP SPRINKLER. PRESSURE REGULATING.	16	30

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI	GPM	RADIUS
0.75	RAIN BIRD 3504-PC 0.75 TURF ROTOR, 4 IN. POP-UP.	4	35	0.67	15'
1.0	RAIN BIRD 3504-PC 1.0 TURF ROTOR, 4 IN. POP-UP.	60	35	0.92	19'
1.5	RAIN BIRD 3504-PC 1.5 TURF ROTOR, 4 IN. POP-UP.	39	35	1.28	21'
2.0	RAIN BIRD 3504-PC 2.0 TURF ROTOR, 4 IN. POP-UP.	22	35	1.69	24'
3.0	RAIN BIRD 3504-PC 3.0 TURF ROTOR, 4 IN. POP-UP.	10	35	2.6	28'

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	HUNTER ICZ-101-25-LF 1" DRIP CONTROL ZONE KIT. 1-IN. ICV GLOBE VALVE WITH 1-IN. HY100 FILTER SYSTEM. PRESSURE REGULATION: 25 PSI. FLOW RANGE: 0.5 GPM - 15 GPM. 150 MESH STAINLESS STEEL SCREEN.	16
	AREA TO RECEIVE DRIPLINE HUNTER HDL-06-12-CV HDL-06-12-CV: HUNTER DRIPLINE W/ 0.6 GPH EMITTERS AT 12" 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.	3,354 LF
	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.	3,794 LF

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	HUNTER PGV-101G AS-ADJ 1" 1IN. PLASTIC ELECTRIC REMOTE CONTROL VALVE WITH AS-ADJ ADUSTABLE ACCU-SYNC PRESSURE REGULATOR. GLOBE CONFIGURATION, WITH FLOW CONTROL.	21
	HUNTER HQ-44RC-AW 1" QUICK COUPLER VALVE, YELLOW RUBBER COVER, RED BRASS AND STAINLESS STEEL, WITH 1" NPT INLET, 2-PIECE BODY. ACME KEY WITH ANTI-ROTATION WINGS.	6
MV	HUNTER ICV-G 1" ELECTRIC MASTER VALVE, GLOBE CONFIGURATION.	1
MV2	HUNTER ICV-G 1" ELECTRIC MASTER VALVE, GLOBE CONFIGURATION.	1
MV3	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
BF3	ZURN 375XL 1" REDUCED PRESSURE PRINCIPLE ASSEMBLY.	1
C	HUNTER ICC2-M-PED-EZ-DM OUTDOOR CONTROLLER WITH EZ-DM DECODER OUTPUT MODULE. PLUG-IN MODULE CONVERTS ICC2 CONTROLLER TO 2-WIRE DECODER SYSTEM. GRAY METAL BOX AND PEDESTAL. INCLUDE ROAMXL-R RECEIVER. A REMOTE TRANSMITTER IS NOT REQUIRED.	1
C2	HUNTER ICC2-M-PED-EZ-DM OUTDOOR CONTROLLER WITH EZ-DM DECODER OUTPUT MODULE. PLUG-IN MODULE CONVERTS ICC2 CONTROLLER TO 2-WIRE DECODER SYSTEM. GRAY METAL BOX AND PEDESTAL. INCLUDE ROAMXL-R RECEIVER. A REMOTE TRANSMITTER IS NOT REQUIRED.	1
C3	HUNTER ICC2-M-PED-EZ-DM OUTDOOR CONTROLLER WITH EZ-DM DECODER OUTPUT MODULE. PLUG-IN MODULE CONVERTS ICC2 CONTROLLER TO 2-WIRE DECODER SYSTEM. GRAY METAL BOX AND PEDESTAL. INCLUDE ROAMXL-R RECEIVER. A REMOTE TRANSMITTER IS NOT REQUIRED.	1
D	HUNTER EZ-1 SINGLE STATION EZ DECODER FOR USE WITH EZDM DECODER MODULE ONLY.	37
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
F1	HUNTER HFS-100 FLOW SENSOR FOR USE WITH ACC CONTROLLER, 1" SCHEDULE 40 SENSOR BODY, 24 VAC, 2 AMP.	1
F2	HUNTER HFS-100 FLOW SENSOR FOR USE WITH ACC CONTROLLER, 1" SCHEDULE 40 SENSOR BODY, 24 VAC, 2 AMP.	1
F3	HUNTER HFS-100 FLOW SENSOR FOR USE WITH ACC CONTROLLER, 1" SCHEDULE 40 SENSOR BODY, 24 VAC, 2 AMP.	1
M1	WATER METER 1"	1
M2	WATER METER 1"	1
M3	WATER METER 1"	1
	IRRIGATION LATERAL LINE: HDPE PE4710 DR 15 1"	3,462 LF
	IRRIGATION LATERAL LINE: HDPE PE4710 DR 15 1 1/4"	35.6 LF
	IRRIGATION MAINLINE: PVC SCHEDULE 40 1 1/4"	383.8 LF
	IRRIGATION MAINLINE: PVC SCHEDULE 40 1 1/2"	1,160 LF
	PIPE SLEEVE: PVC SCHEDULE 40 TYPICAL PIPE SLEEVE FOR IRRIGATION PIPE. PIPE SLEEVE SIZE SHALL ALLOW FOR IRRIGATION PIPING AND THEIR RELATED COUPLINGS TO EASILY SLIDE THROUGH SLEEVING MATERIAL. EXTEND SLEEVES 18 INCHES BEYOND EDGES OF PAVING OR CONSTRUCTION.	1,016 LF



CRITICAL ANALYSIS

Generated:	2025-07-23 14:34
P.O.C. NUMBER: 01	
Water Source Information:	
FLOW AVAILABLE	
Water Meter Size:	1"
Flow Available	28.49 GPM
PRESSURE AVAILABLE	
Static Pressure at POC:	75 PSI
Elevation Change:	5.00 ft
Service Line Size:	1 1/4"
Length of Service Line:	10 ft
Pressure Available:	72 PSI
DESIGN ANALYSIS	
Maximum Multi-valve Flow:	15 GPM
Flow Available at POC:	28.49 GPM
Residual Flow Available:	13.49 GPM
Critical Station:	A-15
Design Pressure:	30 PSI
Friction Loss:	2.37 PSI
Fittings Loss:	0.24 PSI
Elevation Loss:	0 PSI
Loss through Valve:	6.93 PSI
Pressure Req. at Critical Station:	39.5 PSI
Loss for Fittings:	0.4 PSI
Loss for Main Line:	3.99 PSI
Loss for POC to Valve Elevation:	7.36 PSI
Loss for Backflow:	14 PSI
Loss for Master Valve:	3 PSI
Loss for Water Meter:	1.2 PSI
Critical Station Pressure at POC:	69.5 PSI
Pressure Available:	72 PSI
Residual Pressure Available:	2.5 PSI

CRITICAL ANALYSIS

Generated:	2025-07-23 14:32
P.O.C. NUMBER: 02	
Water Source Information:	
FLOW AVAILABLE	
Water Meter Size:	1"
Flow Available	28.49 GPM
PRESSURE AVAILABLE	
Static Pressure at POC:	75 PSI
Elevation Change:	5.00 ft
Service Line Size:	1 1/4"
Length of Service Line:	10 ft
Pressure Available:	72 PSI
DESIGN ANALYSIS	
Maximum Multi-valve Flow:	15 GPM
Flow Available at POC:	28.49 GPM
Residual Flow Available:	13.49 GPM
Critical Station:	B-16
Design Pressure:	30 PSI
Friction Loss:	2.1 PSI
Fittings Loss:	0.21 PSI
Elevation Loss:	0 PSI
Loss through Valve:	6.79 PSI
Pressure Req. at Critical Station:	39.1 PSI
Loss for Fittings:	0.45 PSI
Loss for Main Line:	4.51 PSI
Loss for POC to Valve Elevation:	7.8 PSI
Loss for Backflow:	14 PSI
Loss for Master Valve:	3 PSI
Loss for Water Meter:	1.2 PSI
Critical Station Pressure at POC:	70.1 PSI
Pressure Available:	72 PSI
Residual Pressure Available:	1.94 PSI

CRITICAL ANALYSIS

Generated:	2025-02-11 10:59
P.O.C. NUMBER: 03	
Water Source Information:	
FLOW AVAILABLE	
Water Meter Size:	1"
Flow Available	18.2 GPM
PRESSURE AVAILABLE	
Static Pressure at POC:	67 PSI
Elevation Change:	5.00 ft
Service Line Size:	1"
Length of Service Line:	10 ft
Pressure Available:	64 PSI
DESIGN ANALYSIS	
Maximum Station Flow:	15.87 GPM
Flow Available at POC:	18.2 GPM
Residual Flow Available:	2.33 GPM
Critical Station:	C-2
Design Pressure:	35 PSI
Friction Loss:	1.17 PSI
Fittings Loss:	0.12 PSI
Elevation Loss:	0 PSI
Loss through Valve:	1.9 PSI
Pressure Req. at Critical Station:	38.2 PSI
Loss for Fittings:	0.12 PSI
Loss for Main Line:	1.16 PSI
Loss for POC to Valve Elevation:	0 PSI
Loss for Backflow:	14 PSI
Loss for Master Valve:	3 PSI
Loss for Water Meter:	1.37 PSI
Critical Station Pressure at POC:	57.8 PSI
Pressure Available:	64 PSI
Residual Pressure Available:	6.16 PSI

VALVE SCHEDULE

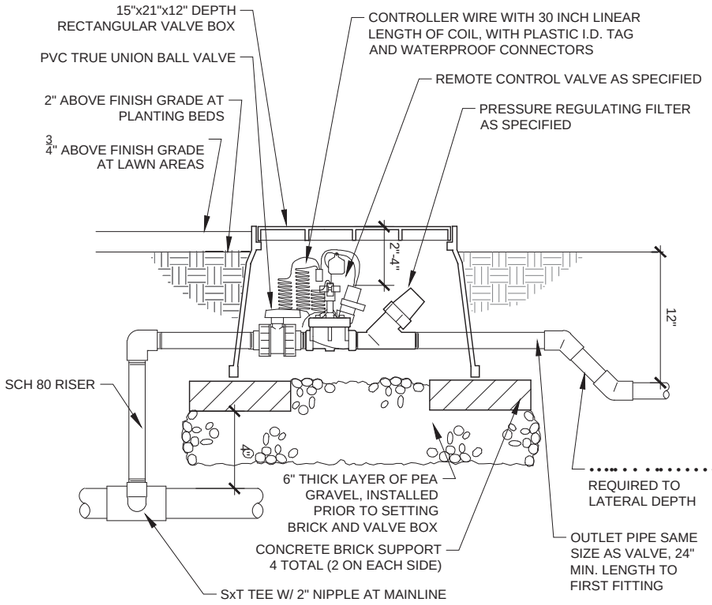
NUMBER	MODEL	SIZE	TYPE	GPM	PSI	PSI @ POC	PRECIP
A-1	HUNTER PGV-101G AS-ADJ	1"	TURF ROTOR	8.7	37.2	55.8	0.75 in/h
A-2	HUNTER PGV-101G AS-ADJ	1"	TURF SPRAY	7.48	32.2	51.7	2.09 in/h
A-3	HUNTER PGV-101G AS-ADJ	1"	TURF ROTOR	8.64	37.4	57.8	0.66 in/h
A-4	HUNTER PGV-101G AS-ADJ	1"	TURF ROTOR	8.64	37.5	58.5	0.7 in/h
A-5	HUNTER PGV-101G AS-ADJ	1"	TURF SPRAY	6.74	32.1	54.9	1.37 in/h
A-6	HUNTER PGV-101G AS-ADJ	1"	TURF ROTOR	10.24	37.5	62.5	0.67 in/h
A-7	HUNTER PGV-101G AS-ADJ	1"	TURF ROTOR	10.24	37.4	62.4	0.65 in/h
A-8	HUNTER PGV-101G AS-ADJ	1"	TURF SPRAY	9.31	32.1	58.7	1.28 in/h
A-9	HUNTER PGV-101G AS-ADJ	1"	TURF ROTOR	13.36	37.3	65.1	0.73 in/h
A-10	HUNTER ICZ-101-25-LF	1"	AREA FOR DRIPLINE	2.89	33.6	52.1	0.64 in/h
A-11	HUNTER ICZ-101-25-LF	1"	AREA FOR DRIPLINE	1.22	28.0	46.7	0.64 in/h
A-12	HUNTER ICZ-101-25-LF	1"	AREA FOR DRIPLINE	1.22	28.0	50.2	0.64 in/h
A-13	HUNTER ICZ-101-25-LF	1"	AREA FOR DRIPLINE	1.22	28.0	54.8	0.64 in/h
A-14	HUNTER ICZ-101-25-LF	1"	AREA FOR DRIPLINE	4.36	34.7	63.8	0.64 in/h
A-15	HUNTER ICZ-101-25-LF	1"	AREA FOR DRIPLINE	8.22	39.5	69.5	0.43 in/h
A-16	HUNTER ICZ-101-25-LF	1"	AREA FOR DRIPLINE	3.96	35.1	65.0	0.43 in/h
B-1	HUNTER PGV-101G AS-ADJ	1"	TURF ROTOR	10.54	37.2	55.8	0.69 in/h
B-2	HUNTER PGV-101G AS-ADJ	1"	TURF SPRAY	7.52	32.1	51.1	2.02 in/h
B-3	HUNTER PGV-101G AS-ADJ	1"	TURF ROTOR	8.28	37.3	58.0	0.61 in/h
B-4	HUNTER PGV-101G AS-ADJ	1"	TURF ROTOR	9.56	37.8	60.2	0.68 in/h
B-5	HUNTER PGV-101G AS-ADJ	1"	TURF SPRAY	8.49	32.2	55.3	1.59 in/h
B-6	HUNTER PGV-101G AS-ADJ	1"	TURF ROTOR	12.79	37.3	62.9	0.73 in/h
B-7	HUNTER PGV-101G AS-ADJ	1"	TURF ROTOR	14.07	37.4	63.1	0.79 in/h
B-8	HUNTER PGV-101G AS-ADJ	1"	TURF SPRAY	10.05	32.3	59.3	1.21 in/h
B-9	HUNTER PGV-101G AS-ADJ	1"	TURF ROTOR	12.09	37.7	60.1	0.87 in/h
B-10	HUNTER PGV-101G AS-ADJ	1"	TURF ROTOR	12.09	37.4	66.0	0.89 in/h
B-11	HUNTER ICZ-101-25-LF	1"	AREA FOR DRIPLINE	2.94	33.7	52.2	0.64 in/h
B-12	HUNTER ICZ-101-25-LF	1"	AREA FOR DRIPLINE	1.22	28.0	47.6	0.64 in/h
B-13	HUNTER ICZ-101-25-LF	1"	AREA FOR DRIPLINE	1.22	33.0	55.7	0.64 in/h
B-14	HUNTER ICZ-101-25-LF	1"	AREA FOR DRIPLINE	1.22	33.0	60.6	0.64 in/h
B-15	HUNTER ICZ-101-25-LF	1"	AREA FOR DRIPLINE	5.97	35.7	66.1	0.64 in/h
B-16	HUNTER ICZ-101-25-LF	1"	AREA FOR DRIPLINE	7.98	39.1	70.1	0.43 in/h
B-17	HUNTER ICZ-101-25-LF	1"	AREA FOR DRIPLINE	5.14	36.1	67.0	0.43 in/h
C-1	HUNTER ICZ-101-25-LF	1"	AREA FOR DRIPLINE	4.47	34.7	51.5	0.64 in/h
C-2	HUNTER PGV-101G AS-ADJ	1"	TURF ROTOR	15.87	38.2	57.8	0.71 in/h
C-3	HUNTER PGV-101G AS-ADJ	1"	TURF ROTOR	15.87	38.0	57.7	0.75 in/h
C-4	HUNTER ICZ-101-25-LF	1"	AREA FOR DRIPLINE	4.47	34.7	51.7	0.64 in/h

IRRIGATION PROGRAM NOTES

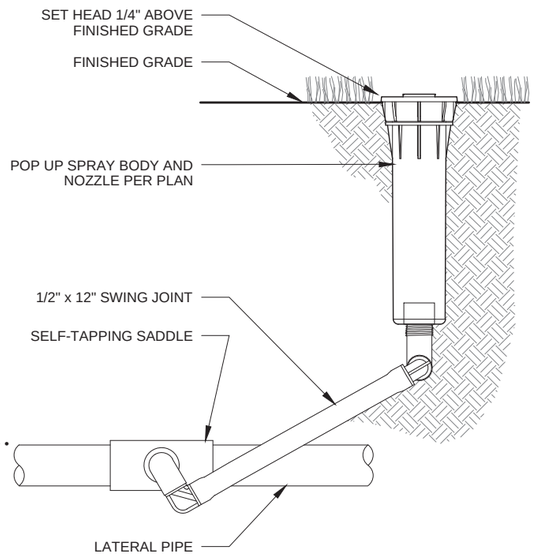
REDUCE THE WATER WINDOW BY SETTING CONTROLLERS A & B TO OPERATE TWO SIMULTANEOUS PROGRAMS WITH A TOTAL FLOW OF UP TO 15 GPM.

NOTE PRECIPITATION RATES. PROGRAM SPRAY HEAD ZONES TO RUN AT APPROXIMATELY HALF THE DURATION OF ROTOR HEADS ZONES TO PROVIDE MATCHED PRECIPITATION.

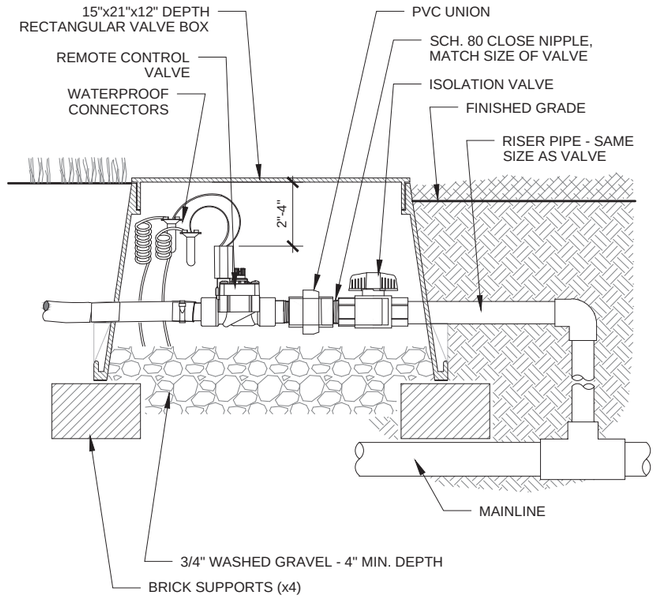
CONFLUENCE SEH



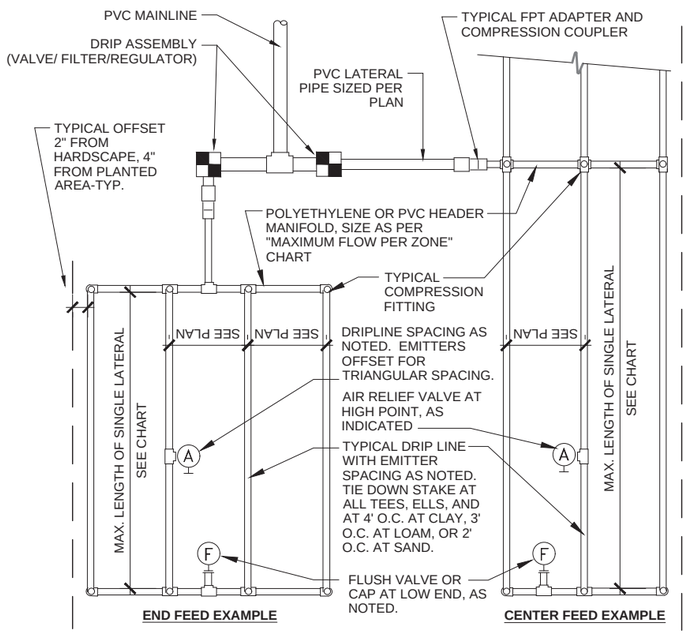
01 H30 **DRIP VALVE** NOT TO SCALE



02 H30 **SPRAY HEAD** NOT TO SCALE



03 H30 **CONTROL VALVE** NOT TO SCALE



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)

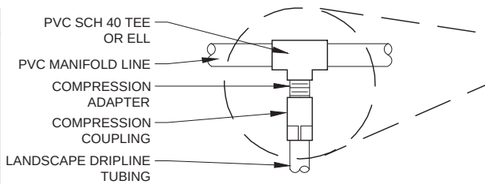
EMITTER FLOW	12" SPACING	18" SPACING	24" SPACING
0.4 GPH	0.67 GPM	0.44 GPM	0.33 GPM
0.6 GPH	1.0 GPM	0.67 GPM	0.50 GPM
1.0 GPH	1.67 GPM	1.11 GPM	0.83 GPM

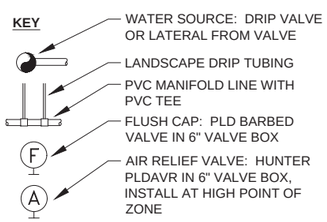
MAXIMUM FLOW PER ZONE

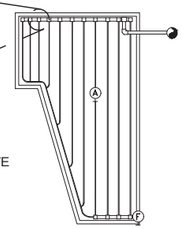
SCH. 40 PVC HEADER		
PIPE SIZE	MAX GPM*	PSI LOSS**
1/2"	4.7 GPM	7.7 PSI
3/4"	8.3 GPM	5.6 PSI
1"	13.5 GPM	4.2 PSI
1-1/2"	33.9 GPM	2.9 PSI
2"	52.4 GPM	1.9 PSI
POLY HEADER		
PIPE SIZE	MAX GPM*	PSI LOSS**
1/2"	4.7 GPM	8.8 PSI
3/4"	8.3 GPM	6.3 PSI
1"	13.5 GPM	4.8 PSI
1-1/2"	33.9 GPM	2.9 PSI
2"	52.4 GPM	2.2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

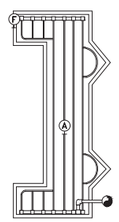
*GPM @ 5 FPS VELOCITY
**LOSS PER 100 FT

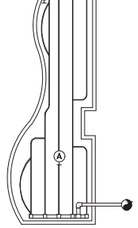
SLOPED CONDITION NOTE:
1. DRIPLINE LATERALS SHOULD FOLLOW THE CONTOURS OF THE SLOPE WHEREVER POSSIBLE.
2. INSTALL AIR RELIEF VALVE PERPENDICULAR TO THE DRIPLINE AT ITS HIGHEST POINT.
3. SPACE ROWS NORMALLY AT THE TOP TWO-THIRDS OF THE SLOPE AND GRADUALLY INCREASE THE SPACING UP TO 25 PERCENT AS APPROACHING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

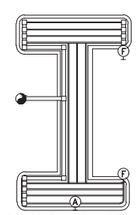


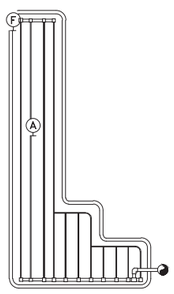


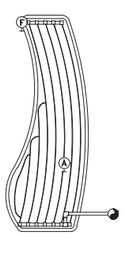


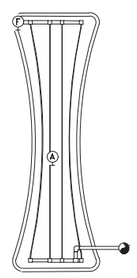






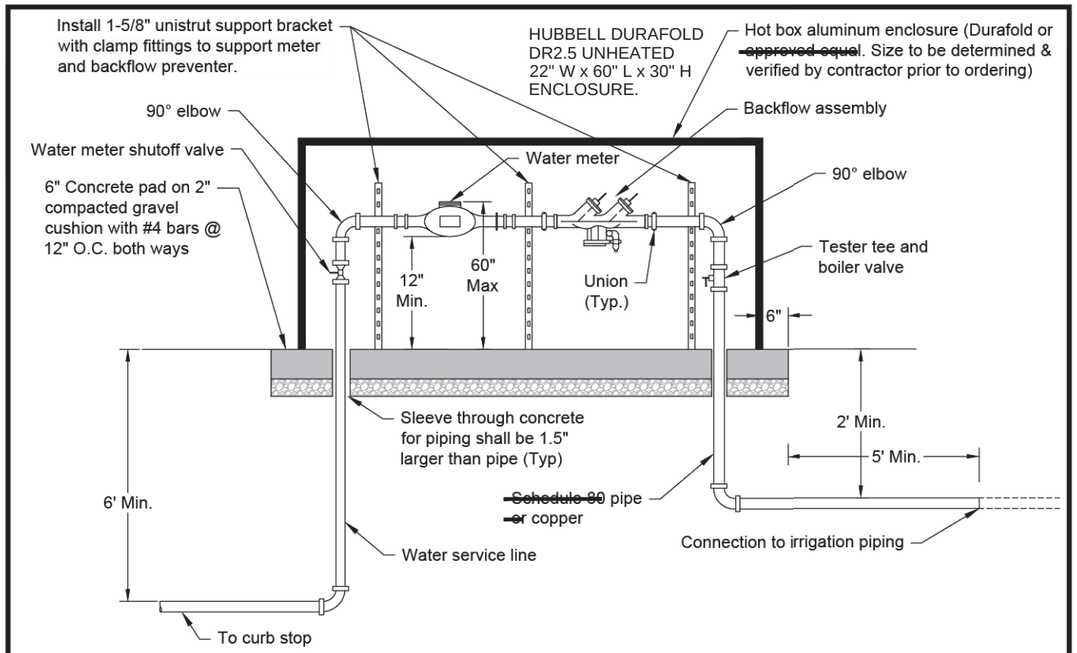






04 H30 **DRIPLINE** NOT TO SCALE

CONFLUENCE SEH

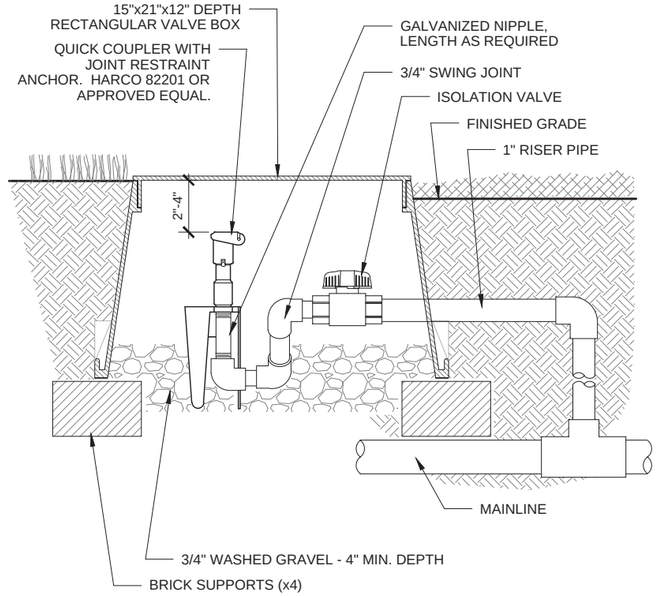


General Notes:

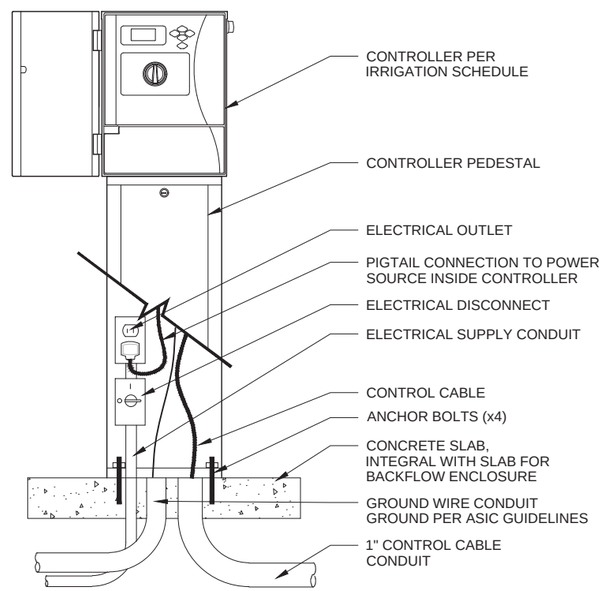
1. All enclosures are to be installed and connected onto a concrete base per manufacturer's recommendations and as detailed above. Concrete pad to be constructed with class M6 concrete and footprint shall be 6" beyond enclosure on all sides.
2. All backflow assemblies shall be tested by a Water Division 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 605-373-6971.
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."
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."
13. Must have Water Department approval of water meter and backflow assembly.

Issued: March 2024

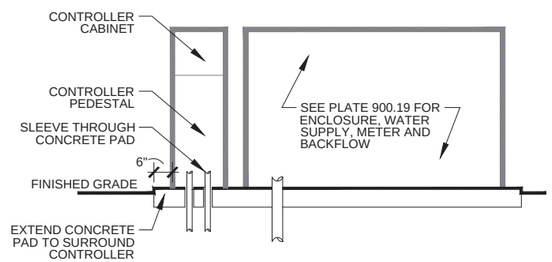
CITY OF SIOUX FALLS PUBLIC WORKS Providing a Better Quality of Life for You!	**Roadway Irrigation Water Meter & Backflow Assembly with Enclosure**	Specification Reference No. 900	Plate Number 900.19



01 H31 QUICK COUPLING VALVE NOT TO SCALE



02 H31 CONTROLLER PEDESTAL NOT TO SCALE



03 H31 IRRIGATION CONTROLS NOT TO SCALE

REGISTERED LANDSCAPE ARCHITECT REG. NO 8518 CHAD W. KUCKER SOUTH DAKOTA 5-16-25

CONFLUENCE SEH

20206 IRRIGATION.dwg
PLOTTING DATE: 07/03/2025

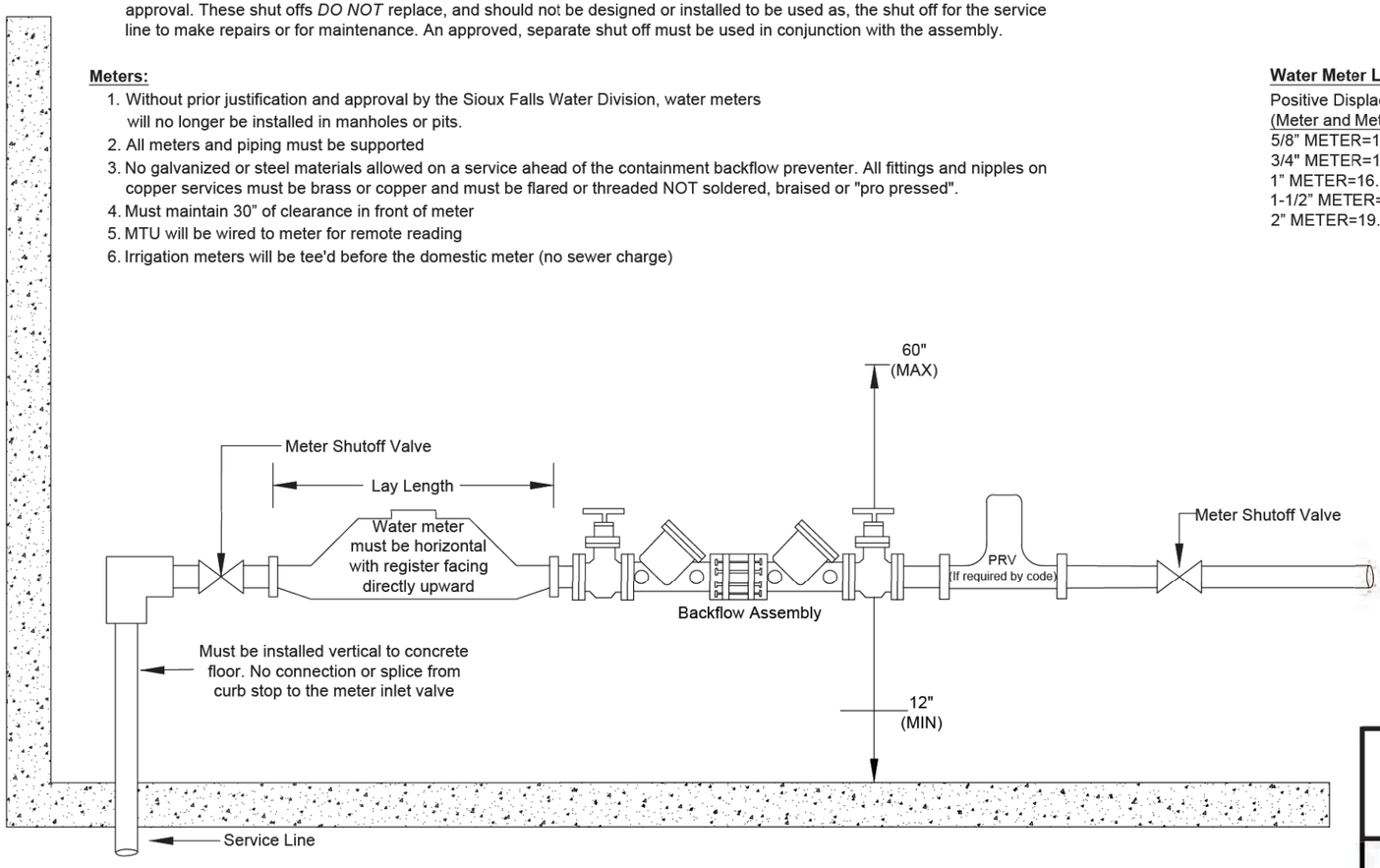
Notes:

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 SEH

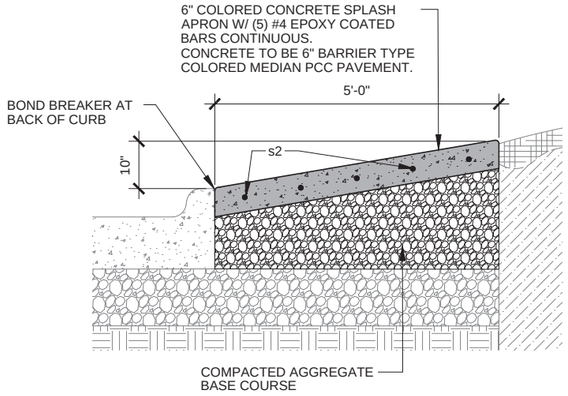
85th Street DDI: Streetscape Details

FOR BIDDING PURPOSES ONLY

SD DOT	PROJECT	SECTION	SHEET
	EM 0292(88)73 IM 2292(104)0	H	H33

20206 DETAILS.dwg
PLOTTING DATE: 07/03/2025

REV DATE: 07/03/2025
INITIAL: CWK



REINFORCING SCHEDULE

(For 5'-0" Colored Concrete Splash Apron)

Mark	*No.*	*Size*	*Length*	*Type*
s2	15,525 LF	4	VARIES	Str.

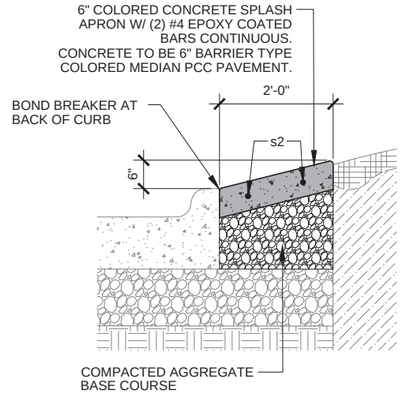
SHAPE CODE
Straight

ESTIMATED QUANTITIES

ITEM	UNIT	QTY.
6" Barrier Type Colored Median PCC Pavement	SqYd	1735
1. 10,368.8 Lb Reinforcing Steel		

Items are approximate quantities contained in the above contract items and are for information only.

04 H33 5'-0" COLORED CONCRETE SPLASH APRON
SCALE: 3/8" = 1'-0"



REINFORCING SCHEDULE

(For 2'-0" Colored Concrete Splash Apron)

Mark	*No.*	*Size*	*Length*	*Type*
s2	520 LF	4	VARIES	Str.

SHAPE CODE
Straight

ESTIMATED QUANTITIES

ITEM	UNIT	QTY.
6" Barrier Type Colored Median PCC Pavement	SqYd	54
1. 346.8 Lb Reinforcing Steel		

Items are approximate quantities contained in the above contract items and are for information only.

05 H33 2'-0" COLORED CONCRETE SPLASH APRON
SCALE: 3/8" = 1'-0"

REINFORCING SCHEDULE

(For Concrete Landscape Edging)

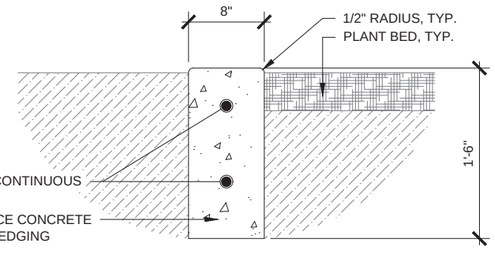
Mark	*No.*	*Size*	*Length*	*Type*
b2	930 LF	3	VARIES	9

SHAPE CODE 9

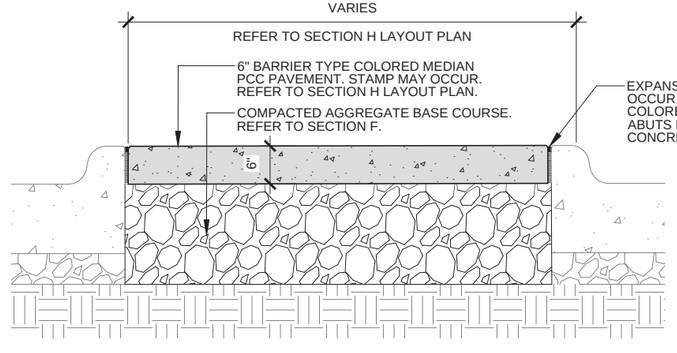
ESTIMATED QUANTITIES

ITEM	UNIT	QTY.
Landscape Edging	Ft	465
1. 17.3 CuYd Unclassified Excavation		
2. 349.7 Lb Reinforcing Steel		
3. 17.3 CuYd Class M6 Concrete		

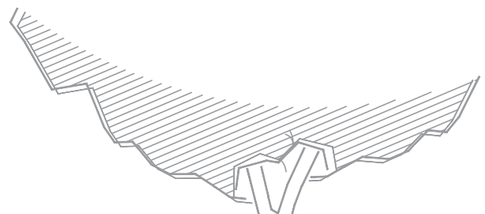
Items are approximate quantities contained in the above contract items and are for information only.

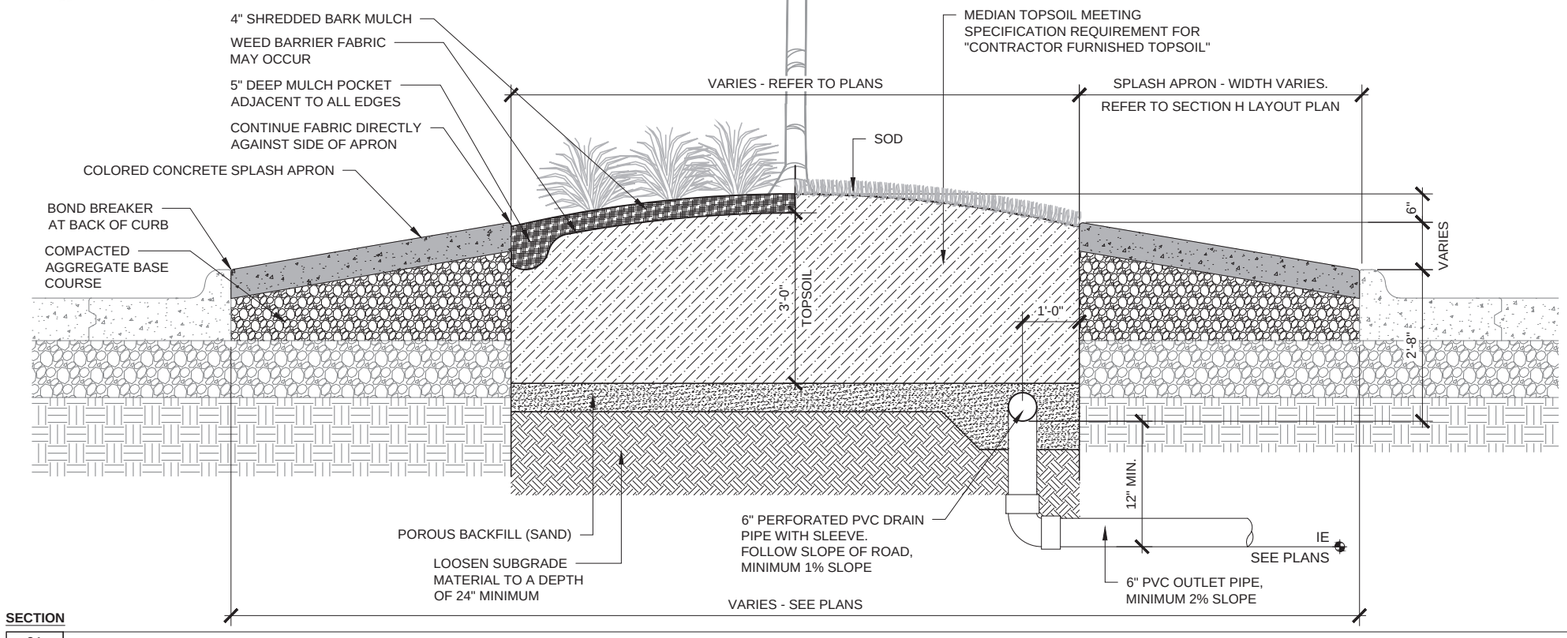


03 H33 CONCRETE LANDSCAPE EDGING
SCALE: 3/4" = 1'-0"



02 H33 6" BARRIER TYPE COLORED MEDIAN PCC PAVEMENT
SCALE: 1/2" = 1'-0"





SECTION

01 H33 LANDSCAPE MEDIAN
N.T.S

CONFLUENCE

SEH

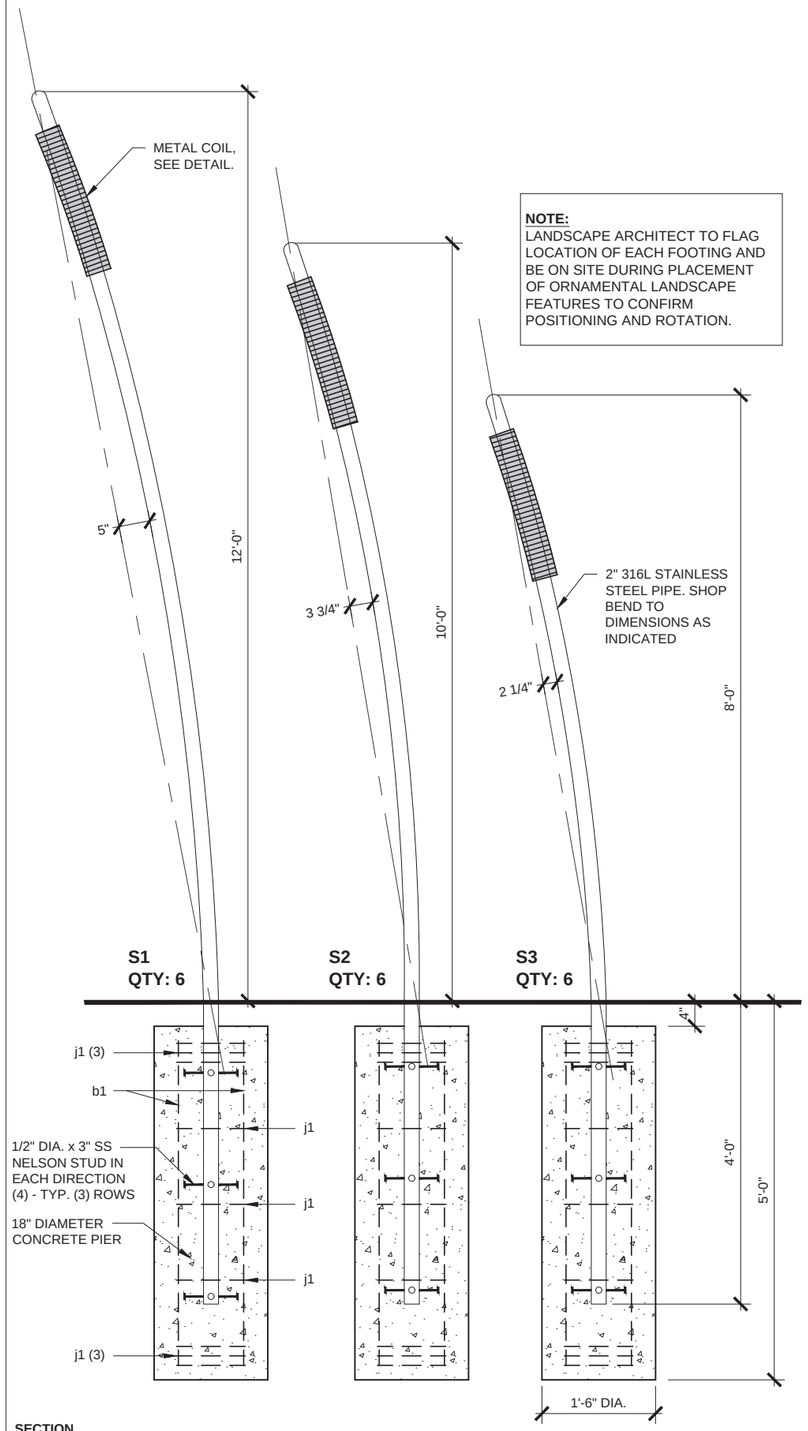
85th Street DDI: Streetscape Details

FOR BIDDING PURPOSES ONLY

PROJECT	SECTION	SHEET
EM 0292(88)73 IM 2292(104)0	H	H34

20206 DETAILS.dwg
PLOTTING DATE: 07/03/2025

REV DATE: 07/03/2025
INITIAL: CWK



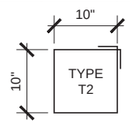
SECTION

01 H34 ORNAMENTAL LANDSCAPE FEATURE "SWIZZLE STICKS" SCALE: 1/2" = 1'-0"

NOTE:
LANDSCAPE ARCHITECT TO FLAG LOCATION OF EACH FOOTING AND BE ON SITE DURING PLACEMENT OF ORNAMENTAL LANDSCAPE FEATURES TO CONFIRM POSITIONING AND ROTATION.

REINFORCING SCHEDULE
(FOR ORNAMENTAL LANDSCAPE FEATURES)

MARK	NO.	SIZE	LENGTH	TYPE
b1	72	4	4'-2"	Str.
j1	162	3	3'-2"	T2



ESTIMATED QUANTITIES

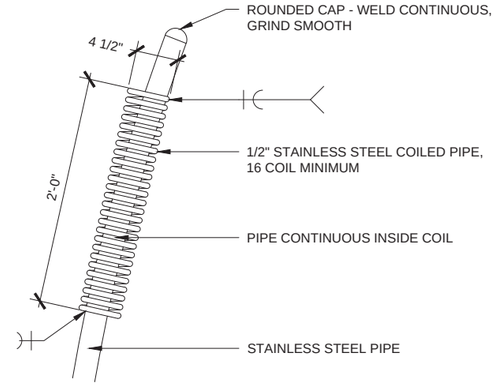
ITEM	UNIT	QTY.
Ornamental Landscape Features	EACH	18

1. 7.5 CuYd Unclassified Excavation
2. 393.7 Lb Reinforcing Steel
3. 7.5 CuYd Class M6 Concrete

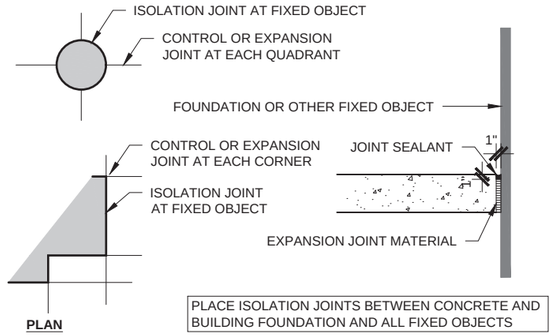
Items are approximate quantities contained in the above contract items and are for information only.

APPROXIMATE STATIONING
(FOR ORNAMENTAL LANDSCAPE FEATURES)

LOCATION		QUANTITY		
STATION	OFFSET	S1	S2	S3
309+53.8	±21.9' L	1	1	1
315+70.5	±46.4' L	1	1	1
324+41.3	±34.5' L	1	1	1
424+74.3	±125.5' L	1	1	1
324+87.7	±98.9' R	1	1	1
330+95.8	±29.1' L	1	1	1
TOTAL		6	6	6



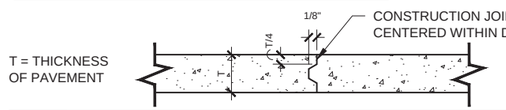
04 H34 METAL COIL SCALE: 3/4" = 1'-0"



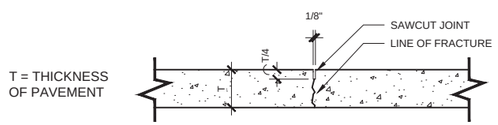
PLACE ISOLATION JOINTS BETWEEN CONCRETE AND BUILDING FOUNDATION AND ALL FIXED OBJECTS

06 H34 ISOLATION JOINT (IJ) SCALE: 3/4" = 1'-0"

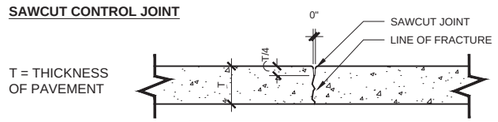
CONSTRUCTION JOINTS SHALL BE PLACED BETWEEN INDIVIDUAL POURS OF CONCRETE WHERE EXPANSION JOINTS DO NOT OCCUR.



03 H34 CONSTRUCTION JOINT SCALE: 3/4" = 1'-0"



SAWCUT CONTROL JOINT



TOOLED CONTROL JOINT

TOOLED JOINTS SHALL BE CONSTRUCTED AT A MINIMUM DEPTH OF ONE INCH BY SCORING WITH A TOOL WHICH WILL LEAVE THE CORNERS ROUNDED AND ENSURE A FREE MOVEMENT OF CONCRETE AT THE JOINT.

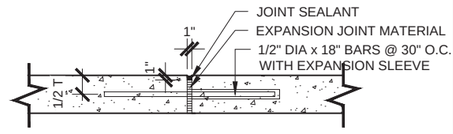
02 H34 CONTROL JOINT SCALE: 3/4" = 1'-0"

ALL EXPANSION JOINTS IN 6" THICK CONCRETE SHALL BE REINFORCED EXPANSION JOINTS.

ALL EXPANSION JOINTS SHALL BE SEALED WITH A SELF LEVELING URETHANE JOINT SEALANT AS SPECIFIED.

WHERE JOINTS OCCUR IN COLORED CONCRETE, SEALANT COLOR SHALL MATCH CONCRETE.

SPACE REINFORCED EXPANSION JOINTS WHERE INDICATED ON PLAN AND NOT TO EXCEED 75'.



REINFORCED EXPANSION JOINT (R-EJ)

T = THICKNESS OF PAVEMENT

05 H34 EXPANSION JOINT SCALE: 3/4" = 1'-0"

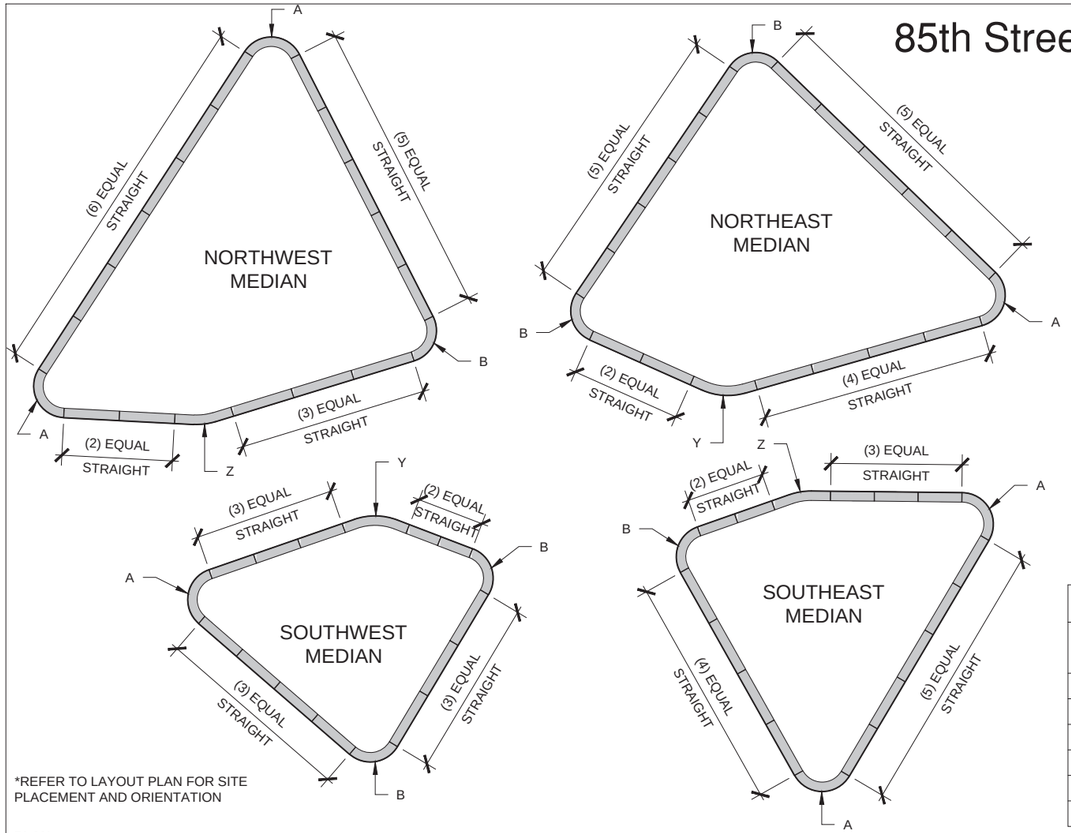
CONFLUENCE SEH

85th Street DDI: Streetscape Details

FOR BIDDING PURPOSES ONLY

SD DOT	PROJECT	SECTION	SHEET
	EM 0292(88)73 IM 2292(104)0	H	H35

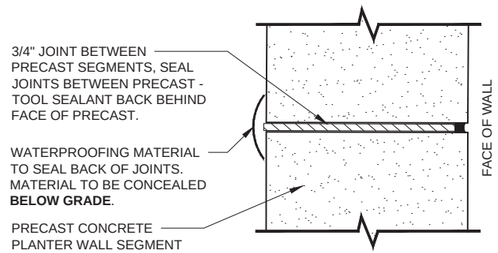
20206 DETAILS.dwg
PLOTTING DATE: 07/03/2025



*REFER TO LAYOUT PLAN FOR SITE PLACEMENT AND ORIENTATION

PLAN

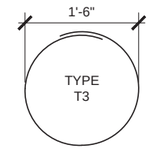
05 H35 PRECAST CONCRETE PLANTER - SEGMENT KEY N.T.S



06 H35 WALL JOINT SCALE: 1" = 1'-0"

PRECAST PLANTER WALL SEGMENT KEY					
LOCATION	STRAIGHT	A	B	Y	Z
NORTHWEST MEDIAN	16	2	1	--	1
SOUTHWEST MEDIAN	11	1	2	1	--
NORTHEAST MEDIAN	16	1	2	1	--
SOUTHEAST MEDIAN	14	2	1	--	1
TOTAL	57	6	6	2	2

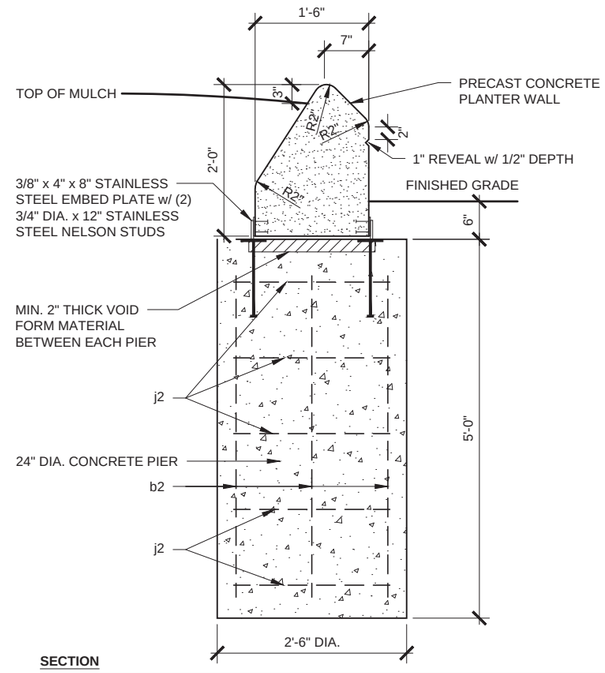
REINFORCING SCHEDULE (FOR PRECAST CONCRETE PLANTER FOOTINGS)				
MARK	NO.	SIZE	LENGTH	TYPE
b2	264	6	4'-6"	Str.
j2	440	4	5'-8"	T3



ESTIMATED QUANTITIES		
ITEM	UNIT	QTY.
Precast Concrete Planters	Lump Sum	LS

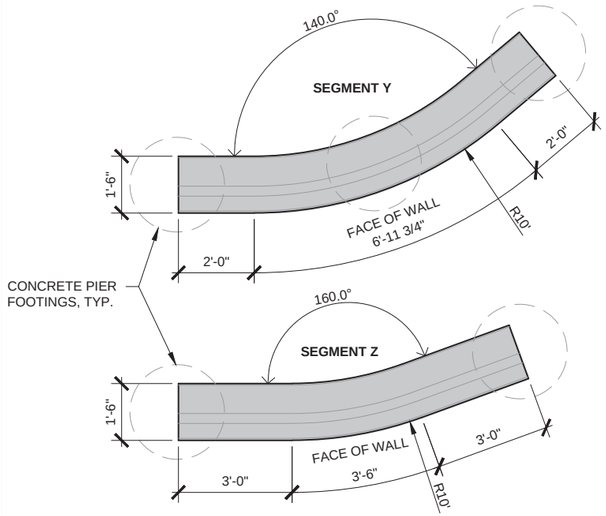
1. 111.8 CuYd Unclassified Excavation
2. 3,451.1 Lb Reinforcing Steel
3. 102.1 CuYd Class M6 Concrete

Items are approximate quantities contained in the above contract items and are for information only.



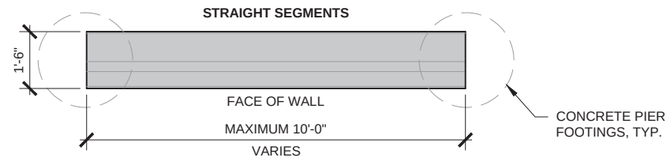
SECTION

04 H35 PRECAST CONCRETE PLANTER SCALE: 1/2" = 1'-0"

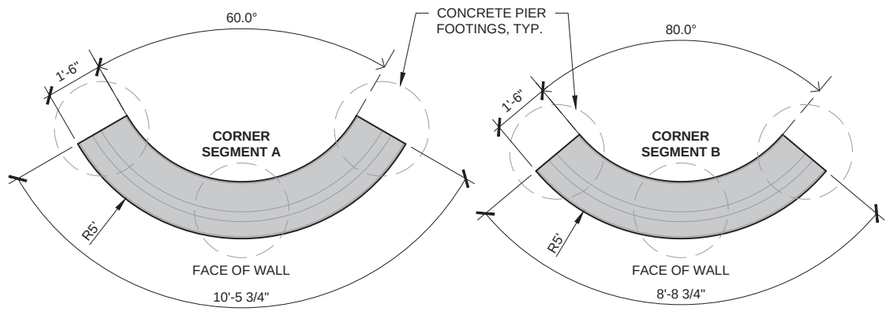


PLAN

01 H35 PRECAST CONCRETE PLANTER - Y & Z SEGMENTS SCALE: 1/4" = 1'-0"



03 H35 PRECAST CONCRETE PLANTER - STRAIGHT SEGMENTS SCALE: 1/4" = 1'-0"



02 H35 PRECAST CONCRETE PLANTER - A & B CORNER SEGMENTS SCALE: 1/4" = 1'-0"

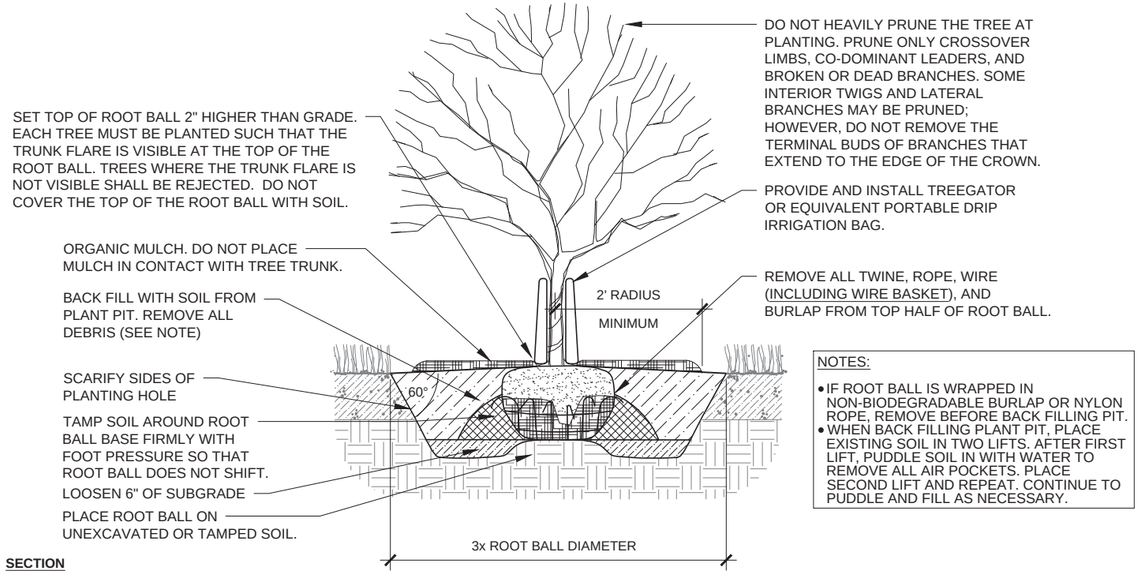
CONFLUENCE SEH

85th Street DDI: Streetscape Details

FOR BIDDING PURPOSES ONLY

PROJECT	SECTION	SHEET
EM 0292(88)73 IM 2292(104)0	H	H36

20206 DETAILS.dwg
PLOTTING DATE: 07/03/2025

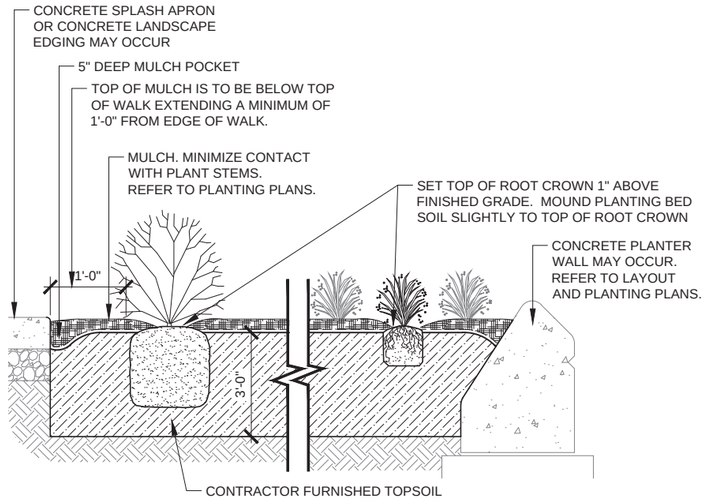


NOTES:

- IF ROOT BALL IS WRAPPED IN NON-BIODEGRADABLE BURLAP OR NYLON ROPE, REMOVE BEFORE BACK FILLING PIT.
- WHEN BACK FILLING PLANT PIT, PLACE EXISTING SOIL IN TWO LIFTS. AFTER FIRST LIFT, PUDDLE SOIL IN WITH WATER TO REMOVE ALL AIR POCKETS. PLACE SECOND LIFT AND REPEAT. CONTINUE TO PUDDLE AND FILL AS NECESSARY.

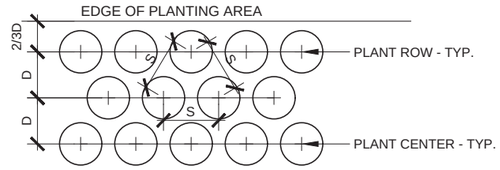
SECTION

03 H36 | B&B TREE PLANTING N.T.S



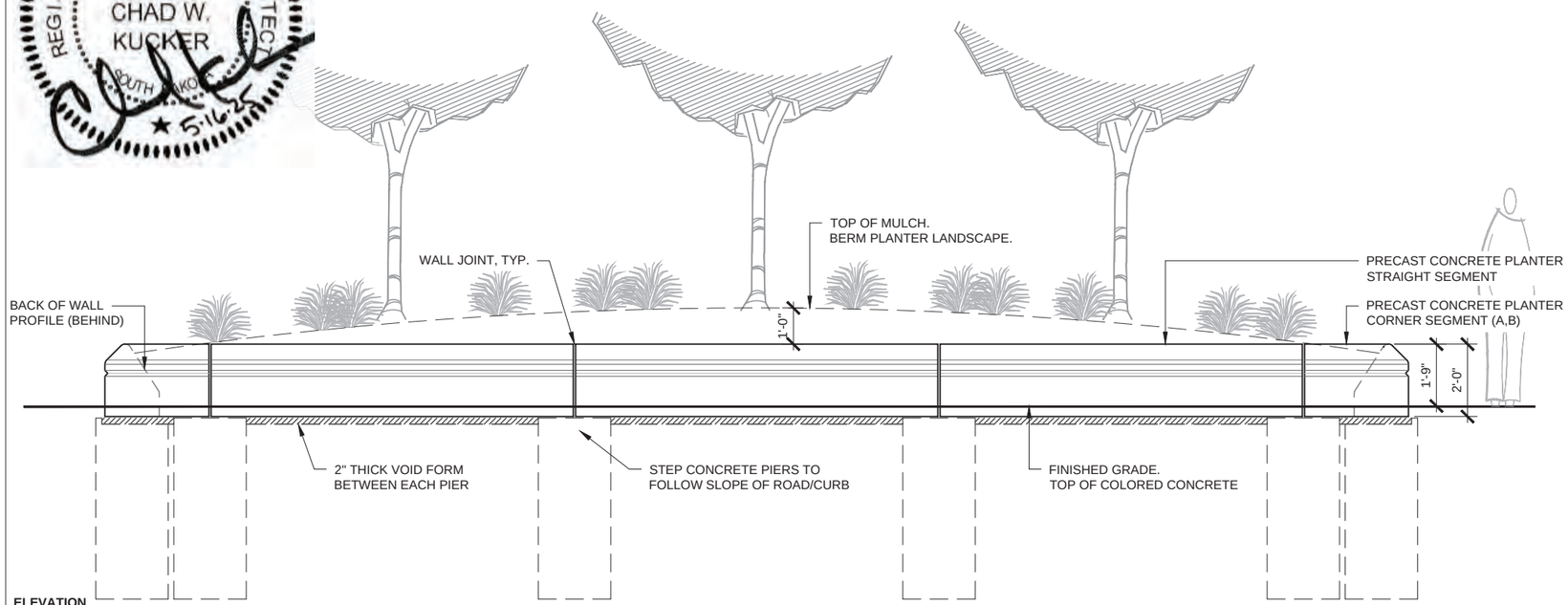
SECTION

04 H36 | PLANT BEDS N.T.S



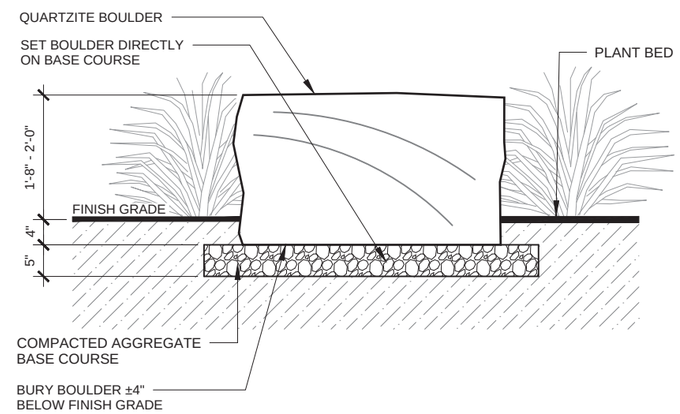
TRIANGULAR SPACING - 'S'	DISTANCE BETWEEN ROWS - 'D'	TOTAL AREA PER PLANT (SF)
12"	10-1/2"	0.88
15"	13"	1.35
18"	15-1/2"	1.94
21"	18"	2.63
24" (2')	21"	3.50
30"	26"	5.42
36" (3')	31"	7.75
42"	36"	10.50

05 H36 | PLANT SPACING N.T.S



ELEVATION

01 H36 | PRECAST CONCRETE PLANTER WALL SCALE: 1/4" = 1'-0"



02 H36 | ORNAMENTAL LANDSCAPE BOULDER SCALE: 1/2" = 1'-0"

CONFLUENCE SEH

85th Street DDI: Streetscape Details

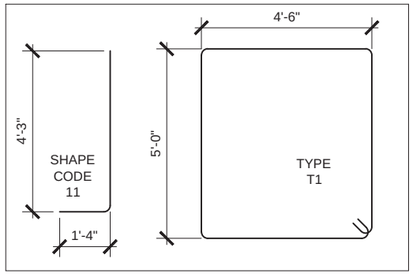
FOR BIDDING PURPOSES ONLY

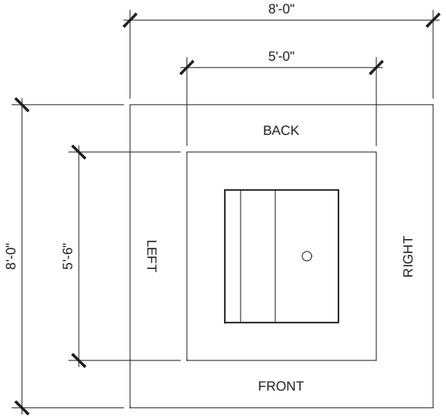
SD DOT	PROJECT	SECTION	SHEET
	EM 0292(88)73 IM 2292(104)0	H	H37

20206 DETAILS.dwg
PLOTTING DATE: 07/03/2025

REINFORCING SCHEDULE
(For Welcome Signs)

Mark	No.	Size	Length	Type
b7	64	6	7'-8"	Str.
c2	10	4	20'-0"	T1
h2	32	8	5'-6"	11





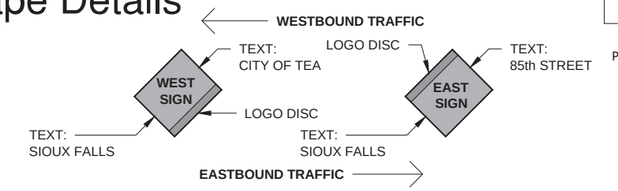
PLAN - FOOTING

ESTIMATED QUANTITIES

ITEM	UNIT	QTY.
Welcome Signs	EACH	2

1. 27.3 CuYd Unclassified Excavation
2. 1,356.6 Lb Reinforcing Steel
3. 13.7 CuYd Class M6 Concrete

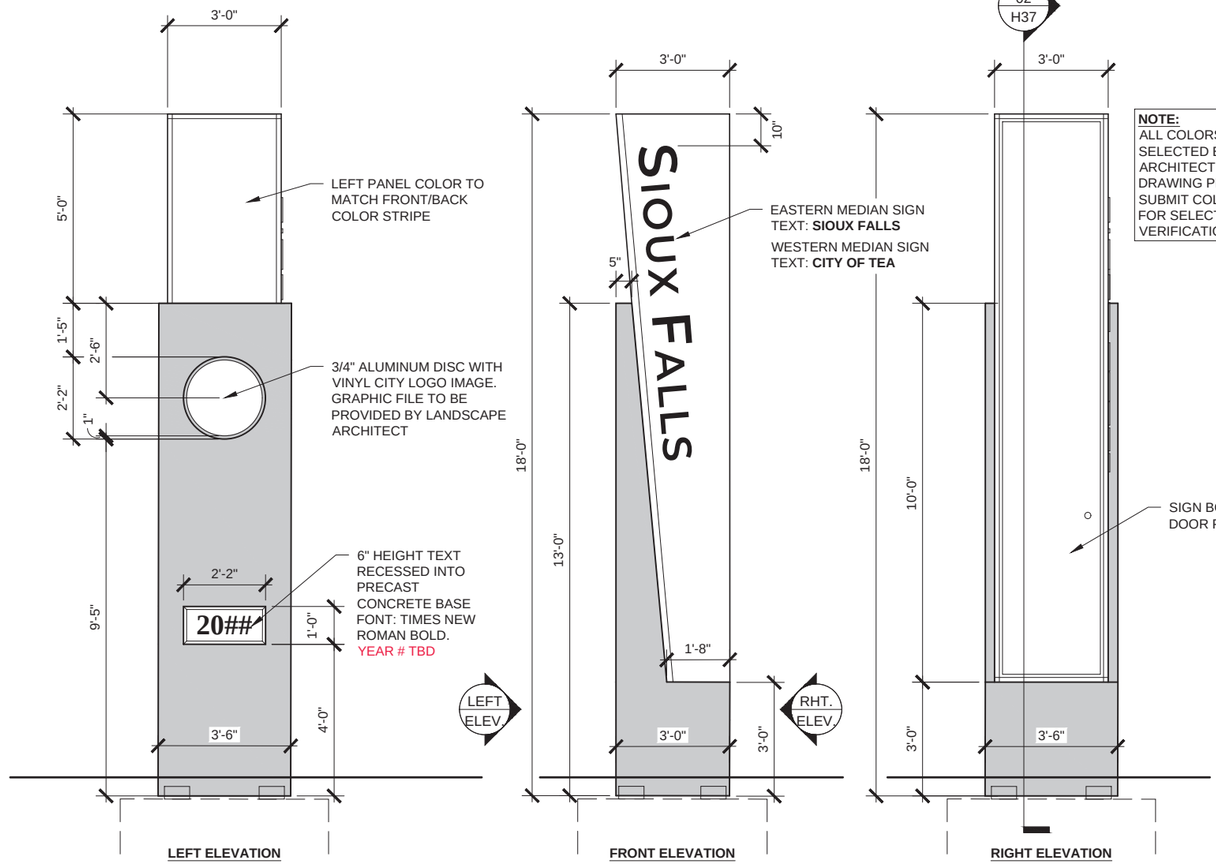
Items are approximate quantities contained in the above contract items and are for information only.

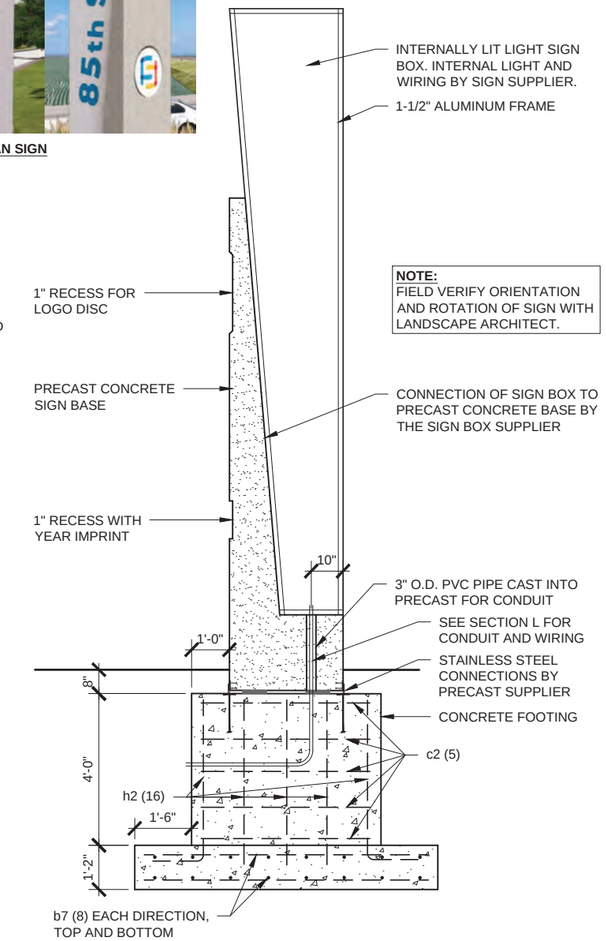


PLAN: SIGN ORIENTATIONS

WESTERN MEDIAN SIGN

EASTERN MEDIAN SIGN





02 H37 WELCOME SIGN - FOOTING SCALE: 1/4" = 1'-0"

01 H37 WELCOME SIGN SCALE: 1/4" = 1'-0"

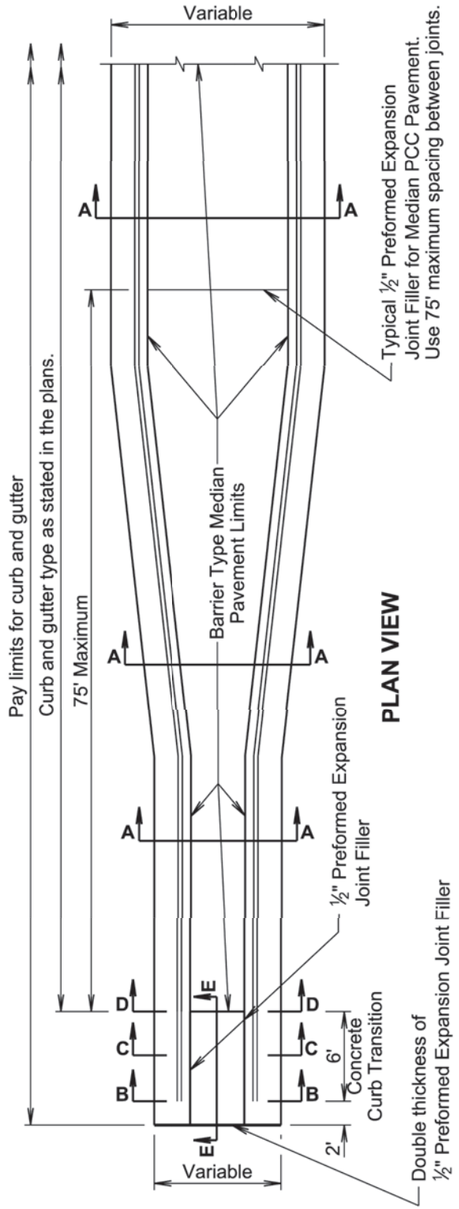
CONFLUENCE SEH

FOR BIDDING PURPOSES ONLY

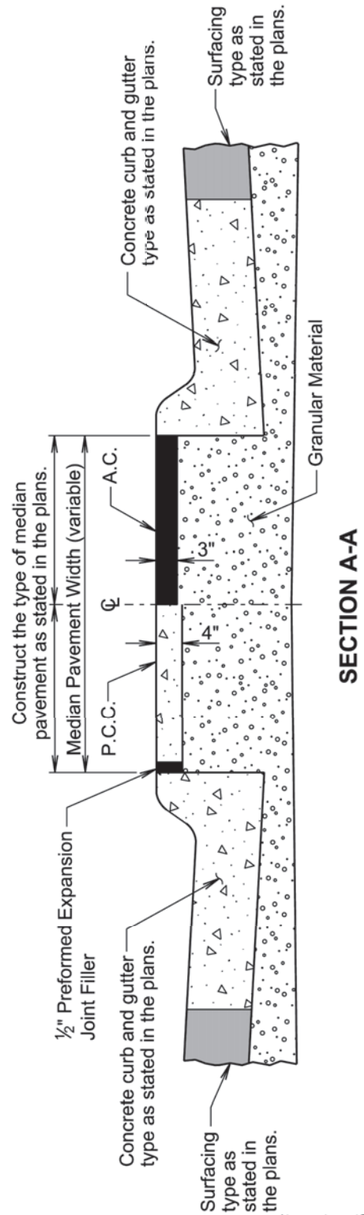
SD DOT	PROJECT	SECTION	SHEET
	EM 0292(88)73 IM 2292(104)0	H	H38

20206 DETAILS.dwg
PLOTTING DATE: 07/03/2025

REV DATE: 07/03/2025
INITIAL: CWK



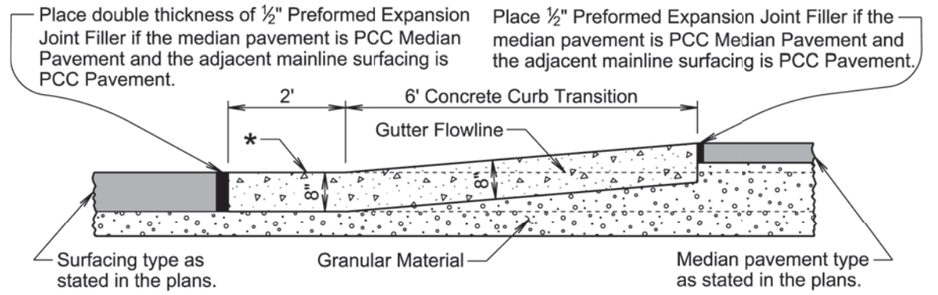
PLAN VIEW



SECTION A-A

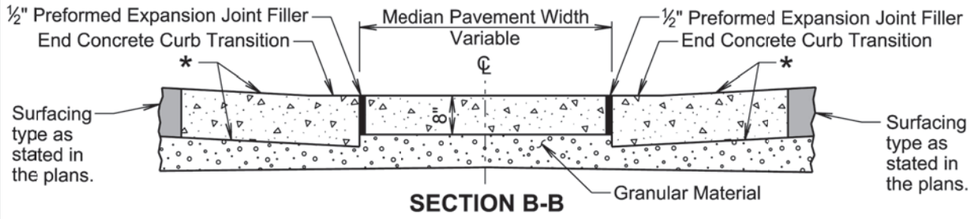
November 19, 2022

Published Date: 2026	SDDOT	BARRIER TYPE MEDIAN PAVEMENT	PLATE NUMBER 380.36
			Sheet 1 of 3

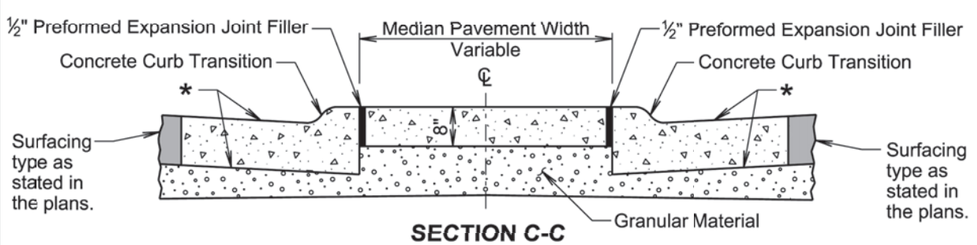


SECTION E-E

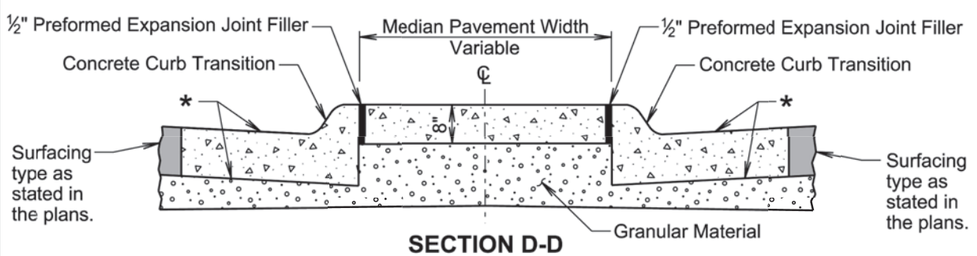
* The slope will be as shown on the standard plate for the corresponding curb and gutter type, on the typical sections, or on the cross sections. The slope will be modified when necessary at locations that would hold or pond water as determined by the Engineer.



SECTION B-B



SECTION C-C



SECTION D-D

November 19, 2022

Published Date: 2026	SDDOT	BARRIER TYPE MEDIAN PAVEMENT	PLATE NUMBER 380.36
			Sheet 2 of 3

CONFLUENCE SEH

20206 DETAILS.dwg
PLOTTING DATE: 07/03/2025
REV DATE: 07/03/2025
INITIAL: CWK

GENERAL NOTES:

Necessary excavation for construction of barrier type PCC and asphalt concrete median pavements and excavation for granular material will be measured and paid for as "Unclassified Excavation".

Concrete for barrier type median PCC pavement will comply with the requirements of the Specifications for Class M6 Concrete. One-half inch expansion joint filler will be placed transversely in the median PCC pavement at a maximum spacing of 75 feet. Where median PCC pavement is wider than 8 feet, a longitudinal joint will be sawed or grooved along the centerline of the median PCC pavement. Where the median PCC pavement is 4 feet or narrower and at width transitions, contraction joints will be sawed or grooved at spacings as approved by the Engineer. All other contraction joints will be sawed in square sections. All joints will be sawed or grooved to a depth of ⅓ the thickness of the median PCC pavement.

All costs for labor, materials, and incidentals necessary for construction of the barrier type median pavement will be incidental to the contract unit price per square yard for "Barrier Type Median PCC Pavement" or "Barrier Type Median Asphalt Concrete Pavement".

All costs for labor, materials, and incidentals necessary for construction of the 6-foot concrete curb transition (See Sections B-B, C-C, and D-D) and the adjacent 8-inch thick concrete (See Section E-E) will be incidental to the contract unit price per foot for the corresponding curb and gutter contract item.

Granular material will be paid for at the contract unit price for the respective granular material contract item.

November 19, 2022

Published Date: 2026	SDDOT	BARRIER TYPE MEDIAN PAVEMENT	PLATE NUMBER 380.36 Sheet 3 of 3