



# Connecting Construction to Asset Management

MnDOT – Charles Groshens  
Infotech – Gavin Diaz

2026 AASHTOWare Connect | Des Moines, IA | April 21-22, 2026

Charles  
Groshens



*PDMS Director,  
MnDOT*



Gavin Diaz

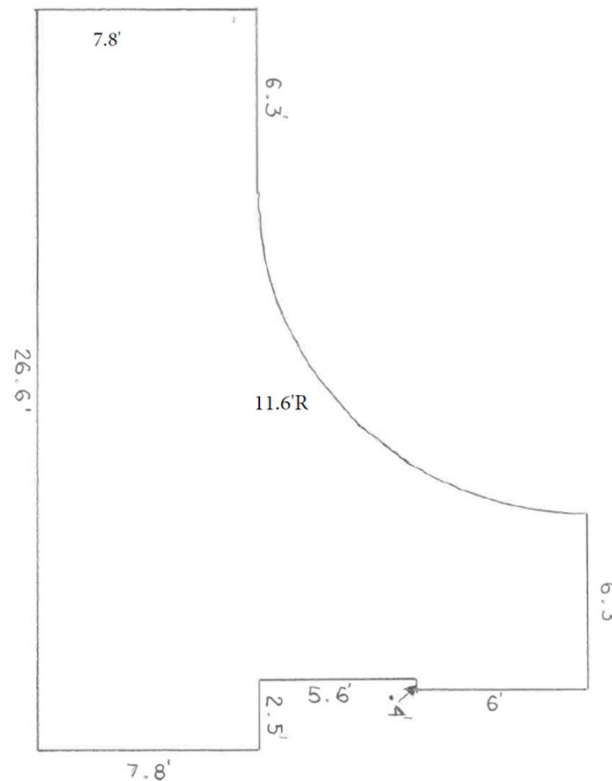


*Territory  
Manager,  
Infotech*

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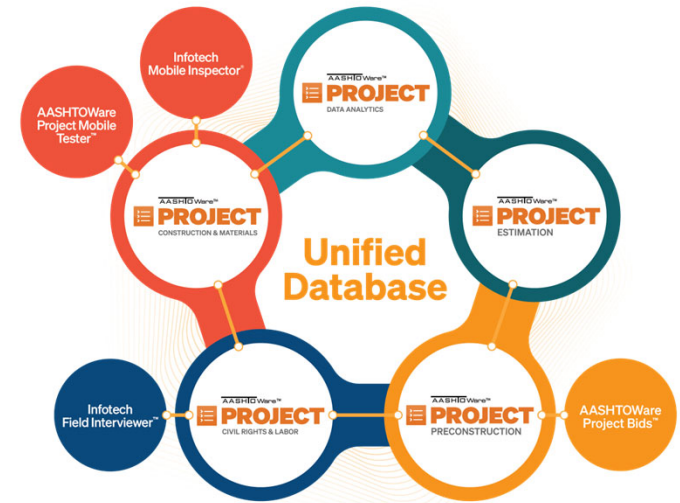
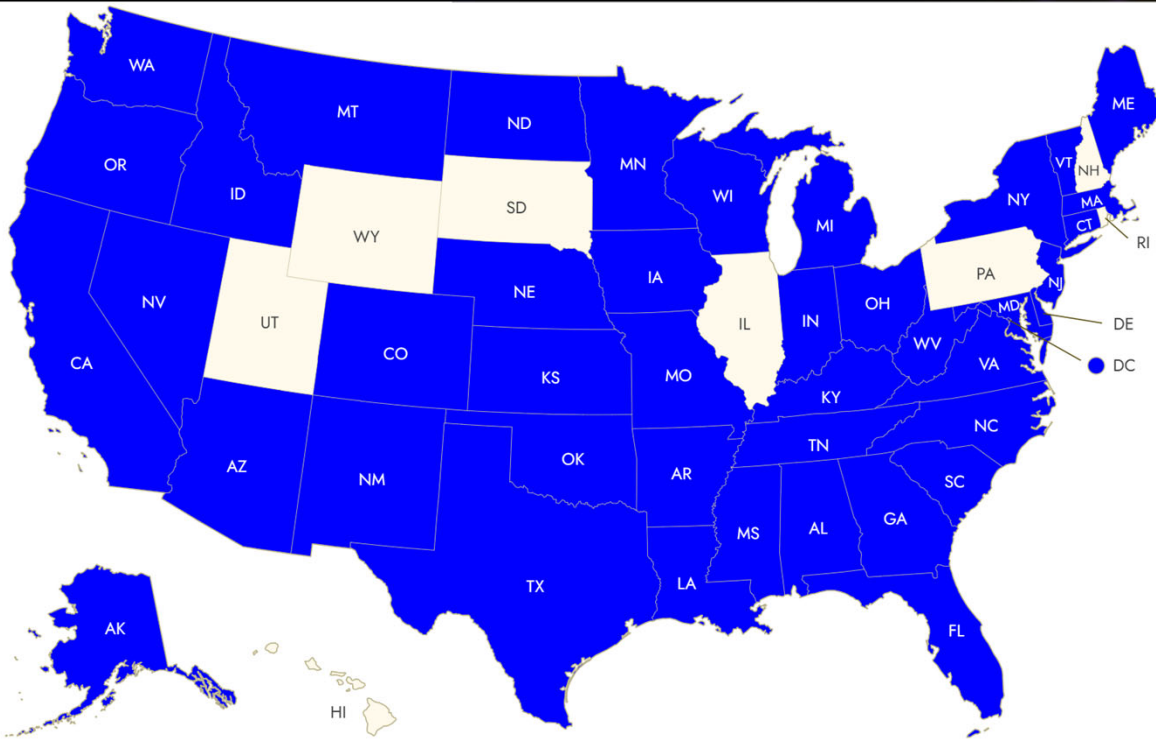
# Activity Time! No AI (use a calculator if needed)

- There is a sheet of paper in front of you, you'll have 4 minutes to calculate the area of the polygon.
- The first person to accurately calculate the quantity will win a prize!



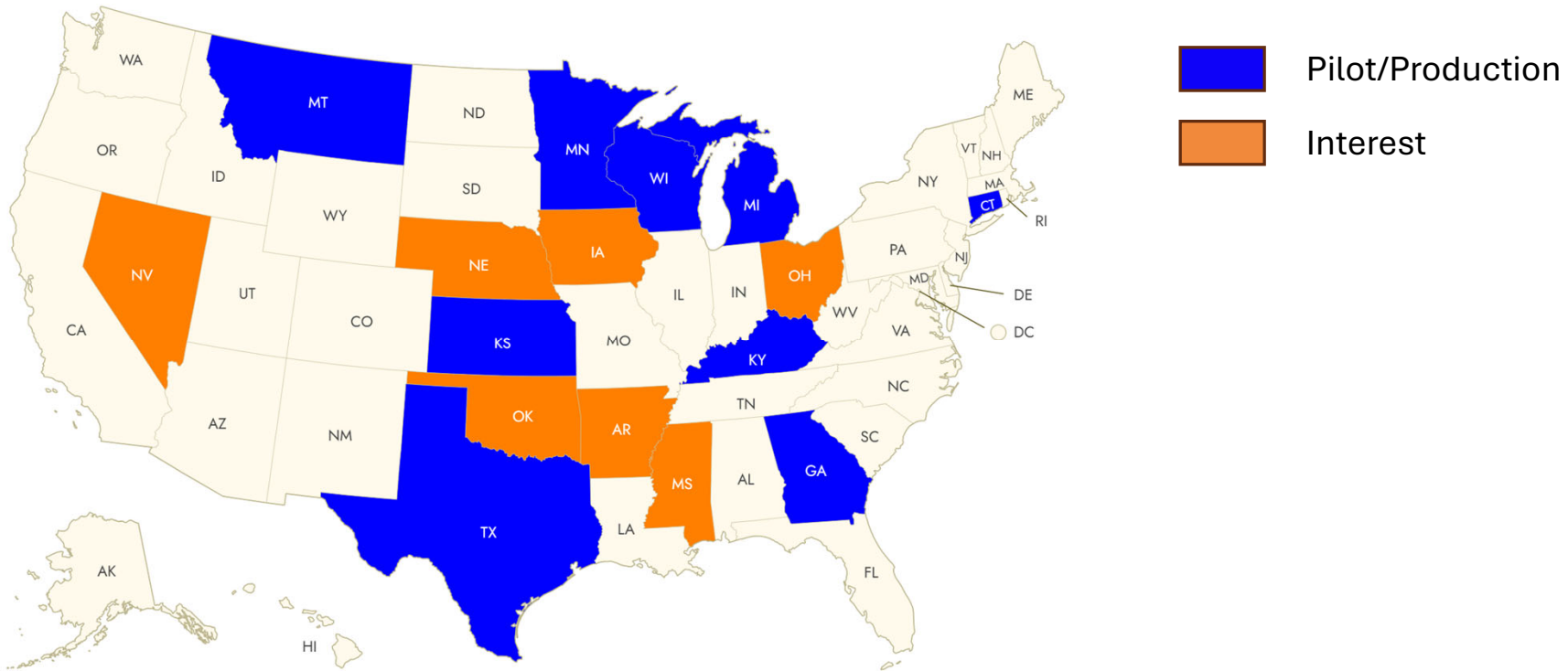


# AASHTOWare Project Licensing



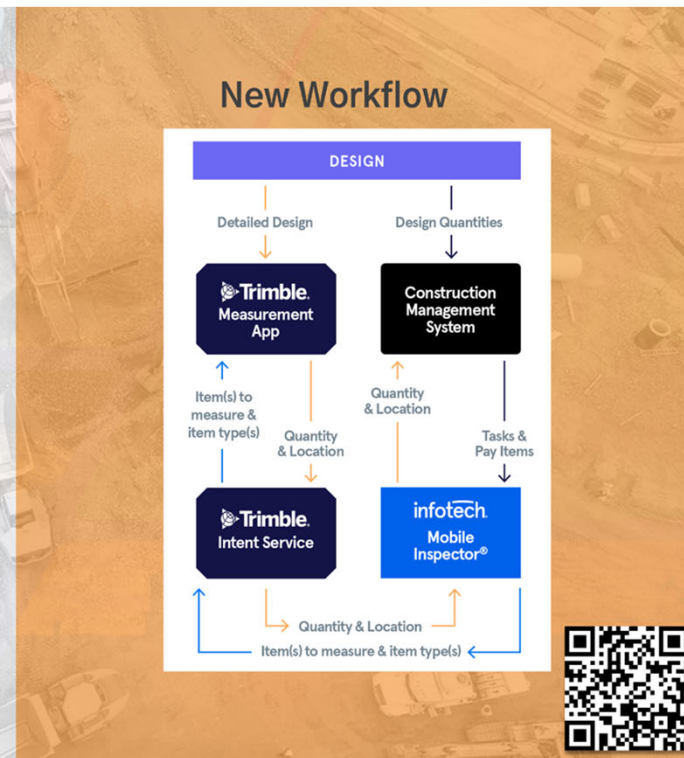
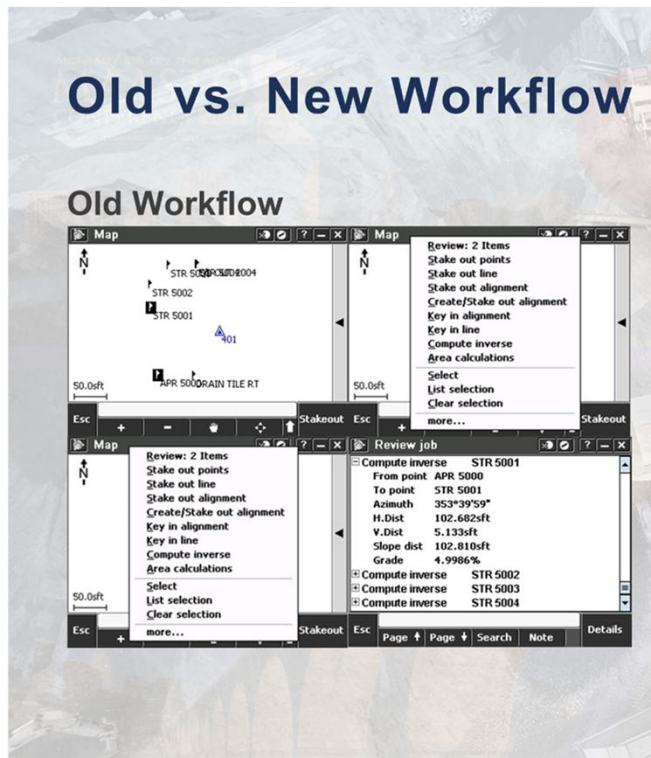
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# Mobile Inspector Measure Service (MIMS)

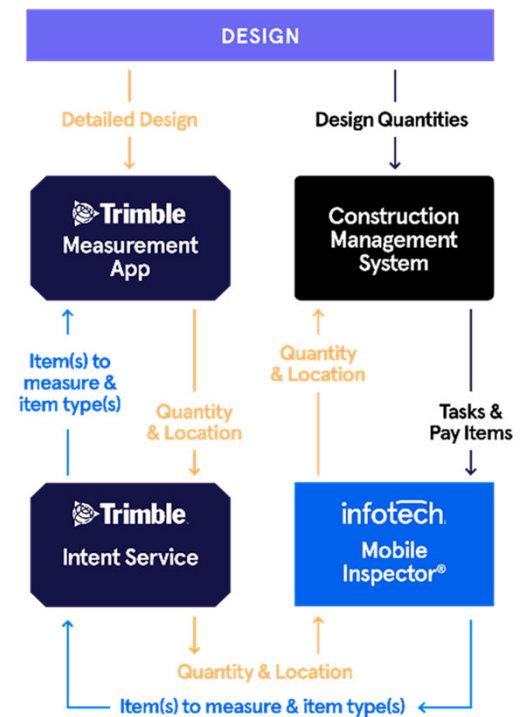
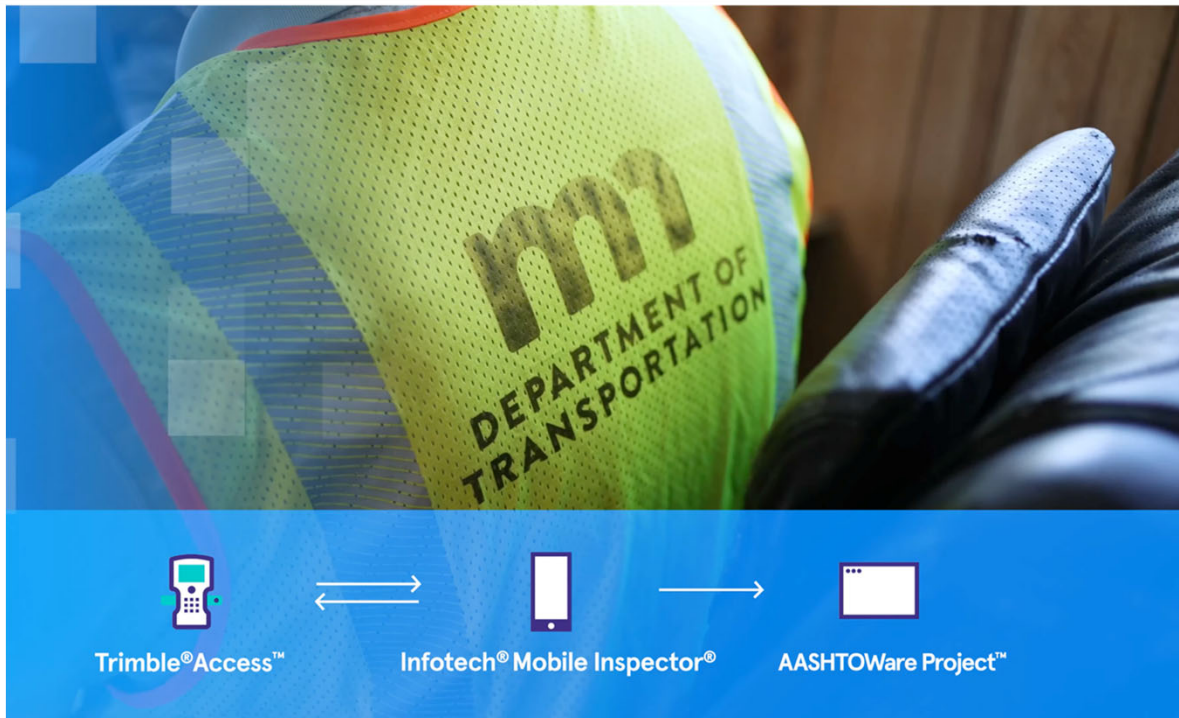


# Old Workflow

# New Workflow



# The Problem



# Mobile Inspector

Filter Postings... 

[+ ADD POSTING](#)

Posting  ^

Item  
2521518/00060 - 6" CONCRETE WALK  ▾

Contractor  
CLGPrimetest - CLGPrime (Prime)  ▾

Qty  SF  Measured

[MEASURE WITH INTEGRATION](#)

Authorized 985 S F

Location  
Conditionally Required.  0 / 600

 GPS Coordinates



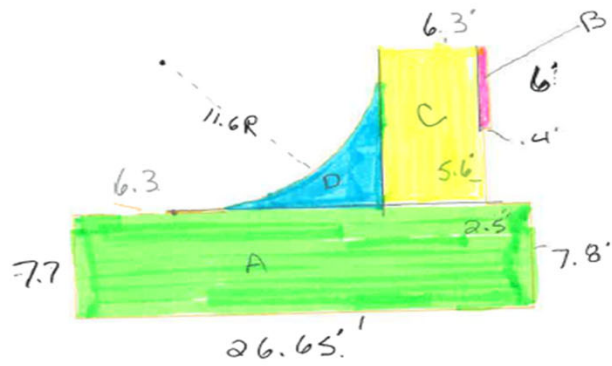
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# Trimble Access

The screenshot displays the Trimble Access software interface, split into two panels. The left panel, titled "Measure requests", shows a list of requests with the following details: "Area-2521518/00060 - 6" CONCRETE WALK: [S F] Contract Line: 195, Project: 69183a, Catg: 0003, Proj line:...". The right panel, titled "Measurement request result", shows a 2D site plan with a pink hatched area representing the measurement. The area is bounded by points SW1 through SW16. A scale bar indicates 10 feet. The results panel on the far right lists the following data:

Measurement request result
Selection
SW1,SW2,SW3,SW4,SW5,SW6,SW7,SW
Sloped Area
313.853S F
Plan Area
313.361S F
Perimeter
86.666sft

At the bottom of the interface, there are buttons for "Measure" and "Share".



34.02 yd<sup>2</sup>

**A**  $\frac{(7.7+26.65)}{2} \times 7.8 = 206.5 \text{ Ft}^2$

**B**  $0.4 \times 6 = 2.4 \text{ Ft}^2$

**C**  $(6.3 - 0.4) \times (5.6 + 6) = 68.4 \text{ Ft}^2$   
 $5.9 \times 11.6 = 68.4 \text{ Ft}^2$

**D**  $11.6 \times 11.6 = 134.6 \text{ Ft}^2$   
 RADIUS  $3.14 \times 11.6^2 = 422.6$   
 $422.6 \times 0.25 = 105.7 \text{ Ft}^2$   
 $134.6 \text{ Ft}^2 - 105.7 \text{ Ft}^2 = 28.9 \text{ Ft}^2$

$\frac{206.5 + 2.4 + 68.4 + 28.9}{4} = 34.02 \text{ yd}^2$

Measurement request result	
Selection	SW1,SW2,SW3,SW4,SW5,SW6,SW7,SW
Sloped Area	313.8535 F
Plan Area	313.3615 F
Perimeter	86.666sft



# Daily Work Report

04/06/2026 09:24:15

Minnesota Department Of Transportation

## Daily Work Report

Report v1

**Contract:** [REDACTED], Grading, Bituminous Surfacing, Roundabout, Moment Slab, ADA Improvements, and Lighting  
**Prime Contractor:** Northland Constructors of Duluth a division of Mathy Construction Company

**DWR Date:** 10/6/2025    **Day of Week:** Monday    **Inspector:** Charles Davis    **Agency Project Engineer:** [REDACTED]  
**Seq Num:** 2    **DWR Status:** Approved    **Entered By:** Charles Davis    **Agency Delivery Engineer:** [REDACTED]  
**Last Updated Date:** 10/9/2025    **Last Updated By:** [REDACTED]    **Managing Office:** [REDACTED]  
**Weather:** [REDACTED]    **Low Temp:** [REDACTED]    **High Temp:** [REDACTED]    **Rainfall Amount:** [REDACTED]    **SECIR Indicator:** [REDACTED]  
**Fed. Proj. Num:** 0125049    **State Proj. Num:** 0117-21

**Work Items:** Yes    **Contractors:** Yes    **Daily Staff:** No    **Attachment(s):** Yes

### Remarks

Type	Remarks
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### Attachments

File Name	Description	File Size (kb)
<a href="#">RawMeasureServiceData.measure-service.json</a>	These are the raw responses from the Measure Service. Please do not delete.	143

### Approvals

Date/Time Approved	Name	Title
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# Item Posting by Item Report – On Demand

04/06/2026 09:20:01

Minnesota Department Of Transportation

**Item Posting by Item Report** Report v1

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**Contract:** Grading, Bituminous Surfacing, Roundabout, Moment Slab, ADA Improvements, and Lighting **Date Range:** to

**Item Description:** 6" CONCRETE WALK

**Suppl. Description:**

<b>Item ID:</b> 2521518/00060	<b>Current Quantity:</b> 9155.000	<b>Current Extended Amount:</b> \$82,395.00
<b>Contract Line:</b> 0340	<b>Bid Quantity:</b> 9155.000	<b>Bid Extended Amount:</b> \$82,395.00
<b>Unit:</b> S F	<b>Quantity Posted to Date:</b> 9165.181	<b>Amount Posted to Date:</b> \$82,486.63
<b>Unit Price:</b> \$9.00	<b>Quantity Paid to Date:</b> 9165.181	<b>Amount Paid to Date:</b> \$82,486.63
<b>Type:</b> Original	<b>Quantity Unpaid:</b> 0.000	<b>Amount Unpaid:</b> \$0.00
<b>Item Completed:</b> Yes	<b>Pending Change Order Quantity:</b> 0.000	<b>Pending Change Order Amount:</b> \$0.00

**Comments:** See DWR measure service attachments- Source

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**Postings**

DWR Date	Inspector	Seq. Num	Project	Category	Proj Ln	Quantity Posted	Measured	Location	Last Updated Date
10/6/2025		2	142513	0001	00570	822.421	Yes		10/06/2025

**Station Location:** Sta 1398 + 41.96sf:2 : -93.294 To Sta 1398 + 99.48sf:2 : -39.608

**Contractor:** 0000213305009 - Northland Constructors of Duluth a division of Mathy Construction Company

**Attention Flag:**

**Comments:** Source, NW Quadrant

**Attachment(s):** [LandXML\\_1.xml.xml](#)  
[measurement\\_1.csv.csv](#)

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Item Description/Suppl. Description: 6" CONCRETE WALK Page: 1 of 13

# Item Payment Workflow

Posting 2521518/00060 - 6" CONCRETE WALK

Supp Desc CO 3

Contract Line 195

Project 69183a

Category 0003

Proj Line 240

Source ChangeOrder

Qty 313.853 S F

Authorized 985 S F

Measured No

Total Posted 1466.691 S F

Unit Price \$67.25

Contractor CLGPrimetest - CLGPrime (Prime)

Geolocation Latitude: 45°08'59.22533N, Longitude: 95°00'33.92176W, Accuracy: 0 m

Station From 8 + 82.418sft

Station To 9 + 08.980sft

Station From Offset Distance 17.189

Station To Offset Distance 16.6

Start Coordinate X 433063.415sft

End Coordinate X 433063.189sft

Start Coordinate Y 194325.353sft

End Coordinate Y 194298.785sft

Start Coordinate Z 1168.858

End Coordinate Z 1168.972

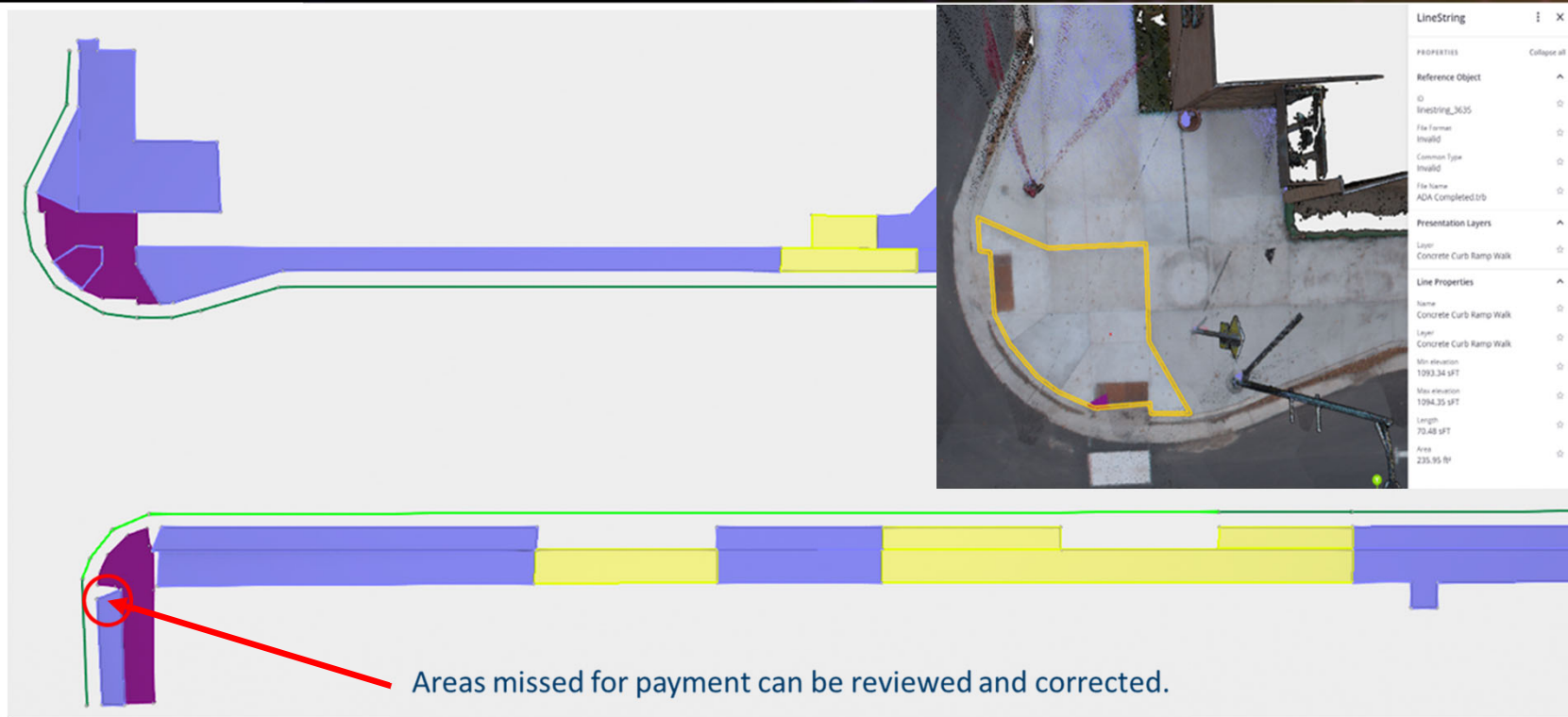
Attention No



	A	B	C	D	E
1	name	northing	easting	elevation	code
2	SW1	194317	433043.9	1169.628	Area1
3	SW2	194323.3	433044	1169.619	Area1
4	SW3	194323.3	433049.9	1169.44	Area1
5	SW4	194322.9	433050	1169.467	Area1
6	SW5	194322.9	433055.5	1169.089	Area1
7	SW6	194325.4	433055.6	1168.984	Area1
8	SW7	194325.4	433063.4	1168.858	Area1
9	SW8	194298.8	433063.2	1168.972	Area1
10	SW9	194299.1	433055.5	1169.23	Area1
11	SW10	194305.4	433055.6	1169.236	Area1
12	SW11	194307.7	433055.1	1169.246	Area1
13	SW12	194309.9	433054.1	1169.24	Area1
14	SW13	194311.8	433052.7	1169.257	Area1
15	SW14	194313.9	433050.6	1169.311	Area1
16	SW15	194315.9	433047.6	1169.495	Area1
17	SW16	194316.8	433045.4	1169.595	Area1

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# Reviewing Field Data Using Trimble Connect



# SP 8706-89 Clarkfield

- Start Date June 3, 2024
- Completion Date: November 1, 2024
- Contract Amount Paid \$4,757,355.28
- 197 different pay items
  - 141 - Items Documented as “Source” within the Daily Work Report. 3 different types of electronic documentation
    - Measure App / Mobile Inspector
    - ProjectWise
    - Direct Source Measurement (field measure/field count)
  - 41 - 100% City Items (Paper documentation submitted by the City for all their related items)
  - 11 - Lump Sum payment Items
  - 4 - items pay by the weight that have paper weight tickets as final documentation
- 3811 Hours of Inspection (Includes Resident Engineer, Project Engineer, Chief Inspector, and one assistant)
  - 23 Labor Hours to Certifying the project post construction.
  - Majority of contract certification was performed in real time.

# Cost to Finalize Contracts

## Statewide AASHTOWare Contracts Administered July 1<sup>st</sup> 2020 – June 30<sup>th</sup> 2024

- 693 projects
- Average Cost to Final Contract  
\$9,691

## Statewide AASHTOWare Contracts Administered July 1<sup>st</sup> 2024 – June 30<sup>th</sup> 2025

- 299 contracts
- Average Cost to Final Contract  
\$6,478

## District 8 Willmar AASHTOWare Contracts Administered July 1<sup>st</sup> 2024 – June 30<sup>th</sup> 2025 Full Implementation of Mobile Inspector and Measure Service

- 16 Projects
- Average Cost to Final Contract  
\$3,018



# Questions?



*[charles.groshens@state.mn.us](mailto:charles.groshens@state.mn.us)*



*[Gavin.diaz@infotechinc.com](mailto:Gavin.diaz@infotechinc.com)*