

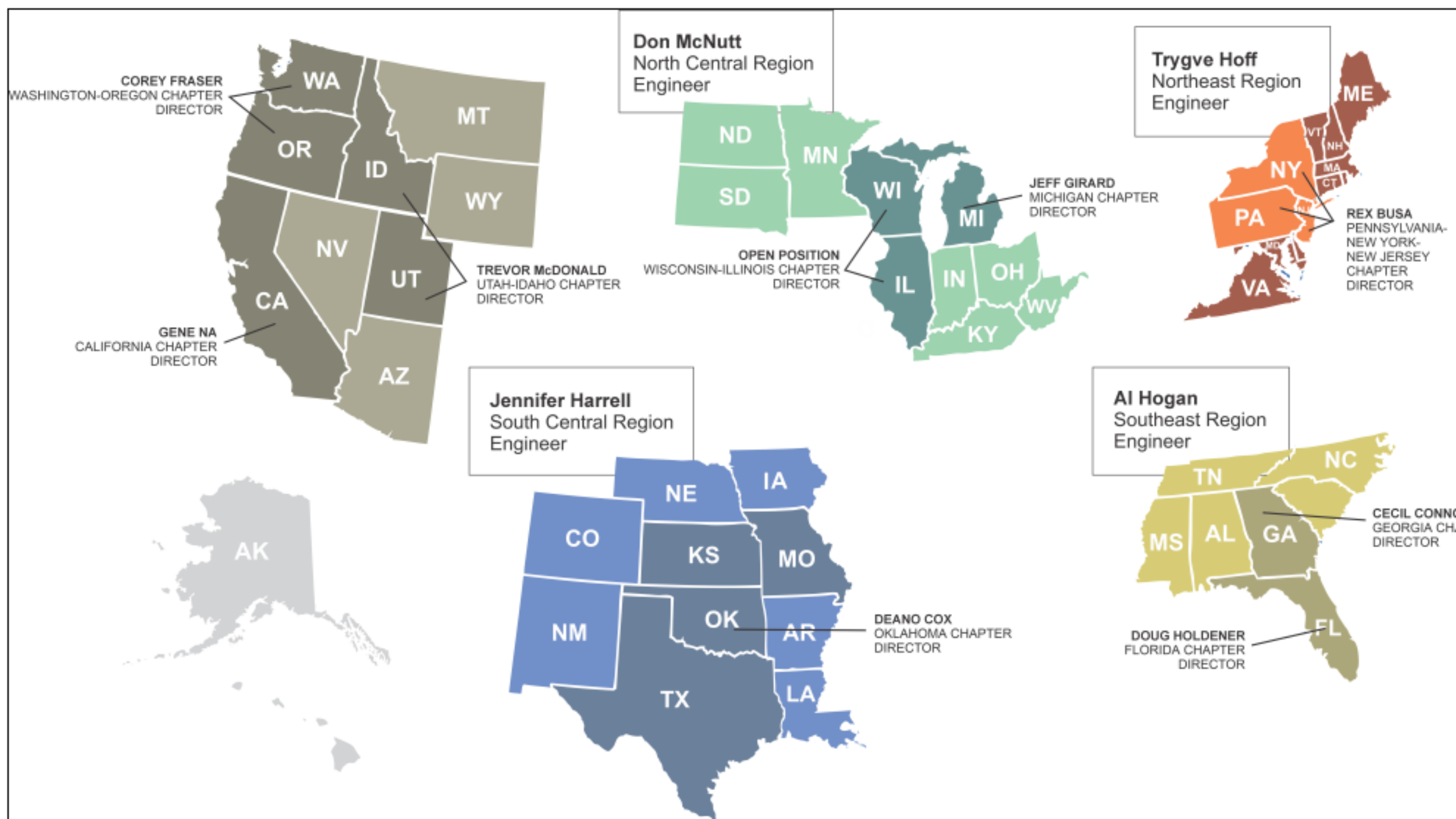
Region Engineer Update

Al Hogan, PE

Tryg Hoff, PE

Don McNutt, PE

Jennifer Harrell, PE



Strategic Focus

Relationships –

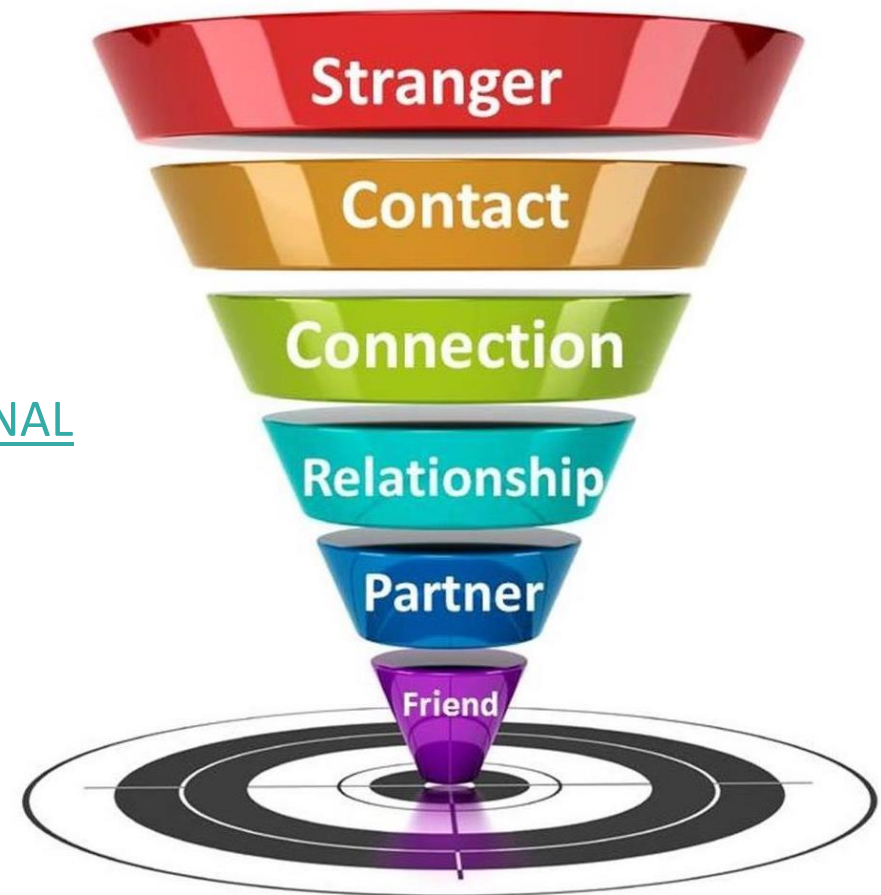
Build Professional Friendships both Internal and EXTERNAL

Training and Education-

Become a respected and Trusted Resource by
Providing a needed and appreciated
service to our customers

Obtain a Favorable Speciation Environment for RCP and PBC-

Specs write CHECKS immediately
and Grow Market share over the long haul



North Central Region Team



Concrete Pipe Association of Michigan



Lowell Concrete Products



Technical Training

National Webinars - (3) 1,862

Manufacturing – Installation - Buoyancy

P.I.P.E. Training (4) – 129

Training Events (70) – 2,978



University Training

(9) Universities – 279 Students



6 1/4 inches wide by 5 1/2 inches tall



Association Events – Build Relationships

AASHTO COMP

AASHTO Bridge

MAASTO

ASTM C13

AASHTO Annual



Key Relationships – Specification Focused

Spec Comments Submitted - 56

Specification Meetings - 47

Specification Changes – 7

Minnesota – 4

Michigan -2

Wisconsin - 1

DIVISION 700 DRAINAGE, TRAFFIC, AND ROADSIDE CONSTRUCTION

SECTION 701 □ CULVERT PIPE, ENTRANCE PIPE, STORM SEWER PIPE, AND EQUIVALENTS

701.01 DESCRIPTION. Furnish and install culvert pipe, entrance pipe, and storm sewer pipe. Use units conforming to the dimensions, fabrication, material, and strength requirements for the type (culvert, entrance, or storm sewer), diameter, cover height, and pH level the Contract specifies. This work may include removing pipe, and relaying pipe.

701.02 MATERIALS.

701.02.01 Pipe. Use reinforced concrete pipe, corrugated metal pipe, polyvinyl chloride (PVC) pipe, high density polyethylene (HDPE) pipe, or corrugated polypropylene (PP) pipe conforming to Section 810.

701.02.02 Structural Plate Pipe. Conform to Section 809 for the following:

- 1) Corrugated Aluminum Alloy Circular Pipe with Longitudinal Seam with Aluminum or Steel Bolts.
- 2) Corrugated Aluminum Alloy Circular Pipe Arch with Longitudinal Seams with Aluminum or Steel Bolts.
- 3) Corrugated Steel Pipe Arch with Longitudinal Seams with Steel Bolts.
- 4) Corrugated Steel Pipe with Longitudinal Seams with Steel Bolts.

701.02.03 Joint Materials.

A) Mortar Joints. Conform to Section 801 for cement and Section 804 for mortar sand.

B) Asphalt Mastic Joint Sealing Compound. Conform to Subsection 807.03.04.

C) Rubber Gaskets. Conform to Subsection 807.03.04.

D) Butyl Rubber Sealants. Conform to Subsection 807.03.04.

E) Elastomeric Seals. Conform to ASTM F477.

F) Couplings for Thermoplastic Pipe. Conform to Section 810.

G) Cleated and Non-Cleated, Integral Welded Bell Coupler with Gaskets. Conform to Section 810.

H) Coupling Bands. Conform to Section 810.04.04.

701.02.04 Bedding Materials. Use No. 8 aggregate, No. 9-M aggregate, or a fine aggregate conforming to Subsection 804.08 for bedding material. Do not use a DGA or gravel base material for bedding material.

701.02.05 Backfill Materials.

A) Granular Backfill.

1) For Reinforced Concrete Pipe. Use size No. 2, 23, 3, 357, 4, 467, 5, 57, 67, 68, 78, 8, or 9M aggregate or material conforming to AASHTO M 145 A1 or A3 material with a maximum plasticity index of 10 (see table below). Limit rock fragments to a 3-inch maximum size.

2) For Corrugated Metal Pipe. Use size No. 2, 23, 3, 357, 4, 467, 5, 57, 67, 68, 78, 8, or 9M aggregate or material conforming to AASHTO M 145 A1 or A3 material with a maximum plasticity index of 10 (see table below). Limit rock fragments to a size that does not exceed the corrugation width.

3) For Thermoplastic Pipe. Use size No. 3, 57, 67, 68, 78, 8, or 9M aggregate or material conforming to AASHTO M 145 A1 or A3 material (see table below).

701-1

Limit rock fragments to a 1.5-inch maximum size. For corrugated pipe, limit



Days of Travel - 2024/2025 – 109 Days



March 2025							April 2025						
Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa
2	3	4	5	6	7	8	6	7	8	9	10	11	12
9	10	11	12	13	14	15	13	14	15	16	17	18	19
16	17	18	19	20	21	22	20	21	22	23	24	25	26
23	24	25	26	27	28	29	27	28	29	30			
30	31												
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY							
Feb 23	24	25	26	27	28	Mar 1							
2	3 11:00am GRC Monthly 11:00am GRC Monthly 2:00pm Precast 2:00pm RE Prep for	4 8:00am Skin Doctor Appointment - Sherry Howard (6365)	5 Pipe School Encore 9:00am March 2025 11:45am Flight DL 4817	6 South Dakota DOT Meeting (Sioux Falls, SD) 9:00am CPAM Monthly Meeting (Conference)	7 6:05am Flight DL 1006 1:00pm ACPA Infrastructure	8 Jean McNutt (Kettering)							
9	10	11 2025 CEAO Storm Water Management and Drainage Conf CEAO Stormwater (Columbus)	12 CEAO Stormwater (Columbus)	13 3:30pm The Construction Conversation (Zoom)	14 VACATION (South Carolina)	15							
16 ACPA Annual Meeting (Isle of Palms)	17	18 Purdue Road School (West Lafayette (West Lafayette, Ind	19 9:00am MP Committee	20	21 7:45am Dr Stevens (OhioHealth) 8:45am Stress Test (Ohio Health Pickerington)	22							
23	24	25 3:00pm WVEXPO (Travel Day)	26 WVEXPO (Charleston (Charleston, West Virginia))	27	28	29							
30	31	Apr 1	2	3	4	5							



North Central Region Activities Dashboard



NORTH CENTRAL REGIONAL TOTALS (ALL STATES)

Activity (Goal/Tactic)	April	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	YTD	Goal	To Go
Technical Training (2-B)	11	16	6	8	2	0	3	4	1	6	13		70	50	(20)
University Training (2-E)	1	0	0	0	0	1	1	6	0	0	0		9	3	(6)
Technical Plant Tour (2-A)	3	5	6	3	0	9	8	3	1	0	2		40	30	(10)
Political Plant Tour (3-C)	15	0	0	0	0	3	1	0	0	0	0		19	10	(9)
Association Events (3-B)	7	14	8	3	8	4	23	4	15	7	2		95	3	(92)
Key (Spec.) Relationship Events (2 & 3)	37	39	43	32	9	8	33	14	17	30	14		276	215	(61)
Submitted Spec Comments (2 & 3)	4	6	1	5	12	2	6	4	3	11	2		56	15	(41)
Spec Meeting (2 & 3)	0	11	5	5	3	1	7	2	4	4	0		42	10	(32)
Adopted Spec Change (2 & 3)	0	1	1		1	0	3	1	0	0	0		7	3	(4)
Number Targets Impacted (1, 2, 3)	518	1227	949	363	267	328	538	1217	409	287	304		6407	2000	(4,407)

North Central Region = 13 “Reporters” (Report info. For 14 In-Field Staff/TRE’s)

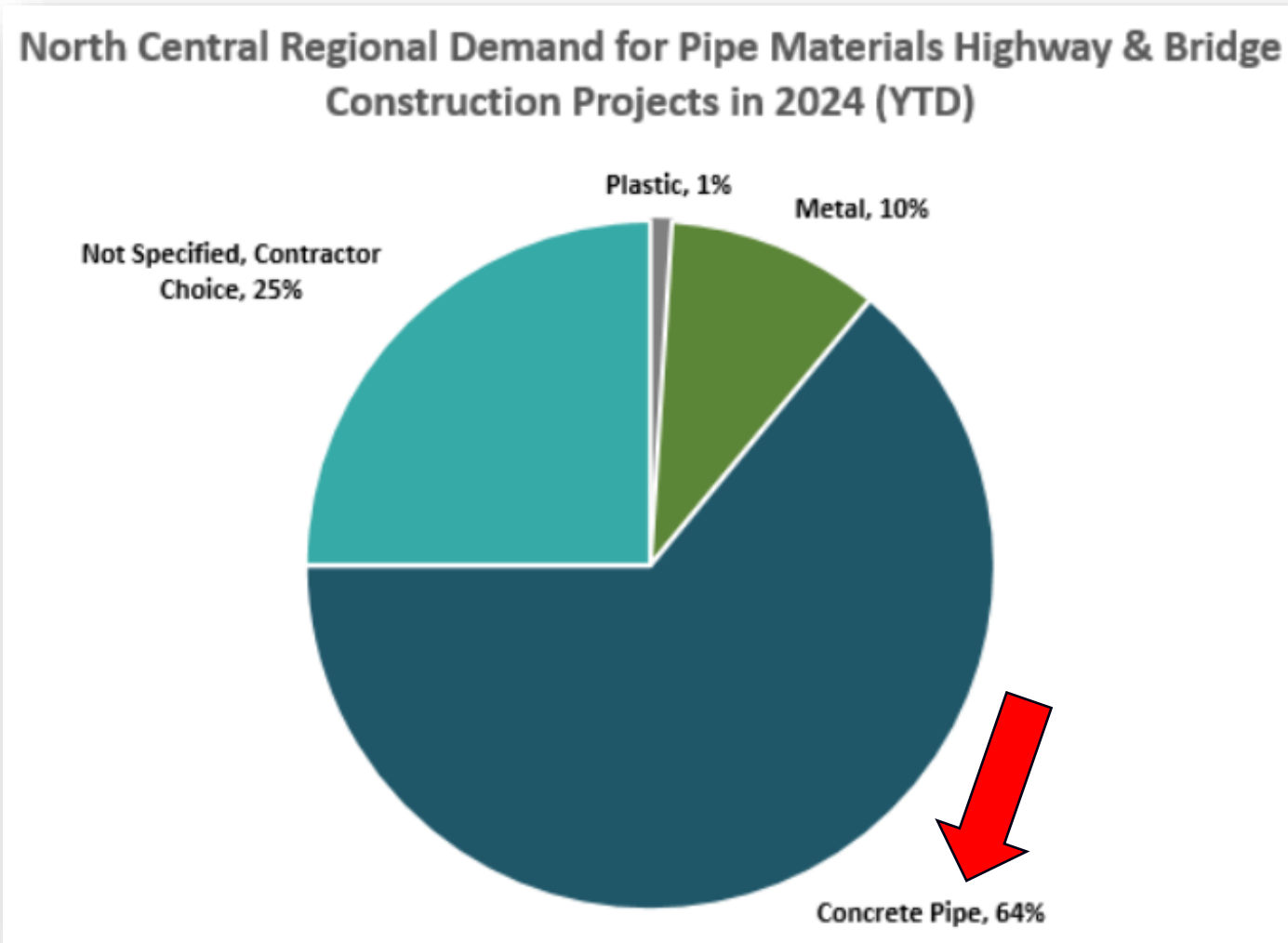


Highlights of my personal service to work in Region:

- Technical Training – 15 Events – 366 attendees
- 3 ACPA National Webinars – 1,826 attendees
- University Training – 7 Events w 218 attendees
- Key Relationships (Spec. Focused) – 19 meetings w 113 contacts
- Assisted with Specification Markups – 5 locations across NC Region



North Central Region Activities Dashboard



* Includes Iowa, Missouri, Kansas, Nebraska, Wyoming & Montana



The Big Deal for 2024-2025



Columbus was a Hit

Hilton Downtown Great Facility

Easy Access From Airport

All in One Facility

Plenty of Bars – Inside and Close

Great Restaurants within Walking Distance

Total Conference Attendees - 561

Total of Transportation Guests - 69

Transportation Guests from NC Region – 46 = 67%

OH-18, IN-13, KY-5, MI-4, WV-2, MN-2, ND-2

Number of Transportation States Represented - 21



South Central Update



© Gt

2024/2025 Activity Highlights

Technical Trainings – 22

Technical Plant Tours – 20

Political Plant Tours - 2

Engineer/Contractor Assoc Events – 58

Key Relationship Events – 57

Submitted Spec Comments – 5

Spec Meetings – 8

Adopted Changes – 1

Targets Impacted – 3466



South Central Region Activities Dashboard

SOUTH CENTRAL REGIONAL TOTALS (ALL STATES)

Activity (Goal/Tactic)	April	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	YTD	Goal	To Go
Technical Training (2-B)	6	3	1	2	2	1	3	3	1	0	0		22	50	(28)
University Training (2-E)	0	0	0	0	0	0	0	0	0	0	0		0	3	(3)
Technical Plant Tour (2-A)	2	2	3	1	1	6	4	1	0	0	0		20	30	(10)
Political Plant Tour (3-C)	0	0	0	0	0	1	0	1	0	0	0		2	10	(8)
Association Events (3-B)	17	6	6	2	2	8	6	2	6	1	2		58	3	55
Key (Spec.)Relationship Events (2 & 3)	9	5	3	6	7	4	8	2	8	3	2		57	215	(158)
Submitted Spec Comments (2 & 3)	0	2	0	0	0	0	0	0	2	1	0		5	15	(10)
Spec Meeting (2 & 3)	0	0	0	0	1	1	1	1	0	1	1		6	10	(4)
Adopted Spec Change (2 & 3)	1	1	0	0	0	0	0	0	0	0	0		2	3	(1)
Number Targets Impacted (1, 2, 3)	1090	217	173	250	176	179	126	90	1042	89	34		3466	2000	1,466

Strategic Plan Reporting Statistics

- Monthly Reporting: RE + 1 member
- 4 members a total of 6 times



South Central Update



2024/2025 Jennifer's Activity Highlights

- Tech Trainings – 13 Events – 2195 attendees
- Political Plant Tours – 2
- Eng / Assoc Events – 37
- State & Local support events - 102
- Key Relationship Events– 27
- Submitted Spec Comments – 4
- Spec Meetings – 11
- Adopted Changes – 1
- Targets Impacted – 2810

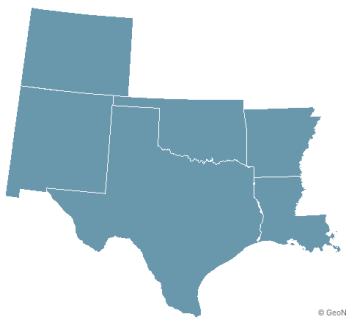
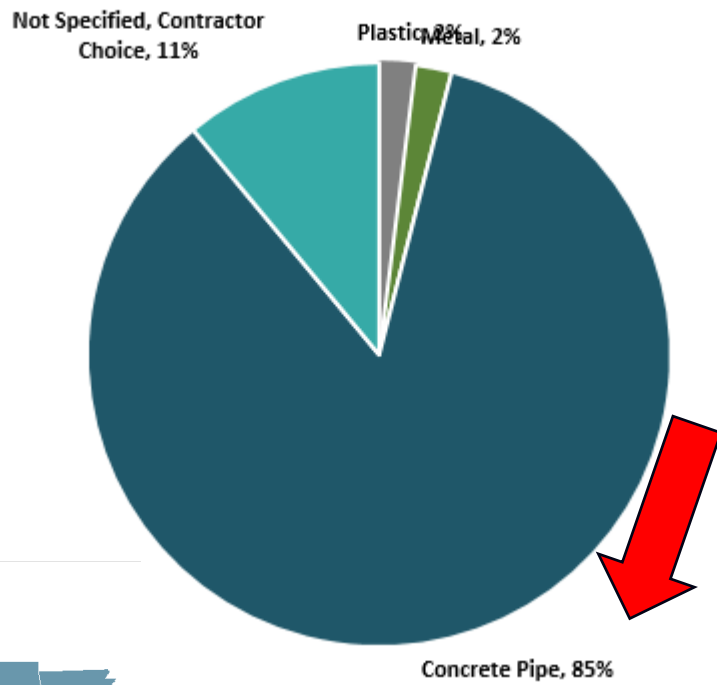
Days of travel- 131

8 weeks - no travel (due to knee replacement Surgery)



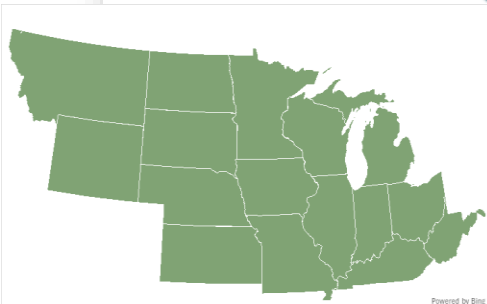
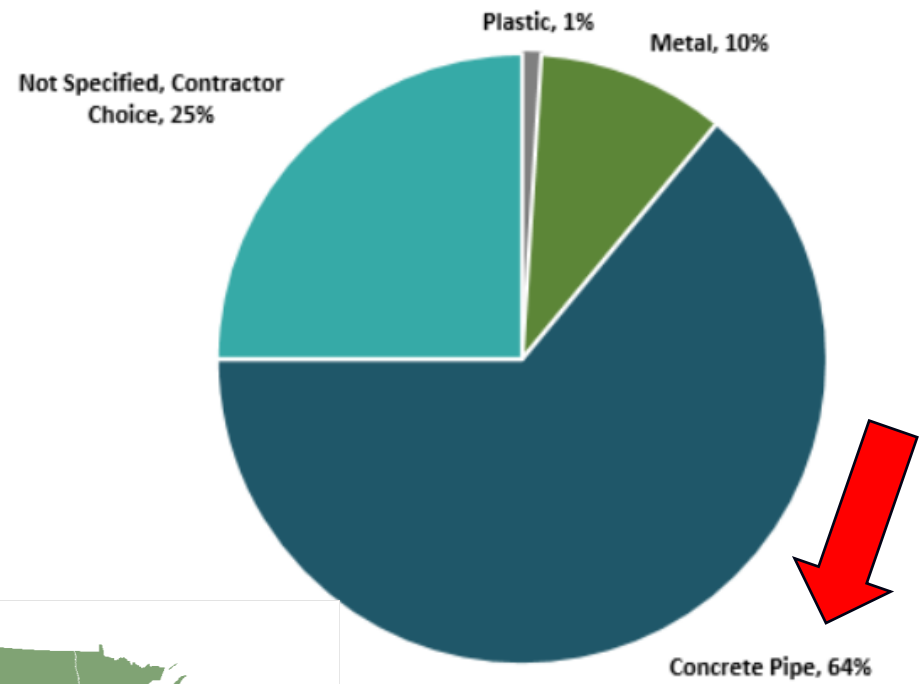
South Central Region Market Share

South Central Regional Demand for Pipe Materials Highway & Bridge Construction Projects in 2024 (YTD)



© GeoN

North Central Regional Demand for Pipe Materials Highway & Bridge Construction Projects in 2024 (YTD)



Powered by Bing
© GeoNames, Microsoft, TomTom

* North Central Map Includes Iowa, Missouri, Kansas, Nebraska



South Central Update – *Oklahoma*



OKLAHOMA
Transportation



ODOT Bedding Specifications History:

- Installation detail and specifications changed without notification local suppliers.
- Local member effort to request changes to updated specifications not successful.
- Several conversations and meetings took place with no movement.
- Local Members thought it was best to work as one industry
- OKPA was form to address concerns as one unified industry
- Deano Cox, local lobbyist hired as OKPA State Director

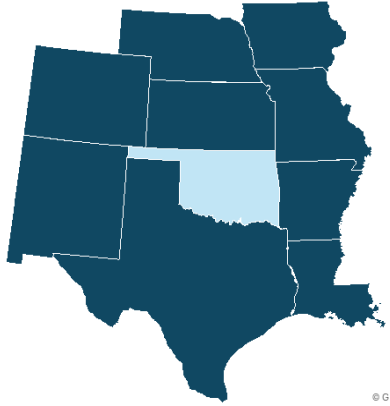
Rinker
MATERIALS™
A QUIKRETE® COMPANY



Scurlock Industries



South Central Update – *Oklahoma*



ODOT Bedding Specifications History:

- Further efforts directly through ODOT unsuccessful
- OKPA decided to pursue through lobbying efforts.
- Deano was successfully able to meet with a legislator it was unacceptable for OK citizens to spend more on backfill requirements for rigid pipe when in it wasn't necessary
- During legislative push ODOT came back agreed to work with OKPA to update standards

1 ENGROSSED HOUSE
2 BILL NO. 3735

By: Dempsey of the House

and

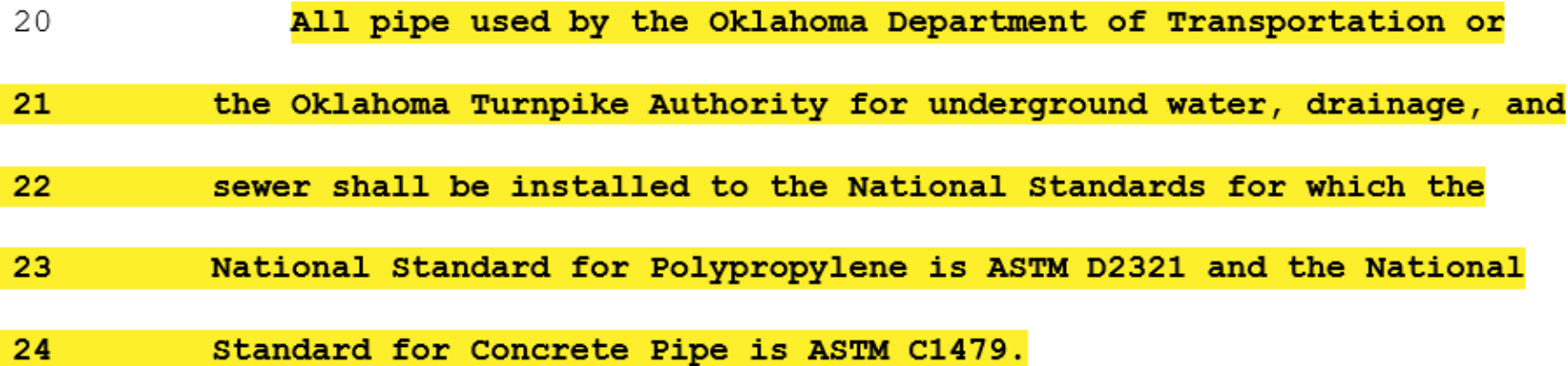
Rogers of the Senate

3
4
5
6 [transportation - installation of pipe - standards -
7 maintenance and construction zones - installation
8 and maintenance of business access signs -
9 placement - certain inspection - effective date]
10



ODOT Bedding Specifications History:

- ODOT updating Bedding Specs & Details
- Invitation to Industry to review and comment on updated specifications and details
- Update to legislative Bill to include ASTM Installation Standards



South Central Update



Upcoming South Central Regional Meeting:

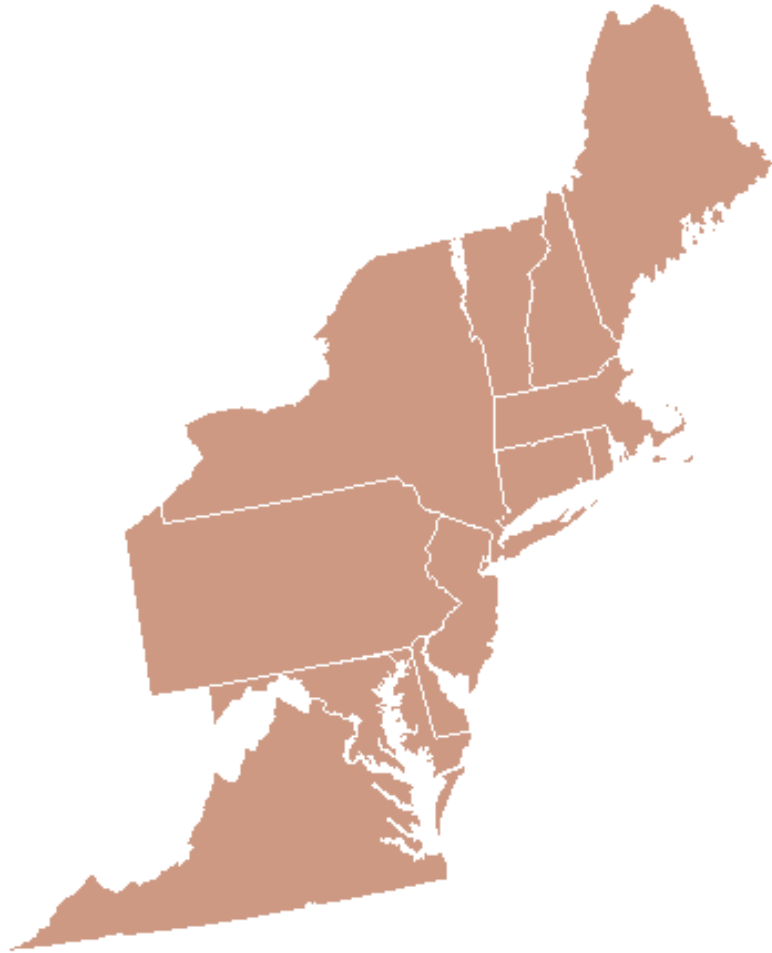
Date: March 25th, 2025

Time: 11am - 3pm

Location: Kansas City, MO



Northeast Update



2024/2025 Activity Highlights

Technical Trainings – 26

Engineer/Contractor Assoc Events – 31

Key Relationship Events – 115

Submitted Spec Comments – 33

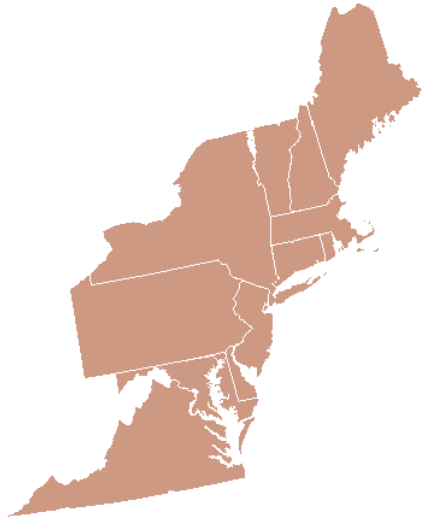
Spec Meetings – 30

Adopted Changes – 5

Targets Impacted – 2267



Northeast Update



Activity (Goal/Tactic)	April	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	YTD	Goal	To Go
Technical Training (2-B)	3	7	0	1	2	3	2	0		2	4	2	26	50	(24)
University Training (2-E)	0	0	0			0		0					0	3	(3)
Technical Plant Tour (2-A)	0	2	0	3		1		0					6	30	(24)
Political Plant Tour (3-C)	0	0				0		0		1			1	10	(9)
Association Events (3-B)	0	4	0	5	3	5	3	1		6	6	1	34	3	31
Key (Spec.)Relationship Events (2 & 3)	11	12	2	22	3	6	9	1		5	44		115	215	(100)
Submitted Spec Comments (2 & 3)	4	2	2	7	4	5	3	0			3	3	33	15	18
Spec Meeting (2 & 3)	3	2	2	7	4	4	4	0		3	1		30	10	20
Adopted Spec Change (2 & 3)	1	0	1		0	0	2	0			1		5	3	2
Number Targets Impacted (1, 2, 3)	113	258	32	129	69	661	118	5		107	449	326	2267	2000	267

NE Region = 4 “Reporters” (RE, SD, & 2 members)

2024/2025 TH Activity Highlights

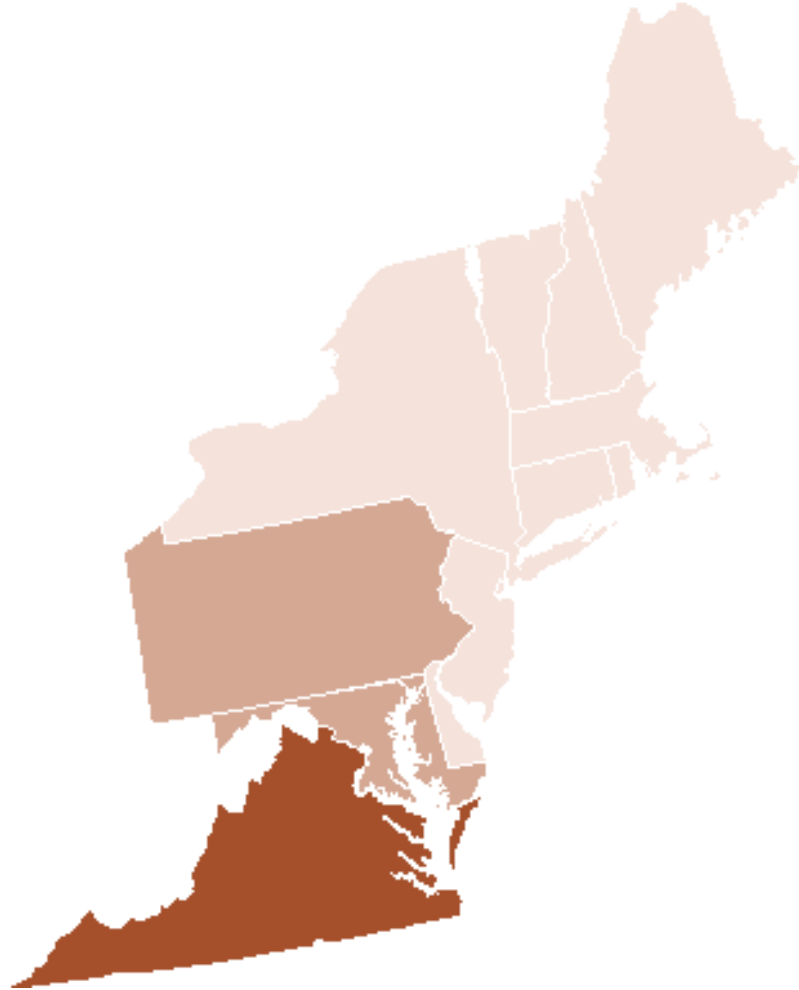
- Tech Trainings – 14 Events – 1151 attendees
- Eng / Assoc Events – 24 Events
- Key Relationship – 33 Events – 159 contacts
- Submitted Spec Comments – 19
- Spec Meetings – 14
- Adopted Changes – 2
- Targets Impacted – 1425

2024/2025 GR & Sustainability Highlights

- TRB/AASHTO/TCC/FHWA LCTM/ACEC/
- Capital Hill – 15 Visits – 28 legislators/staffers
- Member Outreach on Regulations – 3 webinars, 3 presentations
- Application for & selection of \$10M EPA Grant
- Review Comments Submitted to EPA – 5 documents
- Meetings w/ EPA/FHWA regarding EPDs
 - 6 meetings, 10 virtual grant meetings, 12 webinars
- Sustainability – 5 technical trainings

Northeast Update

2024/2025 Key Spec Updates

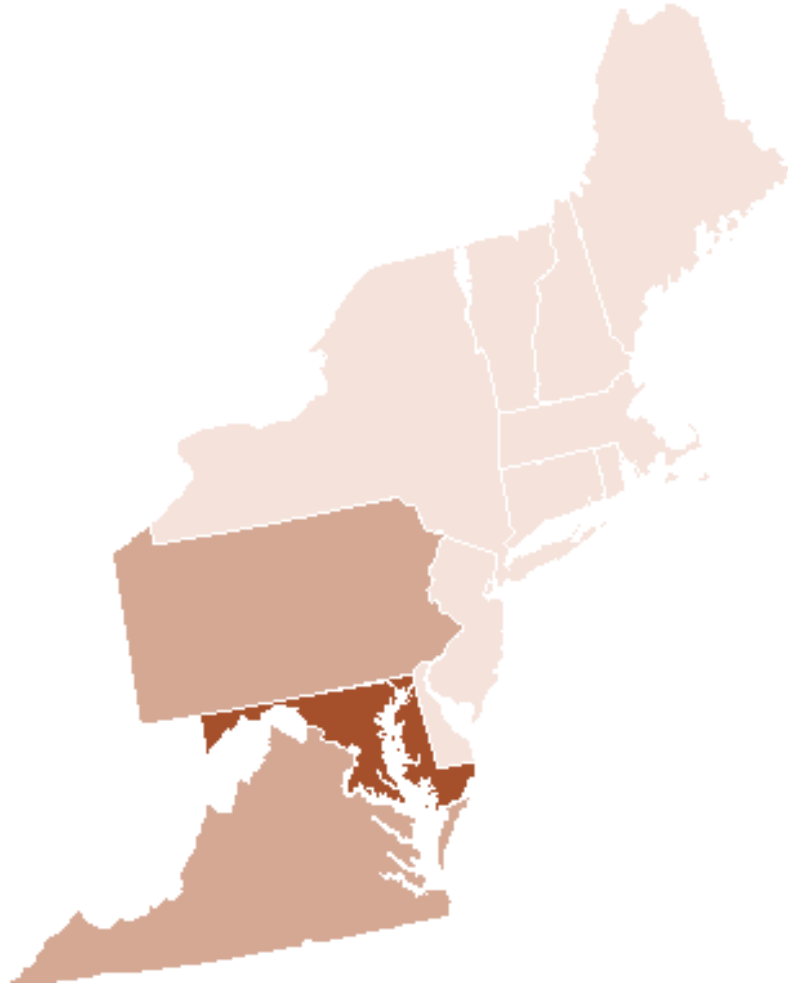


Virginia:

- Updates to Pipe Installation & PII
- AASHTO Construction Guide, X-5
- Next Steps – Fill Height Tables



Northeast Update



2024/2025 Key Spec Updates

Virginia:

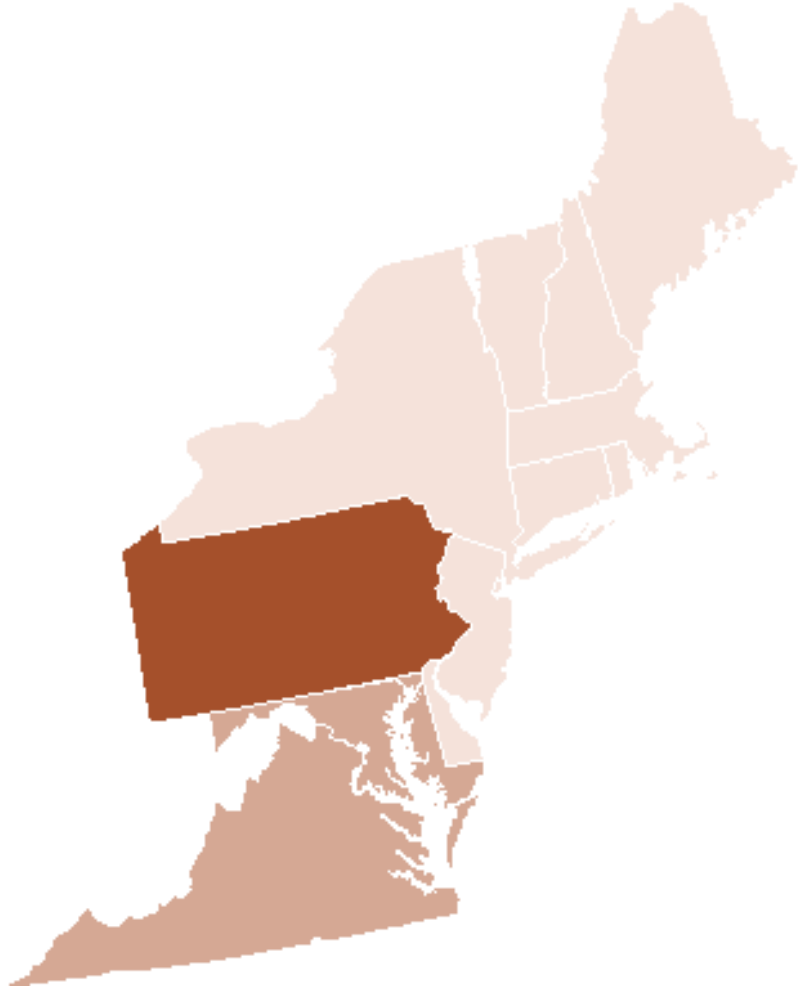
- Updates to Pipe Installation & PII
- AASHTO Construction Guide, X-5
- Next Steps – Fill Height Tables

Maryland:

- Updates to Pipe Installation & PII
- Cracks < 0.1"
- Next Steps – Fill Height Tables & Trench Details



Northeast Update



2024/2025 Key Spec Updates

Virginia:

- Updates to Pipe Installation & PII
- AASHTO Construction Guide, X-5
- Next Steps – Fill Height Tables

Maryland:

- Updates to Pipe Installation & PII
- Cracks < 0.1"
- Next Steps – Fill Height Tables & Trench Details

Pennsylvania:

- Manning's Roughness Coefficient
- Required Pipe Material Alternates



Pennsylvania Timeline

May, 2019



2019 – Began discussions on Corrugation Growth

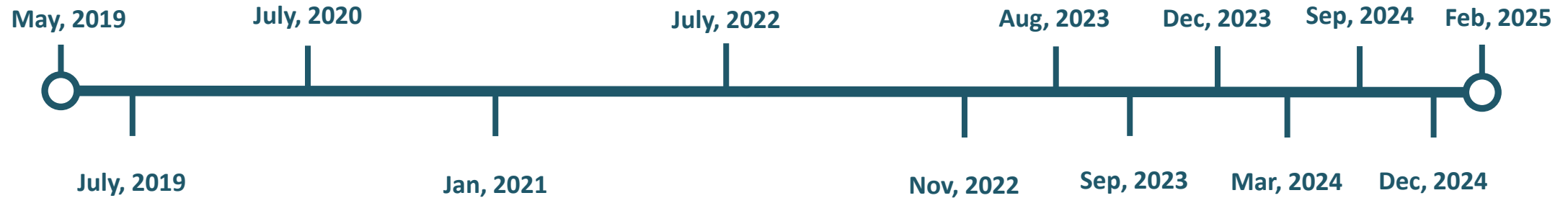
Tom Macioce, P.E. | Chief Bridge Engineer
PA Department of Transportation | Bureau of Project Delivery
Bridge Design and Technology Division
400 North Street, 7th Floor | Harrisburg, PA 17120
Phone: 717.783.7615
www.PennDOT.gov

Tom

I looked into this issue for you. I have attached the manning's values from Penndot Pub 584 (Drainage Manual) and PADEP ES Program Manual. The current values we use are consistent between these publications. As for the concerns below:

- This is the first I ever hear of corrugation growth on the interior liner of smooth lined HPDE pipe. HDPE Plastic pipe has proven to be low maintenance and durable compared to other materials. I have attached a spreadsheet that shows the effect of changing the manning's n value on an 18" pipe @ 1% slope. A change from 0.012 to 0.015 is roughly 2cfs. If 2cfs is "blowing up" the current system the designer should increase the diameter to the next size anyway. If you look at the DEP manning's chart (plastic lined channel) the acceptable manning's is 0.012-0.014, concrete is 0.012-0.016 so bottom line. It is negligible. (this is not a premium racing engine we are building where 1/32nd causes catastrophic failure, know what I mean!)

Pennsylvania Timeline



2019 – Began discussions on Corrugation Growth & Roughness Coefficient

2019 – Met w/ Hydraulics Eng Nick Vivian

2020 – Held Resilience Meeting w/ Nick Vivian & Tom Macioce

2021 – Tom Macioce presented on resilience & flooding for PS21

2022 – Nick Vivian Webinar for ACPA on Flooding Resilience

2022 – Nick Vivian told us the only way to remove Required Alternates

2023 – Signed on with Milliron-Goodman Lobbying Team

2023 – Met with PennDOT Top Brass

2023 – We provided Nick with the FHWA requirements for alternate materials

2024 – PA Senators Sent Letter to Secretary Carroll at our request

2024 – We provided Nick a list of States with limits to Alternates

2024 – PennDOT to change “Required Alternate” to “Recommended Alternates”

2025 – Nick Vivian leaves PennDOT

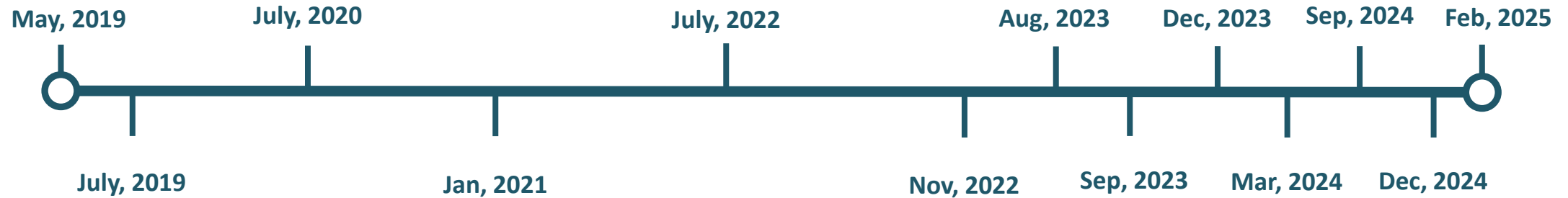
Alternative Pipe Material Options

- **Pennsylvania Department of Transportation:** 2-3 alternate materials **required** depending on project. DM13, Table 10.3.5
- **Virginia Department of Transportation:** Pay Items include Concrete Pipe, Storm Sewer Pipe, and Pipe. Contractor may choose material when engineer chooses Storm Sewer Pipe or Pipe items in design.
- **Ohio Department of Transportation:** The 611 Spec is technically a performance based specification, meaning the contractor can choose whatever material they want, but must pass stringent Post Installation Inspection criteria 30 days after installation.
- **West Virginia Department of Highways:** Pay Items are specific to the designed pipe material. No requirements for alternate pipe material options.
- **Maryland State Highway Administration:** No pipe material choice by contractor. Engineer calls out specific pipe material.
- **Delaware Department of Transportation:** No pipe material choice by contractor. Engineer calls out specific pipe material.
- **New Jersey Department of Transportation:** No pipe material choice by contractor. Engineer calls out specific pipe material.
- **New York Department of Transportation:** No pipe material choice by contractor. Engineer calls out specific pipe material. Once a bid is awarded, the contractor cannot change materials without proving complications with procuring the initial materials.

We write to encourage the Department to eliminate the outdated policy to require multiple materials for drainage pipes and culverts in the engineering and construction of highway projects.



Pennsylvania Timeline



2025 – Nick Vivian leaves PennDOT

- Parting gift was to change Manning's "n" and diminish "recommended alternate" language in new DM-2

Publication 13 (DM-2)

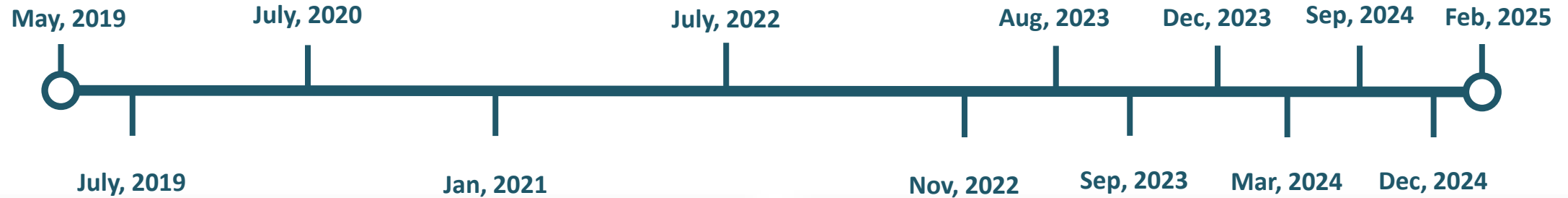
10.3.2.d - Alternate Pipe Designs

Pipe alternate designs are not required but may be included on projects. A summary of acceptable criteria for specifying alternate types of storm or culvert pipes based on the type of use is presented in **Exhibit 10.3.6**. When selecting pipe alternates, consider limitations such as: (1) unstable support, (2) high impact and concentrated loading, (3) high embankments, (4) limited clearance, (5) steep gradients, (6) high acidity to alkalinity of soils and water or other corrosive elements, (7) high erosive forces or (8) for other pertinent reasons. The criteria indicated in **Exhibit 10.3.6** are applicable to all sizes of pipes. The approximate expected service life has been specified as a primary design parameter in the alternate pipe selection criteria indicated in **Exhibit 10.3.6**. If a pipe alternate is proposed with dissimilar hydraulic properties (i.e., inside diameter and roughness), the Pipe Alternatives Worksheet in **Appendix L** must be completed and included in the Drainage Report.

Exhibit 10.3.7 – Roughness Coefficient "n" for Manning's Equation for Pavement Base Drains

Manning's "n"	Types of Pipe
0.010	Polyvinyl Chloride (PVC) with Smooth Inner Walls
0.012	Porous Cement Concrete Pipe
0.015	Corrugated Plastic Pipe; Helically Corrugated Circular Metal Pipe (4 in through 8 in); Corrugated High-Density Polyethylene (HDPE) with Smooth Inner Walls
0.024	Corrugated High-Density Polyethylene (HDPE) with Corrugated Inner Walls; Helically Corrugated Circular Metal Pipe (10 in)

Pennsylvania Timeline



**TABLE 10.3.5
ALTERNATE PIPE SELECTION CRITERIA BASED UPON
LOCATION OF DRAINAGE PIPES**

LOCATION OF DRAINAGE PIPES		TYPES OF PIPE		NO. OF ALTERNATES REQUIRED
Cross Drains Under Pavement, Shoulder, or Between Curbs; Parallel Storm Sewers Under Pavement or Between Curbs	Fill Height*	Interstate, Freeways, Expressways and Arterials	Collectors and Locals	2
	< 0.6 m (< 2 ft)	100 Years Life (Pipes 1, 2, 5 & 7)	50 Years Life (Pipes 1 & 3 thru 7) **	
	0.6 m - 4.6 m (2 ft - 15 ft) Pipe 10 limited to 0.6 m - 3.5 m (2 ft - 12 ft)	100 Years Life (Pipes 1, 2, 5, 7 & 10)	50 Years Life (Pipes 1 & 3 thru 8) **	
	> 4.6 m (> 15 ft)	100 Years Life (Pipes 1, 2, 5 & 7)	100 Years Life (Pipes 1, 2, 5 & 7)	
Parallel Storm Sewers Outside of Pavement or Curbs	50 Years Life (All pipes in LEGEND)			3
Cross Drains Outside of Pavement, Shoulder or Curbs (Cross Drains in Medians, etc.)	50 Years Life (All pipes in LEGEND except 9)			3
Combination Storm Sewer and Underdrain and Other Special Drainage System	100 Years Life*	Pipe 2, open joint, & perforated pipes 5 & 7		2
	50 Years Life**	Fill Height* < 0.6 m (2 ft)	Pipe 3, open joint, & perforated pipes 4, 5 & 7	3
		Fill Height* ≥ 0.6 m (2 ft)	Pipe 3, open joint, & perforated pipes 4, 5, 7 & 8	
Slope Pipes	50 Years Life (Pipes 4 thru 9)			2
Side Drains (Driveways, etc.)	25 Years Life (All pipes in LEGEND)			3

Separate tables are provided for fill height requirements. Utilize those tables for determination of minimum and maximum fill height requirements. Specified minimum fill heights are applicable to pipes under pavement or between curbs. Specified

Exhibit 10.3.6 – Alternate Pipe Selection Criteria Based Upon Location of Drainage Pipes

Location of Drainage Pipes		Types of Pipe	
Cross Drains Under Pavement, Shoulder, or Between Curbs and Parallel Storm Sewers Under Pavement or Between Curbs	Fill Height*	Interstate, Freeways, Expressways, and Arterials	Collectors and Locals
	< 2 ft	100 Years Life (Pipes 1, 2, 5 & 7)	50 Years Life (Pipes 1 & 3 thru 7)**
	2 ft - 15 ft Pipe 10 limited to 2 ft - 12 ft	100 Years Life (Pipes 1, 2, 5, 7 & 10)	50 Years Life (Pipes 1 & 3 thru 8)**
	> 15 ft	100 Years Life (Pipes 1, 2, 5 & 7)	100 Years Life (Pipes 1, 2, 5 & 7)
Parallel Storm Sewers Outside of Pavement or Curbs	50 Years Life (All pipes in LEGEND)		
Cross Drains Outside of Pavement, Shoulder or Curbs (Cross Drains in Medians, etc.)	50 Years Life (All pipes in LEGEND except 9)		
Combination Storm Sewer and Underdrain and Other Special Drainage System	100 Years Life*	Pipe 2, open joint, & perforated pipes 5 & 7	
	50 Years Life**	Fill Height* < 2 ft	Pipe 3, open joint, & perforated pipes 4, 5 & 7
		Fill Height* ≥ 2 ft	Pipe 3, open joint, & perforated pipes 4, 5, 7 & 8
Slope Pipes	50 Years Life (Pipes 4 thru 9)		
Side Drains (Driveways, etc.)	25 Years Life (All pipes in LEGEND)		

* Fill height is defined as the material from the top of pipe barrel to the riding surface, including the pavement structure.

Pennsylvania: Why it Matters

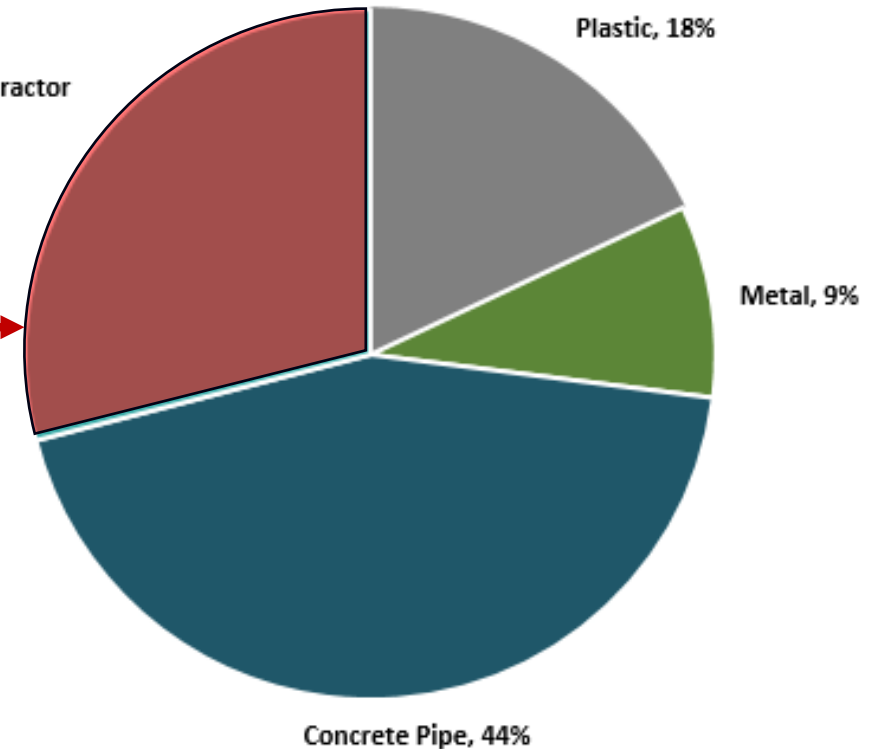
**TABLE 10.3.5
ALTERNATE PIPE SELECTION CRITERIA BASED UPON
LOCATION OF DRAINAGE PIPES**

LOCATION OF DRAINAGE PIPES		TYPES OF PIPE		NO. OF ALTERNATES REQUIRED
Cross Drains Under Pavement, Shoulder, or Between Curbs; Parallel Storm Sewers Under Pavement or Between Curbs	Fill Height*	Interstate, Freeways, Expressways and Arterials	Collectors and Locals	2
	< 0.6 m (< 2 ft)	100 Years Life (Pipes 1, 2, 5 & 7)	50 Years Life (Pipes 1 & 3 thru 7) **	
	0.6 m - 4.6 m (2 ft - 15 ft) Pipe 10 limited to 0.6 m - 3.5 m (2 ft - 12 ft)	100 Years Life (Pipes 1, 2, 5, 7 & 10)	50 Years Life (Pipes 1 & 3 thru 8) **	
	> 4.6 m (> 15 ft)	100 Years Life (Pipes 1, 2, 5 & 7)	100 Years Life (Pipes 1, 2, 5 & 7)	
Parallel Storm Sewers Outside of Pavement or Curbs	50 Years Life (All pipes in LEGEND)			3
Cross Drains Outside of Pavement, Shoulder or Curbs (Cross Drains in Medians, etc.)	50 Years Life (All pipes in LEGEND except 9)			3
Combination Storm Sewer and Underdrain and Other Special Drainage System	100 Years Life*	Pipe 2, open joint, & perforated pipes 5 & 7		2
	50 Years Life**	Fill Height* < 0.6 m (2 ft)	Pipe 3, open joint, & perforated pipes 4, 5 & 7	3
		Fill Height* ≥ 0.6 m (2 ft)	Pipe 3, open joint, & perforated pipes 4, 5, 7 & 8	
Slope Pipes	50 Years Life (Pipes 4 thru 9)			2
Side Drains (Driveways, etc.)	25 Years Life (All pipes in LEGEND)			3

Separate tables are provided for fill height requirements. Utilize those tables for determination of minimum and maximum fill height requirements. Specified minimum fill heights are applicable to pipes under pavement or between curbs. Specified maximum fill heights are applicable to all installations.

Northeast Regional Demand for Pipe Materials Highway & Bridge Construction Projects in 2024 (YTD)

Not Specified, Contractor Choice, 29%



Southeast Region Highlights

Al Hogan
Southeast Region
Engineer



CECIL CONNOR
GEORGIA CHAPTER
DIRECTOR

DOUG HOLDENER
FLORIDA CHAPTER
DIRECTOR



SOUTHEAST REGIONAL TOTALS (ALL STATES)

Activity (Goal/Tactic)	April	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	YTD	Goal	To Go
Technical Training (2-B)	9	22	10	12	11	11	22	12	6	16	8		139	50	89
University Training (2-E)	0	0	0	2	0	0	2	2	0	0	0		6	3	3
Technical Plant Tour (2-A)	7	5	6	4	1	2	2	1	0	1	8		37	30	7
Political Plant Tour (3-C)	1	0	0	1	0	1	0	0	0	0	0		3	10	(7)
Association Events (3-B)	13	8	10	10	10	11	11	11	14	19	18		135	3	132
Key (Spec.)Relationship Events (2 & 3)	37	38	27	72	26	55	24	27	9	25	35		375	215	160
Submitted Spec Comments (2 & 3)	4	5	7	11	11	4	6	2	7	2	0		59	15	44
Spec Meeting (2 & 3)	5	9	6	13	7	2	3	2	3	3	3		56	10	46
Adopted Spec Change (2 & 3)	0	0	3	1	2	2	2	0	6	2	0		18	3	15
Number Targets Impacted (1, 2, 3)	634	912	622	726	271	1778	1343	629	421	755	494		8585	2000	6,585

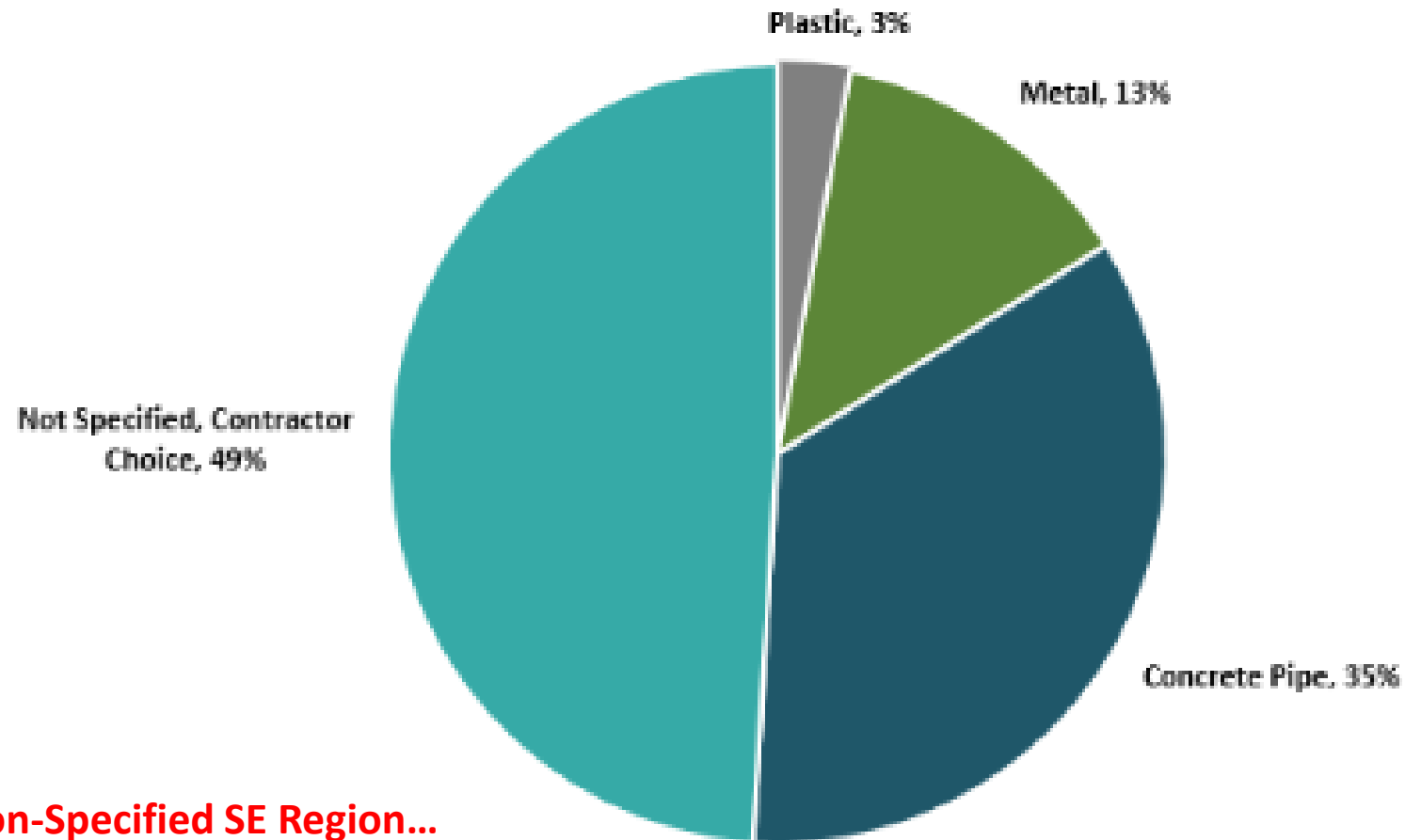
SHOOT

SE Region = 5 “Reporters” (Report info. For 9 In-Field Staff/TRE’s)

Highlights of AI Hogan Service Activity Work In Region:

- Technical Training – 48 Events – 2,259 attendees (Inc. 1 ACPA National Webinar)
- University Training – 3 Events w 195 attendees
- Participated in 8 Region or National Conferences
- Key Relationships (Spec. Focused) – 15 meetings w 171 contacts
- Assisted with Specification Markups – 20 locations across SE
- Days of travel for 2024/25 = 135 - 140 Days of Travel

Southeast Regional Demand for Pipe Materials Highway & Bridge Construction Projects in 2024 (YTD)



Specifics – Non-Specified SE Region...

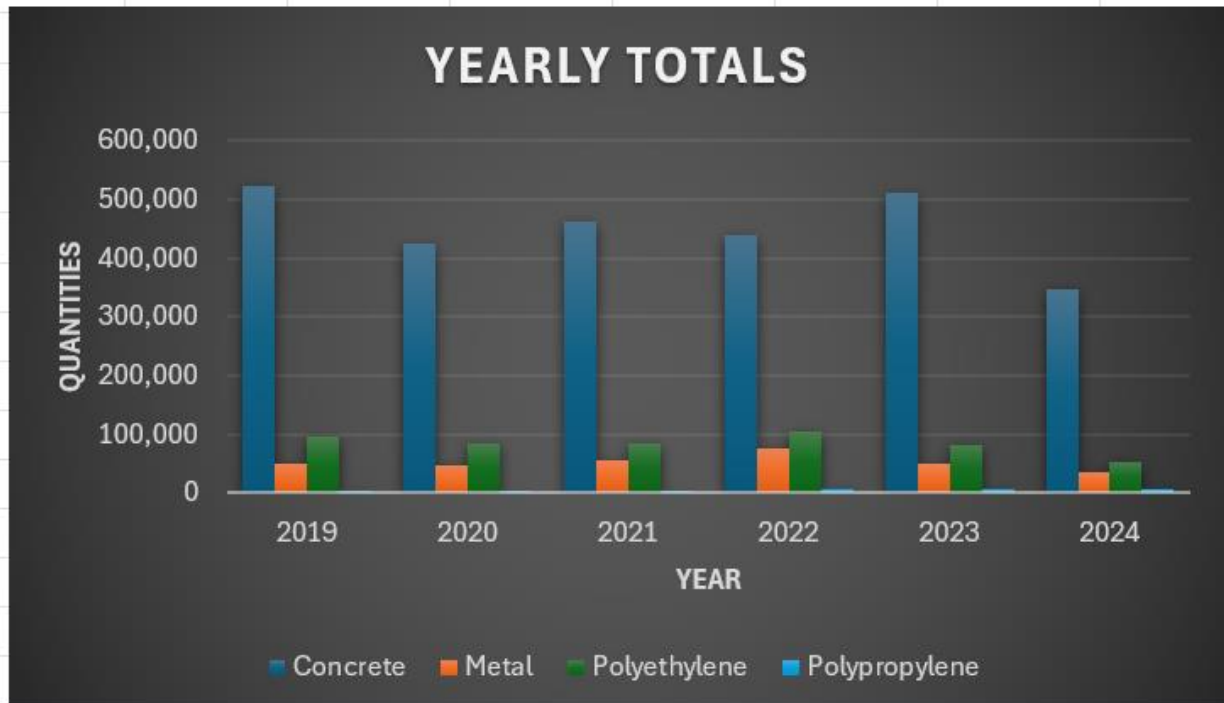
GDOT = 78% RCP – Trending Steady

NCDOT = 78 % RCP & Plastic 15% Trending Steady

FAVORABLE DOT SPECS ALL SE REGION EXCEPTION FL

ACTUAL PIPE USAGE (Market Share) - NCDOT

Pipe Material	2019	2020	2021	2022	2023	2024
Concrete	523,720	423,596	462,349	440,260	511,434	346,287
Metal	50,188	48,622	56,304	75,572	49,101	34,517
Polyethylene	96,265	83,487	85,548	104,277	81,985	51,983
Polypropylene	420	1,020	3,820	6,940	5,495	7,416



If my math is right in 2024 market share #'s in NC = RCP = 78%

CMP = 8 %

HDPE = 12%

HDPP = 2%

PIPE TRAINING – Delivered to EVERY DISTRICT IN TDOT, MDOT, SCDOT, NCDOT, Working on GDOT



PIPE – Installation/Inspection Training @ Every District 4.5 States

DOT & Contractor Association Promotion Partners



WEST REGION



State Associations



WEST REGIONAL TOTALS (ALL STATES)

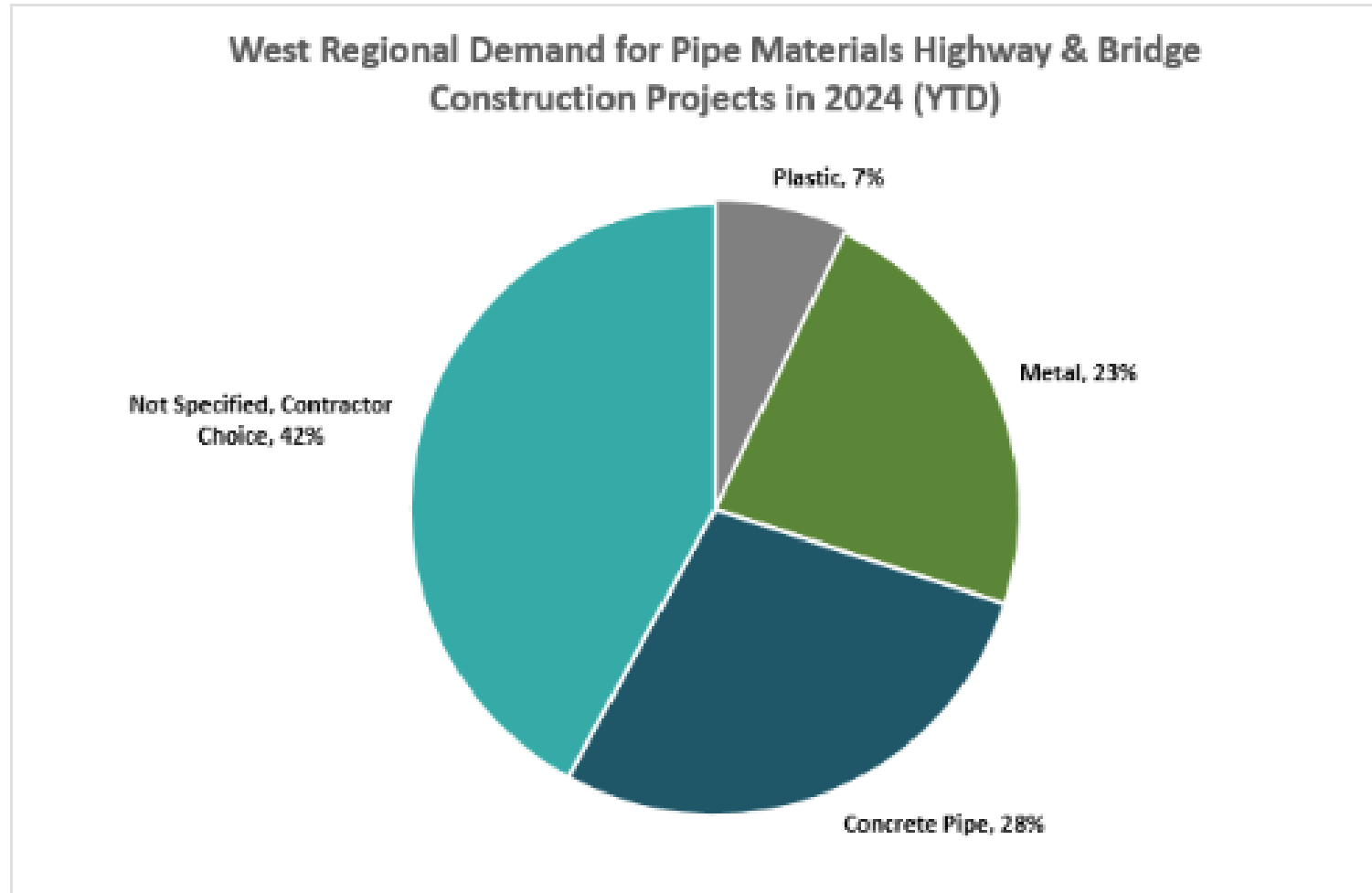
Activity (Goal/Tactic)	April	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	YTD	Goal	To Go
Technical Training (2-B)	4	8	9	4	4	3	3	7	2	4	3		51	50	1
University Training (2-E)	0	0	0	0	0	0	0	1	0	0	0		1	3	(2)
Technical Plant Tour (2-A)	1	2	3	1	1	2	4	1	0	1	1		17	30	(13)
Political Plant Tour (3-C)	0	0	0	0	0	2	0	0	0	0	0		2	10	(8)
Association Events (3-B)	26	16	14	12	9	12	5	6	7	13	11		131	3	128
Key (Spec.)Relationship Events(2 & 3)	23	37	31	47	39	14	18	7	35	13	5		269	215	54
Submitted Spec Comments (2 & 3)	6	2	1	4	0	4	5	4	2	0	2		30	15	15
Spec Meeting (2 & 3)	7	6	5	6	6	3	1	1	0	5	4		44	10	34
Adopted Spec Change (2 & 3)	0	0	0	1	1	3	0	2	0	0	0		7	3	4
Number Targets Impacted (1, 2, 3)	655	700	591	242	411	395	543	508	232	864	464		5605	2000	3,605

SE Region = 3 “Reporters” - Minimal TRE Support in West Region

RE Support Provided as Needed by Committee/Availability:

- Spec. related work strong...
- Producer member support is good
- Need more TRE Support
- Meeting soon to develop ACPA support plan to West Region

Market Share





Region Reports



Al Hogan, PE

Tryg Hoff, PE

Don McNutt, PE

Jennifer Harrell, PE