IOWA DEPARTMENT OF TRANSPORTATION

To Office:	Specification Committee	Date:	May 2, 2016			
Attention:		Ref. No.:	305			
From:	Thomas L. Reis, P.E.					
Office: Specifications						
Subject:	Subject: Agenda for May 12, 2016, Specification Committee Meeting					

The Specification Committee will meet on Thursday, May 12, 2016, at 9:00 a.m. in the NW Wing, 1st Floor Conference Room.

The agenda is as follows:

1. Article 2412.02, Concrete Bridge Decks.

The Office of Construction and Materials requests to add requirements for air content when placing by pump.

2. Article 2503.03, D, 2, Reinforced Concrete Pipe, Reinforced Concrete Arch Pipe, and Reinforced Concrete Elliptical Pipe.

Article 4149.03, Storm Sewer Pipe.

The Specifications Section requests to update jointing methods to match SUDAS.

3. Article 2525.03, E, 2, Traffic Signal and Pedestal Poles and Pedestrian Push Button Posts Article 2554.05, A, Pipe and Fittings.

The Specifications Section requests to add tightening methods to match SUDAS.

<u>4.</u> Section 2526, Construction Survey.

The Office of Construction and Materials requests to update the specification to reflect new monument preservation legislation and clarify submittal requirements at project completion.

5. Article 2554.04, A, Pipe and Fittings.

Article 2554.05, A, Pipe and Fittings.

The Specifications Section requests to add another option for bidding water service stubs to match SUDAS.

6. Article 2601.03, Placement of Erosion Control.

The Office of Design requests to add specifications for drop seeders and salt tolerant seeding and require slit seeders for rural seeding.

7. Article 4108.01, Fly Ash.

The Office of Construction and Materials requests to add specifications for natural pozzolans, a new supplementary cementitious material.

8. Article 4137.01, General Requirements (Asphalt Binder).

The Office of Construction and Materials requests to waive stress sensitivity limits for very stiff binders.

9. Article 4169.12, Perimeter and Slope Sediment Control Device.

The Office of Design requests to delete wattles and filter socks from the specifications.



Submitted by:	Greg Mulder		Office: Construction & Materials Item 1				
Submittal Date	e: May 2016		Proposed Effective	Date: October 2	016		
Article No.:	2412.02		Other:				
Title: Concre	te Bridge Decks						
Specification	Committee Action:						
Deferred:	Not Approved:	Approve	d Date:	Effective Date	:		
Specification	Committee Approved	Text:					
Comments:							
Specification S	Section Recommende	ed Text:					
2412.02, Mater	ials.						
	et requirements of Art		2, B, 3 for entrained air ue of 7.0% plus or minu		concrete is		
	uested Change: (Do i ERIALS.	not use ' <u>Tra</u>	ack Changes', or ' <u>Mark-U</u>	l <u>p'</u> . Use Strikeou	and Highlight.)		
	equirements of Article 240 Irget value of 7.0% +/-2.0		r entrained air content. Wh	ien concrete is pla	iced by pumping,		
Reason for Revision: Now testing for air content at last point of placement. Contractor is responsible for establishing correlation through the pump. This change will allow for a wider tolerance in air content, due to variability introduced with concrete pumping.							
New Bid Item Required (X one) Yes No X							
Bid Item Modi	fication Required (X	one)	Yes	No X			
Bid Item Obso	Bid Item Obsoletion Required (X one) Yes No X						
Comments:							
County or City Comments:							
Industry Comments: Discussed at IRMCA Technical Committee Meeting April 13, 2016.							



Submitted by: Tom Reis / Eric Johnsen			Office: Specifications	6	Item 2	
Submittal Date	: 2016.04.25		Proposed Effective	Date: Octob	per 18, 2016	
	2503.03, D, 2 ced Concrete Pipe, Re Pipe, and Reinforced C 4149.03 Sewer Pipe		Other:			
Specification 0	Committee Action:					
Deferred:	Not Approved:	Approve	d Date:	Effective [Date:	
Specification C	Committee Approved	Text:				
Comments:						
 Specification Section Recommended Text: 2503.03, D, 2, Reinforced Concrete Pipe, Reinforced Concrete Arch Pipe, and Reinforced Concrete Elliptical Pipe. Replace the Article: a. Use cold applied bituminous or rubber rope gasket jointing materials unless specified otherwise. 1) Apply joint material to entire tongue, or to top half of tongue and bottom half of groove, in sufficient quantity to fill the joint. Close the joint between pipes. 2) Fill remaining voids in the joint, both inside and outside of pipe, with joint material. Smooth the joint material on the inside of pipes 24 inches and larger. b. If a rubber O-ring or profile gasket is specified for RCP, coat the rubber gasket and joint with soap based lubricant immediately prior to closing the joint. c a. If wrapped pipe joint is specified, cComply with the contract documents Standard Road Plan SW-211 for pipe joint wrapping. Secure engineering fabric in place to prevent displacement while placing backfill material. d c. Place pipe such that joint openings on the outside or inside of the pipe do not exceed 1/8 inch at the bottom and 5/8 inch at the top. 						
4149.03, Storm	Sewer Pipe.					
Replace Articles A and B: A. Reinforced Concrete Pipe. 1. Comply with Section 2440 and ACTM C 70						
1. Comply with Section 2419 and AS						
2.	2. Minimum Class 2000D (Class III, Wall B).					
3.	materials, unless othe	erwise spe	old applied bituminous cified wrapped with eng complying with ASTM C	ineering fab	ric. If specified, use	

	 If specified, wrap exterior of eapprofile gasket complying with A 		engineering fabric	use rubber O-ring or					
B. Low Clearance Reinforced Concrete Pipe.									
	1. Comply with Section 2419 and either AASHTO M 206 (RCAP) or M 207 (RCEP).								
	2. Minimum Class 2000D (A-III or HE-III).								
	3. Use tTongue and groove joints jointing materials, unless spec								
	 If specified, wrap exterior of ea profile gasket complying with A 		engineering fabric	use rubber O-ring or					
	Article E: Jointing Material for Concrete A	pron.							
	 Bituminous Jointing Materia Use a cold-applied mastic sew manufacturer for the intended C 990. 	/er joint seali n							
	2. Rubber Rope Gasket Jointin Comply with ASTM C 990.	ig Material.							
	3. Rubber O-Ring or Profile Ga Comply with ASTM C 443 (for		M C 361 (for RCPI	2).					
Comments:									
Member's	Requested Change: <mark>(Do not use</mark> ' <u>T</u>	rack Changes	<u>',</u> or ' <u>Mark-Up'</u> . Use	Strikeout and Highlight.)					
Reason for Revision: To match SUDAS. Some storm sewer pipe jointing methods were obsolete. Wrapping pipe joints is now required.									
New Bid Item Required (X one) Yes No X									
Bid Item Modification Required (X one) Yes No X									
Bid Item Obsoletion Required (X one) Yes No X									
Comments:									
County or	City Comments:								
Industry C	omments:								



Submitted by: Tom Reis / Eric John	sen	Office: Specifications	3	Item 3			
Submittal Date: 2016.04.25	Submittal Date: 2016.04.25			ber 18, 2016			
Article No.:2525.03, E, 2Title:Traffic Signal and Pedestal PPedestrian Push Button PostsArticle No.:2554.05, ATitle:Pipe and Fittings	oles and	Other:					
Specification Committee Action:							
Deferred: Not Approved:	Approve	d Date:	Effective [Date:			
Specification Committee Approved	Text:						
Comments:							
 Specification Section Recommended Text: 2525.03, E, 2, Traffic Signal and Pedestal Poles and Pedestrian Push Button Posts. Replace the Article: a. Erect all poles and posts vertically under normal load. b. Securely bolt the bases to the cast-in-place concrete foundations using the procedures in Articles 2522.03, H, 2, a through h. 1) Mast Arm Poles: Provide footing type (A through F) as specified in the contract documents. Level by using two nuts on each anchor bolt or according to the manufacturer's recommendations. 2) Pedestal Poles: Level by using metal shims and one nut on each anchor bolt or according to the manufacturer's recommendations. 3) Pedestrian Push Button Posts: Weld the post to the base plate using a minimum 3/16 inch weld. Level by using two nuts on each bolt. c. Use of a torque wrench to verify that a torque at least equal to the computed verification torque, Tv, according to paragraph 6.9 of FHWA Guidelines for the Installation, Inspection, Maintenance, and Repair of Structural Supports for Highway Signs, Luminaires, and Traffic Signals, is required to additionally tighten the leveling nuts and the top nuts. An inability to achieve this torque shall be interpreted to indicate the threads have stripped and shall be reported to the Engineer. c d. After leveling the poles, use non-shrink grout or a rodent guard between the pole base and the foundation. When non-shrink grout is used, neatly finish exposed edges of grout to present a pleasing appearance, and place a weep hole in the grout. d e.Apply anti-seize compound to all mechanical fasteners on pole access doors. e f. Install pedestrian push button post caps with tamper-proof set screws per manufacturer's 							
4189.05, D, 2. Replace the Article: Anchor Bolts: Four 3/4 inch by 15 inch steel, hot dip galvanized anchor bolts complying with							
ASTM F 1554, Grade 36, with right angle bend at the bottom end, complete with all hardware							

required for installation.								
Comments: Should these tightening proced	Comments: Should these tightening procedures be used for highway lighting poles also?							
Member's Requested Change: (Do not use	' <u>Track Changes'</u> , o	r ' <u>Mark-Up'</u> . Use <mark>Strikeout</mark> and Highlight.)						
Reason for Revision: To match SUDAS. Prosignal poles.	eviously no tighten	ning requirements were given for traffic						
New Bid Item Required (X one)	Yes X	No						
Bid Item Modification Required (X one)	Yes	No X						
Bid Item Obsoletion Required (X one)	Yes	No X						
Comments:								
County or City Comments:								
Industry Comments:								

Submitted by: Greg	Submitted by: Greg Mulder / Kevin Merryman Office: Construction & Materials Item 4							
Submittal Date: 20		,	Proposed Effective Date: October 2016					
Section No.: 2526	;		Other:					
Title: Construction	Survey							
Specification Comm	nittee Action:		-					
Deferred: Not	Approved:	Approve	d Date:	Effective I	Date:			
Specification Comn	nittee Approved	Text:						
Comments:								
Specification Section 2526, Construction Replace the Sec	Survey.	ed Text:						
2526.01 DESCRIPT Perform survey for cons	-							
2526.02 MATERIAL None.	S.							
2526.03 SURVEY.								
licensed land original stakes the opinion of benchmarks, t Engineer's atte	surveyor. Do not ap s set by the Engine the Engineer, the C the cost of replacing ention for review pr	pply the pro- er. Refer to Contractor h g will be cha rior to stakin	nt preservation, under the visions of Article 1105.15 Article 1105.16 for require as destroyed or disturbed arged to the Contractor. Br g. Construction survey inc t limited to, the following it	to this work, e ments when any of the or ing design er cludes qualifie	except to preserve the AMG is utilized. If, in iginal survey stakes or rors discovered to the			
	nt Preservation existing monumen	ts as require	ed by Iowa Code.					
 4 2. Project Control. a. Primary Control Monuments. A primary control monument is a survey point the Contracting Authority establishes prior to project commencement. These are shown in the contract documents. The point will be established by placing a monument in the ground. b. Secondary Control Monuments. A secondary control monument is a survey point the Contractor establishes on grading or other projects specified in the plans, and preserves on all other projects. 1) The Engineer will provide monuments, similar to those the Department uses for GPS control. 2) Place secondary permanent horizontal control monuments, under the Engineer's direction, at locations likely to survive project construction and at intervals not to exceed 2640 feet. Place the monuments in the ground along the project corridor. Place at higher elevations along the corridor to provide a view of the immediate project topography and to provide for visible clear line of sight to the nearest secondary permanent control monument in either direction. Primary project monuments 1 to 4 inches below existing ground. Drive a metal fence post within 1 foot to mark their location. 4) Carefully determine project coordinates relative to the nearest primary project control monument using project coordinate values the Engineer has provided. Ensure the resulting 								

error radius of the secondary monument does not exceed 0.10 feet ±2 ppm relative to the primary control. Provide the Engineer with all the field data of the survey. The data may be either unedited printed or electronic formatted field data, or both. Provide the Engineer with an ASCII comma delineated file of the coordinates formatted as (Point Number, Northing, Easting, Elevation, Point Description, Feature).

- 5) Perform an independent traverse check between the secondary control monuments by observing distance and angular measurements or by use of GPS. Provide the Engineer with all the field data for the traverse check. The data may be either unedited printed or electronic file, or both. Provide the Engineer with a diagram indicating horizontal ground distances to nearest 0.01 foot and angles to at least the nearest 10 seconds between each secondary control monument. Ensure inverses between the coordinate pairs as determined in the previous paragraph do not exceed 0.10 feet of the direct measurements.
- 6) Replace secondary control monuments disturbed during construction activities using procedures outlined above, at no additional cost to the Contracting Authority.

c. Durable Physical Objects.

- 1) Using measurements to the nearest 0.10 foot, reference each control monument to a minimum of three durable physical objects located 20 to 100 feet away from the monument. Durable physical objects could include trees, poles, fence posts, station marks in new roadway pavement, or metal fence posts.
- 2) Provide the Engineer with either a printed or electronic reference image (for example JPEG, TIFF, etc), or both, including each reference and project coordinate.

d c. Benchmarks.

- Establish permanent vertical control benchmarks at all bridges and reinforced concrete box culverts within the project. Use an Iowa DOT brass plug on bridge barrier rail or headwall of reinforced concrete box culvert to indicate the benchmark. If the Engineer approves, a sawn "X" on bridge barrier rail or headwall of reinforced concrete box culvert may be used.
- 2) Transfer all benchmark elevations from construction plan benchmarks to the permanent benchmarks using the three-wire method or by trigonometric leveling. Use temporary benchmarks of reasonable stability to preserve the plan benchmarks.
- 3) Provide the Engineer with all field benchmark elevation data. The data may be either unedited printed or electronic formatted, or both. Provide the Engineer with the project x and y coordinates of all benchmarks along with an ASCII comma delineated file of the coordinates formatted as (Point Number, Northing, Easting, Elevation, Point Description, Feature).
- **4 3)** Ensure benchmark level loops do not exceed an error of 0.05 feet times the square root of the loop's length in miles. Distribute the error equally along the loop on all intermediate traverse/benchmark points.

2 3. Grading.

a. General.

- 1) Survey right-of-way line between permanent right-of-way corners at 100 foot intervals, or less if needed, including borrows, temporary easements, and right of entry. Mark these points by placement of a metal pin or wood hub, flat, and lath at the same location as the slope stakes. Clearly mark the flat with the station number, distance from centerline, and elevation (cut or fill) to subgrade.
- 2) Take original and final elevations of all borrows. Provide original and final graphical cross sections at 100 foot intervals, or less if needed digital terrain model (DTM) in LandXML format, suitable for use by the Engineer to calculate excavation quantities.
- 3) Set bridge berm slope stakes to establish all transitions, including the face of the berm. Set finish grade stakes (blue tops) on all roadway shoulder lines and roadway centerlines to project down the face of the bridge berm at the top, face of berm bench, and toe.
- 4) When Class 12 excavation is an item, take cross section elevations at 100 foot intervals, or less if needed, and plot cross sections provide original and final DTM in LandXML format for use by the Engineer to calculate the excavation quantities.
- 5) Use a lath to locate, on each side of roadway at the right-of-way line, agricultural drain tile shown in the contract documents. Clearly mark lath to show station location, distance from centerline, tile size and type, and flowline elevation.

b. Areas Constructed Without AMG.

 Set slope stakes at 100 foot intervals, or less if needed, for embankment and excavation work including roadway, channel changes, and borrow areas. Interpolations may be necessary to match cross-sections. Set stakes at toe of foreslope or top of backslope, or both. Mark slope stakes with a flat and lath. Clearly mark flat with station location, distance, slope, and cut or fill information.

- 2) Set grade check stakes at 100 foot intervals for bottoms of subgrade treatments. Set stakes on centerline for two-lane roads and in median for four-lane roads. Mark grade check stakes with a lath. Clearly mark lath with station location and cut or fill information.
- 3) Set finish grade stakes (blue tops) at 100 foot intervals, or less if needed. Set blue tops at each shoulder line and each point where there is a change in cross slope. Mark blue tops with a wood hub and stake chaser or similar type tassel.

c. Areas Constructed With AMG.

- Establish elevation of secondary control points using differential leveling from project benchmarks, forming closed loops. Provide a copy of new control point information to Engineer prior to construction work. Contractor is responsible for errors resulting from their efforts. Correct deficiencies to the satisfaction of the Engineer at no additional cost to Contracting Authority.
- 2) Set hubs at top of finished subgrade at hinge points on cross section at 1000 foot intervals on mainline and at least two cross sections on side roads and ramps. Establish these hubs, using means other than the machine guidance surface (such as plan typicals and cross sections), for use by Engineer to check accuracy of construction.
- 3) Provide grade stakes at critical transition points such as, but not limited to, PC's, PT's, super elevation points, and other critical points required for construction of drainage and roadway structures.

34. Bridges.

- a. Mark locations and elevations with metal pin or tack in a wood hub, flat, and lath. Clearly mark flat with the pier/abutment station location, design number, and offset distance from centerline of the approach roadway.
- b. Establish a minimum of three temporary benchmarks.
- **c.** Mark location of test pile with a wood hub.
- **d.** Perform an independent check of the above stakes. Independent check shall be performed by a second survey crew using their own calculations and equipment entries for staking bridge. Results and staking layout shall be sent to the Engineer prior to starting structure construction.
- Submit elevations of all completed substructure beam seats to the Engineer for review prior to installation of bearings and superstructure elements.
- f. Take elevations of beams as erected. Develop proposed final deck grades for review by the Engineer on an Excel spreadsheet format. Provide proposed final deck grades to the Engineer for determination of required deck grade adjustments and approval of final deck grades for deck construction. Locations for determining beam elevations are to be according to the plans.
- g. Provide the Engineer with a copy of the staking diagram prior to commencing work.

4 5. Reinforced Concrete Box Culverts.

- a. Mark locations and elevations with metal pin or tack in a wood hub, flat, and lath. Clearly mark the flat with the station location, design number, cut/fill elevation, and offset distance from the centerline of the culvert and back of parapet.
- **b.** Perform an independent check of the above stakes.
- c. Provide the Engineer with a copy of the staking diagram prior to commencing work.
- **d.** Report to the Engineer questionable flow lines and alignments that do not match existing drainage.

5 6. Pipe Culverts.

- **a.** Mark locations and elevations with metal pin or a wood hub, flat, and lath. Clearly mark the flat with the station location, cut/fill elevation, and offset distance to both ends or centerline of pipe.
- **b.** Report to the Engineer questionable flow lines and alignments that do not match existing drainage.

6 7. Sanitary and Storm Sewers.

Mark locations and elevations with metal pin or tack in a wood hub, flat, and lath. Clearly mark the flat with the station location, pipe number, cut/fill elevation, and offset distance to centerline of pipe.

78. Water Mains.

Mark locations and elevations with metal pin or tack in a wood hub, flat, and lath. Clearly mark the flat with the station location, pipe number, cut/fill elevation, and offset distance to centerline of pipe.

8 9. Intakes and Utility Accesses.

Mark locations and elevations with metal pin or tack in a wood hub, flat, and lath. Clearly mark the flat with the station location, intake or utility access number, cut/fill elevation (including bottom of well and form grade), and offset distance to the Station Location.

9 10. Pavements (PCC & HMA) and Overlays (PCC).

- a. General.
 - 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, and other locations necessary to characterize existing profile and cross slope. Obtain elevations at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins.
 - 2) For PCC and HMA pavements, Wwhen a new profile grade is not included in the contract documents:
 - a) Obtain elevations of the existing pavement and bridges at 100 foot intervals on straight and level sections and 50 foot intervals on horizontal and vertical curves.
 - b) Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement or bridge. Design a smooth profile grade line to provide the required pavement or shoulder thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins.
 - 3) For PCC overlays, when a new profile grade is not included in the contract documents:
 - a) Obtain elevations of existing pavement at centerline and both pavement edges for bonded overlays and projects including mainline stress relief course and/or pavement scarification.
 - b) Obtain elevations of existing pavement at centerline, quarter points, and both pavement edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included.
 - c) Obtain elevations at maximum 50 foot intervals on straight and level sections and at maximum 25 foot intervals on horizontal and vertical curves.
 - d) Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement or bridge. Design a smooth profile grade line to provide the required pavement or shoulder thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins.

b. Areas Constructed Without AMG.

Mark locations and elevations with metal pin or tack in wood hub (only tack one side), flat, and lath. Mark elevations on both sides of pavement at 50 foot intervals on straight and level sections and 25 foot intervals on horizontal and vertical curves. Clearly mark flat with station location, cut or fill information, and offset distance to edge of pavement. Include pavement cross slope information in superelevated curves.

c. Areas Constructed With AMG.

- When total stations are used for the AMG paving system, set additional control points at maximum 500 foot intervals on each side of pavement. Furnish x,y,z coordinates and station offset information for each point.
- 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points along superelevated curve transitions and at station equation locations. Additional paving hubs will not be required for mainline pavement.

10. HMA Overlays

- a. Reference and preserve existing control points located at each Point of Intersection (P.I.).
- b. Obtain the Engineer's approval for the method used to reference points.
- c. Reset Control Points after the work is complete.

11. PCC Overlays

a. General.

1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, and other locations necessary to characterize existing profile and cross slope. Obtain elevations at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavement

	to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins.
	2) When a new profile grade is not included in the contract documents:
	 a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, a, 1. b) Obtain elevations of existing pavement at centerline and both pavement edges for
	bonded overlays and projects including mainline stress relief course and/or pavement scarification.
	c) Obtain elevations of existing pavement at centerline, quarter points, and both pavement
	edges for unbonded overlays and whitetopping projects when a stress relief course
	and/or pavement scarification are not included.
	d) Obtain elevations at maximum 50 foot intervals on straight and level sections and at maximum 25 foot intervals on horizontal and vertical curves.
	e) Using these elevations, design a profile grade and cross slopes to provide a smooth
	transition, free of bumps and dips, from the new pavement to the existing pavement or
	bridge. Design a smooth profile grade line to provide the required pavement or shoulder thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins.
	 Beference and preserve existing control points located at each Point of Intersection (P.I.). Obtain Engineer's approval for method used to reference points.
	 6) Reset Control Points after work is complete.
b-	Areas Constructed Without AMG:
	Mark locations and elevations with metal pin or tack in wood hub (only tack one side), flat, and
	lath. Mark elevations on both sides of pavement at 50 foot intervals on straight and level sections and 25 foot intervals on horizontal and vertical curves. Clearly mark flat with station location, cut
	or fill information, and offset distance to edge of pavement. Include pavement cross slope
	information in superelevated curves.
C.	Areas Constructed With AMG:
	 When total stations are used for the AMG paving system, set additional control points at maximum 500 foot intervals on each side of pavement. Furnish x,y,z coordinates and station offset information for each point.
	2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points along superelevated curve transitions and at station equation locations. Additional paving hubs will not be required for mainline pavement.
12 11	Structural Walls.
a.	Survey requirements for structural walls includes the following work types:
•••	1) Mechanically Stabilized Earth (MSE) Walls.
	2) Cast in Place (CIP) Retaining Walls.
	3) Soil Nail Walls.
	4) Tie Back Walls.
	5) Noise Walls.
	6) Modular Block Retaining Walls.
	7) Segmental Retaining Walls.
b.	Mark locations and elevations with a metal pin or a wood hub, flat, and lath. Clearly mark the flat with the station location, cut/fill elevation, and offset distance to face of wall.
docume comple to the p Engine the Sta	the method used to preserve project control to the Engineer for approval. Format the survey work entation in a manner acceptable to the Engineer. Ensure monument preservation work is ted by a Professional Land Surveyor licensed in the State of Iowa in responsible charge, according provisions of Iowa Code 542B. Ensure all other survey work is completed by a Professional er licensed in the State of Iowa in responsible charge or a Professional Land Surveyor licensed in te of Iowa in responsible charge, according to the provisions of Iowa Code 542B. Submit a resume Engineer identifying the field survey personnel and their capabilities to perform the intended ments.

- **C.** Obtain the Engineer's approval for the method of determining alignments and elevations and the method of preserving control points. This approval does not act to relieve the Contractor of the responsibility for the correctness of the survey work. Do not use plan cross-sections for vertical or horizontal control.
- D. The Engineer will provide bench mark elevations, right of way corners, and reference control points on the original survey as shown in the contract documents. A GeoPak alignment will be provided if available.

- E D. Check tie-ins with existing roadways for correctness of alignment prior to construction staking.
- **F.** When survey work is done under traffic, detail sheets in the contract documents will establish the required signing.
- **G E.** Establish benchmarks in the adjacent area before installing settlement plates in accordance with Article 2526.03, A, 4 2, d c.
 - 1. Obtain Engineer's approval for method of determining alignments and elevations and the method of preserving control points. This approval does not relieve Contractor of the responsibility for correctness of survey work.
 - Do not use plan cross sections for vertical or horizontal control. The Engineer will locate and determine elevations of settlement plates.
- H. Replace land corners and permanent reference markers unless stated otherwise in the contract documents.
- I F. All survey work documentation becomes the property of the Contracting Authority. Assemble required documentation into a single electronic package upon completion of the project and furnish to the Engineer. The work of this specification will be considered finished complete when the following documentation is furnished to and accepted by the Engineer.:
 - 1. ASCII comma delineated file of the coordinates formatted as (Point Number, Northing, Easting, Elevation, Point Description, Feature). Identify coordinate system used.
 - 2. Monument preservation certificates.
 - 3. Secondary control monument coordinates including traverse check.
 - 4. Reference monument drawings.
 - 5. Benchmark coordinates.
 - 6. Required DTMs.
 - 7. Bridge and box culvert staking diagrams.
 - 8. Final profile grades.
- **J G**. For the purpose of subcontracting, this item will be considered a specialty item.

2526.04 METHOD OF MEASUREMENT.

None. Lump sum item.

2526.05 BASIS OF PAYMENT.

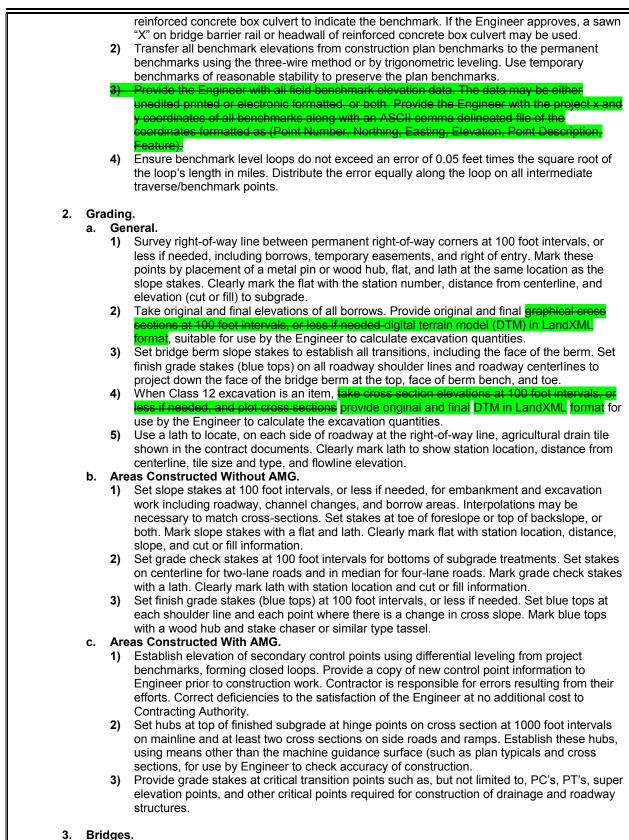
- A. Payment for Construction Survey will be paid for at the lump sum contract price.
- **B.** Payment is full compensation for the survey work required for the project as let, including any interpolations that may be necessary between cross-section and field staking.
- C. Payment for revisions after the letting will be paid for according to Article 1109.03, B.

Comments:

Member's Requested Change: (Do not use '<u>Track Changes'</u>, or '<u>Mark-Up'</u>. Use Strikeout and Highlight.) Section 2526. Construction Survey

2526.01 DESCRIPTION. Perform survey for construction projects.

2526.02 None.	MAT	ERIALS.			
2526.03	SUR	VEY.			
А.		all survey necessary for construction of the project before work begins in the area. Comply with			
	lowa lic preserv utilized survey discove	ble lowa Code requirements including monument preservation under the direct supervision of an censed land surveyor Do not apply the provisions of Article 1105.15 to this work, except to ve the original stakes set by the Engineer. Refer to Article 1105.16 for requirements when AMG is . If, in the opinion of the Engineer, the Contractor has destroyed or disturbed any of the original stakes or benchmarks, the cost of replacing will be charged to the Contractor. Bring design errors ered to the Engineer's attention for review prior to staking. Construction survey includes qualified nel, equipment, and supplies required for, but not limited to, the following items:			
		onument Preservation eserve existing monuments as required by Iowa Code.			
	 Project Control. Primary Control Monuments. A primary control monument is a survey point the Contracting Authority establishes prior to project commencement. These are shown in the contract documents. The point will be established by placing a monument in the ground. Secondary Control Monuments. A secondary control monument is a survey point the Contractor establishes on grading or projects specified in the plans, and preserves on all other projects. The Engineer will provide monuments, similar to those the Department uses for GPS control. Place secondary permanent horizontal control monuments, under the Engineer's dire at locations likely to survive project construction and at intervals not to exceed 2640 for Place the monuments in the ground along the project corridor. Place at higher elevation 				
		 along the corridor to provide a view of the immediate project topography and to provide for visible clear line of sight to the nearest secondary permanent control monument in either direction. Primary project monuments may be substituted if appropriate. 3) Plant secondary control monuments 1 to 4 inches below existing ground. Drive a metal fence post within 1 foot to mark their location. 4) Carefully determine project coordinates relative to the nearest primary project control monument using project coordinate values the Engineer has provided. Ensure the resulting error radius of the secondary monument does not exceed 0.10 feet ±2 ppm relative to the primary control. Provide the Engineer with all the field data of the survey. The data may be 			
		 either unedited printed or electronic formatted field data, or both. Provide the Engineer with an ASCII comma delineated file of the coordinates formatted as (Point Number, Northing, Easting, Elevation, Point Description, Feature). 5) Perform an independent traverse check between the secondary control monuments by observing distance and angular measurements or by use of GPS. Provide the Engineer with all the field data for the traverse check. The data may be either unedited printed or electronic file, or both. 			
	C.	 distances to nearest 0.01 foot and angles to at least the nearest 10 seconds between each secondary control monument. Ensure inverses between the coordinate pairs as determined in the previous paragraph do not exceed 0.10 feet of the direct measurements. 6) Replace secondary control monuments disturbed during construction activities using procedures outlined above, at no additional cost to the Contracting Authority. Durable Physical Objects. 1) Using measurements to the nearest 0.10 foot, reference each control monument to a 			
		 minimum of three durable physical objects located 20 to 100 feet away from the monument. Durable physical objects could include trees, poles, fence posts, station marks in new roadway pavement, or metal fence posts. 2) Provide the Engineer with either a printed or electronic reference image (for example JPEG, The Provide the Engineer with either a printed or electronic reference image (for example JPEG, The Provide the Engineer end of the Provide the Engineer end of the printed or electronic reference image (for example JPEG, The Provide the Engineer end of the Provide the Engineer end of the printed or electronic reference image (for example JPEG, The Provide the Engineer end of the printed o			
	d.	TIFF, etc), or both, including each reference and project coordinate. Benchmarks.			
		 Establish permanent vertical control benchmarks at all bridges and reinforced concrete box culverts within the project. Use an Iowa DOT brass plug on bridge barrier rail or headwall of 			



a. Mark locations and elevations with metal pin or tack in a wood hub, flat, and lath. Clearly mark flat with the pier/abutment station location, design number, and offset distance from centerline of

the approach roadway.

- b. Establish a minimum of three temporary benchmarks.
- c. Mark location of test pile with a wood hub.
- **d.** Perform an independent check of the above stakes. Independent check shall be performed by a second survey crew using their own calculations and equipment entries for staking bridge. Results and staking layout shall be sent to the Engineer prior to starting structure construction.
- Submit elevations of all completed substructure beam seats to the Engineer for review prior to installation of bearings and superstructure elements.
- f. Take elevations of beams as erected. Develop proposed final deck grades for review by the Engineer on an Excel spreadsheet format. Provide proposed final deck grades to the Engineer for determination of required deck grade adjustments and approval of final deck grades for deck construction. Locations for determining beam elevations are to be according to the plans.
- g. Provide the Engineer with a copy of the staking diagram prior to commencing work.

4. Reinforced Concrete Box Culverts.

- a. Mark locations and elevations with metal pin or tack in a wood hub, flat, and lath. Clearly mark the flat with the station location, design number, cut/fill elevation, and offset distance from the centerline of the culvert and back of parapet.
- b. Perform an independent check of the above stakes.
- c. Provide the Engineer with a copy of the staking diagram prior to commencing work.
- **d.** Report to the Engineer questionable flow lines and alignments that do not match existing drainage.

5. Pipe Culverts.

- **a.** Mark locations and elevations with metal pin or a wood hub, flat, and lath. Clearly mark the flat with the station location, cut/fill elevation, and offset distance to both ends or centerline of pipe.
- **b.** Report to the Engineer questionable flow lines and alignments that do not match existing drainage.

6. Sanitary and Storm Sewers.

Mark locations and elevations with metal pin or tack in a wood hub, flat, and lath. Clearly mark the flat with the station location, pipe number, cut/fill elevation, and offset distance to centerline of pipe.

7. Water Mains.

Mark locations and elevations with metal pin or tack in a wood hub, flat, and lath. Clearly mark the flat with the station location, pipe number, cut/fill elevation, and offset distance to centerline of pipe.

8. Intakes and Utility Accesses.

Mark locations and elevations with metal pin or tack in a wood hub, flat, and lath. Clearly mark the flat with the station location, intake or utility access number, cut/fill elevation (including bottom of well and form grade), and offset distance to the Station Location.

9. Pavements (PCC & HMA) and Overlays (PCC).

a. General.

- 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, and other locations necessary to characterize existing profile and cross slope. Obtain elevations at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins.
- 2) For PCC and HMA pavements, Wwhen a new profile grade is not included in the contract documents:
 - a) Obtain elevations of the existing pavement and bridges at 100 foot intervals on straight and level sections and 50 foot intervals on horizontal and vertical curves.
 - b) Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement or bridge. Design a smooth profile grade line to provide the required pavement or shoulder thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins.
- For PCC overlays, Wwhen a new profile grade is not included in the contract documents:
 a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, a, 1.

 a. Reference and preserve existing control points located at each Point of Intersection (P.I.). b. Obtain the Engineer's approval for the method used to reference points. c. Reset Control Points after the work is complete. PCC Overlays a. General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, and other locations necessary to characterize existing profile and cross slope. Obtain elevations at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of existing pavement at centerline and both pavement edges for bonded overlays and projects including mainline stress relief course and/or pavement edges for bonded overlays and projects included. 6) Obtain elevations of existing pavement at centerline, quarter points, and both pavement edges for bonded overlays and whitetopping projects when a stress relief course and/or pavement edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations of existing an on tincluded. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and at maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement or bridge. Design a smooth profile grade line to provide the required pavement or bridge. Design a smooth profile grade line to provide the required pavement or should thickness a	 bonded overlays and projects including mainline stress relief course and/or pave scarification. Cottain elevations of existing pavement at centerline, quarter points, and both p edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. Cottain elevations at maximum 50 foot intervals on straight and level sections a maximum 25 foot intervals on horizontal and vertical curves. Using these elevations, design a profile grade and cross slopes to provide a sm transition, free of bumps and dips, from the new pavement to the existing paver bridge. Design a smooth profile grade line to provide the required paverent or thickness as detailed in the contract documents. Notify the Engineer when a sm profile connot be provided. Submit final elevations to the Engineer before pavin begins! Areas Constructed Without AMG. Mark locations and elevations with metal pin or tack in wood hub (only tack one side), fits lath. Mark elevations on both sides of pavement at 50 foot intervals on straight and level and 25 foot intervals on horizontal and vertical curves. Clearly mark flat with station location in superelevated curves. Areas Constructed With AMG. When total stations are used for the AMG paving system, set additional control poin maximum 500 foot intervals on each side of pavement. Furnish x, y, z coordinates an offset information for each point. Set paving hubs with cut or fill to finish pavement elevation tat A, B, C, and D points superelevated curve transitions and at station equation locations. Additional paving not be required for mainline pavement. HMA Overlays Reference and preserve existing control points located at each Point of Intervals control point maximum 500 foot intervals are appreserve existing control points located at each Point of Intervals and the control foot secase slope. Obtain		
 bonded overlays and projects including mainline stress relief course and/or pavement scarification c) Obtain elevations of existing pavement at centerline, quarter points, and both pavement edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and at maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross stopes to provide a smooth transition, rice of bumps and dips, from the new pavement to the existing pavement or should thickness as detailed in the contract documents. Notify the Engineer before paving begins. b. Areas Constructed Without AMG. Mark locations and elevations with metal pin or tack in wood hub (only tack one side), flat, and 125 foot intervals on both sides of pavement at 50 foot intervals on straight and level sanction, cu or fill information, and offset distance to edge of pavement. Include pavement cross slope information in superelevated curves. c. Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control points at maximum 500 foot intervals on each side of pavement. Furnish x,y.z coordinates and statio offset information for each point. 2) Set paving hubs with cut or fill to finish pavement elevation total paving hubs w on the required preverse existing pavement. HMA Overlays Reference and preserve existing control points located at each. Point of Intersection (P.1.). Obtain the Engineer's papeval for the method used to reference points. POC overlays Reference and preserve existing control points located at each. Point of Intersection (P.1.). Obtain the Engineer's paproval for the method used to reference points. POC	 bonded overlays and projects including mainline stress relief course and/or paves scarification. (c) Obtain elevations of existing pavement at centerline, quarter points, and both p edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. (d) Obtain elevations at maximum 50 foot intervals on straight and level sections a maximum 25 foot intervals on horizontal and vertical curves. (e) Using these elevations, design a profile grade and cross slopes to provide a sm transition, free of bumps and dips, from the new pavement to the existing paver pridge. Design a smooth profile grade line to provide the required pavement or thickness as detailed in the contract documents. Notify the Engineer when a sm profile canot be provided. Submit final elevations to the Engineer when a sm profile canot be provided. Submit final elevations to the Engineer when a sm profile canot be provided. Submit final elevations to the traditional devel and 25 foot intervals on horizontal and vertical curves. Clearly mark flat with station locat or fill information in superelevated curves. C. Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control poin maximum 500 foot intervals on each side of pavement. Include pavement cross slop information for each point. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points superelevated curve transitions and at station equation locations. Additional paving not be required for mainline pavement and bridges at centerline, edge of pavement of the assetting experiment of the assetting experiment of the excited tradition for each point. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points superelevated curve transitions and at station equation locations. Additional paving not be required for mainline pavement		b) Obtain elevations of existing payement at centerline and both payement edges for
 c) Obtain elevations of existing pavement at centerline, quarter points, and both pavement edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scriftcation are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and at maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade ind cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement or should thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer when a smooth profile continuers. Clearly mark flat with station location, at o for intervals on horizontal and vertical curves. Clearly mark flat with station location, at or fill information in superlevated curves. c. Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control points at maximum 500 foot intervals on each side of pavement. Furnish x, yz coordinates and salor of the adving by any characterize available with curves. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points along superelevated curve transitions and at station equation location, at the equired pavement. HMA Overlays B. Reference and preserve existing control-points-located at each Point of Intersection (PLI). D. Obtain elevatione of adjacent pavement and bridges at centerline, edge	 cantification. c) Obtain elevations of existing pavement at centerline, quarter points, and both p edges for unbonded overlays and whitetopping projects when a stress relief cor and/or pavement scanfication are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections at maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a sm transition, free of bumps and dips, from the new pavement to the existing paver bridge. Design a smooth profile grade line to provide the required pavement or thickness as detailed in the contract documents. Notify the Engineer when a sm profile cannot be provided. Submit final elevations to the Engineer before pavin bedins. b. Areas Constructed Without AMG. Mark locations and elevations with metal pin or tack in wood hub (only tack one side), fit lath. Mark elevations on both sides of pavement at 50 foot intervals on straight and level and 25 foot intervals on horbicance to edge of pavement. Include pavement cross slop information in superelevated curves. c. Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control poin maximum 500 foot intervals on each side of pavement. Furnish x, y, z coordinates an offset information for each point. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points superelevated curve tarsitions and at station equation locations. Additional paving not be required for mainline pavement. e) Reference and preserve existing control points located at each Point of Intersection (PL, Do-Obtain elevations of adjacent pavement and bridges at centerline, edge of pavemer plate locations necessary to characterize existing profile and cross slope. Obtain all at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade		
 Clotain elevations of existing pavement at centerline, quarter points, and both pavement scarification are not included. Clotain elevations at maximum 50 foot intervals on straight and level sections and at maximum 50 foot intervals on straight and level sections and at maximum 50 foot intervals on horizontal and vertical curves. Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of burns and dips, from the new pavement to the existing pavement to bridge. Design a smooth profile grade line to provide the required pavement or should thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. Areas Constructed Without AMG. Mark locations and elevations with metal pin or tack in wood hub (only tack one side), flat, and lath. Mark elevations on both sides of pavement at 50 foot intervals on straight and level section and 25 foot intervals on both sides of pavement. Include pavement cross slope information in superlevated curves. Areas Constructed With AMG. When total stations are used for the AMG paving system, set additional control points at maximum 500 foot intervals on each side of pavement. Furnish x, y.z coordinates and stat offset information for each point. Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points along superelevated curve transitions and at station equation locations. Additional paving hubs vin ot be required for mainline pavement and bridges at each Point of Intersection (P L). Obtian the Engineer's approal for the method used to reforence points. Reference and preserve existing control points located at each Point of Intersection (P L). Obtian the Engineer's approal for the method used to reforence points. Cotatin the Engineer's approal for the m	 c) Obtain elevations of existing pavement at centerline, quarter points, and both padges for unbonded overlays and whitetopping projects when a stress relief corand/or pavement scanfication are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections a maximum 50 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a sint transition, free of bumps and dips, from the new pavement to the existing pave pridge. Design a smooth profile grade line to provide the required pavement or thickness as detailed in the contract documents. Notify the Engineer when a sin profile cannot be provided. Submit final elevations to the Engineer before pavin begins. A reas Constructed Without AMG. Mark locations and elevations with metal pin or tack in wood hub (only tack one side), fit lath. Mark elevations on both sides of pavement at 50 foot intervals on straight and level and 25 foot intervals on horizontal and vertical curves. Clearly mark flat with station locat or fill information in superelevated curves. Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control poin maximum 500 foot intervals on each side of pavement. Furnish x, y.z coordinates an offset information for each point. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points superelevated curve transitions and at station equation locations. Additional paving not be required paremet rescripted. Pobtain elevations of adjacent pavement and bridges at conterline, edge of pavement other locations necessary to charactorize existing pavement at ontrolexing. Pobtain elevations of adjacent pavement and bridges at conterline, edge of pavement other locations and at station equired for maximum 10 foot intervals on a straign and leye, from the new pay to		
 edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and at maximum 25 foot intervals on horizontal and vertical curves. g) Using these elevations, design a profile grade ind cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement or should thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. b. Areas Constructed Without AMG. Mark locations and elevations with metal pin or tack in wood hub (only tack one side), flat, and lath. Mark elevations on both sides of pavement at 50 foot intervals on straight and level section, and 25 foot intervals on horizontal and vertical curves. Clearly mark flat with station location, c or fill information, and offset distance to edge of pavement. Include pavement cross slope information in superelevated curves. c. Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control points at maximum 500 foot intervals on each side of pavement. Furnish x,y,z coordinates and stat offset information for each point. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points along superelevated curve transitions and at station locations. Additional paving hubs vin to the Engineer's approval for the method used to reference points. Cotoatin the Engineer's approval for the method used to reference points. Potbain the Engineer's approval for the method used to reference points. Cotoatin the Engineer's approval for the method used to reference points. Cotoatin the Engineer's approval for the method used to reference points.	 deges for unbonded overlays and whitetopping projects when a stress relief con and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections at maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a sm transition, free of bumps and dips, from the new pavement to the existing paver bridge. Design a smooth profile grade and cross slopes to provide a sm transition, free of bumps and dips, from the new pavement to the existing paver bridge. Design a smooth profile grade line to provide the required pavement or thickness as detailed in the contract documents. Notify the Engineer before pavin begins b. Areas Constructed Without AMG. Mark locations and elevations with metal pin or tack in wood hub (only tack one side), fit lath. Mark elevations on both sides of pavement at 50 foot intervals on straight and level and 25 foot intervals on horizontal and vertical curves. Clearly mark flat with station locat or fill information, and offset distance to edge of pavement. Include pavement cores slop information in superelevated curves. c. Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control poin maximum 500 foot intervals on each slde of pavement. Furnish x,y,z coordinates an offset information, for each point. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points superlevated curve transitions and at station equation locations. Additional paving not be required for mainline pavement. HMA Ovorlaye Cobtain the Engineer's approval. For the method used to reference points of thersection (PLI bo. Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement ot bate-locatine. Recestary to characterize existing portile and cross sl		
 and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and at maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of burps and dips, from the new pavement to the existing pavement of budy thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins! b. Areas Constructed Without AMG. Mark locations and elevations with metal pin or tack in wood hub (only tack one side), flat, and lath. Mark elevations on both sides of pavement at 50 foot intervals on straight and level section and 25 foot intervals on horizontal and vertical curves. Clearly mark flat with station location, or offil information in superelevated curves. c. Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control points at maximum 500 foot intervals on each side of pavement. Furnish x,y.z coordinates and stat offset information for each point. 2) Set paving hubs with cut of fill to finish pavement elevation at A, B, C, and D points along superelevated curve transitions and at station equation locations. Additional paving hubs not be required for mainline pavement. HMA Overlays a. Reference and preserve existing control points located at each Point of Intersection (P.I.); b) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, and the existing pavement and bridges at centerline, edge of pavement, and the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations of the Engineer before paving begins. 2) Obtain elevations of adjacent pavement and bridges at centerline,	 and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections at maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a sm transition, free of burns and dips, from the new pavement to the existing pavement or thickness as detailed in the contract documents. Notify the Engineer when a sm profile cannot be provide. Submit final elevations to the Engineer before pavin begins D. Areas Constructed Without AMG. Mark locations and elevations with metal pin or tack in wood hub (only tack one side), fit lath. Mark elevations on both sides of pavement at 50 foot intervals on horizontal and vertical curves. Clearly mark flat with station locat or fill information in superelevated curves. C. Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control poin maximum 500 foot intervals on each side of pavement. Furnish x,y,z coordinates an offset information for each point. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points superelevated curve transitions and at station equation locations. Additional paving not be required for mainline pavement. HMA Overlays Reference and preserve existing control points located at each Point of Intersection (P.I. b) obtain the Engineer's approval for the method used to reference points. Control Points after the work is complete! PCC Overlays Control Points after the work is complete! PCC Overlays Obtain elevations of existing pavement at contentine, edge of pavement edge bond bording existing profile and cross slope to provide a smooth transition, free of bumps		
 d) Obtain elevations at maximum 50 foot intervals on straight and level sections and at maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement of bridge. Design a smooth profile grade line to provide the required pavement or shoul thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins! b. Areas Constructed Without AMG. Mark locations and elevations with metal pin or tack in wood hub (only tack one side), flat, and lath. Mark elevations on horizontal and vertical curves. Clearly mark flat with station location, or of fill information, and offset distance to edge of pavement. Include pavement cross slope information in superelevated curves. c. Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control points at maximum 500 foot intervals on each side of pavement. Furnish x,y.z coordinates and station of each point. 2) Set paving hubs with cut or fill to finish pavement elevation tat A, B, C, and D points along superlevated curve transitions and at station equation locations. Additional paving hubs not be required for mainline pavement. HMA Overlage References and preserve existing control points located at each Point of Intervals end with state the work is complete. PCC Overlage PCC Overlage a) Obtain elevations of adjacent pavement and bridges at conterline, edge of pavement, and the avieting at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a semoth transition, free of pavements. a) Obtain elevations of existing pavement and bridges par Article 252	 d) Obtain elevations at maximum 50 foot intervals on straight and level sections a maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a sm transition, free of bumps and dips, from the new pavement to the existing paver bridge. Design a smooth profile grade line to provide the required pavement or thickness as detailed in the contract documents. Notify the Engineer when a sm profile cannot be provided. Submit final elevations to the Engineer before pavin begins. b. Areas Constructed Without AMG. Mark locations and elevations with metal pin or tack in wood hub (only tack one side), fit lath. Mark elevations on both sides of pavement at 50 foot intervals on straight and level and 25 foot intervals on horizontal and vertical curves. Clearly mark flat with station loca or fill information, and offset distance to edge of pavement. Include pavement cross slop information in superelevated curves. c. Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control poin maximum 500 foot intervals on each side of pavement. Furnish x,y,z coordinates an offset information for each point. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points superelevated curve transitions and at station equation locations. Additional paving not be required for mainline pavement. HMA Overlays a. Reference and preserve existing control points located at each Point of Intersection (PLB, Overlays) a. Ceneral. d) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement provided. Submit final elevations to the Engineer before paving begins. d) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement provided. Submit final elevations to the Engineer before paving begins. d) Obtain elevations of adjacent pavement and		
 maximum 25 foot intervals on horizontal and vertical curves. a) Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement bridge. Design a smooth profile grade line to provide the required pavement or shou tickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. b. Areas Constructed Without AMG. Mark locations and elevations with metal pin or tack in wood hub (only tack one side), flat, and lath. Mark elevations on both sides of pavement at 50 foot intervals on straight and level secti and 25 foot intervals on horizontal and vertical curves. Clearly mark flat with station location, or of fill information, and offset distance to edge of pavement. Include pavement cross slope information in superelevated curves. c. Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control points at maximum 500 foot intervals on each side of pavement. Furnish x,y,z coordinates and sta offset information for each point. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points along superelevated curve transitions and at station equation locations. Additional paving hubs not be required for mainline pavement. PMA Overlays a. Reference and preserve existing control-points-located at each Point of Intersection (PLI); b. Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, and other elocations necessary to characterize existing profile and cross slope. Obtain elevation aros slope to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement obtine conterline. Hub and the pavement is on the existing pavement and bridges pavement and br	 maximum 25 foot intervals on horizontal and vertical curves. a) Using these elevations, design a profile grade and cross slopes to provide a sm transition, free of bumps and dips, from the new pavement to the existing paver bridge. Design a smooth profile grade line to provide the required pavement or thickness as detailed in the contract documents. Notify the Engineer when a sm profile cannot be provided. Submit final elevations to the Engineer before pavin begins! b. Areas Constructed Without AMG. Mark locations and elevations with metal pin or tack in wood hub (only tack one side), fit lath. Mark elevations on both sides of pavement at 50 foot intervals on straight and level and 25 foot intervals on horizontal and vertical curves. Clearly mark flat with station locat or fill information in superelevated curves. c. Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control point maximum 500 foot intervals on each side of pavement. Furnish x,y.z coordinates an offset information for each point. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points superelevated curve transitions and at station equation locations. Additional paving not be required for mainline pavement. HMA Overlage a. Reference and preserve existing control points located at each Point of Intersection (PL be Obtain the Engineer's approval for the method used to reference points. PCC Overlags a. Concrail 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement provided. Submit final elevations of the angineer before paving begins. 2) When a new profile grade is not included in the contract documents. 3) Obtain elevations of existing pavement at elevatione due to provide a samoth transition free of bumps and dips, from the new pavement edges border deve		
 e) Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement bridge. Design a smooth profile grade line to provide the required pavement or shou thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins! b. Areas Constructed Without AMG. Mark locations and elevations with metal pin or tack in wood hub (only tack one side), flat, and lath. Mark elevations on both sides of pavement at 50 foot intervals on straight and level section and 25 foot intervals on horizontal and vertical curves. Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control points at maximum 500 foot intervals on each side of pavement. Furnish x,y,z coordinates and sta offset information for each point. 2) Set paving hubs with out or fill to finish pavement elevation at A, B, C, and D points along superelevated curve transitions and at station equation locations. Additional paving hubs not be required for mainline pavement. HMA Overlays a. Reference and preserve existing control points located at each Point of Intersection (P.I.): bo Obtain the Engineer's approval for the method used to reference points. PCC Overlays a. Reference and preserve existing control points located at each Point of Intersection (P.I.): bo Obtain the Engineer's approval for the method used to reference points. PCC Overlays a. Reference and preserve existing control points located at each Point of Intersection (P.I.): bo Obtain the Engineer's approval for the method used to reference points. PCC Overlays a. General. f) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, an other locations necessary to characterize existing profile and cross slope to provide a	 a) Using these elevations, design a profile grade and cross slopes to provide a sm transition, free of bumps and dips, from the new pavement to the existing paver bridge. Design a smooth profile grade line to provide the required pavement or thickness as detailed in the contract documents. Notify the Engineer when a sm profile cannot be provided. Submit final elevations to the Engineer before pavin begins. b. Areas Constructed Without AMG. Mark locations and elevations with metal pin or tack in wood hub (only tack one side), fit lath. Mark elevations on both sides of pavement at 50 foot intervals on straight and level and 25 foot intervals on horizontal and vertical curves. Clearly mark flat with station loca or fill information, and offset distance to edge of pavement. Include pavement cross slop information, and offset distance to adge of pavement. Furnish x,y,z coordinates an offset information for each point. c. Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control poin maximum 500 foot intervals on each side of pavement. Furnish x,y,z coordinates an offset information for each point. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points superelevated curve transitions and at station equation locations. Additional paving not be required for mainline pavement. HMA Overlays Reference and preserve existing control points located at each Point of Intersection (PL b). Obtain the Engineer's approval for the method used to reference points. C. Reset Control Points after the work is complete. PCC Overlays General. Chara elevations of adjacent pavement and bridges at centerline, edge of pavement provided. Submit final elevations to bing pavement and bridges at centerline, edge of pavement provided. Submit final elevations of budjacent pavement and bridges paving begins. (2) When a new profile gra		
 transition, free of bumps and dips, from the new pavement to the existing pavement or shou thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins b. Areas Constructed Without AMG. Mark locations and elevations with metal pin or tack in wood hub (only tack one side), flat, an lath. Mark elevations on both sides of pavement at 50 foot intervals on straight and level sect and 25 foot intervals on horizontal and vertical curves. Clearly mark flat with station location, or fill information, and offset distance to edge of pavement. Include pavement cross slope information in superelevated curves. C. Areas Constructed With AMG.	 Irransition, free of bumps and dips, from the new payment to the existing payers bridge. Design a smooth profile grade line to provide the required payement or thickness as detailed in the contract documents. Notify the Engineer when a smortile cannot be provided. Submit final elevations to the Engineer when a smortile cannot be provided. Submit final elevations to the Engineer when a smortile cannot be provided. Submit final elevations to the Engineer when a smortile cannot be provided. Submit final elevations to the Engineer when a smortile cannot be provided. Submit final elevations to the Engineer when a smortile cannot be provided. Submit final elevations to the the sides of payment at 50 foot intervals on straight and level and 25 foot intervals on horizontal and vertical curves. Clearly mark flat with station local or fill information, and offset distance to edge of paymenet. Include payement cross slop information in superelevated curves. Areas Constructed With AMG. 1) When total stations are used for the AMG paying system, set additional control point maximum 500 foot intervals on each side of payement. Furnish x,yz coordinates an offset information for each point. 2) Set paying hubs with cut or fill to finish payement elevation at A, B, C, and D points superelevated curve transitions and at station equation locations. Additional paying not be required for mainline payement. HMA Overlays a. Reference and preserve existing control points located at each Point of Intersection (P.I. b. Obtain elevations of adjacent payement and bridges at centerline, edge of payement other locations necessary to characterize existing profile and cross slope. Obtain elevations of adjacent payment and bridges at centerline, edge of payement other locations necessary to characterize existing profile and cross slope. Obtain elevations of adjacent payment and bridges per Article 2526.03, A, 11, b). Obtain elevations of adjacent payement at conterline		
 bridge. Design a smooth profile grade line to provide the required payement or shou thickness as detailed in the contract documents. Notify the Engineer before paying begins. A reas Constructed Without AMG. Mark locations and elevations with metal pin or tack in wood hub (only tack one side), flat, an lath. Mark elevations on both sides of payement at 50 foot intervals on straight and level sect and 25 foot intervals on both sides of payement at 50 foot intervals on straight and level sect and 25 foot intervals on horizontal and vertical curves. Clearly mark flat with station location, or fill information, and offset distance to edge of payement. Include payement cross slope information in superelevated curves. C. Areas Constructed With AMG. 1) When total stations are used for the AMG paying system, set additional control points at maximum 500 foot intervals on each side of payement. Furnish x,y,z coordinates and sta offset information for each point. 2) Set paying hubs with cut or fill to finish payement elevation at A, B, C, and D points along superelevated curve transitions and at station equation locations. Additional paying hubs not be required for mainline payement. HMA Overlays Central Points after the work is complete. PCC Overlays Central Points after the work is complete. PCC Overlays Central Flat and preserve existing control points located at each Point of Intersection (P.I.) D Obtain elevations of adjacent payement and bridges at centerline, edge of payement. an other locations. necessary to characterize existing profile and cross slope. Obtain elevation at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grane and cross slope to provide a smooth transition, free of bumps and dips, from the new payement to the existing payement are bridge. Notify the Engineer whon a smooth payement eagle for unbonded overlays and whiletopping projects when a	 bridge. Design a smooth profile grade line to provide the required pavement or thickness as detailed in the contract documents. Notify the Engineer when a smorfile cannot be provided. Submit final elevations to the Engineer before pavin begins. b. Areas Constructed Without AMG. Mark locations and elevations with metal pin or tack in wood hub (only tack one side), flat lath. Mark elevations on both sides of pavement at 50 foot intervals on straight and level and 25 foot intervals on horizontal and vertical curves. Clearly mark flat with station locat or fill information, and offset distance to edge of pavement. Include pavement cross slop information in superelevated curves. c. Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control poin maximum 500 foot intervals on each side of pavement. Furnish x,yz coordinates an offset information for each point. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points superelevated curve transitions and at station equation locations. Additional paving not be required for mainline pavement. HMA Overlays a. Reference and preserve existing control points located at each Point of Intersection (P.I. b. Obtain the Engineer's approval for the method used to reference points. c. Reset Control Points after the work is complete. PCC Overlays a. General. 1) Obtain elevations of adjacent pavement and bridges at conterline, edge of pavemer other locations necessary to characterize existing profile and cross slope. Obtain elevations necessary to characterize existing profile and cross slope. Obtain elevations of adjacent pavement at bridges per Article 2526.03. A. 11. b) Obtain elevations of adjacent pavement and bridges per Article 2526.03. A. 11. b) Obtain elevations of adjacent pavement and bridges per Article 2526.03. A. 11. b) Obtain elevations of existing pavement and bridges per Article 2		
 thickness as detailed in the contract documents. Notify the Engineer when a smooth perifile cannot be provided. Submit final elevations to the Engineer before paving begins A reas Constructed Without AMG. Mark locations and elevations with metal pin or tack in wood hub (only tack one side), flat, an lath. Mark elevations on both sides of pavement at 50 foot intervals on straight and level sect and 25 foot intervals on horizontal and vertical curves. Clearly mark flat with station location, or fil information, and offset distance to edge of pavement. Include pavement cross slope information in superelevated curves. A reas Constructed With AMG. When total stations are used for the AMG paving system, set additional control points at maximum 500 foot intervals on each side of pavement. Furnish x,y.z coordinates and state offset information for each point. Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points along superelevated curve transitions and at station equation locations. Additional paving hubs not be required for mainline pavement. General, General, Obtain the Engineer's approval for the method used to reference points. General, Obtain elevatione of adjacent pavement and bridgee at centerline, edge of pavement, an other locations necessary to characterize existing profile and cross slope. Obtain deva and cross slope to provide a smooth transition, free of bumps and diper, from the new pavem to the existing pavement or bridge. Nolify the Engineer when a stress relief course and/cross slope to provide a smooth transition, free of bumps and diper, form the new pavem to the existing pavement or bridge. Nolify the Engineer when a stress relief course and/or pavement be provided. Submit final elevations of adjacent pavement at centerline, edge of pavement, an other locations necessary to characterize existing profile and cross slope. Obtai	 thickness as detailed in the contract documents. Notify the Engineer when a sn profile cannot be provided. Submit final elevations to the Engineer before pavin begins. A Areas Constructed Without AMG. Mark locations and elevations with metal pin or tack in wood hub (only tack one side), fit lath. Mark elevations on both sides of pavement at 50 foot intervals on straight and level and 25 foot intervals on horizontal and vertical curves. Clearly mark flat with station locat or fill information, and offset distance to edge of pavement. Include pavement cross slop information in superelevated curves. C. Areas Constructed With AMG. (1) When total stations are used for the AMG paving system, set additional control poin maximum 500 foot intervals on each side of pavement. Furnish x,y,z coordinates an offset information for each point. (2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points superelevated curve transitions and at station equation locations. Additional paving not be required for mainline pavement. HMA Overlays a. Reference and preserve existing control points located at each Point of Intersection (P.I. b. Obtain the Engineer's approval for the method used to reference points. c. Reest Control Points after the work is complete. PCC Overlays a. Generali (1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement other locations necessary to characterize existing profile and cross slope. Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, b). Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, b). Obtain elevations of existing pavement at centerline, quarter points, and both pavement edges bended overlays and projects included in the contract documents. a) Obtain elevations of existing pavement at centerline, quarter points, and both pavement edges bended overlays and projects		
 profile cannot be provided. Submit final elevations to the Engineer before paving begins. b. Areas Constructed Without AMG. Mark locations and elevations with metal pin or tack in wood hub (only tack one side), flat, an lath. Mark elevations on both sides of pavement at 50 foot intervals on straight and level sect and 25 foot intervals on horizontal and vertical curves. Clearly mark flat with station location, or fill information, and offset distance to edge of pavement. Include pavement cross slope information in superelevated curves. c. Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control points at maximum 500 foot intervals on each side of pavement. Furnish x,y.z coordinates and ste offset information for each point. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points along superelevated curve transitions and at station equation locations. Additional paving hubs not be required for mainline pavement. HMA Overlays a. Reference and preserve existing control points located at each Point of Intersection (PL). b. Obtain the Engineer's approval for the method used to reference points. c. Recet Control Points after the work is complete. PCC Overlays a. General. i) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, an to the existing pavement or bridge. Notify the Engineer when a kenoth be required based and cross slope. Obtain elevations of adjacent pavement and bridges paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement and bridges paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement and bridges paving begins. 2) When a new profile grade is not the Engineer	 profile cannot be provided. Submit final elevations to the Engineer before pavin begins. b. Areas Constructed Without AMG. Mark locations and elevations with metal pin or tack in wood hub (only tack one side), file lath. Mark elevations on both sides of pavement at 50 foot intervals on straight and level and 25 foot intervals on horizontal and vertical curves. Clearly mark flat with station locat or fill information, and offset distance to edge of pavement. Include pavement cross slop information in superelevated curves. c. Areas Constructed With AMG. (1) When total stations are used for the AMG paving system, set additional control poin maximum 500 foot intervals on each side of pavement. Furnish x,y,z coordinates an offset information for each point. (2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points superelevated curve transitions and at station equation locations. Additional paving not be required for mainline pavement. HMA Overlays a. Reference and preserve existing control points located at each Point of Intersection (PLB, Obtain the Engineer's appreval for the method used to reference points. e. Reset Control Points after the work is complete. PCC Overlaye a. General (1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavemer other locations necessary to characterize existing profile and cross slope. Obtain ela at maximum 10 foot intervals for a minimum of 100 foot existing profile grade cross slope to provide a smooth transition, free of humps and dips, from the new part to the existing pavement or bridge. Notify the Engineer when a emoth profile eard orgas portal existing and rese relief course and/or pavement provided, submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement at centerl		
 begins Areas Constructed Without AMG. Mark locations and elevations with metal pin or tack in wood hub (only tack one side), flat, an lath. Mark elevations on both sides of pavement at 50 foot intervals on straight and level seat and 25 foot intervals on horizontal and vertical curves. Clearly mark flat with station location, or fill information, and offset distance to edge of pavement. Include pavement cross slope information in superelevated curves. Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control points at maximum 500 foot intervals on each side of pavement. Furnish x,y,z coordinates and ste offset information for each point. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points along superelevated curve transitions and at station equation locations. Additional paving hubs not be required for mainline pavement. HMA Overlays a. Reference and preserve existing control points located at each Point of Intersection (P.I.) b. Obtain the Engineer's approval for the method used to reference points. c. Reset Control Points after the work is complete. PCC Overlays a. General. f) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, an other locations necessary to characterize existing profile and cross slope. Obtain elevati at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, tree of bumps and digs. from the new pavement is existing pavement at centerline, edge of pavement set bridges of pavement at a provided system is and by and project included in the contract documents: a) Obtain elevations of adjacent pavement at centerline attractice 256.03. A, 11, a, 1 b) Obtain elevations of adjacent pavement at centerline and both pavement edges for bonded overlays and project inclu	 b. Areas Constructed Without AMG. Mark locations and elevations with metal pin or tack in wood hub (only tack one side), flat lath. Mark elevations on both sides of pavement at 50 foot intervals on straight and level and 25 foot intervals on norizontal and vertical curves. Clearly mark flat with station locat or fill information, and offset distance to edge of pavement. Include pavement cross slop information in superelevated curves. c. Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control poin maximum 500 foot intervals on each side of pavement. Furnish x,y,z coordinates an offset information for each point. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points superelevated curve transitions and at station equation locations. Additional paving not be required for mainline pavement. HMA Overlays a. Reference and preserve existing control points located at each Point of Intersection (P.I. b. Obtain the Engineer's approval for the method used to reference points. c. Reset Control Points after the work is complete. PCC Overlays a. General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement other locations necessary to characterize existing profile and cross slope. Obtain elevations necessary to characterize or binnys and dips. from the new part other locations necessary to characterize or binny and brong horefle cannor provided. Submit final elevations of adjacent transition, free of bumps and dips. from the new part to the existing pavement at the Engineer when a smooth profile cannor provided. Submit final elevations of existing pavement at centerline, quarter points, and both p edges for fundes of existing pavement at centerline, duart dege bonded overlays and projects including mainline stress relief course and/or pavement scarification are not included. 		
 b. Areas Constructed Without AMG. Mark locations and elevations with metal pin or tack in wood hub (only tack one side), flat, an lath. Mark elevations on both sides of pavement at 50 foot intervals on straight and level sect and 25 foot intervals on horizontal and vertical curves. Clearly mark flat with station location, or fill information in superelevated curves. c. Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control points at maximum 500 foot intervals on each side of pavement. Furnish x,y,z coordinates and sta offset information for each point. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points along superelevated curve transitions and at station equation locations. Additional paving hubs not be required for mainline pavement. HMA Overlays a. Reference and preserve existing control points located at each Point of Intersection (P.I.) b. Obtain the Engineer's approval for the method used to reference points. c. Reset Control Points after the work is complete. PCC Overlays a. General. 1) Obtain elevations of adjacent pavement and bridges at conterline, edge of pavement, an other locations necessary to characterize existing profile and cross slope. Obtain elevating around the avisting pavement or bridge. Notify the Engineer when a smooth profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement or bridge. Notify the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement at enterline and both pavement edges for bended everlays and projects including mainline stress relief course and/or pavement scarification are not included. 3) Obtain elevations of adjacent pavement at enterline and both pavement edges for bended everlays and proj	 b. Areas Constructed Without AMG. Mark locations and elevations with metal pin or tack in wood hub (only tack one side), fla lath. Mark elevations on both sides of pavement at 50 foot intervals on straight and level and 25 foot intervals on horizontal and vertical curves. Clearly mark flat with station locat or fill information in superelevated curves. c. Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control poin maximum 500 foot intervals on each side of pavement. Furnish x,y,z coordinates an offset information for each point. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points superelevated curve transitions and at station equation locations. Additional paving not be required for mainline pavement. HMA Overlays a. Reference and preserve existing control points located at each Point of Intersection (P.I. b. Obtain the Engineer's approval for the method used to reference points. c. Reset Control Points after: the work is complete PCC Overlays a. General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement other locations necessary to characterize existing profile and cross slope. Obtain ele at maximum 10 foot intervals for a minimum of 100 foet. Adjust design profile grade cross slope to provide a smoth transition, free of bumps and dips, from the new pa to the existing pavement or bridge. Nullify the Engineer when a smooth profile canne provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of existing pavement at centerline, and both pavement edges bended everlays and projects including mainline stress relief course and/or pav ecasification. c) Obtain elevations of existing pavement at centerline and both pavement edges bended everlays and projects including mai		
 Mark locations and elevations with metal pin or tack in wood hub (only tack one side), flat, an lath. Mark elevations on both sides of pavement at 50 foot intervals on straight and level sect and 25 foot intervals on horizontal and vertical curves. Clearly mark flat with station location, or fill information in superelevated curves. C Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control points at maximum 500 foot intervals on each side of pavement. Furnish x,y,z coordinates and station for each point. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points along superelevated curve transitions and at station equation locations. Additional paving hubs not be required for mainline pavement. HMA Overlays a. Reference and preserve existing control points located at each Point of Intersection (P.I.); b. Obtain the Engineer's approval for the method used to reference points. c. Reset Control Points after the work is complete. PCC Overlays a. General f) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, an other locations necessary to characterize existing profile and cross slope. Obtain elevatin at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations of adjacent pavement and bridges per Article 2526.03, A, 11, a, 1 b) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, a, 1 b) Obtain elevations of existing pavement at centerline, quarter points, and both pavement edge. Source and profile grade and cross slope to provide a smooth transition free of bumps and both pavement edges for unbonded overlays and pr	 Mark locations and elevations with metal pin or tack in wood hub (only tack one side), fla lath. Mark elevations on both sides of pavement at 50 foot intervals on straight and level and 25 foot intervals on horizontal and vertical curves. Clearly mark flat with station locat or fill information in superelevated curves. C Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control poin maximum 500 foot intervals on each side of pavement. Furnish x,y,z coordinates an offset information for each point. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points superelevated curve transitions and at station equation locations. Additional paving not be required for mainline pavement. HMA Overlays a. Reference and preserve existing control points located at each Point of Intersection (P.I. b). Obtain the Engineer's approval for the method used to reference points. c. Reset Control Points after the work is complete. PCC Overlays a. General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavemer other locations necessary to characterize existing profile and cross slope. Obtain elevations provide a mooth transition, free of bumps and dips, from the new part other oxicing pavement or bridge. Notify the Engineer before paving begins. 2) When a new profile grade is not included in the contract documentsi: a) Obtain elevations of adjacent pavement at denterline and both pavement edges bonded overlays and projects included in the contract documentsi. a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, b) Obtain elevations of adjacent pavement at centerline, and both pavement edges bonded overlays and projects included in the contract documentsi. a) Obtain elevations of adjacent pavement at centerline, and both pavement edges bonded ov	b.	
 lath. Mark elevations on both sides of pavement at 50 foot intervals on straight and level sect and 25 foot intervals on horizontal and vertical curves. Clearly mark flat with station location, or fill information, and offset distance to edge of pavement. Include pavement cross slope information in superelevated curves. c. Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control points at maximum 500 foot intervals on each side of pavement. Furnish x,y,z coordinates and station for each point. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points along superelevated curve transitions and at station equation locations. Additional paving hubs not be required for mainline pavement. HMA Overlays a. Reference and preserve existing control points located at each Point of Intersection (P.I.) b. Obtain the Engineer's approval for the method used to reference points. ce. Reset Control Points after the work is complete. PCC Overlays a. Generali d) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, an other location necessary to characterize existing profile and cross slope. Obtain elevation at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents. a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, a, 1 b) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, a, 1 b) Obtain elevations of adjacent pavement at centerline, quarter points	 lath. Mark elevations on both sides of pavement at 50 foot intervals on straight and level and 25 foot intervals on horizontal and vertical curves. Clearly mark flat with station local or fill information, and offset distance to edge of pavement. Include pavement cross slop information in superelevated curves. c. Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control poin maximum 500 foot intervals on each side of pavement. Furnish x,y,z coordinates an offset information for each point. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points superelevated curve transitions and at station equation locations. Additional paving not be required for mainline pavement. HMA Overlays a. Reference and preserve existing control points located at each Point of Intersection (P.I. b. Obtain the Engineer's approval for the method used to reference points. c. Reset Control Points after the work is complete. PCC Overlays a. General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement other locations necessary to characterize existing profile and cross slope. Obtain elevations enceesary to characterize existing profile and cross slope. Obtain elevations of adjacent pavement and bridges at centerline, rom the new part other locations necessary to characterize existing profile and cross slope. Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, b) Obtain elevations of adjacent pavement at centerline, and both pavement edges bended overlays and projects included in the contract documents! a) Obtain elevations of existing pavement at centerline, and both pavement edges bended overlays and projects included in the contract documents! b) Obtain elevations of existing pavement at centerline, quarter points, and both padges bended overlays and projects included in the contr		
 and 25 foot intervals on horizontal and vertical curves. Clearly mark flat with station location, or fill information, and offset distance to edge of pavement. Include pavement cross slope information in superelevated curves. c. Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control points at maximum 500 foot intervals on each side of pavement. Furnish x,y,z coordinates and stations for each point. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points alon superelevated curve transitions and at station equation locations. Additional paving hubs not be required for mainline pavement. HMA Overlays a. Reference and preserve existing control points located at each Point of Intersection (P.I.) b. Obtain the Engineer's approval for the method used to reference points. c. Reset Control Points after the work is complete. PCC Overlays a. General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevati at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavement to the existing grade is not included in the contract documents. a) Obtain elevations of adjacent pavement at centerline, quarter points, and both pavement existing pavement at centerline and both pavement edge for body and cross endor on superelevate and projects included in the contract documents. a) Obtain elevations of adjacent pavement at centerline, edge of pavement, ar other locations necessary to characterize existing profile and cross lope. Obtain elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents. a) Obt	 and 25 foot intervals on horizontal and vertical curves. Clearly mark flat with station local or fill information, and offset distance to edge of pavement. Include pavement cross slop information in superelevated curves. c. Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control poin maximum 500 foot intervals on each side of pavement. Furnish x,y,z coordinates an offset information for each point. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points superelevated curve transitions and at station equation locations. Additional paving not be required for mainline pavement. HMA Overlays a. Reference and preserve existing control points located at each Point of Intersection (P.I. b. Obtain the Engineer's approval for the method used to reference points. c. Reset Control Points after the work is complete. PCC Overlays a. General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavemer other locations necessary to characterize existing profile and cross slope. Obtain elevations to bridge. Notify the Engineer when a smooth prefile cannopavio being individed. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, 9) Obtain elevations of adjacent pavement at centerline, quarter points, and both pavement elevation and bridges per Article 2526.03, A, 11, 9) Obtain elevations of existing pavement at centerline and both pavement edges bended overlays and projects including mainline stress relief course and/or pavement escrification are not included. d) Obtain elevations of existing pavement at centerline, quarter points, and both pavement elevation are not included. d) Obtain elevations of existing pavement at centerline and		
 or fill information, and offset distance to edge of pavement. Include pavement cross slope information in superelevated curvers. Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control points at maximum 500 foot intervals on each side of pavement. Furnish x,y,z coordinates and statioffset information for each point. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points alon superelevated curve transitions and at station equation locations. Additional paving hubs not be required for mainline pavement. HMA Overlays a. Reference and preserve existing control points located at each Point of Intersection (P.I.) b. Obtain the Engineer's approval for the method used to reference points. c. Reset Control Points after the work is complete. PCC Overlays a. General. 1) Obtain the Lengineer's approval for the method used to reference points. c. Reset Control Points after the work is complete. PCC Overlays a. General. 1) Obtain the evations of adjacent pavement and bridges at centerline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevation to bridge. Notify the Engineer when a smooth profile grade and cross slope to provide a smooth transition, free of bumps and dips. from the new pavement to the existing pavement or bridge. Notify the Engineer when a smooth profile grade and cross slope. Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, a, 1 b). Obtain elevations of adjacent pavement at centerline, quarter pointe, and both pavement edges for bonded overlays and projects including mainline stress relief course and/or pavement edges for bonded overlays and projects including mainline stress relief course and/or pavement edges for bonded overlays and projects includin	 or fill information, and offset distance to edge of pavement. Include pavement cross slop information in superelevated curves. c. Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control poin maximum 500 foot intervals on each side of pavement. Furnish x,y,z coordinates an offset information for each point. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points superelevated curve transitions and at station equation locations. Additional paving not be required for mainline pavement. HMA Overlays a. Reference and preserve existing control points located at each Point of Intersection (P.I. b. Obtain the Engineer's approval for the method used to reference points. c. Reset Control Points after the work is complete. PCC Overlays a. Ceneral. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement other locations necessary to characterize existing profile and cross slope. Obtain elevations of adjacent pavement and bridges at centerline, ender of the reset of th		
 information in superelevated curves. C. Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control points at maximum 500 foot intervals on each side of pavement. Furnish x,y,z coordinates and statoffset information for each point. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points alon superelevated curve transitions and at station equation locations. Additional paving hubs not be required for mainline pavement. HMA Overlays a. Reference and preserve existing control points located at each Point of Intersection (P.I.). b. Obtain the Engineer's approval for the method used to reference points. c. Reset Control Points after the work is complete. PCC Overlays a. General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevati at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, 4, 1 b) Obtain elevations of existing pavement at centerline, quarter points, and both pavement edges for bonded overlays and projects including mainline stress relief course and/or pavement existing pavement at centerline, quarter points, and both pavement edges for ubonded overlays and projects included. c) Obtain elevations of existing pavement at centerline, quarter points, and both pavement edges for ubonded overlays and projects included. d) Obtain elevations of existing pavement at centerline, and both pavemen	 information in superelevated curves. C. Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control poin maximum 500 foot intervals on each side of pavement. Furnish x,y,z coordinates an offset information for each point. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points superelevated curve transitions and at station equation locations. Additional paving not be required for mainline pavement. HMA Overlays a. Reference and preserve existing control points located at each Point of Intersection (P.I. b. Obtain the Engineer's approval for the method used to reference points. C. Reset Control Points after the work is complete. PCC Overlays a. General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavemer other locations necessary to characterize existing profile and cross slope. Obtain elevations provide a smooth transition, free of bumps and dips, from the new part to the existing pavement or bridge. Notify the Engineer when a smooth profile canne provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents. a) Obtain elevations of adjacent pavement at centerline, quarter points, and both p edges for unbonded overlays and trigges part at centerline, quarter points, and both p edges bonded overlays and projects included. 2) When a new profile grade is not included in the contract documents. a) Obtain elevations of existing pavement at centerline, quarter points, and both p edges for unbonded overlays and whiletopping projects when a stress relief cor and/or pavement scarification are not included. b) Obtain elevations of existing pavement at centerline, quarter points, and both p edges for unbonded overlays and whiletopping projects when a stress relief c		
 c. Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control points at maximum 500 foot intervals on each side of pavement. Furnish x,y,z coordinates and station offset information for each point. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points alon superelevated curve transitions and at station equation locations. Additional paving hubs not be required for mainline pavement. HMA Overlays a. Reference and preserve existing control points located at each Point of Intersection (P.I.). b. Obtain the Engineer's approval for the method used to reference points. c. Reset Control Points after the work is complete. PCC Overlays a. General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevations to the ransition, free of bumps and digs. from the new pavem to the existing provide a smooth transition, free of bumps and digs. from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement at centerline, quarter points, and both pavement edges for unbonded overlays and projects including mainline stress relief course and/or pavement scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both pavement edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain eleva	 c. Areas Constructed With AMG. 1) When total stations are used for the AMG paving system, set additional control poin maximum 500 foot intervals on each side of pavement. Furnish x,y,z coordinates an offset information for each point. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points superelevated curve transitions and at station equation locations. Additional paving not be required for mainline pavement. HMA Overlays Reference and preserve existing control points located at each Point of Intersection (P.I. D. Obtain the Engineer's approval for the method used to reference points. c. Reset Control Points after the work is complete. PCC Overlays General. 1) Obtain elevations of adjacent pavement and bridges at conterline, edge of pavemer other locations necessary to characterize existing profile and cross slope. Obtain elevations necessary to characterize evisiting profile and cross slope. Obtain elevations pavement or bridge. Notify the Engineer when a smooth profile grade cross slope to provide a smooth transition, free of bumps and dips, from the new pat to the existing pavement or bridge. Notify the Engineer when a smooth profile cance provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement at centerline, quarter points, and both pavement edges bonded overlays and projects including mainline stress relief course and/or pavescarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both pavescarification. c) Obtain elevations of existing pavement at centerline quarter points, and both pavescarification. c) Obtain elevations of existing pavement at centerline due both pavement edges bonded overlays and projects including mainline stress relief course and/or pavescarification.<		
 When total stations are used for the AMG paving system, set additional control points at maximum 500 foot intervals on each side of pavement. Furnish x,y,z coordinates and station figet information for each point. Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points alon superelevated curve transitions and at station equation locations. Additional paving hubs not be required for mainline pavement. HMA Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.); Obtain the Engineer's approval for the method used to reference points. Centrol Points after the work is complete. PCC Overlays General. Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevations to be rowide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. When a new profile grade is not included in the contract documents:	 When total stations are used for the AMG paving system, set additional control poin maximum 500 foot intervals on each side of pavement. Furnish x,y,z coordinates an offset information for each point. Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points superelevated curve transitions and at station equation locations. Additional paving not be required for mainline pavement. HMA Overlays Reference and preserve existing control points located at each Point of Intersection (P.I. b. Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. PCC Overlays General. Obtain elevations of adjacent pavement and bridges at centerline, edge of pavemer other locations necessary to characterize existing profile and cross slope. Obtain elevations necessary to characterize existing profile and cross slope. Obtain elevations necessary to characterize existing profile and cross slope. Obtain elevations pavement or bridge. Notify the Engineer when a smooth profile cannor previded. Submit final elevations to the Engineer before paving begins. When a new profile grade is not included in the contract documents: Obtain elevations of adjacent pavement at centerline, quarter points, and both pavement edges bended overlays and projects including mainline stress relief course and/or pavement edges and/or pavement and bridges per Article 2526.03, A, 11, b) Obtain elevations of existing pavement at centerline, quarter points, and both pavement edges bended overlays and projects including mainline stress relief course and/or pavement edges and/or pavement acenterline, design a profile grade and cross elopes to provide a stress relief course and/or pavement acenterline, deage on and/or pavement edges bended overlays	c.	
 maximum 500 foot intervals on each side of pavement. Furnish x,y,z coordinates and sta offset information for each point. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points alon superelevated curve transitions and at station equation locations. Additional paving hubs not be required for mainline pavement. HMA Overlays a. Reference and preserve existing control points located at each Point of Intersection (P.I.). b. Obtain the Engineer's approval for the method used to reference points. c. Reset Control Points after the work is complete. PCC Overlays a. General. f) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, and other locations necessary to characterize existing profile and cross slope. Obtain elevatia at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, a, 1 b) Obtain elevations of existing pavement at centerline, quarter points, and both pavement ecarification are not included. e) Obtain elevations of existing pavement at centerline, quarter points, and both pavement edges for bonded overlays and projects included. e) Obtain elevations of existing pavement at centerline, quarter points, and both pavement ecarification are not included. e) Obtain elevations at maximum 50 foot intervals on straight and level sections and are maximum 25 foot intervals on brizontal and vertical curves. e) Using these elevations, design a profile grade and cross stopes to	 maximum 500 foot intervals on each side of pavement. Furnish x,y,z coordinates an offset information for each point. 2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points superelevated curve transitions and at station equation locations. Additional paving not be required for mainline pavement. HMA Overlays a. Reference and preserve existing control points located at each Point of Intersection (P.I. b. Obtain the Engineer's approval for the method used to reference points. c. Reset Control Points after the work is complete. PCC Overlays a. General. f) Obtain elevations of adjacent pavement and bridges at conterline, edge of pavemer other locations necessary to characterize existing profile and cross slope. Obtain elevations necessary to characterize existing profile and cross slope. Obtain elevations to be provide a smooth transition, free of bumps and dips, from the new pate to be existing pavement and bridges pavements. a) Obtain elevations of adjacent pavement and bridges pavements. a) Obtain elevations of adjacent pavement and bridges at conterline, edge of pavemer other locations necessary to characterize existing profile and cross slope. Obtain elevations to the ransition, free of bumps and dips, from the new pate the existing pavement or bridge. Notify the Engineer when a smooth profile canner provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents. a) Obtain elevations of existing pavement at centerline, quarter points, and both p edges for unbonded overlays and whitetopping projects when a stress relief co and/or pavement scarification are not included. d) Obtain elevations of existing pavement at centerline, quarter points, and both p edges for unbonded overlays and whitetopping projects when a stress relief co and/or pavement escarification ar		1) When total stations are used for the AMG paying system, set additional control points at
 offset information for each point. 2) Set paying hubs with cut or fill to finish pavement elevation at A, B, C, and D points alon superelevated curve transitions and at station equation locations. Additional paving hubs not be required for mainline pavement. HMA Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.) b. Obtain the Engineer's approval for the method used to reference points. c. Reset Control Points after the work is complete. PCC Overlays a. General. 1) Obtain elevations of adjacent pavement and bridges at conterline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevatiat at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations of adjacent pavement at centerline and both pavements. a) Obtain elevations of adjacent pavement at centerline and both pavement edges for bended overlays and projects included in the contract documents. a) Obtain elevations of adjacent pavement at centerline and both pavement edges for bended overlays and projects included. b) Obtain elevations of existing pavement at centerline, quarter points, and both pavere edges for unbonded overlays and whitelopping projects when a stress relief course and/or pavere edges. For included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and a maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross clopes to provide a smooth transition are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections a	 offset information for each point. 2) Set paying hubs with cut or fill to finish pavement elevation at A, B, C, and D points superelevated curve transitions and at station equation locations. Additional paving not be required for mainline pavement. HMA Overlays Reference and preserve existing control points located at each Point of Intersection (P.I. b. Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. PCC Overlays General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavemer other locations necessary to characterize existing profile and cross slope. Obtain elevations of adjacent pavement and bridges recess slope. Obtain elevations of provide a smooth transition, free of bumps and dips, from the new pate the existing pavement or bridge. Notify the Engineer when a smooth profile canner provided. Submit final elevations of adjacent pavement at centerline, edges pavement edges bonded overlays and projects included in the contract documents: a) Obtain elevations of adjacent pavement at centerline and both pavement edges bonded overlays and projects including mainline stress relief course and/or paves carification. c) Obtain elevations of existing pavement at centerline, quarter points, and both p edges for unbonded overlays and whitetopping projects when a stress relief course and/or paves carification. c) Obtain elevations at maximum 50 foot intervals on straight and level sections a maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and orces slopes to provide a error transition, free of bumps and dips, from the new pavement to the existing pavement or thickness as detailed in the contract documents. 		
 Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points alon superelevated curve transitions and at station equation locations. Additional paving hubs not be required for mainline pavement. HMA Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.). Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. PCC Overlays General. Obtain elevations of adjacent pavement and bridges at conterline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevatia at maximum 10 foot intervals for a minimum of 100 feet. Adjuct design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. When a new profile grade is not included in the contract documents: 	 Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points superelevated curve transitions and at station equation locations. Additional paving not be required for mainline pavement. HMA Overlays Reference and preserve existing control points located at each Point of Intersection (P.I. b. Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. PCC Overlays General. Obtain elevations of adjacent pavement and bridges at centerline, edge of pavemer other locations necessary to characterize existing profile and cross slope. Obtain elevations necessary to characterize existing profile and dips, from the new pa to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot provided. Submit final elevations to the Engineer before paving begins. When a new profile grade is not included in the contract documents: Obtain elevations of existing pavement at centerline, quarter points, and both pavement edges bended overlays and projects including mainline stress relief course and/or pav scarification. Obtain elevations of existing pavement at centerline and both pavement edges bended overlays and projects included. Obtain elevations of existing pavement at centerline and both pavement edges bended overlays and projects included. Obtain elevations of existing pavement at centerline and both pavement edges bended overlays and projects included. Obtain elevations of existing pavement at centerline and both pavement edges bended overlays and projects included. Obtain elevations at maximum 50 foot intervals on straight and level sections a maximum 25 foot interval		
 superelevated curve transitions and at station equation locations. Additional paving hubs not be required for mainline pavement. HMA Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.). Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. PCC Overlays General. Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevatiant at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. When a new profile grade is not included in the contract documents: Obtain elevations of existing pavement at centerline, and both pavement edges for bonded overlays and projects including mainline stress relief course and/or pavement scarification. Obtain elevations of existing pavement at centerline, quarter points, and both paver edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. Obtain elevations at maximum 50 foot intervals on straight and level sections and a maximum 25 foot intervals on horizontal and vertical curves. Using these elevations, design a profile grade and errose slopes to provide a smooth profile grade and vertical curves. Using these elevations, design a profile grade and vertical curves. Using these elevations, at maximum 50 foot intervals on straight and level sections and a maximum 25 foot intervals on horizontal and vertical curves. Using these elevations, fee of bumps and dips,	 superelevated curve transitions and at station equation locations. Additional paving not be required for mainline pavement. HMA Overlays Reference and preserve existing control points located at each Point of Intersection (P.I. b. Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. PCC Overlays General. Obtain elevations of adjacent pavement and bridges at centerline, edge of pavemer other locations necessary to characterize existing profile and cross slope. Obtain elevations necessary to characterize existing profile and dips, from the new pato the existing provide a smooth transition, free of bumps and dips, from the new pato the existing pavement or bridge. Notify the Engineer when a smooth profile canned provided. Submit final elevations to the Engineer before paving begins. When a new profile grade is not included in the contract documents: Obtain elevations of existing pavement at centerline and both pavement edges bended overlays and projects including mainline stress relief course and/or pav scarification. Obtain elevations of existing pavement at centerline, quarter points, and both p adges for unbonded overlays and whitetopping projects when a stress relief course and/or pav scarification. Obtain elevations at maximum 50 foot intervals on straight and level sections a maximum 25 foot intervals on horizontal and vertical curves. Using these elevations, design a profile grade and eroses slopes to provide a smooth profile grade in the contract document. Using these elevations, design a profile grade and eroses slopes to provide a smooth profile grade in the contract docurves. Obtain elevations at maximum 50 foot intervals on straight and level sections a maximum 25 foot intervals on horizontal and vertical curves. Using these elevations, design a profile grade in to provide the re		2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points alon
 not be required for mainline pavement. HMA Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.); Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. PCC Overlays General, Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevati at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. When a new profile grade is not included in the contract documents: Obtain elevations of existing pavement at centerline, quarter points, and both pavement edges for bonded overlays and projects including mainline stress relief course and/or pavement scarification. Obtain elevations of existing pavement at centerline, quarter points, and both pavement scarification are not included. Obtain elevations at maximum 50 foot intervals on straight and level sections and ar maximum 25 foot intervals on horizontal and vertical curves. Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement bridge. Design a smooth profile grade in to provide the required pavement or shot thickness as detailed in the contract documents. 	 not be required for mainline pavement. HMA Overlays Reference and preserve existing control points located at each Point of Intersection (P.I. Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. PCC Overlays General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavemer other locations necessary to characterize existing profile and cross slope. Obtain elevations necessary to characterize existing profile and cross slope. Obtain elevations necessary to characterize existing profile and cross slope. Obtain elevations to bridge. Notify the Engineer when a smooth profile canner provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents. a) Obtain elevations of adjacent pavement at centerline, quarter points, and both pavement edges bended overlays and projects including mainline stress relief course and/or paves scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both pavement edges for unbonded overlays and whitetopping projects when a stress relief course and/or paves carification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections a maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a serier transition, free of bumps and dips, from the new pavement to the existing pavement or transition free of bumps and dips. a) Obtain elevations of existing pavement at centerline, quarter points, and both profile grade overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections		
 HMA Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.). Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. PCC Overlays a. General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, an other locations necessary to characterize existing profile and cross slope. Obtain elevatin at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement at centerline and both pavement edges for bonded overlays and projects including mainline stress relief course and/or pavement edges for bonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations of existing pavement at centerline, quarter points, and both pavement edges for bonded overlays and whitetopping projects when a stress relief course and/or pavement edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and at maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement bridge. Design a smooth profile grade li	 HMA Overlays a. Reference and preserve existing control points located at each Point of Intersection (P.I. b. Obtain the Engineer's approval for the method used to reference points. c. Reset Control Points after the work is complete. PCC Overlays a. General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavemer other locations necessary to characterize existing profile and cross slope. Obtain elevations necessary to characterize existing profile and cross slope. Obtain elevations necessary to characterize existing profile and cross slope. Obtain elevations to the roy provide a smooth transition, free of bumps and dips, from the new pato the existing pavement or bridge. Notify the Engineer when a smooth profile canner provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of existing pavement at centerline, quarter points, and both pavement edges bonded overlays and projects including mainline stress relief course and/or pave scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both pedges for unbonded overlays and whitetopping projects when a stress relief course and/or paves and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections a maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade line to provide the required pavement or thickness as detailed in the contract documents. Notify the Engineer when a sn profile. Design a smooth profile grade line to provide the required pavement or thickness as detailed in the contract documents. Notify the Engineer when a sn profile. 		
 b. Obtain the Engineer's approval for the method used to reference points. c. Reset Control Points after the work is complete. PCC Overlays a. General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, an other locations necessary to characterize existing profile and cross slope. Obtain elevat at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement at centerline, and both pavement edges for bonded overlays and projects included in the contract documents: a) Obtain elevations of existing pavement at centerline and both pavement edges for bonded overlays and projects included. c) Obtain elevations of existing pavement at centerline, quarter points, and both pavement scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both pavement edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and a maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement bridge. Design a smooth profile grade line to provide the required pavement or shot thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provide. 	 b. Obtain the Engineer's approval for the method used to reference points. c. Reset Control Points after the work is complete. PCC Overlays a. General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavemer other locations necessary to characterize existing profile and cross slope. Obtain elevations necessary to characterize existing profile and cross slope. Obtain elevations of provide a smooth transition, free of bumps and dips, from the new patto the existing pavement or bridge. Notify the Engineer when a smooth profile cannot provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, b) Obtain elevations of adjacent pavement at centerline, quarter points, and both pavement edges bonded overlays and projects including mainline stress relief course and/or pav scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both pedges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections at maximum 25 foot intervals on straight and level sections at maximum 25 foot intervals on straight and level sections at maximum 25 foot intervals on straight and level sections at maximum 25 foot intervals on straight and level sections at maximum 26 foot intervals on straight and level sections at maximum 26 foot intervals on straight and level sections at maximum 26 foot intervals on straight and level sections at maximum 50 foot intervals on straight and level sections at maximum 26 foot intervals on straight and level sections at maximum 26 foot intervals on straight and level sections at maximum 26 foot intervals on straight and level sections at maxi		
 c. Reset Control Points after the work is complete. PCC Overlays a. General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevatiat maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, a, 1 b) Obtain elevations of adjacent pavement at centerline and both pavement edges for bonded overlays and projects including mainline stress relief course and/or paveme scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both paver edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and a maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement or shot thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 	 c. Reset Control Points after the work is complete. PCC Overlays a. General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavemer other locations necessary to characterize existing profile and cross slope. Obtain elevations necessary to characterize existing profile and cross slope. Obtain elevations of the obtain elevations of a smooth transition, free of bumps and dips, from the new patto the existing pavement or bridge. Notify the Engineer when a smooth profile canner provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, b) Obtain elevations of existing pavement at centerline, quarter points, and both pavement edges bonded overlays and projects including mainline stress relief course and/or pavescarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both p edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavescarification. c) Obtain elevations at maximum 50 foot intervals on straight and level sections at maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smooth profile grade line to provide the required pavement or thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provide. Submit final elevations to the Engineer before paving begins. 	HN	A Overlays
 PCC Overlays a. General, 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevati at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement at centerline and both pavement edges for bonded overlays and projects including mainline stress relief course and/or paveme scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both pavement edges for unbanded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and a maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement is the contract documents. Notify the Engineer when a smooth transition profile grade and cross slopes to provide a smooth single. Design a smooth profile grade intervals on the required pavement or shout transition are not included. 	 PCC Overlays General, 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavemer other locations necessary to characterize existing profile and cross slope. Obtain elevations necessary to characterize existing profile and cross slope. Obtain elevations slope to provide a smooth transition, free of bumps and dips, from the new pato the existing pavement or bridge. Notify the Engineer when a smooth profile canner provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, b) Obtain elevations of existing pavement at centerline and both pavement edges bonded everlays and projects including mainline stress relief course and/or pav scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both p edges for unbonded overlays and whitetopping projects when a stress relief course and/or pav ment scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections at maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smaximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smaximum 50 foot intervals on straight and level sections at maximum 50 foot intervals on straight and level sections at maximum 50 foot intervals on straight and level sections at maximum 50 foot intervals on straight and level sections at maximum 50 foot intervals on straight and level sections an maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a sm transition, free of bumps and dips, from the new pavement to the exi	HM a.	A Overlays
 a. General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, an other locations necessary to characterize existing profile and cross slope. Obtain elevation at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of existing pavement and bridges per Article 2526.03, A, 11, a, 1 b) Obtain elevations of existing pavement at centerline and both pavement edges for bonded overlays and projects including mainline stress relief course and/or paveme scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both pavement edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and all maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smooth bridge. Design a smooth profile grade and cross slopes to provide a smooth bridge. Design a smooth profile grade and crose slopes to provide a smooth bridge and vertical curves. 	 a. General, 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavemer other locations necessary to characterize existing profile and cross slope. Obtain elevations slope to provide a smooth transition, free of bumps and dips, from the new pa to the existing pavement or bridge. Notify the Engineer when a smooth profile canner provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, b) Obtain elevations of existing pavement at centerline and both pavement edges bonded overlays and projects including mainline stress relief course and/or paves scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both pedges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections a maximum 25 foot intervals on horizontal and vertical curves; e) Using these elevations, design a profile grade and cross slopes to provide a strest transition, free of bumps and dips, from the new pavement to the existing pavement or thickness as detailed in the contract documents. Notify the Engineer when a strest provide a strest relief. 	HM a. b.	A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.).
 a. General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, an other locations necessary to characterize existing profile and cross slope. Obtain elevation at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, a, 1. b) Obtain elevations of existing pavement at centerline and both pavement edges for bonded overlays and projects including mainline stress relief course and/or pavement edges for unbended overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. c) Obtain elevations at maximum 50 foot intervals on straight and level sections and at maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smooth bridge. Design a smooth profile grade and vertical curves. 	 a. General, 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavemer other locations necessary to characterize existing profile and cross slope. Obtain elevations slope to provide a smooth transition, free of bumps and dips, from the new pa to the existing pavement or bridge. Notify the Engineer when a smooth profile canner provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, b) Obtain elevations of existing pavement at centerline and both pavement edges bonded overlays and projects including mainline stress relief course and/or paves scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both pedges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections a maximum 25 foot intervals on horizontal and vertical curves; e) Using these elevations, design a profile grade and cross slopes to provide a strest transition, free of bumps and dips, from the new pavement to the existing pavement or thickness as detailed in the contract documents. Notify the Engineer when a strest provide a strest relief. 	HM a. b. c.	A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.). Obtain the Engineer's approval for the method used to reference points.
 Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, an other locations necessary to characterize existing profile and cross slope. Obtain elevation at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. When a new profile grade is not included in the contract documents: Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, a, 1. Obtain elevations of existing pavement at centerline and both pavement edges for bonded overlays and projects including mainline stress relief course and/or pavement scarification. Obtain elevations of existing pavement at centerline, quarter points, and both pavement edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. Obtain elevations at maximum 50 foot intervals on straight and level sections and at maximum 25 foot intervals on horizontal and vertical eurves. Using these elevations, design a profile grade and vertical eurves. Using these elevations, design a profile grade and recises to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement or shout thickness as detailed in the contract documents. Notify the Engineer when a smooth profile grade line to provide the required pavement or shout thickness as detailed in the contract documents. Notify the Engineer when a smooth profile senter. 	 Obtain elevations of adjacent pavement and bridges at centerline, edge of pavemer other locations necessary to characterize existing profile and cross slope. Obtain ele at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade cross slope to provide a smooth transition, free of bumps and dips, from the new pa to the existing pavement or bridge. Notify the Engineer when a smooth profile canne provided. Submit final elevations to the Engineer before paving begins. When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, b) Obtain elevations of existing pavement at centerline and both pavement edges bonded overlays and projects including mainline stress relief course and/or pav scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both p edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections at maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a sm transition, free of bumps and dips, from the new pavement to the existing paver bridge. Design a smooth profile grade line to provide the required pavement or thickness as detailed in the contract documents. Notify the Engineer when a sm profile cannot be provided. Submit final elevations to the Engineer before pavin begins. 	HM a. b. c.	A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.). Obtain the Engineer's approval for the method used to reference points.
 other locations necessary to characterize existing profile and cross slope. Obtain elevation at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, a, 1. b) Obtain elevations of existing pavement at centerline and both pavement edges for bonded overlays and projects including mainline stress relief course and/or pavement scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both pavement edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and at maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement or shou thickness as detailed in the contract documents. Notify the Engineer when a smooth profile grade in the contract document to the existing pavement or shou thickness as detailed in the contract documents. Notify the Engineer before paving begins. 	 other locations necessary to characterize existing profile and cross slope. Obtain eleat maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade cross slope to provide a smooth transition, free of bumps and dips, from the new pat to the existing pavement or bridge. Notify the Engineer when a smooth profile canner provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, b) Obtain elevations of existing pavement at centerline and both pavement edges bended overlays and projects including mainline stress relief course and/or pavescarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both predges for unbonded overlays and whitetopping projects when a stress relief course and/or pavescarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections at maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smaximum 25 foot provide a smaximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smaximum 25 foot provide a smaximum 26 foot provide a smaximum 26 foot provide a smaximum 26 foot provide a smaximum 50 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smaximum 25 foot prov	a. b. c.	A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.). Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete.
 at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, a, 1 b) Obtain elevations of existing pavement at centerline and both pavement edges for bonded overlays and projects including mainline stress relief course and/or paveme scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both paver edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and ar maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement bridge. Design a smooth profile grade line to provide the required pavement or shot thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving 	 at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade cross slope to provide a smooth transition, free of bumps and dips, from the new pato the existing pavement or bridge. Notify the Engineer when a smooth profile canner provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, b) Obtain elevations of existing pavement at centerline and both pavement edges bonded overlays and projects including mainline stress relief course and/or pavescarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both paves edges for unbonded overlays and whitetopping projects when a stress relief course and/or paves and/or pavescarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections at maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a stress ration, free of bumps and dips, from the new pavement to the existing pavement or thickness as detailed in the contract documents. Notify the Engineer when a stress relief pavement or thickness as detailed in the contract documents. a) Reference and preserve existing control points located at each Point of Intersection 	a. b. c.	A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.). Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. C Overlays General.
 cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, a, 1 b) Obtain elevations of existing pavement at centerline and both pavement edges for bonded overlays and projects including mainline stress relief course and/or paveme scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both pavere edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and a maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement bridge. Design a smooth profile grade line to provide the required pavement or shout thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 	 cross slope to provide a smooth transition, free of bumps and dips, from the new pato the existing pavement or bridge. Notify the Engineer when a smooth profile canner provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, b) Obtain elevations of existing pavement at centerline and both pavement edges bonded overlays and projects including mainline stress relief course and/or paves scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections at maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smooth profile cannot be provided. Submit final elevations to the Engineer when a smooth profile grade and cross slopes to provide a smooth profile grade in the contract documents. Notify the Engineer when a smooth profile grade and cross slopes to provide a smooth profile grade line to provide the required pavement or thickness as detailed in the contract documents. Notify the Engineer when a smooth profile grade line to provide the required pavement or thickness as detailed in the contract documents. Notify the Engineer when a smooth profile grade line to provide the required pavement or thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before pavin begins. 	a. b. c.	A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.). Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. C Overlays General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, ar
 to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, a, 1 b) Obtain elevations of existing pavement at centerline and both pavement edges for bonded overlays and projects including mainline stress relief course and/or paveme scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both pavement edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and a maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement or shot thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 	 to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, b) Obtain elevations of existing pavement at centerline and both pavement edges bonded overlays and projects including mainline stress relief course and/or pav scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both p edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections at maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a sm transition, free of bumps and dips, from the new pavement to the existing pavement or thickness as detailed in the contract documents. Notify the Engineer when a sm profile cannot be provided. Submit final elevations to the Engineer before paving begins. 3) Reference and preserve existing control points located at each Point of Intersection 	a. b. c.	 A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.). Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. C Overlays General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevati
 provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, a, 1 b) Obtain elevations of existing pavement at centerline and both pavement edges for bonded overlays and projects including mainline stress relief course and/or paveme scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both pavere edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and a maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement or shot thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 	 provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, b) Obtain elevations of existing pavement at centerline and both pavement edges bonded overlays and projects including mainline stress relief course and/or pav scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both p edges for unbonded overlays and whitetopping projects when a stress relief courand/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections at maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a sm transition, free of bumps and dips, from the new pavement to the existing pavement or thickness as detailed in the contract documents. Notify the Engineer when a sn profile cannot be provided. Submit final elevations to the Engineer before paving begins. a) Reference and preserve existing control points located at each Point of Intersection 	a. b. c.	 A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.). Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. C Overlays General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevati at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and
 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, a, 1 b) Obtain elevations of existing pavement at centerline and both pavement edges for bended overlays and projects including mainline stress relief course and/or pavemet scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both pavere edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and a maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement or shot thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 	 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, b) Obtain elevations of existing pavement at centerline and both pavement edges bonded overlays and projects including mainline stress relief course and/or pav scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both p edges for unbonded overlays and whitetopping projects when a stress relief cor and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections at maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a sm transition, free of bumps and dips, from the new pavement to the existing pavement or thickness as detailed in the contract documents. Notify the Engineer when a sn profile cannot be provided. Submit final elevations to the Engineer before pavin begins. 3) Reference and preserve existing control points located at each Point of Intersection 	a. b. c.	 A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.). Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. C Overlays General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevati at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem
 a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, a, 1 b) Obtain elevations of existing pavement at centerline and both pavement edges for bended overlays and projects including mainline stress relief course and/or paveme scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both paver edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and a maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement bridge. Design a smooth profile grade line to provide the required pavement or shou thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 	 a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, b) Obtain elevations of existing pavement at centerline and both pavement edges bonded overlays and projects including mainline stress relief course and/or pav scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both p edges for unbonded overlays and whitetopping projects when a stress relief cor and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections at maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a sm transition, free of bumps and dips, from the new pavement to the existing pavement or thickness as detailed in the contract documents. Notify the Engineer when a sm profile cannot be provided. Submit final elevations to the Engineer before pavin begins. a) Reference and preserve existing control points located at each Point of Intersection 	a. b. c.	 A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.). Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. C Overlays General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevati at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be
 b) Obtain elevations of existing pavement at centerline and both pavement edges for bonded overlays and projects including mainline stress relief course and/or paveme scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both paver edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and a maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement bridge. Design a smooth profile grade line to provide the required pavement or shou thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 	 b) Obtain elevations of existing pavement at centerline and both pavement edges bended overlays and projects including mainline stress relief course and/or pave scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both pedges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections at maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a sm transition, free of bumps and dips, from the new pavement to the existing paver bridge. Design a smooth profile grade line to provide the required pavement or thickness as detailed in the contract documents. Notify the Engineer when a sm profile cannot be provided. Submit final elevations to the Engineer before pavin begins. 8) Reference and preserve existing control points located at each Point of Intersection 	a. b. c.	 A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.). Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. C Overlays General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevati at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins.
 bonded overlays and projects including mainline stress relief course and/or pavement scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both paveredges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and a maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement bridge. Design a smooth profile grade line to provide the required pavement or shot thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 	 bonded overlays and projects including mainline stress relief course and/or pav scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both p edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections at maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a sm transition, free of bumps and dips, from the new pavement to the existing pavement or thickness as detailed in the contract documents. Notify the Engineer when a sn profile cannot be provided. Submit final elevations to the Engineer before pavin begins. 3) Reference and preserve existing control points located at each Point of Intersection 	a. b. c.	 A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.). Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. C Overlays General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevati at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents:
 scarification. Obtain elevations of existing pavement at centerline, quarter points, and both paveredges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. Obtain elevations at maximum 50 foot intervals on straight and level sections and a maximum 25 foot intervals on horizontal and vertical curves. Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement bridge. Design a smooth profile grade line to provide the required pavement or shot thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 	 scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both p edges for unbonded overlays and whitetopping projects when a stress relief corand/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections at maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a sm transition, free of bumps and dips, from the new pavement to the existing pavement or bridge. Design a smooth profile grade line to provide the required pavement or thickness as detailed in the contract documents. Notify the Engineer when a sm profile cannot be provided. Submit final elevations to the Engineer before pavin begins. 3) Reference and preserve existing control points located at each Point of Intersection 	a. b. c.	 A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.). Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. C Overlays General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevati at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents; a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, a, 1
 c) Obtain elevations of existing pavement at centerline, quarter points, and both paveredges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and a maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement bridge. Design a smooth profile grade line to provide the required pavement or shot thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 	 c) Obtain elevations of existing pavement at centerline, quarter points, and both p edges for unbonded overlays and whitetopping projects when a stress relief corand/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections at maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a sm transition, free of bumps and dips, from the new pavement to the existing paver bridge. Design a smooth profile grade line to provide the required pavement or thickness as detailed in the contract documents. Notify the Engineer when a sm profile cannot be provided. Submit final elevations to the Engineer before pavin begins. 3) Reference and preserve existing control points located at each Point of Intersection 	a. b. c.	 A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.). Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. C Overlays General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevati at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, a, 1 b) Obtain elevations of existing pavement at centerline and both pavement edges for
 edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and a maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement bridge. Design a smooth profile grade line to provide the required pavement or shot thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 	 edges for unbonded overlays and whitetopping projects when a stress relief con and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections at maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a sm transition, free of bumps and dips, from the new pavement to the existing paver bridge. Design a smooth profile grade line to provide the required pavement or thickness as detailed in the contract documents. Notify the Engineer when a sm profile cannot be provided. Submit final elevations to the Engineer before pavin begins. 3) Reference and preserve existing control points located at each Point of Intersection 	a. b. c.	 A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.). Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. C Overlays General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevati at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents; a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, a, 1 b) Obtain elevations of existing pavement at centerline and both pavement edges for bonded overlays and projects including mainline stress relief course and/or pavement
 and/or pavement scarification are not included. Obtain elevations at maximum 50 foot intervals on straight and level sections and a maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement bridge. Design a smooth profile grade line to provide the required pavement or shot thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 	 and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections at maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a sm transition, free of bumps and dips, from the new pavement to the existing paver bridge. Design a smooth profile grade line to provide the required pavement or thickness as detailed in the contract documents. Notify the Engineer when a sn profile cannot be provided. Submit final elevations to the Engineer before pavin begins. 8) Reference and preserve existing control points located at each Point of Intersection 	a. b. c.	 A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.). Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. C Overlays General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevati at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents; a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, a, 1 b) Obtain elevations of existing pavement at centerline and both pavement edges for bonded overlays and projects including mainline stress relief course and/or pavement
 and/or pavement scarification are not included. Obtain elevations at maximum 50 foot intervals on straight and level sections and a maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement bridge. Design a smooth profile grade line to provide the required pavement or shot thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 	 and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections at maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a sm transition, free of bumps and dips, from the new pavement to the existing paver bridge. Design a smooth profile grade line to provide the required pavement or thickness as detailed in the contract documents. Notify the Engineer when a sn profile cannot be provided. Submit final elevations to the Engineer before pavin begins. 8) Reference and preserve existing control points located at each Point of Intersection 	a. b. c.	 A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.). Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. C Overlays General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevati at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, a, 1 b) Obtain elevations of existing pavement at centerline and both pavement edges for bonded overlays and projects including mainline stress relief course and/or pavement scarification.
 d) Obtain elevations at maximum 50 foot intervals on straight and level sections and a maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement bridge. Design a smooth profile grade line to provide the required pavement or shot thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 	 d) Obtain elevations at maximum 50 foot intervals on straight and level sections at maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smartansition, free of bumps and dips, from the new pavement to the existing paver bridge. Design a smooth profile grade line to provide the required pavement or thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before pavin begins. 3) Reference and preserve existing control points located at each Point of Intersection 	a. b. c.	 A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.). Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. C Overlays General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevati at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement at centerline and bridges per Article 2526.03, A, 11, a, 1 b) Obtain elevations of existing pavement at centerline and both pavement edges for bonded overlays and projects including mainline stress relief course and/or pavement edges for unbonded overlays and whitetopping projects when a stress relief course
e) Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement bridge. Design a smooth profile grade line to provide the required pavement or shou thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins.	 e) Using these elevations, design a profile grade and cross slopes to provide a sm transition, free of bumps and dips, from the new pavement to the existing paver bridge. Design a smooth profile grade line to provide the required pavement or thickness as detailed in the contract documents. Notify the Engineer when a sm profile cannot be provided. Submit final elevations to the Engineer before pavin begins. 3) Reference and preserve existing control points located at each Point of Intersection 	a. b. c.	 A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.). Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. C Overlays General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevati at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement at centerline and bridges per Article 2526.03, A, 11, a, 1 b) Obtain elevations of existing pavement at centerline and both pavement edges for bonded overlays and projects including mainline stress relief course and/or pavement edges for unbonded overlays and whitetopping projects when a stress relief course
e) Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement bridge. Design a smooth profile grade line to provide the required pavement or shou thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins.	 e) Using these elevations, design a profile grade and cross slopes to provide a sm transition, free of bumps and dips, from the new pavement to the existing paver bridge. Design a smooth profile grade line to provide the required pavement or thickness as detailed in the contract documents. Notify the Engineer when a sm profile cannot be provided. Submit final elevations to the Engineer before pavin begins. 3) Reference and preserve existing control points located at each Point of Intersection 	a. b. c.	 A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.). Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. C Overlays General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevati at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of existing pavement at centerline and both pavement edges for bonded overlays and projects including mainline stress relief course and/or pavement edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included.
transition, free of bumps and dips, from the new pavement to the existing pavement bridge. Design a smooth profile grade line to provide the required pavement or shou thickness as detailed in the contract documents. Notify the Engineer when a smootl profile cannot be provided. Submit final elevations to the Engineer before paving begins.	transition, free of bumps and dips, from the new pavement to the existing paver bridge. Design a smooth profile grade line to provide the required pavement or thickness as detailed in the contract documents. Notify the Engineer when a sn profile cannot be provided. Submit final elevations to the Engineer before pavin begins. 3) Reference and preserve existing control points located at each Point of Intersection	a. b. c.	 A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.). Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. C Overlays General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevati at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of existing pavement at centerline and both pavement edges for bended overlays and projects including mainline stress relief course and/or paveme scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both paver edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and a maximum 25 foot intervals on horizontal and vertical curves.
bridge. Design a smooth profile grade line to provide the required pavement or shou thickness as detailed in the contract documents. Notify the Engineer when a smoot profile cannot be provided. Submit final elevations to the Engineer before paving begins.	bridge. Design a smooth profile grade line to provide the required pavement or thickness as detailed in the contract documents. Notify the Engineer when a sn profile cannot be provided. Submit final elevations to the Engineer before pavin begins. 3) Reference and preserve existing control points located at each Point of Intersection	a. b. c.	 A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.). Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. C Overlays General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevati at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of existing pavement at centerline and both pavement edges for bended overlays and projects including mainline stress relief course and/or pavement scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both paver edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and a maximum 25 foot intervals on horizontal and vertical curves.
thickness as detailed in the contract documents. Notify the Engineer when a smootl profile cannot be provided. Submit final elevations to the Engineer before paving begins.	thickness as detailed in the contract documents. Notify the Engineer when a sn profile cannot be provided. Submit final elevations to the Engineer before pavin begins. 3) Reference and preserve existing control points located at each Point of Intersection	a. b. c.	 A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.), Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. C Overlays General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevati at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of existing pavement at centerline, quarter points, and both pavement escarification. 6) Obtain elevations of existing pavement at centerline, quarter points, and both pavem edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and a maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smooth
profile cannot be provided. Submit final elevations to the Engineer before paving begins.	profile cannot be provided. Submit final elevations to the Engineer before pavin begins. 3) Reference and preserve existing control points located at each Point of Intersection	a. b. c.	 A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.); Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. C Overlays General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, an other locations necessary to characterize existing profile and cross slope. Obtain elevatiat maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, a, 1 b) Obtain elevations of existing pavement at centerline, quarter points, and both pavement edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. c) Obtain elevations at maximum 50 foot intervals on straight and level sections and a maximum 25 foot intervals on horizontal and vertical curves. b) Obtain elevations at maximum 50 foot intervals on straight and level sections and a maximum 25 foot intervals on projects when a stress relief course and/or pavement and projects when a stress relief course and/or pavement and projects when a stress relief course and/or pavement and projects when a stress relief course and/or pavement and projects when a stress relief course and/or pavement and projects when a stress relief course and/or pavement and projects when a stress relief course and/or pavement and projects when a stress relief course and/or pavement and projects when a stress relief course and/or pavement and projects when a stress r
begins.	begins. 3) Reference and preserve existing control points located at each Point of Intersection	a. b. c.	 A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.); Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. C Overlays General. 1) Obtain elevations of adjacent pavement and bridges at contorline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevatiat at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents; a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, a, 1 b) Obtain elevations of existing pavement at centerline and both pavement edges for bonded overlays and projects including mainline stress relief course and/or pavement edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations of existing pavement at centerline, quarter points, and both pavement edges for bonded overlays and whitetopping projects when a stress relief course and/or pavement edges for bonded overlays and projects included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and a maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement bridge. Design a smooth profile grade line to provide the required pavement or shot
	3) Reference and preserve existing control points located at each Point of Intersection	a. b. c.	 A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.); Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. C Overlays Genoral, 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevati at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins; 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement at centerline, quarter points, and both pavement edges for unbonded overlays and projects including mainline stress relief course and/or pavement scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both paver edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and a maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement or bridge. Design a smooth profile grade in the contract documents.
3) Reference and preserve existing control points located at each Point of Intersection (PL)	4) Obtain Engineer's approval for method used to reference points.	a. b. c.	 A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.); Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. C Overlays General, 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, an other locations necessary to characterize existing profile and cross slope. Obtain elevati at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, a, 1 b) Obtain elevations of existing pavement at centerline and both pavement edges for bonded overlays and projects including mainline stress relief course and/or paveme scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both pavem edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and al maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement bridge. Design a smooth profile grade line to provide the required pavement or shot thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving
4) Obtain Engineer's approval for method used to reference points.		a. b. c.	 A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.). Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. C Overlays General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevati at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannet be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, a, 1 b) Obtain elevations of existing pavement at centerline and both pavement edges for bonded overlays and projects including mainline stress relief course and/or paveme scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both pavement edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and a maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade in a provide the required pavement or shou thickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving profile cannot be provided. Submit final elevations to the Engineer before paving profile cannot be provided. Submit final elevations to the Engineer before paving profile cannot be provided. Submit final elevations to the Engineer befor
The stand Engineer of approval for method doed to reference points.		a. b. c.	 A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.): Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. C Overlays General, Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, ar other locations necessary to characterize existing profile and cross slope. Obtain elevati at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. When a new profile grade is not included in the contract documents! Obtain elevations of existing pavement at centerline, quarter points, and both pavement escarification. Obtain elevations of existing pavement at centerline, quarter points, and both pavem escarification. Obtain elevations at maximum 50 foot intervals on straight and level sections and at maximum 25 foot intervals on horizontal and vertical scipes to provide a smooth transition, free of bumps and dips, from the new pavem escarification. Using these elevations at maximum 50 foot intervals on straight and level sections and at maximum 25 foot intervals on horizontal and vertical scipes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement or shot thickness as detailed in the contract documents. Notify the Engineer when a smooth profile grade is not included. B) Obtain elevations at maximum 50 foot intervals on straight and level sections and at maximum 25 foot intervals on horizontal and vertical scipes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement bridge. Design a smooth profile grade line to provide the re
		a. b. c.	 A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.). Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. C Overlays General. (1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, an other locations necessary to characterize existing profile and cross slope. Obtain elevatia at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavem to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement and bridges per Article 2526.03, A, 11, a, 1 b) Obtain elevations of existing pavement at centerline, quarter points, and both pavement scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both pavement edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement edges for unbonded overlays on whitetopping projects when a stress relief course and/or pavement edges for intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smooth profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement of the existing pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and all maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to prov
5) Reset Control Points after work is complete.	b Areas Constructed Without AMG:	a. b. c.	 A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.). Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. C Overlays General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, an other locations necessary to characterize existing profile and cross slope. Obtain elevation at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade and cross slope to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of existing pavement at centerline, quarter points, and both pavement edges for bonded overlays and projects including mainline stress relief course and/or pavement scarification are not included. d) Obtain elevations of existing pavement at centerline, quarter points, and both pavement edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations, design a profile grade and cross slopes to provide a semoth transition, free of bumps and dips, from the new pavement to the existing pavement scarification are not included. d) Obtain slevations, design a profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement profile grade and cross slopes to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement profile grade into to provide a smooth transition are not included. d) Obtain elevations of existing pavement at centerline, quarter points, and both pavemen
 Reset Control Points after work is complete. 		a. o. o.	 A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.). Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. C Overlays General. 1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, other locations necessary to characterize existing profile and cross slope. Obtain elevations slope to provide a smooth transition, free of bumps and dips, from the new pavement to the existing pavement or bridge. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer and bridges per Article 252.03, A, 11, a, b) Obtain elevations of existing pavement at centerline, quarter points, and both pavement edges for bonded overlays and projects included in the contract documents. a) Obtain elevations of existing pavement at centerline, quarter points, and both pavement edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations of existing pavement at centerline, quarter points, and both pave edges for unbonded overlays and whitetopping projects when a stress relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smoot transition, free of bumps and dips, from the new pavement to the existing pavement bridge. Design a smooth profile grade and cross relief course and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and maximum 25 foot intervals on horizontal and vertical curves.
		a. b. c.	 A Overlays Reference and preserve existing control points located at each Point of Intersection (P.I.). Obtain the Engineer's approval for the method used to reference points. Reset Control Points after the work is complete. C Overlays General. Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, other locations necessary to characterize existing profile and cross slope. Obtain elev at maximum 10 foot intervals for a minimum of 100 feet. Adjust design profile grade a cross slope to provide a smooth transition, free of bumps and dips, from the new pave to the existing pavement or bridge. Notify the Engineer when a smooth profile cannet provided. Submit final elevations to the Engineer before paving begins. 2) When a new profile grade is not included in the contract documents: a) Obtain elevations of adjacent pavement at centerline, quarter points, and both pavement elevations. c) Obtain elevations of existing pavement at centerline, quarter points, and both pave scarification. c) Obtain elevations of existing pavement at centerline, quarter points, and both pave adjes for unbonded overlays and whitetopping projects when a stress relief cours and/or pavement scarification are not included. d) Obtain elevations at maximum 50 foot intervals on straight and level sections and maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cross slopes to provide a smoot transition, free of bumps and dips, from the new pavement or the oxisting pavement or st hickness as detailed in the contract documents. Notify the Engineer when a smooth profile cannot be provided. Submit final elevations to the Engineer before paving begins. a) Obtain elevations at maximum 50 foot intervals on straight and level sections and maximum 25 foot intervals on horizontal and vertical curves. e) Using these elevations, design a profile grade and cro

		lath. Mark elevations on both sides of pavement at 50 foot intervals on straight and level sections and 55 foot intervals on horizontal and vertical curves. Clearly mark flat with station location, cut
		or fill information, and offset distance to edge of pavement. Include pavement cross slope information in superelevated curves.
		 c. Areas Constructed With AMG: 4) When total stations are used for the AMG paving system, set additional control points at
		maximum 500 foot intervals on each side of pavement. Furnish x,y,z coordinates and station offset information for each point.
		2) Set paving hubs with cut or fill to finish pavement elevation at A, B, C, and D points along
		superelevated curve transitions and at station equation locations. Additional paving hubs will not be required for mainline pavement.
		12. Structural Walls.
		 a. Survey requirements for structural walls includes the following work types: 1) Mechanically Stabilized Earth (MSE) Walls. 2) Cast in Place (CIP) Retaining Walls. 3) Soil Nail Walls. 4) Tie Back Walls. 5) Noise Walls.
		6) Modular Block Retaining Walls.7) Segmental Retaining Walls.
		 b. Mark locations and elevations with a metal pin or a wood hub, flat, and lath. Clearly mark the flat with the station location, cut/fill elevation, and offset distance to face of wall.
	В.	Submit the method used to preserve project control to the Engineer for approval. Format the survey work
		documentation in a manner acceptable to the Engineer. Ensure monument preservation work is completed by a Professional Land Surveyor licensed in the State of Iowa in responsible charge, according to the provisions of Iowa Code 542B. Ensure all other survey work is completed by a Professional Engineer licensed in the State of Iowa in responsible charge, according to the State of Iowa in responsible charge, according to the provisions of Iowa Code 542B. Ensure all other survey work is completed by a Professional Engineer licensed in the State of Iowa in responsible charge, according to the provisions of Iowa Code 542B. Submit a resume to the Engineer identifying the field survey personnel and their capabilities to perform the intended requirements.
	C.	Obtain the Engineer's approval for the method of determining alignments and elevations and the method of preserving control points. This approval does not act to relieve the Contractor of the responsibility for the correctness of the survey work. Do not use plan cross-sections for vertical or horizontal control.
	Ð.	The Engineer will provide bench mark elevations, right of way corners, and reference control points on the contract documents. A GeoPak alignment will be provided if available.
	E.	Check tie-ins with existing roadways for correctness of alignment prior to construction staking.
	F.	When survey work is done under traffic, detail sheets in the contract documents will establish the required signing.
	G.	Establish benchmarks in the adjacent area before installing settlement plates in accordance with Article 2526.03, A, 1, d.
		 Obtain Engineer's approval for method of determining alignments and elevations and the method of preserving control points. This approval does not relieve Contractor of the responsibility for correctness of survey work.
		 Do not use plan cross-sections for vertical or horizontal control. The Engineer will locate and determine elevations of settlement plates.
	H.	Replace land corners and permanent reference markers unless stated otherwise in the contract documents.
I.		All survey work documentation becomes the property of the Contracting Authority. Assemble all required documentation into a single electronic package upon completion of the project and furnish to the Engineer. The work of this specification will be considered finished complete when the following required documentation is furnished to and accepted by the Engineer.

1. ASCII comma delineated file of the coordinates formatted as (Point Number, Northing, Easting, Elevation, Point Description, Feature). Identify coordinate system used. Monument preservation certificates 10. Secondary control monument coordinates including traverse check 11. Reference monument drawings 12. Benchmark coordinates 13. Required DTMs 14. Bridge and box culvert staking diagrams 15. Final profile grades J. For the purpose of subcontracting, this item will be considered a specialty item. 2526.04 METHOD OF MEASUREMENT. None. Lump sum item. 2526.05 BASIS OF PAYMENT. D. Payment for Construction Survey will be paid for at the lump sum contract price. E. Payment is full compensation for the survey work required for the project as let, including any interpolations that may be necessary between cross-section and field staking. F. Payment for revisions after the letting will be paid for according to Article 1109.03, B. Reason for Revision: To update the spec. to reflect new monument preservation legislation. Revisions also clarify submittal requirements at project completion. New Bid Item Required (X one) Yes No X **Bid Item Modification Required (X one)** Yes No X

 Bid Item Modification Required (X one)
 Yes
 No

 Bid Item Obsoletion Required (X one)
 Yes
 No

 Comments:
 X

County or City Comments:

Industry Comments: This was sent to AGC prior to submittal. They were generally OK with the proposed changes, but they do have some issues with the independent check language. They had a few suggestions to modify the proposed changes. Some suggested modifications were included.



Submitted by: Tom Reis / Eric Johnsen			Office: Specifications	6	ltem 5			
Submittal Date	e: 2016.04.25		Proposed Effective I	Date: Octob	ber 18, 2016			
Article No.:	2554.04, A nd Fittings 2554.05, A nd Fittings		Other:					
Specification	Committee Action:		-					
Deferred:	Not Approved:	Approve	d Date:	Effective [Date:			
Specification	Committee Approved	Text:						
Comments:								
Replace Art Water S Add the Arti 5. Wat a. b.	 2554.04, A, Pipe and Fittings. Replace Article 4 title: Water Service Stubs by Each. Add the Article: 5. Water Service Stubs by Length. a. Water Service Pipe. Each type and size of water service pipe will be measured in linear feet along the centerline of the pipe. b. Water Service Corporation. Each type and size of water service corporation will be counted. c. Water Service Curb Stop and Box. Each type and size of water service curb stop and box will be counted. 							
 Replace Article 4 title: Water Service Stubs by Each. Add the Article: 5. Water Service Stubs by Length. a. Water Service Pipe. Payment will be the contract unit price per linear foot for each type and size of water service stub. b. Water Service Corporation. Payment will be made at the contract unit price for each type and size of water service corporation. C. Water Service Curb Stop and Box. Payment will be made at the contract unit price for each type and size of water service curb stop and box. 								
Comments:		at the contra	ct unit price for each type	and size of w	ater service curb stop			

Member's Requested Change: (Do not use ' <u>Track Changes'</u> , or ' <u>Mark-Up'</u> . Use Strikeout and Highlight.)					
Reason for Revision: To match SUDAS. Some designers requested the option to bid water service stubs by length instead of each.					
New Bid Item Required (X one)	Yes X	No			
Bid Item Modification Required (X one)	Yes	No X			
Bid Item Obsoletion Required (X one)	Yes	No X			
Comments:					
County or City Comments:					
Industry Comments:					



Submitted by:	Brian Smith		Office: Design		ltem 6			
Submittal Date: 3/22/2016			Proposed Effective Date: 10/18/2016					
Article No.: 2601.03 Other:								
Title: Placen	Title: Placement of Erosion Control							
Specification	Specification Committee Action:							
Deferred:	Not Approved:	Approve	d Date:	Effective D)ate:			
Specification	Committee Approved	Text:						
Comments:								
 Specification Section Recommended Text: 2601.03, A, Equipment. Add the Article: Drop Seeder. One piece of equipment containing the following: Pulverizer rollers in front of the seed tubes. Ground driven seed meters. Max seed tube spacing of 3 inches delivering seed between the pulverizer rollers and packer wheels. Packer wheels pressing and firmly packing seed into the soil. 2601.03, B, 4, c, 1. Replace the Article: For Sseed mixing, shall meet comply with the requirements of Materials 1.M. 469.02. Use Ppermanent rural, permanent urban, urban stabilizing, salt tolerant seeding, Native Grass, Wetland Grass, and Wildflower seeding mixtures shall be mixed off-site by a seed conditioner approved by the Iowa Crop Improvement Association or other state's Crop Improvement Association. 2601.03, C, 3, a, 3. Replace the first sentence: In areas with existing stabilized crop residue, apply seed with a native grass seed drill with a no till attachment through the small seed box slit seeder. 2601.03, C, Types of Seeding. Add the Article: 9. Salt Tolerant Seeding. a. Preparation and Application. f) Prepare seed according to Article 2601.03, B, 4, c. 								
 2) Prepare seedbed according to Article 2601.03, B, 4, a, and apply seed according to Article 2601.03, B, 4, d using only a drop seeder according to Article 2601.03, A, 19. b. Seed Mixture. Use seeding rates in Table 2601.03-7 for permanent seeding of rural areas, unless otherwise 								
	specified in the contract							
	Alkali gra		3-7: Salt Tolerant Seed Rate 109 lbs. per acre	S				

Turf-type Tall Fescue ¹	109 lbs. per acre			
Perennial ryegrass	66 lbs. per acre			
Crested wheatgrass	66 lbs. per acre			
Hard fine fescue 44 lbs. per acre				
Sheep fine fescue 44 lbs. per acre				
1. Turf-type Tall Fescue will contain a minimum 36 lbs. of				
each cultivar Inferno and Quest.				

c. Fertilizing.

- 1) Spread over the areas at the rate of 300 pounds per acre of 6-24-24 (or equivalent).
- 2) Apply provisions of Article 2601.03, B, 4, b.
- d. Application Dates.
 - Normal permanent seed application dates are March 1 through May 31, and August 10 through September 30.

Comments: Do we need to add a bid item for Salt Tolerant Seeding?

Member's Requested Change: (Do not use '<u>Track Changes'</u>, or '<u>Mark-Up'</u>. Use Strikeout and Highlight.)

2601.03, A, 19, Drop Seeder.

Add as a new article:

One piece of equipment that contains the following:

- Pulverizer rollers in from of the seed tubes.
- Ground driven seed meters.
- Max seed tube spacing of three inches that delivers seed between the pulverizer rollers and the packer wheels.
- Packer wheels that press and firmly pack seed into the soil.

2601.03, B, 4, c, 1.

Replace the article:

For Sseed mixing, shall meet comply with the requirements of Materials I.M. 469.02. Use Ppermanent rural, permanent urban, urban stabilizing, salt tolerant seeding, Native Grass, Wetland Grass, and Wildflower seeding mixtures shall be mixed off-site by a seed conditioner approved by the Iowa Crop Improvement Association or other state's Crop Improvement Association.

2601.03, C, 3, a, 3.

Replace the first sentence:

In areas with existing stabilized crop residue, apply seed with a native grass seed drill with a no till attachment through the small seed box slit seeder.

2601.03, C, 9, Salt Tolerant Seeding.

Add as a new article:

a. Preparation and Application.

- 1) Prepare seed according to Article 2601.03, B, 4, c.
- 2) Prepare seedbed according to Article 2601.03, B, 4, a, and apply seed according to Article 2601.03, B, 4, d using only a drop seeder according to Article 2601.03, A, 19.

b. Seed Mixture.

Use seeding rates in Table 2601.03-7 for permanent seeding of rural areas, unless otherwise specified in the contract documents:

Table 2601.03-7: Salt Tolerant Seed Mix

	Alkali grass		109 lbs/acre			
Turf-type Tall Fescue ¹		e ¹	109 lbs/acre			
	Perennial ryegrass		66 lbs/acre			
	Crested wheatgrass		66 lbs/acre			
Hard fine fescue			44 lbs/acre			
	Sheep fine fescue		44 lbs/acre			
	 Turf-type Tall I 36 lbs of each 		ill contain a mini nferno and Quest			
 c. Fertilizing. 1) Spread over the areas at the rate of 300 pounds per acre of 6-24-24 (or 						
	ivalent).	ne rate or	300 pounds per a		4-24 (01	
, ,,	ly provisions of Article	2601.03,	B, 4, b.			
d. Applica						
	Normal permanent seed application dates are March 1 through May 31, and August 10 through September 30.					
Reason for Revision: Add in specifications for drop seeders. Change specifications for rural seeding to require applying seed using a slit seeder rather than a native grass seed drill. Add in specifications for salt tolerant seeding.						
New Bid Item Required	(X one)	Yes		No X		
Bid Item Modification F	Yes		No X			
Bid Item Obsoletion Re	Yes		No X			
Comments:						
County or City Comments:						
Industry Comments:						



SPECIFICATION REVISION SUBMITTAL FORM

Submitted by	: Greg Mulder		Office: Construction	& Materials	Item 7	
Submittal Date: March 30, 2016			Proposed Effective Date: October 2016			
Article No.:	4108.01		Other:			
Title: Fly As	h					
Specification	Committee Action:	-				
Deferred:	Not Approved:	Approve	d Date:	Effective Date:		
Specification	Committee Approved	l Text:				
Comments:						
Specification	Section Recommend	ed Text:				
4108.01, Fly /	Ash.					
	he Article and title: SH AND NATURAL P	OZZOLAN	S.			
A. Comply with AASHTO M 295, either Class N, Class F or Class C, except the value of available total equivalent alkalies is are not to exceed 1.50% 3.80% as determined by Materials I.M. 491.17. Sources with fly ash between 1.5% and 2.5% available alkalies may be approved based on satisfactory results of the mortar bar expansion test specified in Materials I.M. 491.17. For Class C fly ash, the pozzolanic activity test with lime will not be required.						
	B. When Class F is required, a Class C fly ash with minimum total oxides (SiO ₂ + Al ₂ O ₃ + Fe_2O_3) of 66% and minimum SiO ₂ of 38% may be used.					
C. Approval of the source of fly ash will be required. This is to be based on fly ash produced when the power plant is using specific materials, equipment, and processes. Any change in materials, equipment, and processes voids the source approval, and a new approval of the source will be required. Initial approval of Class N pozzolans will be based on meeting the additional requirements of <u>Materials I.M. 491.17</u>						
D. Inspection and acceptance of fly ash and natural pozzolans will be according to Materials I.M. 491.17.						
Comments:						
Member's Requested Change: (Do not use ' <u>Track Changes'</u> , or ' <u>Mark-Up'</u> . Use Strikeout and Highlight.)						
4108.01 FLY ASH AND NATURAL POZZOLANS.						
 A. Comply with AASHTO M 295, either Class N, Class F or Class C, except the value of available total equivalent alkalies is are not to exceed 1.50% 3.80% as determined by Materials I.M. 491.17. Sources with fly ash between 1.5% and 2.5% available alkalies may be approved based on satisfactory results of the mortar bar expansion test specified in Materials I.M. 491.17. For Class C fly ash, the pozzolanic activity test with lime will not be required. 						

B. When Class F is required, a Class C fly ash with minimum total oxides (SiO₂ + Al₂O₃ + Fe₂O₃) of 66% and

minimum SiO₂ of 38% may be used.

- **C.** Approval of the source of fly ash will be required. This is to be based on fly ash produced when the power plant is using specific materials, equipment, and processes. Any change in materials, equipment, and processes voids the source approval, and a new approval of the source will be required. Initial approval of Class N pozzolans will be based on meeting the additional requirements of <u>Materials I.M. 491.17</u>
- D. Inspection and acceptance of fly ash and natural pozzolans will be according to Materials I.M. 491.17.

Reason for Revision: Changing from available alkali to total equivalent alkali was based research from ISU research project TR-628. The available alkali test takes 28 days to run and currently is only determined using a formula based on equivalent alkali result. Research showed the level could be set based on the total equivalent alkali test.

A new source, produced with natural pozzolans, is being developed by an lowa company. The natural pozzolan can be used to reduce permeability and increase durability for HPC bridges and other concrete items.

New Bid Item Required (X one)	Yes	No x			
Bid Item Modification Required (X one)	Yes	No x			
Bid Item Obsoletion Required (X one)	Yes	No x			
Comments:					
County or City Comments:					
Industry Comments:					



Submittal Date: 4/28/2016 Proposed Effective Date: October 2016 Article No:: 4137.01 Other: Title: General Requirements (Asphalt Binder) Other: Specification Mot Approved: Approved Date: Effective Date: Specification Commente: Effective Date: Effective Date: Specification Commente: E Vot Approved: Effective Date: Specification Section Recommended Text: Effective Date: Effective Date: Add the Article: E. Wave stress sensitivity limits (Junc Diff) for AASHTO M 332 when Junc at 3.2 kPa is below 0.5 kPa-1 Add the Article: E. Wave stress sensitivity limits (Junc Diff) for AASHTO M 332 when Junc at 3.2 kPa is below 0.5 kPa-1 4137.01 GENERAL REQUIREMENTS. E Strikeout and Highlight. E. Waive stress sensitivity limits (Junc Diff) for AASHTO M332 when Junc at 3.2 kPa is below 0.5 kPa-1 Affer Stress sensitivity limits (Junc Diff) for AASHTO M332 when Junc at 3.2 kPa is below 0.5 kPa-1 No X Bid Item Modification Required (X one) Yes No X Bid Item Modification Required (X one) Yes	Submitted by: Greg Mulder		Office: Construction and Materials Item 8					
Title: General Requirements (Asphalt Binder) Shart Specification Committee Action: Effective Date: Deferred: Not Approved: Approved Date: Effective Date: Specification Committee Approved Text: Comments: Specification Section Recommended Text: Specification Section Recommended Text: 4137.01, General Requirements. Add the Article: E. Waive stress sensitivity limits (Jnr Diff) for AASHTO M 332 when Jnr at 3.2 kPa is below 0.5 kPa ⁻¹ . Comments: Comments: Member's Requested Change: (Do not use 'Track Changes', or 'Mark-Up'. Use Strikeout and Highlight.) 4137.01 GENERAL REQUIREMENTS. E. Waive stress sensitivity limits (Jnr Diff) for AASHTO M332 when Jnr at 3.2 kPa is below 0.5 kPa-1 Reason for Changes: The stress sensitivity limits (Jnr Diff) for AASHTO M332 when Jnr at 3.2 kPa is below 0.5 kPa-1 Reason for Changes: The stress sensitivity limits (Jnr Diff) for AASHTO M332 when Jnr at 3.2 kPa is below 0.5 kPa-1 New Bid Item Required (X one) Yes No X Bid Item Modification Required (X one) Yes No X Bid Item Modification Required (X one) Yes No X Bid Item Modification Required (X one) Yes No X Bid Item Obsoletion Required (X one) Yes <	Submittal Date: 4/28/2016		Proposed Effective Date: October 2016					
Deferred:Not Approved:Approved Date:Effective Date:Specification Committee Approved Text:Comments:Specification Section Recommended Text:4137.01, General Requirements.Add the Article:E.Waive stress sensitivity limits (Jnr Diff) for AASHTO M 332 when Jnr at 3.2 kPa is below 0.5 kPa ⁻¹ .Comments:Member's Requested Change: (Do not use 'Track Changes', or 'Mark-Up'. Use Strikeout and Highlight.)4137.01 GENERAL REQUIREMENTS.E.Waive stress sensitivity limits (Jnr Diff) for AASHTO M332 when Jnr at 3.2 kPa is below 0.5 kPa-1Reason for Changes: The stress sensitivity is meaningless for very stiff binders. The CSBG will address this in the future.New Bid Item Required (X one)YesNo XBid Item Modification Required (X one)YesNo XBid Item Obsoletion Required (X one)YesNo XComments:County or City Comments:	Title: General Requirements (Asphalt							
Specification Committee Approved Text: Comments: Specification Section Recommended Text: 4137.01, General Requirements. Add the Article: E. Waive stress sensitivity limits (Jnr Diff) for AASHTO M 332 when Jnr at 3.2 kPa is below 0.5 kPa ⁻¹ . Comments: Member's Requested Change: (Do not use 'Track Changes', or 'Mark-Up'. Use Strikeout and Highlight.) 4137.01 GENERAL REQUIREMENTS. E. Waive stress sensitivity limits (Jnr Diff) for AASHTO M332 when Jnr at 3.2 kPa is below 0.5 kPa-1 Reason for Changes: The stress sensitivity is meaningless for very stiff binders. The CSBG will address this in the future. New Bid Item Required (X one) Yes No X Bid Item Modification Required (X one) Yes No X Bid Item Obsoletion Required (X one) Yes No x Comments: Comments: Comments:	Specification Committee Action:							
Comments: Specification Section Recommended Text: 4137.01, General Requirements. Add the Article: E. Waive stress sensitivity limits (Jnr Diff) for AASHTO M 332 when Jnr at 3.2 kPa is below 0.5 kPa ⁻¹ . Comments: Member's Requested Change: (Do not use 'Track Changes', or 'Mark-Up'. Use Strikeout and Highlight.) 4137.01 GENERAL REQUIREMENTS. E. Waive stress sensitivity limits (Jnr Diff) for AASHTO M332 when Jnr at 3.2 kPa is below 0.5 kPa-1 Reason for Changes: The stress sensitivity is meaningless for very stiff binders. The CSBG will address this in the future. New Bid Item Required (X one) Yes No No Bid Item Obsoletion Required (X one) Yes No Bid Item Obsoletion Required (X one) Yes No x Bid Item Obsoletion Required (X one) Yes No x Comments: County or City Comments:	Deferred:	Not Approved:	Appro	roved Date: Effective Date:				
Specification Recommended Text: 4137.01, General Requirements. Add the Article: E. Waive stress sensitivity limits (Jnr Diff) for AASHTO M 332 when Jnr at 3.2 kPa is below 0.5 kPa ⁻¹ . Comments: Member's Requested Change: (Do not use 'Track Changes', or 'Mark-Up'. Use Strikeout and Highlight.) 4137.01 GENERAL REQUIREMENTS. E. Waive stress sensitivity limits (Jnr Diff) for AASHTO M332 when Jnr at 3.2 kPa is below 0.5 kPa-1 Reason for Changes: The stress sensitivity is meaningless for very stiff binders. The CSBG will address this in the future. New Bid Item Required (X one) Yes No X Bid Item Modification Required (X one) Yes No X Bid Item Obsoletion Required (X one) Yes No X Bid Item Obsoletion Required (X one) Yes No X Bid Item Obsoletion Required (X one) Yes No X Bid Item Obsoletion Required (X one) Yes No X Bid Item Obsoletion Required (X one) Yes No X Bid Item Obsoletion Required (X one) Yes No X Comments:	Specification (Committee Approved	Text:					
4137.01, General Requirements. Add the Article: E. Waive stress sensitivity limits (Jnr Diff) for AASHTO M 332 when Jnr at 3.2 kPa is below 0.5 kPa ⁻¹ . Comments: Member's Requested Change: (Do not use 'Track Changes', or 'Mark-Up'. Use Strikeout and Highlight.) 4137.01 GENERAL REQUIREMENTS. E. Waive stress sensitivity limits (Jnr Diff) for AASHTO M332 when Jnr at 3.2 kPa is below 0.5 kPa-1 Reason for Changes: The stress sensitivity is meaningless for very stiff binders. The CSBG will address this in the future. New Bid Item Required (X one) Yes No X Bid Item Modification Required (X one) Yes No X Bid Item Obsoletion Required (X one) Yes No X Bid Item Obsoletion Required (X one) Yes No X Bid Item Obsoletion Required (X one) Yes No X	Comments:							
Comments: Member's Requested Change: (Do not use 'Track Changes', or 'Mark-Up'. Use Strikeout and Highlight.) 4137.01 GENERAL REQUIREMENTS. E. Waive stress sensitivity limits (Jnr Diff) for AASHTO M332 when Jnr at 3.2 kPa is below 0.5 kPa-1 Reason for Changes: The stress sensitivity is meaningless for very stiff binders. The CSBG will address this in the future. New Bid Item Required (X one) Yes No X Bid Item Modification Required (X one) Yes No X Comments: Ves County or City Comments: Ves	4137.01, General Requirements. Add the Article:							
Member's Requested Change: (Do not use 'Track Changes', or 'Mark-Up'. Use Strikeout and Highlight.) 4137.01 GENERAL REQUIREMENTS. E. Waive stress sensitivity limits (Jnr Diff) for AASHTO M332 when Jnr at 3.2 kPa is below 0.5 kPa-1 Reason for Changes: The stress sensitivity is meaningless for very stiff binders. The CSBG will address this in the future. New Bid Item Required (X one) Yes No X Bid Item Modification Required (X one) Yes No X Bid Item Obsoletion Required (X one) Yes No X Comments: County or City Comments: Ves No X		a'.						
4137.01 GENERAL REQUIREMENTS. E. Waive stress sensitivity limits (Jnr Diff) for AASHTO M332 when Jnr at 3.2 kPa is below 0.5 kPa-1 Reason for Changes: The stress sensitivity is meaningless for very stiff binders. The CSBG will address this in the future. New Bid Item Required (X one) Yes No X Bid Item Modification Required (X one) Yes No X Bid Item Obsoletion Required (X one) Yes No X Comments: County or City Comments: Ves No X								
address this in the future.New Bid Item Required (X one)YesNoXBid Item Modification Required (X one)YesNoXBid Item Obsoletion Required (X one)YesNoXComments:Comments:VesVes	4137.01 GENERAL REQUIREMENTS.E. Waive stress sensitivity limits (Jnr Diff) for AASHTO M332 when Jnr at 3.2 kPa is below 0.5							
Bid Item Modification Required (X one) Yes No Bid Item Obsoletion Required (X one) Yes No Comments: Ves Ves	• • • •							
Bid Item Obsoletion Required (X one) Yes No x Comments:	New Bid Item Required (X one) Yes No X							
Comments: County or City Comments:	Bid Item Modif	Bid Item Modification Required (X one) Yes No X						
County or City Comments:	Bid Item Obso	Bid Item Obsoletion Required (X one)YesNox						
	Comments:							
Industry Comments: Industry in support	County or City	Comments:						
	Industry Comments: Industry in support							



Submitted by: Brian Smith		Office: Design		ltem 9			
Submittal Date: 3/22/2016		Proposed Effective Date: 10/18/2016					
Article No.: Title: Perime Device	Title: Perimeter and Slope Sediment Control						
Specification Committee Action:							
Deferred:	Not Approved:	Approve	d Date:	Effective D	Date:		
Specification C	Committee Approved	Text:					
Comments:							
•	Section Recommende		rol Device.				
Replace the A. Gen							
1.	 Provide wattles, sediment logs, and filter socks consisting of the following materials wood excelsior fibers, with 80% of the wood excelsior fibers being 6 inches long or longer, contained in a tube of photo degradable fabric or synthetic netting.: a. Wattles: Cereal straw or native grass straw certified by the Iowa Crop Improvement Association or other state's Crop Improvement Associations as Certified Noxious Weed Seed Free Mulch. Wattles with observed seed heads will not be accepted. b. Sediment logs: Wood excelsior fibers with 80% of the wood excelsior fibers being 6 inches long or longer. c. Filter socks: Compost (from an approved source meeting Article 4169.08) wood chips, or mulch. 						
2.	Fill wattles, sediment logs , and filter socks using a mechanical device. Hand filling of wattles, sediment logs , and filter socks will not be allowed.						
3.	 8. Ensure wattles, sediment logs, and filter socks do not contain: A visible admixture of refuse or other physical contaminants, Germination or growth inhibiting factors, or Material toxic to plant growth. 						
4.	 Ensure wattles, sediment logs, and filter socks have waterproof identification tags that: Are printed using permanent ink, and eContaining manufacturer's name and address, and. For wattles and sediment logs, tags shall be Are attached to the inside of the netting of each wattle or sediment log. For filter socks, tags shall be attached to the outside of each sock. 						
5.	Approved perimeter and slope sediment control devices are listed in Materials I.M. 469.10, Appendix E.						

B. Wattles and Sediment Logs.

Meet the following minimum weight requirements:

- 20 inch sediment logs and straw wattles: 3 pounds per foot with tolerance of 0.25 pounds per foot.
- 12 inch sediment logs and straw wattles: 2 pounds per foot with tolerance of 0.25 pounds per foot.
- 9 inch sediment logs and straw wattles: 1 pound per foot with a tolerance of 0.1 pounds per foot.

C. Filter Socks.

Provide filter socks with a maximum 3/8 inch opening.

Comments:

Member's Requested Change: (Do not use '<u>Track Changes'</u>, or '<u>Mark-Up'</u>. Use Strikeout and Highlight.)

4169.12, A, General.

Replace the article:

- 1. Provide wattles, sediment logs, and filter socks consisting of the following materials wood excelsior fibers, with 80% of the wood excelsior fibers being 6 inches long or longer, contained in a tube of photo degradable fabric or synthetic netting.
 - a. Wattles: Cereal straw or native grass straw certified by the Iowa Crop Improvement Association or other state's Crop Improvement Associations as Certified Noxious Weed Seed Free Mulch. Wattles with observed seed heads will not be accepted.
 - b. Sediment logs: Wood excelsior fibers with 80% of the wood excelsior fibers being 6 inches long or longer.
 - c. Filter socks: Compost (from an approved source meeting Article 4169.08) wood chips, or mulch.
- Fill wattles, sediment logs, and filter socks using a mechanical device. Hand filling of wattles, sediment logs, and filter socks will not be allowed.
- 3. Ensure wattles, sediment logs, and filter socks do not contain:
 - A visible admixture of refuse or other physical contaminants,
 - Germination or growth inhibiting factors, or
 - Material toxic to plant growth.
- 4. Ensure wattles, sediment logs, and filter socks have waterproof identification tags that:
 - Are printed using permanent ink, and
 - cContaining the manufacturer's name and address, and. For wattles and sediment logs, tags shall be
 - Are attached to the inside of the netting of each wattle or sediment log. For filter socks, tags shall be attached to the outside of each sock.
- **5.** Approved perimeter and slope sediment control devices are listed in Materials I.M. 469.10, Appendix E.

4169.12, B, Wattles and Sediment Logs.

Replace the title and article:

Wattles and Sediment Logs.

Meet the following minimum weight requirements:

- 20 inch sediment logs and straw wattles: 3 pounds per foot with tolerance of 0.25 pounds per foot.
- 12 inch sediment logs and straw wattles: 2 pounds per foot with tolerance of 0.25 pounds per foot.
- 9 inch sediment logs and straw wattles: 1 pound per foot with a tolerance of 0.1 pounds per foot.

4169.12, C, Filter Socks.

Delete the article:

Filter Socks.

Provide filter socks with a maximum 3/8 inch opening.

Reason for Revision: Delete wattles and filter socks from the specifications. These products typically aren't applicable to our projects.

New Bid Item Required (X one)	Yes	No X		
Bid Item Modification Required (X one)	Yes	No X		
Bid Item Obsoletion Required (X one)	Yes	No X		
Comments:				
County or City Comments:				
Industry Comments:				