MDT CONSTRUCTION ADMINISTRATION MANUAL (CAM)

APPENDICES



MONTANA
DEPARTMENT OF
TRANSPORTATION

Updated June 2022

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MONTANA
DEPARTMENT OF
TRANSPORTATION

Updated June 2022

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APPENDIX A Construction Checklists

Checklist 105-1 — BRIDGE CONSTRUCTION SURVEY PROCEDURES

		Yes	No	N/A
1.	Check bridge plan dimensions prior to staking.			
2.	Check span lengths and skew angles for horizontal control.			
3.	Review roadway or other plans for construction features possibly affecting layout and structural reference locations.			
4.	Roadway centerline alignment and stationing is as staked in the field.			
5.	Benchmarks shown on plans and those proposed for vertical control establishment are in place and usable.			
6.	 Layout and referencing has been planned to provide work control with required accuracy. 			
7.	Separate field books are used for each major structure, and maintained daily:			
	a. Information to set up staking diagrams and sketches from plan detail sheets has been obtained.			
	b. Separate pages have been used to show overall staking system and structural component detail drawings (avoid crowding information on one page).			
8.	Layout referencing has been completed and field horizontal and vertical control has been checked before construction.			
9.	Roadway and bridge end grades and elevations have been checked to ensure compatibility.			

Checklist 107-1 — MDT EMPLOYEE SAFETY

			Yes	No	N/A
1.	Не	avy Equipment			
	a.	Ensure operators are aware you are in the area by making "eye contact."			
	b.	Never place yourself within the equipment blind spots.			
	C.	Cranes and excavators pivot rapidly. Stay away from the rear of these machines to avoid crushing danger.			
	d.	Never board moving equipment.			
	e.	Yield right-of-way to heavy equipment. It cannot stop fast.			
	f.	Stay away from elevated equipment buckets.			
	g.	Avoid being under loads being lifted or swung by cranes.			
	h.	Do not closely follow haul units as material may fall from equipment.			
	i.	Pay attention to hoisted loads, and be prepared to move if need be.			
	j.	Be aware of piles (or pile leads) being lifted any time you are within the radius of a falling pile.			
	k.	Be aware of pinch points associated with articulating equipment.			
2.	Tre	enches			
	a.	Never stand next to the edge of a trench.			
	b.	Be aware of overhead dangers such as backhoe buckets or material being lowered into trench.			
	C.	Ensure proper barrier systems are in place around open trenches/excavations during periods of no work.			
	d.	Ensure materials spoils or stockpiles are set back from the trench a proper distance.			
	e.	Never enter a trench showing signs it may cave in.			
	f.	Monitor for gases in trenches.			
	g.	Make someone aware of your entrance into a trench.			
	h.	Are support systems in place? For example:			
		+ A stairway, ladder with rails extending a minimum of 3 ft above ground (see OSHA Std. 29 CFR 1926.1053(b)(1)), or other safe means of egress must be provided if excavations 4 or more feet deep require trench workers to travel 25 lateral feet to exit the trench.			

			Yes	No	N/A
		+ Trenches 5 or more ft deep and not sloped or benched, must have an approved support system provided and equipped with one means of egress within the support system (see OSHA Std. 29 CFR 1926.650 and 1926.651).			
3.	Cru	ushers and Hot Plants			
	a.	Watch for heavy equipment.			
	b.	Watch for overhead hazards.			
	C.	Stay clear of moving parts within crushers and hot plants.			
	d.	Watch for falling rock.			
	e.	Exercise caution around hot materials such as bituminous asphalt, plant mix, and hot items in test trailers.			
	f.	Be aware of hazardous chemicals such as hydrated or quick lime.			
	g.	Stay back from valves, fittings and couplings which may fail and spray hot, hazardous materials.			
	h.	Be aware of electrical connections.			
	i.	Watch for trip hazards.			
4.	Ro	adway			
	a.	Work within the traffic control zone.			
	b.	Park vehicles in a safe area.			
	C.	Use flashing lights on vehicles when in the work zone.			
	d.	Watch out for fellow employees. Work as a team.			
	e.	Be aware of projectile rock.			
	f.	Before stepping into a traveled way, look both ways even for one way lanes.			
5.	Ha at:	rd Hats/High-Visibility Vests/Other Personal Protective Equipment; Mandatory			
	a.	Any highway construction or maintenance project.			
	b.	Any work activity where the authoritative jurisdiction requires hard hats be worn by all personnel, including observers.			
	C.	Work activities outside a vehicle for any purpose within the highway right-of-way.			
	d.	Within areas where falling or flying objects can reasonably be expected.			

Checklist 107-2 — EEO DOCUMENTATION TO PROJECT FILE

		Yes	No	N/A
1.	Current Contractor and Subcontractor discrimination complaint procedure and complaint form copies.			
2.	Contractor and Subcontractor on-site EEO meeting minutes.			
3.	Approved training program information copies, if applicable.			
4.	Monthly training report, supporting time card and Diary note copies, if applicable.			
5.	Spot check interview form copies (LC-1).			
6.	Diary notes or comments documenting dates the bulletin board was last checked.			
7.	Contractor and subcontractor payroll and payroll check sheet copies are attached.			
8.	Submission of Commercially Useful Function (CUF) Reports (Federally funded projects only).			

Checklist 107-3 — BULLETIN BOARD

		Yes	No	N/A
1.	Current year company policy statement identifying EEO Officer.			
2.	Current company discrimination complaint procedures (On company letterhead, signed by a management level official, and currently)			
3.	Discrimination complaint form			
4.	Dual employment poster			
5.	EEO is the law poster			
6.	Davis Bacon poster			
7.	False statements poster (formerly "Notice" Poster)?			
8.	FHWA 1273			
9.	FMLA - if 50 or more employees are employed			
10.	OSHA – "It's the Law" poster			
11.	Employee Polygraph Protection Act			
12.	USDOT Hotline - DBE			
13.	USERRA - Uniformed Services Employment and Reemployment Rights Act?			
14.	Whistle Blower - Know your rights poster?			
15.	Contract specific wage rates?			

Note: Check for changes/latest updates at:

http://www.mdt.mt.gov/publications/docs/forms/dbe/eeo_board/eeo_bulletin_board_checklist.pdf

Checklist 107-4 — EEO TRAINING

		Yes	No	N/A
1.	Contractor submitted training program information before beginning work.			
2.	Project Manager reviewed the program and submitted a recommendation for approval or non-approval to Civil Rights Bureau.			
3.	Project Manager has been notified of Civil Rights Bureau approval, a copy of which is in the project file.			
4.	Project Manager notified the Civil Rights Bureau in writing within seven days when a trainee begins work.			
5.	Project Manager or Inspector observed the trainee twice daily to assure behavior in accordance with the training program.			
6.	Project Manager compared monthly 7a reports submitted by the Contractor, to payroll hours, time cards and Diary entries, and signed 7a reports. 7a reports can be used as notes to document training programs.			
7.	Physical training provided corresponds to the approved program.			
8.	Work hours correspond to the work type specified by the approved training program.			
9.	Hours correspond to time cards and/or payrolls and Project Manager field notes.			

Checklist 108-1 — PRECONSTRUCTION CONFERENCE CHECKLIST



Preconstruction Meeting

MINUTES	[MEETING DATE] [M	EETING TIMI	E]	[MEETING LOCATION]
PROJECT ID				
PROJECT DESIGNATION				
MEETING ORGANIZER				
NOTE TAKER				
ATTENDEES	See attached sign-in sheet.			
Agenda topics	INTRODUCTION			[PRESENTER]
DISCUSSION				[, ,,202,,,2,,]
CONCLUSIONS				
ACTION ITEMS			PERSON RESPONSIBLE	DEADLINE
[TIME ALLOTTED]	LABOR COMPLIANCE, D	BE & EEO 107	7.01	[PRESENTER]
DISCUSSION				
CONCLUSIONS				
ACTION ITEMS			PERSON RESPONSIBLE	DEADLINE

			orving you with pride
[TIME ALLOTTED]	MCS & MHP CONCERNS 107.01, 107.02 107.08, 107.27	2,	[PRESENTER]
DISCUSSION			
CONCLUSIONS			
		ř	Ţ.
ACTION ITEMS		PERSON RESPONSIBLE	DEADLINE
[TIME ALLOTTED]	UTILITY CONCERNS 105.06, 107.18		[PRESENTER]
DISCUSSION			
CONCLUSIONS			
A CTYON ATTEND		DEDOCAL DECONATOLE	DEADLYNE
ACTION ITEMS		PERSON RESPONSIBLE	DEADLINE
[TIME ALLOTTED]	RAILROAD CONCERNS 107.07		[PRESENTER]
DISCUSSION			
CONCLUSIONS			
ACTION ITEMS		PERSON RESPONSIBLE	DEADLINE



[TIME ALLOTTED]	COUNTY/CITY CONCERNS 107.10		[PRESENTER]
DISCUSSION			
CONCLUSIONS			
ACTION ITEMS		PERSON RESPONSIBLE	DEADLINE
[TIME ALLOTTED]	AIR FORCE CONCERNS 107.01		[PRESENTER]
DISCUSSION			
CONCLUSIONS			
ACTION ITEMS		PERSON RESPONSIBLE	DEADLINE
[TIME ALLOTTED]	TRIBAL CONCERNS 107.01 (PSA & M	ou)	[PRESENTER]
DISCUSSION			
CONCLUSIONS			
·			
ACTION ITEMS		PERSON RESPONSIBLE	DEADLINE

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[TIME ALLOTTED]	RIGHT OF WAY CONCERNS 107.19		[PRESENTER]
DISCUSSION			
CONCLUSIONS			
ACTION ITEMS		PERSON RESPONSIBLE	DEADLINE
ACTIONITES		T EROOM REST STOZEE	DEADLINE
[TIME ALLOTTED]	ENVIRONMENTAL CONCERNS 107.01,	107.11,	[PRESENTER]
DISCUSSION	107.22		
CONCLUSIONS			
ACTION ITEMS		PERSON RESPONSIBLE	DEADLINE
[TIME ALLOTTED]	MATERIALS AND MATERIAL SUPPLIE (LIST 106.01.1)	RS 106	[PRESENTER]
DISCUSSION			
CONCLUSIONS			
			DEADLINE



[TIME ALLOTTED]	SCHEDULE 108.03.2		[PRESENTER]
DISCUSSION			
CONCLUSIONS			
ACTION ITEMS		PERSON RESPONSIBLE	DEADLINE
[TIME ALLOTTED]	O S A FORUM		[PRESENTER]
DISCUSSION	Q & A FORUM		[PRESENTER]
CONCLUSIONS			
ACTION ITEMS		PERSON RESPONSIBLE	DEADLINE
[TIME ALLOTTED] DISCUSSION	SPECIAL PROVISIONS		[PRESENTER]
51555551511			

			serving you with pride
CONCLUSIONS			-
ACTION ITEMS		PERSON RESPONSIBLE	DEADLINE
[TIME ALLOTTED]	TRAFFIC CONTROL, NOISE, AND DUST CO 104.05.2, 104.05.3, 104.05.4, 107.06	ONTROL	[PRESENTER]
DISCUSSION			
CONCLUSIONS			
ACTION ITEMS		PERSON RESPONSIBLE	DEADLINE
[TIME ALLOTTED]	SAFE ENTRY/EXIT OF WORK VEHICLES AI EQUIPMENT ONTO/FROM TRAVEL LANES	ND 618.03.7	[PRESENTER]
DISCUSSION			
CONCLUSIONS			
ACTION ITEMS		PERSON RESPONSIBLE	DEADLINE



TIME ALLOTT	ED] PRIME CONTRA	ACTOR		[PRESENTER]
DISCUSSION				
CONCLUSIONS				
			DEDGOM DEGDOMOTELE	DE ADIANE
ACTION ITEMS			PERSON RESPONSIBLE	DEADLINE
TIME ALLOTT	ED] SUPERVISOR	s		[PRESENTER]
DISCUSSION	EPM:	Co	ontractor Superintendent:	
CONCLUSIONS				
ACTION ITEMS			PERSON RESPONSIBLE	DEADLINE
TTIME ALLOTT	rn] ourgontnad	Topo 400 04		[PRESENTER]
DISCUSSION	ED] SUBCONTRAC	.10RS 108.01		[PRESENTER]
CONCLUSIONS				
ACTION ITEMS			PERSON RESPONSIBLE	DEADLINE



[TIME ALLOTTED]	POSSIBLE VE PROPOSAL 104.08		[PRESENTER]
DISCUSSION			
CONCLUSIONS			
ACTION ITEMS		PERSON RESPONSIBLE	DEADLINE
TIME ALLOTTED]	ARRA		[PRESENTER]
DISCUSSION A vio	deo from the OIG on fraud awareness was shown.		
Audits – there may be cooperative with thes	e other entities wanting to view the project or project se entities.	files (e.g. OIG, FHWA). Contracto	ors must be
	limits) – there are specific requirements for employme ormation from all subcontractors.	ent reporting. Those need to be co	ompleted timely,
	quirements on ARRA projects (quantity and payment o	locumentation, payrolls, etc) are t	he same as any
CONCLUSIONS			
l.			
ACTION ITEMS		PERSON RESPONSIBLE	DEADLINE
TIME ALLOTTED]	MISCELLANEOUS		[PRESENTER]
DISCUSSION			
CONCLUSIONS			
ACTION ITEMS		PERSON RESPONSIBLE	DEADLINE



APPROVAL OF MINUTES

PRINTED NAME AND TITLE	
SIGNATURE	
DATE AND TIME	

DISTRIBUTION DATE SENT

District Administrator

District Construction Engineer

District Materials Supervisor

Construction Engineering Services Bureau – Paul Jagoda Materials Bureau – Matt Strizich

Civil Rights Bureau – Sheila Cozzie

Motor Carrier Services – Mark Moberley

Contractor



Preconstruction Meeting

SIGN-IN	[MEETING	DATE]	[MEETING	TIME]		[MEETING LOCATION]
PROJECT ID						
PROJECT DESIGNATION						
MEETING ORGANIZER						
NAME		TITLE	COMPAI	NY PHONE	EMAIL	

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Checklist 201-1 — CLEARING AND GRUBBING FIELD REVIEW

		Yes	No	N/A
1.	Clearing limits and needed clearing are shown in the contract documents.			
2.	Typical sections are shown within contract documents.			
3.	Soil profile is included.			
4.	Existing and proposed drainage does not flow from right-of-way, and natural drainage does not adversely affect landowners or structures upstream or downstream.			
5.	Utilities, fences or other obstructions to be moved or protected have been noted.			
6.	Private property boundaries and restricted areas have been noted and marked.			
7.	Trees to be saved have been marked.			
8.	Vegetation, survey monuments, cultural or archaeological sites, or other physical features needing protection, preservation or relocation have been marked.			
9.	Borrow sources and access roads have been located			
10.	Unusual soil/moisture conditions such as springs, seeps, or swamps have been noted.			

Checklist 203-1 — NUCLEAR GAUGES

General Guidelines:			No	N/A
1.	Keep unauthorized personnel away from nuclear gauges.			
2.	Follow established operating procedures when using nuclear gauges.			
3.	Gauges must always be under immediate operator control if not stored and secured. Do not leave a nuclear gauge unattended.			
4.	Maintain nuclear gauges in the "SAFE" position when stored or not in use.			
5.	Properly secure gauges when stored or unused.			
6.	Store nuclear gauges in approved locations.			

Ва	dges:	Yes	No	N/A
1.	Badges are personal monitors only to be used by one operator. Do not share badges.			
2.	Wear badges near the center of the operator (belt area) and point toward the gauge.			
3.	Report events such as accidentally leaving a badge with a gauge overnight.			

4.	Mark badge containers so they are not placed near nuclear gauges.			
5.	Store badges at least 30 ft from gauges.			
Pro	ocedures for Damaged Gauges:	Yes	No	N/A
1.	Stop all activity around the device and remove personnel from the area.			
2.	Do not move the gauge under any circumstance.			
3.	Do not remove vehicles or equipment involved in the accident from the site. Immobilize equipment by removing the key.			
4.	Rope off an area 30 ft x 30 ft around the device and place warning signs around the area. The area may be somewhat smaller if necessary.			
5.	Constantly surveil the accident site.			
6.	Contact the Project Manager and District Materials Lab to notify appropriate individuals in the Headquarters Materials Bureau. Refer to emergency procedures accompanying the gauge.			
7.	Call the local sheriff or fire department if headquarters cannot be contacted or accident circumstances warrant.			
8.	Complete an accident report form and carefully document the event. Record pertinent information as soon as possible.			
9.	Keep personnel away from the accident site. Await further instruction and Helena Radiological Response Team arrival.			
	· · · · · · · · · · · · · · · · · · ·			

Checklist 301-1 — AGGREGATE SURFACING

Su	rface Preparation:	Yes	No	N/A
1.	Excavated and removed subgrade areas not meeting moisture and density requirements and backfilled excavated areas with approved material. Excavated, backfilled and re-compacted existing aggregate surfaces not meeting moisture and density requirements to typical cross section and profile grade.			
2.	Aggregate surfacing material was not placed on surfaces not meeting dry density surface requirements.			
3.	No aggregate surfacing material was placed over rutted or frozen subgrade or aggregate sub-surfacing.			
4.	Aggregate was not placed over surfacing not meeting grade or surface smoothness specifications. Cuts or fills were made to blue top elevations.			
Pla	cement:	Yes	No	N/A
1.	Surfacing aggregate except crushed cover aggregate was pugmill mixed unless otherwise specified in the contract.			
2.	Aggregate surfacing was transported, placed and spread on the roadway.			
3.	Aggregate surfacing was spread in maximum 8 inch compacted layers to required grade and typical section.			
4.	Aggregate was placed to avoid segregation.			
5.	Contractor maintained previous aggregate surfacing courses until subsequent courses were placed.			
Со	mpaction:	Yes	No	N/A
1.	Target density has been established.			
2.	Project Manager established target density for each surfacing aggregate course, grade and type.			
3.	A new target density is established if aggregate characteristics change.			
4.	Density requirements are being met.			
5.	Each lift is divided into 2000 ft constructed sections for testing.			
6.	10 randomly selected tests are run for each section.			
7.	Average of the 10 tests exceeds 98% target density.			
8.	No more than 2 tests are below 98% target density.			
9.	Failing sections are retreated and tested with new random test locations.			
10.	Gravel density test locations are picked randomly.			
11.	Aggregate density documentation is organized and available			

Ag	gregate Testing:	Yes	No	N/A
1.	Aggregate samples are being obtained correctly.			
2.	Gravel tests are of correct size for material being tested.			
3.	Weight on any one screen exceeding Materials Manual allowed limits is called out.			
4.	Gravel and fracture tests are reported using correct forms.			
5.	I.A.'s are being performed and district lab personnel have visited the test trailer.			

Checklist 401-1 — PLANT MIX PAVEMENT

Bit	uminous material for plant mix pavement	Yes	No	N/A
1.	Hot mix asphalt (HMA) grade and asphalt binder are in accordance with contract documents.			
2.	MDT HMA and field test trailers are properly set up, equipped and wired.			
3.	Haul road is in good condition.			
4.	Contractor hauling equipment is equipped with safety equipment such as flashing lights and back up alarms.			
5.	Contractor is using an approved release agent.			
6.	If used, structurally sound sample stands are in place.			
7.	HMA and Asphalt Cement (AC) samples are witnessed and collected in accordance with methods ensuring representative samples.			
8.	Test results and certificates of compliance are satisfactory for items such as asphalt binder and hydrated lime.			
9.	Mixing and compaction temperatures are correct.			

Checklist 401-2 — PREPAVING PROCEDURES AND PLANNING

			Yes	No	N/A
1.		eld has been determined ("actual" unit weights may vary from "plan" unit ights).			
2.	То	nnage has been determined.			
3.	Su	rfacing sections are placed to dimensions shown within typical sections.			
4.	No	te plant mix properties significantly impacting pavement service life:			
	a.	Temperature variation			
	b.	Segregation			
	C.	Compaction			
	d.	Stability			
5.	Joi	nts are located as needed.			
6.	Tra	affic control is adequate.			
7.	Ba	sic laydown practices are used.			
8.		fore paving, inspectors accompanied Project Manager to discuss the following h the Contractor:			
	a.	Plant and paving operations.			
	b.	Work sequencing.			
	C.	Quality control procedures.			
	d.	Chain of command.			
	e.	Equipment to be used			
	f.	Contingency plans in place for equipment failures.			
	g.	Test reporting to the Contractor.			
	h.	Test type and method responsibilities.			
	i.	Grade control methodology.			
	j.	Project areas requiring special treatment.			
	k.	Random sample time and location establishment.			
	I.	Cold joints construction methods have been discussed.			
	m.	Weather impacts to paving operations have been discussed.			
	n.	Traffic control issues and features such as such as temporary striping have been addressed,			

Checklist 401-3 — PAVING

		Yes	No	N/A
1.	Equipment is in good repair and proper adjustment.			
2.	Traffic control measures and devices are functioning properly with the correct signs and sign sizes in proper position. A Traffic Control Plan has been submitted and accepted.			
3.	Paver guidelines for maintaining proper centerline horizontal control have been set properly.			
4.	Base material soundness ahead of paver been verified, accepted and documented.			
5.	Longitudinal and transverse joints have been checked for smoothness and appearance. Longitudinal joints do not fall in wheel paths unless otherwise approved.			
6.	Frequent mix temperature checks are being made.			
7.	The mat behind the paver is inspected for signs of non-uniform mixture.			
8.	Rolling sequence is correct for conditions, proper rolling methods are being used, and rollers are operated at reasonable speed. Mat thickness is checked and proper adjustments are made.			
9.	Spread is frequently checked and truckloads delivered per day is recorded. Yield is checked hourly, and spread rate adjusted to achieve planned yield? Daily PMS totals are verified with plant inspector and quantities are reconciled as soon as practical.			
10.	The project site is in good shape before shift end. Lights, barricades, signs, etc., are correctly placed. Unrequired signs are removed or covered. Temporary striping is in place.			

Checklist 401-4 — PAVING EQUIPMENT

	Requirements	Yes	No	N/A
1.	Pneumatic tires are inflated uniformly at correct pressures. Drive chain is checked for correct adjustment and excessive wear.			
2.	Screed plates are checked for excessive wear, proper crown and tilt adjustment.			
3.	Screed heater operates properly.			
4.	Screed extensions are in the same plane and flush with screed bottom.			
5.	Screed plate surfaces are true and in good condition.			
6.	Screed vibrators function as intended.			
7.	Auger extensions are added to match screed extensions, and ensure proper mix flow across full screed width.			

Checklist 401-5 — ROLLER INSPECTION CHECKLIST

		Yes	No	N/A
1.	Drums on steel wheel rollers are smooth without flat spots, ridges or grooves.			
2.	Pneumatic rollers with smooth tires are of equal size, ply and inflation.			
3.	Vibratory rollers are operated at speeds not leaving corrugations in the rolled surface. Vibratory mechanisms are shut off when rollers are stopped or about to stop. Breakdown or intermediate rollers do not sit idle on hot surfaces for extended periods.			
4.	Amplitude and frequency adjustments on vibratory rollers are properly set.			
5.	Rollers start, stop and reverse smoothly.			
6.	Rollers are equipped with cleaning devices.			
7.	Water sprinklers on steel drum wheel rollers operate properly.			

Checklist 402-1 — DAILY WORK REPORT DOCUMENTATION

		Yes	No	N/A
1.	Hauling and storage containers are clean to avoid cross-contamination.			
2.	Storage tanks and coils are checked regularly for damage and leaks.			
3.	A calibrated thermometer is used to obtain temperature readings.			
4.	Material temperature in the tank is recorded regularly and safely.			
5.	Temperature is maintained below the material flash point.			
6.	Readings are not taken near heating coils, tank walls or bottom.			
7.	Use proper temperature volume conversion factor to calculate quantities.			

Checklist 407-1 — TACK COAT PREPARATION AND APPLICATION

		Yes	No	N/A
1.	Tack surface is clean and dust free.			
2.	Tack application is uniform.			
3.	Tack application rate has been determined.			
4.	Haul truck tires are free and clear of debris.			
5.	Contractor minimizes tracking.			

Checklist 409-1 — SEAL COAT INSPECTION

		Yes	No	N/A
1.	Contractor avoids contaminating cover material during loading. Oversize material is not picked up from the lower stockpile or from adjacent stockpiles.			
2.	Cover material is placed immediately behind asphalt distributor within the time frame recommended by bituminous manufacturer? Chips used with emulsified asphalt are wet but free of draining water.			
3.	Weather conditions and surface temperatures are within bituminous manufacturer recommendation.			
4.	Surface is properly cleaned and prepared.			
5.	Surface absorptive properties have been inspected, and asphalt application rate is correct for existing surface conditions.			
6.	Asphalt distributor and spreader box deliver a uniform application. Spray bar height and pattern are acceptable. Spray nozzles are not plugged and wind is not diminishing uniform material application.			
7.	Test sections are designated to determine asphalt and cover application uniformity.			
8.	Inspector worksheets document station to station, lane location, and application rate for each shot of bituminous material. (This information is valuable if issues arise during the warranty period.)			
9.	Asphalt splash to curbs, handrails and traffic is prevented.			
10.	Contractor is using building paper or other material at transverse joints to ensure a smooth transition to adjacent surfaces.			
11.	Loaded haul trucks stagger wheel paths while backing toward spreaders before unloading.			
12.	Cover material is promptly and properly rolled.			
13.	Rollers stay close behind the aggregate spreader.			
14.	Haul units do not damage fresh seal with excessive speed, sudden braking or sharp turns.			

Checklist 501-1 — PORTLAND CEMENT CONCRETE PRE-PAVEMENT DISCUSSION

	Yes	No	N/A
Concrete mix design is as designed for the job.			
Plant and paving operations are discussed.			
Quality Control Plan is reviewed.			
4. Work sequence is discussed.			
5. Quality control measures and methods are discussed.			
6. Chain of command is discussed and assigned.			
7. Equipment is discussed.			
Equipment failure contingencies are addressed.			
Procedures to report test results to the Contractor are discussed.			
10. Testing responsibility is assigned and discussed.			
11. Roadway grade control is covered.			
12. Project areas requiring special treatment have been discussed			
13. Random sample time and location selection is addressed.			
14. Joint reconstruction is discussed.			
15. Weather impact paving operations is discussed.			
16. Traffic control issues are addressed.			

Checklist 501-2 — CONTRACTORS PAVEMENT PLAN

		Yes	No	N/A
1.	Paving layout drawings show beginning, end, length, width, thickness and area of each paving pass, hand placement areas, and longitudinal, transverse and construction joint locations. Pavement width, thickness, joint location, tapers and breaks are in accordance with contract documents. Hand placement is only planned in areas inaccessible to the paver.			
2.	Surfacing placement, cure times, expected production rates, and times of operation have been discussed. Paving schedule has been evaluated to account for crew size, equipment production rates, temperature specifications, cure times, haul rates, batching capacity and traffic control requirements.			
3.	A list of proposed equipment with manufacturer operational specifications for key equipment such as paving machines, vibrators and finishing equipment is available.			
4.	Stockpiling and batching procedures, aggregate storage to prevent contamination, aggregate moisture monitoring, batching procedures, mixing times and specified concrete mix water has been discussed. A Contractor representative authorized to make mix adjustments has been appointed. A plan for handling rejected concrete is in place.			
5.	A traffic control plan is in place showing how work will be safely separated from traffic, ingress and egress points and concrete protection during curing.			
6.	A staging plan has been devised showing how paving will proceed while maintaining traffic through the project. This staging plan is integrated with traffic control plans or paving layout drawings to minimize traffic interruptions.			
7.	Texturing and curing methods have been discussed.			
8.	Joint sawing, sealing, location, equipment, cleaning, and sealant manufacturer installation requirements have been discussed. Project Manager has forwarded the Contractor joint plan to the Construction Engineering Services Bureau for review and comment.			
9.	A detailed staking plan illustrating spacing and offset subgrade control stake locations and methods for setting the wire line and verifying its accuracy before paving has been generated.			

Checklist 501-3 — PCC JOINT DISCUSSION

		Yes	No	N/A
1.	Contractor will be responsible for timely and proper joint sawing.			
2.	Contractor will keep a spare joint saw on site during sawing operations.			
3.	Construction joint spacing is discussed.			
4.	How joints will be made around openings and other appurtenances (e.g., manholes) in the pavement?			
5.	Transverse joints have been planned to line up with adjacent lane joints.			

Checklist 501-4 — BATCH AND PLANT INSPECTION

Note: This checklist should be used considering the possible differences between a commercial batch plant facility and a batch plant set up for a specific project	Yes	No	N/A
Aggregate production, handling and stockpiles have been inspected.			
Plant equipment and operational handbooks have been reviewed.			
Calibrations and checks are documented.			
4. Cement certifications have been received and recorded.			
5. Approvals for air agent and admixtures have been verified and recorded.			
6. Scale weight settings have been evaluated.			
7. Mix design has been adjusted for aggregate moisture changes.			
8. Actual batch weights are observed and recorded.			
Slab inspector has been contacted to record batch weights producing loads sampled for unit weight tests.			
10. A record of batches produced per day is maintained.			
11. Major plant parts are inspected periodically (mixer, weigh bins, admixture dispensers, water meters, drum revolution counters, mixing time).			
12. Cement cut-off is checked periodically.			
13. Aggregate batch handling practices have been inspected.			
14. Returning haul units are inspected for undischarged concrete.			
15. Daily Work Reports record instructions to Contractor, unusual actions, start and end times, lost time due to breakdown, weather and Contractor forces.			
16. Aggregate tests have been performed as required.			

Checklist 501-5 — SLAB INSPECTION

		Yes	No	N/A
1.	Paving inspection and testing activities were coordinated.			
2.	Paving equipment handbooks were reviewed.			
3.	Paving equipment was inspected for specification compliance.			
4.	Hauling equipment was inspected for specification compliance.			
5.	Base condition ahead of paver was inspected.			
6.	Grade control string line was visually checked immediately ahead of paver.			
7.	Concrete was properly deposited.			
8.	Concrete slump was checked in accordance with specification requirements.			
9.	Vibrators are in place and operating operational.			
10.	Vibration stops when paver stops.			
11.	Dowel bars are properly spaced at proper depth and alignment.			
12.	Tie bars are properly spaced and at correct depth.			
13.	Concrete behind the paver has been inspected for excessive moisture.			
14.	Concrete behind paver is smooth and free of voids.			
15.	Tube finisher follows closely behind paver.			
16.	Water is not added to the surface other than as a fine fog or mist, and no more added than necessary.			
17.	Texturing is performed as soon as possible.			
18.	Texturing does not tear the surface.			
19.	Curing compound is applied as soon as surface water disappears.			
20.	Curing compound is applied at the proper rate to exposed concrete.			
21.	Construction joints are checked via straightedge.			
22.	Starting and ending station is recorded every day.			
23.	Samples are collected by Contractor. Testing is performed by Inspector for slump, entrained air, cylinders, test beams and unit weight.			
24.	Plastic strips installed in joints are installed vertically and aligned with joints at correct depth?			
25.	Daily Work Reports include instructions to Contractor, actions taken, daily start and end times, lost time, weather conditions, wasted concrete and Contractor forces.			

Checklist 501-6 — SAWING INSPECTION

		Yes	No	N/A
1.	Saw cuts are proper depth and width.			
2.	Sawing has been inspected for raveling, washing, concrete tearing and random cracking.			
3.	Sawed joints are cleaned.			
4.	Curing compound damaged by sawing has been replaced.			

Checklist 501-7 — JOINT SEAL INSPECTION

	Yes	No	N/A
Joint surface is completely clean and dry.			
Lab material approvals and certifications are verified.			
Pavement temperature has been monitored.			
Sealant temperature complies with manufacturer recommended heati and application temperature.	ng 🗆		
5. Joints are filled to proper depth. Excess sealant is removed.			
6. Beginning and ending station recorded each day.			

Checklist 551-1 — FLOWABLE FILL

			Yes	No	N/A
1.	Cu	ulverts			
	a.	Contractor has provided a method to combat flotation and plug form holes in to prevent flowable fill loss during placement. Care has been taken during placement to prevent pipe floatation or movement.			
	b.	Contractor has avoided rapid placement on and around thinly walled pipe culverts to avoid deformation during placement.			
	C.	Culvert was not rested on any surface harder than flowable fill (concrete blocks, rocks or steel) during placement to avoid point loads and pipe deformation.			
	d.	Placement started at one end of the pipe and was poured along both sides evenly until movement or flotation risk was alleviated.			
2.	Uti	ilities			
	a.	Contractor has provided a method to combat flotation and plug form holes in to prevent flowable fill loss during placement. Care has been taken during placement to prevent pipe floatation or movement.			
	b.	Contractor has avoided rapid placement on and around thinly walled pipe culverts to avoid deformation during placement.			
	C.	Contractor provided steel plates bridging the trench to divert traffic over the fill before 24 hrs after placement.			
 	d.	The utility was not rested on any surface harder than flowable fill (concrete blocks, rocks or steel) during placement to avoid point loads and pipe deformation.			
	e.	Placement started at one end of the pipe and was poured along both sides evenly until movement or flotation risk was alleviated.			
3.	Bri	idge Ends			
	а.	Flowable fill was not used behind bridge ends without prior written approval from the Bridge Bureau.			
	b.	Contractor placed flowable fill slowly to avoid excessive hydrostatic pressure before initial set and prevent pile cap, backwall or wingwall damage.			
	C.	Contractor placed an expansion joint as needed between bridge end and flowable fill if none have been installed on the bridge deck.			
	d.	Contractor was aware a drainage plan could be needed for the area under the flowable fill and behind the bridge ends.			
	e.	Contractor accounted for flowable fill shrinkage after curing to achieve finished grade.			
		Checklist 552-1 — FALSEWORK CONSTRUCTION			
- 	_		Yes	No	N/A

	Yes	No	N/A
Footings and Mudsills			

		Yes	No	N/A
1.	Soil type is as identified within approved falsework drawings.			
2.	Soil is firm, stable and has uniform contact under the mudsill.			
3.	Top mudsill or footing surface is level.			
4.	Mudsill and footings are protected from wash out or under cutting.			
5.	Mudsills or footings are back far enough from the edge or toe of slopes. Drawings specify this distance.			
	Piling			
6.	Piles are placed within specified driving tolerances.			
7.	Piles are driven to allowable bearing values.			
8.	Pile caps are properly set and level to ensure uniform bearing over pile grouping.			
	Timber Falsework Members			
9.	Timber is free of defects such as splits, open knots, rots, cuts over the grade specified.			
10.	Timber is seasoned to minimize warping and shrinkage.			
11.	Members are in full contact with each other.			
12.	Member size, spacing, length and grade are as shown in approved drawings.			
13.	Diagonal bracing is installed per drawings.			
14.	Connections are checked for tightness.			
15.	Vertical members are plumb and horizontal members are level.			
16.	Camber is provided when required.			
17.	Full bearing connections have been examined for crushing			
	Structural Steel Falsework Members			
18.	Salvaged beams and other steel shapes were examined for section loss, web penetrations, rivet or bolt holes and local deformation that may affect load carrying capacity. If member condition is questionable, Project Manager and Contractor have been involved.			
19.	Column or pile bents are plumb and beams are level.			
20.	Member size and spacing conform with shop drawings.			
21.	Bracing is per drawings, including on beam compression flanges.			
22.	Bolted connections are tightened using proper bolt numbers.			
23.	Welded connections are to prescribed standards by a certified welder.			
24.	Splices are located only at drawing locations.			
25.	Allowances for jacking the bridge structure for members are located under a hinge?			

	Yes	No	N/A
Manufactured Steel Shoring Assemblies			
26. Manufactured shoring system complies with manufacturer recommended usage.			
27. Base plates, shore heads, extensions or adjusting screw legs firmly contact the foundation or support.			
28. Shoring tower assemblies are correctly spaced.			
29. Cross bracing, including frame-to-frame and tower-to-tower bracing, conforms with drawings.			
30. Screw leg extensions are within the allowable limits or adequately cross-braced, and snug to tower frame.			
31. Tower frames are plumb.			
32. Top "U heads" fully contact joist or ledge and hardwood wedges are snug.			
33. Frames have been examined for section loss, kinks, broken weld connections, damaged cross bracing, lugs or bent members.			
34. Locking devices are in closed position.			
35. Guy wires are adequately attached to towers and ground support.			
36. Allowances are made for jacking the bridge structure for members located under a hinge.			
Falsework Protection			
37. Barriers and crash attenuators are placed in correct location, length and number.			
38. Warning and clearance signs are up.			
39. Safety (banger) beams are set at correct height and offset from the structure.			
40. Horizontal clearances are maintained between shores and barrier.			

	Yes	No	N/A
41. Falsework members adjacent to barriers are properly bolted or mechanically connected.			
42. Falsework bracing and bolted joint connections are installed with falsework is and not delayed until the falsework construction is completed.			
43. Lane widths are correct under the falsework.			
44. Signing, striping, barrier and barricades are in accordance with traffic control plans.			

Checklist 552-2 — DRILLED SHAFTS

		Yes	No	N/A
	Contractor & Equipment Arrival Onsite			
1.	Contractor has submitted Drilled Shaft Installation Plan.			
	Drilled Shaft Installation Plan has been approved.			
2.	Contractor concrete mix design is approved.			
3.	Contractor has run trial mix and slump loss tests for drilled shaft mix design.			
4.	If concrete placement duration is over two hours, Contractor has performed a slump loss test for the time period.			
5.	A Slurry Management Plan is in place if a blended mineral-polymer or polymer slurry will be used.			
6.	Contractor is prepared to take soil samples or rock cores from the shaft bottom of in accordance with contract documents.			
7.	Site preparation is completed for footings in accordance with contract documents.			
8.	If a cofferdam is required, Contractor has a qualified diver and safety diver for inspections.			
9.	Contractor has all equipment and tools shown by the Drilled Shaft Installation Plan.			
10.	Casing is correct size in accordance with the contract documents.			
11.	Contractor plans to use a manufactured slurry are accompanied by mixing equipment.			
12.	Contractor has an operational desander onsite if desander usage is planned.			
13.	Contractor tremie meets contract document requirements.			
14.	Drilled shaft forms are available during shaft construction.			
	Trial Shaft			
15.	Trial shaft is located away from production shafts.			
16.	Contractor performed a successful test hole in accordance with contract documents.			
17.	Contractor cut off the shaft 2 ft below grade.			
18.	Contractor has revised technique and equipment via approved revision to successfully construct a shaft.			

Shaft Excavation & Cleaning	Yes	No	N/A
19. Shaft is constructed in correct location within tolerance.			
20. Contractor has established a benchmark to reference shaft elevation and as an inspection reference.			
21. Contractor has taken cores in accordance with contract documents.			
22. If a core hole was completed for which Contractor has maintained a log.			
23. Contractor has performed slurry tests as required and reported results required by contract documents.			
24. Slurry level is properly maintained.			
25. Slurry tests are run in accordance with the contract documents.			
26. Soil/rock excavation forms have been completed.			
27. Permanent casing meets contract document requirements.			
28. Temporary casing meets contract requirements.			
29. Belting meets contract requirements.			
30. Contractor is maintaining an excavation log.			
31. Shaft is within allowable vertical alignment tolerance.			
32. Shaft is of proper depth.			
33. Shaft excavation time meets specified time limit.			
34. Shaft over-reaming was performed in accordance with the contract.			
35. Shaft bottom meets contract requirements.			
36. Proper forms have been completed.			
Reinforcing Cage			
37. Iron and steel products incorporated into permanent work and accompanying documentation meet Standard Specification Subsection 106.09 domestic material ("buy America") requirements.			
38. Rebar is correct size and configured in accordance with the contract.			
39. Rebar is tied in accordance with the contract.			
40. Contractor has proper steel cage spacers.			
41. Contractor has correct number of spacers for the cage.			
42. Cage splicing was done in accordance with the contract.			
43. Steel cage is secured to prevent settling and floating during concrete placement.			
44. Steel cage top elevation is correct.			

Concrete Operations		
45. Contractor has contingency plans for equipment failures.		
46. Slurry (both manufactured & natural) has been tested in accordance with the contract before placement.		
47. Casing was removed if required.		
48. Tremie discharge end maintained in the concrete mass with proper concrete head.		
49. Free-fall concrete was placed in accordance with the contract document.		
50. Placement occurred within specified time limit.		
51. Concrete placement and volume forms have been completed.		
52. During placement, Contractor overflowed the shaft until clean concrete was extruded.		
53. Concrete acceptance tests were performed.		
Post Installation		
54. Shafts constructed in open water are protected for seven days or until concrete reaches required minimum strength.		
55. Casing is removed to proper elevation.		
56. Shaft is within construction tolerances.		
57. Drilled Shaft Log has been completed.		
58. Pay items are documented.		
Notes/Comments		

Checklist 552-3 — DRILLED SHAFTS

Approved Job Information	Daily Essentials
 □ Project Plans & Specifications with Revisions □ Special Provisions □ Drilled Shaft Installation Plan 	 ☐ Hard Hat ☐ Boots ☐ Ear & Eye Protection ☐ Pen/Pencil (with spare) ☐ 12' Tape (Preferably 25') ☐ 150' Tape
Testing Equipment	☐ Carpenters Square☐ Life Jacket and High Visibility Vest or
 □ Sampler □ Sand Content Testing Equipment □ Mud Density Test Equipment □ Viscosity Test Equipment 	Reflective Jacket Watch Calculator Camera Scale Level Weighted 100' Tape
Blank Forms	☐ Plumb Bob
 □ Drilled Shaft Soil/Rock Excavation Log □ Drilled Shaft Rock Core Log □ Drilled Shaft Inspection Log □ Concrete Placement Log □ Concrete Volume Form □ Drilled Shaft Log □ Drilled Shaft Construction & Pay Summary 	

Checklist 552-4 — BRIDGE DECK PRE-PLACEMENT

			Yes	No	N/A
1.	W	eather conditions			
	a.	Temperature restrictions			
	b.	Anticipated temperatures			
2.	Pl	acement time and duration			
	a.	Start time			
	b.	Anticipated completion time			
3.	С	oncrete			
	a.	Supplier			
	b.	Mix approval			
	C.	Special considerations			
4.	М	DT QA Sampling & Testing			
	a.	Samples from placement point			
	b.	Frequency			
	C.	Air content specification			
	d.	Slump expectations			
5.	С	oncrete handling and finishing			
	a.	Any special considerations			
		+ Silica fume, retarders, plasticizers			
	b.	Placement methods and equipment			
	C.	Hand finishing areas			
	d.	Screed should provide the finish, bull gloating not desirable			
	e.	Any detail work, dowels to insert, etc.			
6.	Fo	gging			
	a.	Equipment			
		+ Type is correct			
		+ Sufficient for anticipated conditions			
	b.	Ahead of screed			
	C.	Behind screed prior to burlap placement			
	d.	After burlap placement			
7.	We	et cure			

			Yes	No	N/A
	a.	Wet burlap			
		+ Burlap spec.			
		+ Presoak burlap, 24 hours			
		+ Catwalk for application			
		+ Setup at beginning of placement			
		+ Placement within 15 minutes of screeding and as close as possible			
	b.	Soaker hoses			
		+ Placement			
		+ Water source			
	C.	Plastic cover			
		+ Material, clear polyethylene sheeting			
		+ Placement			
		+ Ensure soaker hoses are not impeded			
	d.	Monitoring and maintenance			
8.	Со	ntingency Plans			
	a.	Equipment failure			

Checklist 552-5 — BRIDGE DECK FORM WORK

		Yes	No	N/A
1.	Contractor has used highest quality plywood for overhangs. Plywood used for interior bays is sound without ragged edges and pieces fitted tightly together. Plywood form holes are plugged with corks or wooden plugs only.			
2.	Corners and edges are filleted or chamfered. The only exception is the point where the overhang contacts the outside of the exterior beam.			
3.	The joint between the overhang forms and the outside of prestressed beams is a common problem area. Overhang forms are tight against prestressed beams during placement to prevent mortar loss and honeycombing at this point.			
4.	Deck forms for all superstructure systems are constructed to permit final adjustment during screed test run.			
5.	Form hanger welding to tension flanges on steel girders is not permitted. Welding of form hangers, screed supports, etc., to stress-carrying reinforcing steel has been avoided. Hangers are welded to the outside leg of stirrups projecting from prestressed girders.			

Checklist 553-1 — PRESTRESSED CONCRETE

		Yes	No	N/A
1.	Do all iron and steel products to be incorporated into the permanent work and the required documentation meet Domestic Materials (Buy America) requirements set forth in Subsection 106.09 of the <i>Standard Specifications</i> ?			
2.	Circle M identification stamp present on each member? (See MT-111 of the MDT <i>Materials Manual</i> and Subsection 553.B.1 of this <i>Manual</i> for additional information).			
3.	Correct dimensions and correct material specifications?			
4.	Any spalls, dents or chips?			
5.	Cracks on the exterior of the beam?			
6.	A fabrication date stamped on the precast concrete beams?			
7.	Identification marks on the beam indicating the same lot or production number as shown on the Certificate of Compliance?			

Checklist 553-2 — PRESTRESSED CONCRETE ERECTION PLAN

		Yes	No	N/A
1.	Falsework, struts, bracing, tie cables and other devices meet material properties and specifications for temporary works and bolt torque requirements prior to releasing girders from the cranes.			
2.	A sequence of operations, including a detailed schedule with completion times for work items has been reviewed.			
3.	Minimum load chart lift capacity, outrigger size and reactions for each crane are available.			
4.	Girder weights, lift points, lifting devices, angle of lifting cable angles are known or have been calculated.			
5.	Girder stresses at critical points along the girder length during erection, have been investigated to maintain girder structural integrity and stability. Stresses at lifting stress points have been investigated and adequate bracing provided as indicated by the analysis.			
6.	Crane location, trucks delivery points, crane and outrigger locations relative to retaining walls, wingwalls, and utilities have been reviewed.			
7.	Drawings, notes, manufacturer recommendations and calculations clearly show erection details, assumptions and dimensions.			

		Yes	No	N/A
8.	Contractor Traffic Control Plan specifically addresses girder erection work.			
9.	Contingency plans detailing Contractor measures to deal with inclement weather, equipment failure, delivery interruption, and slowed production are in place.			

Checklist 554-1 — PRECAST CONCRETE

		Yes	No	N/A
1.	Iron and steel products incorporated into permanent work and associated documentation meets Standard Specification Subsection 106.09 Domestic Materials (Buy America) requirements.			
2.	Dimensions and material specifications are correct.			
3.	Spalls, dents or chips have been noted.			
4.	Interior and exterior cracks have been recorded.			
5.	Fabrication date and a "Circle M" are stamped on precast concrete items. (See MDT Materials Manual MT-110.			
6.	Item identification marks indicate the same Certificate of Compliance lot or production number.			

Checklist 555-1 — REINFORCED STEEL

		Yes	No	N/A
1.	Iron and steel products incorporated into permanent work and associated documentation meets Standard Specification Subsection 106.09 Domestic Materials (Buy America) requirements.			
2.	Bars of proper size and number are in correct location and grade.			
3.	Concrete cover and bar clearances are as specified.			
4.	Bar spacing, length and ties are as specified.			
5.	Bar splices are correctly placed.			
6.	Chair height is correct.			
7.	Epoxy over reinforcement is in good condition.			
8.	Bars are free of impurities.			
9.	Proper lap lengths for hoops, spirals and straight bars have been used.			
10.	Overall reinforcement length and width are correct.			
11.	Reinforcement stiffness and stability is adequate for lifting.			
12.	Inspection tubes are properly placed and secured.			

Checklist 556-1 — STRUCTURAL STEEL

		Yes	No	N/A
1.	Iron and steel products incorporated into permanent work and associated documentation meets Standard Specification Subsection 106.09, Domestic Materials (Buy America) requirements.			
2.	Shipping documents accurately identify quantity, shape and steel type shipped.			
3.	Complete and descriptive steel certificates include grade identification, test results and lot or heat number.			
4.	Appropriate markings show steel type and grade.			
5.	Key dimensions such as thickness, length, width, diameter, and section shape are correct.			

Checklist 556-2 — BOLT TENSIONING

		Yes	No	N/A
1.	Iron and steel products incorporated into permanent work and associated documentation meets Standard Specification Subsection 106.09 Domestic Materials (Buy America) requirements.			
2.	Materials testing date and location are known for hardware samples.			
3.	Bolts or bolt groups were tensioned and tensioning force is known.			
4.	Method used to achieve required bolt tension is known.			
5.	Bolts tensioning order is documented using a sketch.			
6.	Torque readings for all bolts has been recorded.			
7.	Bolts were relubricated if deemed necessary by Inspector.			
8.	Corrective actions such as changing bolt length or hole reaming to assemble the connection were noted.			

Checklist 556-3 — ERECTION PLAN

		Yes	No	N/A
1.	Falsework, struts, bracing, tie cables and other devices, material properties, temporary work specifications, and bolt torque requirements have been reviewed before releasing girders from cranes.			
2.	Operational procedures and sequence, including an item completion time schedule have been defined.			
3.	Minimum load chart lift capacity, crane outrigger size and reactions are available			
4.	Assumed loads, girder weights, lift points, lifting devices, spreaders and lifting cable angles have been reviewed.			
5.	Locations of cranes, girder truck deliveries, and crane outriggers relative to structures such as retaining walls, wingwalls, utilities have been determined.			
6.	Drawings, notes, manufacturer recommendations and calculations clearly show erection plan details, assumptions and dimensions.			
7.	The erection plan references the Contractor Traffic Control Plan (TCP). An elaboration of the TCP is included specifically for girder erection.			
8.	Contingency plans are in place detailing Contractor measures in case of inclement weather, equipment failure, delivery interruption, and slowed production.			

Checklist 556-4 — ASSEMBLY

		Yes	No	N/A
1.	During erection Contractor placed members in position by cross checking match or identification marks with erection drawing locations.			
2.	Bearing and contacting metal surfaces are free of rust, loose scale, dirt, oil or grease.			
3.	Girder splice contact surfaces for main truss connections connected by high strength bolts are free of paint or lacquer.			
4.	Steel fits together without strain or distortion. If bolt holes are slightly out of alignment, it's usually possible to bring pieces into proper position with drift pins. If holes fail to line up and forcing the drift pin would enlarge the hole or distort the metal, Contractors may redrill holes with Project Manager and Designer approval.			
5.	Material has been rejected when fabrication errors are uncorrected by slight drifting, drilling or reaming. Do not permit heavy sledging to bring parts into alignment or make flame cuts.			
6.	The Bridge Bureau has provided prior approval to heat steel members to facilitate bending and installation. Heat applied to structural steel must be rigidly controlled.			
7.	Erected bridge girder top elevations have been verified.			

Checklist 557-1 — STEEL BRIDGE RAILING

		Yes	No	N/A
1.	Iron and steel products incorporated into permanent work and associated documentation meets Standard Specification Subsection 106.09 Domestic Material (Buy America) requirements.			
2.	Steel rail and post galvanization is undamaged, including elements having been stockpiled. Elements have not been field cut or drilled. Field repairs or replacement is based on coating damage. Contact the Project Manager for assistance in verifying galvanization and coating acceptability.			
3.	Visual defects such as burrs, twists, bends, misaligned holes and uncoated areas have been noted. Verify sections are type, shape, length and curvature required. Damaged sections have been replaced.			
4.	Visual defects such as bends, twists, uncoated areas, misaligned holes and damaged ends have been noted. Posts are of proper type and weight for the system. Length, cross sectional dimension, hole diameter and template are as specified.			
5.	Fastener type, class, diameter and length are in compliance. Correct fasteners are supplied with the proper system? Do not permit bolt cutting.			

Checklist 559-1 — PILING

		Yes	No	N/A
1.	Iron and steel products incorporated into permanent work and associated documentation meets Standard Specification Subsection 106.09 Domestic Material (Buy America) requirements.			
2.	Certified Material Test Reports have been obtained.			
3.	key dimensional requirements such as thickness, length, width, diameter, section shape are correct.			
4.	Inspect the pile labeling for size, length, grade, weight/foot, heat number to ensure information matches certifications.			
5.	MDT Form 406 has been added to each Mill Test Report packet and sent to the Materials Bureau and construction office.			
6.	Steel piling has been inspected for compliance with maximum camber and sweep per Standard Specification Subsection 559.02.1.			
7.	Bent, deformed or kinked steel piling has been rejected.			
8.	Pile length, conical driving points for pipe piling and cutting shoes for H-piling conform to the contract.			

Checklist 559-2 — PILE HAMMER

		Yes	No	N/A
1.	Pile driving equipment meets job requirements.			
2.	Pile leads are sturdy, smooth and straight.			
3.	Hammer falls freely in the leads.			
4.	Blocks in the hammer driving head are not badly worn?			

Checklist 603-1 — CULVERT FIELD INSPECTION

		Yes	No	N/A
1.	Culvert is of correct diameter and material specification.			
2.	Spalls, dents or chips at pipe segment ends is noted.			
3.	Interior and exterior pipe cracks are noted.			
4.	Fabrication date is stamped on precast concrete pipe.			
5.	Precast pipe is stamped with class or D-load, plant id and reinforcement type.			
6.	Pipe identification marks indicate the same lot or production number shown on compliance certificate.			
7.	Compliance certificates have been obtained for pipe, gaskets, banding material and hardware.			
	Compliance certificate water tightness requirements have been submitted if water tight joints are specified.			
8.	Polymeric or asphalt coating damage has been noted.			

Checklist 603-2 — FINAL CULVERT INSPECTION

		Yes	No	N/A
1.	Culverts are free of debris or obstruction.			
2.	Cracks exceeding specified widths and/or depths have been noted.			
3.	Watertight pipe joints have been properly sealed, especially around manholes.			
4.	Pipe inverts are free of sags or high points.			
5.	Pipe ends or stubs are properly plugged.			
6.	Connections and hookups are properly made.			
7.	Catch basins, inlets and drains are connected properly.			
8.	Patching and crack repairs have been completed.			
9.	Bulges, dents or other damage has been noted.			
10.	Pipe coating completely covers the pipe if required.			
11.	Concrete pipe joints are pulled tight, and within tolerance for reinforced concrete boxes.			
12.	Pipe shape is as designed.			
13.	Pipe alignment is as shown within plans.			
14.	Pipe end treatment is installed according to plans.			
15.	No corner radius bolt hole cracking is present on structural steel pipe.			

	Yes	No	N/A
16. Drain pipes properly drain without inlet or outlet ponding.			
17. Multiple pipe installations are spaced properly.			
18. Drop inlet grates are installed correctly.			
19. Settlement in new surfacing above the pipe has been noted.			

Checklist 604-1 — MANHOLES AND INLETS

		Yes	No	N/A
1.	Manholes and inlets are of correct material specifications.			
2.	Manholes and inlets are dimensionally compliant.			
3.	Spalls, dents or fractures are absent.			
4.	Interior and exterior cracks have been noted.			
5.	Fabrication date is stamped on precast concrete items.			
6.	Identification marks match lot or production numbers shown on compliance certificate.			
7.	Water tightness criteria are stated on certificate of compliance as required.			

Checklist 604-2 — INLET GRATE

		Yes	No	N/A
1.	Undisturbed ground is compacted to specification before bedding material is placed.			
2.	Bedding material is compacted to specification.			
3.	Inlets are lifted according to manufacturer recommendation to prevent damage during placement.			
4.	Concrete or grout fills voids between pipe and inlet, and around pipe perimeters inside and outside of the inlet.			
5.	Backfill around the structure is thoroughly compacted and notches into firm material.			
6.	New or existing pipe connections are water tight.			
7.	Wall reinforcement bars are as specified.			
8.	Inlet is cleaned after forms are removed.			
9.	An approved patching compound is used to bevel pipe/wall junctions.			
10.	Inlet at correct elevation and height.			
11.	Inlet interior matches the plan or Detailed Drawings.			
12.	Grate rests securely on frame.			
13.	Grate cross grade matches curb and gutter cross grade.			
14.	Grate is in accordance with plan details and specifications.			
15.	Installed grate is not a bicycle hazard.			
16.	Precautions were taken to prevent water pumped from inlets from flooding streets, alleys, sidewalks and private property.			
17.	Temporary coverings such as geotextile were provided between frame and grate to prevent materials from entering storm drain system, and removed after grading or paving. Materials such as fabric/geotextile allow water passage but keep road material from entering.			

Checklist 604-3 — MANHOLE

		Yes	No	N/A
1.	Undisturbed ground was compacted before bedding material placement.			
2.	Bedding material is properly compacted.			
3.	Inlets are lifted according to manufacturer recommendation to prevent damage during placement.			
4.	Concrete or grout fills voids between pipe and inlet, and around pipe perimeters inside and outside of the inlet.			
5.	Manhole interior matches plans or Detailed Drawings.			
6.	Bearing frame face and cover is machined so cover lies flat in any position in the ring, and bears uniformly throughout the ring circumference.			
7.	Patching material is being used to bevel pipe and wall junctions.			
8.	Backfill material is placed in lifts < 8 inches before compaction, and notched into firm material?			
9.	Frames and covers are set after top course placement. Although standard specifications do not prohibit contractors from setting frames and covers before top lift placement. Informed Project Manager of contractor intention to set frames before top lift placement.			
10.	Surface roughness due to ring and cover setting and settling has been considered.			
11.	Access to manhole steps is provided from the manhole lid.			
12.	Pedestrians and traffic is protected from manhole excavation when Contractor is not working. Safety fencing with steel posts is installed nightly and during non-work periods at Contractor expense until backfilling.			
13.	Water pumped from manholes will not flood streets, alleys, sidewalks and private property.			
14.	A location manhole and valve survey has been performed. Some Contractors choose to pave over manholes and water valves and then hammer out these locations after paving is completed. If so, manhole and valve locations must be surveyed for location beforehand.			

Checklist 606-1 — GUARDRAIL

		Yes	No	N/A
1.	Iron and steel products incorporated into permanent work and associated documentation meet Standard Specification Subsection 106.09 Domestic Material (Buy America) requirements.			
2.	Steel rail sections and posts have been checked for damage to galvanization, especially in stockpile areas, for evidence of being field cut or drilled. Field repair or replacement is required based on extent of missing coating? Contact Project Manager for assistance verifying galvanization and coating acceptability.			
3.	Defects to rail such as burrs, twists, bends, misaligned holes and uncoated areas have been identified. Verify guardrail sections are of type, shape, length and curvature required. Replacement of damaged sections has been required.			
4.	Visual defects to wire rope such as kinks and frays have been identified and replacement is required as necessary. Ensure wire rope is of type, size and grade required.			
5.	Check for visual defects to posts such as bends, twists, uncoated areas, misaligned holes and damaged ends are identified. Verify system posts are proper type and weight. Length, cross sectional dimension, hole diameter and template are checked for compliance.			
6.	Verify block-outs are proper type, size and material. Hole diameter and template are correct.			
7.	Verify hammer mark from the mill is present. Wood is straight, sound, without defect, and meets specified dimension. Field cuts have been avoided. If cut, wood is treated with approved preservative.			
8.	Fastener type, class, diameter and length compliance has been verified. Correct fasteners are supplied with the system. Bolt cutting is not taking place.			

Checklist 607-1 — CHAIN LINK FENCE

		Yes	No	N/A
1.	Iron and steel products incorporated into permanent work and associated documentation meet Standard Specification Subsection 106.09 Domestic Material (Buy America) requirements.			
2.	Wire fabric is proper gauge.			
3.	Wire fabric is installed as specified.			
4.	Concrete achieves strength before wire fabric is stretched.			
5.	Fabric is stretched taut and securely fastened to posts and strain wires.			
6.	Tie wire is proper gauge.			
7.	Wire clips are proper number and gauge.			
8.	Strain wires are proper gauge.			

Checklist 607-2 — WIRE FENCE AND GATES

		Yes	No	N/A
1.	Iron and steel products incorporated into permanent work and associated documentation meet Standard Specification Subsection 106.09 Domestic Material (Buy America) requirements.			
2.	Measures have been taken to protect livestock during fencing.			
3.	Posts are driven to proper depth, spacing, plumb and alignment.			
4.	Wire is taut and fastened to pasture side of each post, and on the outside of posts around curved areas. Only one wire splice per run of wire has been used between panels (braces). Within high velocity wind and moving debris areas, wire may be placed on the windward side of posts, except on curves.			
5.	Upper gate post hanger is installed to prevent removal.			
6.	Strain and corner posts are installed at required locations.			
7.	Fencing has been properly tied into structures. ROW agreements have been checked against plans.			
8.	On wood posts, staples are placed on skew to wood grain and driven to within 1/16 - 1/8 inch of contact with wire. Cut or trimmed areas received three applications of treating solution.			
		Yes	No	N/A
9.	Wire at splices and end posts is wrapped back on itself with five wraps.			

Checklist 608-1 — CONCRETE SIDEWALK

		Yes	No	N/A
1.	Forms are same depth as sidewalk thickness and staked securely in position.			
2.	Unsuitable material is removed from subgrade and replaced to satisfactory depth.			
3.	Subgrade is thoroughly compacted.			
4.	Forms and subgrade are moistened before concrete placement.			
5.	Concrete surface is struck off with float, troweled smooth, and brush finished.			
6.	Joints are properly formed and at required intervals.			
7.	Surface tolerance has been checked with straightedge and documented. ADA grade has been verified.			
8.	Sidewalk placed against existing curb has bond breaker been applied between new sidewalk and existing curb. Sidewalk joints align with curb joints. approximately every other sidewalk joint should align with curb joints.			

Checklist 609-1 — CURB AND GUTTER

		Yes	No	N/A
1.	Subgrade and forms are watered before concrete placement.			
2.	Expansion joints are at correct intervals, radius points and structures.			
3.	Contraction joints adjacent to asphalt are placed at correct interval.			
4.	Expansion and contraction joints are cut to adequate depth.			
5.	Contraction joints match PCCP joints.			
6.	Expansion joint filler is placed between curb and driveway.			
7.	Lines and finish provide a good appearance.			
8.	Curb top surface, front face and flow line have been straight edged. Check plans to verify spill or catch type curbing.			
9.	Concrete complies with specifications.			

Checklist 611-1 — CATTLE GUARDS

		Yes	No	N/A
1.	Required material certifications are submitted for items requiring certification. Iron and steel products incorporated into permanent work and associated documentation meet Standard Specification Subsection 106.09 Domestic Material			

	(Buy America) requirements.		
2.	Steel components are prime coated and field painted as required.		
3.	Backfill is compacted to at least 95% maximum density.		
4.	Grade and cross slope conform to finished pavement surface.		

Checklist 612-1 — PAINTING

		Yes	No	N/A
1.	MSDS safety information has been obtained and abided by. Necessary PPE and safety devices are available and properly used.			
2.	Paints not granted prior approval have been obtained and submitted to Materials Bureau for approval prior to use.			
3.	Paint is formulated and mixed in accordance with Standard Specifications and manufacturer recommendation.			
4.	Surface to be painted is cleaned of rust, loose mill scale, dirt, oil or grease and foreign substances. Pay particular attention to areas needing hand cleaning to prevent surface damage, such as bearing components and slip critical surfaces. No more surface than can be cleaned in one day can be painted that day.			
5.	Metal is dry, frost free and atmospheric conditions are satisfactory.			
6.	Weather conditions meet the more restrictive of manufacturer recommendation or project contract specifications regarding surface temperature, dew point and temperature.			
7.	Proper precautions are taken to protect vehicular and pedestrian traffic from paint spotting.			
8.	Paint is applied smoothly and uniformly so no excess paint collects, and "runs" or "thin" areas do not develop. Runs are sanded and repainted.			
9.	Paint thickness is checked with a micrometer, and by tracking paint volumes applied to the area covered to calculate application rate and applied thickness.			

Checklist 614-1 — MSE WALLS

		Yes	No	N/A
1.	Excavation limits, grade and elevation have been checked.			
2.	Geotechnical Section or representative has checked wall base excavation to ensure adequate bearing material is present.			
3.	Foundation backfill was placed at proper lift thickness and compaction.			
4.	Manufacturer representative is present when construction begins if required by special provision.			

5.	Verified drainage is installed at correct location and spacing. Outfalls are compliant. Drainage elements are connected to an outlet exiting through the wall face.		
6.	Proper erosion control and drainage is installed and functioning to minimize washout during leveling pad installation.		
7.	Facing installation and first course was monitored to ensure proper alignment. Wall was continually monitored for plumbness so corrections could be made in progress.		
8.	Connections were checked for compliance.		
9.	Block wall cores are backfilled with free draining aggregate before the next course is installed.		
10.	Reinforcement type, length and spacing are according to shop drawings. Wall backfill layers are level prior to reinforcement placement. Reinforcement is pulled tight and held in place with pins or soil piles before backfill placement.		
11.	Large compaction equipment was not used directly behind or close to the wall. Only hand operated compaction equipment was used near wall face.		
12.	Facing unit spacing prevents soil from raveling out. Top course is properly capped.		
13.	Wall elements damaged during installation were removed and replaced.		
14.	The geotechnical section was notified of issues, concerns or questions during construction.		

Checklist 616-1 — CONDUIT INSTALLATION

		Yes	No	N/A
1.	Inspector sent conduit samples to the Materials Bureau for testing prior to installation.			
2.	PVC conduit has UL approval stamp, manufacturer name, trade size, Schedule 80 and 150° temperature rating imprinted on each conduit section.			
3.	Conduit embedded in concrete structures is securely tied to reinforcing steel as required.			
4.	Expansion fittings were checked and installed properly where conduit crosses structural expansion joints.			
5.	Open trench conduit installation was checked for straight line, grade level and depth (24 inches).			
6.	Trenches open overnight are barricaded.			
7.	Conduit designated "future use," has a pull string installed and is properly capped, plugged or sealed with conduit putty.			
8.	Contractor cut into curb face directly over conduit located under curb line.			
9.	Contractor blew out conduit with compressed air and mandreled existing conduits incorporated into the new system.			
10.	Conduits entering pull boxes are located near box sides at proper height above pull box bottom (see pull box detail) and slope toward conduit run direction.			
11.	Conduit ends in pull boxes and foundation were inspected. Contractor has not been allowed to pull conductor until end bells are installed on conduit ends when steel conduit is used for conduit termination. PVC conduit ends will not damage conductors or cables pulled through conduit.			
12.	Jacking and drilling pits are at required distance from edge of traveled way and barricaded.			

Checklist 616-2 — ELECTRICAL CONDUCTORS, SPLICING AND TAGGING

		Yes	No	N/A
1.	Wire and cable for traffic signals, highway lighting, and electrical systems are UL listed copper and rated for operation?			
2.	Conduit bell ends are installed on conduit ends before wire was pulled.			
3.	Contractor cleaned conduit runs with compressed air and mandrel if necessary.			
4.	UL label was affixed to each wire or cable reel, coil or container delivered to the job site.			
5.	Wire has distinctive and permanent markings showing manufacturer name or trade mark, insulation type, size and voltage rating.			
6.	Conductor number and size is consistent with the contract conductor schedule.			
7.	Pulling lubricant was used.			
8.	Wire was not dragged to avoid conductor insulation damage.			
9.	A minimum 2 ft of slack wire was left in each pull box and signal pole.			
10.	Detector lead in cables are continuously run (not spliced) between the detector loop pull box and control cabinet.			
11.	Conductors were tagged to identify circuit number and function.			
12.	Signal wires were tagged in pull boxes, mounting assembly terminal compartments and control cabinets.			
13.	Roadway lighting conductors for circuit number tagging in pull boxes and service cabinets have been inspected.			
14.	In-line non-locking fused and unfused watertight connectors were installed in luminaire pull boxes.			
15.	Lighting wire splicing was done only in pull boxes with correct, watertight connectors. Signal cable connections were made in terminal compartments and cabinets only.			
16.	Loop wire soldering splices were checked. Conductor splices are identified in the plans. Tape splices were not permitted.			
17.	Soldered, waterproof splices were used to weatherproof loop cable splices.			
18.	When the conductor schedule called for green insulated copper bond wire, insulation was removed from the bond wire in the pull box where the wire leaves the conduit end bell.			

Checklist 616-3 —PRECAST REINFORCED CONCRETE PULL BOX INSTALLATION

		Yes	No	N/A
1.	Pull box size is as specified.			
2.	Chipped or cracked pull boxes, extensions and covers have been rejected.			
3.	Pull boxes are set at grade elevation level with curb or sidewalk. Pull boxes are at the same level as the slope within cut and fill areas.			
4.	Pull boxes in concrete were inspected for expansion joint material surrounding the box.			
5.	Pull boxes installed in soil are encased in concrete pad as required.			

Checklist 617-1 —TRAFFIC SIGNAL AND LIGHTING INSTALLATION

		Yes	No	N/A
1.	Signal hardware package was inspected for conformity with the approved materials list, MDT detailed drawings and specifications when delivered.			
2.	Pole layout for mounting assemblies has been checked for correct orientation against the pole schedule and MDT Detailed Drawings.			
3.	Mounting bolts are properly sized, galvanized, and configured per pole drawings for Contractor furnished poles.			
4.	Pipe nipple lengths on mounting assemblies have been inspected.			
5.	Elevator plumbizers and pole plates are bronze as required.			
6.	Elevator plumbizer through bolts are double nutted.			
7.	Traffic signal mounting assemblies are plumbed and assembled with appropriate mounting (standard or plumbizer) to deliver roadway clearance.			
8.	Tunnel visors are specified length.			
9.	Back plate dimensions have been inspected.			
10.	Correct wattage and type signal lamps were installed.			
11.	Back plate was checked for no open gap between elevator plumbizer and signal face section.			
12.	Check post and side mounts to verify individual lens holders are mounted perpendicular to signal faces as required when fiber optic turn arrows are installed			
13.	Not in service signal heads are covered.			
14.	Breakaway foundation bases protrude above ground 4 inches or less.			

Checklist 617-2 — CONTROLLER CABINETS

			Yes	No	N/A
1.	Ca	binet bottom was sealed to foundation with quality caulk.			
2.	hei	ntroller cabinet is mounted according to cabinet orientation detail. Mounting ght and orientation have been inspected with respect to driver and pedestrian proaches and ADA requirements.			
3.		rvice load center cabinets and entrance equipment has been inspected to rify:			
	a.	Contractor consulted with utility company to establish and install proper amperage interruption capacity breaker if other than specified.			
	b.	Completed service assembly is acceptable to utility company.			
	C.	Contractor and Inspector met with utility company in the field to verify service run location.			
	d.	All live electrical components are protected by a dead front panel.			
	e.	Voltage and amperage readings were taken on each circuit.			
	f.	Padlocks were furnished and installed. Key transfer plans have been made.			

Checklist No. 617-3 — INSPECTION GUIDELINES FOR VIDEO DETECTION SYSTEMS

		Yes	No	N/A
1.	Contractor installed necessary mounting hardware.			
2.	Contractor rack mounted vehicle detection video processor to detect vehicles.			
3.	One video monitor per traffic signal cabinet is provided. (Note: monitors may not be required in smaller cabinets.)			
4.	Video detection cable is as specified by video detection equipment manufacturer.			
5.	Detection system holds a call for presence while vehicles remain in the detection zone.			
6.	Cameras are shielded against sun and inclement weather, and operate at -20°F to +120°F.			
7.	Contractor provided lightning protection between video camera and the video processor as recommended by video manufacturer.			
8.	Terminal blocks are installed for connection.			
9.	Video detection system manufacturer representative was present at traffic signal start up.			
10.	Contractor installed video detection cable is one continuous cable from traffic signal cabinet to each video camera.			
11.	Video detection cable is not spliced.			
12.	Contractor sealed wire entrance holes in the signal standard, as approved by Project Manager.			
13.	Video processor was delivered to the construction site when traffic signal was turned on for cabinet installation.			

Checklist 617-4 — RADAR PRESENCE DETECTION SYSTEMS

		Yes	No	N/A
1.	Contractor provided a cabinet side mount, preassembled back plate with power supply meeting manufacturer specification and a contact closure input card.			
2.	The back plate provided communication, power conversion, power supply and surge protection for 4 detection units.			
3.	Radar detection system detects and reports vehicles within 90° view field and range of 6 ft within a 100 ft radius from sensor.			
4.	Radar detection system provided at least 8 RF channels so multiple units can be mounted nearby without interference.			
5.	Contractor provided radar presence detection with automatic and manual lane configuration, stop bars and zones.			
6.	Radar detection system includes software for saving detector configurations and firmware upgrading.			
7.	Contractor arranged for a radar detection system factory representative at signal activation.			

Checklist 617-5 — LOOP DETECTORS

			Yes	No	N/A
1.		op detectors are installed in subbase or base material during new roadway nstruction:			
	a.	Loop detectors are centered in each traffic lane and at proper distance from stop bar.			
	b.	Trenching was kept to a minimum.			
	C.	Specified sand amount is placed above and below loop wires.			
	d.	Insulation ground resistance tested at least 50 megohms before and after saw cut sealant installation, and was tested with Inspector present. Inductance and resistance were tested to meet detector loop specifications with Inspector present.			
	e.	Contractor performed and documented a continuity test.			
	f.	Loop detector wires are identified for phase number, direction and lane or plan loop number with wire marking tags.			
2.	Sa	w cutting loop detectors in asphaltic concrete:			
	a.	Loop detectors were installed before final lift placement during new construction with multiple asphalt lifts.			
	b.	Corner holes were drilled first.			
	C.	Saw cutting is straight.			
	d.	Saw cut depth is checked every 3 feet.			
	e.	Loop detector wire is approved.			
	f.	Number of wire turns was verified.			
	g.	"Hold down tabs" were installed as specified.			
	h.	Approved sealant was furnished and applied.			
	i.	Ground insulation resistance tested at least 50 megohms before and after saw cut sealant installation and was tested with Inspector present.			
	j.	Contractor performed and documented continuity testing.			
	k.	Contractor cut into curb face directly over loop detector conduit located under the curb.			
	l.	Loop detector wires are identified by phase number, direction and lane or plan loop number with permanent marking tags.			

Checklist 617-6 — TRAFFIC SIGNAL ACTIVATION AND FINAL CLEANUP

		Yes	No	N/A
1.	Signal circuits were Contractor tested with 120 volt power applied to each signal wire at the pull box in front of the control cabinet, and witnessed by Inspector.			
2.	Signal activation date was coordinated with the Traffic Engineering Unit to set up controller timing and activation.			
3.	Roadway striping and signing is completed before activation.			
4.	Contractor has arranged for activation day traffic control.			
5.	Stop signs are removed after signal activation.			
6.	Signal heads are properly aligned.			
7.	Grouting is completed.			
8.	Touch up painting is completed.			
9.	Pavement patching and replacement is completed.			
10.	Landscaping and grading is restored to original or acceptable condition.			
11.	Final measurements and quantities are submitted to Project Manager?			
12.	As-built plans are completed and submitted.			
13.	Salvaged equipment has been dismantled, stockpiled or delivered.			
14.	Salvage equipment damaged or destroyed by Contractor is replaced.			
15.	Contractor delivered manufacturer warranties and guarantees to project office.			

Checklist 617-7 — HIGHWAY LIGHTING

		Yes	No	N/A
1.	Luminaires delivered to the job site match the approved materials list?			
2.	Lamp socket position provides correct light distribution for horizontally mounted luminaires.			
3.	Vertically mounted luminaires exhibit specified tilt angle setting.			
4.	Up-light shields are installed.			
5.	Lamp wattage is correct.			
6.	Horizontally mounted luminaires are leveled and mounting bolts are tight.			
7.	Vertically mounted luminaires are plumbed before tilt angle was set. Mounting bolts are tight.			

Checklist 618-1 — TRAFFIC CONTROL INSPECTION

		Yes	No	N/A
1.	Temporary traffic control is checked for compliance each calendar day traffic control devices are used, masked or turned away from traffic and at least once per week during nighttime hours.			
2.	Traffic control device type and number are correctly located as shown by the traffic control plan during active construction.			
3.	A safe route is ensured for users, including Contractor equipment, workers, and MDT employees.			
4.	Traffic control devices are in place and managing highway users as intended.			
5.	Traffic control devices are continually monitored for damage, visibility compliance and undesirable device relocation.			
6.	Warning lights, beacons, portable arrow boards and changeable message signs are functioning properly and clearly visible with sufficient battery life.			
7.	Traffic control device cleaning is requested as necessary to preserve legibility and retro-reflectivity, and at least every two weeks.			

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Checklist 619-1 — HIGHWAY SIGN INSTALLATION

		Yes	No	N/A
1.	Staked locations have been inspected for contract compliance.			
2.	Sign visibility obstructions have been noted.			
3.	Sign type, color, size, message, placement location, lateral offset, mounting height, orientation and reflectance are compliant.			
4.	Posts are plumb and bases meet breakaway requirements.			
5.	Sign placement angle to the roadway is correct.			
6.	Signs are installed to proper height above the edge of traveled way.			
7.	Contractor furnished reflective sheeting is proper color and shade for partial sign overlays.			
8.	Overlay material overlays the full sign area.			
9.	Sign placement does not compromise pedestrian safety or violate ADA requirements such as sidewalk width.			
10.	Installation date label is attached to new signs backs.			