# STATE CONSTRUCTION OFFICE

## **INSPECTION GUIDE**



May 2005

#### MOBILIZATION

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
101	1. W	Documentation	1. Daily Diary
	2. W		2. Ensure contractor has permission
			private property.
	3. W		3. Ensure contractor places no
			equipment in the median or within the clear zone

#### MAINTENANCE OF TRAFFIC

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
102	1. W		1. Ensure setup according to MOT phasing and design Standards
	2. W		2. Ensure Weekly report is received form #700-010-08
	3. W		3. Ensure access to businesses and private property maintained
	4. W		4. Ensure all signs are erected according to design standards.
	5. W		5. Ensure use of business access signs when required.
	6. W		<ol> <li>Ensure proper lane closures per design standards.</li> </ol>
	7. W		
	8 W		7. Be sure that signs are not only per std but also fit field conditions.
			8. Ensure that prior to switching phases the MOT set up is in accordance with MOT plan
	9. W		9. Ensure RPM'S are placed

## MAINTENANCE OF TRAFFIC (Continued)

SPEC	INSPECTION	<b>INSPECTION OBJECTIVE</b>	INSPECTION ACTIVITY
102	10. W		10. Ensure Work Site Supervisor is
			certified
	11. W		11. Ensure reasonable access for pedestrians (sidewalks)

TEMPORARY WORK STRUCTURES			
SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
103	1. H		<b>1.</b> <i>Proper permits in accordance with specifications.</i>
	2. W	Documentation	2. Daily Diary.

### **EROSION CONTROL**

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
104	1. H 2. H		<ol> <li>Ensure erosion control plan is submitted and accepted prior to construction activities.</li> </ol>
			2. Ensure all certifications received before placement on project (Hay, silt fence, turbidity barrier, etc.)
	3. H		3. Ensure protective measures from plans meet field conditions.
	4. H		4. Ensure no construction activities begin until Erosion Control Plan has been approved.
	5. W		5. Ensure silt fence and hay bales staked & trenched if applicable and protective measures shown in plans meet field conditions.
	6. W		6. Ensure weekly Storm Water Pollution Prevention Permit (SWPPP) is received
	7. W		7. Monitor National Pollutant Discharge Elimination System (NPDES) and SWPPP for compliance

#### **EROSION CONTROL**

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
104	8. W		8. Ensure Contractor Personnel is certified.

## CONTRACTOR QUALITY CONTROL GENERAL REQUIREMENTS

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
	•		•
105	1. H		1. Ensure that a QC plan has been submitted and approved in accordance with specification.
	2. W		2. Ensure that the QC plan is revised in accordance with specifications.
	3. W		3. Ensure QC manager is qualified.

#### **CLEARING AND GRUBBING**

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
110	1. <b>H</b>		1. Ensure bench loop run is completed.
	2. H		2. Before C & G operations, ensure original X-sections taken if applicable.
	3. W		3. Ensure C & G confined to areas shown on plans
	4. W		4. Ensure select C & G confined to areas on plans.
	5. W		5. Ensure removal of all roots, stumps etc.
	6. W		
	7. W		6. Ensure disposal per Specifications.
	8. W		/. Ensure all utilities have been located prior to clearing and grubbing.
			8. Ensure all Applicable laws, ordinances and regulations are followed when burning or disposing of materials.

#### **EXCAVATION AND EMBANKMENT**

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
120	Regular Etc.		
	1. <b>H</b>		1. Ensure original x-sections taken if applicable before excavation begins
	2. <b>H</b>		2. Ensure bench loop ran if applicable
	3. H		3. Ensure utilities have been located prior to excavation.
	4. W		4 Cuts & Slopes conform to plans
			4. Cuts & Stopes contonn to plans
	5. W		5. Unsuitable excavation not placed in fill
	6. W		6. Ensure no muck, stumps, roots, etc are used in the material used for embankment.

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
120	Borrow 1. H		1. Borrow pits have an approval from Div. of Archives
	2. H		2. If not using truck measure will need X- Sections original and final.
	3. H		3. Borrow must be from approved pit.
	4. W		4. Ensure trucks have numbers, certs
	5. W		<ul><li>5. Ensure density log book coded if applicable</li></ul>
	6. W		<ul><li>6. Ensure proctor samples are taken</li><li>for all material types in borrow pit.</li></ul>

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
120	Lateral Ditch Exc. 1. W		1. Conforms to line & grades in plans.
	Subsoil Exc.		
	1. H		1. Ensure original x-sections are taken or waived
	2. H		2. After excavation take final x- sections
	3. W		3. Ensure limits have been set
	4. W		4. Ensure cut is to plan
	5. W		5. Ensure suitable backfill material is utilized
	6. W		
			6. Ensure lift thickness for density is correct.
	7. W		
			7. If material is suitable for embankment, do not remove from
			project until it is determined it will not
			be needed for the project.

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
120	Subsoil Exc. 8. W		8. If material is unsuitable and is being hauled from the project to private property a letter giving permission from the land owner will be needed.

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
120	Channel Exc.		
	1. H		1. Ensure original x-sections taken if applicable
	2. W		2. Cut made to line & grade in plans
	3. W		3. Take final x-sections

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
120	Embankment		
	1. H		1. Ensure original x-sections taken if applicable
	2. H		2. Ensure final x-sections taken if applicable
	3. H		3. Ensure embankment is from approved source
	4. W		
	5. W		4. Conforms to line & grades in plans.
	6. W		<ul><li>5. Fill placed in lifts stipulated in specs.</li><li>6. Ensure density book compares to</li></ul>
	7. W		field conditions.
			7. Ensure proctor sample has been taken and that it matches description of embankment being placed.

#### **FLOWABLE FILL**

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
121	1. H		1. Ensure proper cure time prior to
			opening to traffic.
	2. H		2. Be sure material meets DOT Specs. And approved design mix.
	3. W		
			3. Ensure delivery ticket for each load
			delivered
	A W		4. When used to fill placed out of
	4. VV		service utility casing fill from low end
			and vent high side to allow air to escape
			which ensures casing is totally full.

#### **EXCAVATION FOR STRUCTURES & PIPE**

SPEC	INSPECTION	<b>INSPECTION OBJECTIVE</b>	INSPECTION ACTIVITY
125	1. H		1. Ensure original x-sections have been taken if applicable
	2. H		2. Ensure final x-sections taken after excavation if applicable
	3. W		3. Excavation is to lines & grades shown in plans

#### **GEOSYNTHETIC REINFORCEMENT**

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
145	1. W		1. Ensure suppliers certification is received
	2. W		2. Ensure Pins & over laps are per plan or manufactures recommendations.
	3. W		3. Ensure it is installed according to the contract documents and manufacturers recommendation.

## STABILIZATION

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
160	1. H		1. After mixing take sample for min
			LBR and proctor for density.
	2. W		
			2. Mixing depth uniformity
	3. W		
			3. Ensure thickness within tolerance.
	4. W		4. Ensure density book is properly
			coded and that proper compaction is
			achieved.

## FINISH SOIL LAYER

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
162	1. H		1. Acceptable values must be achieved before grassing
	2. W		2. Uniformity & mixing depth achieved

#### **BLANKET MATERIAL**

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
163	1. W		1. Ensure uniformity & mixing depth
			achieved before grassing

## CRACKING & RESEATING EXISTING CONC. PAV'T.

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
175	1. W		1. Ensure cracked slabs have no
			dimension greater than 3'

#### **RECLAIMED ASPHALT PAVEMENT BASE**

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
283	1. H		1. Ensure a proctor sample has been
			taken.
	2. W		
			2. Ensure used only for non-traffic
			applications.
	3. W		
			3. Ensure material is spread to line,
			grade and depth per contract documents.
	4. W		4. Ensure density book is coded
			properly.
	5 W		
	5. W		5. Ensure proper compaction is
			received.

## **OPTIONAL BASE** (Excluding Asphalt)

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
285	1. H		1. Limerock must come from approved
			DOT pit.
	2. H		2. Ensure moisture content is met before priming.
	3. W		
			3. Ensure density book is coded.
	4. W		4. A proctor sample is taken.
	5. W		5. Ensure lines & grades according to plans.
	6. W		6. Ensure proper thickness is met.
	7. W		7. Proper spread rate is met for prime
	8 W		coat.
	0. W		8. Sanding of prime coat.
	9. W		9. Ensure proper % of compaction is met.

#### TURNOUT CONST

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
286	1. W		1. Ensure construction to lines & grades
			in plans
	2. W		2. If asphalt is used be sure mix design is approved and that it is not open graded friction course, also that it does not go over 105% based on lbs/sy.

#### PRIME AND TACK FOR BASE COURSES

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
300	1. H		1. Ensure all distributors calibrated
			prior to use.
	2. H		2. Ensure prime or tack has broken before paving.
	3. W		3. Ensure Rdwy surface is clean prior to Application.
	4. W		4. Certification for materials.
	5. W		5. Calibration table for distributor.
	6. W		6. Ensure material temperature & Spread rate conforms to Spec book.

## HOT BITUMINOUS MIXTURES – PLANT, METHODS, AND EQUIPMENT

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
320	1. W		1. Verify mix design, mix type and traffic level are as agreed upon at pre- pave meeting and/or on plans.
	2. W		2. Scale check to verify, weigh system accuracy and automatic print out, with all pertinent info.
	3. W		3. Verify material stockpile locations.
	4. W		4. Check off plant inspection list.
	5.		5. Print out roadway and plant random number sheets for cores and Plant Sample.
	6.		6. Check mix temperature in haul trucks.
	7.		7. Check haul trucks for tarps, chains, and release agent.
	8.		8. Test HMA per random # using FSTM methods.

## MILLING OF ASPHALT PAVEMENT

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
327	1. H		1. Ensure milled surface is properly swept with out creating excessive dust or sweeping milled material on to previous surfaces.
	2. W		<ol> <li>Ensure proper cross-slope, depth</li> </ol>
	3. W 4. W		3. Ensure positive drainage
	5 W		4. Ensure straightedge requirements are met.
	5. W		5. Check milling machine for proper width, length of conveyor and automatic grade control.
	0. W		6. Check for rpm removal prior to milling.
	7. W		7. Check milling depth, ensure milling is not exposing limerock base.
	8. W		<ul> <li>8. Check cross-slope + 2% roadway +</li> <li>5% shoulder at proper frequencies.</li> </ul>

	SUPERPAVE ASPHALT			
SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY	
234	1. H		1. Lay out cores promptly after finish rolling.	
334	2. H		2. Inspects contractors equipment to ensure compliance with 320, 330-10, and 330-11	
336	3. H		3. Inspects structural surface and indicates locations for corrections based on rolling straightedge	
337	4. H		4. Ensure that tack truck is calibrated and has chart available for review	
330	5. H		5. Inspect tack truck and distributor bar or clogs and to ensure burners will maintain required temperature	
320	6. W		6. Ensures that correct mix design is being delivered and placed and in compliance with standards and specs	
	7. W		7. Ensures tack is applied per specification 300-7	
	8. W		8. Verifies MOT on project or paving operation and review periodically throughout paving operations.	

SUPERPAVE ASPHALT (Continued)			
SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
234	9. W		9. Checks air temperature per 330-4.2.2
334	10. W		10. Check asphalt tickets for correct mix type, traffic level and mix design number.
336	11. W		11. Check mix temperature and ensure no diesel fuel used as a release agent in truck beds.
337	12. W		12. Check condition of mat before and after rollers.
330	13. W		13. Check spread rate and cross slope.
320			

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SUPERPAVE ASPHALT (Continued)				
SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY	
234	14. W		14. Ensures HMA not placed in rain or on wet surfaces	
334	15. W		15. Checks roadway surface condition per 330-4.2.1	
336	16. W		16. Ensures that contractor follows requirements set forth at pre-paving	
337			conference	
330				
320				

SUPERPAVE ASPHALT (Continued)			
SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
234	17. W		17. Inspects milled surface to ensure that limerock base is not gouged and if it is to prime LR before paving.
334	18. W		18. Ensures that contractor's equipment electronic controls are functioning in accordance with specs.
336	19. W		19. Inspects dump trucks to verify have tarp and dump chains
337	20. W		20. Inspects asphalt delivery tickets and temperature in accordance with 330-7.3
330	21. W		21. Inspects dumping of mix to ensure no segregation of mix in dump or pavers
320	22. W		22. Ensures asphalt pavers is correct width and mix is being placed per 330-10.2.3
	23. W		23. Inspects longitudinal and transverse joints to ensure compliance with 330-12

## SUPERPAVE ASPHALT (Continued)

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
234	24. W		24. Ensures string line used for pavers alignment when no curb and gutter
334	25. W		25. Verifies transverse & longitudinal joints constructed correctly
336	26. W		<ul><li>26. Performs asphalt depth checks per</li><li>330-10.1.6</li></ul>
337	27. W		27. Reviews speed of asphalt pavers and spread rates to ensure following plans and pre-paving agreements
330	28. W		28. Verifies cross-slop of placed mat of asphalt
320	29. W		29. Inspects asphalt mat for cracking, shoving, slipping, or other irregularities

#### **SUPERPAVE ASPHALT (Continued)**

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
234	30. W		30. Monitors temperature and spread
			rates throughout placement operation
334	31. W		31. Inspector identifies locations for asphalt cores in accordance with 334-5.4.1.4
336	32. W		32. Inspects final asphalt surface per 330-13.3.4
337	33. W		33. Completed required asphalt reports
330			
320			

SUPERPAVE ASPHALT (Continued)				
SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY	
234	34. W		34. Inspector uses core results to complete reports	
334	35. W		35. Ensures that correct lift thicknesses are used during placement	
336	36. W		36. Inspect the pavers with string line to ensure that it is free of inverts or crowns	
337	37. W		37. Inspect pavers hopper to ensure it is free of cold asphalt build-up that could pass through the pavers	
330	38. W		38. Inspect pavers and screed for fuel leaks	
520	39. W		39. Inspect dump trucks for fuel/oil leaks	
	40. W		40. Inspect asphalt distributor for fuel leaks	

	SUPERPAVE ASPHALT (Continued)			
SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY	
234	41. W		41. Monitor asphalt distributor speed for proper spread rate	
334	42. W		42. Inspect steel wheel roller drums for damage or defects	
336	43. W		43. Ensure that water system on steel wheel rollers is functioning properly	
337	44. W		44. Inspect steel wheel rollers for scrapers and mats.	
330	45. W		45. Inspect SWR for weight ticket or actual weight	
320	46. W		46. Inspect traffic rollers for weight, leaks, tire inflation, and filled capacity weight	
	47. W		<ul><li>47. Inspect straight edging of transverse joints at 2' intervals</li></ul>	
	48. W		48. Inspect corrections of straightedge deficiencies	
	49. W		49. Ensure last structural layer prior to FC and dense FC mixes protected from traffic until properly cooled	
#### SUPERPAVE ASPHALT (Continued)

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
234	50. W		50. Measurements for Progress and
			Final Estimates
334			
336			
227			
337			
330			
550			
320			

## MISC. ASPHALT

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
339	l. H		1. Ensure approved design mix is used
	2. H		2. Ensure proper soil treatment used
	3. W		3. Ensure cut to lines & grades
	4. W		according to plans
			4. Ensure proper spread rate
	5. W		
			5. Ensure no open graded FC is used.

## ARMI

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
341	1. H		1. If ARMI layer is required, ensures that viscosity and temperature of rubber
			is in compliance
	2. W		2. Ensure rolling operation of ARMI conforms to specs
	3. W		3. Ensure ARMI covered w/1 <sup>st</sup> course of asphalt prior to allowing traffic
	4. W		4. Ensures correct spread rate of rubber and spread rate of aggregate required for ARMI layer

	CONCRETE, STEEL ETC.			
SPE	C INSPECTION	<b>INSPECTION OBJECTIVE</b>	INSPECTION ACTIVITY	
346	1. H		1. Verifies correct placement and size of rebar	
347	2. H		2. Ensures proper placement of deck joints	
350	3. H		3. If stay-in-place forms used, ensures proper attachment to girders	
352	4. H		4. Ensures proper curing times adhered to and correct stripping of forms	
353	5. H		5. Ensures proper placement of attachments to deck (hangers for utilities, etc)	
370	6. H		6. Verify that footing formwork is dimensionally correct and true to line and grade	
400	7. H		7. Ensure that footing forms are securely braced	
400	8. H		8. Ensure that friction collars on piling are securely in place to support load of form and concrete	

		INSI ECHON ODJECHVE	INSPECTION ACTIVITY
346	9. H		9. For bridge rails, ensure top grade line adjusted for variations if deck elevation
347	10. H		10. Ensure mortar blocks or other standoffs provide proper clearance and are secure
350	11. H		11. Ensure that varied tie wire methods are used as required
352	12. H		12. Ensure that rebar placement within tolerances
353	13. H		13. For column hoops, ensure proper placement and tie
370	14. H		14. Ensure that pile caps or pier caps have adequate form support
400	15. H		15. Verify rebar sizes, clearances, tolerances prior to concrete placement
407			

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
346	16. H		16. Ensure that any and all embedment are properly placed and secure to withstand concrete placement
347	17. H		17. For night placements, ensure that adequate lighting is provided
350	18. H		18. For setting of bearings, ensure that pedestals are at correct elevation
352	19. H		19. Ensure pedestals are level, smooth, and free of irregularities
353	20. H		20. Verify that the contractor has provided survey marks for bearing locations and verify placement of bearings relative to those marks
370	21. H		21. Verify correct location and installation of anchor bolts and bearing plates
400	22. H		22. Ensure that the correct size and length of anchor bolt installed and that the temperature is taken into account for expansion locations

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
		·	
346	23. H		23. Ensure that torque wrenches are calibrated
347	24. H		24. (Structural Cone) Ensure cure box meets spec prior to concrete placement.
350			
352			
353			
370			
400			
407			
410			

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
346	25. W		25. Verifies dimensions and integrity of forms.
347	26 W		26. Verifies correct tying of rebar
350	27. W		27. Performs dry run of deck screed
352	28. W		28. Observes proper placement of plastic concrete
353	29. W		29. Observes proper vibration/consolidation of concrete
370	30. W		30. Verifies proper finishing of placed concrete
400	31. W		31. Verifies proper curing of fresh concrete
407	32. W		32. Verifies and monitors mass concrete readings
410			

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
346	33. W		33. Observes proper cleanliness of
			forms
347	34. W		34. Checks proper alignment of forms
350	35. W		35. Ensures pointing/patching of placed concrete
352	36. W		36. Ensures proper placement of scuppers of drains
353	37. W		37. Ensures proper grooving of cured deck
370			
400			
407			
410			

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
346	38. W		38. Ensures proper grinding of cured
			deck
347	39. W		39. Ensures correct placement of bridge
			rail concrete
350	40. W		40. Ensures proper cutting of rail joints
			and deck joints within the specified
			timeframes
352	41. W		41. Verifies thickness of placed concrete
			and concrete cover over steel
353			
370			
100			
400			

	CONCRETE, STEEL ETC.				
SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY		
346	42. W		42. Ensure chamfer is placed as required		
347	43. W		43. Ensure forms are oiled (release agent)		
350	44. W		44. For slip formed rails, ensure stringline securely placed; that machines vibrator working properly; that rebar receiving proper cover		
352	45. W		45. Ensure steel is moist		
353 370	46. W		46. Ensure rebar properly stored on dunnage, properly tied, clean and free of foreign matter		
400					
407					
410					

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
346	47. W		47. Ensure ambient temperatures are
			within tolerance prior to concrete
			placement
347	48. W		48. Ensure that lift placements and vibration of concrete do not violate
350			zone of influence, etc)
352			
353			
270			
370			
400			
100			

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
346	49. W		49. Ensure chairs have rubber on feet
			prior to placing concrete.
347	50. W		50. Ensure backup generators and
			vibrators are available.
350	51. W		51. Ensure blankets are available for bridge deck curing and kept in place for
			required time interval.
352			
353			
370			
100			
400			

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
346	52. W		52. Ensure that weather protection is available and used correctly when necessary
347	53. W		53. Ensure that curing compound is applied at the specified rate
350	54. W		54. Ensure that surfaces to receive Class V finish is applied per specifications
352			
353			
370			
400			

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
346	55. W		55. Watch for impact with rebar of
			anchor bolt holes that are drilled into
			pedestal
2.47	54 W		
347	56. W		56. Inspect beams delivered to ensure
			no damage occurred during snipping
350	57 W		57 Verify that pick points are in the
220			proper location
352	58. W		58. Verify members have FDOT stamp
353	59. W		59. Inspect storage method for precast
			members
370	60 W		60 Verify that beam lengths match as-
570	00. W		built spacings
			ount spacings
400	61. W		61. Ensure that beams are erected fixed
			bearing first
407			

SP	PEC INSPECTION	<b>INSPECTION OBJECTIVE</b>	INSPECTION ACTIVITY
34	6 62. W		62. Ensure that beams are erected per
			the framing plan
34	63. W		63. For steel beams, ensure that beams are stored properly and kept clean
35	64. W		64. Ensure that bolt connections are securely drift pinned before bolting
35	52 65. W		65. Ensure that fastener test results have been obtained for each combination of bolt/nut/washer (Rotational Capacity, Material Test Reports, wedge test results)
35	66. W		66. Track bolt/washer/nut assembly lots being used for all bolt connections
37	70 67. W		67. Ensure that bolted connections are initially tightened to snug tight condition
40	00 68. W		68. Ensure that bolts are match marked and turn of the nut tightening method is used

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
346	69. W		69. Ensure that fastener assemblies are properly stored, packaged, and that they are lubricated from the manufacturer
347	70. W		70. Ensure that connection plates are clean
350	71. W		71. Verify that faying surfaces are in tight contact
352			

## INLETS, MANHOLES & JUNCTION BOXES

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
425	1. H		1. Ensure stamped
	2. W		2. Check line & grade
	3. W		3. Ensure select material is used for backfill
	4. W		4. Ensure inverts are poured
	5. W		5. Ensure proper location
	6. W		6. Ensure removal of all construction debris.
	7. W		7. Ensure grates and lids are installed properly.
	8. W		8. Ensure proper backfilling around structure.
	9. W		9. Inspect structures for any shipping or delivery damage.

# PIPE CULVERTS & STORM SEWERS, ARCH CULVERTS

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
430	1. H		1. Ensure stamped
435	2. H		2. Proper filter fabric placement, cert., and recommended gaskets are used
	3. W		
	1 W		3. Ensure proper type used
	-+. vv		4. Check for damage
	5. W		
	6 W		5. Proper alignment & grade
	0. W		6. Proper slope protection
	7. W		7. Videotape final placement
	8. W		8. Inspect section joints and ensure manufacturer recommended gaskets used.
	9. W		9. Be aware of utilities in the area.
	10. W		10. Ensure all proper backfilling methods are per spec.

## PIPER LINER

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
431	1. H		1. Certifications received
	2. W		2. Inspect completed pipe runs by closed circuit T.V.

# UNDERDRAINS, FRENCH DRAINS, EDGEDRAIN

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
440	1. H		1. Ensure proper certifications
443	2. W		2. Ensure proper type used
446	3. W		3. Ensure select material used

# PRECAST CONCRETE, SOIL ANCHORS

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
450	1. H		1. Ensure QC stamp affixed
451	2. W		2. Check for damage
	3. W		3. Inspect that dimensions match plans.

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
455	1. H		1. Ensure bench loop run and TBM closed properly
	2. H		2. Ensure authorized pile letter is issued
	3. H		3. Review plans for locations of foundation piling or drilled shafts and review project borings
	4. H		4. Review contractor's pile or drilled shaft installation plan and accept
	5. H		5. Prepare pile or drilled shaft field book and record field installation record in log
	6. H		6. Review project site for special features (i.e., buried utilities, overhead power lines)
	7. H		7. Review installation of pile or drilled shaft template

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
455	8. H		8. Ensure that piling have FDOT stamp and are undamaged from shipment.
	9. H		9. For drilled shaft, ensure that the contractor has level II QC plan
	10. H		10. Verify placement of cage and top elevation of cage
	11. H		11. Ensure that footing rebar is correct size, properly tied and placed
	12. H		12. Ensure that vibrations from pile driving is suspended during adjacent concrete casting operations

	PILING, DRILLED SHAFT & STRUCTURE FOUNDATIONS			
SPEC	INSPECTION	<b>INSPECTION OBJECTIVE</b>	INSPECTION ACTIVITY	
455	13. W		13. Mark piling in foot meter increments for recording driving.	
	14. W		14. Establish reference elevation for pile cutoff	
	15. W		15. Ensure necessary protection of existing structures	
	16. W		16. Inspect pile hammer, pile cushion, hammer cushion, leads	
	17. W		17. Inspect pile hole auger and punch for compliance	
	18. W		18. Ensure preforming of holes does not exceed the allowable depth	
	19. W		19. Ensure that voids between pile and preformed hole is appropriately filled with clean sand	
	20. W		20. Ensure that piling are handled and stored correctly per the standard lifting with proper lifting points	

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
455	21. W		21. Verify that pile jets meet specs and that all piling in group are jetted prior to driving
	22. W		22. Ensure pile driving bearing, penetration, blow count criteria, practical refusal, etc meet requirements established by Geotechnical Eng.
	23 .W		23. Verify that piling are driven per the established criteria and results of Saximeter recorded
	24. W		24. Verify proper placement of piling and that out of tolerance piling are analyzed
	25. W		25. Ensure that piles achieve required capacity
	26. W		26. Verify that contractor is maintaining leads and pile in proper alignment
	27. W		27 Perform set checks as required
			27. Terrorini set enceks as required
	28. W		28. When pile splices are required, ensure that they are constructed properly, clean dowel holes, correct epoxy, etc

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
455	29. W		29. For splices of H piles, ensure done by certified welder and that length is >40'
	30. W		30. Verify that pile top elevation and alignment are within tolerance
	31. W		31. Prepare and use the following forms: Soil Excavation log, Rock Excavation log, Rock Core log, Shaft Inspection form, Concrete placement log, Slurry Sampling log, Concrete volumes form, Pay Summary form
	32. W		32. Verify location of drilled shaft
	33. W		33. Verify that equipment matches Drilled Shaft Inspection Plan
	34. W		34. Ensure that barge surfaces are free of slurry to avoid slips/falls
	35. W		35. Participate in test hole or test shaft installation to verify contractor's abilities

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
455	36. W		36. Verify plumbness of casing and
			diameter of shaft
	37. W		37. Log description of material removed by auger
	38. W		38. Verify slurry elevation and viscosity
	39. W		39. Check plumbness of Kelly bar during excavation
	40. W		40. Verify that contractor is performing slurry viscosity testing
	41. W		41. Use SID or sound bottom of shaft as required
	42. W		42. Ensure proper storage of reinforcing steel

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
455	43. W		43. Ensure that correct bars and sizes are used for cages and that correct tying is performed
	44. W		44. Ensure that proper spacers are used to maintain necessary clearance and are at correct interval
	45. W 46. W		45. Ensure that concrete placement is correctly placed via tremie and pump, per specifications or as approved by Engineer
	47. W		<ul><li>46. Ensure that top of shaft is properly cured</li><li>47. For footings, ensure that correct mix is provided</li></ul>
			is provided

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
455	48. W		48. Ensure that bottom of footing is firm
			and unyielding and dry enough to
			support concrete

## **BITUMEN COATING & POLYETHYLENE SHEETING ON CONC. PILES**

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
459	1. H		1. Ensure certification of materials received.
	2. W		2. Ensure surfaces are clean, dry and primed before placing bitumen coating.

## STRUCTURAL STEEL & MISCELLANEOUS METALS

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
460	1. H		1. Ensure stamped
502			
504			
506			
508			
510			

### MULTIROTATIONAL BEARINGS

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
461	1. H		1. Ensure certification is received

## TIMBER STRUCTURES

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
470	1. H		1. Ensure timber is from approved source and certified.
	2. W		2. Ensure hardware is in accordance plan details.

## PLASTIC FILTER FABRIC

SPEC	INSPECTION	<b>INSPECTION OBJECTIVE</b>	INSPECTION ACTIVITY
514	1. H		1. Ensure certification of test report
	2. W		2. Ensure overlaps are correct and in accordance with manufactures recommendations.

## ASPHALTIC CONC. CURB

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
525	1. W		1. Ensure line & grade according to
			plans
	2. W		2. Ensure use of SP 12.5 (A, B, or C)
#### **ARCHITECTURAL PAVERS**

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
526	1. W		1. Ensure consistency in color, size &
			appearance
	2. W		2. Ensure use of proper bedding sand

## **RIP RAP**

SPEC I	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
530 1	1. H		1. Ensure certification
2	2. W 3. W		<ol> <li>Ensure construction according to contract documents</li> <li>(Cert Diver) (EDOT) Ensure if under</li> </ol>
	5. W		water inspection is made.
4	4. W		4. Ensure weight tickets for rubble riprap.
5	5. W		5. Ensure 5:1 ratio for Sand Cement
6	6. W		6. Ensure from approved source

#### NOISE BARRIER WALL

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
534	1. H		1. Ensure precast units are stamped
			from an approved source.
	2. W		2. Ensure construction is in accordance with Contract Documents.
	3. W		3 Ensure no damage during delivery
	4. W		5. Ensure no damage during derivery.
			4. Ensure line and grade is per plan.
	5. W		5. Inspect vertical and horizontal alignment.
	6. W		6. Inspect post spacing is within tolerance.

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
536	1. H		1. For Timber Posts: Verify
			Certifications
538	2. H		2. For Steel Posts: Verify
			Certifications
544	3. H		3. Ensure certifications address
			physical and chemical properties
	4. H		4. For Welded Steel Posts: Verify
			Certifications
	5 11		5 For Timber Discher Verif.
	5. H		5. For Timber Blocks: Verify
			Certifications
	6 H		6 For Rubbar Blacks warify product
	0. 11		cartifications compliant with ASTM
			and FDOT requirements Verify
			Certifications
	7. H		7. For Recycled Plastic, ensure
			compliance with Section 972. Verify
			Certifications

	GUARDRAIL & ATTENUATORS			
SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY	
536	8. H		8. Ensure bolting hardware has certifications of compliance with ASTM and FDOT specs	
538	9. H		9. Verify Certifications	
544	10. W		10. Ensure materials compliant with Section 967	
	11. W		11. Ensure correct guardrail sections being used (Standard, Thrie)	
	12. W		12. Verify in plans that particular post type is/isn't required	
	13. W		13. Ensure they meet SPIB Standard Grading Rules	
	14. W		14. Treated in accord with Section 955	
	15. W		15. Length correct and within 1 inch tolerance	
	16. W		16. Post sides are S4S	
	17. W		17. Ensure posts compliant with ASTM's	

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
536	18. W		18. Ensure posts drilled prior to
			galvanizing
538	19. W		19. Verifies proper grading for mowing
			strips and slopes
544	20. W		20. Verifies that galvanized nails are
			flare
	21. W		21. Ensure posts meet W6x8.5 shape
			and design properties
	22. W		22. Are welded in accord with ASTM's
	23 W		23 For cut posts verify weld between
	23. 11		web plate and flange plates
	24. W		24. Ensure anchor blocks cast of Class I
			Concrete and located according to plans

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
536	25. W		25. Ensure offset blocks meet
			requirements of plans if type specified
538	26. W		26. For cut Steel Blocks, ensure length within 0.25 inch tolerance
544	27. W		27. Verifies that the panels, end sections and special end shoes are lapped in the direction of adjacent traffic
	28. W		28. Meet SPIB Standard Grading Rules
	29. W		29. Are S4S
	30. W		30. Do not vary in length by more than 0.25 inches
	31. W		31. Verifies that the correct washers for guardrail are used

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
536	32. W		32. Verifies the designer approves any
			field changes to guardrail lengths and
			locations
538	33. W		33. Ensure reflectors correct type
			required in contract and mounted in
			accordance with plans/indexes.
<b>5</b> 44	24 W		
544	34. W		34. Ensure correct reflector color used
			in correct locations
	35 W		35 Set posts vertically to depths shown
	55. W		in plans/indexes
			In plano, macheo
	36. W		36. For posts not set in concrete or
			mounted to structures, ensure post hole
			is backfilled/tamped

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
536	37. W		37. For post replacement, backfill and compact existing hole prior to setting new post
538	38. W		38. For posts driven through asphalt pavement, either blockout prior to paving or cut holes through mat. After installation, backfill/compact if necessary and patch asphalt around each post with fresh hot mix.
544	39. W		39. Ensure guardrail panels erected per standard indexes
	40. W		40. Measure for payment number of end anchorages, special guardrail posts, bridge anchorages, etc for payment
	41. W		41. Ensure post spacing are per standard indexes
	42. W		42. Ensure mounting height with and without rub rails is correct for type of guardrail being used
	43. W		43. Ensure guardrail offset minimum distance to hazards

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
536	44. W		44. Ensure correct guardrail panels used
			for transition to bridge rail barriers and
			other specified barriers or cushions
538	45. W		45. Ensure that correct post/offset block combination used
544	46. W		46. Ensure that any necessary enlargement of holes or additional holes done by drilling or reaming and then metalized per specs
	47. W		47. Ensure that guardrail panels used for radius greater than 125 feet are shop bent
	48. W		48. Ensure that guardrail panels at bridge connections are nested
	49. W		49. Ensure that thrie beam terminal connection plates have required filler plate
	50. W		50. Where required, ensure appropriate pedestrian safety treatments are installed

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
536	51. W		51. Ensure proper end treatments used and correctly installed
538	52. W		52. Ensure correct attenuator type installed – redirective or non-redirective
544	53. W		53. Ensure that attenuator is on QPL
	54. W		54. Given the wide variety of available, acceptable systems, it is imperative that inspection utilizes manufacturers provided instruction in conjunction with FDOT standard indexes
	55. W		55. Verifies attenuator delineated with a Type I Object Marker specified in Section 705

## FENCING

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
550	1. H		1. Check for proper certs
	2. W		2. Visual inspection checking post spacing, etc.
	3. W		3. Ensure installation per plans.

# DIRECTIONAL BORING, JACK & BORE, VIBRATORY BORING

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
555	1. H		1. Ensure all utilities have been located and VVH's have been established.
556	2. W		2. Ensure Path Report & as-built plans received within 30 days of Completion of Work Document Measurements.
557	3. W		3. If receiving pits will be excavated be sure they are outside the clear zone.
	4. W		4. Ensure proper equipment use, depths and offsets per plans.

#### COATING SYSTEMS Shop, Field, & Maintenance Painting of Structural Steel Self-Curing Inorganic Zinc Coating Systems

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
560	1. H		1. Do not apply the final coat of paint until all concrete work is completed
561	2. H		2. Ensure approved containment system if applicable.
562	3. W		3. Check for stamps
563	4. W		4. Cert. on Materials
	5. W		5. Clean all welds in accordance with 560-11.2
	6. W		6. Meet the requirements of self-curing Inorganic Zinc Coating 561.32
	7. W		7. Cover all motors, gears and electrical apparatus that may be damaged by sand from the sandblaster.

#### GRASSING

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
570	1. W		1. Ensure proper seed, fertilizer & hay
			used
	2. W		2. Ensure proper germination have been
			with 6 months of day of planning.
	3. W		3. Ensure all seed are grass tested
	4. W		4. Ensure proper documentation
	5 11		5 Ensure anonar annead acts of good
	5. W		5. Ensure proper spread rate of seed.
	6 W		6 Ensure fortilizing and watering per
	0. W		o. Ensure rerunzing and watering per
			plan or spec.

#### SODDING

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
575	1. H		1. Ensure proper certification for noxious weed.
	2. W		<ol> <li>Ensure sod used hasn't been cut over</li> <li>hours.</li> </ol>
	3. W		3. Ensure sod placed per specification.
	4. W		4. Ensure proper application of water and fertilizer.
	5. W		5. Ensure sod has been rolled properly.

#### LANDSCAPE INSTALLATION

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
580	1. W		1. Ensure species size & quality is according to plans.
	2. W		2. Ensure installation, staking and guying are per plan.

#### SIGNALIZATION

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
603	1. H		1. Ensure traffic submittal data submittal in accordance 603-7
608	2. H		2. Ensure shop drawings are approved.
611	3. W		<ul><li>3. Check loops in accordance with 660-</li><li>6.2</li></ul>
620	4. W		4. Supply documentation for final quantities
630	5. W		5. Ensure maintaining agent supplies documentation at final inspection.
632 364 365 369 641 649 650 653	6. W		6. Ensure a Final inspection by mainting agency is arranged prior to acceptance.

## SIGNING

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
700	1. H		1. Ensure that shop drawings received for sign panels requiring shop drawings
	2. H		2. Verify Certifications or compliance with sign properties-color, smoothness, overlay thickness, etc
	3. H		3. Ensure that sign panels have FDOT, dates of fabrication and installation, and fabricators initials permanently stenciled on sign back
	4. W		4. Inspect sign panels for visual defects
	5. W		5. Ensure that the correct sign base type used – frangible, breakaway
	6. W		6. For overhead sign structures, ensure that contractor verifies field conditions prior to placement of order for sign uprights
	7. W		7. Ensure that footing excavations are backfilled per specification

## SIGNING

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
700	8. W		8. Ensure correct sign panel type is used
	9. W		9. Monitor overhead sign installation to ensure the erection not done before foundation is cured
	10. W		10. Ensure that breakaway connections are installed at correct height above ground line
	11. W		11. Ensure that bolts are not over tightened – check torque
	12. W		12. Ensure sign offset correct distance from travel way
	13. W		13. Ensure that sign correct height above travel way
	14. W		14. Ensure that sign is angled correctly away from center of roadway
	15. W		15. Ensure sign installed at correct location

## SIGNING

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
700	16. W		16. Ensure bolt threads burred to prevent loosening
	17. W		17. Ensure signs mounted plumb
	18. W		18. In urban locations, ensure that sign panels offset correct distance behind face of curb
	19. W		19. Ensure that sign installation does not impact ADA clearance requirements

#### WARNING DEVICES

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
701	1. W		1. Ensure placement in accordance with
702			Contract Documents.
705			
706			

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
710	1. H		1. Ensure contractor/sub provides certifications for materials
711	2. W		2. Verify manufacturer's name and lot numbers for paint and spheres
713	3. W		3. Verify/measure and record that stripe width and thickness is per plans and specs
	4. W		4. Verify and document reflectivity with calibrated Miralux machine within the specified time frame – initial, intermediate, and final
	5. W		5. Ensure applications are being done only on surfaces compliant with cleanliness and temperature requirements
	6. W		6. Inspect for deficiencies and have deficiencies removed and replaced per specification
	7. W		7. Verify alignment, width, and spacing of striping application

SPEC	INSPECTION	<b>INSPECTION OBJECTIVE</b>	INSPECTION ACTIVITY
710	8. W		8. Measure and record for payment
			striping items
711	9. W		9. Review standard indexes for specifics
			of striping placement and layout
713	10. W		10. Inspect placement of pavement
			messages and compare to standards
	11. W		11. Verifies striping of symbols,
			legends, stripes, and markings applied in
			accordance with Contract
	12. W		12. Verifies removal of existing traffic
			stripes and markings as required by
			plans
	13. W		13. Verifies application rate of paint and
			glass spheres
	14. W		14. Ensure proper stripe placement
			relative to pavement edge

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
710	15. W		15. Ensure that markers and bituminous adhesives are on QPL
711	16. W		16. Collect samples of RPM's are required by sampling guide
713	17. W		17. Use the type marker required by the plans or specs
	18. W		18. Verify contractor's equipment for heating of bituminous adhesive complaint with specs
	19. W		19. Ensure temperatures for heating are per specs
	20. W		20. Ensure that surfaces to receive RPM's clean and free of deleterious materials
	21. W		21. Ensure appropriate amount of adhesive being applied that will cover entire bonding surface or marker
	22. W		22. Clean excess adhesive with allowable cleaner/solvent

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
710	23. W		23. Verify lot numbers of supplied RPM's to those indicated on the
			certification
711	24. W		24. Monitor performance of markers
			necessary
713	25. W		25. Review standard indexes to ensure
			proper placement
	26. W		26. Ensure that right color RPM is used
			in correct locations
	27. W		27. Ensure RPM's placement adjacent
			to stripes per indexes
	28. W		28. Verifies that color of delineator
			stripe
	29. W		29. Verifies object markers &
			delineators are installed plumb
	30. W		30. Verifies delineators on ramps
			installed uniform height and offset

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
710	31. W		31. Verifies delineator @ crossovers uniform height and offset
711	32. W		32. Verifies proper assembly and installation of delineator
713			

## LIGHTING

SPEC	INSPECTION	INSPECTION OBJECTIVE	INSPECTION ACTIVITY
715	1. H		1. Ensure shop drawings are submitted and approved before installation
	2. W		2. Ensure materials meet requirements in section 992.
	3. W		3. Ensure installation is in accordance with Contract Documents.
	4. W		4. Ensure grounding is in accordance with local and national codes.
	5. W		5. Ensure installations have been tested.