# **Tarheel & Toe Driver School Student Confirmation Packet**

### **Tarheel Chapter BMW CCA**

Virginia International Raceway, Alton, VA

Welcome to the Tarheel Chapter BMW CCA "Tarheel & Toe Driver School". The purpose of the school is to provide a safe, controlled environment in which participants learn how to drive their vehicles with greater awareness and skill. This is not a racing school. No racing, competition will be tolerated. This is not "Driver's Ed" to teach a non-driver how to drive. It's a High Performance Driver School for skills advancement of licensed drivers. It emphasizes handling and car control. It enhances driver skills to improve awareness and enable the drivers to practice precise car placement and accident avoidance skills.

#### GENERAL INFORMATION PRE-EVENT

**Technical Inspection of car:** Mandatory within 4-6 weeks of the event by a Professional Mechanic familiar with High Performance Driving on Track. **We DON'T Tech at the track.** You must bring the completed Technical Inspection form from this packet.

Helmet: Mandatory. Without exception, helmets must meet SNELL 2015 or newer standards. Both SA and M standards are accepted. Note: SNELL rating is inside your helmet under the lining. "DOT" helmets are not satisfactory. Open-face helmets are allowed, but you'll be more comfortable and safer from debris with closed helmet. In-Car communicators (provided by your instructor) work much better without the wind interference inherent in open face helmets.

Food and drinks: Available for purchase at track or bring your own. No glass containers in the paddock please.

**Fuel:** May be purchased with a valid credit card at the VIR pumps, open at all times. They have 93, 100 and 110 Unleaded, as well as 114 Leaded race fuel.

NO passengers will be allowed in students' cars other than instructors.

Attire: Natural fiber long pants and long sleeved shirt are required unless specifically stated otherwise. Per VIR Rules beginning 2017, occupants of vehicles with aftermarket rollbar structures are required to wear long sleeves. Wear comfortable, natural-fabric clothing. Shoes should cover the foot, fit snugly, and have a thin, flexible sole. Souvenir shirts when provided may be short sleeved, so bring long sleeved shirts for driving.

Street Tires are highly recommended for C and D group students. You learn more and faster on street tires. Improve the <u>driver</u> first. The event will run rain or shine. You might be surprised at just how much you will learn on a wet surface.

Cancellation Policy \*\*REVISED for 2018\*\* (Suspended during COVID Protocols)

You must cancel by using the self-cancellation on Motorsportreg.com site and please, also email the Event Registrar via the MSR registrar contact link. The timestamp is automatically added to the private note letting organizers apply the refund policy. Cancel 30+ days in advance, receive 100% track fee credit on your MSR account to be applied to future registration. Cancel 10 to 29 days in advance, a \$100 cancellation fee is applicable. Balance will be credited on your MSR account to be applied to future registration. If you cancel within 10 days in advance or NO-SHOW, fees are forfeited. NO refund or credit. For a refund in lieu of MSR credit as outlined above, an additional \$30 handling fee is applicable. Refund must be requested at time of cancellation. NO EXCEPTIONS due to mechanical

failure. Prepare your car carefully. Aborted events (as determined by the Driving Events Committee) may trigger a refund/credit to paid registrants in a prorated amount to be determined.

Property Damage – VIR will bill the chapter and Tarheel chapter will bill you for any damage you cause to VIR property. Examples are guardrail replacement, oil-dry (kitty litter), or tire bundle repair. Recognize incidents are very rare, but it is your responsibility to pay for what you damage.

**Event Insurance:** Your standard insurance may not cover activities on a "competition surface". Don't ask you agent about that. Rather, ask for a detailed copy of your policy and all exclusions. "Track Day Insurance" is readily available and may be acquired through several specialty vendors such as Hagerty or Lockton Affinity.

**Pre-Event Email Meet-n-Greet:** On Tuesday or Wednesday of event week, you should receive email contact from your assigned instructor. Take this opportunity to get to know your instructor. Share information about yourself and your goals for the weekend.

## **On-Site Registration**

**When:** 5pm until 8:00 pm on Friday. Make every effort to register Friday.

Avoid the Saturday morning rush and stress, and be assured of not missing any valuable track time. We are not set up for, nor expect many registrations Saturday morning.

Where: Tech Shed North Paddock at VIR. Turn right after the Security Gate.

**What:** Bring completed forms included in this packet [Tech Form (mandatory), valid Driver's License, Helmet, Online Waiver (<a href="https://ews.bmwcca.org">https://ews.bmwcca.org</a>) signature proof/printout.

**Note:** Detailed event schedule, car numbers, and run group assignments will be provided in the on-site registration packet. Registration is open for a brief time Saturday beginning at 6:30am. It will close at 7:30 for mandatory meetings.

**Car Drop off:** Driver School participants may sign the VIR gate waiver and bring a car/rig for drop-off Friday afternoon and evening. VIR has 24-hour security.

**Student Meeting**: Mandatory. 7:30 AM. Could be Virtual/pre-recorded or Drivers Meeting Room. Listen for announcements on the paddock public address system.

**Instructor Meeting**: Mandatory participation. 7:30 AM. Outside Tech Shed.

Instructor/Student Meet & Greet: Students line up facing hot pits (A & C students nearest the classroom; B & D students, mid-fence). Students hear your name called, meet your instructor, and leave the pairing area together. If you have connected via email prior to the school, please let the CI call your name and respond.

**Classroom:** Student Classroom is held in the Drivers Meeting Room in the basement under the Garages in North Paddock.

## THINGS TO BRING TO THE EVENT

- This packet (including **completed** Technical Inspection, and Electronic Waiver signature proof/printout).
- Helmet (SNELL 2015 or newer).
- Cotton/natural fiber long pants; long & short sleeved shirts; closed toe shoes.
- Extra quart (or two) of oil
- Beverages: water, sports drink. May bring adult beverages for after track closes. No Glass
- Glass cleaner and paper towels
- Gas fill up before arriving at the track to save time. Gas is available at track by credit card pumps (open all of the time). Prices are higher than local stations.
- Other tools and parts as desired. Examples: extra brake fluid, coolant, etc.
- Sunscreen and/or a hat and maybe bug spray; a poncho and umbrella
- Lawn chair(s) and a cooler for your beverages
- A tarp or two to protect your gear from the elements (remember, it might rain)
- Most important a relaxed, open mind for learning something new and exciting, and the willingness to be guided by your instructor.

#### **Accommodations**

**Headquarters Hotel** will be **Sleep Inn Suites** located on 58 East at 1483 South Boston Rd., across from the Danville Airport just 11 miles from the track. **Phone: 434 793 6090**. We have blocked rooms for this event, so please mention **Tarheel BMW** when making reservations to secure the group rate. VIR offers luxury Villas, Garage Suites and The Lodge, all on site. For more info contact them at 434-822-2680 or via www.virclub.com/lodging.

Sleep Inn –	1483 South Boston Road-Route 58 E.	(434) 793 6090		
	Also nearby:			
Holiday Inn Express –	2121 Riverside Dr.	(434) 793-4000		
Best Western -	1292 South Boston Road-Route 58 E.	(434) 483 5000		

VIR Club website: (<a href="http://www.virclub.com">http://www.virclub.com</a>). Learn more about the track including maps, directions, on-site lodging, and lap descriptions. We look forward to a fun filled event. Our focus is on enabling you to have a safe and rewarding experience.

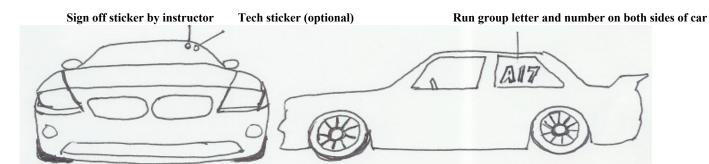
## SATURDAY MORNING IN THE PADDOCK

- Proceed directly to the paddock area and park. Make sure you are registered and have signed the waiver.
- Unload your car. All items, which are not permanently secured, must be removed. For example, remove:
  - Floor mats
  - Contents of glove box
  - Handset of cellular phone
  - Garage door opener

- Contents of trunk (spare tire may stay)
- Contents of side door pockets
- Radar detector
- Check under seats for loose items!

Please be on time to the morning meetings. Roll call will be taken both days!

- CAR NUMBERS: on rear side windows; run group letter first, followed by the number. BINGO!
- If this is a school in conjunction with a Race School you'll be issued a colored run group dot that goes in the upper center of your windshield



If two drivers share a car, place second run group letter and number below the first.

- Please check your tire pressures. Air is available near the Sunoco Fuel Pumps.
- Check your lug nuts (bolts) and tire pressure prior to each session, not just after your session (hot). Do not tighten hot lug nuts (bolts). Don't set your parking brake just after a run.
- All participants must wear a wristband both days! It is OK to shower with the band on.
  - **Keep your schedule with you at all times!** Run group sessions may not always be announced or heard. It is your responsibility to follow the schedule and be prompt! In the event of incidents that cause delays, adjust your schedule.
  - **Information Table staff are here to assist you**. They cannot change run groups or instructor/student pairings. This is done by the Chief Instructor. After the school is running smoothly you may approach them to ask.

### **VIR Rules**

**All paved access roads** - Speed limit paddock *15* mph; access roads **25** mph. Cars & Motorcycles: No one under 16 years of age may operate any motorized vehicle.

Asphalt - Do not pound stakes or make any holes for any reason in any asphalt surface. Offenders will be fined and ejected. All trailer footings and jack stands must be underlaid with plywood bases. Do not fuel cars on any paved areas without a fuel catch pan underneath. If you must temporarily jack a vehicle on asphalt, you MUST have metal or wood under the jack and jack stands NO EXCEPTIONS! Fines can be in excess of \$1000.

**Pets** - VIR discourages bringing pets to the track. If you keep your pet quiet, leashed, under your control, and clean up after it, they will allow it. If we see pets unleashed, we will find the owner and they will be asked to leave. **Do NOT bring pets onto false grid or pit areas or inside any VIR building.** 

**Disposal of waste fluid** - Use of the drums, located in several areas in the paddock(s), is mandatory for used oil antifreeze brake fluid and other polluting material. Spillage will not be tolerated and may result in hefty penalty from the facility. Participants must remove all used tires, batteries and unwanted parts. Environmental debris left behind will result in fines to the participant or the renter [Tarheel Chapter] if the participant cannot be identified.

**Fuel** - VIR's fuel pumps are operable by Credit Card. 110 leaded and 100 unleaded Racing Fuel as well as 93 octane unleaded gas. Come with a full tank, fill-ups are convenient but pricey.

**Showers** - The showers are located in the North paddock main concession building restrooms. Please be considerate of your compatriots regarding all water use. Please do not waste water.

**Music** – Do not play loud music of any kind; be considerate of others.

**Power** - There is limited electrical power available. Standard 20-amp duplex and 30/50-amp "shore" power for motor homes and large rigs/trailers are available for rent. VIR personnel will tag lines and collect the fees.

**ATV's, golf carts, and bicycles** - Use of ATV's, golf carts, pit carts, and bicycles is a fact of life in the track paddocks. Common sense and care must be applied to their use. Children should not "learn to drive" on VIR property. Bicycle use will be tolerated as long as used safely. Children (under 16) are prohibited from riding bikes, roller blades, skates, skateboards and scooters in the paddock during hot track hours.

Noise – Un-muffled engines must not be run between 6:30 PM and 8AM.

## RULES OF THE ROAD

#### **GENERAL**

- All students **must be at the drivers meeting each morning**. Important information will be made available to you and it may not be the same as last school.
- Both the driver side window and passenger side window must be fully down at all times when the car is on the track [even in the rain].
- No passengers will be allowed in participants' cars other than instructors. Instructors are allowed to take passengers; 16 to 18 years old must have a notarized waiver signed by both parents to ride with instructors and wear the appropriate wrist band.
- Passing is allowed in designated areas only. Passing shall occur only after a clear point signal is given. Passing areas will be discussed/designated in the meetings and classroom at the event.
- When slowing to enter pit road, the driver shall signal by raising his/her arm out the window with a raised clenched fist, remain OFF LINE full track right and enter at a slow pace.
- All loose objects must be removed from the passenger compartment/trunk of your car

#### FLAGS: The means of communication from corner worker to cars on track

**Green** \* A session is underway and the course is open.

Yellow \* Take care. Slow down. No passing. Be prepared to stop. A yellow flag may be displayed at the first lap to ensure that all cars & drivers warm up prior to hot laps.

**Red** \* Session stopped. Check mirrors then come to a controlled, safe stop on the RIGHT edge of the asphalt in sight of a corner station or behind a car with sight of the station; leave the center clear for emergency vehicles. Red is followed by Black Flag All.

Yellow w/ Red Stripes Debris on the track. Shown if oil, coolant, sand, dirt, are on the track ahead.

Blue / Yellow Stripe Is not thrown to insult you! It means that in the corner-worker's opinion a faster car is approaching. Allow it to pass at the next passing zone. A small in-car wave to let the faster car know that you know that you saw him/her and intend to signal a pass is very helpful both to you and the car behind you. This courtesy prevents tailgating and "driving in your mirrors", and promotes a safer event. Beginners, your instructor will assist you.

Summons to the pits. Acknowledge the Black Flag and enter the pits at the next opportunity to consult with a school official. This is not optional. After a Red Flag the Black Flag will be shown at each station. Slow and come into the pits.

The session is over. Finish the lap as a "cool-down" lap. Slow-down, use the brakes as little as is safe. Allow the car and you to cool down and relax. Take the opportunity to drive "a perfect lap" on the line, or to practice off line driving. Either way, you should tell your instructor your plan. Proceed to pit lane.

Black

Checkered

### **CAR PREPARATION**

BMWs are well-engineered, well-built cars that are designed for enthusiastic driving. Several members have asked if there are modifications that should be made to their cars prior to the driving school. **NO!** Modern cars are quite competent for this type of driving right from the showroom. What IS required is that your car be in top condition. See that your car is functioning as it is designed to and that it is well maintained and passes Tech (see your Tech form).

#### PREPARING YOUR CAR

- Prior to the event, have your car inspected by a professional mechanic. Included in this packet is a pre-event Technical Inspection Form that must be completed, signed, and brought with you to the event.
- It is recommended that your car have a recent tune-up so that is running at its best. You'll certainly enjoy it more.
- The brake fluid should be changed and the system bled as close to the event as possible. Brake fluid absorbs water (from the humidity in the air) which reduces the boiling point of the fluid. When people "lose their brakes" at an event like this, it is more often than not the result of boiling the brake fluid. The brake pads should have at least one-half of their original thickness. If they don't, replace them in time to bed-them-in adequately before the event. You may want to bring the newly removed old pads with you just in case.
- The coolant system should have been flushed and coolant changed within a few months of the event to prevent overheating. Check your coolant level.
- Tires must have at least 2/32's of tread depth, with no blisters, bald spots, or other imperfections. Also, tires that have been patched or plugged are not recommended. On street tires you should inflate your tires a bit more than indicated on the door. Never exceed the max tire pressure printed on the tire. Remember that tire pressure will increase 2- 6 lbs when you drive at the track. Generally, for street tires 36-38 psi is a good starting point. Your instructor will advise you and air is available at the tech shed in the paddock.
- If applicable, remove sunroof wind deflectors. At high speeds, some of these will vibrate and may make a very disconcerting noise. Also, if your car has removable wheel centers, trim rings, etc., these should also be removed to ensure they won't fall off during the event.
- All loose objects must be removed from the passenger compartment and trunk of your car. This includes all items from the glove box and side pockets. It is unnerving and potentially dangerous to have loose objects flying around you during hard braking and cornering. Radar detectors (if removable) and garage door openers often get left on sun visors. Double-check your car **before your first session each day**.

## **DRIVING TERMS AND TOPICS**

Some useful terms and definitions:

**Understeer** There is traction at the rear tires, but the front tires lose traction, regardless of steering correction, the front of

the car slides towards the outside of the turn; Also called "push" or "plow". Understeer increases the radius of

the turn (passenger puckers).

**Oversteer** There is traction at the front tires, but the rear tires lose traction and try to pass the front. Also called "loose";

Oversteer decreases the radius of the turn (driver puckers).

**Trailing-Throttle** [TTO] Oversteer is induced by lifting off the throttle while cornering. When the throttle is lifted, weight is

transferred to the front of the car, which suddenly has better traction than it had before; weight is transferred off

the rear of the car, which suddenly has less traction than it had before (frequently the cause of spin).

Line The most efficient on-track route that a car takes through a given turn.

**Turn-in** The point at which you begin turning into a corner. The turn-in point has direct effect on the apex and track out

(exit) of a given line.

**Apex** The area of a corner in which the inside front tire runs closest to the outside of the turn is the called the Apex. It

may be at the ½ way point or more often near the end of the curbing for that turn. Your instructor will enable

you to know which is coming next.

Track-out (exit) The area of the track where the turn is completed is called the track-out. The track-out point is determined by

the turn-in and apex; depending on the turn-in and apex, will either be on the track, or off the track.

**Trail Brake** Trail braking (releasing the brake gradually) occurs while turning, and after the major braking for the corner has

occurred. Braking pressure is only a fraction of full (10 to 20 percent), and is gradually decreased while making

the transition to acceleration.

Camber The angle of the wheel from vertical as viewed from head-on. Negative camber has the top of the wheel leaning

towards the center of the car. Cornering pulls the bottom of the outside tires in so that the tires exhibit positive

camber, or less negative camber.

**Toe-in** The alignment of the tires as viewed from above, with the front of each wheel pointing in toward the centerline.

Forward motion tends to pull the tires backwards in an arc so that the tires tend to toe-out (or have less toe-in).

**Type of Turn** Turns are divided into three types and are driven differently. Type I turn is a turn leading to a straight (late apex

to maximize exit speed onto the straight eg. T12- Oaktree at VIR); Type II turn is at the end of a longer straight when the turn leads to a very short straight (carry straight speed into corner eg. T1-at VIR); Type III turn is a turn leading to another turn (sacrifice first turn to maximize exit of final turn, eg, T14-14a at VIR). Ask your

instructor how different turns affect your entrance and exit and to help you identify the types of turns.

#### **DON'T STOP HERE**

The following pages contain the Medical Form (optional) and Technical Inspection Form (mandatory) that must be completed and brought with you to the track.

(**This form is optional**. We prefer this medical completed paperless online in your MotorSportReg Profile. You may submit this hardcopy optional.)

## TARHEEL CHAPTER BMW CCA PARTICIPANT MEDICAL INFORMATION

(confidential)

#### PLEASE PRINT LEGIBLY

(fold in half, tape and print your last name first in right upper corner)

Date:	Event:			
Name:			Year of Birth:	
Address:				
City:		State:	Zip:	
Telephone:	_			
Medical Insurance Carrier and Po	licy Number:			
	fold line			
Whom to notify in case of emerg	ency:			_
Relationship to you:	are they	at this event?	Yes [] NO []	
If not at the event, phone number	where they can be reach	ed:		_
Blood type and RH:	Do you wear co	ontacts?		
Date of last tetanus:	Prosthesis?			
Allergies:				
Present Medications:				
Significant illness or condition, w	hich might affect you at	the track:		

This information will be kept confidential and only be used in case of emergency. It is destroyed following the event.

\*fold in half and print your name, last name first on the right corner

Tarheel BMW CCA Event Medical Form (page 2)	
Last Name	First Name
This page intended to be the outside of your confider If you printed single sided sheets, you may discard the	ntial medical form when printing double-sided and folded as directed.

## Tarheel Chapter BMW Car Club of America Driver's Education Vehicle Technical Inspection



Driver 1:	Emergency Contact 1:		Phone:				
Event Date:	Year of Car:	Model:		Color: .	VIN:	VIN:	
Driver 2:	Oriver 2:Emergency Contac		Contac	t 2:	Phone:		
Technical Inspection	(To be completed by a profes			ithin 4-6 weeks of the eve	nt):		
Vehicle	Interior	Pass	Fail	Suspension	& Running Gear	Pass	F
terior Mirror: (1) Minimum in	good condition; securely mount	ed.		Wheel Bearings: Proper	free rotation; no looseness in hub.		
elmet: Snell current or last date od condition. (Certification wit	certified, no cracks; chin strap ii hin 11 years of current date)	ı		Structural Integrity: No loose body or interior parts; no structural rust at or near suspension points.			
th closed cell foam padding whe				Front Suspension: No express secure; boots and all se	xcessive play; ball joints and tie eals in good condition.		
th the bar. Please refer to "Drive en cars" on the following websit tp://www.tarheelbmwcca.org/tra	e for more details:	na			haft bolts tight, boots in good re in good condition; no leakage.		
eat belts/Harnesses: Facto eats. Must be securely mounted or passenger and driver. 4-point chroth Quick Fit. 5, 6 and 7 po ith factory routing holes/safe	; belts not frayed; equal restrair harnesses prohibited except bint harnesses must use seat	:	:	<b>Brakes:</b> Sufficient brake pads (50% minimum); rotors and pads are in good condition; no cuts or abrasions in brake lines. There should be no visible cracks extending to the edge of the rotor. With co-driver, pads should exceed minimum standard.			
edals: All pedals must have free ondition. Brake pedal must be firm		3		Brake Fluid: Sufficient brake fluid; premium fluid; Brake fluid must be changed at least every 6 events or one year.  Date brake fluid was last changed:///			
/indshield/Wipers: No cracks ipers in good working order.	, condition does not impair visio	n.		<b>Tires:</b> General good condition; no cracks, cuts, cords or blisters, the tires should be the ones used at the track.			
oors: Must be operational from	inside and outside.			Steering linkage: No excessive play.			
ccessories secure: Stereo, c	amera, etc.			Center-locks: Locking device	on: All lug nuts engaged. Wheel es are fully engaged. For track tires ed. No cracks, bends or flaws	,	
Engine & Trunl	κ Compartment	Pass	Fail	Vehic	le Exterior	Pass	F
attery: Properly secured; no ap	parent corrosion.			Hood & Deck lids secu	re		
ectrical: Harnesses/relays/wire	es secure.			Brake Lights: Functional	and visible brake lights.		
elts: Fans/auxiliary belts in goo	d condition with proper tension.			Fluids: Appropriate levels, and no dripping leaks of any fluids.			
hrottle Return: Freely operating	ng and proper spring(s).			Exhaust System: securely fastened and in good condition.			1
uel Lines: Proper fittings and lin			i i	Exterior mirrors: In good			Ť
ngine: General condition of eng			<del>                                     </del>		no leaks. Caps for all fluids secure.		+
coolant System: Level, condit	ion of hoses and no leaks.						
THE UNDERSIGNED	HEREBY CERTIFY:			Inspection Fa	cility Information and	Stam	р
of America, in connection with the above noted Higi date shown below by a mechanic and/or shop quali	M (THE "FORM") submitted to <b>Tarheel Chapter</b> of the Performance Driver Education Event was performed fied to conduct such a track inspection.  Owe the condition of the Car identified above on the	ed on the	b	Shop Stamp,	Business Card, Invoice Required		
worthiness of the Car. The undersigned hereby ag	the Car since the date of the inspection that would a rees to defend, indemnify and hold harmless BMW demands arising directly or indirectly from any incor	CCA, its chapters,	,	or mapeution	mvoloe Nequileu		
I understand that the technical inspection performed on my Car and my helmet is solely for the purpose of meeting minimum standards of car preparation for the Chapters's High-Performance Driving Event. No warranties or guarantees are implied or expressed by the passing of the inspection performed. I acknowledge that the safe condition and operation of my Car is entirely my responsibility. I take full and sole responsibility for any vehicle problems, malfunctions, or damage that may occur in connection with the operation or performance of my Car prior to, during, or			Tech Inspector's Name		Date:		
subsequent to the event.	and operation of performance of my Gal phi	to, during, or		Tech Inspector's Signa	ture:		
ignature Driver 1:					Date:		



### **GRID TECH**

## Tarheel & Toe Driver School Virginia International Raceway

Students are encouraged to bring a copy to the track and complete this checklist prior to the first ontrack session. These are our suggestions for a safe uneventful weekend.

Instructors, Keep a copy handy as a guide for sanity checking your student cars.

Group A students are expected to complete this unassisted.

Group B, C and D students are encouraged to ask your Instructor for guidance while you execute the checklist.

Seat belts: OE or acceptable after-market installation.
Front and rear glass: clean and unobstructed.
Battery: securely mounted, cap tight.
Brake lights: all working.
Wheel bearings: tight.
Tire pressure: adjusted for track conditions.
Lug nuts: none missing; tightened to manufacturer's specified torque.
Hub caps: removed.
Gas cap: tight.
All loose items removed from trunk and interior; glove box empty or locked
Special accessories (cameras, data acquisition, etc. ) securely installed.
Car numbers: on both sides of car rear passenger's side windows. Run group letter first then
number, as in bingo. B52, A29 etc.
Helmet: Current valid SNELL sticker. This is absolutely required.
Clothing: natural fibers (e.g., wool, cotton) or fire-resistant material; long sleeves, long
nants and closed toe shoes