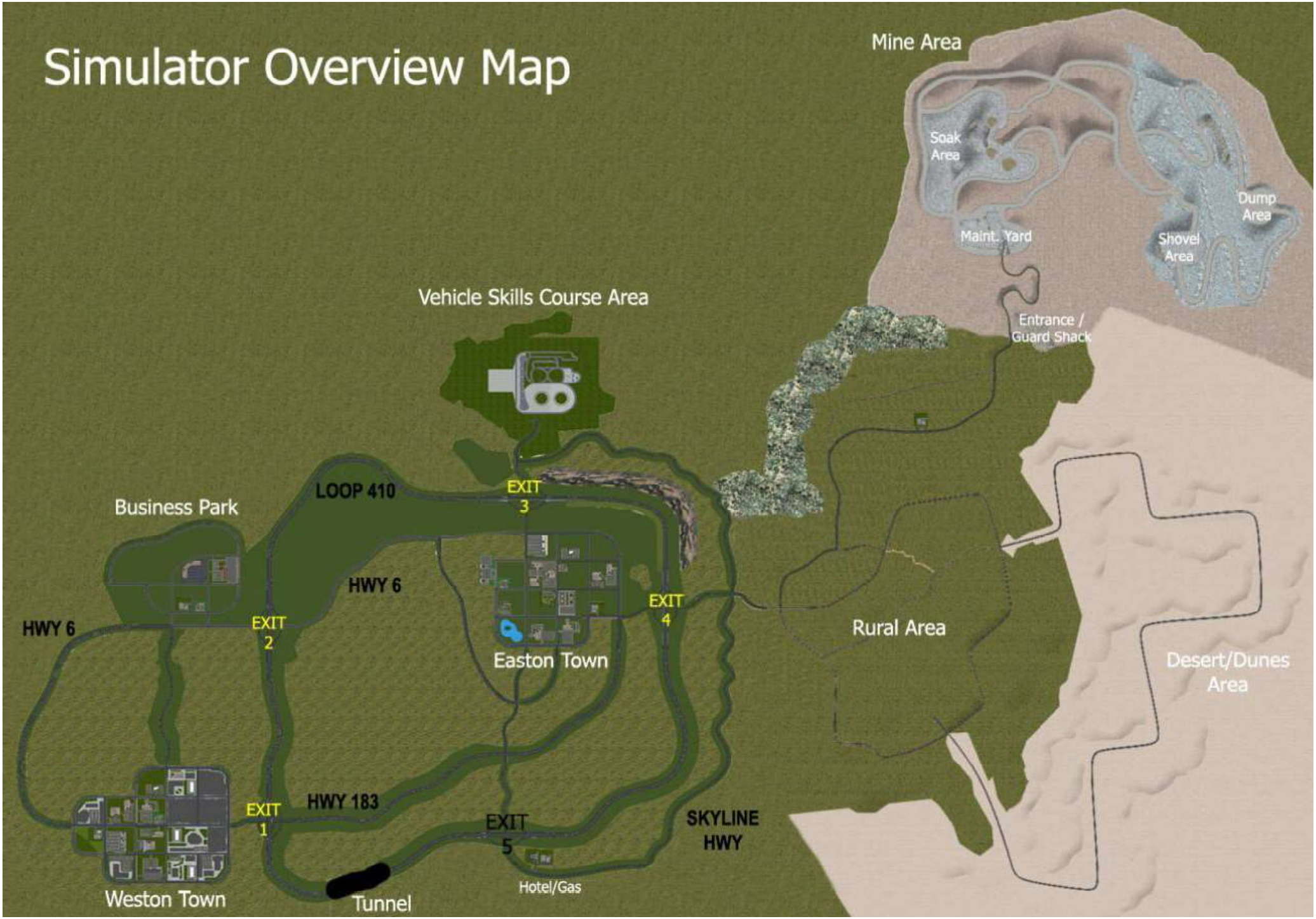
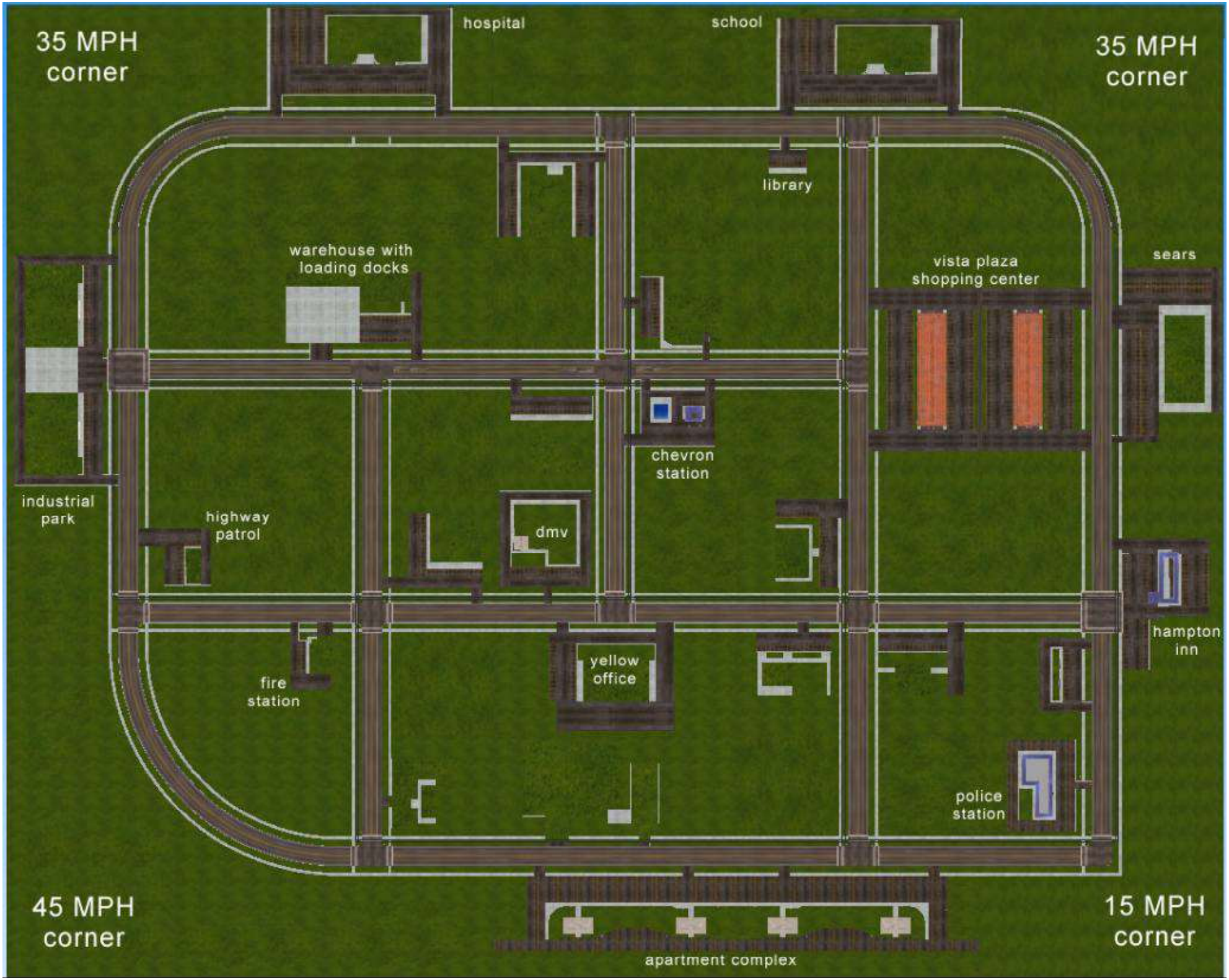

Simulator Overview Map
Mine Area
Soak Area
Dump Area
Maint. Yard
Shovel Area
Entrance / Guard Shack
Vehicle Skills Course Area
Business Park
LOOP 410
EXIT 3
HWY 6
HWY 6
EXIT 2
EXIT 4
Easton Town
Rural Area
Desert/Dunes Area
EXIT 1
HWY 183
EXIT 5
SKYLINE HWY
Weston Town
Tunnel
Hotel/Gas


WESTON TOWN MAP
WESTON Rd.
NORTH St.
<<< BROADWAY Loop
HWY 6
WEST Ave.
CENTRAL Ave.
WESTON Rd.
MAIN St.
EAST Ave.
HWY 183
BROADWAY Loop >>>
SOUTH St.


EASTON TOWN MAP
EASTON RD.
STATE HWY 6
OUTSKIRT BLVD.
LAKESHORE LOOP
MEDICAL DR.
SCHOLAR DR.
LAKESHORE LOOP
EASTON RD.
MIDTOWN AVE.
ELECTRIC AVE.
OUTSKIRT BLVD.
DESERT DR.
DESERT DR.
LAKESHORE LOOP
LAKESHORE LOOP
US HWY 183
EASTON RD.
MIDTOWN AVE.


35 MPH corner
hospital
school
35 MPH corner
library
warehouse with loading docks
vista plaza shopping center
sears
chevron station
industrial park
highway patrol
dmv
hampton inn
yellow office
fire station
police station
45 MPH corner
apartment complex
15 MPH corner

EMS Apparatus Scenario Menu:

1. Code 3

- Medical call near lake
- Medical call at apartment
- School medical call
- Residential city medical call
- Residential rural medical call
- Office building medical call
- Gas station medical call
- Hotel medical call
- Drowning medical call
- City intersection collision
- Rural intersection collision
- Highway collision
- Barn fire
- High rise fire
- Gas station fire
- Quarry fire
- Desert fire
- Residential fire

2. Post Emergency

- Medical call near lake
- Medical call at apartment
- School medical call
- Residential city medical call
- Residential rural medical call
- Office building medical call
- Gas station medical call
- Hotel medical call
- Drowning medical call
- City intersection collision
- Rural intersection collision
- Highway collision
- Barn fire
- High rise fire
- Gas station fire
- Quarry fire
- Desert fire
- Residential fire

3. Scene to Hospital

- Medical call near lake
- Medical call at apartment
- School medical call
- Residential city medical call
- Residential rural medical call
- Office building medical call
- Gas station medical call
- Hotel medical call
- Drowning medical call
- Collision to hospital
- City intersection collision
- Rural intersection collision
- Highway collision
- Barn fire
- High rise fire
- Gas station fire
- Quarry fire
- Desert fire
- Residential fire

Fire Apparatus Scenarios Menu:

1. Code 3

1.1 Code 3 Solo

- Convenience store fire
- Hospital dumpster fire
- Rural grass fire
- Restaurant fire
- Skyscraper fire
- Apartment fire in winter
- Forest fire
- Parking garage fire
- High rise fire
- Rural gas station pump fire
- Truck terminal fire
- Subdivision collision fire
- Quarry fire
- Quarry office fire
- Hotel fire
- Grocery store fire
- Rural truck collision
- Freeway collision in worsening weather
- Rural school bus collision in winter
- Collision near lake when dark and rainy
- Freeway collision
- Water rescue
- Freeway car collision
- Desert car collision
- Rural car collision

1.2 Code 3 following other units

- Car collision
- Convenient store fire
- Barn Fire
- School bus collision
- Intersection collision
- High rise fire
- Parking garage fire
- Hotel fire

2. Post Emergency

- Convenience store fire
- Hospital dumpster fire
- Rural grass fire
- Restaurant fire
- Skyscraper fire
- Apartment fire in winter
- Forest fire
- Parking garage fire
- High rise fire
- Rural gas station pump fire
- Truck terminal fire
- Subdivision collision fire
- Quarry fire
- Quarry office fire
- Hotel fire
- Grocery store fire
- Rural truck collision
- Freeway collision in worsening weather
- Rural school bus collision in winter
- Collision near lake when dark and rainy
- Freeway collision
- Water rescue
- Freeway car collision
- Desert car collision
- Rural car collision

3. Normal Operations

3.1 Fire Inspections

- City building
- Gas station
- Small business
- Grocery store

3.2 Fueling up

- City gas station
- Rural gas station

3.3 Supply Run

- City supply run
- Rural supply run

4. Cone Courses

4.1 VFIS

- Wheelbase < 170”
- Wheelbase between 170” and 220”
- Wheelbase > 220”

4.2 Straight line

4.3 Confined space

4.4 Alley dock

- VFIS
- Standard
- Alternate

4.5 Serpentine

- Wheelbase < 170”
- Wheelbase > 170”

4.6 Offset Alley

- Wheelbase < 220”
- Wheelbase > 220”

4.7 Parallel Parking

- Wheelbase < 170”
- Wheelbase between 170” and 220”
- Wheelbase > 220”

4.8 Diminishing Clearance and stop sign

4.9 Changing lanes

5 Apparatus Placement

- Alley Emergency
- Parking garage collision
- High rise fire
- Gas station fire
- Intersection collision
- Highway collision
- Blind corner on highway collision
- Blind corner in rural collision

6 Misc. Exercises

- Off-road recovery exercise
- Night, Wind, Rain, Drop-offs and Gravel
- Steering avoidance of pop-up obstacles
- Firehouse backing exercise
- Entering freeway
- Exiting freeway
- Left turns
- Right turns

7 Tiller Scenarios

7.1 Non-Networked

- City driving (No traffic)
- City driving (With traffic)
- Freeway driving
- Lane – offset backing course
- VFIS
- Highway driving
- Office building fire

7.2 Networked

- Emergency Steering course
- Square figure eight course
- Serpentine course
- Blind alley dock course
- VFIS
- Highway driving
- Office building fire

8 Instructor Interaction Scenarios

8.1 First on Scene

- Residential fire
  - Instructor plays the role of on-scene supervisor and needs to place student apparatus in correct location.
- Gas station fire
  - Instructor plays the role of on-scene supervisor and needs to place student apparatus in correct location.
- High rise fire
  - Instructor plays the role of on-scene supervisor and needs to place student apparatus in correct location.

8.2 Second on Scene

- Tunnel collision
  - Instructor plays the role of on-scene supervisor and needs to place student apparatus in correct location.
- High rise fire
  - Instructor plays the role of on-scene supervisor and needs to place student apparatus in correct location.
- Gas station fire
  - Instructor plays the role of on-scene supervisor and needs to place student apparatus in correct location.

Free Drive Menu:
- Easton Town
- Weston Town
- Business Park
- Rural Highways Area
- Desert Highways Area
- Skyline Highways Area
- Bus Training Course
- Vehicle Handling Course
- Mine Pit Off-Road Area

Standard Lessons Menu:

1. Core Skills
- Parking lot warm up
- Basic city driving
- City driving with traffic
- Freeway driving
- Curvy highway driving
- Curvy highway driving 2
- Drowsy driving

2. Defensive Driving
- Quick stop situations
- Quick swerve situations
- Hazard Recognition
- Intersection dangers
- Rural highway dangers
- Stop-and-Go freeway
- Autonomous traffic free drive demo

Precision Driving Menu:
- Vehicle handling road course
- Wet and dry skid pad
- Maneuvering competency course (short wheelbase)
- Maneuvering competency course (long wheelbase)
- Emergency steering reaction course
- Emergency braking reaction course
- Visual anticipation cues reaction course
- Large vehicle practice driving range
- Freight terminal backing practice area
- Highway off-road recovery practice area
- Parking garage valet operations
- City bus route

Assessment Scenarios Menu:
- Basic Driving assessment
- Suburban driving assessment
- Urban driving assessment
- Freeway driving assessment
- Emergency steering reactions assessment
- Emergency braking reactions assessment
- Highway braking reactions assessment
- Competency course assessment
- Mine site highway assessment
- Mine site overall assessment

Law Enforcement Menu:

1. Code 3 Response
- Respond along one-way street with fog
- Respond to 911 call at grocery store with left turns
- Respond to emergency call near lake when dark and rainy
- Respond to freeway collision in worsening weather
- Respond to rural school bus collision in winter
- Respond to collision scene following ambulance
- Respond to collision scene from hospital
- Respond to convenience store robbery with other units
- Respond to robbery with gunfire
- Respond to hospital assault call
- Respond to school shooting

2. Traffic stop and BOLO's
- Traffic stop on sports car entering alley
- Traffic stop on sports car making left turns
- Standby and monitor for red light violators
- Standby and monitor for DUI traffic at night
- BOLO for stolen motorcycle
- BOLO for person of interest on motorcycle
- BOLO for hot rod on two lane highway
- BOLO for missing military vehicle
- BOLO for possible DUI

3. Patrols and Exercises
- Patrol on freeway with collision on shoulder
- Patrol on highways with witnessed event
- Patrol on highways with various driving hazards
- Investigate disabled vehicle on rural highway
- Investigate suspicious truck in alley
- Join active pursuit and call on radio
- Exercise off-rad recovery techniques during pursuit
- Exercise steering avoidance of pop-up obstacles

School Bus Menu:

1. School bus training
- Parking lot cone course evaluation
- CDL test cone course
- Maneuvering competency course (Long wheelbase)
- Skid control on low friction
- Wet/Dry skid control
- Aqua-planning
- Parking lot maneuvers
- Truck yard backing courses

2. Route Exercises Menu
- Student pick up and drop off (without traffic)
- Student pick up and drop off (with traffic)
    - Raining
    - Snowing
    - Dark
    - Dark & Raining
    - Dark & Snowing
- School Field trip 1
    - Raining
    - Snowing
- School Field trip 2
    - Raining
    - Snowing
- Student pick up from neighborhood
    - Raining
    - Snowing
    - Dark
    - Dark & Raining
    - Dark & Snowing
- Student drop off after school
    - Raining
    - Snowing
    - Dark
    - Dark & Raining
    - Dark & Snowing
- Returning to school bus depot after completion of route
    - Raining
    - Snowing
- Student pick up and drop off on bus route 1
    - Raining
    - Snowing
    - Dark
    - Dark & Raining
    - Dark & Snowing

Custom Scenario Slots
- Easton Town Template
- Weston Town Template
- Business Park Template
- Rural Highways Area Template
- Desert Highways Area Template
- Skyline Highways Area Template
- Bus Training Course Template
- Vehicle Handling Course Template
- Mine Pit Off-Road Area Template

Apparatus Available:
- Fire Single Axle Pumper (default)
- Fire Dual Axle Platform
- Fire Dual Axle Ladder
- Fire TDA (Tiller)
- Fire Telesquirt
- Fire Charger
- Fire CrownVic
- Fire Tahoe
- Navistar EMS
- Furion Rescue
- E450 Ambulance
- GMC4500 Ambulance
- Police Charger
- Police CrownVic
- Police Tahoe - Economy Car
- Large SUV
- Midsize Sedan
- Sports Car
- City Bus
- School Bus
- Small Pickup
- Haul Truck
- Hot Rod
- Dump Truck
- Military Humvee
- Semi Cabover 40ft
- Semi Conventional 53ft

DFPC LESSON PLAN

COURSE: Driving SimulatorLesson Plan number **#1**

LESSON TITTLE: Introduction to Driving Simulator Operation

Instructor: **Date:**

TYPE OF LESSON

LECTURE ___ PRACTICAL ___ DRILL ___ OTHER ___

OBJECTIVES:

1. Introduce students to simulator training
2. Acclimate students to the mechanics of the simulator cab, instruments, and controls
3. Have students adapt to the steering wheel and foot pedals via straight line driving

EQUIPMENT NEEDS: Computer, projector, screen, and simulator

INSTRUCTIONAL AIDES: Driving Simulator in the Fire Service 2 PPT

INSTRUCTOR REFERENCES: Trailer Start-up Guides, Simulator Start-up Guide, Sim Tech PPT presentations, DFPC lesson plans, and simulated scenarios

PREPARATION: Prior to student arrival:

- Follow Trailer Start-up Guide
- Follow Spartan Simulator Start-up Guide
- Keep trailer room temperature cool to cold but above 60° operating temperature
- Dim/shutdown all unnecessary lighting
- Have students don motion sickness bans (if applicable)

Motivation: To provide students with a safe environment to practice unsafe vehicle driving maneuvers.

PRESENTATION:

- Present PPT in a classroom setting
- Introduce students to the cab, instrument, and controls
    1. Demonstrate how to adjust steering wheel and air seat
    2. Demonstrate how to operate emergency lights and siren controls
    3. Demonstrate how to operate all other control panel switches and knobs
    4. Demonstrate how to switch camera viewing angles

- Select **FREE DRIVE** simulation for acclamation of simulator steering, handling, braking, & acceleration using good road and weather conditions for 3 scenarios lasting two to 3 minutes each. Use these three scenarios. **Remember to switch drivers after each scenario:**
    1. Vehicle Handling Skills
        - Have student perform limited left and right hand turns
        - Have students drive figure eight around the island
    2. East Town
        - Have students perform stopping, accelerating, tighter turns
        - Discuss/require the use of mirrors, turn indicators, etc.
        - Discuss depth perception, spatial awareness, & speed awareness
            - Have student switch views to aid in spatial awareness
        - Have student perform lane changes and enter into parking lots
    3. Ask the student what type of response area they are located in. Pick a scenario that best meets the description i.e. rural, urban, city, etc. Have them perform the same tasks as listed in the East Town scenario listed above.

Evaluation:

- Remove both students from the simulator environment and trailer entirely
- Discuss driver achievements i.e. proper acceleration, turning techniques, spatial awareness
- Discuss needed improvements

Conclusion: Discuss what was learned from the first scenarios and what the student will apply to the next round of scenarios.

DFPC LESSON PLAN

COURSE: Driving Simulator lesson plan number **#2**

LESSON TITTLE: Emergency Braking Reaction Course found under the Fire Simulations tab

Instructor: **Date:**

TYPE OF LESSON

LECTURE ___ PRACTICAL ___ DRILL ___ OTHER ___

OBJECTIVES:

1. To decrease reaction time & distance
2. To decrease stopping time & distance
3. To decrease total reaction/stopping time and distance
4. To understand what a quicker reaction time and decreased stopping distance equates to in real world driving. I.E.:
    - The difference of coming to a safe complete stop or striking an object
    - Preventing the apparatus from coming to a stop in an intersection
    - Awarenes of weight transfer in fire apparatus
    - Awareness of the stopping capabilities on wet/slick roads with the engine retarder turned “on” and when its turned “off”

EQUIPMENT NEEDS: Driving simulator, head phones are optional

INSTRUCTIONAL AIDES:

INSTRUCTOR REFERENCES: Trailer Start-up Guides, Simulator Start-up Guide, Sim Tech PPT presentations, DFPC lesson plans, and simulated scenarios

PREPARATION:

- Ensure students are comfortable with the trailer temperature, lighting and sounds. Adjust if necessary
- Ensure the students are not suffering from motion sickness or dizziness
- Ensure the students are comfortable with the handling characteristics of the simulator. If not repeat the Free Driving skills from the introduction lesson plan number #1

Motivation: To provide students with a safe environment to practice unsafe vehicle driving maneuvers.

PRESENTATION:

- Have the student preform the braking exercise 3 times at **20 mph** on dry pavement and one time on wet pavement
- Have the student preform the braking exercise 3 times at **30 mph** on dry pavement and one time on wet pavement
- Have the student preform the braking exercise 3 times at **30 mph** on dry pavement and one time on wet pavement
- With each exercise encourage the student to look ahead at the "High Horizon" (looking out in the distance) in order to anticipate what hazards and/or obstacles lie ahead and to better prepare themselves for what normal and/or evasive maneuvers lie in the road ahead
- Have the student disengage the engine retarder a few times, discuss the differences in the stopping times and abilities

Evaluation:

- Remove both students from the simulator environment and trailer entirely
- Discuss driver achievements i.e. proper acceleration, turning techniques, spatial awareness
- Discuss needed improvements

Conclusion: Discuss what was learned from the first scenarios and what the student will apply to the next round of scenarios.

DFPC LESSON PLAN

COURSE: Driving Simulator lesson plan number **#3**

LESSON TITTLE: Freeway Accident Course found under the Fire Simulations tab

Instructor: **Date:**

TYPE OF LESSON

LECTURE ___ PRACTICAL ___ DRILL ___ OTHER ___

OBJECTIVES:

1. **Students will begin driving emergent**
2. **The students will familerize themselves with all cab controls and begin using them just as they would in a real fire apparatus**
3. **Using peripheral vision and continual awareness of the area surrounding the appartus the students will learn and practice accident avoidence and how to avoid encounters with other vehicles, pedestrians, and road barriers as they appear on scene.**
4. **The student will incorperate safe driving techniques in the following areas:**
    a. **The use of mirrors in haevy traffic**
    b. **Increased speeds and highway merging**
    c. **The use of emergency lighting**
    d. **The use of sirens and horns**
    e. **Scene placement**
    f. **Various weather and road conditions (instructors option)**

EQUIPMENT NEEDS: Driving simulator

INSTRUCTIONAL AIDES: This is one-on-one instruction between the student and instructor

INSTRUCTOR REFERENCES: Trailer Start-up Guides, Simulator Start-up Guide, Sim Tech PPT presentations, DFPC lesson plans, and simulated scenarios

PREPARATION:

- Ensure students are comfortable with the trailer temperature, lighting and sounds. Adjust if necessary
- Ensure the students are not suffering from motion sickness or dizziness
- Ensure the students are comfortable with the handling characteristics of the simulator. If not repeat the Free Driving skills from the introduction lesson plan number #1

Motivation: To provide students with a safe environment to practice unsafe vehicle driving maneuvers.

PRESENTATION:

1. The student will properly set the seat and steering wheel position.
2. Ensure the student is familiar with mirror placement and is comfortable with all the cab controls and instrument panels.
3. The student will begin by driving code three out of the station and into traffic. The instructor will be by his/her side to answer questions and give guidance when appropriate.
4. There will be many oncoming cars entering the fire apparatus path, the student will become aware of this early in the simulation. As an instructor you will advise the student on how to handle and avoid these encounters.
5. The student will be making many right and left hand turns throughout the simulation, watch how the student positions the apparatus on the roadway as he approaches the turns, make corrective suggestions and discuss “trailover” when appropriate.
6. As the student encounters heavy traffic on the highway he will learn that the travel lane is very narrow. Have the student alternate between the two view positions to better learn the size of the apparatus and the space it takes up.
7. Also the student should make note of when it is appropriate to use the sirens and horns when involved in heavy traffic situations.
8. When approaching the vehicle fire at the end of the simulation have the student position the apparatus for the best on-scene placement. Have the student explain the benefits of why he/she chose the selected position.
9. Have the student engage the pump

Evaluation:

- Remove both students from the simulator environment and trailer entirely
- Discuss driver achievements i.e. proper acceleration, turning techniques, spatial awareness, apparatus placement, accident avoidance, etc.
- Discuss needed improvements

Conclusion: Discuss what was learned from the first scenarios and what the student will apply to the next round of scenarios.

DFPC LESSON PLAN

COURSE: Driving Simulator lesson plan number **#4**

LESSON TITTLE: Restaurant Fire simulation found under the Fire Simulations tab

Instructor: **Date:**

TYPE OF LESSON

LECTURE ___ PRACTICAL ___ DRILL ___ OTHER ___

OBJECTIVES:

1. **Students will be driving emergent**
2. **The students will familerize themselves with all cab controls and begin using them just as they would in a real fire apparatus**
3. **Using peripheral vision and continual awareness of the area surrounding the appartus the students will learn and practice accident avoidence and how to avoid encounters with other vehicles, pedestrians, and road barriers as they appear on scene.**
4. **The student will incorperate safe driving techniques in the following areas:**
    a. **The use of mirrors in haevy traffic**
    b. **Increased speeds and highway merging**
    c. **The use of emergency lighting**
    d. **The use of sirens and horns**
    e. **Scene placement**
    f. **Various weather and road conditions (instructors option)**
5. **Students will learn the appropiate techiques for driving against opposing traffic**

EQUIPMENT NEEDS: Driving simulator

INSTRUCTIONAL AIDES: This is one-on-one instruction between the student and instructor

INSTRUCTOR REFERENCES: Trailer Start-up Guides, Simulator Start-up Guide, Sim Tech PPT presentations, DFPC lesson plans, and simulated scenarios

PREPARATION:

- Ensure students are comfortable with the trailer temperature, lighting and sounds. Adjust if necessary

- Ensure the students are not suffering from motion sickness or dizziness
- Ensure the students are comfortable with the handling characteristics of the simulator. If not repeat the Free Driving skills from the introduction lesson plan number #1

Motivation: To provide students with a safe environment to practice unsafe vehicle driving maneuvers.

PRESENTATION: (this is a short 1:45 simulation used as a confidence builder)
***** There are yellow directional signs with arrows pointing in the direction of travel**

1. The student will properly set the seat and steering wheel position.
2. Ensure the student is familiar with mirror placement and is comfortable with all the cab controls and instrument panels.
3. The student will begin by driving code three out of the station and into traffic. The instructor will be by his/her side to answer questions and give guidance when appropriate.
4. Upon entering the roadway the student will find backed-up traffic due to a close by intersection. If the student does not go opposing immediately he/she will be blocked and help-up by stopped traffic. If this happens the instructor can choose to start the simulation again.
5. There will be many oncoming cars entering the fire apparatus path, the student will become aware of this early in the simulation. Also the student will be going opposing several times while weaving in and out of traffic. As an instructor you will advise the student on how to handle and avoid these encounters.
6. The student will be making many right and left hand turns throughout the simulation, watch how the student positions the apparatus on the roadway as he approaches the turns, make corrective suggestions and discuss “trailover” when appropriate.
7. Also the student should make note of when it is appropriate to use the sirens and horns when involved in heavy traffic situations.
8. When approaching the structure fire at the end of the simulation have the student position the apparatus for the best on-scene placement. Have the student explain the benefits of why he/she chose the selected position.
9. Have the student engage the pump

Evaluation:

- Remove both students from the simulator environment and trailer entirely
- Discuss driver achievements i.e. proper acceleration, turning techniques, spatial awareness, apparatus placement, accident avoidance, etc.
- Discuss needed improvements

Conclusion: Discuss what was learned from the first scenarios and what the student will apply to the next round of scenarios.