PPD 531L: Transportation Studio
Fall Semester 2023

Tuesday 6:00pm – 9:20pm Pacific Time
DMC 155

Supply Chain Congestion:
What do we need to know and how does our practice impact the movements of goods?

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Course Objectives:

1. View the evolving goods movement (supply chain, intermodal freight) through the lens of urban planning and public policy.

2. Examine the complex and interrelated relationship between private enterprise, public entities, incentives, regulations, workforce, and volatile global supply chain by modes, commodity, and/or trades.

3. Gain understanding of goods movement and its impact on transportation planning practice, infrastructure development, project deliveries and community impacts in Southern California

4. Explore the roles of planners and opportunities in the new landscape of supply chain resilience.

I. COURSE DESCRIPTION

Welcome to PPD531L Fall 2023! This course focuses on real-world goods movement and supply chain issues during the unique circumstances we are facing. We will explore the challenges caused by ongoing supply chain congestion, disruptions, geopolitical shifts, and ever-changing manufacturing methods and means.

Goods movement is crucial for every community, but it often goes unnoticed by American consumers. The global pandemic further highlighted the significance of supply chains when empty store shelves and shortages occurred. The shift to online shopping and home deliveries also affected consumer behavior.

In this course, we will study the complexities of the supply chain, examining its vulnerabilities and impacts. Through readings, breakout sessions, and lectures, students will learn about goods movement and its relationship with our built environment. We will assess various objectives and practices along the supply chain and explore how planning, land use, and zoning policies affect freight movement.

Students will analyze the consequences of policies, standards, and regulatory frameworks and propose potential solutions. Expect to work independently, think critically, communicate professionally, and collaborate with others throughout the course. You will be required to produce high-quality deliverables, completing assignments "on time and within budget."

II. BACKGROUND

The global pandemic has brought to light vulnerabilities in the supply chain, especially for suppliers and semi-products reliant on single foreign sources. Over the past two decades, e-commerce has seen significant growth, driven by innovations like electronic shopping and online marketplaces such as Amazon. While various supply chain models aim for efficiency, reliability, or cost-effectiveness, different nodes within a supply chain may have distinct objectives and constraints.

In response to severe congestion at the Ports of Los Angeles and Long Beach in 2004 and 2015 due to labor disputes, major Beneficiary Cargo Owners (BCOs) and shippers adopted a "four-corner strategy," diversifying cargo handling across different gateway regions. This strategy has led to development opportunities in coastal regions like the Pacific Northwest, Gulf, and Southeast.

During the COVID lockdown, companies reevaluated their supply chain systems, considering options like re-shoring (domestic supply sources) or distributing suppliers across different countries. Interestingly, contrary to initial projections of decline, the Ports of Los Angeles and Long Beach experienced a significant rebound in container throughputs as early as August 2020, just six months into the lockdown. However, this surge in cargo movement also brought challenges, such as shortages of drivers and warehouse workers due to health concerns, putting pressure on freight handling and impacting communities near ports. In the last 24 months, US seaports and trade gateways continue to face significant shifts in cargo volume, shortages with skilled labor, and competition among regions.

The fast-changing logistic industry and supply chain models often challenge local planning and engineering practices. For example, more door-to-door freight deliveries are becoming a contributing factor to increasing vehicle-miles-traveled (VMT). Through regulations and incentives, trucks that serve seaports are being aggressively upgraded to zero- and near-zero-emission engines. While clean trucks are a critical element to reducing greenhouse gas emissions, communities still have to grapple with traffic congestion, on/off-street parking, and refueling for intra- and inter-region clean trucks.

In this studio class, students have a unique opportunity to examine the evolving industry amid the post-global pandemic, which continues to reshape the world's economy and stability. Most universities have not yet incorporated goods movement into their transportation planning curricula, making this course especially valuable for understanding these crucial aspects of our modern world.

III. REQUIRED READING, REFERENCES & RECOMMENDED READINGS

Category	Title/Link
Required	*"Building Resilient Supply Chains, Revitalizing American Manufacturing, and Fostering Broad-based Growth."* June 2021
Required	National Freight Strategic Plan 2020, USDOT
Required	California Freight Mobility Plan 2020
Required	SCAG Freight Works
Required	LA County Goods Movement Strategic Plan 2021
Required	*"Introduction to Economics"* by Dr. Anamitra Roy. 2020 (PowerPoint file to be distributed via email)
Reference	NCFRP Report 13: "Freight Facility Location Selection: A Guide for Public Officials"
Reference	NCFRP Report 16: "Preserving and Protecting Freight Infrastructure and Routes"
Reference	NCFRP Report 19: "Freight Trip Generation and Land Use"
Reference	NCFRP Report 20: "Guidebook for Assessing Evolving International Container Chassis Supply Models"
Reference	NCFRP Report 23: "Synthesis of Freight Research in Urban Transportation Planning"
Reference	NCFRP Report 24: "Smart Growth and Urban Goods Movement"
Reference	NCFRP Report 29: "Making Trucks Count: Innovative Strategies for Obtaining Comprehensive Truck Activity Data"
Reference	TRB Special Report 297: Funding Options for Freight Transportation Projects
Recommended	City of Seattle (WA) Freight Master Plan 2016
Recommended	"Why We Need Economic Planning" by Leigh Phillips Michal Rozworski, March 30, 2020
Recommended	*"The Box: How the shipping container made the world smaller and the world economy bigger".* 2nd edition. Marc Levinson
Recommended	*"Ninety Percent of Everything – Inside Shipping: The invisible industry that puts clothes on your back, gas in your car, and food on your plate".* Rose George.

Additional reading materials will be assigned throughout the course.

IV. SCHEDULE – Tentative

Week #	Date	Course Presentations/Contents	Readings and/or Deliverable(s) Due
1	08/22/2023	Welcome & Course Overview Goods Movement Through the Lens of Urban Planning & Public Policy	Group assignments to be announced via email by SUNDAY 08/27/2023, 5pm PDT
2	08/29/2023	"Cargo is King" – How, what, and why goods are moved?	Watch recorded interview #1 (links will be forwarded via email) then submit **Technical Memorandum #1** via email by MONDAY 08/29/2023, 5pm PDT via email. [Individual Project] Submit draft topic and abstract on a commodity or product YOU would like to examine by FRIDAY 09/01/2023, 5pm PDT.
3	09/05/2023	Speed of goods movement vs infrastructure development: "Just-in-time"	[Individual Project] Set up a mandatory 15 min. office-hour via Zoom between **WED 09/06/2023 and SAT 09/09/2023.** You will receive a green light to proceed on your proposed study topic by 09/12/2023 via email before class. [Group Project] POCs to submit top three topics by MONDAY 09/04/2023, 5pm PDT. Announce topical area for each group by TUESDAY 09/05/2023, 6pm PDT
4	09/12/2023	Infrastructure: What's the Future Like?	Watch recorded interview #2 (link to be forwarded via email) then submit **Technical Memorandum #2** via email by MONDAY 9/18/2023, 5pm PDT. [Group Project] POCs to submit proposed title, problem statement/abstract by MONDAY 09/11/2023, 5pm PDT
5	09/19/2023	Urban Freight – Too complicated to deal with?	[Individual Project] Submit Progress Report #1 via email by FRIDAY 9/22/2023, 5pm PDT. [Group Project] Set up a mandatory 15 min. office-hour via Zoom between **WED 09/20/2023 and SAT 09/23/2023.**
6	09/26/2023	Logistic Industry: Who are the movers and shakers?	[Group Project] Submit Bi-Weekly Progress Report #1 via email by MONDAY 9/25/2023, 5pm PDT
7	10/03/2023	Plans, plans, plans – How and when to take actions besides writing plans?	[Individual Project] multimedia and companion Technical Memorandum due via upload by FRIDAY 10/06/2023, 5pm PDT
8	10/10/2023	Showcasing Individual Projects in class	[Group Project] Submit Bi-Weekly Progress Report #2 via email by MONDAY 10/09/2023, 5pm PDT

(8a)	10/13/2023	Freight Tour (tentative)	Location TBD
9	10/17/2023	Policy – Top-down or Bottom-up?	[Group Project] Submit Bi-Weekly Progress Report #3 via email by MONDAY 10/23/2023, 5pm PDT
10	10/24/2023	Funding – Who pays and who gets? Earmarks vs discretionary/competitive grants.	Watch recorded interview assignment #3 then submit Technical Memorandum #3 via email by MONDAY 10/30/2023, 5pm PDT
11	10/31/2023	HALLOWEEN! Infrastructure Delivery – The good, bad, and ugly.	[Group Project] Submit Bi-Weekly Progress Report #4 via email by MONDAY 11/06/2023, 5pm PDT
12	11/07/2023	Environment and Regulations: Are zero-emission vehicles, trucks, trains, warehouses the solutions to congestion and freight in urban regions?	To be amended
13	11/14/2023	Guest Lecture (tentative)	To be amended Upload FINAL Group Project video production by MONDAY 11/27/2023, 5pm PST
14	11/21/2023	**NO CLASS**	
15	11/28/2023	**FINAL – Showcasing Team Projects**	Submit FINAL Group Project report by MONDAY 12/04//2023, 5pm PST

IV. STUDENT EVALUATION (subject to change)

Category	Percentage
Three Technical Memorandums (letter grade), each worth 10%	30%
Individual Project – Multimedia Presentation and Report – (letter grade)	30%
Group Project – Group Grade	40%
TOTAL	**100%**
Individual Participation/Responsiveness (bonus)	5%

Letter Grade Corresponding numerical point range:

A	95 – 105
A-	90-94
B+	87-89
B	83-86
B-	80-82

V.   IMPORTANT DUE DATES (all in Pacific Time) – Refer to supplemental instructions.

VI.   ADDITIONAL INSTRUCTIONS

Pre-Recorded Interviews with Guest Speakers
Students will watch THREE pre-recorded interviews with distinguished guests (1 hour max/each) then submit summaries in the form of technical memorandums. The links to interviews with guest speakers will be published via emails.

Individual Project
Instructions to be provided separately.

Team Project
Instructions to be provided separately.

Relevant Documents & Resources
Note to students: Do not solely rely on Wikipedia for reference. When necessary, attempt to contact public agencies or private companies to inquire about relevant information for completing your individual project or group project. That is part of your "real-world" training.

Policy on the use of Artificial Intelligence (AI) Generators in PPD531 Transportation Studio
Using Generative AI in research and to facilitate technical write-ups is an unavoidable trend. Nevertheless, students must demonstrate full understanding of their own writing submissions.

I expect you to use AI (e.g., ChatGPT and image generation tools) in this class. Learning to use AI is an emerging skill, and I welcome the opportunity to meet with you to provide guidance with these tools during office hours or after class. Keep in mind the following:

- AI tools are permitted to help you brainstorm topics or revise work you have already written.
- If you provide minimum-effort prompts, you will get low-quality results. You will need to refine your prompts to get good outcomes. This will take work.
- Proceed with caution when using AI tools and do not assume the information provided is accurate or trustworthy If it gives you a number or fact, assume it is incorrect unless you either know the correct answer or can verify its accuracy with another source. You will be responsible for any errors or omissions provided by the tool. It works best for topics you understand.
- AI is a tool, but one that you need to acknowledge using. Please include a paragraph at the end of any assignment that uses AI explaining how (and why) you used AI and indicate/specify the prompts you used to obtain the results what prompts you used to get the results. Failure to do so is a violation of academic integrity policies.

- Be thoughtful about when AI is useful. Consider its appropriateness for each assignment or circumstance. The use of AI tools requires attribution. You are expected to clearly attribute any material generated by the tool used.

Here are examples of using ChatGPT related to the course topics:
- "Prepare a 1,000 words write-up on the impact on supply chain during the global pandemic."
- "Write a script on seaport automation and its impact on organized labor workforce."
- "How should urban planners address the changes in logistic industry?"

Please ask me if you are unsure about what constitutes unauthorized assistance on an exam or assignment, or what information requires citation and/or attribution.

Collaboration. In this class, you are expected to submit work that demonstrates your individual mastery of the course concepts.

Group work. Unless specifically designated as a 'group project,' all assignments are expected to be completed individually.

Computer programs (if used). Plagiarism includes the submission of code written by, or otherwise obtained from someone else.

If found responsible for an academic violation, students may be assigned university outcomes, such as suspension or expulsion from the university, and grade penalties, such as an "F" grade on the assignment, exam, and/or in the course.

VII. SCHOOLWIDE POLICIES, EXPECTATIONS AND RESOURCES

Lecturer's Expectations
Please participate in course discussion enthusiastically; communicate with me (in person, via email or phone call or zoom) openly; respond to my assignments/inquiries promptly; and collaborate, coordinate, cooperate with your team members. These are fundamental skills in the workplace.

Etiquette - Expected Social Behavior
1. **Be on time** - We will begin each class promptly at 6pm PDT.
2. To the extent possible, we will take **two 5-10 minutes of break.**
3. **Present yourself in a professional manner**. This course is part of a professional degree program and students are expected to act and present themselves professionally. Adhere to the same **standard of behavior** in the classroom and online (office-hour) as you would at work.
4. **Speak in a professional manner**: e.g., use neutral language, avoid labels and stereotypes or overgeneralizations about groups/populations.
5. Promote participation and **foster respect** among fellow students.
6. Establish norms/standards/roles when you enter a breakout room.
7. Every student is encouraged to participate actively in breakout discussion.
8. When joining in discussion, provide thoughtful, succinct, and non-argumentative contributions to the discussion.
9. **No multitasking**

Statement on Academic Conduct and Support Systems

Academic Integrity:
The University of Southern California is a learning community committed to developing successful scholars and researchers dedicated to the pursuit of knowledge and the dissemination of ideas. Academic misconduct, which includes any act of dishonesty in the production or submission of academic work, compromises the integrity of the person who commits the act and can impugn the perceived integrity of the entire university community. It stands in opposition to the university's mission to research, educate, and contribute productively to our community and the world.

All students are expected to submit assignments that represent their own original work, and that have been prepared specifically for the course or section for which they have been submitted. You may not submit work written by others or "recycle" work prepared for other courses without obtaining written permission from the instructor(s).

Other violations of academic integrity include, but are not limited to, cheating, plagiarism, fabrication (e.g., falsifying data), collusion, knowingly assisting others in acts of academic dishonesty, and any act that gains or is intended to gain an unfair academic advantage.

The impact of academic dishonesty is far-reaching and is considered a serious offense against the university. All incidences of academic misconduct will be reported to the Office of Academic Integrity and could result in outcomes such as failure on the assignment, failure in the course, suspension, or even expulsion from the university.

For more information about academic integrity see the student handbook or the Office of Academic Integrity's website, and university policies on Research and Scholarship Misconduct.

Please ask your instructor if you are unsure what constitutes unauthorized assistance on an exam or assignment, or what information requires citation and/or attribution.

Students and Disability Accommodations:
USC welcomes students with disabilities into all of the University's educational programs. The Office of Student Accessibility Services (OSAS) is responsible for the determination of appropriate accommodations for students who encounter disability-related barriers. Once a student has completed the OSAS process (registration, initial appointment, and submitted documentation) and accommodations are determined to be reasonable and appropriate, a Letter of Accommodation (LOA) will be available to generate for each course. The LOA must be given to each course instructor by the student and followed up with a discussion. This should be done as early in the semester as possible as accommodation is not retroactive. More information can be found at osas.usc.edu. You may contact OSAS at (213) 740-0776 or via email at osasfrontdesk@usc.edu.

Support Systems:

Counseling and Mental Health - *(213) 740-9355 – 24/7 on call*
Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

988 Suicide and Crisis Lifeline - *988 for both calls and text messages – 24/7 on call*
The 988 Suicide and Crisis Lifeline (formerly known as the National Suicide Prevention Lifeline) provides free and confidential emotional support to people in suicidal crisis or emotional distress 24

hours a day, 7 days a week, across the United States. The Lifeline is comprised of a national network of over 200 local crisis centers, combining custom local care and resources with national standards and best practices. The new, shorter phone number makes it easier for people to remember and access mental health crisis services (though the previous 1 (800) 273-8255 number will continue to function indefinitely) and represents a continued commitment to those in crisis.

[Relationship and Sexual Violence Prevention Services (RSVP)](#) - (213) 740-9355(WELL) – 24/7 on call
Free and confidential therapy services, workshops, and training for situations related to gender- and power-based harm (including sexual assault, intimate partner violence, and stalking).

[Office for Equity, Equal Opportunity, and Title IX (EEO-TIX)](#) - (213) 740-5086
Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

[Reporting Incidents of Bias or Harassment](#) - (213) 740-5086 or (213) 821-8298
Avenue to report incidents of bias, hate crimes, and microaggressions to the Office for Equity, Equal Opportunity, and Title for appropriate investigation, supportive measures, and response.

[The Office of Student Accessibility Services (OSAS)](#) - (213) 740-0776
OSAS ensures equal access for students with disabilities through providing academic accommodations and auxiliary aids in accordance with federal laws and university policy.

[USC Campus Support and Intervention](#) - (213) 740-0411
Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

[Diversity, Equity and Inclusion](#) - (213) 740-2101
Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

[USC Emergency](#) - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call
Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

[USC Department of Public Safety](#) - UPC: (213) 740-6000, HSC: (323) 442-1200 – 24/7 on call
Non-emergency assistance or information.

[Office of the Ombuds](#) - (213) 821-9556 (UPC) / (323-442-0382 (HSC)
A safe and confidential place to share your USC-related issues with a University Ombuds who will work with you to explore options or paths to manage your concern.

[Occupational Therapy Faculty Practice](#) - (323) 442-2850 or otfp@med.usc.edu
Confidential Lifestyle Redesign services for USC students to support health promoting habits and routines that enhance quality of life and academic performance.