



# TRANSPORTATION DESIGN COMPETITION

PRESENTED BY: MNS ENGINEERS, INC.

**Pacific Southwest Student Symposium 2023**



**HOSTED BY:**

**California State University, Northridge  
March 23-25, 2023**

# North San Fernando Valley Transit Corridor Improvements: Nordhoff Street from Reseda Boulevard to Zelzah Avenue. Preliminary Design and Project Report Documentation

2023 Transportation Competition, presented by MNS Engineers, Inc.

## **Background**

The Los Angeles County Metropolitan Transit Authority (Metro) is proposing to enhance bus service and network connectivity between Northridge and the San Fernando Valley. With preliminary studies completed, Metro is looking to expedite design efforts for the Nordhoff Street segment from Reseda Boulevard to Zelzah Avenue to provide immediate upgrades around the California State University, Northridge campus, as well as local commercial centers.

Your consulting firm has been selected to prepare preliminary plans and a preliminary magnitude of the cost. The scope of preliminary design includes next generation bus boarding bulbs for all-door boarding, identifying bus priority signalization upgrades, and preparing a preliminary magnitude of cost. The consultant shall be responsible for collecting and disseminating the data, records, and documents in the preparation of all design documents.

## **Project Report**

The project report shall consist of the sections noted below. The report shall be on 8.5"x11" sheets, with the exception of Preliminary Design Drawings. Font shall be minimum 11-point Arial.

### ***Title Page***

Include project name, consultant team name, university name, "Pacific Southwest Symposium 2023", client logo, and publish date.

### ***Acknowledgments and Table of Contents***

On a single page, include a list of team members who contributed to the project. Denote gender and upperclassman or lowerclassman. Include a table of contents on the same page.

**Section 1. Project Overview and Purpose**

Limit to 1 page. Describe the general scope of the project. Discuss the purpose of the project and how it will benefit the local transportation network. Discuss the magnitude of cost and how it was derived.

**Section 2. Existing Conditions**

Limit to 1 page. Discuss existing conditions, including improvements, traffic configurations, and any relevant pre-project data.

**Section 3. Project Design Features and Challenges**

Limit to 4 pages. Discuss the basis of design and standards used. Discuss proposed configurations, and any challenges that may arise constructing and installing improvements.

**Section 4. Environmental Review**

Limit to 1 page. Discuss aesthetic, air quality, cultural, energy, water quality, land use, noise, public service, and transportation impacts.

**Appendix 1. Preliminary Design Drawings**

Preliminary Design Drawings should show proposed improvements, project constraints, and be placed on an engineering border. Sheet size shall be 11"x17". Limit to 8 pages.

**Appendix 2. Magnitude of Cost**

Provide a breakdown of cost for proposed improvements, final design, and construction management. Limit to 2 pages.

**Appendix 3. Additional appendices (optional)**

Consultants may include additional appendices (i.e. calculations, supplemental information, etc.). Limit to 3 pages.

**Public Outreach Presentation**

Consultants shall prepare a presentation poster to present at a public workshop at the Pacific Southwest Student Symposium. The maximum size of the poster shall be 36"x48". The poster should focus on project highlights that would intrigue and be of interest to the general public. The general public and judges will review and have questions for the consultants.

PSWS will supply equipment to display posters at the symposium.

**Scoring**

See Exhibit A. Ties will be broken using the project report score.

### **Penalties**

Penalties will be assessed for:

- Failing to meet team diversity requirements (-100 points)
- Not abiding to the spirit of the competition (at the discretion of the judges)

## **Additional information**

### **Teams**

Each school may enter one team of consultants into the transportation competition. Teams shall be composed of the following:

- At least three (3) people
  - At least one (1) person must be an underclassmen
  - The team must be comprised of at least two (2) different genders.
  - These requirements apply to both the Project Report and the Public Outreach Presentation

### **Request for Information (RFI) and Questions**

Please direct questions to [csun.asce.psws.2023@gmail.com](mailto:csun.asce.psws.2023@gmail.com) with subject *Transportation RFI (School Abbreviation, ex. CSUN)*. Questions are due by March 6, 2023. Please note that all RFI responses will be posted on the <https://studentsymposium.asce.org/pacificsouthwest/> website. RFI responses will be posted by March 10, 2023.

### **Submittals**

Email a single PDF of the Project Report to [csun.asce.psws.2023@gmail.com](mailto:csun.asce.psws.2023@gmail.com) with subject *Transportation Project Report (School Abbreviation, ex. CSUN)* by 11:59pm Pacific Standard Time on March 17, 2023.

### **Resources**

[Metro North San Fernando Valley Bus Rapid Transit](#)

[Attachment: USGS Aerial Orthoimagery \(CAD\)](#)

[Navigate LA](#)

[UC Berkeley Transportation Injury Mapping System](#)

## Exhibit A: Score Sheet

School Name		
<b>Project Report</b>		<b>Points</b>
Title Page	Project name Consultant team name University name Pacific Southwest Conference 2023 Client logo Publish date <b>TOTAL</b>	__ / 1 __ / 1 __ / 1 __ / 1 __ / 1 __ / 1 <b>__ / 6</b>
Acknowledgements and Table of Contents	Acknowledgements list team contributors Table of Contents <b>TOTAL</b>	__ / 2 __ / 2 <b>__ / 4</b>
Section 1. Project Overview	Consultant understands scope and purpose of project	<b>__ / 20</b>
Section 2. Existing Conditions	Consultant understands existing conditions	<b>__ / 10</b>
Section 3. Project Design Features	Consultant understands project design features and applies with good engineering judgment	<b>__ / 50</b>
Section 4. Environmental review	Consultant understands environmental setting, required documentation, etc.	<b>__ / 10</b>
Appendix 1. Preliminary Design Drawings	Engineering border on all drawings Consultant presents proposed improvements in a clear fashion Consultant presents project constraints in a clear fashion <b>TOTAL</b>	__ / 5 __ / 30 __ / 15 <b>__ / 50</b>
Appendix 2. Magnitude of Cost	Organized and clear Understanding of scope Costs make sense with proposed improvements <b>TOTAL</b>	__ / 5 __ / 10 __ / 10 <b>__ / 25</b>
<b>Public Outreach Presentation</b>		<b>Points</b>
Poster	Clarity and ease of understanding for the general public	<b>__ / 30</b>
Presentation	General poise of the team members and confidence in answering any questions	<b>__ / 20</b>
<b>Penalties</b>		<b>Points</b>
Diversity	Failure to include underclassmen or gender diversity	<b>-__ / -100</b>
Formatting Errors	Report or poster (5 points each infraction)	<b>-__</b>
<b>SCORE</b>	<i>Add all bold numbers</i>	<b>__ / 225</b>