



DRAFT
**TRANSPORTATION
CORRIDOR CONCEPT REPORT
STATE ROUTE 174**



The Transportation Corridor Concept Report (TCCR) is Caltrans' long range planning document for each State Highway Route. The TCCR provides information regarding route segments including high priority projects for the highway over the next 20 years, and existing and forecasted traffic data. Projects identified in the TCCR will require environmental and engineering studies before final approval and are subject to change.

Approvals:

Jeff Pulverman
District 3 Deputy Director
Planning and Local Assistance

Date

Jody Jones
District 3 Director

Date

Transportation Concept Report Data



SR 174 near Shady Glen

Segment Summary Information

The following pages provide summaries of each route segment. Each summary includes a segment map, a segment overview, and a list of future projects. The future projects are separated into three categories:

1. **Planned** - projects included in an approved Regional Transportation Plan;
2. **Programmed** - projects included in the State Transportation Improvement Program, State Highway Operations and Protection Plan, or California Federal Transportation Improvement Program;
3. **Conceptual** - projects not yet included in a planning or programming document, but are projects needed to maintain mobility along the segment.

Project listing includes a brief description, cost (if available), and completion year.

State – Local Responsibility

Improvements to the State Highway System are the responsibility of both Caltrans and local agencies. Developments affecting this route and the regional State Highway System may necessitate that local jurisdictions provide nexus based, proportional fair-share funding for future highway improvements.

State Route 174 Summary

State Route (SR) 174 is a non-interregional route that extends 13.1 miles northward from Interstate 80 (I-80) near Colfax in Placer County to SR 20 in the City of Grass Valley in Nevada County. Route 174 serves mostly local area traffic and winds through rolling to mountainous terrain. Small cities are located at each end of the route such as Colfax to the southeast and Grass Valley to the northwest as well as several small, rural communities in between. Recreational areas along the route include Empire Mine State Historic Park in Grass Valley and Rollins Lake on the Bear River at the boundary of Placer and Nevada Counties.

Increasing numbers of local and regional commuters are using SR 174 as a direct route between Auburn and Grass Valley or Nevada City to avoid congestion on SR 49. Large trucks and slow moving vehicles occasionally affect traffic flow, which may cause sizable queuing along some areas of the route. Despite this occasional queuing of vehicles, traffic congestion is not a continuous major problem over the entire length of SR 174.

District 3 has established concept level of service (LOS) standards for the twenty-year period—LOS D for route segments in rural areas and LOS E for route segments in urban areas. Presently, LOS conditions for SR 174 are at LOS D. This LOS rating is directly attributed to the hilly, mountainous terrain of this rural route, limited sight distance, few passing opportunities, many curves, and steep grades—some as high as 8%. SR 174 LOS conditions include some delays, occasional unstable traffic flows, difficult passing, and average operating speeds of 35 to 40 mph. LOS conditions are expected to decline over the 20-year period to LOS E. Typically, operational improvements are identified as a means to negate LOS decline, although routine operational improvements such as roadway realignment, lane or shoulder widening, or providing additional turnouts may be particularly costly and difficult due to the terrain of this rural route.

Lane widths are narrower than the current 12-foot standard in some areas of SR 174. The lanes average in width from 11 feet to 13 feet for the entire route, with lanes as narrow as 10 feet in some areas. Shoulder widths range from zero to less than 8 feet throughout the entire route.

Increased signage along the route to alert motorists of local road intersections, curve warnings, and speed limits should be considered. Brunswick Road is one of the major traffic generators along this route, and mitigation measures such as signalization or installation of a roundabout could be considered to improve operational conditions.

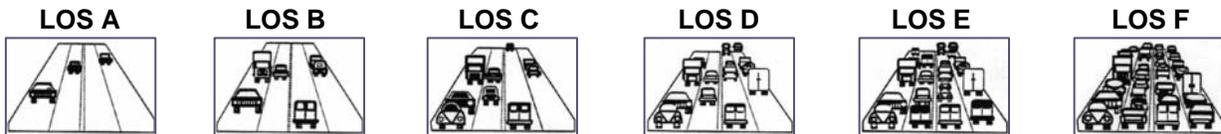
Accessing SR 174 from the northwest or southeast ends of the route can be difficult. There are no interchanges directly connecting motorists to SR 174 from I-80 at the southeast end, or SR 20 from the northwest end respectively. To access SR 174 motorists must follow signs and navigate through city streets to enter the respective routes. To improve these connections, signage should be modified to improve route directions for motorists and ultimately, reconstruction of the SR 174/I-80 Interchange as referenced in Segment 1 (page 6).

State Route 174 TCCR Traffic Data *(continued on next page)*

Location					Forecasted LOS and Facility Type					
Segment	Description	County	Post Mile From	Post Mile To	Current LOS ¹	20-Year LOS (No Build) ²	20-Year Concept LOS ³	Existing Facility ^{4,5}	Concept Facility ⁶	Ultimate Facility ⁷
1	SR 174 Junction at Rte 80 in Colfax to Main Street	PLA	0.00	0.73	D	E	D	2C	2C	2C
2	Main Street in Colfax to Placer/Nevada County Line	PLA	0.73	2.88	D	E	D	2C	2C	2C
3	Placer/Nevada County Line to Grass Valley City Limit	NEV	0.00	9.28	D	E	D	2C	2C	2C
4	Grass Valley City Limit to Rte 174 Junction at Rte 20	NEV	9.28	10.22	D	E	D	2C	2C	2C

Notes/Definitions

- Level of Service (LOS):** A “report card” measurement with “A” being the least amount of congestion and “F” being the most congestion.



LOS A – Free Flowing Conditions.

LOS B – Speeds at or near free-flow speed, but presence of other users begins to be noticeable.

LOS C – Speeds at or near free-flow speed, but freedom to maneuver is noticeably restricted.

LOS D – Speeds begin to decline slightly with increasing flow; freedom to maneuver is more restricted.

LOS E – Operating conditions at or near roadway capacity. Even minor disruptions to the traffic stream can cause delay.

LOS F – Breakdown in vehicle flow. Queues form quickly behind point in the roadway where the arrival flow rate temporarily exceeds the departure rate.

- 20-Year LOS (No Build):** The LOS that would be expected at 20 years with no improvements.
- 20-Year Concept LOS:** The minimum acceptable LOS over the next 20 years.

Current Traffic Data—2008					Prior 3 Years	Future Traffic Data—2028 No Build			Future Traffic Data—2028 Build		
% of Trucks	Directional Split ⁸	Peak Hour Traffic	Average Annual Daily Traffic ⁹	Volume Over Capacity ^{10, 11}	Safety Index ¹²	Peak Hour Traffic	Average Annual Daily Traffic ⁹	Volume Over Capacity	Peak Hour Traffic	Average Annual Daily Traffic ⁹	Volume Over Capacity ^{10, 11}
4%	60%	1,500	14,000	0.56	-27%	2,250	21,000	0.84	2,250	21,000	0.84
4%	60%	600	5,300	0.24	+12%	900	7,950	0.37	900	7,950	0.37
4%	58%	600	5,300	0.24	-4%	990	8,745	0.37	990	8,745	0.37
4%	60%	740	7,300	0.30	-30%	1,147	11,315	0.43	1,147	11,315	0.43

4. **Facility Type Codes:** C (Conventional Highway); E (Expressway); F (Freeway); HOV (High Occupancy Vehicle lanes); and Aux (Auxiliary lanes).
5. **Operational Improvements** are included in future facilities for all segments. Examples of operational improvements include Traffic Operations Systems improvements and Auxiliary Lanes.
6. **Concept Facility:** the future roadway with improvements needed in the next 20 years. If LOS F, no further degradation of service from existing F is acceptable, as indicated by delay performance measurement
7. **Ultimate Facility:** The future roadway with improvements needed beyond a 20 year timeframe.
8. **Peak Directional Split:** The percentage of total traffic in the heaviest traveled direction during the peak hour.
9. **Average Annual Daily Traffic (AADT):** The average number of vehicles per day in both directions.
10. **Volume over Capacity (V/C):** The volume of traffic compared to the capacity of the roadway.
11. **Volume over Capacity does not determine LOS** for two- or three- lane facilities, or segments with intersection delay.
12. **Reported Collision Rate Index:** The percentage by which each segment's reported collisions rate (fatal, injury, and property-damage-only) is above or below the statewide average reported collisions rate on comparable facilities. Source: 3-Year Caltrans Traffic Accident Surveillance and Analysis System data.

State Route 174 Segments 1 & 2 Summary



Segment 1 - I-80/SR 174 Interchange (PM 0.000) to Main Street (PM 0.730) in the City of Colfax

Segment 2 - Main Street (PM 0.730) in Colfax to the Placer/Nevada County Line (PM 2.883)

Segment 1 begins at the Interstate 80 and SR 174 interchange on South Auburn Street and ends at Main Street within the City of Colfax. This facility is a two-lane conventional highway that is also a minor arterial (PM 0.000-0.980) for the City of Colfax.

Reaching SR 174 from I-80 can be confusing to motorists, especially those who are unfamiliar with the Colfax area, due to the lack of signage directing motorists from eastbound I-80 to SR 174. Many access points can also be found along this segment. These access points consist of various collector and local roads and residential driveways.

This segment currently operates at LOS D. Potential improvements to this segment could include improved signage to direct motorists along the route, signalization where feasible, better bicycle and pedestrian access, and the reconstruction of the SR 174/I-80 Interchange.

Segment 2 is a two-lane conventional highway. This segment starts at Main Street within the City of Colfax and extends to the Placer/Nevada County Line.

Outside Colfax, this segment is mostly rural residential with many curves, steep grades, and narrow or no shoulders. Slow speed/curve advisory signage and many access points, such as residential driveways, collectors, and local roads are common characteristics along this segment.

This segment of SR 174 currently operates at LOS D although LOS is expected to decline over the 20-year planning period to LOS E.

Operational improvements that would otherwise be recommended, such as realignments, lane or shoulder widening, and additional turnouts are limited or are infeasible due to the rolling hills and mountainous terrain found throughout this segment.

Highway Improvement Projects

(Construction Cost in Millions (M) or Thousands (K); Construction Completion Year)

Segment 1

Planned Projects:

- Operational improvements at SR 174 at I-80 (\$7.2M; 2035) SACOG MTP 2035
- Reconstruct SR 174/I-80 interchange (\$35M; 2035) PCTPA RTP
- Signalize South Auburn St at Central Ave (\$772K; 2015) SACOG MTP 2035
- Intersection improvements at S. Auburn St in Colfax (\$515K; 2015) SACOG MTP 2035
- Intersection improvements at S. Auburn St at WB I-80 (\$540K; 2019) SACOG MTP 2035

Programmed Projects:

- No programmed projects

Conceptual Projects:

- Construct roundabout at South Auburn Street and Center Avenue

Segment 2

Planned Projects:

- No planned projects

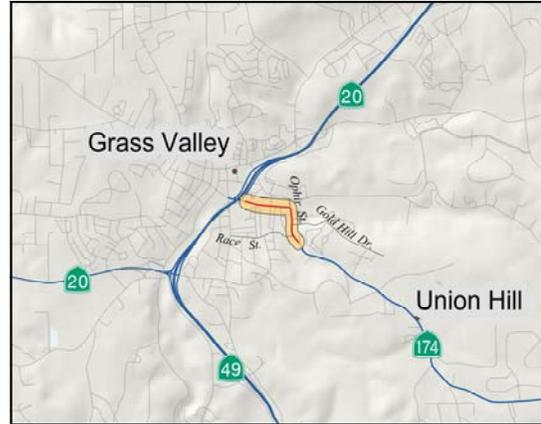
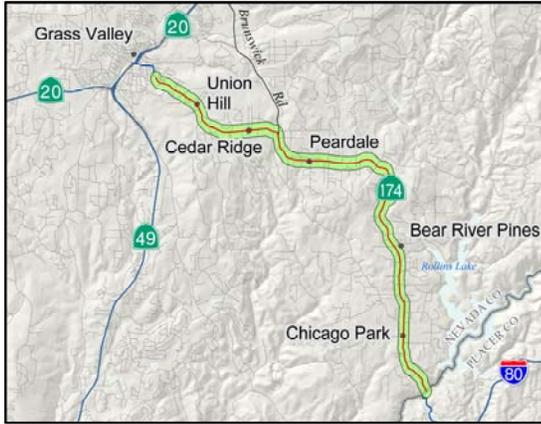
Programmed Projects:

- No programmed projects

Conceptual Projects:

- Widen shoulders where feasible

State Route 174 Segments 3 & 4 Summary



Segment 3 - Placer/Nevada County Line (PM 0.000) to Grass Valley City Limit (PM 9.278)

Segment 4 - Grass Valley City Limit (PM 9.278) to Auburn Street in City of Grass Valley (PM 10.218)

Segment 3 is a two-lane conventional highway. This segment begins at the Placer/Nevada County Line and ends at the Grass Valley city limit.

This segment is primarily rural and includes residential driveways, numerous curves, and some steep grades. Slow moving truck traffic is also a common characteristic of this segment.

This 6.3 mile section of roadway currently operates at LOS D and over the 20-year planning period is expected to decline to LOS E. The primary reason for LOS decline is directly related to the mountainous terrain and rolling hills, as is the case in segment 2, which makes many of the typical operational improvements such as lane widening or roadway realignment infeasible.

Roadway shoulders throughout this segment should be widened where feasible.

Segment 4 is a two-lane conventional highway. This nearly one-mile long segment begins at the Grass Valley City limit and ends at the northwestern terminus of SR 174 at SR 20 in the City of Grass Valley.

This segment has no direct connection available to SR 20 within the City of Grass Valley. Presently, motorists are required to use the SR 20/49 expressway/connector to access westbound SR 20. Due to limited signage along this segment, motorists often have difficulty with navigation to westbound SR 20.

This segment currently operates at LOS D. This standard is expected to decline over the 20-year planning period. As in all segments of this route, this decline is attributed to the hilly and mountainous terrain.

Conceptual improvements to this segment could include improved signage to alert motorists of the right turn lane for Gold Hill Drive (PM 9.629) and improved signage on eastbound SR 174 to provide motorists with improved directions to westbound SR 20.

Highway Improvement Projects

(Construction Cost in Millions (M) or Thousands (K); Construction Completion Year)

Segment 3

Planned Projects:

- Construct traffic signal and channelization at Brunswick Road (\$400K; 2015) NCTC RTP
- Drainage improvements (\$128K; 2013) 2009 10-Year SHOPP (Minor B Program)

Programmed Projects:

- No programmed projects

Conceptual Projects:

- Construct roundabout at Brunswick Road and SR 174 intersection

Segment 4

Planned Projects:

- Improve curve and channelization at Race Street (\$1M; 2017) Caltrans
- Construct traffic signal and channelization at Ophir Street (\$125K; 2015) NCTC RTP

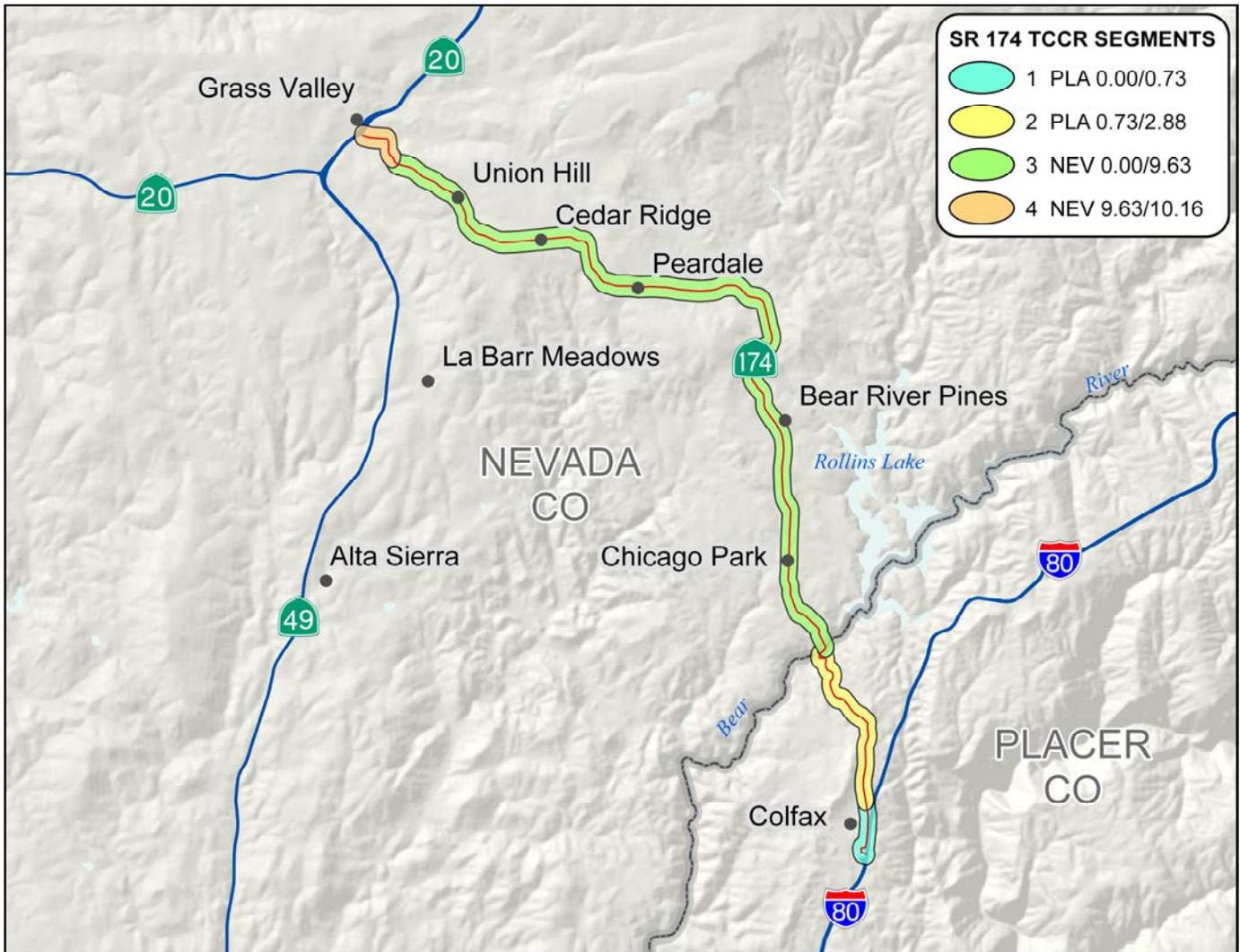
Programmed Projects:

- No programmed projects

Conceptual Projects:

- Widen shoulders where feasible
- Consider improved right-turn signage at Gold Hill Drive
- Provide signage on prior to SR 20/49 expressway/connector overcrossing

STATE ROUTE 174 SEGMENT MAP



Please contact below for questions and concerns about this TCCR:

Caltrans District 3
Office of Transportation Planning
P.O. Box 911, Marysville, CA 95901-0911
Telephone: (530) 741-5151

Or visit the TCCR website at:

<http://www.dot.ca.gov/dist3/departments/planning/systemplanning.html>