

Washoe County Development Application

Your entire application is a public record. If you have a concern about releasing personal information, please contact Planning and Building staff at 775.328.6100.

Project Information		Staff Assigned Case No.: _____	
Project Name: Lockwood IC Center			
Project Description: Master Plan Category designation amendment from Rural to Industrial & Open Space (Split Zoning)			
Project Address: 10705 Lockwood Dr, Washoe County NV 89434			
Project Area (acres or square feet): 5.65			
Project Location (with point of reference to major cross streets AND area locator): Directly East of intersection of Canyon Way & Lockwood Drive			
Assessor's Parcel No.(s):	Parcel Acreage:	Assessor's Parcel No.(s):	Parcel Acreage:
084-080-15	5.65		
Indicate any previous Washoe County approvals associated with this application: Case No.(s).			
Applicant Information (attach additional sheets if necessary)			
Property Owner:		Professional Consultant:	
Name: Lockwood Development Group LLC		Name: Phelps Engineering Services, Inc.	
Address: 3495 Lakeside Dr., Suite 211		Address: 10651 Professional Circle, Suite A	
Reno	Zip: 89509	Reno, NV	Zip: 89521
Phone: 775 827-6700	Fax:	Phone: 775.399.7200	Fax:
Email: Parker@DevelopersIG.com		Email: dperry@phelpsengineering.net	
Cell: 775 771-2955	Other:	Cell: 760.473.0925	Other:
Contact Person: JS Parker		Contact Person: Devin Perry	
Applicant/Developer:		Other Persons to be Contacted:	
Name: Lockwood Development Group, LLC		Name:	
Address: 3495 Lakeside Dr., Suite 211		Address:	
Reno	Zip: 89509		Zip:
Phone: 775 827-6700	Fax:	Phone:	Fax:
Email: Parker@DevelopersIG.com		Email:	
Cell: 775 771-2955	Other:	Cell:	Other:
Contact Person: JS Parker		Contact Person:	
For Office Use Only			
Date Received:	Initial:	Planning Area:	
County Commission District:		Master Plan Designation(s):	
CAB(s):		Regulatory Zoning(s):	

Master Plan Amendment Supplemental Information

(All required information may be separately attached)

The Washoe County Master Plan describes how the physical character of the County exists today and is planned for the future. The plan is adopted by the community and contains information, policies and a series of land use maps. The Master Plan provides the essential framework for creating a healthy community system and helps guide decisions about growth and development in the County. The following are general types of requests the County receives to amend the Master Plan. Please identify which type of amendment you are requesting:

<input type="checkbox"/> A request to change a master plan designation(s) from the adopted master plan and/or area plan maps
<input type="checkbox"/> A request to add, amend, modify or delete any of the adopted policies found in the elements of the Master Plan
<input type="checkbox"/> A request to add, amend, modify or delete any of the adopted policies in the area plans and/or specific language found in the area plans
<input type="checkbox"/> Other (please identify):

Please complete this questionnaire to ensure consistent review of your request to amend the Washoe County Master Plan. Staff will review the application to determine if the amendment request is in conformance with the policies and language within the elements and area plans of the Master Plan or if the information provided supports a change to the plan. Please provide an explanation to all questions; attach additional sheets if necessary.

1. What is the Master Plan amendment being requested at this time?

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2. What conditions have changed and/or new studies have occurred since the adoption of the Washoe County Master Plan that supports the need for the amendment request?

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3. Please provide the following specific information:

a. What is the location (address or distance and direction from the nearest intersection of the subject property)? Attach, for map amendments, a legal description. For all other amendments, what is the area subject to the request?

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b. Please list the following proposed changes (attach additional sheet if necessary):

Assessor's Parcel Number	Master Plan Designation	Existing Acres	Proposed Master Plan Designation	Proposed Acres

c. What are the adopted land use designations of adjacent parcels?

North	
South	
East	
West	

4. Describe the existing conditions and uses located at the site or in the vicinity (i.e. vacant land, roadways, buildings, etc.).

5. Describe the natural resources associated with the site under consideration. Your description should include resource characteristics such as water bodies, vegetation, topography, minerals, soils and wildlife habitat.

6. Describe whether any of the following natural resources or systems are related to the proposed amendment:

a. Is property located in the 100-year floodplain? (If yes, attach documentation of the extent of the floodplain and any proposed floodplain map revisions in compliance with Washoe County Development Code, Article 416, Flood Hazards, and consultation with the Washoe County Engineering & Capital Projects Division.)

<input type="checkbox"/> Yes	<input type="checkbox"/> No
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Explanation:

b. Does property contain wetlands? (If yes, attach a preliminary delineation map and describe the impact the proposal will have on the wetlands. Impacts to the wetlands may require a permit issued from the U.S. Army Corps of Engineers.)

<input type="checkbox"/> Yes	<input type="checkbox"/> No
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Explanation:

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- c. Does the property contain slopes or hillsides in excess of 15 percent and/or significant ridgelines? (If yes, submit the slope analysis requirements as contained in Article 424, Hillside Development of the Washoe County Development Code.)

<input type="checkbox"/> Yes	<input type="checkbox"/> No
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Explanation:

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- d. Does the property contain geologic hazards such as active faults, hillside, or mountainous areas? Is it subject to avalanches, landslides, or flash floods? Near a stream or riparian area such as the Truckee River, and/or an area of groundwater recharge? If the answer is yes to any of the above, check yes and provide an explanation.

<input type="checkbox"/> Yes	<input type="checkbox"/> No
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Explanation:

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- e. Does the property contain prime farmland, within a wildfire hazard area, geothermal or mining area, and/or wildlife mitigation route? If the answer is yes to any of the above, check yes and provide an explanation.

<input type="checkbox"/> Yes	<input type="checkbox"/> No
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Explanation:

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7. Are any archaeological, historic, cultural, or scenic resources in the vicinity or associated with the proposed amendment? If the answer is yes to any of the above, check yes and provide an explanation.

<input type="checkbox"/> Yes	<input type="checkbox"/> No
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Explanation:

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8. Do you own sufficient water rights to accommodate the proposed amendment? (Amendment requests in some groundwater hydrographic basins [e.g. Cold Springs, Warm Springs, etc.] require proof of water rights be submitted with applications. Provide copies of all water rights documents, including chain of title to the original water right holder.)

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------

If yes, please identify the following quantities and documentation numbers relative to the water rights. Please attach a copy(s) of the water rights title (as filed with the State Engineer in the Division of Water Resources of the Department of Conservation and Natural Resources).

a. Permit #		acre-feet per year	
b. Certificate #		acre-feet per year	
c. Surface Claim #		acre-feet per year	
d. Other #		acre-feet per year	

- a. If the proposed amendment involves an intensification of land use, please identify how sufficient water rights will be available to serve the additional development.

9. Please describe the source and timing of the water facilities necessary to serve the amendment.

- a. System Type:

<input type="checkbox"/> Individual wells		
<input type="checkbox"/> Private water	Provider:	
<input type="checkbox"/> Public water	Provider:	

- b. Available:

<input type="checkbox"/> Now	<input type="checkbox"/> 1-3 years	<input type="checkbox"/> 3-5 years	<input type="checkbox"/> 5+ years
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- c. If a public facility is proposed and is currently not available, please describe the funding mechanism for ensuring availability of water service.

10. What is the nature and timing of sewer services necessary to accommodate the proposed amendment?

- a. System Type:

<input type="checkbox"/> Individual septic		
<input type="checkbox"/> Public system	Provider:	

- b. Available:

<input type="checkbox"/> Now	<input type="checkbox"/> 1-3 years	<input type="checkbox"/> 3-5 years	<input type="checkbox"/> 5+ years
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- c. If a public facility is proposed and is currently not available, please describe the funding mechanism for ensuring availability of sewer service. If a private system is proposed, please describe the system and the recommended location(s) for the proposed facility.

11. Please identify the street names and highways near the proposed amendment that will carry traffic to the regional freeway system.

12. Will the proposed amendment impact existing or planned transportation systems? (If yes, a traffic report will be required.)

<input type="checkbox"/> Yes	<input type="checkbox"/> No
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13. Community Services (provided and nearest facility):

a. Fire Station	
b. Health Care Facility	
c. Elementary School	
d. Middle School	
e. High School	
f. Parks	
g. Library	
h. Citifare Bus Stop	

14. Describe how the proposed amendment fosters, promotes, or complies with the policies of the adopted area plans and elements of the Washoe County Master Plan.

a. Population Element:

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b. Conservation Element:

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c. Housing Element:

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d. Land Use and Transportation Element:

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e. Public Services and Facilities Element:

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f. Adopted area plan(s):

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15. If the area plan includes a Plan Maintenance component, address all policies and attach all studies and analysis required by the Plan Maintenance criteria.

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Applicant Comments

This page can be used by the applicant to support the master plan amendment request and should address, at a minimum, how one or more of the findings for an amendment is satisfied. (Please refer to Article 820 of the Washoe County Development Code for the list of Findings.)

Lockwood Development Group, LLC ("LDG") appreciates being able to submit our request for a Master Plan Amendment for APN: 084-080-15.

LDG believes the proposed Amendment is both consistent and compatible with existing and or planned adjacent land uses, both in Washoe County and Story County, and will not adversely impact the public health, safety or welfare of any surrounding community.

In addition:

The Property, located off of the East bound Lockwood on-off ramp from U.S. I-80, was previously zoned TC (prior to 2007), prior to the County rezoning the Property for the Truckee River Restoration Project.

Having met with County engineering staff prior to purchasing our Property, the consensus was that the Property, now that the Truckee River Restoration Project was complete, would be most compatible for development if the request for a MPA and RZA included development sensitivity to both the new designated Flood Way Plan and Flood Zone Areas.

LDG has been responsive to the County's request for site specific Studies and the use of Split Zone designations. The Amendment request for both an Industrial and an Open Space Designation in the MPA on our Property is specifically in response to the County's Request for more desirable land utilization.

The Industrial and Open Space Designations are used on adjacent and nearby lands fronting the Truckee River in both Washoe County and Story County. The split Designations will limit both the use and disturbance of natural resources for utilities and facilities on site, as well as off, and will promote the County's desired pattern of growth for the area with the least amount of natural resource impairment and the most efficient and fiduciary use of funds for public service expenditures by the County.

LDG's Amendment request for a MPA will not affect the location, purpose or mission of a military installation.

Washoe County Development Application

Your entire application is a public record. If you have a concern about releasing personal information, please contact Planning and Building staff at 775.328.6100.

Project Information		Staff Assigned Case No.: _____	
Project Name:			
Project Description:			
Project Address:			
Project Area (acres or square feet):			
Project Location (with point of reference to major cross streets AND area locator):			
Assessor's Parcel No.(s):	Parcel Acreage:	Assessor's Parcel No.(s):	Parcel Acreage:
Indicate any previous Washoe County approvals associated with this application: Case No.(s).			
Applicant Information (attach additional sheets if necessary)			
Property Owner:		Professional Consultant:	
Name:		Name:	
Address:		Address:	
Zip:		Zip:	
Phone: Fax:		Phone: Fax:	
Email:		Email:	
Cell: Other:		Cell: Other:	
Contact Person:		Contact Person:	
Applicant/Developer:		Other Persons to be Contacted:	
Name:		Name:	
Address:		Address:	
Zip:		Zip:	
Phone: Fax:		Phone: Fax:	
Email:		Email:	
Cell: Other:		Cell: Other:	
Contact Person:		Contact Person:	
For Office Use Only			
Date Received: Initial:		Planning Area:	
County Commission District:		Master Plan Designation(s):	
CAB(s):		Regulatory Zoning(s):	

Regulatory Zone Amendment Supplemental Information

(All required information may be separately attached)

Please complete the following supplemental information to ensure consistent review of your request to amend the Washoe County Zoning Map. Please provide a brief explanation to all questions answered in the affirmative.

1. List the Following information regarding the property subject to the Regulatory Zone Amendment.

a. What is the location (address, distance and direction from nearest intersection)?

b. Please list the following proposed changes (attach additional sheet if necessary).

APN of Parcel	Master Plan Designation	Current Zoning	Existing Acres	Proposed Zoning	Proposed Acres

c. What are the regulatory zone designations of adjacent parcels?

	Zoning	Use (residential, vacant, commercial, etc.)
North		
South		
East		
West		

3. Describe the existing conditions and uses located on the site (i.e. vacant land, roadways, easements, buildings, etc.).

4. Describe the natural resources associated with the site under consideration. Your description should include resource characteristics such as water bodies, vegetation, topography, minerals, soils, and wildlife habitat.

5. Does the property contain development constraints such as floodplain or floodways, wetlands, slopes, or hillsides in excess of 15%, geologic hazards such as active faults, significant hydrologic resources, or major drainages or prime farmland?

<input type="checkbox"/> Yes, provide map identifying locations	<input type="checkbox"/> No
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6. Is the site located in an area where there is potentially an archeological, historic, or scenic resource?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
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Explanation:

--

7. Are there sufficient water rights to accommodate the proposed amendment? Please provide copies of all water rights documents, including chain of title to the original water right holder.)

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------

If yes, please identify the following quantities and documentation numbers relative to the water rights:

a. Permit #		acre-feet per year	
b. Certificate #		acre-feet per year	
c. Surface Claim #		acre-feet per year	
d. Other #		acre-feet per year	

- a. Title of those rights (as filed with the State Engineer in the Division of Water Resources of the Department of Conservation and Natural Resources):

--

- b. If the proposed amendment involves an intensification of land use, please identify how sufficient water rights will be available to serve the additional development.

--

8. Please describe the source and timing of the water facilities necessary to serve the amendment.

- a. System Type:

<input type="checkbox"/> Individual wells		
<input type="checkbox"/> Private water	Provider:	
<input type="checkbox"/> Public water	Provider:	

- b. Available:

<input type="checkbox"/> Now	<input type="checkbox"/> 1-3 years	<input type="checkbox"/> 3-5 years	<input type="checkbox"/> 5+ years
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- c. Is this part of a Washoe County Capital Improvements Program project?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------

- d. If a public facility is proposed and is currently not listed in the Washoe County Capital Improvements Program or not available, please describe the funding mechanism for ensuring availability of water service.

--

9. What is the nature and timing of sewer services necessary to accommodate the proposed amendment?

- a. System Type:

<input type="checkbox"/> Individual septic		
<input type="checkbox"/> Public system	Provider:	

- b. Available:

<input type="checkbox"/> Now	<input type="checkbox"/> 1-3 years	<input type="checkbox"/> 3-5 years	<input type="checkbox"/> 5+ years
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- c. Is this part of a Washoe County Capital Improvements Program project?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
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- d. If a public facility is proposed and is currently not listed in the Washoe County Capital Improvements Program or not available, please describe the funding mechanism for ensuring availability of sewer service. If a private system is proposed, please describe the system and the recommended location(s) for the proposed facility.

--

10. Please identify the street names and highways near the proposed amendment that will carry traffic to the regional freeway system.

--

11. Will the proposed amendment impact existing or planned transportation systems? (If yes, a traffic report is required.)

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------

12. Community Services (provided name, address and distance to nearest facility).

a. Fire Station	
b. Health Care Facility	
c. Elementary School	
d. Middle School	
e. High School	
f. Parks	
g. Library	
h. Citifare Bus Stop	

Projects of Regional Significance Information For Regulatory Zone Amendments

Nevada Revised Statutes 278.026 defines "Projects of Regional Significance". Regulatory Zone amendment requests for properties within the jurisdiction of the Truckee Meadows Regional Planning Commission (TMRPC) must respond to the following questions. A "Yes" answer to any of the following questions may result in the application being referred first to the Truckee Meadows Regional Planning Agency (TMRPA) for submission as a project of regional significance. Applicants should consult with County or Regional Planning staff if uncertain about the meaning or applicability of these questions.

1. Will the full development potential of the Regulatory Zone amendment increase employment by not less than 938 employees?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
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2. Will the full development potential of the Regulatory Zone amendment increase housing by 625 or more units?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------

3. Will the full development potential of the Regulatory Zone amendment increase hotel accommodations by 625 or more rooms?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------

4. Will the full development potential of the Regulatory Zone amendment increase sewage by 187,500 gallons or more per day?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------

5. Will the full development potential of the Regulatory Zone amendment increase water usage by 625 acre-feet or more per year?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------

6. Will the full development potential of the Regulatory Zone amendment increase traffic by 6,250 or more average daily trips?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------

7. Will the full development potential of the Regulatory Zone amendment increase the student population from kindergarten to 12th grade by 325 students or more?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
------------------------------	-----------------------------

Lockwood Development Group, LLC ("LDG") appreciates being able to submit our request for a Regulatory Zone Amendment for APN: 084-080-15.

LDG believes the proposed Amendment is both consistent and compatible with existing and or planned adjacent land uses, both in Washoe County and Story County, and will not adversely impact the public health, safety or welfare of any surrounding community.

In addition:

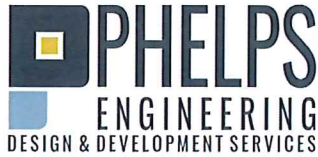
The Property, located off of the East bound Lockwood on-off ramp from U.S. I-80, was previously zoned TC (prior to 2007), prior to the County rezoning the Property for the Truckee River Restoration Project.

Having met with County engineering staff prior to purchasing our Property, the consensus was that the Property, now that the Truckee River Restoration Project was complete, would be most compatible for development if the request for a MPA and RZA included development sensitivity to both the new designated Flood Way Plan and Flood Zone Areas. LDG has been responsive to the County's request for site specific Studies and the use of Split Zone designations.

The Amendment request for an Industrial and an Open Space Designation on our Property in the RZA is in direct response to the County's Request for more desirable land utilization.

Industrial and Open Space Designations are used on adjacent and nearby lands fronting the Truckee River in both Washoe County and Story County. The split Designations will limit both the use and disturbance of natural resources for utilities and facilities on site, as well as off, and will promote the County's desired pattern of growth for the area with the least amount of natural resource impairment and the most efficient and fiduciary use of funds for public service expenditures by the County.

LDG's Amendment request for a RZA will not affect the location, purpose or mission of a military installation.



Memorandum

Date: January 8, 2024
To: Lockwood Project File
RE: 10705 Lockwood Drive Trip Generation Update Letter

This letter contains the findings of the trip generation comparison of the 01/04/2024 Lockwood IC Center Development Proposed Zoning, and the current undeveloped land use. The proposed project is located just south of I-80 at 10705 Lockwood Drive in Washoe County, Nevada. The proposed zoning allows for a maximum 26,400 S.F. general light industrial building with on-site parking.

The potential trip generation of the proposed project was calculated using trip generation rates from the Institute of Transportation Engineer’s (ITE) Trip Generation Manual, 11th Edition (2023) for the “general light industrial” land use (Land Use Code 110).

Land Use	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekday 24-hours		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
26,400 S.F. Light Industrial Building (ITE Land Use 110)	26	4	30	5	22	27	75	75	150

Table 1: Trips based on ITE Trip Generation Manual, 11th Edition.

As shown in Table 1, the site is predicted to generate 30 trips during the weekday morning peak hour, 27 trips during the weekday evening peak hour, and 150 trips during the 24-hour period. Based on the publication *Transportation Impact Analysis for Site Development* also published by ITE in 2010, a trip increase of less than 100 vehicles trips during the peak hour would likely not change the level of service of the roadway system or appreciably increase the volume-to-capacity ratio of an intersection approach. As such, the proposed development is not anticipated to significantly impact the operations of the adjacent roadway network.

Furthermore, the Washoe County TENTATIVE SUBDIVISION MAP APPLICATION states the following minimum requirements for a Traffic Impact Report:

“Traffic impact reports are required whenever the proposed development will create the potential to generate 80 or more weekday peak hour trips as determined using the latest edition of the Institute of Transportation Engineers (ITE) trip generation rates or other such sources as

PLANNERS

ENGINEERS

ANALYSTS

3522 South Emerson Street

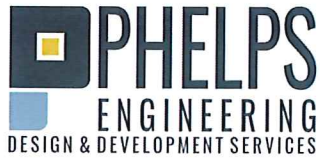
10651 Professional Circle

Englewood, Colorado 80113

Suite "A"

(303) 298-1644 (o)

Reno, NV 89521



may be accepted by Washoe County Engineering. Projects with less than 200 peak hour trips may not need to perform an impact analysis for future years.”

Therefore, with a maximum of 30 peak-hour trips predicted by the ITE Trip Generation Manual, the development will likely not meet the minimum threshold for a traffic impact report. However, the final determination will still need to be made by the County Engineer. We trust that this information will be adequate for your review. Please contact us if you have questions or comments.

Sincerely,

Daniel Eybs, PTOE

Senior Project Engineer

Phelps Engineering Services, Inc.

Lonny Phelps, P.E.

(Reviewed & Approved)

Phelps Engineering Services, Inc.



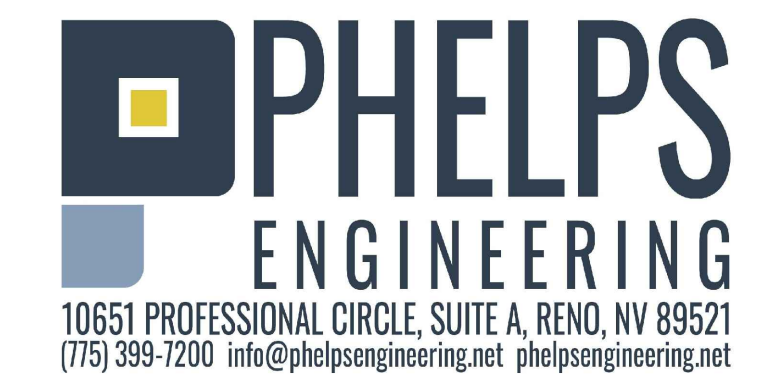
Attachments: 01/04/2024 Lockwood IC Center Development Proposed Zoning

Drawing name: C:\Users\Devin\OneDrive - Phelps Engineering Services\Company OneDrive - Company\Entitlement Engineering\230525 - Lockwood\08 - CAD\Planning\WPA Map\Lockwood IC Center\WPA map.dwg Exhibit 1 Existing Jan 05, 2024 12:50pm by: Devin



LOCKWOOD IC CENTER EXISTING CONDITIONS

APN: 084-080-15
10705 LOCKWOOD DR.
WASHOE COUNTY, NV 89434



Exhibit

1 of 2

SCALE: 1"=100'

DATE: 01/04/2024

DRAWN BY: DP

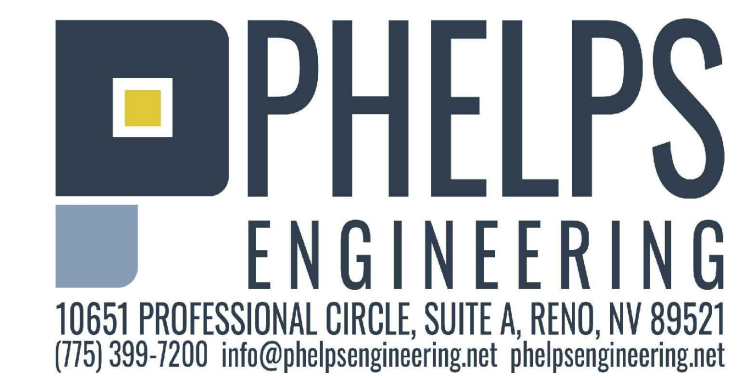
CHECKED BY: LEP

Drawing name: C:\Users\Devin\OneDrive - Phelps Engineering Services\Company OneDrive - Company\Entitlement Engineering\230525 - Lockwood\08 - CAD\Planning\WPA_Map\Lockwood IC Center\WPA_map.dwg Exhibit: 2 Proposed Jan 05, 2024 12:51pm by: Devin



LOCKWOOD IC CENTER PROPOSED ZONING

APN: 084-080-15
10705 LOCKWOOD DR.
WASHOE COUNTY, NV 89434



Exhibit

2 of 2

SCALE: 1"=100'

DATE: 01/04/2024

DRAWN BY: DP

CHECKED BY: LEP

LOCKWOOD IC CENTER

Water Quality Report

Portions of Sections 16 and 17, Township 19 North, Range 21 East of the
Mount Diablo Principal Meridian, Washoe County, Nevada

Engineer: Phelps Engineering Services, Inc.
10651 Professional Circle Suite A
Reno, NV 89511
Contact: Lonny Phelps, P.E.
303-298-1644

Owner: Lockwood Development Group LLC
3495 LAKESIDE DR # 249
RENO NV 89509

Location: 10705 Lockwood Dr, Washoe County NV 89434

Date of Preparation: January, 2024



PLANNERS

3522 South Emerson Street
Englewood, Colorado 80113
(303) 298-1644 (o)

ENGINEERS

ANALYSTS

10651 Professional Circle
Suite A
Reno, NV 89511



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I. INTRODUCTION

A. Purpose of study

The purpose of this study is to discuss mitigation measures that will be constructed or provided to produce no measurable increase over the river's reach of regulated water quality parameters (total dissolved solids, nitrogen, phosphorous, ambient temperature, etc.) as established by the Nevada Division of Environmental Protection per Article 222, Section 110.22.10.d of the Washoe County Development Code.

B. Location

The subject property is located off Interstate Highway 80 (I-80), 0.2 miles from the intersection of I-80 and Canyon Way on the southern edge of Washoe County, in unincorporated Sparks. (Figure 1).

C. Project Description

The project consists of a Master Plan Category designation amendment from Rural to Industrial & Open Space (Split Zoning), and a Regulatory Zone Amendment from General Rural to Industrial & Open Space (Split Zoning).

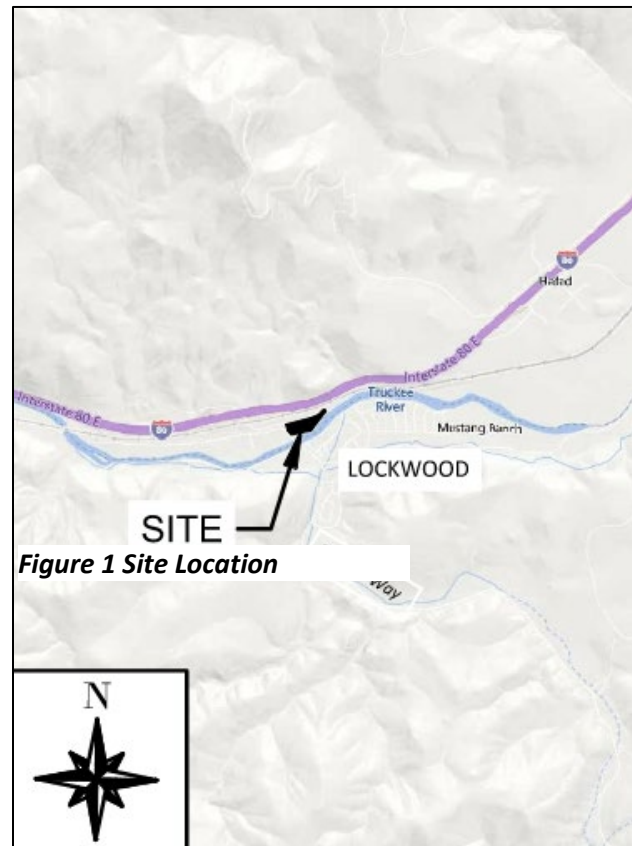


Figure 1 Site Location

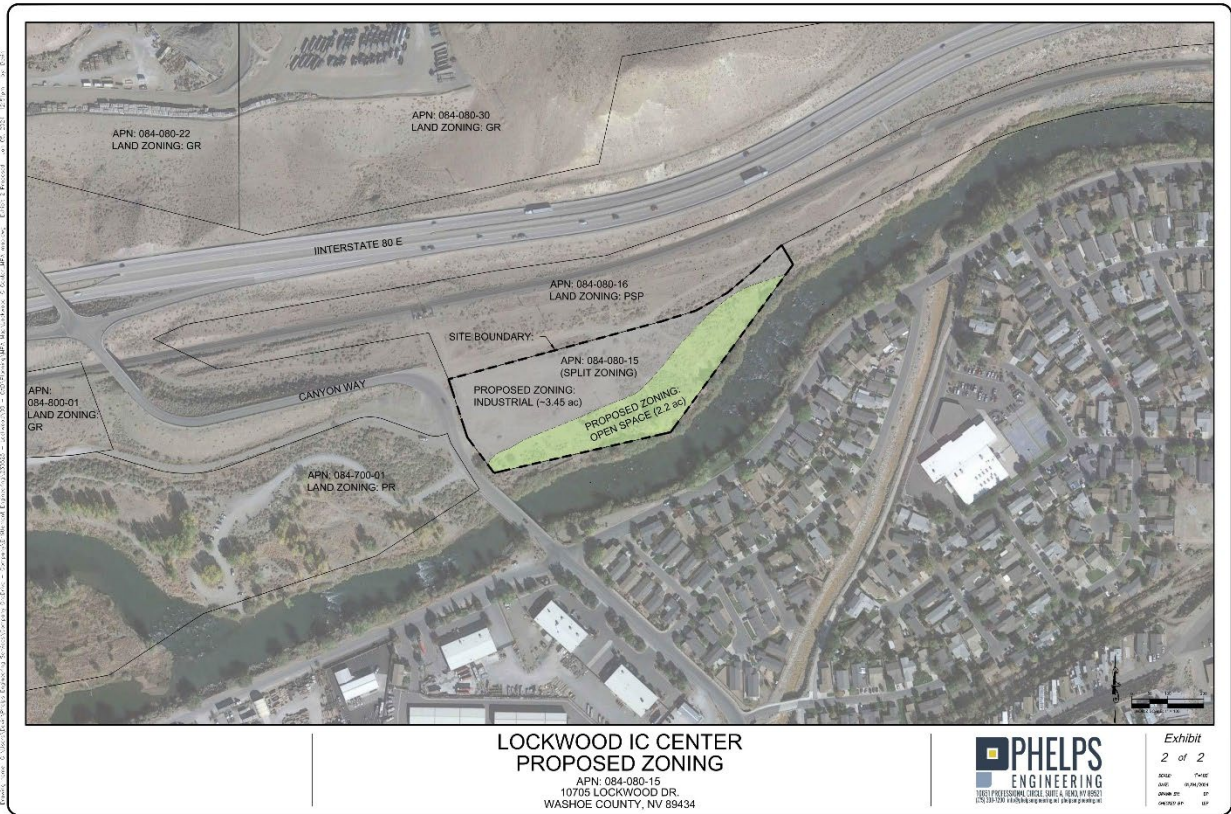


Figure 2: Proposed Zoning

II. EXISTING CONDITIONS

The site is located directly above USGS monitoring location NV-10350057, Groton Div to S Side Wingfall With Gate. This section of the Truckee River is identified as the Truckee River at Lockwood Bridge (NV06-TR-04_00) and consists of approximately 6.31 miles of *River* extending from East McCarran Blvd to Lockwood. This reach of the river is designated as “Impaired” by the EPA under Section 303(d) of the Clean Water Act (Figure 3). A Total Maximum Daily Load (TMDL) study adopted by NVDEP in February, 1994 identified total nitrogen (TN), total phosphorus (TP) and total dissolved solids (TDS) as pollutants of concern. Based on TMDL’s, Waste Load Allocations (WLA’s) are then set for contributing point and non-point sources. TMDL’s and associated WLA’s are listed in Table 1.

Assessment Information from 2022	
State or Tribal Nation specific designated uses:	
Information on Water Quality Standards	Expand All <input type="checkbox"/>
Aquatic Life	Impaired >
Industrial Supply	Good >
Irrigation	Good >
Municipal or Domestic Supply	Impaired >
Propagation of Wildlife	Good >
Recreation Involving Contact With the Water	Impaired >
Recreation Not Involving Contact With the Water	Good >
Water and Organisms	Good >
Watering of Livestock	Good >
Probable sources contributing to impairment from 2022:	
No probable sources of impairment identified for this waterbody.	

Figure 3 Assessment Information



Table 1 – TMDL/WLA Summary

Pollutant	TMDL	WLA (TM NPDES)
TDS	900,528 lbs/day	120,168 lbs/day
TN	1,000 lbs/day	500 lbs/day (30 day ave)
TP	214 lbs/day	134 lbs/day

III. MITIGATION STRATEGY

WLA's are primarily set for wastewater treatment facilities, in this case the Reno-Sparks Water Reclamation facility. Permit compliance for this facility is beyond the scope of this study, however the WLA for phosphorus does provide a key indicator of upstream mitigation strategies. Past studies have shown phosphorus to be a limiting factor in water quality degradation due to hyper-eutrophication of receiving water bodies (Hughes, R. M., Herlihy, A. T., Comeleo, R., Peck, D. V., Mitchell, R. M., & Paulsen, S. G. 2023. *Patterns in and predictors of stream and river macroinvertebrate genera and fish species richness across the conterminous USA. Knowledge & Management of Aquatic Ecosystems*). Other studies have shown that phosphorus typically binds to smaller particles associated with suspended solids scoured from impervious surfaces (Caduto, M.J. 1990. *Pond and brook*. University Press of New England, Hanover, NH.).

The Truckee Meadows Structural Controls Design and Low Impact Development Manual (City of Reno, City of Sparks, and Washoe County, Nevada, April 2015) further describes impacts from urban runoff both in quantity and quality:

"The reduction of natural land surfaces that previously infiltrated a portion of the annual rainfall into pervious soils and recharged groundwater aquifers which slowly discharged to streams and rivers has resulted in decreased baseflows and changes to stream channel morphology."

The mitigation strategy for the Lockwood IC Center will consist of directing all new impervious landscape to two retention ponds designed per Section 6.3 of the TMSCD Manual. Depending on site investigations to be conducted during the design process, these may be sand filters, bio-retention, infiltration trenches or a combination thereof.

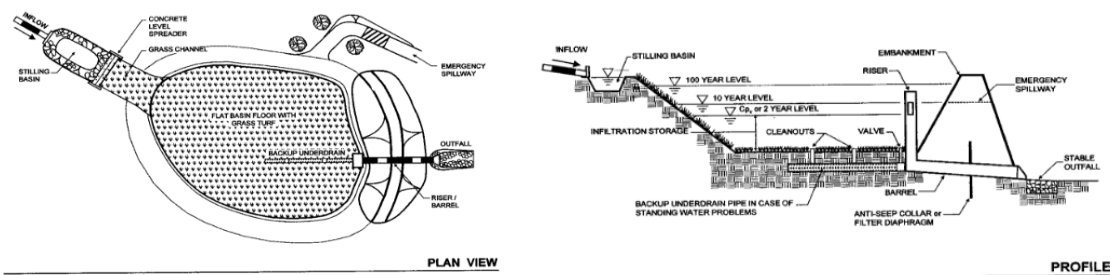


Figure 4 – Example of a typical Infiltration Basin design (CASQA, 2003)



From the TMSCD Manual :

TC-21 INFILTRATION BASINS

Description

Infiltration basins capture stormwater runoff and allow it to infiltrate into the ground. They are similar to sedimentation basins or detention basins; however, their purpose is not only to detain the water but also to promote infiltration. They are also similar to infiltration trenches; however, they can use a wider variety of filter media, can be vegetated on the bottom and can serve larger drainage areas. Pollutants such as suspended solids, metals, nutrients, and bacteria are removed through sedimentation, adsorption, and physical filtration through permeable media and soil thereby improving water quality.

Applications and Advantages

Infiltration systems are applied in areas with well-drained and pervious soils. They are typically applied to drainage areas up to 5 acres. On select sites, it is relatively easy to incorporate an infiltration basin into a site's open space design and layout. Infiltration basins are ideal for areas adjacent to roadways and near interchanges. However, they should not be used in industrial or commercial areas where hazardous or toxic materials are stored outdoors and the potential for spills is relatively high.

Performance Data

Infiltration basins can provide 100 percent reduction in pollutant loading directly to surface waters. Infiltration basins can also provide high pollutant removal efficiency for particulates and moderate efficiency for soluble pollutants when functioning as designed. Actual loading to the subsurface may vary significantly depending on site-specific conditions. Studies in the Pacific Northwest have shown improved long-term performance for basins developed in highly permeable soils. The literature reported range of removal for various pollutants is as follows:

Table 2 – Pollutant Removal Efficiencies

Pollutant	Percent Removal Efficiency
Total Suspended Solids	55 – 75
Total Phosphorus	45 – 55
Total Nitrogen	10 – 20
Total Recoverable Zinc	30 – 60
Total Recoverable Lead	55 – 80

Source: UDFCD, 1999.



IV. REFERENCES

1. EPA Water Body Report: Truckee River at Lockwood Bridge Assessment Unit ID: NV06-TR-04_00
2. USGS 10350057 GROTON DIV TO S SIDE WINGFALL WITH GATE, NV
3. Truckee River Total Maximum Daily Load (TMDL's) and Waste Load Allocations, Nevada Division of Environmental Protection, February, 1994.
4. Truckee Meadows Structural Controls Design and Low Impact Development Manual (City of Reno, City of Sparks, and Washoe County, Nevada, April 2015)