## 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: Dodge Flat Solar \|| Project |  |  |  |
| Project Approximately 200-megawatt (MW) photovoltaic (PV) solar generation Description: facility, substation, energy storage facility, and switching station. |  |  |  |
| Project Address:2505 State Route 447, Washoe County, Nevada |  |  |  |
| Project Area (acres or square feet):Approximately 1,740 acres ( 1,041 acres private land and 699 acres BLM) |  |  |  |
| Project Location (with point of reference to major cross streets AND area locator): <br> Olinghouse Road, west of SR-447; Latitude/Longitude 39³9'31N / 119²0'53"W |  |  |  |
| Assessor's Parcel No.(s): | Parcel Acreage: | Assessor's Parcel No.(s): | Parcel Acreage: |
| Please refer to Attachment A |  |  |  |
| 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:Please refer to Attachment A |  | Name:Dudek |  |
| Address: |  | Address:605 Third Street, Encinitas, CA |  |
| Zip: |  | Zip:92024 |  |
| Phone: | Fax: | Phone: (971) 930-1705 | Fax: 606320164 |
| Email: |  | Email:jrigg@dudek.com |  |
| Cell: | Other: | Cell: (503) 956-1444 | Other: |
| Contact Person: |  | Contact Person:Jonathan Rigg |  |
| Applicant/Developer: |  | Other Persons to be Contacted: |  |
| Name:Dodge Flat Energy Center, LLC |  | Name: |  |
| Address:700 Universe Boulevard, Juno Beach, FL |  | Address: |  |
| Zip: 33408 |  | Zip: |  |
| Phone: (561) 691-7171 |  | Phone: | Fax: |
| Email:stuart.baird@nexteraenergy.com |  | Email: |  |
| Cell: (561) 354-8459 | Other: | Cell: | Other: |
| Contact Person:Stuart Baird |  | Contact Person: |  |
| For Office Use Only |  |  |  |
| Date Received: | Initial: | Planning Area: |  |
| County Commission District: |  | Master Plan Designation(s): |  |
| CAB(s): |  | Regulatory Zoning(s): |  |

## Special Use Permit Application <br> Supplemental Information

(All required information may be separately attached)

1. What is the project being requested?

Dodge Flat Solar II is a proposed 200-megawatt (MW) (approximate) photovoltaic solar generation facility, substation, switchyard, 200-MW energy storage facility, and operations and maintenance building. The proposed project is located adjacent to the existing Dodge Flat Solar Energy Center (DFSEC) in the Truckee Canyon Planning Area and, per the Truckee Canyon Regulatory Zone Map, is located entirely within a General Rural (GR) zone. Renewable generation facilities are allowed in the GR zone with the approval of a Special Use Permit.
2. Provide a site plan with all existing and proposed structures (e.g. new structures, roadway improvements, utilities, sanitation, water supply, drainage, parking, signs, etc.)

Please see the Site Plan attached to this application.
3. What is the intended phasing schedule for the construction and completion of the project?

The proposed project is intended to be constructed in a single phase.
4. What physical characteristics of your location and/or premises are especially suited to deal with the impacts and the intensity of your proposed use?

```
Solar generation is an ideal use for the subject properties. The topography is gently sloping, with an average slope of \(2 \%-3 \%\) for the proposed developed area, generally from west to east a portion of rugged and mountainous terrain at the northeast corner of the subject property has been excluded from the proposed development area, and is not be considered for development at this time). The project will be located adjacent to an existing solar generation facility, the DFSEC, and in close proximity to the Olinghouse Substation.
The property is located within an area that has a contiguous zoning of General Rural, and therefore does not conflict with any immediately adjacent current or allowed uses. There are no significant residential developments within the immediate vicinity, or within the general property view shed. The property is located close to SR-447, and is directly accessed via Olinghouse Road
```

5. What are the anticipated beneficial aspects or affects your project will have on adjacent properties and the community?

The Dodge Flat Solar II facility will provide a reliable local and regional source of power, producing around 465,000 megawatt-hours of clean, emissions-free power each year. Compared to Nevada's current average power emissions, this project will allow for the reduction of around 265,000 tons of carbon dioxide annually. By locating the project near a State Highway, and directly adjacent to existing transmission lines and Olinghouse Substation, the project can be built with minimal additional infrastructure, minimizing additional property impacts and emissions during construction.
6. What are the anticipated negative impacts or affect your project will have on adjacent properties? How will you mitigate these impacts?

> Surrounding lands include private lands including the DFSEC, public lands managed by the Bureau of Land Management (BLM), and lands within with Pyramid Lake Indian Reservation managed by the Pyramid Lake Tribal Council. All lands surrounding the study area are designated "Rural" within the Washoe County Master Plan (WCMP) (Washoe County 2012). In the Truckee Canyon Area Plan (TCAP), surrounding lands are currently assessed as "Undeveloped" (Public Lands), "Industrial" (Reservation), and other private lands include a mix of "Low Density Rural," "Medium Density Suburban," "Vacant-Minor Improvements Common Area," and "Agricultural" (Washoe County 2012). The construction of solar generation facilities is considered to be consistent with the existing land use and zoning, and is not anticipated to have any adverse impacts or effects on these neighboring properties.
7. Provide specific information on landscaping, parking, type of signs and lighting, and all other code requirements pertinent to the type of use being purposed. Show and indicate these requirements on submitted drawings with the application.
$\qquad$
8. Are there any restrictive covenants, recorded conditions, or deed restrictions (CC\&Rs) that apply to the area subject to the special use permit request? (If so, please attach a copy.)

| $\square$ Yes | ■ No |
| :--- | :--- |

9. Utilities:

| a. Sewer Service | No service available |
| :--- | :--- |
| b. Electrical Service | NV Energy, et al |
| c. Telephone Service | No service available |
| d. LPG or Natural Gas Service | No service available |
| e. Solid Waste Disposal Service | Washoe County Solid Waste Management |
| f. Cable Television Service | No service available |
| g. Water Service | No service available |

For most uses, Washoe County Code, Chapter 110, Article 422, Water and Sewer Resource Requirements, requires the dedication of water rights to Washoe County. Please indicate the type and quantity of water rights you have available should dedication be required.

| h. Permit \# | $85241,85242,85243$ (wells at existing DFSEC) | acre-feet per year | 800 otoal tor construction over 2 years, $\sim 1$ for oreeraion |
| :--- | :--- | :--- | :--- |
| i. Certificate \# |  | acre-feet per year |  |
| j. Surface Claim \# |  | acre-feet per year |  |
| k. Other \# |  | acre-feet per year |  |

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

## Dodge Flat Solar, LLC

10. Community Services (provided and nearest facility):

| a. Fire Station | Fernley Volunteer Fire Department, 165 E Main Street, Fernley, NV 89408 |
| :--- | :--- |
| b. Health Care Facility | Renown Medical Group, Fernley 1343 Newlands Drive, W Fernley, NV 89408 |
| c. Elementary School | Natchez Elementary School, 1 Hwy 447, Wadsworth, NV 89442 |
| d. Middle School | Fernley Intermediate School, 320 Hwy 95A South, Fernley, NV 89408 |
| e. High School | Fernley High School, 1300 US Highway 95A South, Fernley NV 89408 |
| f. Parks | In Town Skate Park, South Center St., Fernley, NV 89408 |
| g. Library | Fernley Branch Library, 575 Silver Lace Blvd, Fernley, NV 89408 |
| h. Citifare Bus Stop | Nearby Wadsworth and Fernley do not operate a city bus system |

## Special Use Permit Application for Grading <br> Supplemental Information <br> (All required information may be separately attached)

1. What is the purpose of the grading?

Because the proposed project site is fairly level, grading is expected to be minor in most instances. However, grading would occur throughout the site, especially for the construction of roads and inverter pads. This would be accomplished with scrapers, motor graders, water trucks, dozers, and compaction equipment (see attached grading plans).
2. How many cubic yards of material are you proposing to excavate on site?

## 59,060 (see attached Site Plan)

3. How many square feet of surface of the property are you disturbing?

It is anticipated that approximately 1,120 acres of the site will be disturbed to support
4. How many cubic yards of material are you exporting or importing? If none, how are you managing to balance the work on-site?

Import material will be needed for on-site substation, battery energy storage facility, interior access roads, and inverter pads. In total, 79,754 cubic yards of material would be imported for these components. (See attached Site Plan)
5. Is it possible to develop your property without surpassing the grading thresholds requiring a Special Use Permit? (Explain fully your answer.)

```
A Special Use Permit is required for the following: Grading projects excavating over 1,000 cubic yards; Importing more than 5,000 cubic yards of
fill; Disturbing more than 25,000 square feet; Placing more than 1,000 cubic yards of fill in a flood hazard area; Constructing a permanent earthen
structure over 4.5 feet high.
The project is anticipated to have approximately 59,060 cubic yards of cut and approximately 138,814 cubic yards of fill (see attached Site Plans)
```

6. Has any portion of the grading shown on the plan been done previously? (If yes, explain the circumstances, the year the work was done, and who completed the work.)

No previous grading has occurred at the project site.
7. Have you shown all areas on your site plan that are proposed to be disturbed by grading? (If no, explain your answer.)

[^0]8. Can the disturbed area be seen from off-site? If yes, from which directions and which properties or roadways?

The project site will be visible from sections of Highway 447 and Olinghouse Road located adjacent to the project site. The town of Wadsworth is the closest town to the project site and would not have views of the project site due to intervening topography.
9. Could neighboring properties also be served by the proposed access/grading requested (i.e. if you are creating a driveway, would it be used for access to additional neighboring properties)?

Access to the project site is readily available from Olinghouse Road, Stampmill Road and Canton Road that consists of an improved gravel road that is being maintained. No new access driveways are proposed that would result in new access to additional neighboring properties.
10. What is the slope (horizontal/vertical) of the cut and fill areas proposed to be? What methods will be used to prevent erosion until the revegetation is established?

Cut and fill areas are not anticipated to exceed $4: 1$ ratio. A stormwater pollution prevention plan (SWPPP) will be prepared to address stormwater quality during construction-related activities, and a design -level SQMP will be submitted to Washoe County at a later date as part of final grading permit approvals, in compliance with Article 421 of the Washoe County Development Code (Storm Water Discharge Program).
11. Are you planning any berms?

| Yes | No $X$ | If yes, how tall is the berm at its highest? |
| :--- | :--- | :--- |

12. If your property slopes and you are leveling a pad for a building, are retaining walls going to be required? If so, how high will the walls be and what is their construction (i.e. rockery, concrete, timber, manufactured block)?

No retaining walls are proposed for the project. The topography of the project site is
13. What are you proposing for visual mitigation of the work?

Due to the proposed use, zoning, and existing terrain, no visual mitigation has been proposed, and would not be appropriate for the solar generation facility.
14. Will the grading proposed require removal of any trees? If so, what species, how many and of what size?

The site was surveyed for vegetation and no trees were identified in the project area. Therefore, no trees will be removed.
15. What type of revegetation seed mix are you planning to use and how many pounds per acre do you intend to broadcast? Will you use mulch and, if so, what type?

A revegetation plan and associated seed mix is being prepared for review with Washoe Storey Conservation District and the BLM.
16. How are you providing temporary irrigation to the disturbed area?

Due to the proposed use, zoning, and existing terrain, no landscaping/irrigation has been proposed, and would not be appropriate for the solar generation facility.
17. Have you reviewed the revegetation plan with the Washoe Storey Conservation District? If yes, have you incorporated their suggestions?

A revegetation plan and associated seed mix is being prepared for review with Washoe Storey Conservation District and BLM.
18. Are there any restrictive covenants, recorded conditions, or deed restrictions (CC\&Rs) that may prohibit the requested grading?

| Yes | No $X$ | If yes, please attach a copy. |
| :--- | :--- | :--- |

## Special Use Permit Application for Stables Supplemental Information

(All required information may be separately attached)

1. What is the maximum number of horses to be boarded, both within stables and pastured?
$\square$
2. What is the maximum number of horses owned/maintained by the owner/operator of the project, both within stables and pastured?
$\square$
3. List any ancillary or additional uses proposed (e.g., tack and saddle sales, feed sales, veterinary services, etc.). Only those items that are requested may be permitted.
$\square$
4. If additional activities are proposed, including training, events, competition, trail rides, fox hunts, breaking, roping, etc., only those items that are requested may be permitted. Clearly describe the number of each of the above activities which may occur, how many times per year and the number of expected participants for each activity.
$\square$
5. What currently developed portions of the property or existing structures are going to be used with this permit?
$\square$
6. To what uses (e.g., restrooms, offices, managers living quarters, stable area, feed storage, etc.) will the barn be put and will the entire structure be allocated to those uses? (Provide floor plans with dimensions).
$\square$
7. Where are the living quarters for the operators of the stables and where will employees reside?
$\square$
8. How many improved parking spaces, both on-site and off-site, are available or will be provided? (Please indicate on site plan.) Have you provided for horse trailer turnarounds?
$\square$
9. What are the planned hours of operation?
$\square$
10. What improvements (e.g. new structures including the square footage, roadway/driveway improvements, utilities, sanitation, water supply, drainage, parking, signs, etc.) will have to be constructed or installed and what is the projected time frame for the completion of each?
$\square$
11. What is the intended phasing schedule for the construction and completion of the project?
$\square$
12. What physical characteristics of your location and/or premises are especially suited to deal with the impacts and the intensity of your proposed use?
$\square$
13. What are the anticipated beneficial aspects or affects your project will have on adjacent properties and the community?
$\square$
14. What are the adverse impacts upon the surrounding community (including traffic, noise, odors, dust, groundwater contamination, flies, rats, mice, etc.) and what will you do to minimize the anticipated negative impacts or effects your project will have on adjacent properties?
$\square$
15. Please describe operational parameters and/or voluntary conditions of approval to be imposed on the administrative permit to address community impacts.
$\square$
16. What types of landscaping (e.g. shrubs, trees, fencing, painting scheme, etc.) are proposed? (Please indicate location on site plan.)
$\square$
17. What type of signs and lighting will be provided? On a separate sheet, show a depiction (height, width, construction materials, colors, illumination methods, lighting intensity, base landscaping, etc.) of each sign and the typical lighting standards. (Please indicate location of signs and lights on site plan.)
$\square$
18. Are there any restrictive covenants, recorded conditions, or deed restrictions (CC\&Rs) that apply to the area subject to the administrative permit request? (If so, please attach a copy.)

| $\square$ Yes | $\square$ No |
| :--- | :--- |

19. Community Sewer

| $\square$ Yes | $\square$ No |
| :--- | :--- |

20. Community Water

| $\square$ Yes | $\square$ No |
| :--- | :--- |

## Attachment A

Dodge Flat II Solar Energy Project APNs

| APN | Ownership | Owner Name | Use | Parcel Acreage |
| :--- | :--- | :--- | :--- | :--- |
| 079-150-21 | BLM | United States of America | Solar Field | 20.00 |
| 079-150-20 | Private | Dodge Flat Energy Center, LLC | Solar Field | 80.00 |
| 079-150-19 | Private | The Fort Churchill Corporation | Solar Field | 80.00 |
| 079-150-17 | Private | Cowles 1982 Trust <br> Robert I. Cowles, Jr. <br> The Farnandez Trust <br> Virginia Vierra Trust | Solar Field | 301.20 |
| 079-180-14 | Private | Dodge Flat Solar, LLC | Solar Field | 38.09 |
| 079-150-45 | BLM | United States of America | Solar Field | 647.49 |
| 079-180-50 | Private | Cowles 1982 Trust <br> Robert I. Cowles, Jr. <br> The Farnandez Trust <br> Virginia Vierra Trust | Solar Field | 208.07 |
| 079-150-08 | Private | New Nevada Lands, LLC | Solar Field | 640.00 |
| 079-150-47 | BLM | United States of America | Solar Field | 283.58 |
| 079-150-07 | Private | Nathaniel Ray Johnson | Solar Field | 40.00 |
| 079-150-06 | BLM | United States of America | Solar Field | 80.00 |
| 079-150-04 | Private | Douglas \& Denise Larned Family Trust | Solar Field | 80.00 |
| 079-150-02 | Private | Jeremy James Hice | Solar Field | 40.00 |
| $079-150-01$ | Private | Elizabeth Heyer Charitable Trust | Solar Field | 40.00 |
| 084-040-07 | BLM | United States of America | Solar Field | 651.31 |
| $079-150-58$ | Private | Dodge Flat Solar, LLC | Gen-tie | 592.20 |

Please refer to Appendix A of the Preliminary Plan of Development (Attachment C) for figures/maps of the Proposed Project.

# Project Description Dodge Flat Solar II Project 

NOVEMBER 2023
Submitted by:
Dodge Flat Solar, LLC
700 Universe Boulevard
Juno Beach, Florida 33408

## Table of Contents

## SECTION

PAGE NO.
Acronyms and Abbreviations ..... iv
1 Introduction ..... 1
1.1 Description of Facility ..... 1
1.2 General Facility Description, Design, and Operation ..... 2
1.2.1 Project Location, Land Ownership, and Jurisdiction ..... 2
1.2.2 Legal Land Description of Facility .....
1.2.3 Facility Location and Components ..... 4
1.2.4 Temporary Construction Workspace, Yards, and Staging Areas ..... 8
1.2.5 Geotechnical Studies, Pile Testing, and Data Needs ..... 9
1.2.6 Erosion Control and Stormwater Drainage ..... 9
1.2.7 Vegetation Treatment and Weed Management ..... 9
1.2.8 Health and Safety Plan ..... 10
2 Construction of Facilities ..... 11
2.1 Construction Process and Schedule ..... 11
2.1.1 Construction Process ..... 11
2.1.2 Construction and Operation Transportation Needs ..... 12
2.1.3 Civil Works Description ..... 12
2.1.4 Gen-Tie Line ..... 14
2.1.5 Gravel, Aggregate, and Concrete Needs and Sources ..... 14
2.1.6 Water Use ..... 14
2.1.7 Waste and Hazardous Materials Management ..... 14
2.1.8 Cleanup and Site Reclamation ..... 15
3 Related Facilities and Systems ..... 17
3.1 Transmission System Interconnect ..... 17
3.1.1 Ancillary Facilities and Substations ..... 17
3.1.2 Status of Power Purchase Agreement ..... 17
3.1.3 Status of Interconnection Agreement ..... 17
3.2 Other Related Systems ..... 18
3.2.1 Communications System Requirements ..... 18
4 Operations and Maintenance ..... 20
4.1 Operations Staff and Vehicles ..... 20
4.2 Operations and Maintenance Activities ..... 20
4.3 Water Use and Waste Management ..... 21
4.3.1 Water Use ..... 21
4.4 Waste and Hazardous Materials Management ..... 21
4.4.1 Solid and Non-Hazardous Waste ..... 21
4.4.2 Hazardous Chemicals ..... 22
4.4.3 Hazardous Solid and Liquid Wastes ..... 22
5 References ..... 25
FIGURES
Figure 1, Proposed Lands Under Consideration ..... 28
Figure 2, Proposed Lands with PLSS Overlay ..... 29
APPENDIX
A Figures

INTENTIONALLY LEFT BLANK

## Acronyms and Abbreviations

| Acronym/Abbreviation | Definition |
| :--- | :--- |
| AC | Alternating Current |
| Applicant | Dodge Flat II Solar, LLC |
| BESS | Battery Energy Storage System |
| DC | U.S. Bureau of Land Management |
| DFSEC | Direct Current |
| FLPMA | Dodge Flat Solar Energy Center |
| gen-tie line | Federal Land Policy Management Act |
| kV | generation tie line |
| MW | kilovolt |
| NEER | megawatt |
| NEPA | NextEra Energy Resources, LLC |
| Solar PEIS | National Environmental Policy Act |
| Solar PEIS ROD | Programmatic Environmental Impact Statement for Solar Energy Development in <br> Six Southwestern States |
| POD | Approved Resource Management Plan Amendments/Record of Decision for <br> Solar Energy Development in Six Southwestern States |
| Project | Plan of Development |
| PV | Dodge Flat II Solar Energy Center Project |
| ROD | photovoltaic |
| ROW | Record of Decision |

INTENTIONALLY LEFT BLANK

## 1 Introduction

The Dodge Flat Solar II Project (Project) is a photovoltaic (PV) electricity-generating facility that is composed of arrays of single-axis tracking solar panels, a Battery Energy Storage System (BESS), and associated ancillary facilities (e.g., collection lines and inverters). The Project is proposed by Dodge Flat Energy Center, LLC (Applicant). The Project will have a nameplate capacity of up to 200 megawatts. An interconnection to the electrical grid will be accomplished via a new on-site substation and interconnection to the Nevada Energy 345-kilovolt (kV) Olinghouse Substation, which was recently constructed and in-serviced as a part of the Applicant's adjacent Dodge Flat Solar Energy Center (DFSEC) Project. The Applicant proposes to construct, operate, and decommission the PV electricity-generating facility for an anticipated 30-year operational life of the Project pursuant to a Title V Federal Lands Policy and Management Act of 1976 ROW from BLM.

Consistent with the SF299 application filed with BLM in November 2020, the Project as described in this Project Description (PD) is a solar facility with associated linear features on approximately 699 acres of BLM-managed lands. At this time, the Applicant is considering up to approximately 1,041 acres of private lands to support the Project (Figure 1, Proposed Project Lands under Consideration; all figures can be found in Appendix A).

### 1.1 Description of Facility

The Project would use a single-axis tracking system and may use various PV technologies, including, but not limited to, crystalline silicon panels, cadmium telluride panels, bifacial panels, or copper indium gallium selenide panels. The nameplate capacity of the entire facility would be up to 200 megawatts and could be constructed in phases. In addition to the PV facilities, the project will construct and operate a 200MW-4hr battery storage system co-located with a Project-specific substation. The Project would produce approximately 564,791 megawatt hours a year of clean, renewable energy.

The technologies that would be used at the Project have been proven at many solar facilities in the United States and globally.

The Applicant intends to construct, operate, and decommission the following components associated with the PV facility:

- Main generation area-PV arrays, inverters, collection system, and access ways
- Alternating current (AC)coupled BESS
- Collector system
- Internal roads
- Project substation
- Access roads
- Generation tie line (gen-tie line)
- Meteorological station
- Site security, fencing, and lighting


### 1.2 General Facility Description, Design, and Operation

### 1.2.1 Project Location, Land Ownership, and Jurisdiction

The Project is located on federal lands administered by BLM and adjacent private lands and is located in Washoe County, Nevada. Federal lands administered by BLM are within the jurisdiction of the BLM Carson City District Office and Sierra Front Field Office.

Section 1.4.2, Legal Land Description of Facility, provides the legal land descriptions for these federal lands that would be used by the proposed solar site, and Appendix A contains a map of the Project overlaid on the public lands survey system.

The Project site is overall located in a solar variance area as identified in the Solar PEIS, with small portions excluded for being over the $5 \%$ slope criteria, for which BLM would need to consider a land use plan amendment to allow for solar development.

As noted within the Solar PEIS, the variance process was designed to accommodate variances based on "market, technological, or site-specific factors that make a project appropriate in a non-SEZ [solar energy zone] area" (BLM and DOE 2012).

The factors to be considered by BLM to proceed with processing the Project application within a solar variance area are as follows:

- The proposed action would be in conformance with the current land use plan
- The proposed action would be consistent with regional level conservation, restoration, and/or adaptation objectives
- The proposed action can meet the applicable programmatic design features adopted in the Solar PEIS ROD
- The proposed action will minimize the need to build new roads


### 1.2.2 Legal Land Description of Facility

The SF299 application area is approximately 1,740 acres in Washoe County, Nevada, of which 699 acres would be on BLM-administered lands and 1,041 acres would be on private lands. See Figure 2 for the location of the Project site overlaid with the Public Land Survey System.

The Project is found on the Wadsworth, Nevada, U.S. Geological Survey 7.5-topographic quadrangle at approximately latitude/longitude $39^{\circ} 39^{\prime} 31^{\prime \prime} \mathrm{N}, 119^{\circ} 20^{\prime} 53^{\prime \prime} \mathrm{W}$. The Project site is located west of the intersection of State Route 447 and Olinghouse Road, approximately 3.5 miles northeast of the town of Wadsworth, in unincorporated Washoe County, Nevada. The legal land description for the solar facility and gen-tie line on portions of BLM-administered public lands and private lands is as follows. ${ }^{1}$

[^1]
### 1.2.2.1 Solar Site

Mount Diablo Meridian

## Public Lands:

T. 20 N., R. 23 E.

Sec. 01, L1, L5
T. 20 N., R. 24 E.

Sec. 06, L11, L12, L13, L14, L15, L16, L17, L18
T. 21 N., R. 23 E.

Sec. 24, NWNW, SWNW, NWSW
Sec. 25, SWSW
Sec. 26, L1, L2, L3, L7, L8, L9 L15, L16
Sec. 35, NWNE, NENE, SENE
Sec. 36, NESW, NENW, SENW, NENE, NWNE, NESE, NWSE, L1, L2, L3, L4, L5, L6, L7

Private Lands:
T. 21 N., R. 23 E.

Sec. 13, L4, L13
Sec. 23, NESE, SESE
Sec. 24, NENW, NESE, NESW, NWNE, NWNW, NWSE, NWSW, SENW, SESE, SESW, SWNE, SWNW, SWSE, SWSW, L1, L2, L3
Sec. 25, NENE, NENW, NESE, NWNE, SENE, SESE
Sec. 35, NENE, NENW, NWNE, NWNW, SENE, SWNE
Sec. 36, NENE, NENW, NESE, NESW, NWNE, NWSE, SENE, SWNE, L5, L6
T. 21 N., R. 24 E

Sec. 19, L1, L10, L17, L18
Sec. 30, L1, L2, L3, L4, L5, L6, L12, L13, L17, L18
Sec. 31, L1
The areas described aggregate to approximately 1,740 acres.
1.2.2.2 Gen-tie Line

Mount Diablo Meridian

Private Lands:
T. 21 N., R. 23 E.

Sec. 23, SWNE, NESE, NENE, SENW, SENE, SWNE

The Project would be located adjacent/contiguous to the Applicant's DFSEC project on private land. Additionally, where feasible, the Project would use existing ROWs authorized by BLM in the 2019 Decision Record for the Dodge Flat Utility and Road Crossing Project (Case file number N-96241, Environmental Assessment DOI-BLM-NV-CO2O-2019-0017-EA) to support construction, operation, and decommissioning associated with the Project.

### 1.2.3 Facility Location and Components

The Project is found on the Wadsworth, Nevada, U.S. Geological Survey 7.5-topographic quadrangle at approximately latitude/longitude $39^{\circ} 39^{\prime} 31^{\prime \prime} \mathrm{N}, 119^{\circ} 20^{\prime} 53^{\prime \prime} \mathrm{W}$. The Project site is located west of the intersection of State Route 447 and Olinghouse Road, approximately 3.5 miles northeast of the town of Wadsworth, in unincorporated Washoe County, Nevada.

The Project facilities would be located on private and BLM-administered lands in Washoe County, Nevada, and would encompass approximately 1,740 acres.

All road improvements and any needed gen-tie lines would also be located on BLM land within the overall study area.
The Project facility would interconnect to the Olinghouse Substation, located in the adjacent DFSEC site. A 345 kV gen-tie line (approximately 1.3 miles long) would be constructed from the Project substation to the adjacent DFSEC site and its Olinghouse Substation to the west.

The Project would consist of three major types of facilities: PV solar arrays (the main Project footprint), energy storage facilities (batteries), and linear facilities. Each of these components is explained in detail in the following sections.

Linear facilities would be developed externally from the main power plant footprint. These linear facilities may include the following:

- Main access road
- On-site auxiliary roads connecting the discontinuous project sub-areas
- A 345 kV gen-tie line to carry electricity to the Olinghouse Substation
- Distribution power for buildings and backup for control systems
- Communications cables or lines

The PV panel array facilities would be located on a majority of the Project area. The entire power plant facility footprint would be enclosed by fences. The Project facilities would include the following major components or systems:

- PV modules/arrays
- Solar trackers or fixed support structures
- Direct current (DC) or AC collection cable and combiner or switch boxes
- Solar power inverters and medium-voltage transformers
- An energy storage (batteries) system with capacity not exceeding the final solar Project capacity
- Electrical collection system ( 34.5 kV lines)
- Main step-up transformers and high-voltage electrical equipment in the on-site substation
- Gen-tie line connecting into Olinghouse Substation

The full preliminary layout will be provided as a figure in Appendix A when developed.

### 1.2.3.1 PV Modules/Arrays

The Project would use state-of-the-art PV technology by which the sun's light energy is converted directly into DC electrical energy within the PV panels, referred to as "modules." The PV modules can be mounted together in different configurations, depending on the equipment selected and on a common support framework.

The modules are grouped together in solar arrays. The size of the array is based on the capacity of the equipment selected and is intended to generate the desired overall voltage and current output. Current technology panels are approximately 6.5 feet ( 78.2 inches) high by 3.25 feet ( 39.1 inches) wide and are installed on a racking system with support piles driven into the ground (see Section 1.4.3.2, Solar Trackers and/or Fixed Support Structures). Options for both a tracker that uses one module in portrait format or two modules in portrait exist, with the former being favored. For maximum efficiency, panels are typically installed between 16 and 24 inches off the ground when at their lowest point, which would result in a maximum height of 8.5 feet from ground level if a single portrait module is used, or 12.5 feet if a dual portrait module is used. However, engineering constraints may require an increase in height for some panels; therefore, for analysis purposes we have assumed that panels may be approximately 10-14 feet to the top from ground level once installed. Based on the current conceptual design, each solar array is intended to produce a net power output of approximately 4 megawatts (MW; as AC) as described in Section 1.4.3.3, Electrical Collection System. The overall capacity of the conceptual Project design (approximately 0.14-0.16 megawatts per acre) is achieved with sufficient AC arrays to deliver 200 MW at the point of interconnection. Because solar energy technologies continue to evolve at a rapid rate, the exact arrangement and nature of the PV systems would be determined during the final design, and appropriate updates would be made to this POD prior to construction.

### 1.2.3.2 Solar Trackers and/or Fixed Support Structures

There are different types of mounting structures for the modules, depending on whether the modules would be fixed in one position or track the sun's position during the day. A solar tracking mechanism is used to maximize the solar energy conversion efficiency by keeping the modules perpendicular to the sun's energy rays throughout the day. This completed assembly of PV modules mounted on a framework structure is called a "tracker," as it tracks the sun from east to west. The PV module rows would be oriented north-south based on the mounting structure design; however, exact module support structure types would be determined during the final Project design. The single-axis tracker configuration is more complicated and is discussed in more detail below. A fixed support structure is also possible. For the purposes of this application, the fixed structure would orient the panels in a permanent position facing south at a certain angle to optimize production throughout the year without any mechanical movement or drive motors.

At this time, there are two types of tracker systems that may be selected for the Project: a ganged tracker system or a standalone tracker system. A ganged tracker system uses one actuator to control multiple rows of PV modules through a series of mechanical linkages and/or gearboxes. A standalone tracker system uses a single actuator for each row of PV modules. The exact tracker manufacturer and model would be determined in the final design. All trackers are intended to function the same in terms of following the position of the sun.

Module layout and spacing is optimized to balance energy production vs. peak capacity and would depend on the sun's angle and shading caused by the horizon surrounding the Project. The spacing between the rows of trackers is dependent on site-specific features and tracker selection. Spacing would be identified in the final design.

### 1.2.3.3 Electrical Collection System

PV modules generate a low-voltage DC electrical output that is not suitable for direct connection to the AC utility grid used in the United States. The electrical collection system would be designed to convert the output power from the PV modules from DC to AC, transform the power from low voltage to transmission-level voltage for connection to the grid, and supply auxiliary power to the tracker systems. The DC output from the PV arrays would be transmitted to inverters through a combination of aboveground and underground DC electrical cables. As currently configured, the Project would use about 53 power inverter packages to accomplish the DC-to-AC power conversion process. The number of modules connected to each inverter is dependent on the specific model of modules, inverters, and their capacities, which would be selected in the final design. To allow for greater electrical production in off-peak hours and an overall increase in power production, the DC quantity would exceed the AC plant rating in the range of $25 \%$ to $40 \%$. The resulting AC current from each individual inverter package would then be routed through cable or solid busbars to the adjacent medium-voltage step-up transformer. The output voltage from each inverter would be increased to the desired substation feed voltage ( 34.5 kV ) by these step-up transformers. From the inverter pads, the collected 34.5 kV of AC power would be delivered to the on-site Project substation.

Each subarea would be connected using underground 34.5 kV collection lines parallel and adjacent to the subarea access roads. Electrical collection lines would likely be installed within the access road corridor, using direct bury methods, although conduit could be used in some situations. It is anticipated that during the phased construction a temporary disturbance width of approximately 150 feet would be needed for the subarea access roads and 34.5 kV collection lines. Once complete, the temporary 150 -foot-wide disturbance corridor would be restored, leaving only the 20 -foot-wide subarea access road as permanent disturbance.

### 1.2.3.4 Energy Storage System

The Project would use an energy storage system (batteries) that would have a capacity no larger than the solar facility (approximately 200 MW ) and would be connected using either an AC- or DC-coupled system. Selection of an AC- or DC-coupled system is ultimately determined through off-taker preference and contract terms.

The AC-coupled system would be connected to a bidirectional inverter to convert DC energy to AC energy, allowing for energy to flow in or out of the batteries to provide charge and discharge. This AC energy would be coupled to the PV array at the 34.5 kV busbars. Power switches and relays would protect the system. The system would consist of several housing units, similar to shipping containers. The containers would be placed on concrete pads and would occupy up to 30 acres, depending on the size of the system contracted and technology selected. The equipment enclosures and buildings would be located next to the on-site substation and operations and maintenance building.

If a DC-coupled system is used, battery units would be stored in numerous smaller containers. Those containers would make use of the solar inverters, feeding them in DC power. Therefore, the battery containers would be distributed throughout the solar arrays, adjacent to their respective inverters. The containers would be similar in size (20-40 feet long) to the solar inverter skids. The battery and solar inputs would be metered separately prior to signal inversion. The charge and discharge of the DC-coupled batteries would be controlled by signal from the inverters. As is typical for the industry, inverters would be controlled by a central control system. The protections to the batteries would be internal to the battery management systems and control boxes located within the containers and inverters.

A battery supplier has not been selected at this time due to changing markets; however, past suppliers have included LG Chem, Samsung, BMW, Tesla, and Lishen. Inverter suppliers would likely include ABB, Parker Hannifin, S\&C Electric,

Eaton, Princeton Power, DynaPower, Power Electronics, and Ideal Power. The final battery supplier(s) would be selected prior to Project construction and would be subject to an industry-standard prequalification process.

### 1.2.3.5 Step-Up Transformation/On-Site Substation

The AC current would leave the step-up transformers via underground 34.5 kV lateral lines that may be routed into overhead electrical feeder lines. The feeder lines would be supported by multiple-circuit 34.5 kV poles and would dead-end at the on-site Project substation. The Project substation would occupy approximately 5 acres within the Project area. The Project substation would consist of parallel sets of internal power distribution systems (i.e., 34.5 kV buses and circuit breakers, disconnect switches, and main step-up transformer) to increase the voltage to the 230 kV substation and transmission line voltage. The Project substation and interconnections would be built for 230 kV and would operate at that nominal voltage.

### 1.2.3.6 Interconnection to the Olinghouse Substation

The Project would utilize a new, approximately 1.3 -mile-long 345 kV gen-tie line to connect to the existing Olinghouse Substation, which connects to the electrical grid. Pole types are unknown at this time and would be determined as site design progresses.

### 1.2.3.7 Roads and Access

Primary access to the Project would be along Olinghouse Road from State Route 447, the same access used for the DFSEC project. Depending on the lands selected for the Project, multiple access roads off Olinghouse Road may be needed to access solar components. Primary Project access road(s) would typically be 24 feet wide and composed of either 6 inches of type II class B aggregate base compacted to $95 \%$ maximum dry density or asphalt concrete. The Applicant also proposes to use the auxiliary access road that was approved for the DFSEC project, as needed.

Internal access roads to the on-site substation, switching station, and energy storage system would consist of 20 -foot-wide roads with compacted gravel or dirt. Internal maintenance pathways between solar modules would be 16 feet wide.

### 1.2.3.8 Plant Auxiliary Systems

Plant auxiliary systems would be designed to control, protect, and support the Project and its operation. These systems include the lighting system and the fire protection system, as described below.

## Lighting System

Low-elevation (less than 14 -foot) controlled security lighting would be installed at primary access gates, the on-site substation, and the entrance to the energy storage structure(s). The lighting is only switched on when personnel enter the area (either motion sensor or manual activation [i.e., switch]). All safety and emergency service signs would be lit when the lights are on. The lighting would be shielded so that the light is directed downwards. Electrical power to supply the access gate and lighting would be obtained from Nevada Energy. Lighting would only be in areas where it is required for safety, security, or operations. All lighting would be directed on site and would include shielding as necessary to minimize illumination of the night sky or potential impacts to surrounding viewers.

## Fire Protection

Fire protection would be necessary for the Project during Project construction and operations. During construction activities, a water truck or other portable trailer-mounted water tank would be kept on site and available to workers for use in extinguishing small human-made fires.

All vehicles working on site would also carry a portable fire extinguisher.
Project operations would typically have a low risk of introducing fires because the majority of the materials within the solar arrays are noncombustible (aluminum, steel, or glass) and vegetation is removed or cut short to maintain sufficient distance from vehicles and equipment to avoid starting fires. The fire protection systems for the Project operations would include portable water tanks (Buffalos) and portable fire extinguishers.

Additional emergency response would be provided externally by local municipalities, if required. The Applicant would develop a Fire Management Plan in consultation with BLM. This plan would be approved by BLM and become part of the authorization for operations at the Project.

### 1.2.4 Temporary Construction Workspace, Yards, and Staging Areas

A temporary staging area for construction laydown and parking would be established within the Project area. Temporary staging areas would include fenced parking, covered trash disposal facilities, construction trailers, a laydown area, and sufficient portable toilets and potable water for use by the construction staff. Mobile trailers, modular offices, or an equivalent would be used as construction offices for NextEra Energy Resources, LLC (NEER) and subcontractor personnel. During construction, temporary utilities would be provided for the construction offices, laydown area, and Project area. Prior to the availability of permanent distribution power, temporary construction power would be provided by Valley Electric Association or would come from temporary diesel generators located in the staging area. Temporary lighting would be provided and strategically located to ensure safety and security of the construction area.

Each subarea would be connected using underground 34.5 kV collection lines parallel and adjacent to the subarea access roads. Electrical collection lines would likely be installed within the access road corridor, using direct bury methods, although conduit could be used in some situations. It is anticipated that construction would require a temporary disturbance width of approximately 150 feet for the subarea access roads and 34.5 kV collection lines. Once complete, the temporary 150-foot-wide disturbance corridor would be restored, leaving only the 20-foot-wide subarea access road as permanent disturbance.

The following site services would be provided by the Applicant or its contractors:

- Environmental, health, and safety training
- Site security
- Site first-aid station
- Construction and testing
- Site fire protection and extinguisher maintenance
- Furnishing and servicing of sanitary facilities
- Trash collection and disposal
- Disposal of hazardous materials and waste in accordance with local, state, and federal regulations

Construction materials such as concrete, pipe, wire and cable, fuels, reinforcing steel, small tools, and consumables would be delivered to the site by truck as needed. Access to the Project construction site would be controlled for personnel and vehicles. The fence that would protect the site after full build-out would be installed after grading is complete but before large components are brought onto the site for assembly and installation. During the initial grading, equipment would be stored overnight and during weekends and holidays in a secure, fenced, and gated equipment storage area within the future footprint of the solar field. This area would be moved periodically to allow for completion of grading across the site.

All temporary disturbance areas would be restored in accordance with the BLM-approved Site Restoration and Revegetation Plan.

### 1.2.5 Geotechnical Studies, Pile Testing, and Data Needs

To determine soil and geology suitability, a geotechnical analysis is needed prior to commencing detailed engineering design for the Project. Geotechnical investigations would be performed to identify subsurface conditions, which would dictate much of the design specifications of the roads, underground trenching, and electrical grounding systems as well as the structural design, racking, substation, and t-line structures. Testing also would be completed to measure the soil's electrical properties to ensure proper grounding system design. The specific geotechnical testing locations would be determined closer to final Project engineering design.

### 1.2.6 Erosion Control and Stormwater Drainage

Erosion would be controlled during construction by implementing a Stormwater Pollution Prevention Plan, as required by the Nevada Division of Environmental Protection, Bureau of Water Pollution Control, and Washoe County for projects disturbing more than 1 acre.

### 1.2.7 Vegetation Treatment and Weed Management

A Site Restoration and Revegetation Plan and an Invasive Plant Species and Noxious Weed Management Plan would be finalized prior to receiving a notice to proceed from BLM. The plans would include approved mitigations and best management practices. Infestations of non-native and invasive species would be treated in accordance with the Invasive Plant Species and Noxious Weed Management Plan. If needed, only BLM-approved herbicides would be used within the Project area (BLM 2016). Any use of specific herbicides would be outlined in the Invasive Plant Species and Noxious Weed Management Plan and approved by BLM through the Pesticide Use Proposal in the Pesticide Management Plan.

Traditional site preparation method was originally considered as the site preparation technique for the entire Project. Site preparation under this method would be completed using "disk and roll," which includes complete removal of vegetation and the compaction of the soil surface across the entire Project site. This method is currently the industry standard for utility-scale solar development in the region and would result in the loss of all vegetation within the solar field and the compaction of soils. While this method is standard practice for industry and provides a simpler way to construct, the Applicant has developed a less invasive approach for the proposed
action called "mow-and-go", which maintains critical construction processes, reduces impacts to vegetation and soils, improves restoration potential, supports a safe work environment, and maintains project economics. The "mow-and-go" method has been implemented at other utility-scale projects and has been shown to be successful.

### 1.2.8 Health and Safety Plan

A Health and Safety Plan would be developed prior to receiving the notice to proceed from BLM and commencement of construction of the Project. The Health and Safety Plan would be implemented during construction of the Project and would include written safety programs and procedures, a hearing conservation program, a respiratory protection program, fall protection procedures, hot work procedures, heavy equipment procedures, and others. An Emergency Response Plan would designate responsibilities and actions to be taken in the event of an emergency during construction of the Project.

## 2 Construction of Facilities

The Applicant plans to select a qualified engineering, procurement, and construction contractor for the construction of the Project. The construction team would mobilize as soon as possible after Project approval and issuance of a notice to proceed from BLM. Site access would be controlled for personnel and vehicles. A security fence would be installed around the plant site boundary, including the laydown area. Security would be maintained as required by the engineering, procurement, and construction contractor or a suitable subcontractor to maintain public safety.

### 2.1 Construction Process and Schedule

The solar field on federal lands managed by BLM would cover approximately 699 acres of the Project area (see Appendix A, Figure 1). For the acreage, general dimensions, and a description of the Project on BLM-managed lands, refer to Section 1.4, General Facility Description, Design, and Operation.

### 2.1.1 Construction Process

The following subsections describe civil/structural features of the Project. The Project would be designed in accordance with the latest edition of the International Building Code, state and local requirements, and applicable wind and seismic criteria for the Project location. The engineering, procurement, and construction of the Project would be performed under multiple contracts. Project construction would be undertaken in a sequential approach in accordance with a Construction Plan, which would be developed and finalized prior to the start of construction in conjunction with the selected contractors. As discussed in Section 1.4.4, Temporary Construction Workspace, Yards, and Staging Areas, temporary construction laydown and parking areas would be included in the Project area. With the exception of linear facilities, construction laydown would remain within the overall Project footprint.

### 2.1.1.1 Construction Schedule, Personnel, and Equipment

Preconstruction activities are anticipated to commence during the third quarter of 2024 and continue through the fourth quarter of 2024. The Project is intended to be constructed in a single phase; however, it may be developed in multiple phases depending on pending power purchase agreements. The total construction duration, assuming a single phase, is planned to take no more than 18 months from notice to proceed to final connection and commissioning. If multiple phases are constructed, total construction length would be extended. It is anticipated that the work would be completed in 8 - to 10 -hour shifts, with a total of five shifts per week (Monday-Friday). Overtime and weekend work would be used only as necessary to meet scheduled milestones or accelerate schedule and would comply with all applicable Nevada labor laws.

During Project construction, the construction workforce would largely be recruited from within Washoe County or adjacent counties. Certain non-local specialty trade workers supporting proprietary plant equipment, components, and construction processes may also be employed on a short-term basis during construction.

The on-site workforce would consist of laborers, craftsmen, supervisory personnel, supply personnel, and construction management personnel. The on-site workforce is expected to reach its peak of approximately 500 individuals with an average construction-related on-site workforce of 200-300 individuals, which is in addition to any cultural, biological, and/or tribal monitors required on site.

Generally, construction work schedules are expected to be 10 hours per day 5 days a week. Typically, the workday would consist of shifts beginning as early as 5:00 a.m. and ending as late as 7:00 p.m. The work schedule may be modified throughout the year to account for the changing weather conditions. For instance, during hot weather, it may be necessary to start work earlierto avoid pouring concrete during high ambient temperatures or for the health safety of workers. Additional hours or nighttime work may be necessary to make up schedule deficiencies, or to complete critical construction activities (e.g., PV block construction, foundation pouring, component installation, testing, or working around time-critical shutdowns and constraints). During the startup phase of the Project, some activities might be performed over the weekend.

### 2.1.2 Construction and Operation Transportation Needs

Access to the site for construction and operations would be via Olinghouse Road.
For a 200 MW project, the peak daily construction employees would be approximately 500 daily. In addition to the 500 maximum daily workers traveling to the site, there would be up to 116 truck trips per day at peak construction activity (when trenching and system installation phases overlap). A total of up to 616 trips per day are anticipated during peak construction activities, assuming a worst-case scenario whereby no carpooling occurs, though it is likely that carpooling would occur.

Delivery of materials and supplies would reach the site via on-road truck delivery via State Route 447 and the Project access road. The majority of the truck deliveries would be for the PV system installation and any aggregate material that may be required for road base.

The heaviest delivery loads to the site would consist of the panels, tracker structures, rock truck deliveries, and the generator step up. These loads would typically be limited to a total weight of 80,000 pounds, with a cargo load of approximately 25 tons or 50,000 pounds of rock or tracker structures. The generator step up could be up to 160,000 pounds. Typically, the rock is delivered in "bottom dump trucks" or "transfer trucks" with six axles, and the tracker structures would be delivered on traditional flatbed trucks with a minimum of five axles. Low-bed transport trucks would transport the construction equipment to the site as needed. The size of the low-bed truck (number of axles for weight distribution) would depend on the equipment transported.

Truck and worker vehicle traffic would be managed according to a Construction Traffic Control Plan to be prepared by the engineering, procurement, and construction contractor and in coordination with the Nevada Department of Transportation.

### 2.1.3 Civil Works Description

### 2.1.3.1 Site Preparation, Surveying, and Staking

Prior to the commencement of construction, a land surveyor would obtain or calculate benchmark data, grades, and alignment from plan information and provide control staking to establish the alignments, benchmarks, and elevations. Surveying would be completed by a surveyor licensed to perform work in the State of Nevada. The detailed design documents would furnish data for the horizontal and vertical control points and horizontal alignments, profiles, and elevations. During construction, the surveyor would reestablish and set additional control points to maintain the horizontal and vertical control points as needed. Construction signage and flagging would follow the procedures outlined in the Signage and Flagging Plan.

### 2.1.3.2 Site Preparation, Vegetation Removal and Treatment, Clearing, and Grading

It is the Applicant's goal to minimize removal of vegetation and disturbance of the existing soil surface where feasible.
Because the Project site is fairly level, grading is expected to be minor in most instances. However, grading would occur throughout the site, especially for the construction of roads and inverter pads. This would be accomplished with scrapers, motor graders, water trucks, dozers, and compaction equipment. The PV modules would be offloaded and installed using small cranes, boom trucks, forklifts, rubber-tired loaders, rubber-tired backhoes, and other small- to medium-sized construction equipment, as needed. Construction equipment would be delivered to the site on low-bed trucks unless the equipment can be driven to the site (for example, the boom trucks).

Vegetation on the site would be modified only where necessary. Vegetation would be removed where gravel roads would be constructed, where fill would be placed from grading operations, where buildings would be constructed, and where transmission pole and tracker foundations would be installed (if necessary). At locations where transmission pole and tracker foundations would be installed, minor cuts may be required where the foundations would be driven. Minor earth work would also occur to install aggregate base access roads and transmission line maintenance roads. The surface of the roads would be at grade to allow any water to sheet flow across the site as it currently does. Throughout the remainder of the developed area on the solar and energy storage site, the vegetation root mass would generally be left in place to help maintain existing drainage patterns on a micro level, and to assist in erosion control. During construction of the solar and energy storage facility, it is expected that most of the vegetation would be cut, trimmed, or flattened as necessary, but otherwise undisturbed so that reestablishment is possible.

### 2.1.3.3 Major Equipment Installation

Construction of the tracker/mounting assemblies may be conducted in a single area, and then the assemblies would be transported to the proper location and placed on the pre-installed supports. Alternatively, the array assembly may occur at the installation point. Final assembly typically involves tractors and forklifts to place the tracker/mounts onto the support structures. During this work, there would be multiple crews working the site with vehicles, including special vehicles for transporting the arrays.

The tracker/mount installations would be constructed using driven steel posts or possibly concrete foundations if required. As the solar arrays are installed, the balance of the plant would be constructed concurrently. Within the solar fields, the electrical and instrumentation/control wiring would be installed in underground trenches. The wiring would be run to the location of the solar field controls, and the circuits would be checked.

Each subarea would be connected using underground 34.5 kV collection lines parallel and adjacent to the subarea access roads. Electrical collection lines would likely be installed within the access road corridor, using direct bury methods, although conduit could be used in some situations. It is anticipated that construction will require temporary disturbance for the subarea access roads $/ 34.5 \mathrm{kV}$ collection lines.

The construction of the Project substation would begin early in the construction process. Heavy foundations and equipment pads would be constructed using trenching machines, compactors, concrete trucks and pumpers, vibrators, forklifts, boom trucks, and large cranes. Similar to site grading and excavation, appropriate dust abatement measures would be identified in a Fugitive Dust Control Plan.

### 2.1.4 Gen-Tie Line

The gen-tie line would be constructed from the on-site Project substation and continue east into the adjacent DFSEC site, and would interconnect at the DFSEC's Olinghouse Substation. The proposed gen-tie line ROW would be approximately 120 feet wide and 1.3 miles long. The overhead 345 kV gen-tie line would be constructed on stand alone, single, or double circuit structures standing approximately 100 to 120 feet in height.

### 2.1.5 Gravel, Aggregate, and Concrete Needs and Sources

Minimal concrete would be required for construction of the foundations, equipment pads, and other facilities. The site will have a contained concrete washout. The primary material required for construction is gravel and aggregate for road construction. Concrete would be supplied from commercially available sources produced in the nearby communities, most likely Fernley, Sparks, or Reno. Temporary batch-plant activities are not expected to occur on site.

### 2.1.6 Water Use

Water consumption during construction would be utilized for dust suppression and earthwork over an approximately 24 -month period. Construction water would be provided by on-site groundwater through up to three improved existing wells, a new well permitted and drilled (if necessary), or water trucks could be used to deliver water from a local purveyor. An on-site diesel generator may be used to power pumps for well water use during construction. During construction, water would be pumped directly into $2,000-$ to 4,000 -gallon tank water trucks. Water may be stored in temporary, approximately 12,000-gallon water storage towers/tanks (up to 16 feet tall) and/or retention basins, to assist in the availability of water for trucks and expedient filling thereof. The existing wells on site that would not be used would be capped in place in accordance with Washoe County requirements.

### 2.1.7 Waste and Hazardous Materials Management

### 2.1.7.1 Solid and Non-Hazardous Waste

Construction of the Project would generate non-hazardous solid wastes typical of power generation or other industrial facilities. Produced wastes would include oily rags, worn or broken metal and machine parts, defective or broken electrical materials, other scrap metal and plastic, insulation material, empty containers, paper, glass, and other miscellaneous solid wastes, including the typical refuse generated by workers. These materials would be disposed of by means of contracted refuse collection and recycling services. Waste collection and disposal would occur in accordance with applicable regulatory requirements to minimize health and safety effects.

### 2.1.7.2 Hazardous Chemicals

Hazardous materials that would be used during construction include gasoline, diesel fuel, oil, lubricants, and small quantities of solvents and paints. The Project would implement industry standard techniques for the shipping, handling, maintenance, and storage of the batteries, which would be outlined within the Spill Prevention, Control, and Countermeasures Plan, if needed. During construction, all hazardous materials would be stored on site in storage tanks/vessels/containers that are specifically designed for the characteristics of the materials to be stored. The storage facilities would include secondary containment in case of tank/vessel failure.

### 2.1.7.3 Hazardous Solid and Liquid Wastes

Small quantities of hazardous liquid wastes would be generated during construction and operation of the Project. Hazardous wastes generated during the construction phase would occur as a result of the use of substances such as paint and primer, thinners, and solvents.

A Waste and Hazardous Materials Management Plan would be developed during design and would detail the procedures for solid and hazardous waste amendment during construction and operation of the Project.

### 2.1.8 Cleanup and Site Reclamation

Construction sites, material storage yards, and access roads would be kept in an orderly condition throughout the entirety of the construction period. Approved enclosed refuse containers would be used throughout the Project area. Disturbances to vegetation and soils would be carefully planned and minimized during construction. The postconstruction ROW would be restored in accordance with all BLM requirements. All practical means would be made to restore the land to its original natural contours.

INTENTIONALLY LEFT BLANK

## 3 Related Facilities and Systems

### 3.1 Transmission System Interconnect

### 3.1.1 Ancillary Facilities and Substations

The Project would require the construction of a new, approximately $600 \times 600$-foot substation on BLM lands within the Project area. This Project substation could be larger, depending on the interconnection agreement, since a loop-in to an existing line would require a larger footprint. The switchyard would be a series of 35 kV breakers for collection of power from the solar field, a common bus, and a step-up transformer. The Project substation would use tubular aluminum alloy bus. Tube, cables, and support structures would meet all electrical and mechanical design requirements. Instrument transformers (current and capacitive voltage transformers) would be included for protection. Shield wires and lightning arrestors would be included to protect switching station equipment and personnel against lightning strikes. Final Project substation equipment would be determined during final engineering of the proposed interconnection.

### 3.1.2 Status of Power Purchase Agreement

The Project is actively in negotiations to finalize a power purchase agreement with a commercial operation date of December of 2025.

### 3.1.3 Status of Interconnection Agreement

## Type of Interconnection Service

Network Resource Interconnection Service

## Generating Facility Capacity

400 MW net at the Point of Interconnection

## Total Generating Facility Nameplate Rating

441.6 MVA from one-hundred and ninety-two (192) 2.3 MVA PV Solar Panels and one-hundred and 451 MVA from sixty-four (164) 2.75 MVA Battery Energy Storage System (BESS) units. Company JI has indicated that they will be charging the BESS portion of the project using PV generation at the site. If Company JI wishes to change the method of BESS charging in the future additional studies or energy procurement may be necessary.

## Point of Interconnection

The Point of Interconnection will be the point where the Interconnection Customer's owned 345 kV lead-line from the Dodge Flat 5 Substation intersects the terminal position at the Transmission Provider's 345 kV East Tracy Substation.

## Point of Change of Ownership

The Point of Change of Ownership will be the point where the Interconnection Customer's 345 kV transmission lead line terminates on the Transmission Provider-owned Point of Change of Ownership Structure located adjacent to the East Tracy 345 kV Substation land grant area.

## Nominal Delivery Voltage

345 kV
Metering Voltage
345 kV

### 3.2 Other Related Systems

### 3.2.1 Communications System Requirements

The Project requires a supervisory control and data acquisition system to keep track of the plant, control production, respond to demands on the grid, and be able to take the plant offline quickly if required for grid operation or safety reasons. A supervisory control and data acquisition system collects data from various sensors throughout the plant, then sends the data to a central computer, which then manages and controls the data. It also refers to that part of the system that communicates with the rest of the grid. To comply with the grid interconnect, the Project must provide redundant communications to the plant. Technology is changing rapidly in the field of plant control communications, but for the purposes of this POD, the Applicant assumes that some kind of physical connection would be needed and plans to install it overhead on the proposed transmission line. The system would be used entirely by the Project and would have no third-party uses.

INTENTIONALLY LEFT BLANK

## 4 Operations and Maintenance

The Project would be unmanned, and no operations and maintenance building would be constructed. Operations would be monitored remotely via the supervisory control and data acquisition system, and periodic inspections and maintenance activities would occur. During operations, solar panel washing is expected to occur one to four times per year, and general labor (up to 20 individuals) may assist in the panel cleaning. Panel washing for a project of this size would require 25 days to complete per wash cycle. While the Applicant only expects to wash the PV panels once per year or less, the panels may need to be washed more frequently (up to four times per year) based on site conditions. Conditions that may necessitate increased wash requirements include unusual weather occurrences, forest fires, local air pollutants, and other similar conditions. If groundwater proves unsuitable for washing, water trucks would be used to deliver water from a local purveyor.

### 4.1 Operations Staff and Vehicles

The Project would be unmanned, and no operations and maintenance building would be constructed. Operations would be monitored remotely via the supervisory control and data acquisition system, and periodic inspections and maintenance activities would occur. Specialty personnel may also be located on site during non-working hours to perform specific maintenance functions as required.

Operations and maintenance vehicles would include 0.75 -ton pickup trucks and small utility vehicles to perform on-site welding, lubricating, panel washing, and other maintenance activities. In addition, flatbed trucks, dump trucks, and front-end loaders may be present on site at various times. Heavy-haul transport equipment would be brought to the site as needed for any major maintenance or equipment repair or replacement.

### 4.2 Operations and Maintenance Activities

During operations, solar panel washing could occur one to four times per year, and general labor (up to 20 individuals) may assist in the panel cleaning. Panel washing for a project of this size would require 25 days to complete per wash cycle. While the Applicant only expects to wash the PV panels once per year, the panels may need to be washed more frequently (up to four times per year) based on site conditions. Conditions that may necessitate increased wash requirements include unusual weather occurrences, forest fires, local air pollutants, and other similar conditions.

Vegetation would be maintained on site through a combination of mowing and herbicide application. Areas that were mowed during construction would be maintained at a height of approximately 12 inches, which would be trimmed once or twice a year, as necessary. Equipment includes a commercial-sized raised deck mower, or similar. A bush hog or similar typically is not needed but could be used in limited areas if vegetation becomes thick. Herbicide application would be applied following the BLM-approved Pesticide Use Proposal in the Pesticide Management Plan.

Road maintenance would be performed as needed. Paved roads would be swept, sealed, and/or overlaid as needed to preserve the asphalt surface from degradation. Potholes or damage to the road would be repaired as soon as practical. Grading and drainage would be maintained for gravel and earthen roads. Water would be applied, as required, to limit fugitive dust.

The Project would operate as an unmanned site. Under normal circumstances for an unmanned site, the Project substation would be controlled remotely, and routine inspections by personnel would occur on a weekly basis or as needed under emergency conditions. In addition, all of the Project substation structures would be annually inspected from the ground for corrosion, misalignment, and foundation condition. Ground inspection would include the inspection of hardware, insulator keys, and conductors. This inspection would also check conductors and fixtures for corrosion, breaks, broken insulators, and bad splices.

Battery systems have an initial right-size capacity (this includes auxiliary loads and losses) to deliver nameplate energy beginning the first day of operation. In order to maintain the same level of nameplate energy throughout the duration of the agreement, it is necessary to add new batteries in order to compensate for degradation of the initial batteries. The original building would be constructed to allow for the addition of new batteries as necessary. Periodic replacement of the batteries is expected as often as every 5 years based on usage and quarterly inspections, though it is not uncommon for the batteries to last longer than 10 years. Inspections of the batteries would be performed as part of the preventive maintenance program. Spent batteries would be recycled or disposed of off site in accordance with 40 CFR 273.2 and 40 CFR 266.

Electric lines, support systems, and instrumentation and controls would be inspected regularly to ensure the safe, efficient, and economical operation of the Project.

### 4.3 Water Use and Waste Management

### 4.3.1 Water Use

Construction water and operational water for periodic dust control and maintenance would be provided by on-site groundwater through up to three improved existing wells, a new well permitted and drilled (if necessary), or water trucks could be used to deliver water from a local purveyor.

### 4.4 Waste and Hazardous Materials Management

Project wastes would include wastewater, non-hazardous solid waste, hazardous solid waste, and hazardous liquid waste. A variety of safety-related plans and programs would be developed and implemented during Project construction and operations to ensure safe handling, storage, and use of hazardous materials. Plant personnel would be supplied with appropriate personal protective equipment and would be properly trained in the use of this equipment and the handling, use, and cleanup of hazardous materials used at the facility, as well as procedures to be followed in the event of a leak or spill. Adequate supplies of appropriate cleanup materials would be stored on site.

### 4.4.1 Solid and Non-Hazardous Waste

Construction, operation, and maintenance of the Project would generate non-hazardous solid wastes typical of power generation or other industrial facilities. The plant wastes that are produced would include oily rags, worn or broken metal and machine parts, defective or broken electrical materials, other scrap metal and plastic, insulation material, empty containers, paper, glass, and other miscellaneous solid wastes including the typical refuse generated by workers. These materials would be disposed by means of contracted refuse collection and recycling services. Waste collection and disposal would be in accordance with applicable regulatory requirements to minimize health and safety effects.

### 4.4.2 Hazardous Chemicals

During operations, hazardous materials such as fuel (diesel), hydraulic fluid, and/or transformer oil that may be used at the facility would not be stored on-site. Crews would have appropriate spill containment equipment when hazardous materials are in use during operations activities.

Chemicals and hazardous materials related to the BESS are described in Section 5.5 below.

### 4.4.3 Hazardous Solid and Liquid Wastes

Small quantities of hazardous wastes would be generated during construction and operation of the Project. Hazardous solid and liquid waste streams generated during operations include substances such as used hydraulic fluids, oils, greases, filters, and others, as well as spent cleaning solutions and spent batteries. A Waste and Hazardous Materials Management Plan and a Spill Prevention, Control, and Countermeasures Plan would be developed and implemented in accordance with all federal and state requirements prior to the start of Project construction.

INTENTIONALLY LEFT BLANK

## 5 References

APLIC (Avian Power Line Interaction Committee). 2006. Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006. Accessed September 2022. https://www.aplic.org/uploads/files/2613/ SuggestedPractices2006(LR-2watermark).pdf.

BLM (U.S. Bureau of Land Management). 2012. Approved Resource Management Plan Amendments/Record of Decision (ROD) for Solar Energy Development in Six Southwestern States. Washington, D.C.: BLM. October 2012.

BLM. 2014. Carson City District Draft Resource Management Plan and Environmental Impact Statement. Carson November 2014. Accessed September 2022. https://eplanning.blm.gov/public_projects/lup/ 22652/51594/56136/CCDO_Vol_1_ES_Ch1-3_508.pdf.

BLM. 2015a. Nevada and Northeastern California Greater Sage-Grouse Approved Resource Management Plan Amendment. September 2015. Accessed September 2022. https://eplanning.blm.gov/public_projects/ lup/21152/63235/68484/NVCA_Approved_RMP_Amendment.pdf.

BLM. 2015b. Record of Decision and Approved Resource Management Plan Amendments for the Great Basin Region, Including the Greater Sage-Grouse Sub-Regions of Idaho and Southwestern Montana, Nevada and Northern California, Oregon, Utah. September 2015. Accessed September 2022. https://eplanning.blm.gov/ public_projects/lup/103344/143604/176719/2015_Great_Basin_GRSG_ROD_ARMPA.pdf.

BLM. 2016. Nevada and Northeastern California Greater Sage-Grouse Approved Resource Management Plan Amendment, Plan Maintenance, Action \#3. December 30, 2016.

BLM. 2019a. Dodge Flat Utility and Road Crossing Project Final Environmental Assessment Decision Record. DOI-BLM-NV-CO20-2019-0017-EA. August 2019.

BLM. 2019b. Corridor 15-17 Reno Connector Corridor. May 2019. Accessed September 2022. https://bogi.evs.anl.gov/section368/abstracts/corridor-15-17.pdf.

BLM. 2020. "Variance Process." BLM Solar Energy Program: Western Solar Plan [web page]. Accessed September 1, 2022. https://blmsolar.anl.gov/variance/process/.

BLM and DOE (Bureau of Land Management and U.S. Department of Energy). 2012. Final Programmatic Environmental Impact Statement (PEIS) for Solar Energy Development in Six Southwestern States. Report No: FES 12-14; DOE/EIS-0403.

DOT (U.S. Department of Transportation). 2021. "Pyramid Lake Scenic Byway." Accessed February 2021. https://www.fhwa.dot.gov/byways/byways/2457.

USACE (U.S. Army Corps of Engineers). 2008. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States, A Delineation Manual. Cold Region Research and Environmental Laboratory, ERDC/CRREL TR-08-12. Hanover, New Hampshire: U.S. Army Engineer Research and Development Center. August 2008.

INTENTIONALLY LEFT BLANK

## Appendix A

Figures

Figure 1, Proposed Lands Under Consideration

## (1) Dodge Flat I Project Boundary

B BLM Land Under Consideration for Dodge Flat II $\square$ Private Lands Under Consideration for Dodge Flat II Access Road / Utility Line Right of Way

## Olinghouse Substation

_Proposed Gen-Tie Transmission Line
_Olinghouse Road Right of Entry Easement
Agreement - Pyramid Lake Paiute Tribe
Truckee Meadows Public Land Management Act
Proposed Disposal Boundary

## High Voltage Transmission Corridor

-- Existing High Voltage Transmission Lines

## Land Ownership

- Pyramid Lake Paiute Indian Reservation

BLM Lands
Private Lands

SOURCE: Bing Maps 2022. NVSO
$\qquad$
. Feet

Figure 2, Proposed Lands with PLSS Overlay


[^2]$\qquad$

## Traffic Impact Analysis Dodge Flat II Solar Energy Center, Washoe County

NOVEMBER 2023

Prepared for:

## NEXTERA ENERGY RESOURCES

700 Universe Boulevard
Juno Beach, Florida 33408
Prepared by:

1630 San Pablo Avenue Suite 300
Oakland, California 94612
Contact: Dennis Pascua, Transportation Services Manager

## Table of Contents

## SECTION

PAGE NO.
1 Introduction ..... 1
1.1 Project Description ..... 1
1.2 Construction of Solar Generation Site, ..... 1
1.3 Study Area and Scope ..... 2
1.4 Congestion Management Program ..... 5
1.5 Methodology ..... 5
1.5.1 Volumes ..... 5
1.5.2 Intersections ..... 6
1.5.3 Roadway Segments ..... 6
1.5.4 Significance Criteria ..... 7
2 Existing Conditions ..... 9
2.1 Existing Street System ..... 9
2.2 Transit System ..... 9
2.3 Traffic Volumes ..... 9
2.3.1 Existing Traffic Volumes ..... 9
2.4 Existing Traffic Conditions ..... 9
2.4.1 Existing Segment Traffic Conditions ..... 9
2.4.2 Existing Intersection Traffic Conditions ..... 10
3 Trip Generation ..... 15
3.1 Trip Generation ..... 15
3.2 Trip Distribution and Assignment ..... 16
4 Project Impacts ..... 23
4.1 Impacts to Segment Operations ..... 23
4.2 Impacts to Intersection Operations ..... 23
4.2.1 Existing plus Project (Peak Construction) Scenario ..... 23
4.2.2 Wadsworth Bypass Scenario ..... 23
5 Public Services and Community Infrastructure Analysis ..... 29
5.1 Fire Protection and Emergency Services ..... 29
5.2 Schools ..... 29
5.3 Community Infrastructure ..... 29
a. Mitigation Measures ..... 31
7 Findings and Recommendations ..... 39

## TABLES

1 Levels of Service for Intersections Using HCM Methodology ..... 6
2 Existing Weekday Peak-Hour Intersection Level of Service ..... 10
3 Project Trip Generation ..... 15
4 Existing Plus Project (Peak Construction) Peak-Hour Intersection Level of Service ..... 25
5 Existing Plus Project - Mitigated Peak-Hour Intersection Level of Service (Multiple Shifts) ..... 33
6 Existing Plus Project - Mitigated Peak-Hour Intersection Level of Service (Bus Shuttles) ..... 33
FIGURES
1 Project Site Location and Study Area ..... 3
2 Existing Traffic Controls and Geometrics ..... 11
3 Existing AM and PM Peak Hour Traffic Volumes ..... 13
4 Project Trip Distribution and Assignment - Passenger Cars \& Light-Duty Trucks ..... 17
5 Project Trip Distribution and Assignment - Heavy Trucks ..... 19
6 Total Project Trip Assignment ..... 21
7 Existing plus Project (Peak Construction) AM and PM Peak Hour Traffic Volumes ..... 27
8 Existing plus Project (Mitigated - Multiple Shifts) AM and PM Peak Hour Traffic Volumes. ..... 35
9 Existing plus Project (Mitigated - Bus Shuttles) AM and PM Peak Hour Traffic Volumes ..... 37

## APPENDICES

## A Traffic Counts <br> B LOS Worksheets

INTENTIONALLY LEFT BLANK

## 1 Introduction

The purpose of this Traffic Impact Analysis (TIA) is to identify potential construction-related traffic impacts associated with the proposed Dodge Flat II Solar Energy Center project (herein known as the "proposed project"), and to:

- Document existing traffic conditions including segment and intersection levels of service (LOS) along or in proximity to the solar generation site;
- Estimate trip generation and trip characteristics for the peak project construction-related activities of the solar generation site;
- Analyze the potential for traffic impacts to occur as a result of construction of the solar generation site;
- Describe the significance of the potential impacts; and
- Identify mitigation measures for construction-related traffic impacts (if any).

Activities associated with operation and maintenance of the solar generation site would only be performed on asneeded basis and would be limited in scope and duration, thereby generating only occasional and nominal daily and peak-hour traffic. Hence, this TIA focuses only on the temporary, construction-related traffic impacts of the proposed solar generation site.

### 1.1 Project Description

The proposed project consists of the development of a photovoltaic (PV) solar facility and associated infrastructure. The project site is located on several parcels of federal and private lands west of Nevada State Route (SR-) 447, and northwest of the town of Wadsworth.

All construction-related traffic would use Olinghouse Road as a connection point to SR-447. The project site and study area are shown in Figure 1.

### 1.2 Construction of Solar Generation Site

The construction of the proposed project would last up to 18 months, and would include multiple phases such as site preparation, system installation, testing, commissioning, and cleanup. Construction would primarily occur during daylight hours, Monday through Friday, typically between 7:00 a.m. and 5:00 p.m. with the exception of extended hours and weekend work reserved for catch-up work needed due to rainy days or low productivity. Peak construction traffic conditions would occur for approximately 3 months of the construction period.

The peak daily workforce throughout the duration of construction is expected to consist of construction, supervisory support, and construction management personnel on site during construction and may peak at up to 500 workers. It is anticipated that the construction workforce would commute to the site each day from the Reno-Sparks Metropolitan Area and from localized areas near the City of Fernley. Individuals would report to the designated construction staging yards prior to the beginning of each workday. Local hotels in the area may be used to accommodate construction staff not drawn from the immediate regional labor pool.

### 1.3 Study Area and Scope

As illustrated in Figure 1, the project includes several parcels west of SR-447. The project site would be accessed via Olinghouse Road through its connection with SR-447. An entrance and exit gate located on the project site would provide access to the project site. Therefore, for the purposes of the traffic analysis, the study area is defined along Olinghouse Road, SR-447, and SR-427. The study area is comprised of two intersections and one roadway segment that would be potentially impacted by construction-related traffic generated by the proposed project.


Project Site Location and Study Area

INTENTIONALLY LEFT BLANK

The study area intersections are as follows:

1. SR-447-Washeim Street/SR-427 - Main Street
2. SR-447/Olinghouse Road

The study area roadway segment is as follows:

1. SR-447, 5th Street to Pyramid Street in Wadsworth

This analysis focuses on both the weekday AM (7:00 to 9:00 a.m.) and PM (4:00 to 6:00 p.m.) peak commute periods. The peak periods represent the highest cumulative total traffic for the adjacent street and roadway networks. The study area intersections and roadway segments were analyzed for the following study scenarios:

## Existing Conditions

This TIA includes a description of existing conditions in the site vicinity, including existing street system, existing weekday AM and PM peak-hour traffic volumes, existing roadway traffic volumes and traffic operations. The existing conditions are representative of year 2023.

## Existing plus Project (Peak Construction)

Existing plus Project (Peak Construction) conditions includes analysis of weekday AM and PM peak-hour traffic volumes, roadway daily traffic volumes and traffic operations with traffic from the peak project construction phase added to the existing conditions. Project traffic is comprised of construction-related traffic from construction workers and trucks. Therefore, worker and truck traffic was distributed and assigned separately to the segments and intersections in the study area and analyzed in conjunction with each other under Existing plus Project (Peak Construction) conditions.

### 1.4 Congestion Management Program

The Regional Transportation Commission (RTC) of Washoe County is designated as the Congestion Management Agency in the County. The RTC Congestion Management Process (CMP) includes only the urbanized area of the greater Reno-Sparks metropolitan area. Therefore, the CMP does not address or provide guidelines for the project's study area.

### 1.5 Methodology

Level of service (LOS) is commonly used as a qualitative description of segment or intersection operations and is based on the capacity and the volume of traffic using the segment or the intersection.

### 1.5.1 Volumes

Existing peak-hour counts at the study intersections were conducted in September 2018 during a typical nonholiday week sufficiently beyond the annual Burning Man event that brings thousands of travelers through the town of Wadsworth. In order to represent 2023 conditions, the NDOT TRINA application was used to determine the
approximate growth rate within the last 5 years at the nearest location along SR-447 (station 0310355), resulting in approximately 3 percent per year of overall growth added to the existing volumes.

Detailed vehicle axle classification was also collected and was used to calculate heavy vehicle percentages. Using the amount of truck traffic existing along SR-427 and SR-447, peak-hour volumes were adjusted to include a "heavy vehicle percentage" within the Synchro 11 software. Use of the heavy vehicle percentage factor within Synchro more accurately estimates the operation of an intersection that is being evaluated with the Highway Capacity Manual (HCM) methodology.

Existing traffic volumes in the study area are relatively low, and no new significant growth is anticipated in the shortterm horizon that would coincide with the construction of the project. Therefore, project impacts were calculated for the Existing plus Project (Peak Construction) condition only. Project trip assignments were calculated based on construction-related project traffic and were added to existing traffic volumes to compute the Existing plus Project (Peak Construction) traffic volumes.

### 1.5.2 Intersections

The County of Washoe and Nevada Department of Transportation (NDOT) use the HCM intersection analysis methodology to analyze the operation of signalized and unsignalized study intersections. Both study intersections are currently unsignalized. The HCM analysis methodology describes the operation of an intersection using a range of LOS from LOS A (free-flow conditions) to LOS F (severely congested conditions), based on the corresponding control delay experienced per vehicle for unsignalized intersections.

At unsignalized intersections in the study area, the level of service was calculated using the HCM methodology. The Synchro 11 LOS software was used to determine intersection LOS for all study scenarios. Synchro is consistent with the HCM methodology (Transportation Research Board 2016). Table 1 shows the LOS for unsignalized and signalized intersections under the HCM methodology (delay).

Table 1. Levels of Service for Intersections Using HCM Methodology

| Level of Service | Unsignalized Intersections <br> Control Delay (in seconds) | Signalized Intersections <br> Control Delay (in seconds) |
| :---: | :---: | :---: |
| A | $<10.0$ | $<10.0$ |
| B | $>10.0$ to $<15.0$ | $>10.0$ to $<20.0$ |
| C | $>15.0$ to $<25.0$ | $>20.0$ to $<35.0$ |
| D | $>25.0$ to $<35.0$ | $>35.0$ to $<55.0$ |
| E | $>35.0$ to $<50.0$ | $>55.0$ to $<80.0$ |
| F | $>50.0$ | $>80.0$ |

Source: HCM 6 (Transportation Research Board 2016).

### 1.5.3 Roadway Segments

All roadway segments analyzed in this TIA are under the jurisdiction of NDOT and Washoe County. Both jurisdictions use a volume to capacity ratio to evaluate LOS.

### 1.5.4 Significance Criteria

## Washoe County

The RTC of Washoe County's 2050 Regional Transportation Plan has established the following LOS policy:

- "All regional roadway facilities projected to carry less than 27,000 ADT at the latest RTP horizon - LOS D or better."
- "All regional roadway facilities projected to carry more than 27,000 ADT at the latest RTP horizon - LOS E or better."
- "All intersections shall be designed to provide a level of service consistent with maintain the policy level of service of the intersecting roadways."

The ADT along SR-447 is less than 27,000 vehicles per day through the planning horizon. Therefore, LOS D is the criteria in this TIA.

## Nevada Department of Transportation (NDOT)

All intersections analyzed in this TIA are on State highways (SR-427 and SR-447), which are under the jurisdiction of the State of Nevada Department of Transportation (NDOT). As stated in the NDOT Terms and Conditions Relating to Right-of-Way Occupancy Permits (2021), the level of service for site and non-site traffic shall be LOS D or better.

INTENTIONALLY LEFT BLANK

## 2 Existing Conditions

This section describes existing conditions within the identified study area. Characteristics are provided for the existing street system, peak-hour traffic volumes, and traffic operations.

### 2.1 Existing Street System

The existing traffic controls and geometrics at the study area intersections are shown in Figure 2. All the intersections identified in the study area are unsignalized. Characteristics of the existing street system in the study are described below.

State Route 427 (SR-427) is primarily an east-west, two-lane state highway in the study area and is also known as Main Street in the area. SR-427 is an east-west highway that provides a connection between Interstate 80 (l-80) and SR-447 to the north. SR-427 and its intersection with SR-447 would provide access to all of the constructionrelated traffic to the project site.

State Route 447 (SR-447) is primarily a north-south, two-lane state highway in the study area and is also known as Washeim Street in the town of Wadsworth. SR-447 intersects with Olinghouse Road and SR-427, both of which would be used by all of the construction-related traffic to access the project site.

Olinghouse Road is an east-west, two-lane rural road that is largely unimproved. Olinghouse Road provides immediate project access for construction traffic approaching the site from the west via its intersection with SR447.

### 2.2 Transit System

The Pyramid Lake Pauite Tribe provides a tribal transit system that runs two fixed transit routes from the town of Wadsworth to the rural communities of Washoe County as well as to the City of Reno. Currently, the only transit stop in the study area is at the Wadsworth Community Building.

### 2.3 Traffic Volumes

### 2.3.1 Existing Traffic Volumes

Raw traffic count worksheets are provided in Appendix A. Existing weekday AM and PM peak-hour volumes are summarized in Figure 3.

### 2.4 Existing Traffic Conditions

### 2.4.1 Existing Segment Traffic Conditions

The existing roadway segment of SR-447, 5 th Street to Pyramid Street is classified by NDOT as a rural minor arterial. The average daily traffic (ADT) of 1,875 vehicles was adjusted to represent 2023 conditions, resulting in
approximately 2,153 vehicles. This compared with the free-flow capacity of the roadway indicates that there are no existing congestion issues for this segment. Additionally, the ADT for this segment is higher than NDOT's ADT counts averaged over the past 10 years (approximately 1,200) as displayed on the NDOT TRINA application (station 0310355).

### 2.4.2 Existing Intersection Traffic Conditions

An intersection LOS analysis was prepared for the existing conditions using HCM methodology via the Synchro LOS software as discussed in Chapter 1. Table 2 shows the results of the existing conditions LOS analysis.

## Table 2. Existing Weekday Peak-Hour Intersection Level of Service

|  |  | AM Peak |  | PM Peak |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  | Delay <br> (in sec) | LOS | Lelay <br> (in sec) |
| Intersection |  | LoS |  |  |  |

Notes: Delay - Delay reported as Control Delay and expressed in seconds
LOS - Level of Service
1 Two-Way Stop Control reported as worst movement. Analyzed using Highway Capacity Manual (HCM 6) methodology.

As shown in the table, all of the study area intersections are currently operating at LOS B or better under existing conditions during both peak hours.


INTENTIONALLY LEFT BLANK


INTENTIONALLY LEFT BLANK

## 3 Trip Generation

This section documents the trip generation, distribution and assignment of construction-related traffic associated with the proposed project.

### 3.1 Trip Generation

Trip generation estimates for the construction phase of the project were calculated based on the worst case/maximum traffic during construction. Construction traffic includes the number of workers, and the amount of delivery and on-site truck traffic that would be generated to and from the site during the AM and PM peak hours. The construction activities would occur during the daylight hours of 7:00 a.m. to 5:00 p.m., for approximately 10 hours over the weekdays (Monday through Friday), while extended hours and weekend work is also possible to meet the construction schedule.

Although construction would take approximately 18 months in total, peak construction traffic would occur for approximately 3 months. Peak construction activities would require a maximum of 500 workers, 4 light-duty trucks, and 40 heavy trucks (such utility line service trucks and component delivery trucks) per day. Other construction equipment would be expected to stay on-site and would not contribute to traffic along study roadways and was therefore not analyzed in this report. Approximately $50 \%$ of the 500 workers are expected to carpool (at least 2 workers sharing one vehicle), while the remaining 250 workers are expected to take solitary trips, therefore the number of daily trips is 750 vehicles. Light-duty trucks and heavy trucks would travel to and from the site and would be evenly distributed over the 10 hour workday. Although construction worker shifts are scheduled to start before the AM peak hour, a conservative analysis assuming that $10 \%$ of construction workers would arrive to the project site within the AM peak hour (after 7:00 a.m.), with all workers exiting during the PM peak hour (before 6:00 p.m.), respectively, was analyzed. The calculation of project trip generation estimates are shown in Table 3.

As shown in Table 3, the peak construction phase of the proposed project would generate 838 daily trips, 85 AM peak-hour trips ( 80 inbound and 5 outbound), and 760 PM peak-hour trips ( 5 inbound and 755 outbound).

Table 3. Project Trip Generation

| Vehicle Type | Daily Quantity | Daily Trips | AM Peak Hour |  |  | PM Peak Hour |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | In | Out | Total | In | Out | Total |
| Trip Generation |  |  |  |  |  |  |  |  |
| Workers (with 50\% carpool reduction) ${ }^{1}$ | 500 Workers | 750 | 75 | 0 | 75 | 0 | 750 | 750 |
| Light-Duty Trucks (off-site) | 4 Trucks | 8 | 1 | 1 | 2 | 1 | 1 | 2 |
| Heavy Trucks | 40 Trucks | 80 | 4 | 4 | 8 | 4 | 4 | 8 |
|  | Total | 838 | 80 | 5 | 85 | 5 | 755 | 760 |

## Notes:

Data provided by NextEra Energy.
1 Approximately 50\% of workers would carpool. Therefore, the Daily Trips calculation is $(250+(250 / 2)) * 2=750$

### 3.2 Trip Distribution and Assignment

Project trips were distributed to the study area intersections and segments using the regional location of the project, logical commute routes for workers, and available truck routes for project-related trucks.

This analysis assumes that all heavy truck traffic and a majority of construction worker traffic for the proposed solar generation sites would access the project site from the Reno-Sparks Metropolitan Area in the west via l-80, exit along SR-427, and continue northward through Wadsworth along SR-447 to access the project site off of Olinghouse Road. The remaining portion of construction worker traffic is expected to travel from the east and the nearby Fernley area, traveling northward and westward along SR-427 before continuing along SR-447 and Olinghouse Road.

The resulting project trip distribution percentages and assignments are shown in Figures 4, 5, and 6 for passenger cars and light-duty trucks, heavy trucks, and total project traffic, respectively.


SOURCE: Google Earth 2015
FIGURE 4

Project Trip Distribution and Assignment - Passenger Cars \& Light-Duty Trucks
Dodge Flat II Solar Energy Center

INTENTIONALLY LEFT BLANK


SOURCE: Google Earth 2015

Project Trip Distribution and Assignment - Heavy Trucks
Dodge Flat II Solar Energy Center

INTENTIONALLY LEFT BLANK


INTENTIONALLY LEFT BLANK

## 4 Project Impacts

This section documents impacts on study area intersections related to construction-related project traffic under Existing plus Project (Peak Construction) conditions.

The project trip assignments shown in Figure 6 for construction-related project traffic (workers, light-duty trucks, and heavy trucks) were added to the existing traffic volumes shown in Figure 3 to derive the Existing plus Project (Peak Construction) traffic volumes. Figure 7 illustrates the Existing plus Project (Peak Construction) traffic volumes that were used to evaluate Existing plus Project (Peak Construction) traffic conditions.

### 4.1 Impacts to Segment Operations

The roadway segment of SR-447, 5th Street to Pyramid Street would see an increase in ADT as result of project traffic ( 838 daily trips) totaling 2,991 vehicles for this segment. This represents a $39 \%$ increase in ADT, however the workers contributing 750 vehicles would be concentrated primarily in the PM peak hour after shifts end at 5:00 p.m. Overall, the free-flow capacity of the roadway is not expected to create congestion issues for this segment.

### 4.2 Impacts to Intersection Operations

An intersection operations analysis was conducted for the study area to evaluate the Existing plus Project (Peak Construction) weekday AM and PM peak-hour conditions. Intersection operations were calculated using the LOS methodology described in Chapter 1. The following presents the results of the project analysis.

### 4.2.1 Existing plus Project (Peak Construction) Scenario

Table 4 shows the results of the Existing plus Project (Peak Construction) LOS analysis and provides a comparison to the existing (without project) conditions for the weekday peak hours using HCM methodology for unsignalized intersections and NDOT intersections. Detailed LOS worksheets are included in Appendix B.

Based on the appropriate significance criteria, both of the study area intersections are forecast to operate at LOS E or worse in the PM peak hour with the addition of the construction-related project traffic from the proposed project. Several mitigation options will be proposed to alleviate the impact to the roadway network. Additionally, a Traffic Control Plan (TCP) would be required to reduce the temporary impact of the proposed project. The TCP may include such details such as restriction of work hours to limit egress and ingress during peak hours, limiting traffic travelling in platoons to avoid conflicts with school drop-off or pick-up schedules, and coordination with fire and emergency services to avoid conflicts, and dedicated flag personnel to facilitate safe movement of vehicles.

### 4.2.2 Wadsworth Bypass Scenario

The Wadsworth Bypass Road Project proposes a bypass road that would include a two-lane roadway southwest of Wadsworth connecting to SR-427 to SR-447 northward. The bypass would allow through-traffic to bypass Wadsworth's residential core as well as alleviate impacts to emergency services and schools that arise throughout the year during high traffic periods such as the Burning Man event.

With the construction of the bypass, construction-related project traffic travelling to and from I-80 would directly avoid the town of Wadsworth by transitioning to SR-447 without the need of Main Street in the center of Wadsworth. Additionally, the bypass would directly improve the access for traffic generating projects in the Wadsworth region. Currently, the Wadsworth Bypass Road Project is in the process of securing funding either through Tribal Transportation Program funds or federal-aid highway funds allocated to NDOT from the Federal Highway Administration. Therefore, the bypass is not expected to be built before construction is complete for the proposed project. If the bypass is completed in time for construction, LOS for the study area is expected to remain well below the significance criteria of LOS D.

Table 4. Existing Plus Project (Peak Construction) Peak-Hour Intersection Level of Service

|  |  | Existing |  |  |  | Existing Plus Project |  |  |  | Change |  | Significant Change in LOS or Delay |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | AM Peak |  | PM Peak |  | AM Peak |  | PM Peak |  |  |  |  |  |
| Intersection | Control ${ }^{1}$ | Delay (sec) | LOS | Delay (sec) | LOS | Delay (sec) | LOS | Delay (sec) | LOS | AM | PM | AM | PM |
| 1. SR-447 - Washeim Street/SR427 - Main Street | two-way stop | 10.1 | B | 10.2 | B | 11.3 | B | 69.6 | F | 1.2 | 59.4 | no | yes |
| 2. SR-447/Olinghouse Road | two-way stop | 8.6 | A | 7.4 | A | 9.3 | A | 42.1 | E | 0.7 | 34.7 | no | yes |

Notes: Delay - Delay reported as Control Delay and expressed in seconds
LOS - Level of Service; sec = seconds
1 Two-Way Stop Control reported as worst movement. Analyzed using Highway Capacity Manual (HCM 6) methodology.
BOLD value indicates unsatisfactory LOS

INTENTIONALLY LEFT BLANK


## FIGURE 7

Existing plus Project (Peak Construction) AM and PM Peak Hour Traffic Volumes

INTENTIONALLY LEFT BLANK

## 5 Public Services and Community Infrastructure Analysis

This section documents impacts on the public services and community infrastructure in the Wadsworth area and qualitatively analyzes the impact upon services as a result of the proposed project.

### 5.1 Fire Protection and Emergency Services

The Pyramid Lake Fire Rescue/EMS Department provides fire protection and emergency services for the Wadsworth region. Station 225 located on 400 Stamp Mill Drive in Wadsworth, provides direct coverage to the study area, while support is provided by the next nearest department, Station 243 located approximately 14 miles north of Wadsworth at 104 SR-447 in Nixon. Both stations provide ambulance and emergency services when available. Since SR-447 is the main thoroughfare in the region, there is a high likelihood that both stations would use this roadway to provide services, and therefore that construction-related project traffic has at least the potential to impede on fire protection and emergency services. Therefore, as part of the TCP, construction traffic would need to coordinate and provide open lines of communication with both stations to ensure expedient accessibility at all times in case of emergency.

### 5.2 Schools

The nearest school in the study area is the Natchez Elementary School located along SR-447, just south of Pyramid Street in Wadsworth. Natchez Elementary serves the immediate Wadsworth area and provides K-6 education. On a typical schedule, Natchez Elementary begins classes at 8:25 a.m. and concludes at 2:30 p.m. with early release on Wednesdays at 1:45 p.m. A majority of construction traffic would occur before the pick-up or drop-off period, with only a small proportion of light-duty and heavy trucks arriving throughout the day. As part of the TCP, construction traffic arriving throughout the day should avoid as much as feasible the school drop-off and pick-up period.

### 5.3 Community Infrastructure

Active coordination with other community services departments in the Pyramid Lake Paiute Tribe, as well as with roadway maintenance branches of the NDOT and Washoe County Department of Public Works will be required as part of the TCP. Construction-related traffic is not expected to create impacts upon the area's ability to provide adequate community infrastructure and maintenance.

INTENTIONALLY LEFT BLANK

## a. Mitigation Measures

The level of service analysis provided above demonstrates that with the maximum level of construction-related traffic added to the study area, the projected LOS for the intersections of SR-447 - Washeim Street/SR-427 - Main Street and SR-447/Olinghouse Road would be significantly impacted by temporary construction-related traffic generated by the proposed project.

However, the construction of the project would result in a temporary impact on the existing transportation system in the study area. This would primarily be due to the conservative assumption that all project construction traffic ( $100 \%$ ) would exit the site during the PM peak hour (5:00 p.m. to 6:00 p.m.). Prior to the issuance of a grading permit, the Project applicant shall implement either mitigation measure (MM-)TRAF 1A or MM-TRAF 1B, or another mitigation measure that similarly reduces at least 120 vehicles during peak PM hours:

MM-TRAF-1A The proposed project shall operate at least two construction shifts in order to reduce their traffic impact during the peak hours. These shifts may be (1) 7:00 a.m. to 5:00 p.m. and (2) 8:00 a.m. to 6:00 p.m., or something similar.

MM-TRAF 1A would provide a staggered shift schedule offset by 1 hour. The assumptions for shift \#1 are the same as for the standard shift explained in preceding chapters. Shift \#2 would require all trips to occur before 8:00 a.m. to avoid the peak drop-off period for Natchez Elementary School, and conservatively would allow for 10\% of worker trips to leave during the PM peak hour before 6:00 p.m. Figure 8 illustrates the Existing plus Project (peak construction) mitigated (multiple shifts) traffic volumes that were used to evaluate Existing plus Project (peak construction) mitigated (multiple shifts) traffic conditions. Detailed LOS worksheets are included in Appendix B.

Table 5 shows that with the implementation of MM-TRAF-1A, project construction traffic impacts would be less than significant since LOS would be at LOS C for both intersections.

OR
MM-TRAF-1B The proposed project shall provide bus shuttles for at least 120 construction workers, reducing the total volume of traffic (elimination of 120 vehicles) generated by the peak construction phase.

MM-TRAF 1B would provide bus shuttles in the form of worker driven shuttles by which the construction crew would coordinate based on place of residence or where stationed. Each shuttle is expected to hold at least 15 workers and to maintain the standard shift of 7:00 a.m. to 5:00 p.m. described in preceding chapters. Figure 9 illustrates the Existing plus Project (peak construction) mitigated (bus shuttles) traffic volumes that were used to evaluate Existing plus Project (peak construction) mitigated (bus shuttles) traffic conditions. Detailed LOS worksheets are included in Appendix B.

Table 6 shows that with implementation of MM-TRAF-1B, project construction impacts would be less than significant since LOS would be at LOS D or better for both intersections.

Similarly, other possible mitigation, such as re-routing outbound PM peak-hour traffic northward, would be sufficient, as long as 120 construction workers (the elimination of 180 vehicles) would not travel southward. Construction workers residing in the Spanish Springs or Sun Valley neighborhoods of the Reno-Sparks Metropolitan Area seeking to avoid potential traffic along I-80 could potentially exit the site, proceed northward along SR-447,
westward along SR-446, and then southward via SR-445. This route would yield similar LOS results as MM-TRAF1B.

Additionally, due to the size of some materials needed, a safety crew member would stop or direct traffic at specific locations with slower moving trucks. Therefore, such general mitigation measures would be undertaken to reduce these temporary impacts resulting from the construction-related traffic. These general mitigation measures would be identified in the TCP.

The TCP would include, but not necessarily be limited to, the following:

- Temporary traffic control devices in accordance with FHWA's Manual on Uniform Traffic Control Devices (MUTCD), and notification to NDOT, the Pyramid Lake Paiute Tribe and the Washoe County Public Works Department to identify locations where construction is ongoing. This may include slow-moving-vehicle warning signs, signage to warn of merging trucks, barriers for separating construction and non-construction traffic, use of traffic control flag personnel, and any additional measures required for the sole convenience of safely passing non-construction traffic through and around construction areas.
- Scheduling of heavy truck traffic, hauling materials and equipment to the site, during non-peak periods to the maximum extent possible. Scheduling of worker shift changes so as not to coincide with existing background traffic peak periods if feasible.
- Establish procedures for coordinating with local emergency response agencies to ensure dissemination of information regarding emergency response vehicle routes affected by construction activities.
- Coordinate and provide open lines of communication with fire protection and emergency services to ensure expedient accessibility at all times in case of emergency.
- Construction traffic arriving throughout the day should avoid as much as feasible the school drop-off and pick-up period for Natchez Elementary School.
- Implement MM-TRAF-1A, MM-TRAF-1B, or similar described above.
- Encourage further carpooling among workers to reduce worker commute trips in the study area.

Table 5. Existing Plus Project - Mitigated Peak-Hour Intersection Level of Service (Multiple Shifts)

| Intersection | Control ${ }^{1}$ | Existing |  |  |  | Existing plus Project Mitigated |  |  |  | Change |  | Significant Change in LOS or Delay |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | AM Peak |  | PM Peak |  | AM Peak |  | PM Peak |  |  |  |  |  |
|  |  | Delay (sec) | LOS | Delay (sec) | LOS | Delay (sec) | LOS | Delay (sec) | LOS | AM | PM | AM | PM |
| 1. SR-447-Washeim St/SR-427Main St | two-way stop | 10.1 | B | 10.2 | B | 27.4 | D | 16.3 | C | 17.3 | 6.1 | no | no |
| 2. SR-447/Olinghouse Road | two-way stop | 8.6 | A | 7.4 | A | 9.3 | A | 13.1 | B | 0.7 | 5.7 | no | no |

Notes: Delay - Delay reported as Control Delay and expressed in seconds
LOS - Level of Service; sec = seconds
1 Two-Way Stop Control reported as worst movement. Analyzed using Highway Capacity Manual (HCM 6) methodology.
Table 6. Existing Plus Project - Mitigated Peak-Hour Intersection Level of Service (Bus Shuttles)

| Intersection | Control ${ }^{1}$ | Existing |  |  |  | Existing Plus Project Mitigated |  |  |  | Change |  | Significant Change in LOS or Delay |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | AM Peak |  | PM Peak |  | AM Peak |  | PM Peak |  |  |  |  |  |
|  |  | Delay (sec) | LOS | Delay (sec) | LOS | Delay (sec) | LOS | Delay (sec) | LOS | AM | PM | AM | PM |
| 1. SR-447-Washeim St/SR-427Main St | two-way stop | 10.1 | B | 10.2 | B | 11.2 | B | 27.7 | D | 1.1 | 17.5 | no | no |
| 2. SR-447/Olinghouse Road | two-way stop | 8.6 | A | 7.4 | A | 9.3 | A | 19.0 | C | 0.7 | 11.6 | no | no |

Notes: Delay - Delay reported as Control Delay and expressed in seconds
LOS - Level of Service; sec = seconds
1 Two-Way Stop Control reported as worst movement. Analyzed using Highway Capacity Manual (HCM 6) methodology.

INTENTIONALLY LEFT BLANK


Existing plus Project (Mitigated - Multiple Shifts) AM and PM Peak Hour Traffic Volumes

INTENTIONALLY LEFT BLANK


SOURCE: Google Earth 2015
Existing plus Project (Mitigated - Bus Shuttles) AM and PM Peak Hour Traffic Volumes

INTENTIONALLY LEFT BLANK

## $7 \quad$ Findings and Recommendations

Based on the results of the traffic analysis in this TIA, the following summarizes the traffic impacts of the proposed Dodge Flat II Solar Energy Center project. General findings are as follows:

- The peak construction phase of the proposed project would generate 838 daily trips, 85 AM peak-hour trips ( 80 inbound and 5 outbound), and 760 PM peak-hour trips ( 5 inbound and 755 outbound).
- All of the study area intersections currently operate at LOS B or better under existing conditions during both peak hours.
- The existing roadway segment of SR-447, 5th Street to Pyramid Street has an ADT total of 2,153 vehicles, and when compared with the free-flow capacity of the roadway indicates that there are no existing congestion issues. Additionally, the ADT is higher than NDOT's ADT counts averaged over the past 10 years (approximately 1,200) as displayed on the NDOT TRINA application (station 0310355).
- Both of the study area intersections are forecast to operate at LOS E or worse in the PM peak hour with the addition of the construction-related project traffic from the proposed project.
- Implement MM-TRAF-1A or MM-TRAF-1B:
- MM-TRAF-1A
- Provide for two construction traffic shifts: (1) 7:00 a.m. to 5:00 p.m. and (2) 8:00 a.m. to 6:00 p.m.
- MM-TRAF-1B
- Provide bus shuttles for at least 120 construction workers, reducing the total volume of traffic (elimination of 120 vehicles) generated by the peak construction phase.

With either mitigation measure active, impacts would be become less than significant since LOS would be at least LOS D for both intersections.

- Project impacts, as well as the potential of impacts to fire protection and emergency services, schools, and community infrastructure departments, would be further minimized based on the application of a TCP, which would reduce temporary impacts resulting from the construction-related traffic associated with the project. These details may include the following:
- Temporary traffic control devices in accordance with FHWA's Manual on Uniform Traffic Control Devices (MUTCD), and notification to NDOT, the Pyramid Lake Paiute Tribe and the Washoe County Public Works Department to identify locations where construction is ongoing. This may include slow-moving-vehicle warning signs, signage to warn of merging trucks, barriers for separating construction and nonconstruction traffic, use of traffic control flag personnel, and any additional measures required for the sole convenience of safely passing non-construction traffic through and around construction areas.
- Scheduling of heavy truck traffic, hauling materials and equipment to the site, during non-peak periods to the maximum extent possible. Scheduling of worker shift changes so as not to coincide with existing background traffic peak periods if feasible.
- Establish procedures for coordinating with local emergency response agencies to ensure dissemination of information regarding emergency response vehicle routes affected by construction activities.
- Coordinate and provide open lines of communication with fire protection and emergency services to ensure expedient accessibility at all times in case of emergency.
- Construction traffic arriving throughout the day should avoid as much as feasible the school drop-off and pick-up period for Natchez Elementary School.
- Encourage further carpooling among workers to reduce worker commute trips in the study area.


## Appendix A Traffic Counts

Intersection Turning Movement Count
Location: SR 447 \& Washeim St \& SR 427 \& Main St
City: Wadsworth
Control: 1-Way Stop (SB)
Total

|  | Total |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NS/EW Streets: | SR 447 \& Washeim St |  |  |  | SR 447 \& Washeim St |  |  |  | SR 427 \& Main St |  |  |  | SR 427 \& Main St |  |  |  |  |
| AM | NORTHBOUND |  |  |  | SOUTHBOUND |  |  |  | EASTBOUND |  |  |  | WESTBOUND |  |  |  |  |
|  | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |  |
|  | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 7:00 AM | 0 | 0 | 0 | 0 | 5 | 0 | 9 | 0 | 7 | 3 | 0 | 0 | 0 | 4 | 16 | 0 | 44 |
| 7:15 AM | 0 | 0 | 0 | 0 | 3 | 0 | 12 | 0 | 9 | 2 | 0 | 0 | 0 | 2 | 17 | 0 | 45 |
| 7:30 AM | 0 | 0 | 0 | 0 | 14 | 0 | 13 | 0 | 12 | 5 | 0 | 0 | 0 | 6 | 14 | 0 | 64 |
| 7:45 AM | 0 | 0 | 0 | 0 | 9 | 0 | 7 | 0 | 18 | 4 | 0 | 0 | 0 | 3 | 22 | 0 | 63 |
| 8:00 AM | 0 | 0 | 0 | 0 | 22 | 0 | 11 | 0 | 5 | 2 | 0 | 0 | 0 | 4 | 15 | 0 | 59 |
| 8:15 AM | 0 | 0 | 0 | 0 | 16 | 0 | 8 | 0 | 8 | 3 | 0 | 0 | 0 | 3 | 14 | 0 | 52 |
| 8:30 AM | 0 | 0 | 0 | 0 | 13 | 0 | 10 | 0 | 9 | 0 | 0 | 0 | 0 | 1 | 6 | 0 | 39 |
| 8:45 AM | 0 | 0 | 0 | 0 | 13 | 0 | 4 | 0 | 4 | 3 | 0 | 0 | 0 | 4 | 8 | 0 | 36 |
|  | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| TOTAL VOLUMES : | 0 | 0 | 0 | 0 | 95 | 0 | 74 | 0 | 72 | 22 | 0 | 0 | 0 | 27 | 112 |  | 402 |
| APPROACH \%'s : |  |  |  |  | 56.21\% | 0.00\% | 43.79\% | 0.00\% | 76.60\% | 23.40\% | 0.00\% | 0.00\% | 0.00\% | 19.42\% | 80.58\% | 0.00\% |  |
| PEAK HR : | 07:30 AM - 08:30 AM |  |  |  | $\begin{gathered} 61 \\ 0.693 \end{gathered}$ | $\begin{gathered} 0 \\ 0.000 \end{gathered}$ | $\begin{gathered} 39 \\ 0.750 \end{gathered}$ | $\begin{gathered} 0 \\ 0.000 \end{gathered}$ | $\begin{gathered} 43 \\ 0.597 \end{gathered}$ | $\begin{gathered} 14 \\ 0.700 \end{gathered}$ | $8^{0.000}$ | $\begin{gathered} 0 \\ 0.000 \end{gathered}$ | $\begin{gathered} 0 \\ 0.000 \end{gathered}$ | $\begin{aligned} & 16 \\ & 0.667 \\ & \quad 0.81 \\ & \hline \end{aligned}$ | $\begin{gathered} 65 \\ 0.739 \\ 0 \end{gathered}$ | $\begin{gathered} 0 \\ 0.000 \end{gathered}$ | TOTAL |
| PEAK HR VOL : | 0 | 0 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  | 238 |
| PEAK HR FACTOR : | 0.000 | 0.000 | 0.000 | 0.000 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.930 |


| PM | NORTHBOUND |  |  |  | SOUTHBOUND |  |  |  | EASTBOUND |  |  |  | WESTBOUND |  |  |  | TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |  |
|  | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | wU |  |
| 4:00 PM | 0 | 0 | 0 | 0 | 10 | 0 | 9 | 0 | 10 | 6 | 0 | 0 | 0 | 3 | 12 | 0 | 50 |
| 4:15 PM | 0 | 0 | 0 | 0 | 7 | 0 | 9 | 0 | 13 | 5 | 0 | 0 | 0 | 6 | 13 | 0 | 53 |
| 4:30 PM | 0 | 0 | 0 | 0 | 15 | 0 | 10 | 0 | 15 | 5 | 0 | 0 | 0 | 7 | 16 | 0 | 68 |
| 4:45 PM | 0 | 0 | 0 | 0 | 18 | 0 | 9 | 0 | 7 | 4 | 0 | 0 | 0 | 2 | 16 | 0 | 56 |
| 5:00 PM | 0 | 0 | 0 | 0 | 15 | 0 | 9 | 0 | 12 | 4 | 0 | 0 | 0 | 2 | 19 | 0 | 61 |
| 5:15 PM | 0 | 0 | 0 | 0 | 10 | 0 | 5 | 0 | 12 | 9 | 0 | 0 | 0 | 2 | 6 | 0 | 44 |
| 5:30 PM | 0 | 0 | 0 | 0 | 12 | 0 | 6 | 0 | 15 | 6 | 0 | 0 | 0 | 5 | 13 | 0 | 57 |
| 5:45 PM | 0 | 0 | 0 | 0 | 14 | 0 | 5 | 0 | 12 | 9 | 0 | 0 | 0 | 1 | 12 | 0 | 53 |
|  | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| TOTAL VOLUMES: APPROACH \%'s: | 0 | 0 | 0 | 0 | $\begin{gathered} 101 \\ 61.96 \% \end{gathered}$ | $\begin{gathered} 0 \\ 0.00 \% \\ \hline \end{gathered}$ | $\begin{gathered} 62 \\ 38.04 \% \end{gathered}$ | $\begin{gathered} 0 \\ 0.00 \% \end{gathered}$ | $\begin{gathered} 96 \\ 66.67 \% \end{gathered}$ | $\begin{gathered} 48 \\ 33.33 \% \end{gathered}$ | $\begin{gathered} 0 \\ 0.00 \% \end{gathered}$ | $\begin{gathered} 0 \\ 0.00 \% \end{gathered}$ | $\begin{gathered} 0 \\ 0.00 \% \end{gathered}$ | $\begin{gathered} 28 \\ 20.74 \% \end{gathered}$ | $\begin{gathered} 107 \\ 79.26 \% \end{gathered}$ | $\begin{gathered} 0 \\ 0.00 \% \end{gathered}$ | 442 |
| PEAK HR : | 04:15 PM - 05:15 PM |  |  |  | $\begin{gathered} 55 \\ 0.764 \end{gathered}$ | $\begin{gathered} 0 \\ 0.000 \end{gathered}$ | $\begin{gathered} 37 \\ 0.925 \\ 2 \end{gathered}$ | $\begin{gathered} 0 \\ 0.000 \end{gathered}$ | $\begin{gathered} 47 \\ 0.783 \end{gathered}$ | $\begin{gathered} 18 \\ 0.900 \\ 0.813 \end{gathered}$ | $\begin{gathered} 0 \\ 0.000 \end{gathered}$ | $\begin{gathered} 0 \\ 0.000 \end{gathered}$ | $\begin{gathered} 0 \\ 0.000 \end{gathered}$ | $\begin{gathered} 17 \\ 0.607 \end{gathered}$ <br> 0.880 | $\begin{gathered} 64 \\ 0.842 \\ 0 \end{gathered}$ | $\begin{gathered} 0 \\ 0.000 \end{gathered}$ | $\begin{gathered} \hline \text { TOTAL } \\ 238 \\ 0.875 \end{gathered}$ |
| PEAK HR VOL: | 0 | 0 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PEAK HR FACTOR : | 0.000 | 0.000 | 0.000 | 0.000 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Intersection Turning Movement Count

| Location: SR 447 \& Washeim St \& SR 427 \& Main St <br> City: Wadsworth <br> Control: 1-Way Stop (SB) |  |  |  |  | Passenger Vehicles |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |
| NS/EW Streets: | SR 447 \& Washeim St |  |  |  |  |  |  |  |  |  |  |  | SR 447 \& Washeim St |  |  |  | SR 427 \& Main St |  |  |  | SR 427 \& Main St |  |  |  |  |
| AM | NORTHBOUND |  |  |  | SOUTHBOUND |  |  |  | EASTBOUND |  |  |  | WESTBOUND |  |  |  | TOTAL |
|  | 0 | 0 | 0 | $\begin{gathered} 0 \\ \mathrm{NU} \end{gathered}$ | $\begin{gathered} 0 \\ \text { SL } \end{gathered}$ | $\begin{gathered} 1 \\ \mathrm{ST} \end{gathered}$ | 0 | 0 | $\begin{gathered} 0 \\ \text { EL } \end{gathered}$ | $\begin{gathered} 1 \\ \mathrm{ET} \end{gathered}$ | 0 | 0 | 0 | 1 | 0 | 0 |  |
|  | NL | NT | NR |  |  |  | SR | SU |  |  | ER | EU | WL | WT | WR | wU |  |
| 7:00 AM | 0 | 0 | 0 | 0 | 4 | 0 | 8 | 0 | 5 | 3 | 0 | 0 | 0 | 3 | 12 | 0 | 35 |
| 7:15 AM | 0 | 0 | 0 | 0 | 3 | 0 | 12 | 0 | 8 | 2 | 0 | 0 | 0 | 2 | 15 | 0 | 42 |
| 7:30 AM | 0 | 0 | 0 | 0 | 14 | 0 | 13 | 0 | 12 | 4 | 0 | 0 | 0 | 5 | 14 | 0 | 62 |
| 7:45 AM | 0 | 0 | 0 | 0 | 9 | 0 | 6 | 0 | 17 | 4 | 0 | 0 | 0 | 1 | 22 | 0 | 59 |
| 8:00 AM | 0 | 0 | 0 | 0 | 17 | 0 | 9 | 0 | 4 | 1 | 0 | 0 | 0 | 3 | 14 | 0 | 48 |
| 8:15 AM | 0 | 0 | 0 | 0 | 12 | 0 | 7 | 0 | 8 | 2 | 0 | 0 | 0 | 1 | 14 | 0 | 44 |
| 8:30 AM | 0 | 0 | 0 | 0 | 11 | 0 | 10 | 0 | 9 | 0 | 0 | 0 | 0 | 1 | 5 | 0 | 36 |
| 8:45 AM | 0 | 0 | 0 | 0 | 12 | 0 | 4 | 0 | 3 | 3 | 0 | 0 | 0 | 4 | 7 | 0 | 33 |
|  | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| TOTAL VOLUMES : | 0 | 0 | 0 | 0 | 82 | 0 | 69 | 0 | 66 | 19 | 0 | 0 | 0 | 20 | 103 | 0 | 359 |
| APPROACH \%'s : |  |  |  |  | 54.30\% | 0.00\% | 45.70\% | 0.00\% | 77.65\% | 22.35\% | 0.00\% | 0.00\% | 0.00\% | 16.26\% | 83.74\% | 0.00\% |  |
| PEAK HR : |  | 7:30 AM | 8:30 A |  |  |  |  |  |  |  |  |  |  |  |  |  | TOTAL |
| PEAK HR VOL: | 0 | 0 | 0 | 0 | 52 | 0 | 35 | 0 | 41 | 11 | 0 | 0 | 0 | 10 | 64 | 0 | 213 |
| PEAK HR FACTOR : | 0.000 | 0.000 | 0.000 | 0.000 | 0.765 | 0.000 | 0.673 | 0.000 | 0.603 | 0.688 | 0.000 | 0.000 | 0.000 | 0.500 | 0.727 | 0.000 | 0.859 |
|  |  |  |  |  |  | 0.8 |  |  |  |  |  |  |  | 0.8 |  |  | 0.859 |
|  |  | NORT | OUND |  |  | SOUTH | OUND |  |  | EASTB | UND |  |  | WEST | UND |  |  |
| PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |  |
|  | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 4:00 PM | 0 | 0 | 0 | 0 | 8 | 0 | 8 | 0 | 10 | 6 | 0 | 0 | 0 | 3 | 11 | 0 | 46 |
| 4:15 PM | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 0 | 13 | 5 | 0 | 0 | 0 | 6 | 11 | 0 | 49 |
| 4:30 PM | 0 | 0 | 0 | 0 | 13 | 0 | 9 | 0 | 15 | 5 | 0 | 0 | 0 | 7 | 16 | 0 | 65 |
| 4:45 PM | 0 | 0 | 0 | 0 | 17 | 0 | 8 | 0 | 7 | 3 | 0 | 0 | 0 | 2 | 16 | 0 | 53 |
| 5:00 PM | 0 | 0 | 0 | 0 | 14 | 0 | 9 | 0 | 12 | 4 | 0 | 0 | 0 | 2 | 19 | 0 | 60 |
| 5:15 PM | 0 | 0 | 0 | 0 | 10 | 0 | 5 | 0 | 12 | 8 | 0 | 0 | 0 | 2 | 6 | 0 | 43 |
| 5:30 PM | 0 | 0 | 0 | 0 | 12 | 0 | 5 | 0 | 15 | 6 | 0 | 0 | 0 | 5 | 12 | 0 | 55 |
| 5:45 PM | 0 | 0 | 0 | 0 | 13 | 0 | 5 | 0 | 12 | 8 | 0 | 0 | 0 | 1 | 12 | 0 | 51 |
|  | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| TOTAL VOLUMES : | 0 | 0 | 0 | 0 | 94 | 0 | 56 | 0 | 96 | 45 | 0 | 0 | 0 | 28 | 103 | 0 | 422 |
| APPROACH \%'s : |  |  |  |  | 62.67\% | 0.00\% | 37.33\% | 0.00\% | 68.09\% | 31.91\% | 0.00\% | 0.00\% | 0.00\% | 21.37\% | 78.63\% | 0.00\% |  |
| PEAK HR : |  | 4:15 PM | 5:15 P |  |  |  |  |  |  |  |  |  |  |  |  |  | TOTAL |
| PEAK HR VOL: | 0 | 0 | 0 | 0 | 51 | 0 | 33 | 0 | 47 | 17 | 0 | 0 | 0 | 17 | 62 | 0 | 227 |
| PEAK HR FACTOR : | 0.00 | 0.000 | 0.000 | 0.000 | 0.750 | 0.000 | 0.917 | 0.000 | 0.783 | 0.850 | 0.000 | 0.000 | 0.000 | 0.607 | 0.816 | 0.000 |  |
|  |  |  |  |  |  | 0.8 |  |  |  | 0.8 |  |  |  | 0.8 |  |  | 0.873 |

Intersection Turning Movement Count

| Location: SR 447 \& Washeim St \& SR 427 \& Main St <br> City: Wadsworth <br> Control: 1-Way Stop (SB) |  |  |  |  | Light Trucks |  |  |  |  |  |  |  | Project ID: $18-07321-001$Date: $9 / 25 / 2018$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |
| NS/EW Streets: | SR 447 \& Washeim St |  |  |  |  |  |  |  |  |  |  |  | SR 447 \& Washeim St |  |  |  | SR 427 \& Main St |  |  |  | SR 427 \& Main St |  |  |  |  |
| AM | NORTHBOUND |  |  |  | SOUTHBOUND |  |  |  | EASTBOUND |  |  |  | WESTBOUND |  |  |  | TOTAL |
|  | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |  |
|  | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU |  |
| 7:00 AM | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 7 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 4 |
| 8:00 AM | 0 | 0 | 0 | 0 | 4 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 8 |
| 8:15 AM | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 8:30 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:45 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
|  | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| TOTAL VOLUMES : | 0 | 0 | 0 | 0 | 9 | 0 | 5 | 0 | 4 | 1 | 0 | 0 | 0 | 3 | 5 | 0 | 27 |
| APPROACH \%'s : |  |  |  |  | 64.29\% | 0.00\% | 35.71\% | 0.00\% | 80.00\% | 20.00\% | 0.00\% | 0.00\% | 0.00\% | 37.50\% | 62.50\% | 0.00\% |  |
| PEAK HR : |  | 7:30 AM | 08:30 |  |  |  |  |  |  |  |  |  |  |  |  |  | TOTAL |
| PEAK HR VOL: | 0 | 0 | 0 | 0 | 6 | 0 | 4 | 0 | 2 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 16 |
| PEAK HR FACTOR : | 0.000 | 0.000 | 0.000 | 0.000 | 0.375 | 0.000 | 0.500 | 0.000 | 0.500 | 0.250 | 0.000 | 0.000 | 0.000 | 0.375 | 0.000 | 0.000 |  |
|  |  |  |  |  |  | 0.4 |  |  |  | 0.7 |  |  |  | 0.3 |  |  | 0.500 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NOR | OUND |  |  | SOUTH | OUND |  |  | EASTB | UND |  |  | WEST | OUND |  |  |
| PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |  |
|  | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 4:00 PM | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 |
| 4:30 PM | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 4:45 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:00 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 |
| 5:45 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
|  | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| TOTAL VOLUMES : | 0 | 0 | 0 | 0 | 6 | 0 | 4 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |  | 14 |
| APPROACH \%'s : |  |  |  |  | 60.00\% | 0.00\% | 40.00\% | 0.00\% | 0.00\% | 100.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 100.00\% | 0.00\% |  |
| PEAK HR : |  | 4:15 PM | 05:15 |  |  |  |  |  |  |  |  |  |  |  |  |  | TOTAL |
| PEAK HR VOL: | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 7 |
| PEAK HR FACTOR : | 0.00 | 0.000 | 0.000 | 0.000 | 0.750 | 0.000 | 0.500 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 |  |
|  |  |  |  |  |  | 0.6 |  |  |  |  |  |  |  |  |  |  | 0.875 |

Intersection Turning Movement Count

| Location: SR 447 \& Washeim St \& SR 427 \& Main St City: Wadsworth Control: 1-Way Stop (SB) |  |  |  |  | Medium Trucks $\quad \begin{gathered}\text { Project ID: } 18-07321-001 \\ \text { Date: } 9 / 25 / 2018\end{gathered}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |
| NS/EW Streets: | SR 447 \& Washeim St |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | SR 447 \& Washeim St |  |  |  | SR 427 \& Main St |  |  |  | SR 427 \& Main St |  |  |  |  |
| AM | NORTHBOUND |  |  |  | SOUTHBOUND |  |  |  | EASTBOUND |  |  |  | WESTBOUND |  |  |  |  |
|  | $\begin{gathered} 0 \\ \text { NL } \end{gathered}$ |  | 0 | $\begin{gathered} 0 \\ \mathrm{NU} \end{gathered}$ | $\begin{gathered} 0 \\ \mathrm{SL} \end{gathered}$ |  | $\begin{gathered} 0 \\ \text { SR } \end{gathered}$ | $\begin{gathered} 0 \\ \text { SU } \end{gathered}$ | $\begin{gathered} 0 \\ \text { EL } \end{gathered}$ | $\begin{gathered} 1 \\ \text { ET } \end{gathered}$ | $\begin{gathered} 0 \\ \text { ER } \end{gathered}$ | $\begin{gathered} 0 \\ \text { EU } \end{gathered}$ | $\begin{gathered} 0 \\ \text { WL } \end{gathered}$ | $\begin{gathered} 1 \\ W T \\ \hline \end{gathered}$ | $\begin{gathered} 0 \\ \text { WR } \end{gathered}$ | WU | TOTAL |
|  |  |  | NR |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| TOTAL VOLUMES: APPROACH \%'s: | 0 | 0 | 0 | 0 | $\begin{gathered} 1 \\ 100.00 \% \end{gathered}$ | $\begin{gathered} 0 \\ 0.00 \% \end{gathered}$ | $\begin{gathered} 0 \\ 0.00 \% \end{gathered}$ | $\begin{gathered} 0 \\ 0.00 \% \end{gathered}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| PEAK HR : |  | 7:30 AM | 8:30 A |  |  |  |  |  |  |  |  |  |  |  |  |  | TOTAL |
| PEAK HR VOL: | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| PEAK HR FACTOR : | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | $0.000$ | $50.000$ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORT | OUND |  |  | SOUT | OUND |  |  | EAS | UND |  |  | WES | UND |  |  |
| PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |  |
|  | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| TOTAL VOLUMES: APPROACH \%'s : | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PEAK HR : |  | 4:15 PM | 5:15 P |  |  |  |  |  |  |  |  |  |  |  |  |  | TOTAL |
| PEAK HR VOL : | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PEAK HR FACTOR : | 0.00 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |  |

Intersection Turning Movement Count

| Location: SR 447 \& Washeim St \& SR 427 \& Main St City: Wadsworth Control: 1-Way Stop (SB) |  |  |  |  |  |  |  |  |  |  |  |  |  | ject ID: Date: | $\begin{aligned} & \text { 18-07321-0 } \\ & 9 / 25 / 2018 \end{aligned}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Heavy Trucks |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| NS/EW Streets: | SR 447 \& Washeim St |  |  |  | SR 447 \& Washeim St |  |  |  | SR 427 \& Main St |  |  |  | SR 427 \& Main St |  |  |  |  |
| AM | NORTHBOUND |  |  |  | SOUTHBOUND |  |  |  | EASTBOUND |  |  |  | WESTBOUND |  |  |  |  |
|  | 0NL | $\begin{gathered} 0 \\ \text { NT } \end{gathered}$ | 0 | $\begin{gathered} 0 \\ \mathrm{Nu} \end{gathered}$ | $\begin{gathered} 0 \\ \text { SL } \end{gathered}$ |  | 0 | 0 | 0 | 1 | 0 | 0 | 0 | $\begin{array}{lll}1 & 0 & 0\end{array}$ |  |  | TOTAL |
|  |  |  | NR |  |  |  | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU |  |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 2 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 3 |
| 8:15 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 3 |
| 8:30 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
|  | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| TOTAL VOLUMES : | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 4 | 4 | 0 | 15 |
| APPROACH \%'s : |  |  |  |  | 100.00\% | 0.00\% | 0.00\% | 0.00\% | 50.00\% | 50.00\% | 0.00\% | 0.00\% | 0.00\% | 50.00\% | 50.00\% | 0.00\% |  |
| PEAK HR : |  | 7:30 AM | 8:30 |  |  |  |  |  |  |  |  |  |  |  |  |  | TOTAL |
| PEAK HR VOL: | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 3 | 1 | 0 | 8 |
| PEAK HR FACTOR : | 0.000 | 0.000 | 0.000 | 0.000 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.500 | 0.000 | 0.000 | 0.000 | 0.375 | 0.250 | 0.000 |  |
| PEAK HR FACTOR. |  |  |  |  |  | 0.5 |  |  |  | 0.5 |  |  |  |  |  |  | 0.667 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORT | OUND |  |  | SOUTH | OUND |  |  | EASTB | UND |  |  | WEST | OUND |  |  |
| PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |  |
|  | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 |
| 4:30 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| TOTAL VOLUMES : | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 6 |
| APPROACH \%'s : |  |  |  |  | 33.33\% | 0.00\% | 66.67\% | 0.00\% | 0.00\% | 100.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 100.00\% | 0.00\% |  |
| PEAK HR : |  | 4:15 PM | 5:15 P |  |  |  |  |  |  |  |  |  |  |  |  |  | TOTAL |
| PEAK HR VOL : | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 4 |
| PEAK HR FACTOR : | 0.00 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.500 |
|  |  |  |  |  |  | 0.7 |  |  |  |  |  |  |  |  |  |  | 0.500 |

Intersection Turning Movement Count


Intersection Turning Movement Count


Intersection Turning Movement Count

| Location: SR 447 \& Washeim St \& SR 427 \& Main St <br> City: Wadsworth <br> Control: 1-Way Stop (SB) |  |  |  |  |  |  |  |  |  |  |  |  |  | ject ID: Date: | $\begin{aligned} & 18-07321-c \\ & 9 / 25 / 2018 \end{aligned}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Light Trucks PCE |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| NS/EW Streets: | SR 447 \& Washeim St |  |  |  | SR 447 \& Washeim St |  |  |  | SR 427 \& Main St |  |  |  | SR 427 \& Main St |  |  |  |  |
| AM | NORTHBOUND |  |  |  | SOUTHBOUND |  |  |  | EASTBOUND |  |  |  | WESTBOUND |  |  |  |  |
|  | $\begin{gathered} 0 \\ \mathrm{NL} \end{gathered}$ | $\begin{gathered} 0 \\ \text { NT } \end{gathered}$ | 0 | $\begin{gathered} 0 \\ \mathrm{NU} \\ \hline \end{gathered}$ | $\begin{gathered} 0 \\ \mathrm{SL} \end{gathered}$ | $\begin{aligned} & 1 \\ & \text { ST } \end{aligned}$ | 0 | 0 | 0 | 1 | ER | 0 | 0 | $1 \begin{array}{lll}1 & 0 & 0\end{array}$ |  |  | TOTAL |
|  |  |  | NR |  |  |  | SR | SU | EL | ET |  | EU | WL | WT | WR | WU |  |
| 7:00 AM | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 12 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 7 |
| 8:00 AM | 0 | 0 | 0 | 0 | 6 | 0 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 13 |
| 8:15 AM | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 8:30 AM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 8:45 AM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
|  | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| TOTAL VOLUMES : | 0 | 0 | 0 | 0 | 15 | 0 | ${ }^{9}$ 90\% | 0 | ${ }^{8}$ | 2 | 0 | 0 | 0 | ${ }^{5}$ | ${ }^{8}$ | 0 | 47 |
| APPROACH \%'s : |  |  |  |  | 62.50\% | 0.00\% | 37.50\% | 0.00\% | 80.00\% | 20.00\% | 0.00\% | 0.00\% | 0.00\% | 38.46\% | 61.54\% | 0.00\% |  |
| PEAK HR : |  | 7:30 AM | 8:30 A |  |  |  |  |  |  |  |  |  |  |  |  |  | TOTAL |
| PEAK HR VOL : | 0 | 0 | 0 | 0 | 9 | 0 | 7 | 0 | 4 | 2 | 0 | 0 | 0 | 5 | 0 | 0 | 27 |
| PEAK HR FACTOR : | 0.000 | 0.000 | 0.000 | 0.000 | 0.375 | 0.000 | 0.583 | 0.000 | 0.500 | 0.250 | 0.000 | 0.000 | 0.000 | 0.417 | 0.000 | 0.000 |  |
|  |  |  |  |  |  | 0.4 |  |  |  | 0.7 |  |  |  | 0.4 |  |  | 0.519 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORT | OUND |  |  | SOUTH | OUND |  |  | EAST | UND |  |  | WEST | OUND |  |  |
| PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |  |
|  | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 4:00 PM | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 4 |
| 4:30 PM | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 4:45 PM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 5:00 PM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 4 |
| 5:45 PM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
|  | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| TOTAL VOLUMES : | 0 | 0 | 0 | 0 | 11 | 0 | 8 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 4 | 0 | 27 |
| APPROACH \%'s : |  |  |  |  | 57.89\% | 0.00\% | 42.11\% | 0.00\% | 0.00\% | 100.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 100.00\% | 0.00\% |  |
| PEAK HR : |  | 4:15 PM | 5:15 P |  |  |  |  |  |  |  |  |  |  |  |  |  | TOTAL |
| PEAK HR VOL: | 0 | 0 | 0 | 0 | 6 | 0 | 4 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 14 |
| PEAK HR FACTOR : | 0.00 | 0.000 | 0.000 | 0.000 | 0.750 | 0.000 | 0.500 | 0.000 | 0.000 | 0.250 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.875 |
|  |  |  |  |  |  |  |  |  |  | 0.2 |  |  |  |  |  |  | 0.875 |

Intersection Turning Movement Count


Intersection Turning Movement Count

| Location: SR 447 \& Washeim St \& SR 427 \& Main St <br> City: Wadsworth <br> Control: 1-Way Stop (SB) |  |  |  |  | Heavy Trucks PCE |  |  |  |  |  |  |  | Project ID: $18-07321-001$Date: $9 / 25 / 2018$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |
| NS/EW Streets: | SR 447 \& Washeim St |  |  |  |  |  |  |  |  |  |  |  | SR 447 \& Washeim St |  |  |  | SR 427 \& Main St |  |  |  | SR 427 \& Main St |  |  |  |  |
| AM | NORTHBOUND |  |  |  | SOUTHBOUND |  |  |  |  |  |  |  | WESTBOUND |  |  |  | TOTAL |
|  | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | $\begin{gathered} 0 \\ \text { EL } \end{gathered}$ | $1 \begin{array}{ll}\text { EASTBOU }\end{array}$ |  |  | 0 | 1WT | 0 | $\begin{gathered} 0 \\ \text { WU } \end{gathered}$ |  |
|  | NL | NT | NR | NU | SL | ST | SR | SU |  | ET | ER | EU | WL |  | WR |  |  |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 6 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 6 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 6 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 9 |
| 8:15 AM | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 9 |
| 8:30 AM | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 6 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 |
|  | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| TOTAL VOLUMES : | 0 | 0 | 0 | 0 | ${ }^{9}$ | 0 | 0 | 0 | ${ }^{6}$ | ${ }^{6}$ | 0 | 0 | 0 | 12 | 12 | 0 | 45 |
| APPROACH \%'s : |  |  |  |  | 100.00\% | 0.00\% | 0.00\% | 0.00\% | 50.00\% | 50.00\% | 0.00\% | 0.00\% | 0.00\% | 50.00\% | 50.00\% | 0.00\% |  |
| PEAK HR : |  | 7:30 AM | 08:30 |  |  |  |  |  |  |  |  |  |  |  |  |  | TOTAL |
| PEAK HR VOL: | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 9 | 3 | 0 | 24 |
| PEAK HR FACTOR : | 0.000 | 0.000 | 0.000 | 0.000 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.500 | 0.000 | 0.000 | 0.000 | 0.375 | 0.250 | 0.000 |  |
|  |  |  |  |  |  | 0.5 |  |  |  | 0.50 |  |  |  | 0.5 |  |  | 0.667 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | NORT | OUND |  |  | SOUTH | OUND |  |  | EASTB | UND |  |  | WEST | OUND |  |  |
| PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |  |
|  | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 6 |
| 4:30 PM | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| TOTAL VOLUMES : | 0 | 0 | 0 | 0 | 3 | 0 | 6 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 6 | 0 | 18 |
| APPROACH \%'s : |  |  |  |  | 33.33\% | 0.00\% | 66.67\% | 0.00\% | 0.00\% | 100.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 100.00\% | 0.00\% |  |
| PEAK HR : |  | 4:15 PM | 05:15 |  |  |  |  |  |  |  |  |  |  |  |  |  | TOTAL |
| PEAK HR VOL: | 0 | 0 | 0 | 0 | 3 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 12 |
| PEAK HR FACTOR : | 0.00 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 | 0.500 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.250 | 0.000 |  |
|  |  |  |  |  |  | 0.7 |  |  |  |  |  |  |  |  |  |  | 0.500 |

## SR 447 \& Washeim St \& SR 427 \& Main St

Peak Hour Turning Movement Count

ID: 18-07321-001
City: Wadsworth

| SR 447 \& Washeim St |
| :---: |
| SOUTHBOUND |

Day: Tuesday
Date: 09/25/2018

| AM | 39 | 0 | 61 | 0 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| NOON | 0 | 0 | 0 | 0 |  |
|  | PM | 37 | 0 | 55 | 0 |
|  |  | $\square$ | 4 | $C$ |  |



| 108 | AM |
| :---: | :---: |
| 0 | NOON |
| 111 | PM |

Total Vehicles (NOON)


Total Vehicles (PM)


National Data \& Surveying Services
Intersection Turning Movement Count


| PM | NORTHBOUND |  |  |  | SOUTHBOUND |  |  |  | EASTBOUND |  |  |  | WESTBOUND |  |  |  | TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 0 | $\begin{gathered} 0 \\ \mathrm{NU} \end{gathered}$ | $\begin{gathered} 0 \\ \text { SL } \end{gathered}$ | 1ST | 0 | $\begin{gathered} 0 \\ \text { SU } \\ \hline \end{gathered}$ | $\begin{gathered} 0 \\ \text { EL } \end{gathered}$ | 1ET | $\begin{gathered} 0 \\ \text { ER } \end{gathered}$ | $\begin{gathered} 0 \\ \text { EU } \end{gathered}$ | $\begin{gathered} 0 \\ \text { WL } \end{gathered}$ | $\begin{gathered} 0 \\ \text { WT } \end{gathered}$ | $\begin{gathered} 0 \\ \text { WR } \end{gathered}$ | $\begin{gathered} 0 \\ \text { WU } \end{gathered}$ |  |
|  | NL | NT | NR |  |  |  | SR |  |  |  |  |  |  |  |  |  |  |
| 4:00 PM | 1 | 10 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 26 |
| 4:15 PM | 1 | 17 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 |
| 4:30 PM | 1 | 16 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 37 |
| 4:45 PM | 1 | 10 | 0 | 0 | 0 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 |
| 5:00 PM | 0 | 12 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 |
| 5:15 PM | 1 | 14 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| 5:30 PM | 0 | 14 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| 5:45 PM | 1 | 10 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
|  | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| TOTAL VOLUMES : | 6 | 103 | 0 | 0 | 0 | 121 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 231 |
| APPROACH \%'s : | 5.50\% | 94.50\% | 0.00\% | 0.00\% | 0.00\% | 100.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 100.00\% | 0.00\% |  |  |  |  |  |
| PEAK HR : |  | 4:15 PM | 5:15 PM |  |  |  |  |  |  |  |  |  |  |  |  |  | TOTAL |
| PEAK HR VOL : | 3 | 55 | 0 | 0 | 0 | 81 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 139 |
| PEAK HR FACTOR : | 0.750 | 0.809 | 0.000 | 0.000 | 0.000 | 0.653 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.827 |
|  |  | 0.8 |  |  |  | 0.6 |  |  |  |  |  |  |  |  |  |  | 0.827 |

Intersection Turning Movement Count


Intersection Turning Movement Count


Intersection Turning Movement Count


Intersection Turning Movement Count

| Location: SR 447 \& Olinghouse Rd City: Wadsworth Control: 1-Way Stop (EB) |  |  |  |  |  |  |  |  |  |  |  |  |  | $\begin{aligned} & \text { ject ID: } \\ & \text { Date: } \end{aligned}$ | $\begin{aligned} & 8-07321 \\ & \hline / 25 / 201 \end{aligned}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Heavy Trucks |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| NS/EW Streets: | SR 447 |  |  |  | SR 447 |  |  |  | Olinghouse Rd |  |  |  | Olinghouse Rd |  |  |  |  |
| AM | NORTHBOUND |  |  |  | SOUTHBOUND |  |  |  | EASTBOUND |  |  |  | WESTBOUND |  |  |  | TOTAL |
|  | $\begin{gathered} 0 \\ \mathrm{NL} \end{gathered}$ | 1NT | 0 | 0 | 0 | 1 | 0 | 0 | 0EL | 1ET | 0 | $\begin{gathered} 0 \\ \text { EU } \end{gathered}$ | $0$ | 0 | 0 | $\begin{gathered} 0 \\ \text { WU } \end{gathered}$ |  |
|  |  |  | NR | NU | SL | ST | SR | SU |  |  | ER |  | WL | WT | WR |  |  |
| 7:00 AM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 |
| $\begin{aligned} & 7: 30 \mathrm{AM} \\ & 7: 45 \mathrm{AM} \end{aligned}$ | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
|  | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 1 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 2 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:45 AM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| TOTAL VOLUMES: APPROACH \%'s : | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | $\begin{gathered} \hline \text { WR } \\ 0 \end{gathered}$ | $\begin{gathered} \mathrm{WU} \\ 0 \end{gathered}$ | $\begin{gathered} \hline \text { TOTAL } \\ 7 \end{gathered}$ |
|  | 0 | 4 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  |
|  | 0.00\% | 100.00\% | 0.00\% | 0.00\% | 0.00\% | 100.00\% | 0.00\% | 0.00\% |  |  |  |  |  |  |  |  |  |
| PEAK HR : | 07:15 AM - 08:15 AM |  |  |  | $\begin{gathered} 0 \\ 0.000 \end{gathered}$ | ${ }_{0.250}{ }_{0.250} 0.0000$ |  | $\begin{gathered} 0 \\ 0.000 \end{gathered}$ | $\begin{gathered} 0 \\ 0.000 \end{gathered}$ | $\begin{gathered} 0 \\ 0.000 \end{gathered}$ | $\begin{gathered} 0 \\ 0.000 \end{gathered}$ | $\begin{gathered} 0 \\ 0.000 \end{gathered}$ | $\begin{gathered} 0 \\ 0.000 \end{gathered}$ | $\begin{gathered} 0 \\ 0.000 \end{gathered}$ | $\begin{gathered} 0 \\ 0.000 \end{gathered}$ | $\begin{gathered} 0 \\ 0.000 \end{gathered}$ | $\begin{gathered} \hline \text { TOTAL } \\ 2 \\ 0.500 \end{gathered}$ |
| PEAK HR VOL: | 0 | 1 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PEAK HR FACTOR : | 0.000 | 0.250 | 0.000 | 0.000 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PEAK HR FACTOR. | 0.250 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PM | NORTHBOUND |  |  |  | SOUTHBOUND |  |  |  | EASTBOUND |  |  |  | WESTBOUND |  |  |  |  |
|  | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0EL | $\begin{gathered} 1 \\ \text { ET } \end{gathered}$ | $\begin{gathered} 0 \\ 0 \\ \text { ER } \end{gathered}$ | $\begin{gathered} 0 \\ E U \end{gathered}$ | $\begin{gathered} 0 \\ \text { WL } \end{gathered}$ | $\begin{gathered} 0 \\ \text { WT } \end{gathered}$ | $\begin{gathered} 0 \\ \text { WR } \end{gathered}$ | $\begin{gathered} 0 \\ \text { WU } \end{gathered}$ |  |
|  | NL | NT | NR | NU | SL | ST | SR | SU |  |  |  |  |  |  |  |  |  |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | TOTAL |
| 4:15 PM | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | $0 \quad 0$ |  | 2 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | $0 \quad 0$ |  | 1 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |  |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0000 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| TOTAL VOLUMES: APPROACH \%'s : | $\begin{gathered} \hline \mathrm{NL} \\ 0 \\ 0.00 \% \end{gathered}$ |  | $\begin{gathered} \hline \text { NR } \\ 0 \\ 0.00 \% \end{gathered}$ | $\begin{aligned} & \hline \text { NU } \\ & 0 \\ & 0.00 \% \end{aligned}$ | $\begin{aligned} & \text { SL } \\ & 0 \\ & 0.00 \% \end{aligned}$ | $\begin{gathered} \hline \text { ST } \\ 3 \\ 100.00 \% \\ \hline \end{gathered}$ | $\begin{aligned} & \hline \text { SR } \\ & 0 \\ & 0.00 \% \end{aligned}$ | $\begin{aligned} & \text { SU } \\ & 0 \\ & 0.00 \% \end{aligned}$ | EL0 | $\begin{gathered} \hline \mathrm{ET} \\ 0 \end{gathered}$ | $\begin{gathered} \hline \text { ER } \\ 0 \end{gathered}$ | $\begin{gathered} \text { EU } \\ 0 \end{gathered}$ | $\begin{gathered} \hline \text { WL } \\ 0 \end{gathered}$ | $\begin{gathered} \hline \text { WT } \\ 0 \end{gathered}$ | WR0 | $\begin{gathered} \hline \text { WU } \\ 0 \end{gathered}$ | $\begin{gathered} \hline \text { TOTAL } \\ \hline \end{gathered}$ |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PEAK HR : | 04:15 PM - 05:15 PM |  |  |  | 00.000 | 30.7500. |  |  |  |  |  |  |  |  |  |  | TOTAL |
| PEAK HR VOL : | 0 | 1 | 0 | 0 |  |  | $\begin{gathered} 0 \\ 0.000 \\ 0 \\ \hline \end{gathered}$ | $\begin{gathered} 0 \\ 0.000 \end{gathered}$ | $\begin{gathered} 0 \\ 0.000 \end{gathered}$ | $0$ | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| PEAK HR FACTOR : | 0.00 | 0.250 | 0.000 | 0.000 |  |  |  |  |  | $0.000$ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.500 |
|  |  | 0.2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.500 |

Intersection Turning Movement Count


| PM | NORTHBOUND |  |  |  | SOUTHBOUND |  |  |  | EASTBOUND |  |  |  | WESTBOUND |  |  |  | TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 0 | 0 | 0 | $\begin{gathered} 0 \\ \mathrm{SL} \end{gathered}$ | 1ST | 0SR | $\begin{gathered} 0 \\ \text { SU } \end{gathered}$ | $\begin{gathered} 0 \\ \text { EL } \end{gathered}$ | 1ET | $\begin{gathered} 0 \\ \text { ER } \end{gathered}$ | $\begin{gathered} 0 \\ \text { EU } \end{gathered}$ | $\begin{gathered} 0 \\ \text { WL } \end{gathered}$ | $\begin{gathered} 1 \\ \text { WT } \end{gathered}$ | WR | $\begin{gathered} 0 \\ \text { WU } \end{gathered}$ |  |
|  | NL | NT | NR | NU |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4:00 PM | 1 | 10 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 27 |
| 4:15 PM | 1 | 20 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 37 |
| 4:30 PM | 1 | 16 | 0 | 0 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 40 |
| 4:45 PM | 1 | 10 | 0 | 0 | 0 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 45 |
| 5:00 PM | 0 | 12 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 |
| 5:15 PM | 1 | 14 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| 5:30 PM | 0 | 15 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 |
| 5:45 PM | 1 | 10 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
|  | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| TOTAL VOLUMES : | 6 | 107 | 0 | 0 | 0 | 133 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 247 |
| APPROACH \%'s : | 5.31\% | 94.69\% | 0.00\% | 0.00\% | 0.00\% | 100.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 100.00\% | 0.00\% |  |  |  |  |  |
| PEAK HR : |  | 4:15 PM - | 5:15 PM |  |  |  |  |  |  |  |  |  |  |  |  |  | TOTAL |
| PEAK HR VOL : | 3 | 58 | 0 | 0 | 0 | 91 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 152 |
| PEAK HR FACTOR : | 0.75 | 0.725 | 0.000 | 0.000 | 0.000 | 0.669 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |  |
|  |  | 0.7 |  |  |  | 0.6 |  |  |  |  |  |  |  |  |  |  | 0.844 |

Intersection Turning Movement Count

| Location: SR 447 \& Olinghouse Rd City: Wadsworth Control: 1-Way Stop (EB) |  |  |  |  |  |  |  |  |  |  |  |  |  | $\begin{aligned} & \text { ject ID: } \\ & \text { Date: } \end{aligned}$ | $\begin{aligned} & 8-07321 \\ & \hline / 25 / 201 \end{aligned}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Passenger Vehicles PCE |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| NS/EW Streets: | SR 447 |  |  |  | SR 447 |  |  |  | Olinghouse Rd |  |  |  | Olinghouse Rd |  |  |  |  |
| AM | NORTHBOUND |  |  |  | SOUTHBOUND |  |  |  | EASTBOUND |  |  |  | WESTBOUND |  |  |  |  |
|  | 0$N L$ |  | 0 | $\begin{gathered} 0 \\ \mathrm{NU} \end{gathered}$ | 0SL |  | $\begin{gathered} 0 \\ \text { SR } \end{gathered}$ | $\begin{gathered} 0 \\ \text { SU } \end{gathered}$ | $\begin{gathered} 0 \\ \text { EL } \end{gathered}$ | $\begin{gathered} 1 \\ \text { ET } \end{gathered}$ | $\begin{gathered} 0 \\ \text { ER } \\ \hline \end{gathered}$ | $\begin{gathered} 0 \\ \text { FI } \end{gathered}$ | $\begin{gathered} 0 \\ \text { WL } \end{gathered}$ | $\begin{gathered} 1 \\ \text { WT } \\ \hline \end{gathered}$ | 0WR | WU | TOTAL |
|  |  |  | NR |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7:00 AM | 0 | 10 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| 7:15 AM | 0 | 9 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| 7:30 AM | 0 | 19 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 |
| 7:45 AM | 0 | 24 | 0 | 1 | 0 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 32 |
| 8:00 AM | 0 | 13 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| 8:15 AM | 1 | 6 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 8:30 AM | 0 | 11 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| 8:45 AM | 0 | 6 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
|  | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| TOTAL VOLUMES: APPROACH \%'s : | 1 | 98 | 0 | 1 | 0 | 60 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 161 |
|  | 1.00\% | 98.00\% | 0.00\% | 1.00\% | 0.00\% | 100.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 100.00\% | 0.00\% |  |  |  |  |  |
| PEAK HR : | 07:15 AM - 08:15 AM |  |  |  | 00.000 | 350.5830.5 | $\begin{gathered} { }^{0} 0 \\ 0.000 \\ \hline \end{gathered}$ | $\begin{gathered} 0 \\ 0.000 \end{gathered}$ | $\begin{gathered} 0 \\ 0.000 \end{gathered}$ | $\begin{array}{cc} 0_{0} & 1 \\ 0.000 \\ 0.250 \\ \hline \end{array}$ |  | $\begin{gathered} 0 \\ 0.000 \end{gathered}$ | $\begin{gathered} 0 \\ 0.000 \\ \hline \end{gathered}$ | $\begin{gathered} 0 \\ 0.000 \end{gathered}$ |  |  | TOTAL |
| PEAK HR VOL: | 0 | 65 | 0 | 1 |  |  |  |  |  |  |  | 0 |  |  | 0 | 102 |  |
| PEAK HR FACTOR : | 0.000 | 0.677 | 0.000 | 0.250 |  |  |  |  |  |  |  | 0.000 |  |  | 0.000 | 0.750 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.750 |  |


| PM | NORTHBOUND |  |  |  | SOUTHBOUND |  |  |  | EASTBOUND |  |  |  | WESTBOUND |  |  |  | TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 0 | 0 | 0 | $\begin{aligned} & 0 \\ & \mathrm{SL} \end{aligned}$ | 1ST | 0 | 0SU | $\begin{gathered} 0 \\ \text { EL } \end{gathered}$ | 1ET | $\begin{gathered} 0 \\ \text { ER } \end{gathered}$ | $\begin{gathered} 0 \\ \text { EU } \end{gathered}$ | $\begin{gathered} 0 \\ \text { WL } \end{gathered}$ | $\begin{gathered} 1 \\ \text { WT } \end{gathered}$ | $\begin{gathered} 0 \\ \text { WR } \end{gathered}$ | $\begin{gathered} 0 \\ \text { Wu } \end{gathered}$ |  |
|  | NL | NT | NR | NU |  |  | SR |  |  |  |  |  |  |  |  |  |  |
| 4:00 PM | 1 | 10 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 24 |
| 4:15 PM | 1 | 15 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 |
| 4:30 PM | 1 | 16 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 |
| 4:45 PM | 1 | 10 | 0 | 0 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 40 |
| 5:00 PM | 0 | 12 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 |
| 5:15 PM | 1 | 14 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| 5:30 PM | 0 | 13 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 |
| 5:45 PM | 1 | 10 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
|  | NL | NT | NR | NU | SL | ST | SR | SU | EL | ET | ER | EU | WL | WT | WR | WU | TOTAL |
| TOTAL VOLUMES : | 6 | 100 | 0 | 0 | 0 | 110 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 217 |
| APPROACH \%'s : | 5.66\% | 94.34\% | 0.00\% | 0.00\% | 0.00\% | 100.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 100.00\% | 0.00\% |  |  |  |  |  |
| PEAK HR : |  | 4:15 PM - | 5:15 PM |  |  |  |  |  |  |  |  |  |  |  |  |  | TOTAL |
| PEAK HR VOL : | 3 | 53 | 0 | 0 | 0 | 73 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 129 |
| PEAK HR FACTOR : | 0.75 | 0.828 | 0.000 | 0.000 | 0.000 | 0.629 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |  |
|  |  | 0.8 |  |  |  | 0.6 |  |  |  |  |  |  |  |  |  |  | 0.806 |

Intersection Turning Movement Count


Intersection Turning Movement Count


Intersection Turning Movement Count


## SR 447 \& Olinghouse Rd

Peak Hour Turning Movement Count


## VOLUME

SR 447 Bet. 5th St \& Pyramid St
Day: Tuesday
Date: 9/25/2018
City: Wadsworth
Project \#: NV18_7322_001


## Appendix B LOS Worksheets

| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 5.6 |  |  |  |  |  |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations |  | -1 | F |  | Mr |  |
| Traffic Vol, veh/h | 49 | 16 | 18 | 75 | 70 | 45 |
| Future Vol, veh/h | 49 | 16 | 18 | 75 | 70 | 45 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, \# | - | 0 | 0 | - | 0 | - |
| Grade, \% | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 93 | 93 | 93 | 93 |
| Heavy Vehicles, \% | 5 | 21 | 38 | 2 | 15 | 10 |
| Mvmt Flow | 53 | 17 | 19 | 81 | 75 | 48 |


| Major/Minor | Major1 |  | Major2 |  | Minor2 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Conflicting Flow All | 100 | 0 | - | 0 | 183 | 60 |
| Stage 1 | - | - | - - | - | 60 | - |
| Stage 2 | - | - | - - | - | 123 | - |
| Critical Hdwy | 4.15 | - | - - | - | 6.55 | 6.3 |
| Critical Hdwy Stg 1 | - | - | - - | - | 5.55 | - |
| Critical Hdwy Stg 2 | - | - | - - | - | 5.55 | - |
| Follow-up Hdwy | 2.245 | - | - - | - | 3.635 | 3.39 |
| Pot Cap-1 Maneuver | 1474 | - | - | - | 778 | 983 |
| Stage 1 | - | - | - - | - | 930 | - |
| Stage 2 | - | - | - - | - | 871 | - |
| Platoon blocked, \% |  | - | - - | - |  |  |
| Mov Cap-1 Maneuver | 1474 | - | - - | - | 750 | 983 |
| Mov Cap-2 Maneuver | - | - | - - | - | 750 | - |
| Stage 1 | - | - | - | - | 897 | - |
| Stage 2 | - | - | - - | - | 871 | - |
|  |  |  |  |  |  |  |
| Approach | EB |  | WB |  | SB |  |
| HCM Control Delay, s | 5.7 |  | 0 |  | 10.1 |  |
| HCM LOS |  |  |  |  | B |  |
|  |  |  |  |  |  |  |
| Minor Lane/Major Mvmt |  | EBL | EBT | WBT | WBR SBLn1 |  |
| Capacity (veh/h) |  | 1474 | - | - | - | 827 |
| HCM Lane V/C Ratio |  | 0.036 | - | - | - | 0.15 |
| HCM Control Delay (s) |  | 7.5 | - | - | - | 10.1 |
| HCM Lane LOS |  | A | A | - | - | B |
| HCM 95th \%tile Q(veh) |  | 0.1 | A | - | - | 0.5 |


| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 0.1 |  |  |  |  |  |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | r |  |  | $\mathbf{A}$ | F |  |
| Traffic Vol, veh/h | 0 | 1 | 1 | 79 | 51 | 0 |
| Future Vol, veh/h | 0 | 1 | 1 | 79 | 51 | 0 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, \# | 0 | - | - | 0 | 0 | - |
| Grade, \% | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 80 | 80 | 80 | 80 | 80 | 80 |
| Heavy Vehicles, \% | 0 | 0 | 0 | 6 | 20 | 0 |
| Mvmt Flow | 0 | 1 | 1 | 99 | 64 | 0 |



| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 6.3 |  |  |  |  |  |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations |  | -1 | F |  | Mr |  |
| Traffic Vol, veh/h | 114 | 16 | 18 | 90 | 70 | 50 |
| Future Vol, veh/h | 114 | 16 | 18 | 90 | 70 | 50 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, \# | - | 0 | 0 | - | 0 | - |
| Grade, \% | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 93 | 93 | 93 | 93 |
| Heavy Vehicles, \% | 6 | 21 | 38 | 1 | 15 | 17 |
| Mvmt Flow | 123 | 17 | 19 | 97 | 75 | 54 |


| Major/Minor | Major1 |  | Major2 |  | Minor2 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Conflicting Flow All | 116 | 0 | - | 0 | 331 | 68 |
| Stage 1 | - | - | - - | - | 68 | - |
| Stage 2 | - | - | - - | - | 263 | - |
| Critical Hdwy | 4.16 | - | - - | - | 6.55 | 6.37 |
| Critical Hdwy Stg 1 | - | - | - - | - | 5.55 | - |
| Critical Hdwy Stg 2 | - | - | - - | - | 5.55 | - |
| Follow-up Hdwy | 2.254 | - | - - | - | 3.635 | 3.453 |
| Pot Cap-1 Maneuver | 1448 | - | - | - | 638 | 955 |
| Stage 1 | - | - | - - | - | 923 | - |
| Stage 2 | - | - | - - | - | 752 | - |
| Platoon blocked, \% |  | - | - - | - |  |  |
| Mov Cap-1 Maneuver | 1448 | - | - - | - | 583 | 955 |
| Mov Cap-2 Maneuver | - | - | - - | - | 583 | - |
| Stage 1 | - | - | - | - | 844 | - |
| Stage 2 | - | - | - - | - | 752 | - |
|  |  |  |  |  |  |  |
| Approach | EB |  | WB |  | SB |  |
| HCM Control Delay, s | 6.8 |  | 0 |  | 11.3 |  |
| HCM LOS |  |  |  |  | B |  |
|  |  |  |  |  |  |  |
| Minor Lane/Major Mvmt |  | EBL | EBT | WBT | WBR SBLn1 |  |
| Capacity (veh/h) |  | 1448 | - | - | - | 696 |
| HCM Lane V/C Ratio |  | 0.085 | - | - | - | 0.185 |
| HCM Control Delay (s) |  | 7.7 | 0 | - | - | 11.3 |
| HCM Lane LOS |  | A | A | - | - | B |
| HCM 95th \%tile Q(veh) |  | 0.3 | A | - | - | 0.7 |


| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 3.1 |  |  |  |  |  |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | Yr |  |  | -1 | F |  |
| Traffic Vol, veh/h | 0 | 6 | 81 | 79 | 51 | 0 |
| Future Vol, veh/h | 0 | 6 | 81 | 79 | 51 | 0 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, \# | 0 | - | - | 0 | 0 | - |
| Grade, \% | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 80 | 80 | 80 | 80 | 80 | 80 |
| Heavy Vehicles, \% | 0 | 65 | 5 | 6 | 20 | 0 |
| Mvmt Flow | 0 | 8 | 101 | 99 | 64 | 0 |


| Major/Minor M | Minor2 |  | Major1 |  | Major2 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Conflicting Flow All | 365 | 64 | 64 | 0 | - | 0 |
| Stage 1 | 64 | - | - | - | - | - |
| Stage 2 | 301 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.85 | 4.15 | - | - | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3.5 | 3.885 | 2.245 | - | - | - |
| Pot Cap-1 Maneuver | 639 | 849 | 1519 | - | - | - |
| Stage 1 | 964 | - | - | - | - | - |
| Stage 2 | 755 | - | - | - | - | - |
| Platoon blocked, \% |  |  |  | - | - | - |
| Mov Cap-1 Maneuver | 594 | 849 | 1519 | - | - | - |
| Mov Cap-2 Maneuver | 594 | - | - | - | - | - |
| Stage 1 | 897 | - | - | - | - | - |
| Stage 2 | 755 | - | - | - | - | - |
|  |  |  |  |  |  |  |
| Approach | EB |  | NB |  | SB |  |
| HCM Control Delay, s | 9.3 |  | 3.8 |  | 0 |  |
| HCM LOS | A |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Minor Lane/Major Mvmt |  | NBL | NBT EBLn1 |  | SBT | SBR |
| Capacity (veh/h) |  | 1519 | - | 849 | - | - |
| HCM Lane V/C Ratio |  | 0.067 | - | 0.009 | - | - |
| HCM Control Delay (s) |  | 7.5 | 0 | 9.3 | - | - |
| HCM Lane LOS |  | A | A | A | - | - |
| HCM 95th \%tile Q(veh) |  | 0.2 | - | 0 | - | - |



| Major/Minor | Major1 |  | Major2 |  | Minor2 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Conflicting Flow All | 116 | 0 | - | 0 | 331 | 68 |
| Stage 1 | - | - | - | - | 68 | - |
| Stage 2 | - | - | - | - | 263 | - |
| Critical Hdwy | 4.16 | - | - | - | 6.55 | 6.37 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.55 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.55 | - |
| Follow-up Hdwy | 2.254 | - | - | - | 3.635 | 3.453 |
| Pot Cap-1 Maneuver | 1448 | - | - | - | 638 | 955 |
| Stage 1 | - | - | - | - | 923 | - |
| Stage 2 | - | - | - | - | 752 | - |
| Platoon blocked, \% |  | - | - | - |  |  |
| Mov Cap-1 Maneuver | 1448 | - | - | - | 583 | 955 |
| Mov Cap-2 Maneuver | - | - | - | - | 583 | - |
| Stage 1 | - | - | - | - | 844 | - |
| Stage 2 | - | - | - | - | 752 | - |
|  |  |  |  |  |  |  |
| Approach | EB |  | WB |  | SB |  |
| HCM Control Delay, s | 6.8 |  | 0 |  | 11.3 |  |
| HCM LOS |  |  |  |  | B |  |
|  |  |  |  |  |  |  |
| Minor Lane/Major Mvmt |  | EBL | EBT | WBT | WBR SBLn1 |  |
| Capacity (veh/h) |  | 1448 | - | - | - | 696 |
| HCM Lane V/C Ratio |  | 0.085 | - | - | - | 0.185 |
| HCM Control Delay (s) |  | 7.7 | 0 | - | - | 11.3 |
| HCM Lane LOS |  | A | A | - | - | B |
| HCM 95th \%tile Q(veh) |  | 0.3 | - | - | - | 0.7 |


| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 3.1 |  |  |  |  |  |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | r |  |  | $\mathbf{A}$ | F |  |
| Traffic Vol, veh/h | 0 | 6 | 81 | 79 | 51 | 0 |
| Future Vol, veh/h | 0 | 6 | 81 | 79 | 51 | 0 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, \# | 0 | - | - | 0 | 0 | - |
| Grade, \% | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 80 | 80 | 80 | 80 | 80 | 80 |
| Heavy Vehicles, \% | 0 | 65 | 5 | 6 | 20 | 0 |
| Mvmt Flow | 0 | 8 | 101 | 99 | 64 | 0 |



| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 58.3 |  |  |  |  |  |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations |  | -1 | F |  | Mr |  |
| Traffic Vol, veh/h | 59 | 21 | 20 | 74 | 213 | 647 |
| Future Vol, veh/h | 59 | 21 | 20 | 74 | 213 | 647 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, \# | - | 0 | 0 | - | 0 | - |
| Grade, \% | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 88 | 88 | 88 | 88 | 88 | 88 |
| Heavy Vehicles, \% | 7 | 6 | 0 | 3 | 2 | 1 |
| Mvmt Flow | 67 | 24 | 23 | 84 | 242 | 735 |


| Major/Minor | Major1 |  | Major2 |  | Minor2 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Conflicting Flow All | 107 | 0 | - | 0 | 223 | 65 |
| Stage 1 | - | - | - - | - | 65 | - |
| Stage 2 | - | - | - - | - | 158 | - |
| Critical Hdwy | 4.17 | - | - - | - | 6.42 | 6.21 |
| Critical Hdwy Stg 1 | - | - | - - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | 2.263 | - | - - | - | 3.518 | 3.309 |
| Pot Cap-1 Maneuver | 1453 | - | - | - | 765 | 1002 |
| Stage 1 | - | - | - - | - | 958 | - |
| Stage 2 | - | - | - - | - | 871 | - |
| Platoon blocked, \% |  | - | - - | - |  |  |
| Mov Cap-1 Maneuver | 1453 | - | - - | - | 729 | 1002 |
| Mov Cap-2 Maneuver | - | - | - - | - | 729 | - |
| Stage 1 | - | - | - | - | 913 | - |
| Stage 2 | - | - | - - | - | 871 | - |
|  |  |  |  |  |  |  |
| Approach | EB |  | WB |  | SB |  |
| HCM Control Delay, s | 5.6 |  | 0 |  | 69.6 |  |
| HCM LOS |  |  |  |  | F |  |
|  |  |  |  |  |  |  |
| Minor Lane/Major Mvmt |  | EBL | EBT | WBT | WBR SBLn1 |  |
| Capacity (veh/h) |  | 1453 | - | - | - | 917 |
| HCM Lane V/C Ratio |  | 0.046 | - | - | - | 1.066 |
| HCM Control Delay (s) |  | 7.6 | 0 | - | - | 69.6 |
| HCM Lane LOS |  | A | A | - | - | F |
| HCM 95th \%tile Q(veh) |  | 0.1 | , | - | - | 23.3 |


| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 34.7 |  |  |  |  |  |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | 1 |  |  | -1 | F |  |
| Traffic Vol, veh/h | 0 | 755 | 8 | 63 | 93 | 0 |
| Future Vol, veh/h | 0 | 755 | 8 | 63 | 93 | 0 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, \# | 0 | - | - | 0 | 0 | - |
| Grade, \% | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 83 | 83 | 83 | 83 | 83 | 83 |
| Heavy Vehicles, \% | 0 | 1 | 47 | 4 | 10 | 0 |
| Mvmt Flow | 0 | 910 | 10 | 76 | 112 | 0 |



HCM LOS E

| Minor Lane/Major Mvmt | NBL | NBT EBLn1 | SBT | SBR |
| :--- | ---: | ---: | ---: | :---: |
| Capacity (veh/h) | 1240 | - | 944 | - |
| - |  |  |  |  |
| HCM Lane V/C Ratio | 0.008 | - | 0.964 | - |
| HCM Control Delay (s) | 7.9 | 0 | 42.1 | - |
| HCM Lane LOS | A | A | E | - |
| HCM 95th \%tile Q(veh) | 0 | - | 16.4 | - |



| Major/Minor | Major1 |  | Major2 |  | Minor2 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Conflicting Flow All | 188 | 0 | - | 0 | 949 | 104 |
| Stage 1 | - | - | - | - | 104 | - |
| Stage 2 | - | - | - | - | 845 | - |
| Critical Hdwy | 4.12 | - | - | - | 6.53 | 6.36 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.53 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.53 | - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.617 | 3.444 |
| Pot Cap-1 Maneuver | 1386 | - | - | - | 276 | 914 |
| Stage 1 | - | - | - | - | 893 | - |
| Stage 2 | - | - | - |  | 403 | - |
| Platoon blocked, \% |  | - | - | - |  |  |
| Mov Cap-1 Maneuver | 1386 | - | - | - | 193 | 914 |
| Mov Cap-2 Maneuver | - | - | - | - | 193 | - |
| Stage 1 | - | - | - | - | 623 | - |
| Stage 2 | - | - | - |  | 403 | - |
|  |  |  |  |  |  |  |
| Approach | EB |  | WB |  | SB |  |
| HCM Control Delay, s | 8.4 |  | 0 |  | 27.4 |  |
| HCM LOS |  |  |  |  | D |  |
|  |  |  |  |  |  |  |
| Minor Lane/Major Mvmt |  | EBL | EBT | WBT WBR SBLn1 |  |  |
| Capacity (veh/h) |  | 1386 | - | - | - - | 287 |
| HCM Lane V/C Ratio |  | 0.299 | - | - | - | 0.45 |
| HCM Control Delay (s) |  | 8.7 | 0 | - | - | 27.4 |
| HCM Lane LOS |  | A | A | - | - | D |
| HCM 95th \%tile Q(veh) |  | 1.3 | - | - | - | 2.2 |


| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 6.6 |  |  |  |  |  |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | r |  |  | - | 个 |  |
| Traffic Vol, veh/h | 0 | 6 | 419 | 79 | 51 | 0 |
| Future Vol, veh/h | 0 | 6 | 419 | 79 | 51 | 0 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, \# | 0 | - | - | 0 | 0 | - |
| Grade, \% | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 80 | 80 | 80 | 80 | 80 | 80 |
| Heavy Vehicles, \% | 0 | 65 | 1 | 5 | 18 | 0 |
| Mvmt Flow | 0 | 8 | 524 | 99 | 64 | 0 |



| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |


| Major/Minor $\quad$ N | Major1 |  | Major2 |  | Minor2 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Conflicting Flow All | 107 | 0 | - | 0 | 223 | 65 |
| Stage 1 | - | - | - | - | 65 | - |
| Stage 2 | - | - | - | - | 158 | - |
| Critical Hdwy | 4.17 | - | - | - | 6.43 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.43 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.43 | - |
| Follow-up Hdwy | 2.263 | - | - | - | 3.527 | 3.318 |
| Pot Cap-1 Maneuver | 1453 | - | - | - | 763 | 999 |
| Stage 1 | - | - | - | - | 955 | - |
| Stage 2 | - | - | - |  | 868 | - |
| Platoon blocked, \% |  | - | - | - |  |  |
| Mov Cap-1 Maneuver | 1453 | - | - | - | 727 | 999 |
| Mov Cap-2 Maneuver | - | - | - | - | 727 | - |
| Stage 1 | - | - | - | - | 910 | - |
| Stage 2 | - | - | - |  | 868 | - |
|  |  |  |  |  |  |  |
| Approach | EB |  | WB |  | SB |  |
| HCM Control Delay, s | 5.6 |  | 0 |  | 16.3 |  |
| HCM LOS |  |  |  |  | C |  |
|  |  |  |  |  |  |  |
| Minor Lane/Major Mvmt |  | EBL | EBT | WBT | WBR SBLn1 |  |
| Capacity (veh/h) |  | 1453 | - | - | - | 905 |
| HCM Lane V/C Ratio |  | 0.046 | - | - | - | 0.658 |
| HCM Control Delay (s) |  | 7.6 | 0 | - | - | 16.3 |
| HCM Lane LOS |  | A | A | - | - | C |
| HCM 95th \%tile Q(veh) |  | 0.1 | - | - | - | 5.1 |


| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 9.5 |  |  |  |  |  |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | Y |  |  | -1 | F |  |
| Traffic Vol, veh/h | 0 | 418 | 8 | 63 | 93 | 0 |
| Future Vol, veh/h | 0 | 418 | 8 | 63 | 93 | 0 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, \# | 0 | - | - | 0 | 0 | - |
| Grade, \% | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 83 | 83 | 83 | 83 | 83 | 83 |
| Heavy Vehicles, \% | 0 | 1 | 47 | 3 | 9 | 0 |
| Mvmt Flow | 0 | 504 | 10 | 76 | 112 | 0 |



HCM LOS B

| Minor Lane/Major Mvmt | NBL | NBT EBLn1 | SBT | SBR |  |
| :--- | ---: | ---: | ---: | ---: | :--- |
| Capacity (veh/h) | 1240 | -944 | - | - |  |
| HCM Lane V/C Ratio | 0.008 | -0.533 | - | - |  |
| HCM Control Delay (s) | 7.9 | 0 | 13.1 | - | - |
| HCM Lane LOS | A | A | B | - | - |
| HCM 95th \%tile Q(veh) | 0 | - | 3.2 | - | - |


| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 6.2 |  |  |  |  |  |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations |  | -1 | F |  | Mr |  |
| Traffic Vol, veh/h | 106 | 16 | 18 | 88 | 70 | 50 |
| Future Vol, veh/h | 106 | 16 | 18 | 88 | 70 | 50 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, \# | - | 0 | 0 | - | 0 | - |
| Grade, \% | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 93 | 93 | 93 | 93 | 93 | 93 |
| Heavy Vehicles, \% | 6 | 21 | 38 | 1 | 15 | 17 |
| Mvmt Flow | 114 | 17 | 19 | 95 | 75 | 54 |


| Major/Minor M | Major1 |  | Major2 |  | Minor2 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Conflicting Flow All | 114 | 0 | - | 0 | 312 | 67 |
| Stage 1 | - | - | - - | - | 67 | - |
| Stage 2 | - | - | - - | - | 245 | - |
| Critical Hdwy | 4.16 | - | - | - | 6.55 | 6.37 |
| Critical Hdwy Stg 1 | - | - | - - | - | 5.55 | - |
| Critical Hdwy Stg 2 | - | - | - - | - | 5.55 | - |
| Follow-up Hdwy | 2.254 | - | - - | - | 3.635 | 3.453 |
| Pot Cap-1 Maneuver | 1451 | - | - - | - | 654 | 956 |
| Stage 1 | - | - | - - | - | 924 | - |
| Stage 2 | - | - | - - | - | 766 | - |
| Platoon blocked, \% |  | - | - - | - |  |  |
| Mov Cap-1 Maneuver | 1451 | - | - - | - | 602 | 956 |
| Mov Cap-2 Maneuver | - | - | - - | - | 602 | - |
| Stage 1 | - | - | - - | - | 851 | - |
| Stage 2 | - | - | - - | - | 766 | - |
|  |  |  |  |  |  |  |
| Approach | EB |  | WB |  | SB |  |
| HCM Control Delay, s | 6.7 |  | 0 |  | 11.2 |  |
| HCM LOS |  |  |  |  | B |  |
|  |  |  |  |  |  |  |
| Minor Lane/Major Mvmt |  | EBL | EBT | WBT | WBR SBLn1 |  |
| Capacity (veh/h) |  | 1451 | - | - | - | 712 |
| HCM Lane V/C Ratio |  | 0.079 | - | - | - | 0.181 |
| HCM Control Delay (s) |  | 7.7 | 0 | - | - | 11.2 |
| HCM Lane LOS |  | A | A | - | - | B |
| HCM 95th \%tile Q(veh) |  | 0.3 | A | - | - | 0.7 |


| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 2.9 |  |  |  |  |  |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | r |  |  | - | 个 |  |
| Traffic Vol, veh/h | 0 | 6 | 71 | 79 | 51 | 0 |
| Future Vol, veh/h | 0 | 6 | 71 | 79 | 51 | 0 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, \# | 0 | - | - | 0 | 0 | - |
| Grade, \% | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 80 | 80 | 80 | 80 | 80 | 80 |
| Heavy Vehicles, \% | 0 | 65 | 6 | 6 | 20 | 0 |
| Mvmt Flow | 0 | 8 | 89 | 99 | 64 | 0 |



| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 22.6 |  |  |  |  |  |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations |  | -1 | F |  | Mr |  |
| Traffic Vol, veh/h | 59 | 21 | 20 | 74 | 179 | 510 |
| Future Vol, veh/h | 59 | 21 | 20 | 74 | 179 | 510 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, \# | - | 0 | 0 | - | 0 | - |
| Grade, \% | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 88 | 88 | 88 | 88 | 88 | 88 |
| Heavy Vehicles, \% | 7 | 6 | 0 | 3 | 3 | 2 |
| Mvmt Flow | 67 | 24 | 23 | 84 | 203 | 580 |



| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 14.9 |  |  |  |  |  |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | Tr |  |  | - | F |  |
| Traffic Vol, veh/h | 0 | 583 | 8 | 63 | 93 | 0 |
| Future Vol, veh/h | 0 | 583 | 8 | 63 | 93 | 0 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, \# | 0 | - | - | 0 | 0 | - |
| Grade, \% | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 83 | 83 | 83 | 83 | 83 | 83 |
| Heavy Vehicles, \% | 0 | 1 | 47 | 4 | 10 | 0 |
| Mvmt Flow | 0 | 702 | 10 | 76 | 112 | 0 |


| Major/Minor | Minor2 |  | Major1 |  | ajor2 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Conflicting Flow All | 208 | 112 | 112 | 0 | - | 0 |
| Stage 1 | 112 | - | - | - | - | - |
| Stage 2 | 96 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.21 | 4.57 | - | - | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3.5 | 3.309 | 2.623 | - | - | - |
| Pot Cap-1 Maneuver | 785 | 944 | 1240 | - | - | - |
| Stage 1 | 918 | - | - | - | - | - |
| Stage 2 | 933 | - | - | - | - | - |
| Platoon blocked, \% |  |  |  | - | - | - |
| Mov Cap-1 Maneuver | 779 | 944 | 1240 | - | - | - |
| Mov Cap-2 Maneuver | 779 | - | - | - | - | - |
| Stage 1 | 911 | - | - | - | - | - |
| Stage 2 | 933 | - | - | - | - | - |
|  |  |  |  |  |  |  |
| Approach | EB |  | NB |  | SB |  |
| HCM Control Delay, s | 19 |  | 0.9 |  | 0 |  |
| HCM LOS | C |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Minor Lane/Major Mvmt |  | NBL | NBT EBLn1 |  | SBT | SBR |
| Capacity (veh/h) |  | 1240 | - | 944 | - | - |
| HCM Lane V/C Ratio |  | 0.008 | - | 0.744 | - | - |
| HCM Control Delay (s) |  | 7.9 | 0 | 19 | - | - |
| HCM Lane LOS |  | A | A | C | - | - |
| HCM 95th \%tile Q(veh) |  | 0 | - | 7.1 | - | - |



## DEMOLITION NOTES









OURNG OEMOLITON ANO CLEARANG O F THE SITE $\qquad$



## SITE PLAN NOTES




 ' REQUREMENTT AND SHALL BE APPROVED BY SUCH





## SITE COORDINATE SYSTEM

 SITE UTILITY SYSTEM
 SITE GRADING NOTES



. 1 OR FLATER UNLESS otherkuse noteo.
3. AL GRDDEE AREAS SHALL BE PROTECTEE FROM EROSION BY EROSION CONTROL DEVVCES


 -

## EROSION AND SEDIMENT CONTROL NOTES















 "MMEDATELY.


 RE SPECRFD AA FoLOWS:




 PROTECTIONSTORMMATER IISC











## EARTHWORK QUANTITY NOTES


THE MAX. cutrfu I I Gven for the rest of the southear aral gradng outide of the SUBMITTAL NOTES






 SECTON1.B.1. 1 B. (2)


 NVR100000, 18.1.1. .




CIVIL IMPROVEMENT PLAN - NOVEMBER 8, 2023 - SUP PLAN

CIVIL IMPROVEMENT PLAN - NOVEMBER 8, 2023 - SUP PLAN



| LEGEND: |  |
| :---: | :---: |
|  | SECTIONLINE |
| --- $\overline{(x \times x)}$-- - | PROPERTY LINE <br> EXISTING CONTOUR |
|  | Easement Line |
| - - - - | Exsting natural wast |

DEMOLITION NOTES:

1) Ex. ROAD TO be ABADONED NPLAC
PROTECTION NOTES:
PRotect N PLacE ExSting natural wasi


5 protectin pace Exsting water tank
GENERAL NOTES:




















EROSION CONTROL NOTES:


GENERAL EROSION CONTROL NOTES


4. gate bas PRoposeso sedurit fence
Rooposes ilt rence
 Proposeb Earth oike Xestiv natural wash
Lits of olitureance Matve compactel road Vater crossing


CIVIL IMPROVEMENT PLAN - NOVEMBER 8, 2023 - SUP PLAN

EROSION CONTROL NOTES:

2) NSTALL EARTH DIKE, SEE DETALL 2, SHEEET CS.13
GENERAL EROSION CONTROL NOTES






 Proposege conto
daxlight LINE SąLIGHTLIN
Propoose securit fence Proposed sil fence
 Exsting natural wash
Lmis of olisubuance Natve compacteo road

EROSION CONTROL NOTES： EROSION CONTROL NOTES：
（2）MSTALL EARTH OIKE，SEE DEEAAL 2，SHEET C5．13
GENERAL EROSION CONTROL NOTES：
4.











> トーナー-
> $\left.\right|^{\text {c53 }} \mathbf{| c}^{\text {c54 }}$
> -

$$
\begin{aligned}
& \text { KEYMAP } レ ー ム ー 」 ~ \\
& \boldsymbol{1}^{\text {c5. }} 1 \text { | } \\
& \text {, }
\end{aligned}
$$

can botor yov vis


[^3]









\[

$$
\begin{aligned}
& \text { DAYपLGHTLINE } \\
& \text { PRoposed AcGer }
\end{aligned}
$$
\]

$$
\begin{aligned}
& \text { Roposed AGGREGATE EASE AcCESSS RoAD } \\
& \text { Ropose SECURTr Fence }
\end{aligned}
$$

CONSTRUCTION NOTES:
C



(B) Low water crossmge, se dedal 1, SHEET 6 . 13
GENERAL NOTES


「ーナー
トーナー-


1
ᄂT

$\underset{\text { KEYMAP }}{ }$ Lームーム

|  | 200 MWAC | GRADING PLAN | $\underset{\substack{\text { KHA Provect } \\ 106574003}}{\text { a }}$ |  | Kimley»）Horn <br> © 2023 KIMLEY－HORN AND ASSOCIATES，INC． 6671 S LAS VEGAS BLVD，LAS VEGAS，NV 89119 PHONE：702－862－3600 WWW．KIMLEY－HORN．COM | NEXTera ENERGY 2 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\bigcirc{ }^{\circ}$ |  |  |  |  |  |  |  |  |  |
| $\bigcirc$ |  |  | scale As Shown |  |  |  |  |  |  |
|  | SOLAR FACILITY |  |  |  |  |  |  |  |  |
|  | washoe countr，nv |  | Chiceceo er ML |  |  |  |  | REVSIONS | DATE |



$\qquad$
 erivilin darıIGHTLINE

 mits of ІІІтubaance compacted native road CONSTRUCTION NOTES：
BASE ACCESS R RAAD，SEE DEEALL 2，SHEET C C． 15



（5）Compacted native rado，SE De detal 3 ，SHEET C 6.15
GENERAL NOTES：


$\boldsymbol{\ulcorner} \boldsymbol{\square}$
トーナー－
I $\left.{ }^{66,3}\right|^{c 6.4}$

ᄂт
$\stackrel{\text { I }}{\text { I }}$
${ }_{\text {KEY MAP }}^{\text {L－}} \underset{\text { NTS }}{\boldsymbol{-}}$

| $\bigcirc$ |  | GRADING PLAN |  |  | Kimley»）Horn <br> © 2023 KIMLEY－HORN AND ASSOCIATES，INC． PHONE：702－862－3600 | NEXTEra ENERGY 2 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |
|  | DODGE FLAT II |  | Scale As Shown |  |  |  |  |  |  |
|  | SOLAR FACILITY |  | Resameo br bl |  |  |  |  |  |  |
|  | washoe countr，nv |  | entereo er |  |  |  |  | Revsions | pate |

$\qquad$
Lmis of IISTVR
compacted Native road
CONSTRUCTION NOTES


（5）Compacted native rado，se de dial 3 ，SHEET C 6.15
Low water crossma，SEE detall 1 ，SHEET C 6,13
GENERAL NOTES


「ーナーー
トーナー－
$\left.\right|^{\text {c6．}} \mathbf{| l}^{\text {c6．}}$ I
「ー～T









[^0]:    Yes. Vegetation on the site would be modified only where necessary. Vegetation would be removed where gravel roads would be constructed, where fill would be placed from grading operations, where buildings are to be constructed, and where transmission pole and tracker foundations would be installed (if necessary). At locations where transmission pole and tracker foundations would be installed, minor cuts may be required where the foundations would be driven. Minor earth work would also occur to install aggregate base access roads and transmission line maintenance roads. The surface of the roads would be at-grade to allow any water to sheet flow across the site as it currently does. Throughout the remainder of the developed area on the solar and energy storage site, the vegetation root mass would generally be left in place to help maintain existing drainage patterns on a micro level, and to assist in erosion control. During construction of the solar and energy storage facility, it is expected that most of the vegetation would be cut, trimmed, or flattened as necessary, but otherwise undisturbed so that reestablishment is possible.

[^1]:    1 The legal description for the Project and gen-tie line is approximate and based on best available geographic information systems data from BLM and Washoe County. Title and survey review have not been conducted for the Project.

[^2]:    SOURCE: Bing Maps 2022, Planning and Builiding Division Washoe County Nevada, NvSO

[^3]:    

