Wednesday, July 6, 2022
Development Review Committee

DEVELOPMENT REVIEW COMMITTEE AGENDA
PUBLIC NOTICE is hereby given that the Development Review Committee of Spanish Fork, Utah, will hold a regular meeting at the Spanish Fork City Council Chamber, 40 South Main Street, Spanish Fork, Utah, commencing at 10:00 a.m. This meeting is not available to attend virtually.

1. Approval of Minutes

A. June 29, 2022

2. Final Plat

A. QUIET VALLEY PLAT C. The proposal involves approval of a final plat with 208 dwelling units, including townhomes and cottage lots as part of a Master Planned Development located at approximately 1500 South 3500 East.

B. QUICK QUACK CAR WASH HIGHWAY 6. The proposal involves the platting of a subdivision with three commercial lots located at 1091 East Spanish Fork Parkway.

3. Site Plan

A. QUICK QUACK CAR WASH HIGHWAY 6. The proposal involves commercial development for a car wash to be located at 1091 East Spanish Fork Parkway.

4. Zone Change and Preliminary Plat

A. SHELLY SUBDIVISION. The proposal involves changing the current Zone from R-3 and R-1-15 to R-1-9 in conjunction with the development of 16 residential lots as a Master Planned Development located at approximately 686 North Slant Road.

5. Discussion

A. PARKING REQUIREMENTS.

B. GENERAL PLAN PURPOSE.

6. Adjourn

Draft Minutes
Spanish Fork City Development Review Committee
40 South Main Street
Spanish Fork, UT 84660
June 29, 2022

Staff Members Present: **Chris Thompson**, Public Works Director; **Seth Perrins**, City Manager; **Dave Anderson**, Community Development Director; **Brandon Snyder**, City Planner; **Vaughn Pickell**, City Attorney; **Ana Burgi**, Assistant City Attorney; **Michael Clark**, Assistant City Engineer; **Jered Johnson**, Engineering Division Manager; **Shelley Hendrickson**, Engineering Division Secretary; **Zach Hendrickson**, Outside Plant Manager; **Jake Theurer**, Power and Light Superintendent; **Garrett Elmer**, Power and Light Assistant Superintendent; **Bart Morrill**, Parks Maintenance Supervisor. **John Little**, Chief Building Official, **Kasey Woodard**, Division Secretary; **Jason Tuner**; Fire Marshall; **Dillon Muirbrook**, Engineering intern; **Jackson**, Community Development and Planning Intern.

Citizens Present: Jackie Larson, David Bourne, McKell Dalton, Jeremy Endicott, Krista Fuhriman, Andrew Oviatte, Jill McConnell.

Chris Thompson called the meeting to order at 10:00 a.m.

MINUTES

June 15, 2022
June 22, 2022

Dave Anderson **moved** to approve the minutes of June 15, 2022 and June 22, 2022.

Jake Theurer seconded and the motion **passed** all in favor.

MINOR PLAT AMENDMENT

EAST MEADOWS ESTATES SUBDIVISION PLAT C

Brandon Snyder stated this is very straightforward and was approved by the DRC in 2020 and approval expired in 2021. There were no changes and the applicant resubmitted for reapproval to finish the project and record the plat.

Michael Clark had no comment.

Dave Anderson **moved** to approve the East Meadows Estates Subdivision Plat C Minor Plat Amendment based on the following finding and conditions:

Finding:
1. That the application conforms to the City's General Plan Designation and Zoning Map.

Condition:
1. That the applicant meets the City's Zoning requirements and Construction Standards.
2. That the applicant addresses any red-lines.

John Little **seconded** and the motion **passed** all in favor.

CHICK-FIL-A (EXPRESSWAY SQUARE SHOPPING CENTER SUBDIVISION, PLAT "C")

Brandon Snyder stated this is very easy, Chick Fil A is looking to expand their driveway by shifting their shared property line on the east side of the building.

Michael Clark had no comment.

Dave Anderson **moved** to approve the Chick-Fil-A Plat C Minor Plat Amendment based on the following finding and condition:

Finding:
1. That the application conforms to the City's General Plan Designation and Zoning Map.

Condition:
1. That the applicant meets the City's Zoning requirements and Construction Standards.
2. That the applicant addresses any red-lines.

Jered Johnson **seconded** and the motion **passed** all in favor.

SITE PLAN

CHICK-FIL-A DRIVE-THRU EXPANSION

There was no discussion.

Jered Johnson **moved** to approve the proposed Chick-Fil-A Drive-Thru Expansion Site Plan based on the following finding and conditions:

Finding:

1. That the application conforms to the City's General Plan Designation and Zoning Map.

Conditions:

1. That the applicant meets the City's Zoning requirements and Construction Standards.
2. That the applicant addresses any red-lines.
3. That Site Plan approval is contingent upon approval and recordation of the associated Minor Plat Amendment.

Jake Theurer **seconded** and the motion **passed** all in favor.

DAYBELL WAREHOUSE ADDITION

There was no discussion.

Dave Anderson **moved** to Continue the proposed Daybell Warehouse Addition Site Plan.

Jake Theurer **seconded** and the motion **passed** all in favor.

GENERAL PLAN AMENDMENT

LELAND AGRICULTURE

Dave Anderson stated there was correspondence put together in staff reports, and he suggests DRC take additional time to go over them in more depth. He stated this is very unique and needs additional time and care. He feels it makes the most sense to leave the plan as it is right now.

Jackie Larson feels like this is one way or the other, and asks if there is a way for both parties to meet in the middle. She feels this will possibly cause conflict between landowners and developers.

Dave Anderson does not feel this map will stop land owners from being approached to sell land. He feels it comes down to what the property owners want to do with their own land.

Jackie Larson feels this is going to make farming for the property owners much harder going forward and hopes the City will consider this.

Dave Anderson feels the ag protection area helps to maintain farming protection for landowners of the area.

Jackie Larson askes the Committee if they plan for the future use of existing businesses and Dave Anderson stated the City does plan for future businesses and uses. He stated these types of plans are what's intended for the best use to help the growth of the city.

Jackie Larson asked if one landowner left, how would it impact the landowners deciding to stay. Dave Anderson stated it is the responsibility of the City, to ensure that what happens on a neighbor's property does not impact your ability to farm on your property.

Dave Anderson stated as the population grows, there is pressure on a city to try and follow what the general plan has laid out to accommodate its future growth. He stated this does not have to happen now, but when the city is finally laid out completely, this will be the best planned use of the land.

Jackie Larson stated that she does not see the farming community getting smaller, she believes that it will only continue to grow larger.

Vaughn Pickell stated that the general plan is a forward-looking document and believes that it helps to develop the best future uses to accommodate the upcoming growth of the city.

Chris Thompson stated he is not agreeing, but he cannot think of any other argument to add other than what has already been discussed.

Seth Perrins **moved** to recommend Denial of the proposed Leland Agriculture General Plan Amendment to the City Council based on the following findings:

Finding:

1. The Council will be reviewing the adjustment to the general plan and the entire area should be looked at in greater detail.
2. That there be room in the discussion for something other than what has been discussed.
3. That significant investments have been made in infrastructure to serve current and future land uses in the area.
4. That the current Land Use Map appropriately plans to utilize area infrastructure.
5. That the unique infrastructure located in the area should be utilized in the manner prescribed by the current Land Use Map.
6. That the current Land Use Map appropriately plans for uses that are needed in the community.
7. That the current Land Use Map prescribes an appropriate pattern of various land uses in an effort to create a vibrant center for commerce and attractive residential neighborhoods.
8. That the current Land Use Map appropriately accounts for the area's suitability for development.
9. That the current Land Use Map prescribes land uses that will be supported from a market perspective.
10. That the current Land Use Map appropriately plans to create a similar development pattern as what is contemplated in Salem.

Dave Anderson **seconded** and the motion **Denied** all in favor.

GENERAL PLAN AMENDMENT

2022 MID-YEAR TRANSPORTATION ELEMENT OF THE GENERAL PLAN

Dillon Muirbrook stated these are all recommended for approval by the DRC and being reviewed before going to the Planning Commission and City Council. He presented a jurisdictional change for 400 North back to a UDOT road for continuity so that UDOT will be responsible to maintain the road as it makes the most sense to have the two state roads meet without the city road bridging them. He stated there was a change in alignment on a trail located near 900 North Main St. He stated the shared path was moved from southeast of I-15 to the north side of 900 North. He stated they moved the trail located on Market Place Drive from 800 north to Expressway Lane. And the last trail located on 700 South was moved from the south side of the road to the north side of the road.

Chris Thompson stated these have acted on with recommendations for approval and are planned to go to the planning commission, but he felt there was benefit to having these changes be reviewed by staff as some changes are 6-7 months out.

Seth Perrins asks if there is a way to get away from placing trails on the last side of the road with plans similar to this, and Dave Anderson stated he would like to take additional time in the DRC meeting on July 6 to discuss this in further detail on what the Committee is really trying to accomplish.

ZONE CHANGE

ANDREW OVIATT DUPLEX

Brandon Snyder stated the applicants recently purchased the home are looking to do internal conversions to convert to a duplex.

Seth Perrins feels this instance was not why the Infill Overlay zone was created, as this home is not in disrepair, or in need of significant redevelopment to give the Council reason to approve changing the use from single-family to multi-family.

John Little stated that to be able to convert a home from a single family into a duplex, the property owners must be prepared for significant improvement to the property to separate the structure to qualify it as a duplex. Including separating the power to the structure, installing separate meters for each unit, water services, and separate air filtration systems.

Seth Perrins stated he feels this is more related to the application of the Infill Overlay Application. He asked what improvements are the property owners doing to the land, and how will the duplex impact the surrounding neighborhood? He stated he is unsure if this is really aligning with what the general planned use of the land is.

Vaughn Pickell stated that this is not aligning with what would be considered a duplex, but more closely in line with an ADU.

Jill McConnell asked the Committee, if since they are just a recommending body, that no matter what is recommended, it will still proceed to the Planning Commission and City Council and it was stated that it will still continue forward at the applicant's request.

Dave Anderson explained that to change the use of land it requires significant, positive improvements to be made, that include landscaping, fencing, and utilities but it is never a guarantee the Planning Commission or City Council will approve the change in use of the property.

Andrew Oviatt decided that they would like to go forward to the Planning Commission.

Dave Anderson **moved** to recommend Denial of the proposed Andrew Oviatt Duplex Zone Change from R-1-6 to R-3 to the City Council based on the following finding and condition:

Finding:

1. The proposed change would not meet the intent of the Infill Overlay.

Seth Perrins **seconded** and the motion **passed** all in favor.

TITLE 15 AMENDMENTS

AGRICULTURAL PROTECTION AREAS

Dave Anderson stated this discussion comes down to minimum area size, and language in the draft and how it relates to a City's ability to exclude certain items from a proposed agricultural protection area, and establishing an application fee

Vaughn Pickell stated statute allows the City to charge a fee to cover the processing of the application, but he stated there is no fee to withdraw your application.

Dave Anderson stated the fee is $360 and is not meant to be a hurdle for someone that wants to create an Ag protection area, and notes that it is less expensive than the County's fee of $500.

Jackie Larson suggests the minimum acreage be 5 acres, and Dave Anderson believes it is very rare that someone makes a real livelihood from a 40-acre farm, let alone a 5-acre farm and considers it more of a hobby and not a bona fide farm as it doesn't produce enough that could fully support someone. He believes that the acreage should be higher than 40 acres.

Seth Perrins believes that the acreage should be higher than the county as we are a city and feels that 40 acres is a very low threshold as what constitutes a functioning farm. He asked if there are additional things in the code that could help protect residents' right to farm abilities.

Vaughn Pickell stated the reason for a required minimum acreage, but there are additional protections that can be done to help protect the agricultural areas by marking them on plats. He stated there is language that can be added to the code that would allow for signs to indicate the protected areas.

Seth Perrins stated he does not see this as a real problem in Spanish Fork and referred to it more as a red herring. He stated there is not a real concern of farmers bailing at 2 a.m. and residents being forced to call the authorities.

Dave Anderson feels that the City and the residents are very closely aligned in what is wanted and does not see a need to discuss this in greater detail.

Vaughn Pickell **moved** to recommend approval of the proposed Title 15 Amendments as presented to the City Council based on the following findings and conditions:

Findings:

1. That the application conforms to the City's General Plan Designation and Zoning Map.
2. That the application is consistent with the approved Preliminary Plat.

3. Refinement of the language of the minimum acreage to allow less than 40 acres, similar to the provisions that Utah County allows.

Conditions:

1. That the applicant meets the City's Construction Standards.
2. That the applicant addresses any redline comments in Citizenserve.

Dave Anderson **seconded** and the motion **passed** all in favor.

CONCEPT REVIEW

PEG DEVELOPMENT

David Bourne stated they feel they have sufficiently addressed the four main concerns laid out by staff members and are looking for feedback on the changes. He stated the first concern was the set back from the river was not sufficient, 450 South needs to widened, the 1550 West needs to be widened to be sufficient for UDOT plans for the future interchange, and lastly was the overall concept of the layout plan and how it works with the interaction of the community.

Michael Clark asked if the backyards are fenced or open space and David Bourne stated they are fenced.

Brandon Snyder asked if there were any environmental issues since the last meeting and it was stated there is none.

There was discussion about an agreement that was made between the City and the property owners that assuming that the right of way remained the same, the City would use Corridor Preservation funds to purchase the right of way for the 5 lanes, based off of the center lane.

David Bourne stated he was never a part of that agreement as it was struck up with the existing land owner. He stated he has looked over the document and has conversations with the landowner and his recollection of the agreement. He gathers the agreement included the city paying to relocate Wasatch Pallet to its current location, a transfer of impact fees that would be gathered by the existing businesses that would go from the transportation corridor to the owner and then to the City. He stated he did not see that it was specifically allocated for the purchase of the property

owners land for the department of transportation. So, he does not see a discrepancy that the impact fees will be going from the corridor association though the property owner and back to the City.

Seth Perrins asked what the overall density of the development is and David Bourne stated there are 170 units on the 17 acres.

Chris Thompson asked how many units are single family detached units and it was stated there are only a few units that do not share walls with any other units.

Chris Thompson stated it may need to be reviewed to include sub local roads as Spanish Fork does not allow private roads or drives.

John Little asked what the unit count is that will be using the one access point and it was stated that it would be 32 units using one access point.

OTHER BUSINESS

ANNEXATIONS

Dave Anderson stated we currently have 6 annexations, with both Oberg and GWC currently being very close to being ready to go in front of the City Council. He does not feel the rest are very close at this time. He stated GWC is one of the larger proponents on the application, as GWC and the Simpson annexation are co applicants as there he would like to set up a meeting with Dave Simpson.

There was discussion about a future railway station and whether or not it makes sense to place high density residential developments that far to the north.

Dave Anderson stated that he appreciates GWC taking the lead and helping to address some of the potential issues, and whether or not there is significant infrastructure that needs to be built. He states this went to City Council and was accepted for further study, but then has vegetated with the idea that it is unknown on how to proceed until there is more information available for the commuter rail stop.

Seth states the only issue is the resulting island it creates, and he feels that it is bad planning. He stated that he hopes the council would act on eliminating the island that is being created.

Dave Anderson stated Rays Valley is currently on hold.

Vaughn Pickell, in referral to the Oberg annexation, stated Jon Jenson inquired about withdrawing his protest as the county will consent to being an island and it was stated the withdrawal must be in writing.

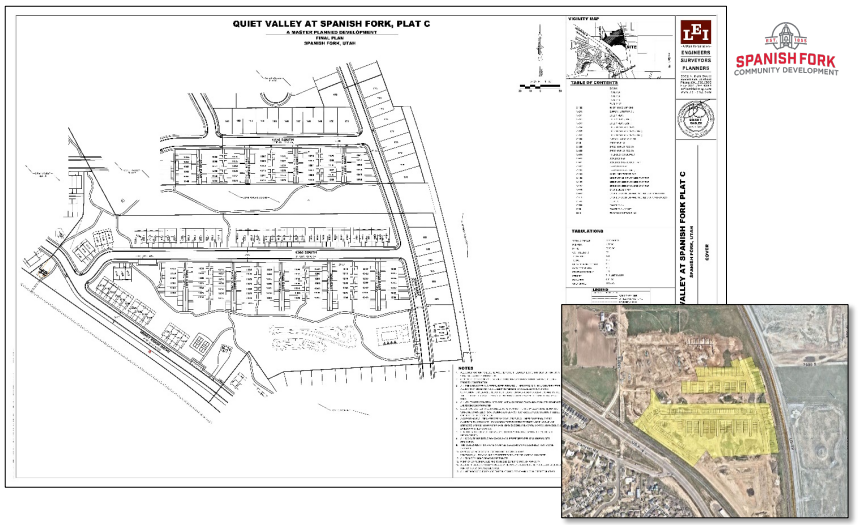
It was discussed that this property is not quite an acre and does not have the right to protest. Dave Anderson stated this needs to go to the Planning Commission. He stated there needs to be an agreement in place before this can move forward.

Stephens Hill Annexation will produce another island, Dave Anderson stated this gives reason to look at the general plan from agriculture, and moving the Growth Boundary.

Seth Perrins moved to adjourn the meeting at 12:33 p.m.

Adopted:

Kasey Woodard
Community Development
Division Secretary



Quiet Valley Plat C Final Plat Approval Request

July 6, 2022, Development Review Committee Meeting.

Located at 1500 South 3500 East, including 27.81 acres.

The subject property is zoned R-3 and R-1-15.

The applicant has requested Final Plat approval for 208 dwelling units, including cottage lots and townhomes.

Key Issues

1. Consistency with the approved Preliminary Plat.
2. Rocky Mountain Power lease.
3. Landscaping.
4. Power.
5. Utilities.
6. Access.

Recommendation

That the proposed Final Plat be approved based on the following findings and subject to the following conditions:

Findings

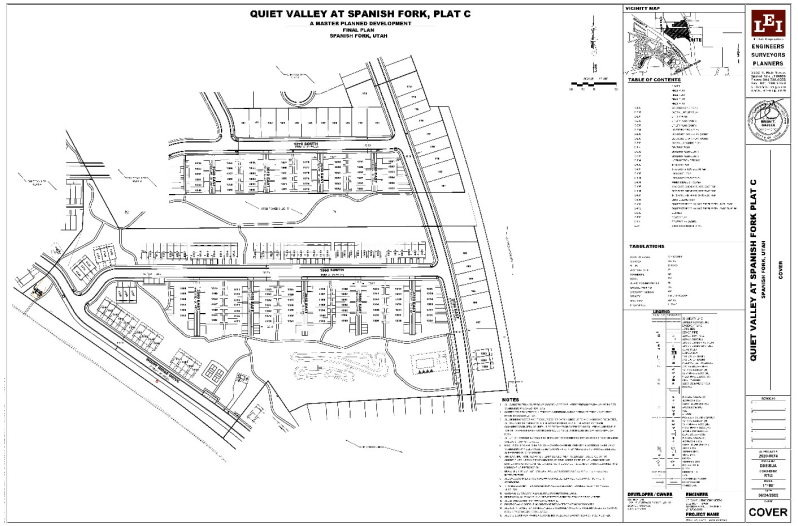
1. That the proposal conforms to the City's General Plan Designation and Zoning Map.
2. That the proposal is consistent with the approved Preliminary Plat.

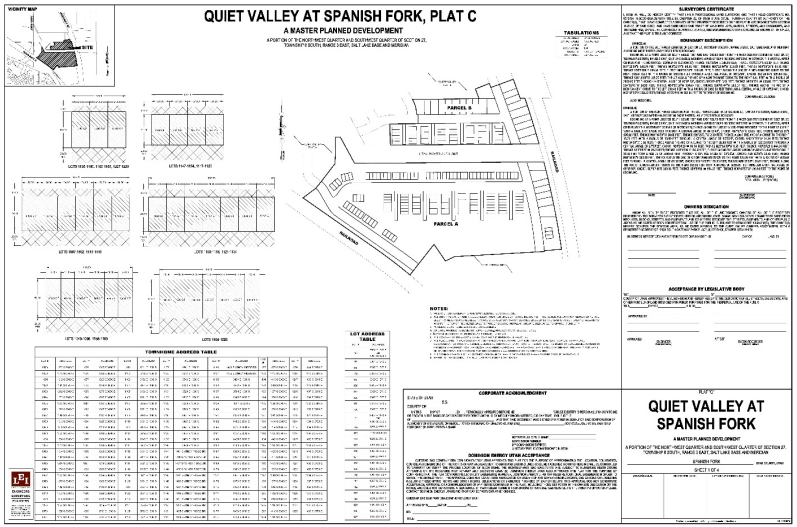
Conditions

1. That the applicant meets the City's Construction Standards and Zoning requirements.
2. That the applicant addresses any red-lines.

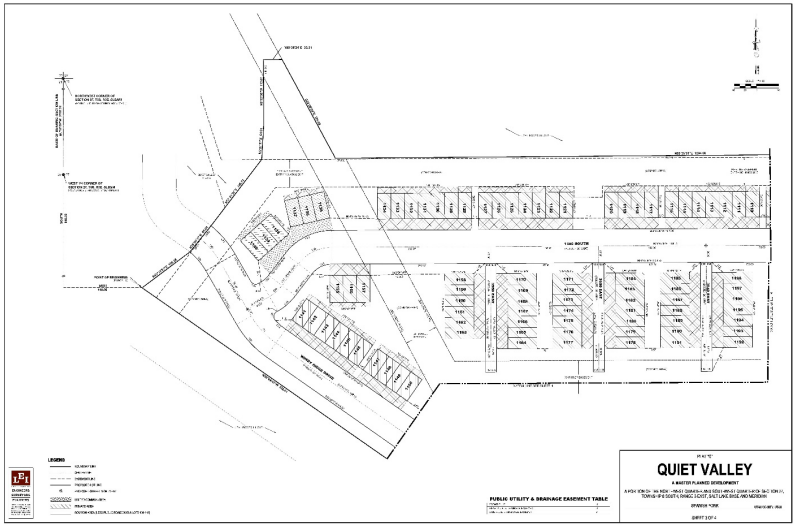
Exhibits

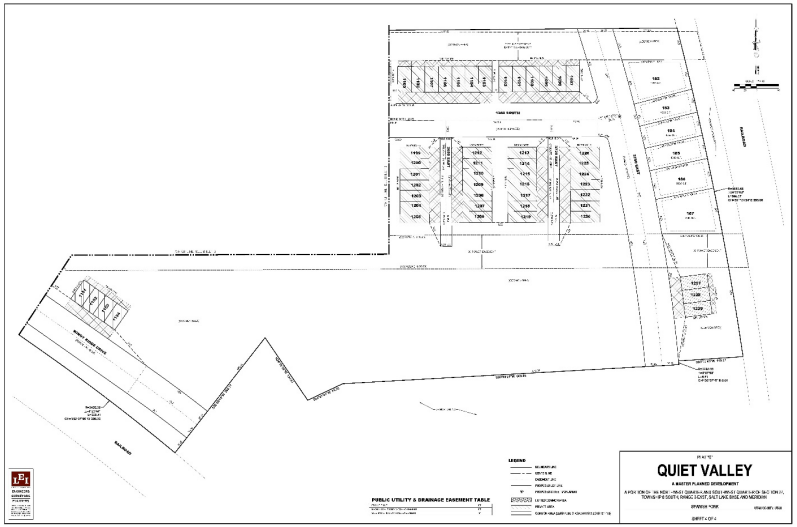
1. Final Plat.
2. Landscaping Plans.

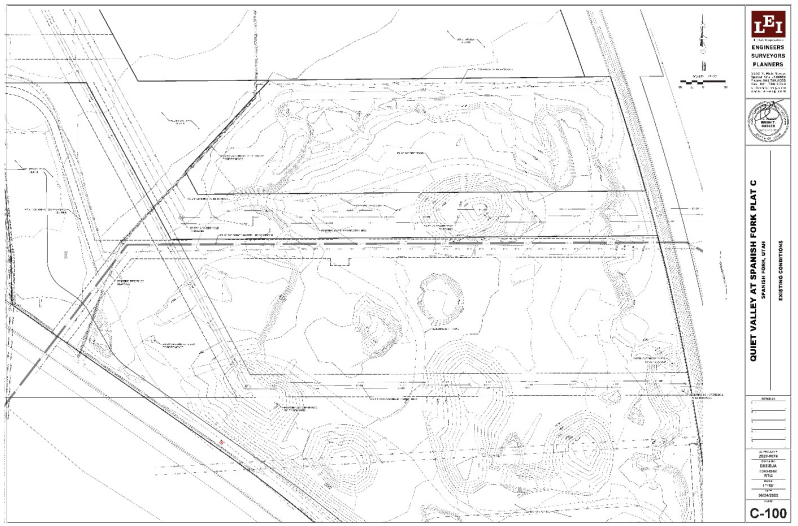


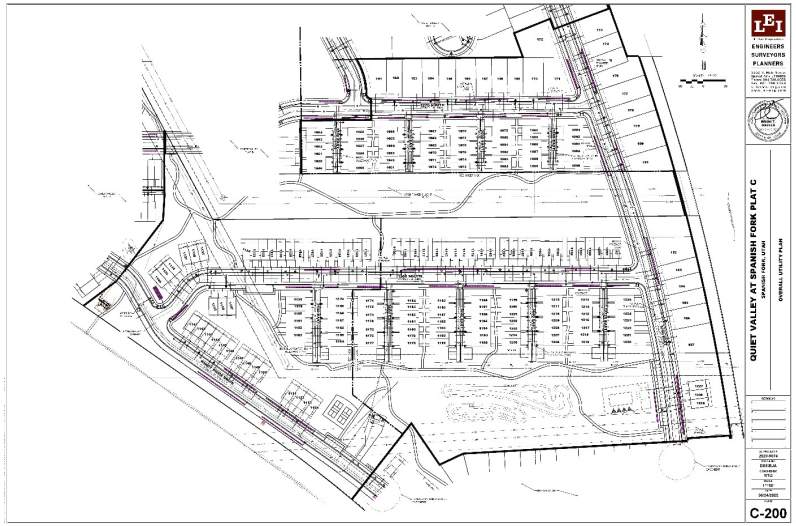


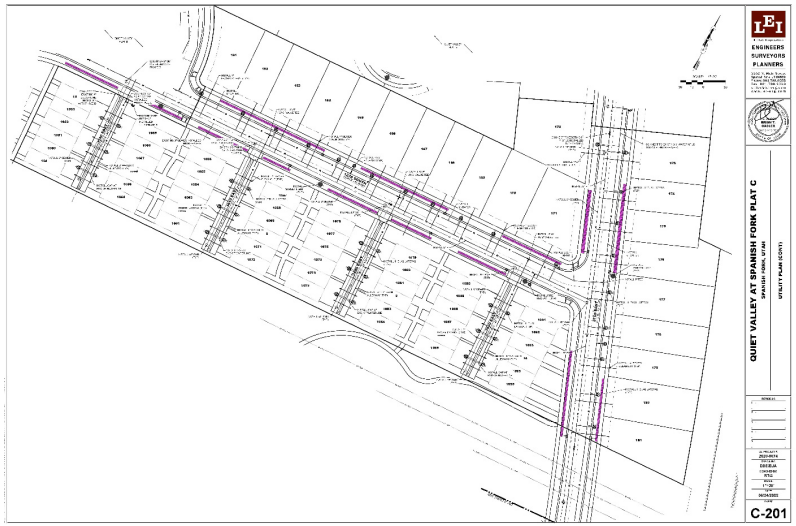

QUIET VALLEY
A MASTER PLANNED DEVELOPMENT

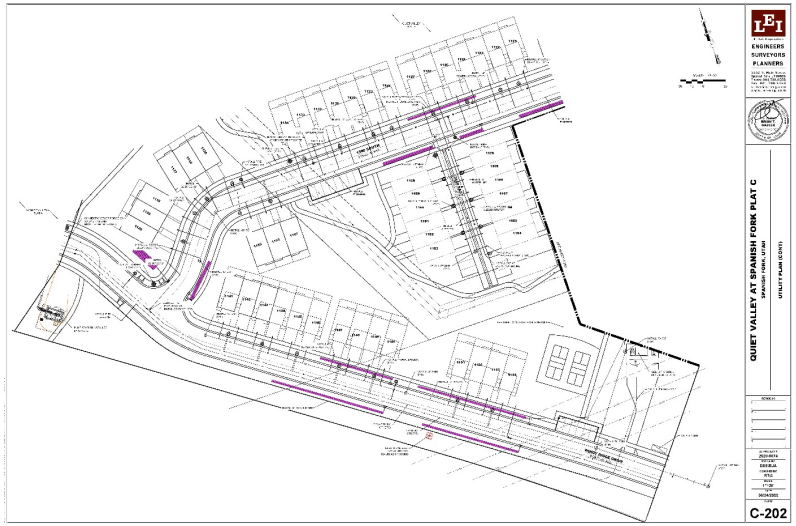

QUIET VALLEY
A MASTER PLANNED DEVELOPMENT

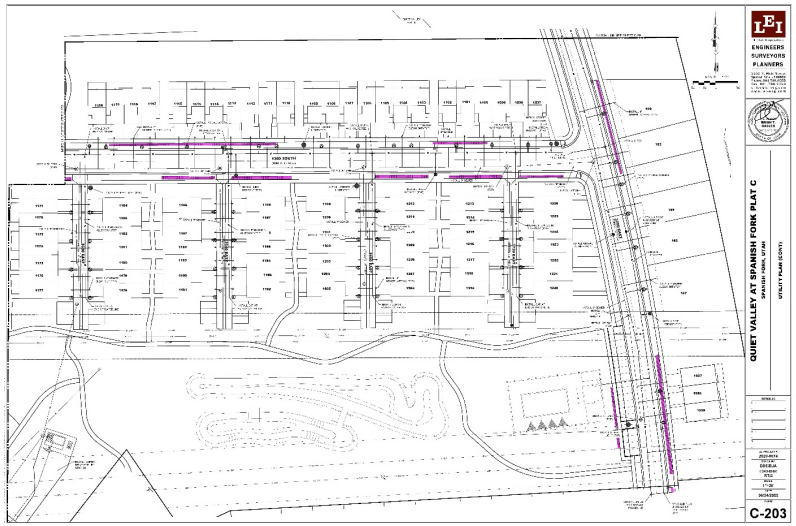

QUIET VALLEY
A MASTER PLANNED DEVELOPMENT


ENGINEERS
SURVEYORS
PLANNERS
QUIET VALLEY AT SPANISH FORK PLAT C
EXISTING CONDITIONS
C-100

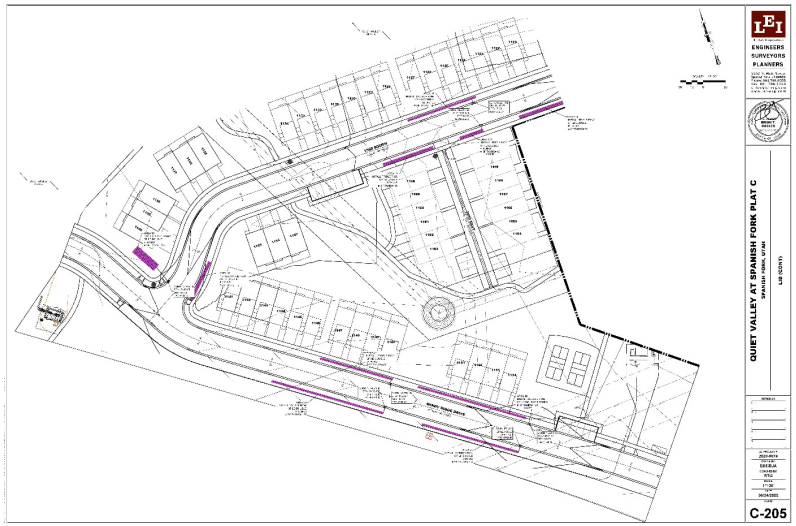

ENGINEERS
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PLANNERS
QUIET VALLEY AT SPANISH FORK PLAT C
SPANISH FORK, UTAH
OVERALL UTILITY PLAN
C-200

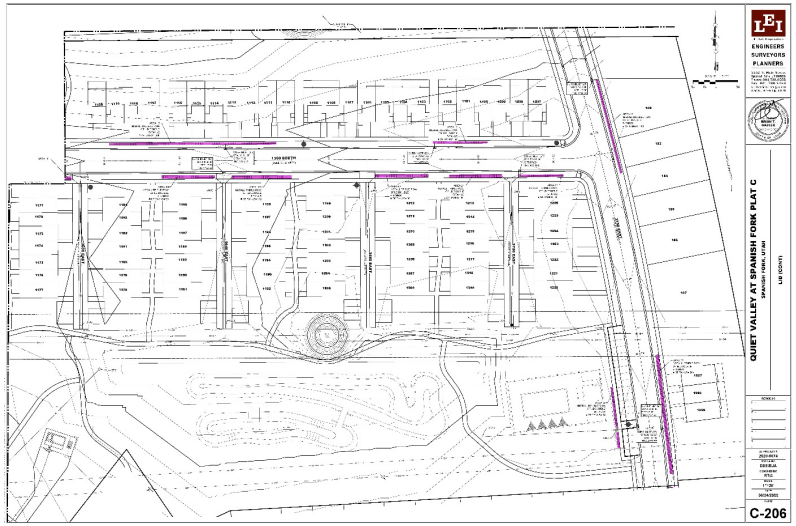

ENGINEERS
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PLANNERS
QUIET VALLEY AT SPANISH FORK PLAT C
SPANISH FORK, UTAH
UTILITY PLAN (CONT)
C-201


ENGINEERS
SURVEYORS
PLANNERS
QUIET VALLEY AT SPANISH FORK PLAT C
SPANISH FORK, UTAH
UTILITY PLAN (CONT)
C-202


ENGINEERS
SURVEYORS
PLANNERS
QUIET VALLEY AT SPANISH FORK PLAT C
SPANISH FORK, UTAH
UTILITY PLAN (CONT)
C-203

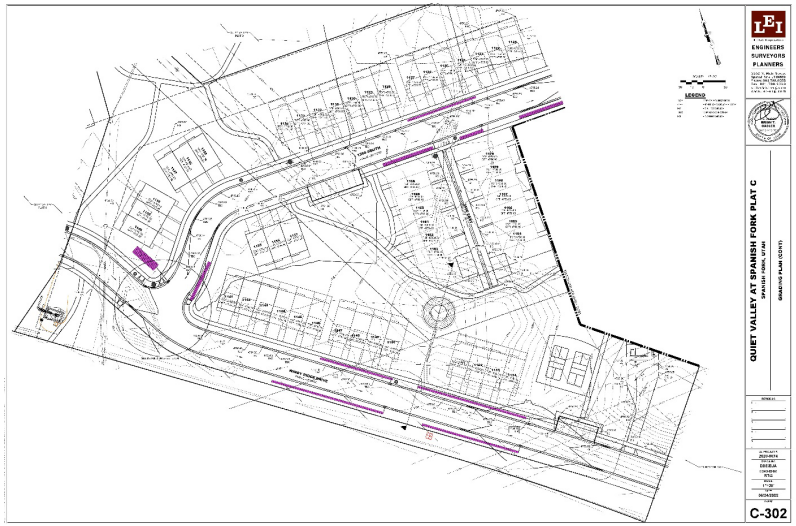

ENGINEERS
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QUIET VALLEY AT SPANISH FORK PLAT C
SPANISH FORK, UTAH
LEI
C-204


ENGINEERS
SURVEYORS
PLANNERS
QUIET VALLEY AT SPANISH FORK PLAT C
SPANISH FORK, UTAH
LEI (CIVIL)
C-205

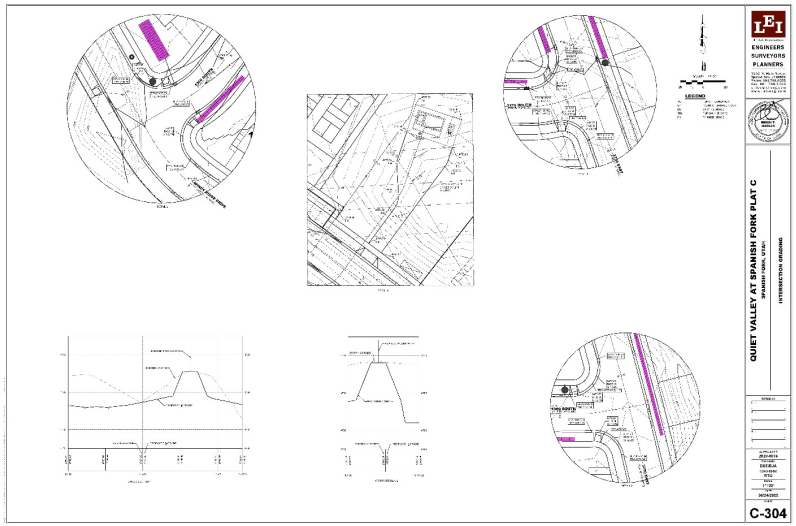

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SPANISH FORK, UTAH
LEI (CIVIL)
C-206

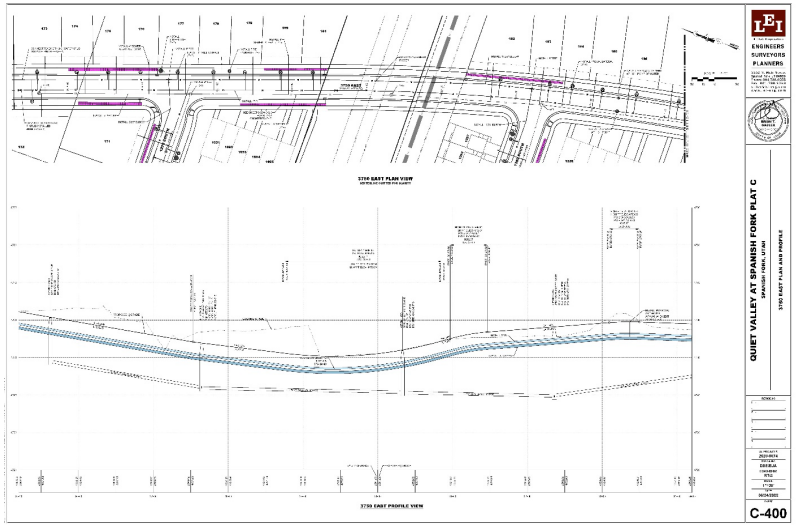

ENGINEERS
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PLANNERS
QUIET VALLEY AT SPANISH FORK PLAT C
SPANISH FORK, UTAH
OVERALL GRADING PLAN
C-300

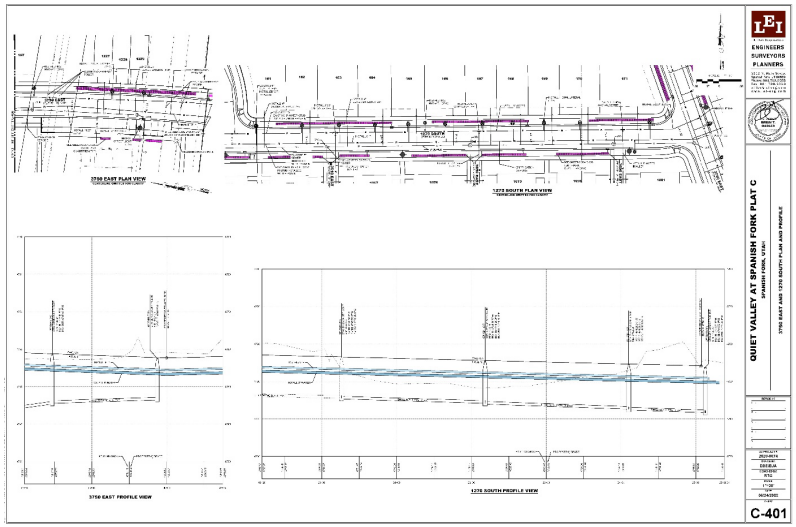

ENGINEERS
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QUIET VALLEY AT SPANISH FORK PLAT C
C-301

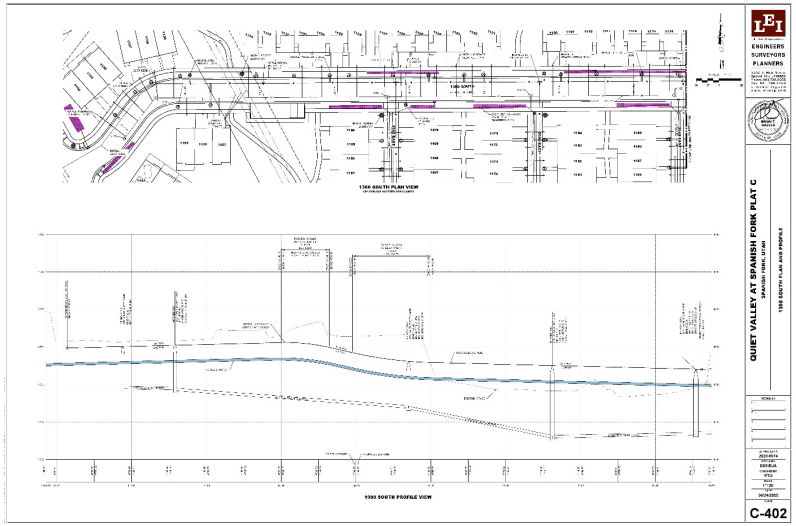

ENGINEERS
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PLANNERS
QUIET VALLEY AT SPANISH FORK PLAT C
C-302

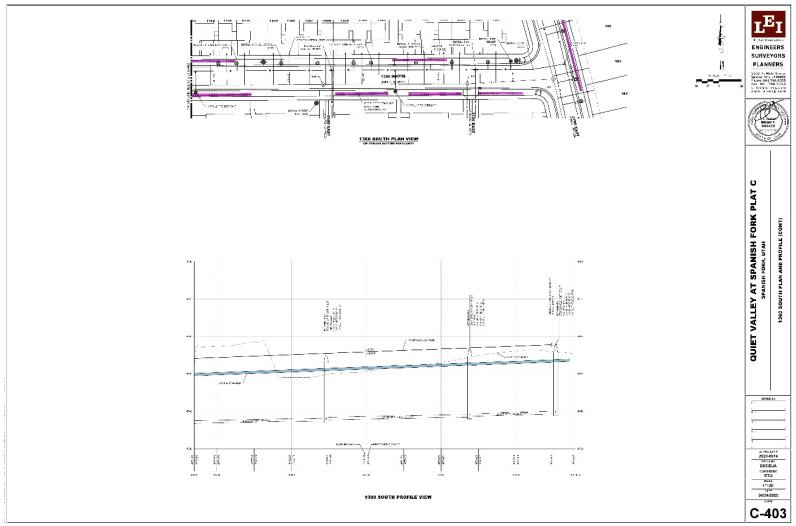

ENGINEERS
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PLANNERS
QUIET VALLEY AT SPANISH FORK PLAT C
C-303

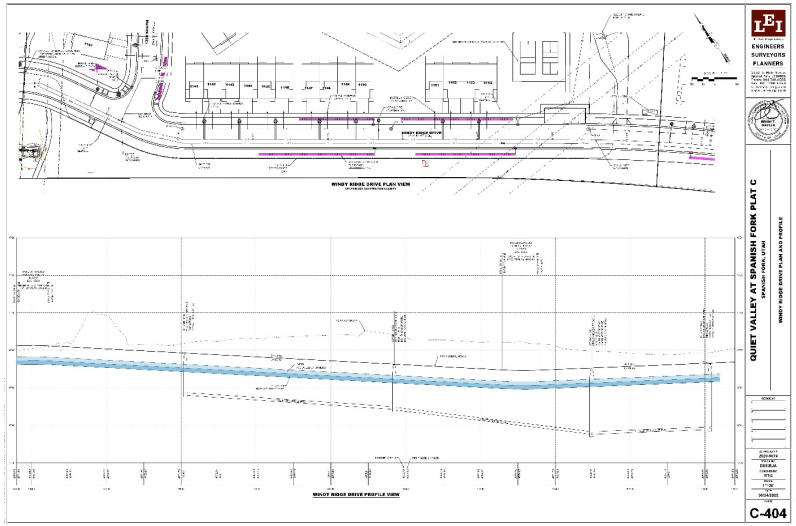

ENGINEERS
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PLANNERS
QUIET VALLEY AT SPANISH FORK PLAT C
C-304

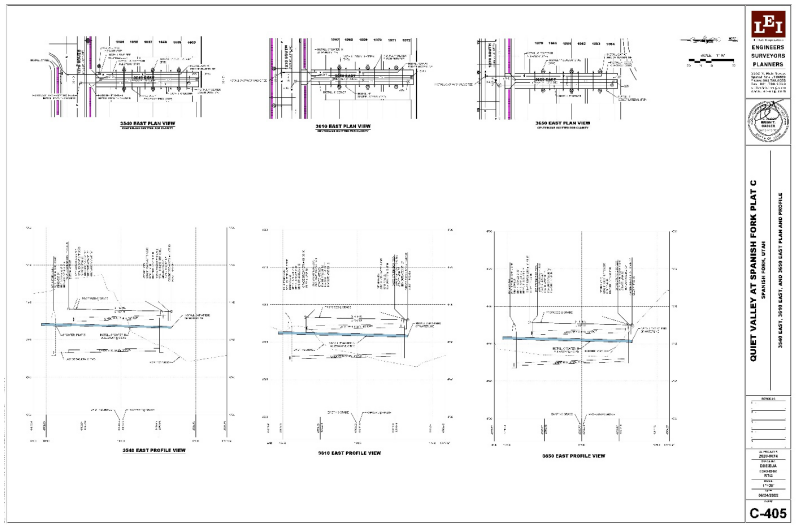

ENGINEERS
SURVEYORS
PLANNERS
QUIET VALLEY AT SPANISH FORK PLAT C
SPANISH FORK, UTAH
3750 EAST PLAN AND PROFILE
3750 EAST PLAN VIEW
3750 EAST PROFILE VIEW
C-400

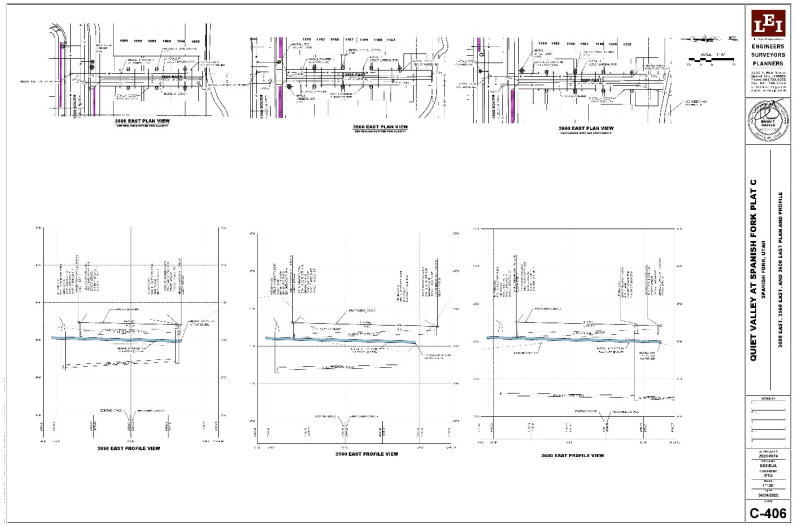

ENGINEERS
SURVEYORS
PLANNERS
QUIET VALLEY AT SPANISH FORK PLAT C
SPANISH FORK, UTAH
3750 EAST AND 1275 SOUTH PLAN AND PROFILE
3750 EAST PLAN VIEW
1275 SOUTH PLAN VIEW
3750 EAST PROFILE VIEW
1275 SOUTH PROFILE VIEW
C-401

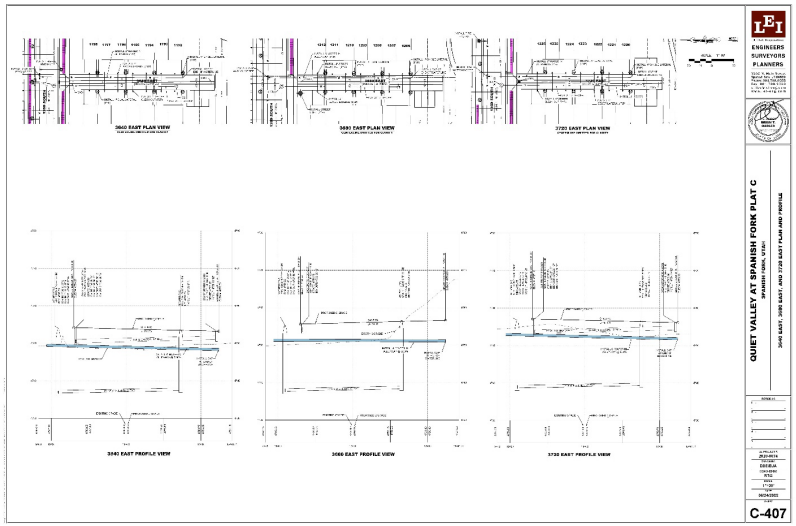

ENGINEERS
SURVEYORS
PLANNERS
QUIET VALLEY AT SPANISH FORK PLAT C
SPANISH FORK, UTAH
1350 SOUTH PLAN AND PROFILE
1350 SOUTH PLAN VIEW
1350 SOUTH PROFILE VIEW
C-402

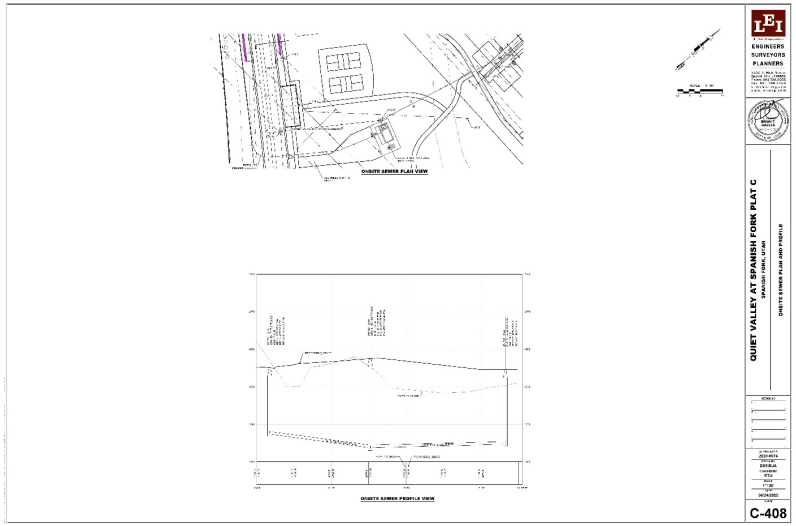

ENGINEERS
SURVEYORS
PLANNERS
QUIET VALLEY AT SPANISH FORK PLAT C
SPANISH FORK, UTAH
1350 SOUTH PLAN AND PROFILE (CONT)
1350 SOUTH PLAN VIEW
1350 SOUTH PROFILE VIEW
C-403

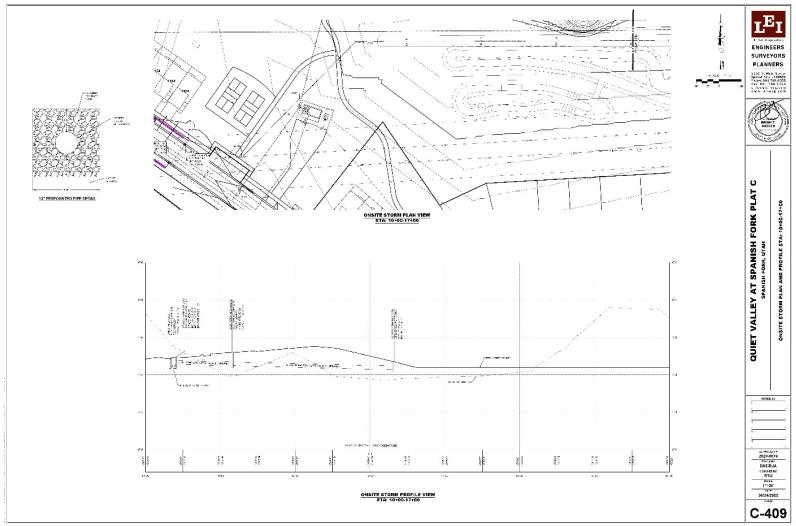

ENGINEERS
SURVEYORS
PLANNERS
QUIET VALLEY AT SPANISH FORK PLAT C
SPANISH FORK, UTAH
WINDY RIDGE DRIVE PLAN AND PROFILE
WINDY RIDGE DRIVE PLAN VIEW
WINDY RIDGE DRIVE PROFILE VIEW
C-404


ENGINEERS
SURVEYORS
PLANNERS
QUIET VALLEY AT SPANISH FORK PLAT C
SPANISH FORK, UTAH
3540 EAST, 3610 EAST, AND 3650 EAST PLAN AND PROFILE
3540 EAST PLAN VIEW
3610 EAST PLAN VIEW
3650 EAST PLAN VIEW
3540 EAST PROFILE VIEW
3610 EAST PROFILE VIEW
3650 EAST PROFILE VIEW
C-405

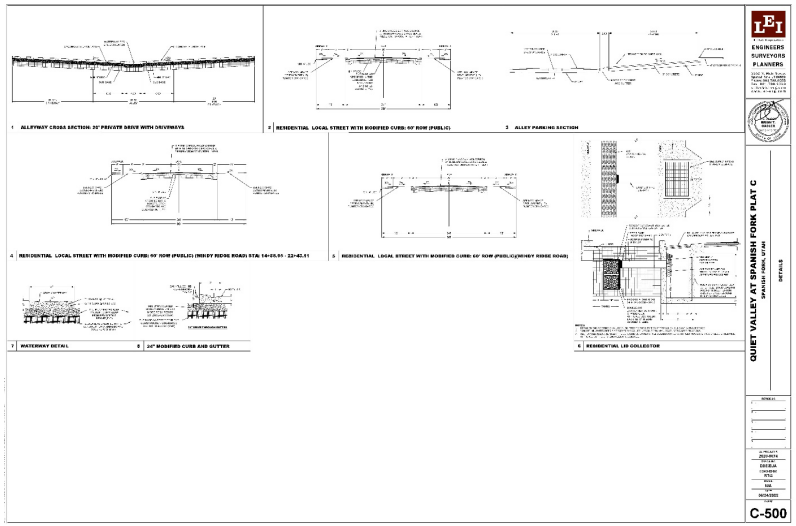

ENGINEERS
SURVEYORS
PLANNERS
QUIET VALLEY AT SPANISH FORK PLAT C
SPANISH FORK, UTAH
3500 EAST, 3560 EAST, AND 3630 EAST PLAN AND PROFILE
3500 EAST PLAN VIEW
3560 EAST PLAN VIEW
3630 EAST PLAN VIEW
3500 EAST PROFILE VIEW
3560 EAST PROFILE VIEW
3630 EAST PROFILE VIEW
C-406

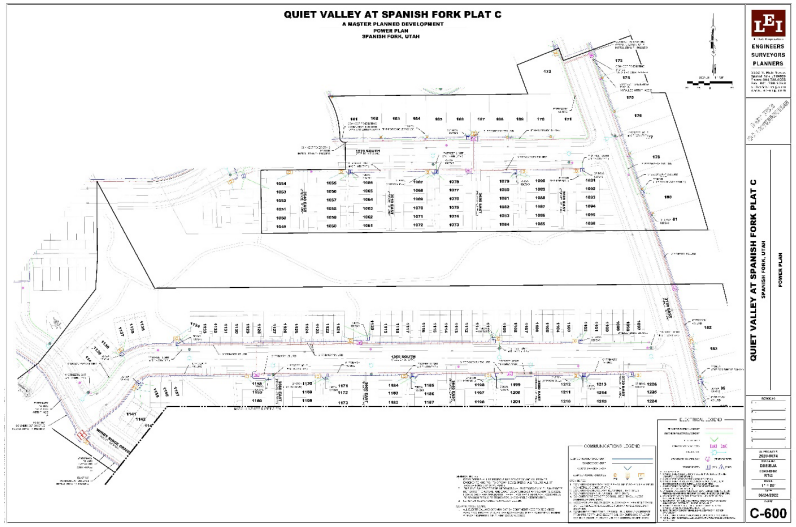

ENGINEERS
SURVEYORS
PLANNERS
QUIET VALLEY AT SPANISH FORK PLAT C
SPANISH FORK, UTAH
3640 EAST, 3680 EAST, AND 3720 EAST PLAN AND PROFILE
3640 EAST PLAN VIEW
3680 EAST PLAN VIEW
3720 EAST PLAN VIEW
3640 EAST PROFILE VIEW
3680 EAST PROFILE VIEW
3720 EAST PROFILE VIEW
C-407

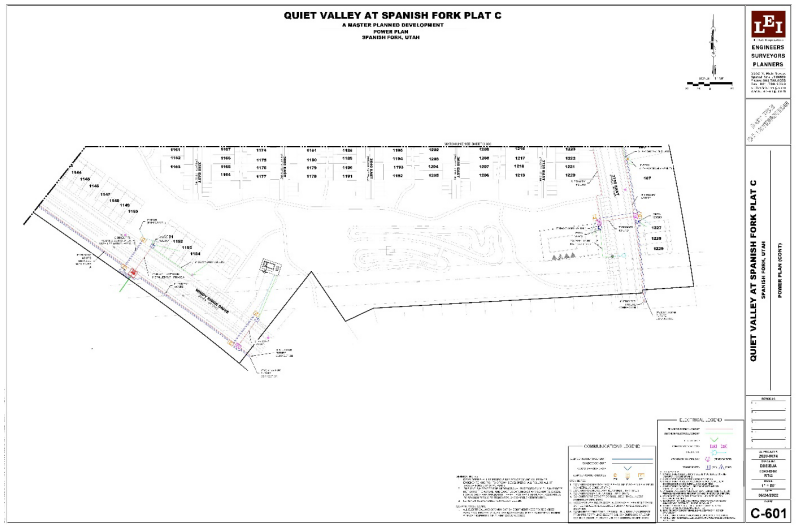

ENGINEERS
SURVEYORS
PLANNERS
QUIET VALLEY AT SPANISH FORK PLAT C
SPANISH FORK, UTAH
ONSITE SEWER PLAN AND PROFILE
ONSITE SEWER PLAN VIEW
ONSITE SEWER PROFILE VIEW
C-408

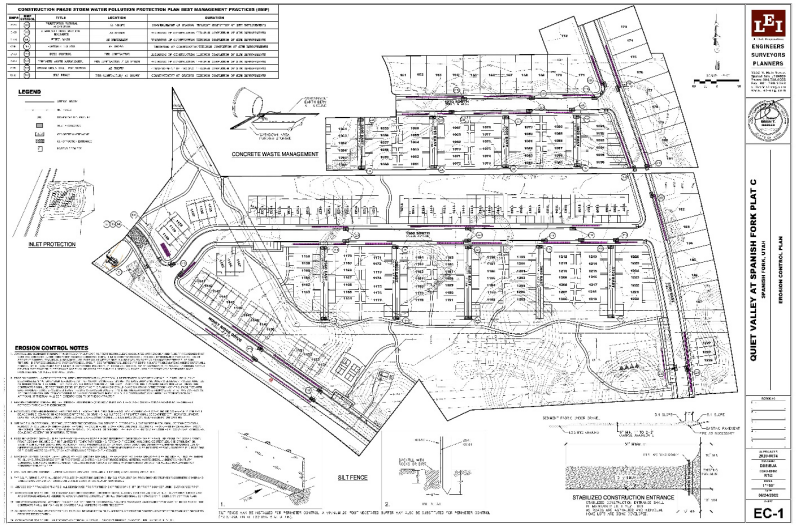

ENGINEERS
SURVEYORS
PLANNERS
QUIET VALLEY AT SPANISH FORK PLAT C
SPANISH FORK, UTAH
ONSITE STORM PLAN AND PROFILE
ONSITE STORM PLAN VIEW
ONSITE STORM PROFILE VIEW
C-409

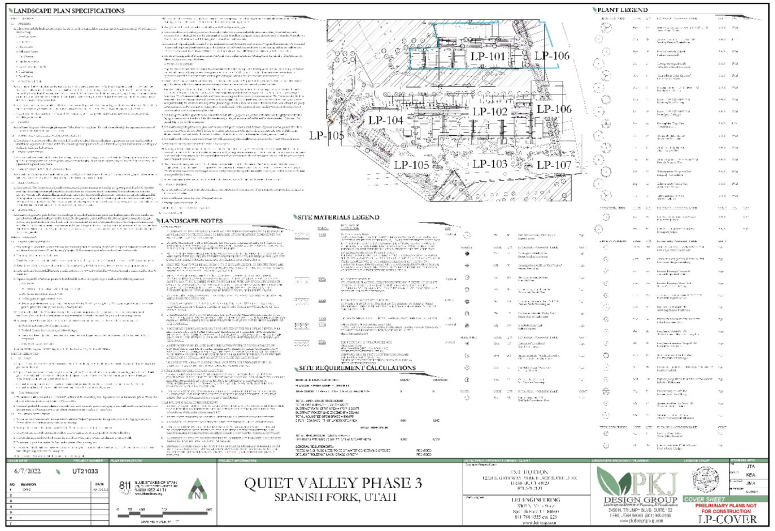

ENGINEERS
SURVEYORS
PLANNERS
QUIET VALLEY AT SPANISH FORK PLAT C
SPANISH FORK, UTAH
ONSITE STORM PLAN AND PROFILE
ONSITE STORM PLAN VIEW
ONSITE STORM PROFILE VIEW
C-410

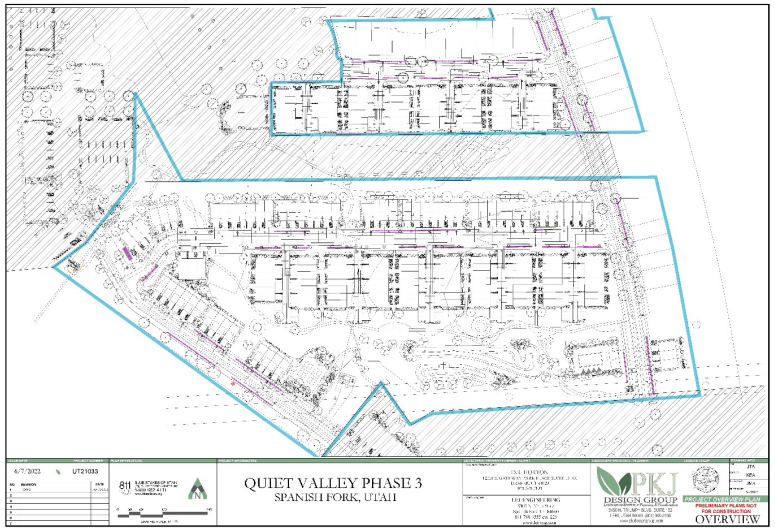

ENGINEERS
SURVEYORS
PLANNERS
QUIET VALLEY AT SPANISH FORK PLAT C
SPANISH FORK, UTAH
DETAILS
C-500

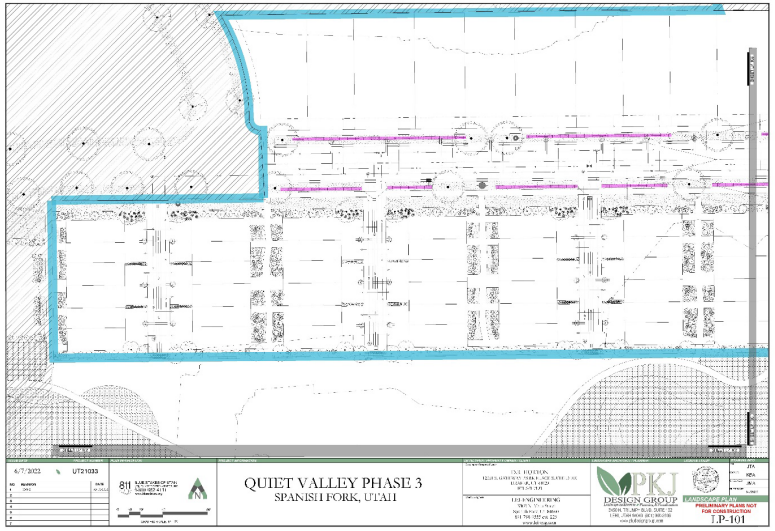

QUIET VALLEY AT SPANISH FORK PLAT C
A MASTER PLANNED DEVELOPMENT
POWER PLAN
SPANISH FORK, UTAH
ENGINEERS
SURVEYORS
PLANNERS
QUIET VALLEY AT SPANISH FORK PLAT C
SPANISH FORK, UTAH
POWER PLAN
C-600

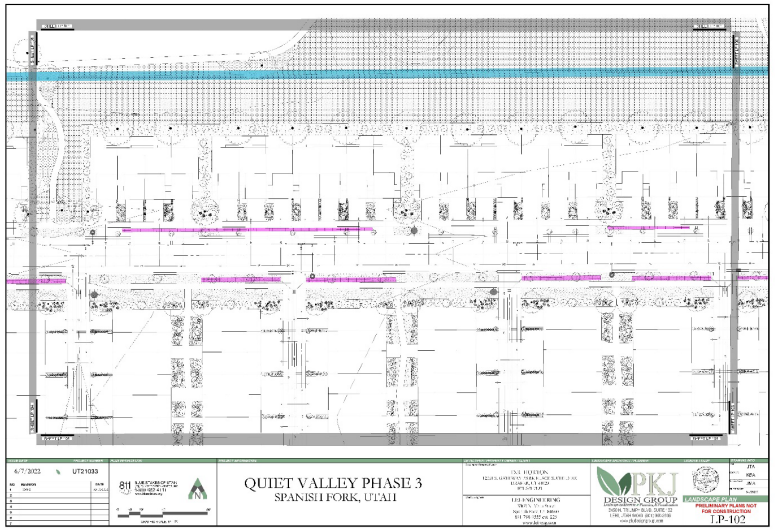

QUIET VALLEY AT SPANISH FORK PLAT C
A MASTER PLANNED DEVELOPMENT
POWER PLAN
SPANISH FORK, UTAH
ENGINEERS
SURVEYORS
PLANNERS
QUIET VALLEY AT SPANISH FORK PLAT C
SPANISH FORK, UTAH
POWER PLAN (SOUTH)
C-601

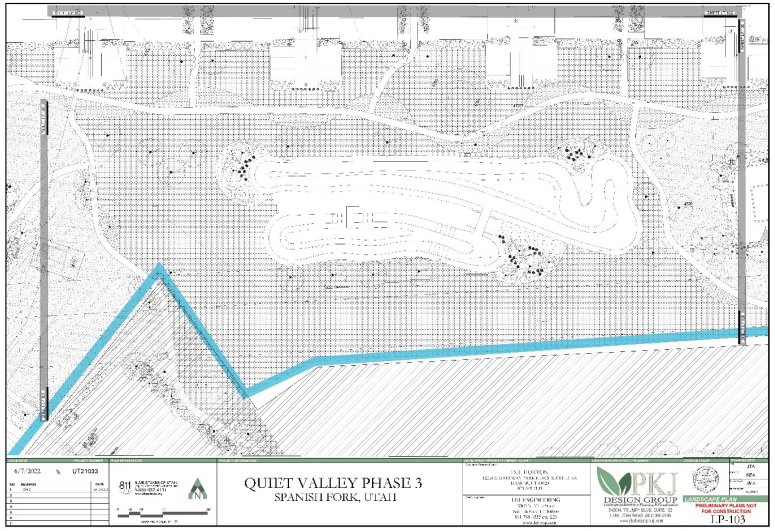

CONSTRUCTION PHASE STORM WATER POLLUTION PROTECTION PLAN BEST MANAGEMENT PRACTICES (BMP)
LEGEND
CONCRETE WASTE MANAGEMENT
INLET PROTECTION
EROSION CONTROL NOTES
SILT FENCE
STABILIZED CONSTRUCTION ENTRANCE
ENGINEERS
SURVEYORS
PLANNERS
QUIET VALLEY AT SPANISH FORK PLAT C
SPANISH FORK, UTAH
EROSION CONTROL PLAN
EC-1

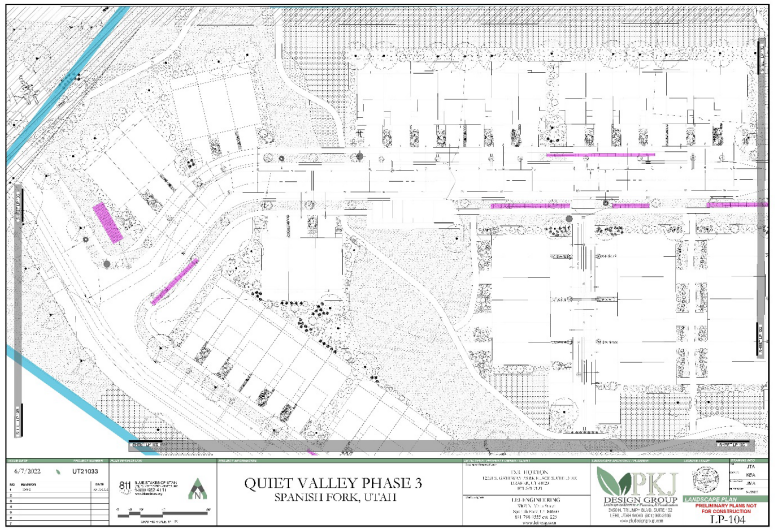

LANDSCAPE PLAN SPECIFICATIONS
PLANT LEGEND
LP-101
LP-106
LP-104
LP-102
LP-106
LP-105
LP-105
LP-103
LP-107
LANDSCAPE NOTES
SITE MATERIALS LEGEND
SITE REQUIREMENT CALCULATIONS
6/7/2022
UT21033
QUIET VALLEY PHASE 3
SPANISH FORK, UTAH
DESIGN GROUP
PRELIMINARY PLANS NOT FOR CONSTRUCTION
LP-COVER

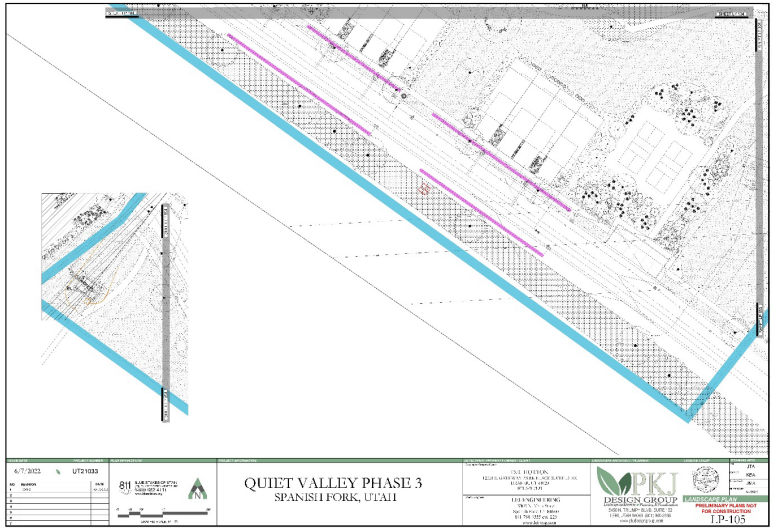

6/7/2022
UT21033
QUIET VALLEY PHASE 3
SPANISH FORK, UTAH
DESIGN GROUP
PRELIMINARY PLANS NOT FOR CONSTRUCTION
OVERVIEW

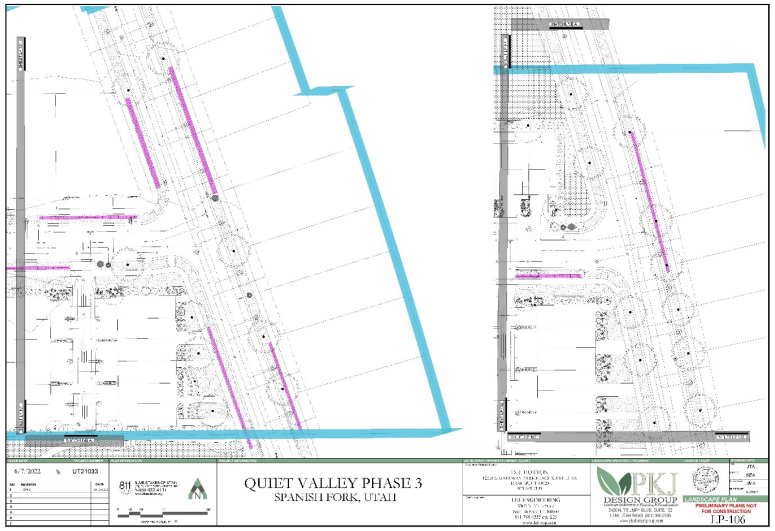

6/7/2022
UT21033
QUIET VALLEY PHASE 3
SPANISH FORK, UTAH
DESIGN GROUP
PRELIMINARY PLANS NOT FOR CONSTRUCTION
LP-101

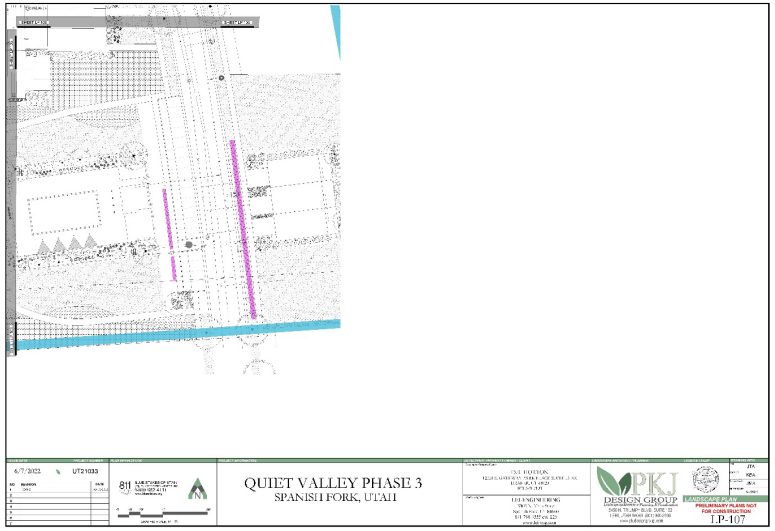

6/7/2022
UT21033
QUIET VALLEY PHASE 3
SPANISH FORK, UTAH
DESIGN GROUP
PRELIMINARY PLANS NOT FOR CONSTRUCTION
LP-102

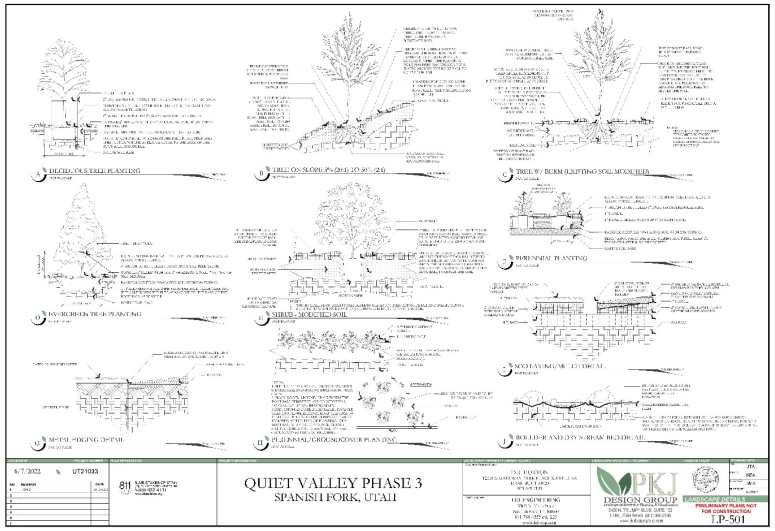

QUIET VALLEY PHASE 3
SPANISH FORK, UTAH
LP-103

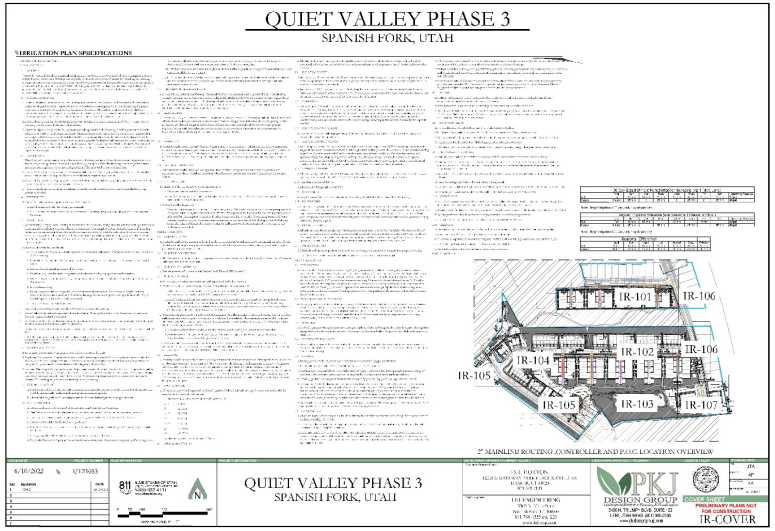

QUIET VALLEY PHASE 3
SPANISH FORK, UTAH
LP-104

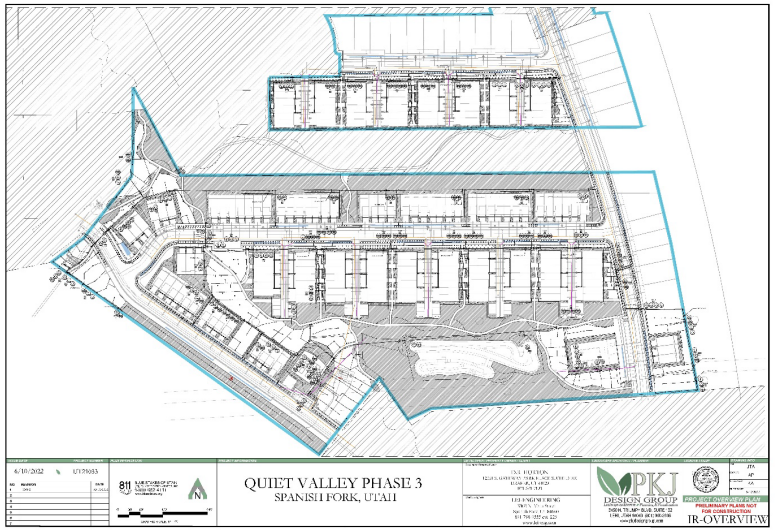

QUIET VALLEY PHASE 3
SPANISH FORK, UTAH
LP-105

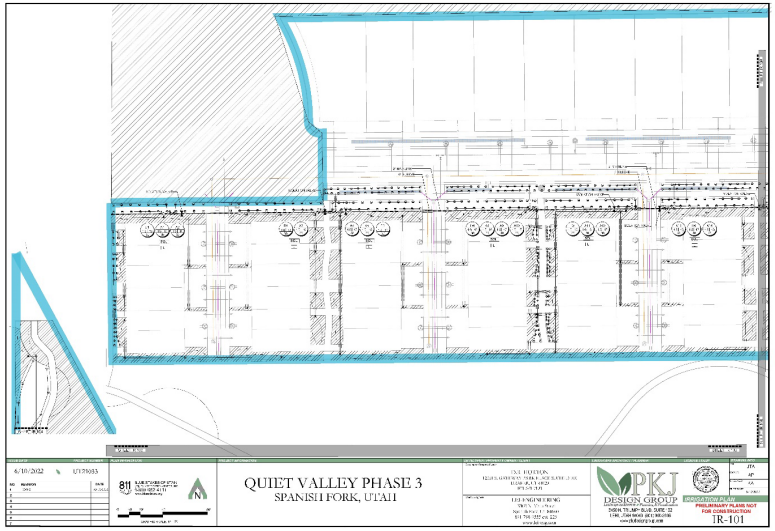

QUIET VALLEY PHASE 3
SPANISH FORK, UTAH
LP-106

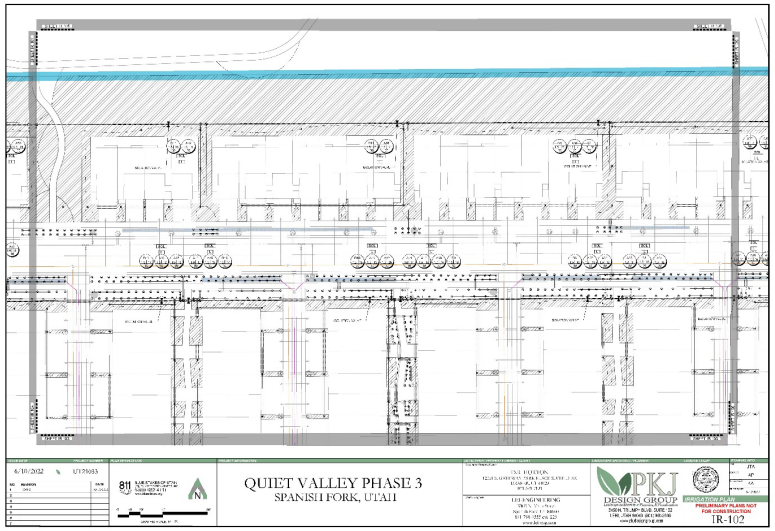

QUIET VALLEY PHASE 3
SPANISH FORK, UTAH
LP-107

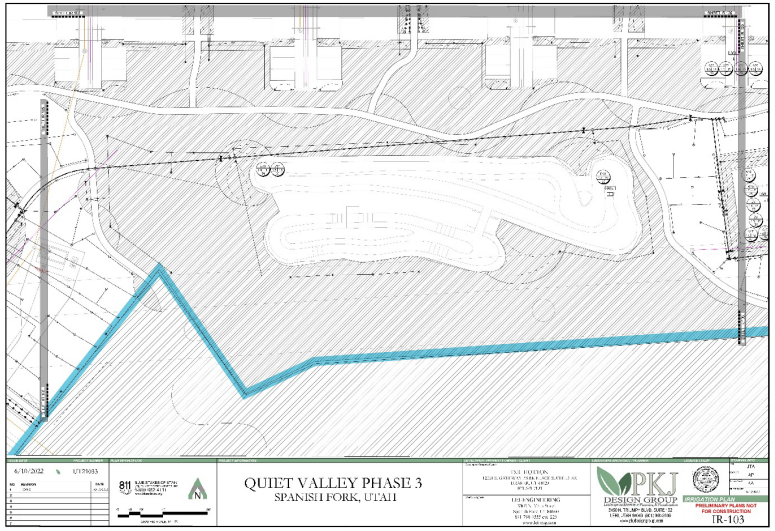

QUIET VALLEY PHASE 3
SPANISH FORK, UTAH
LP-501

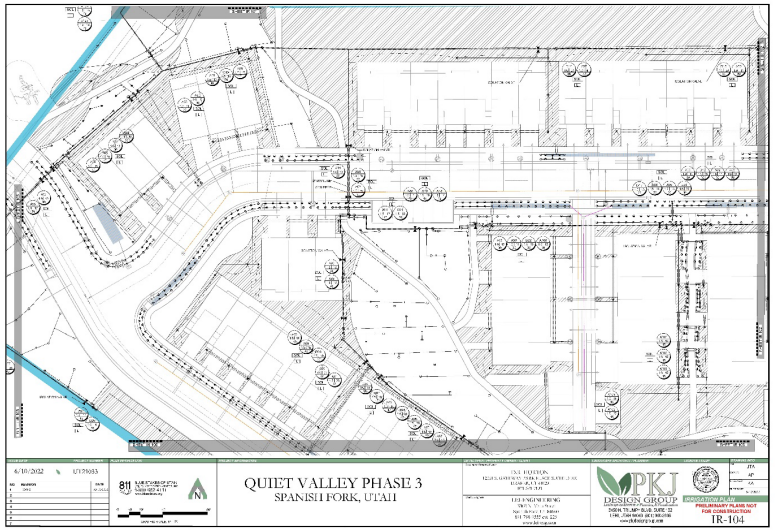

QUIET VALLEY PHASE 3
SPANISH FORK, UTAH
IRRIGATION PLAN SPECIFICATIONS
IR-101
IR-106
IR-102
IR-104
IR-105
IR-103
IR-107
QUIET VALLEY PHASE 3
SPANISH FORK, UTAH
IR-COVER

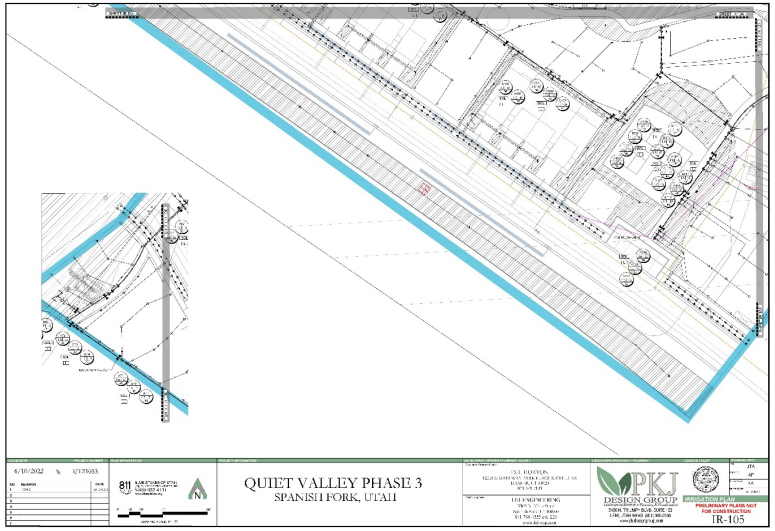

QUIET VALLEY PHASE 3
SPANISH FORK, UTAH
IR-OVERVIEW

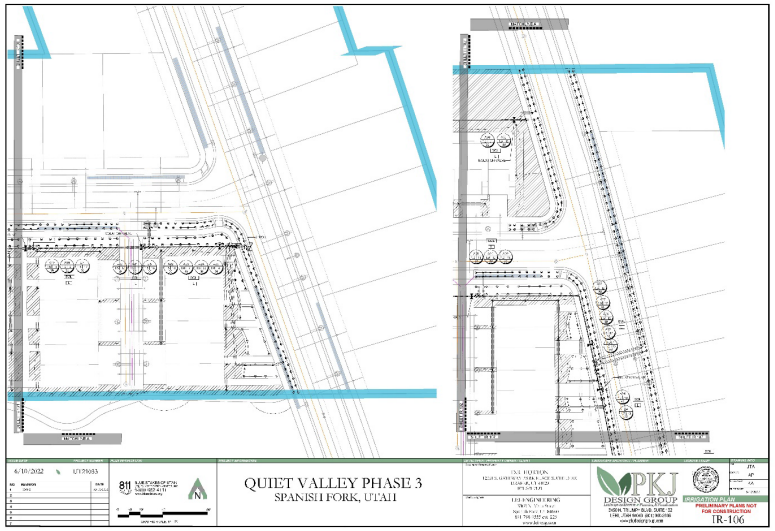

QUIET VALLEY PHASE 3
SPANISH FORK, UTAH
IR-101

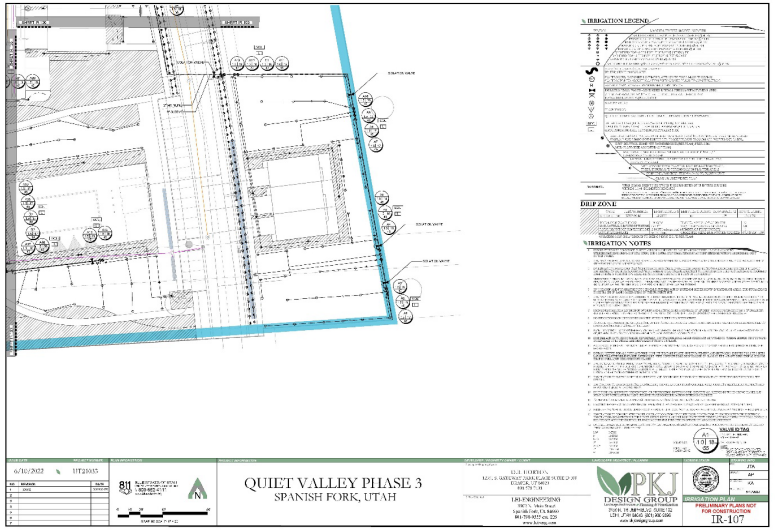

QUIET VALLEY PHASE 3
SPANISH FORK, UTAH
IR-102

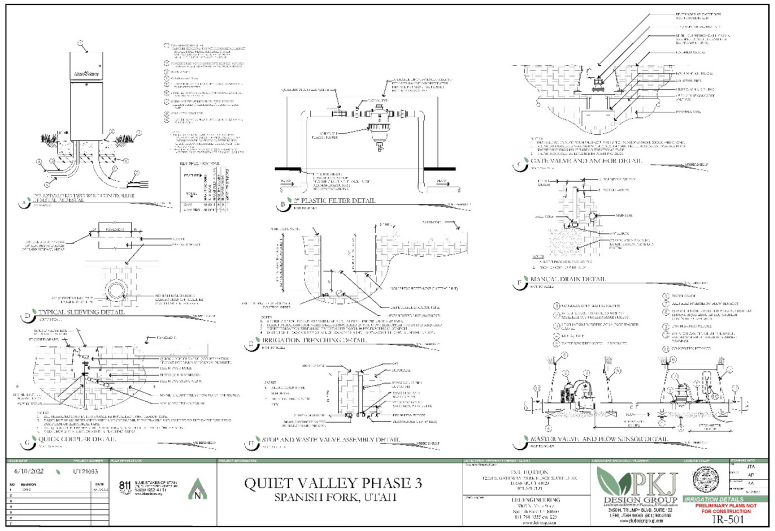

QUIET VALLEY PHASE 3
SPANISH FORK, UTAH
IR-103

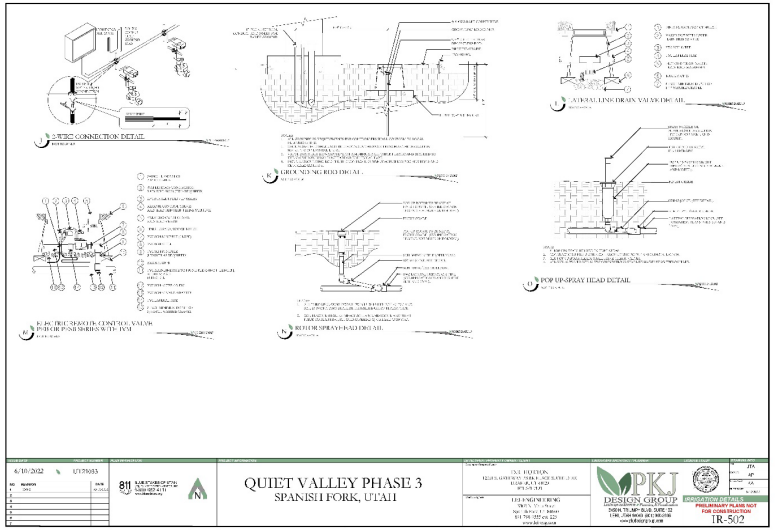

QUIET VALLEY PHASE 3
SPANISH FORK, UTAH
IR-104

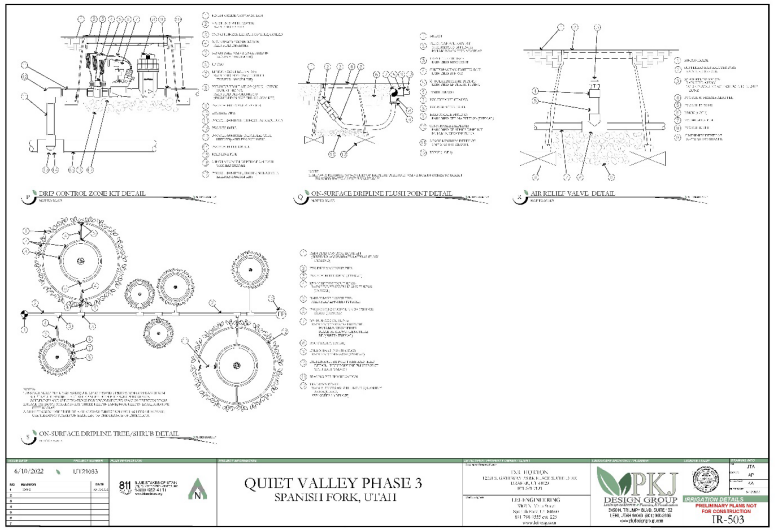

QUIET VALLEY PHASE 3
SPANISH FORK, UTAH
PKJ DESIGN GROUP
TR-105

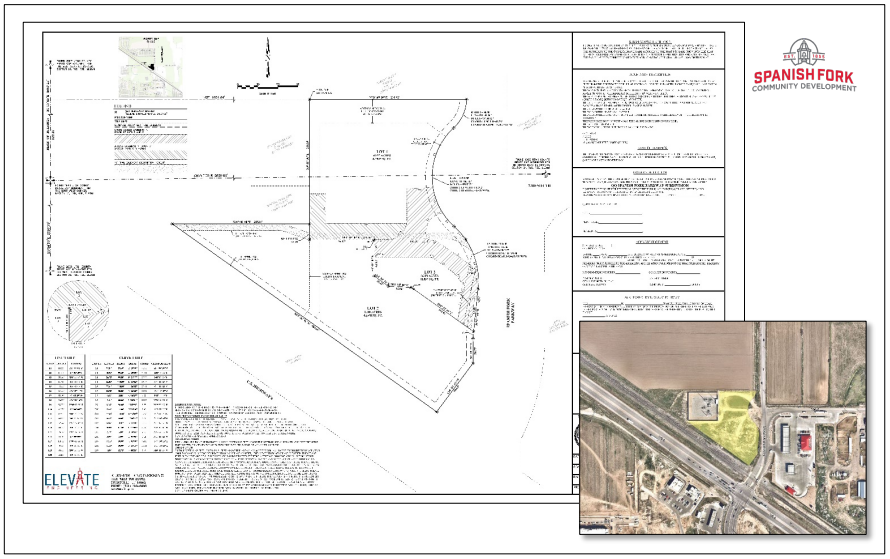

QUIET VALLEY PHASE 3
SPANISH FORK, UTAH
PKJ DESIGN GROUP
TR-106


QUIET VALLEY PHASE 3
SPANISH FORK, UTAH
PKJ DESIGN GROUP
TR-107


QUIET VALLEY PHASE 3
SPANISH FORK, UTAH
PKJ DESIGN GROUP
TR-501


QUIET VALLEY PHASE 3
SPANISH FORK, UTAH
PRELIMINARY PLANS NOT FOR CONSTRUCTION
IR-502


QUIET VALLEY PHASE 3
SPANISH FORK, UTAH
PRELIMINARY PLANS NOT FOR CONSTRUCTION
IR-503



Quick Quack Car Wash Highway 6 Final Plat Approval Request

July 6, 2022, Development Review Committee Meeting.

Located at 1091 East Spanish Fork Parkway, including 2.435 acres.

The subject property is zoned C-1.

The applicant has requested Final Plat approval for 3 lots.

Key Issues

1. Consistency with the approved Preliminary Plat.
2. Utilities.
3. Access.

Recommendation

That the proposed Final Plat be approved based on the following findings and subject to the following conditions:

Findings

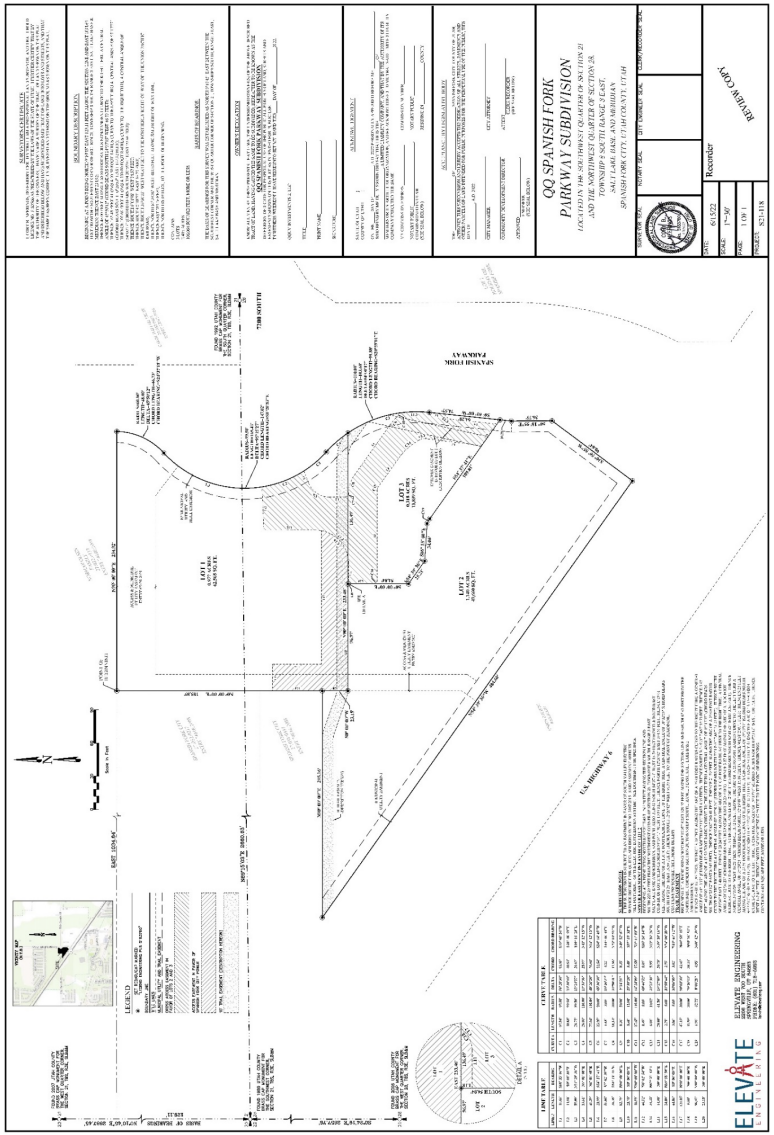
1. That the proposal conforms to the City's General Plan Designation and Zoning Map.
2. That the proposal is consistent with the approved Preliminary Plat.

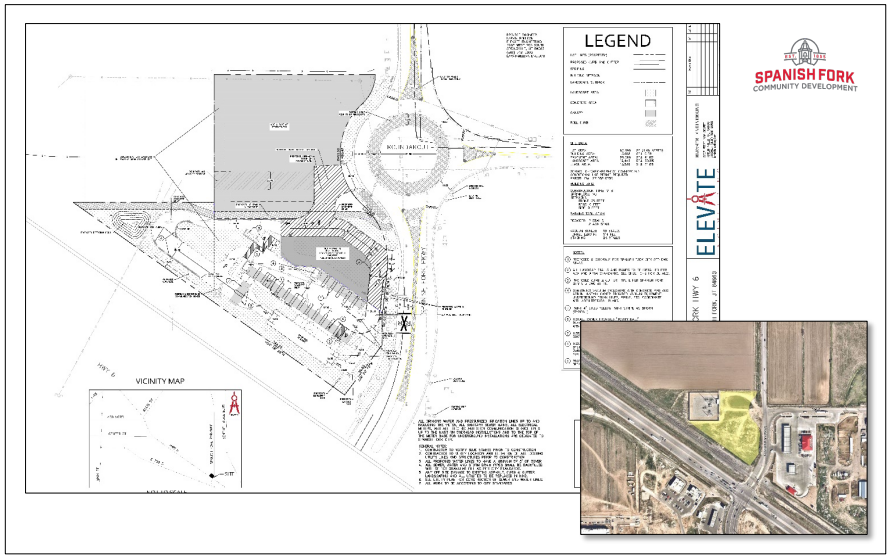
Conditions

1. That the applicant meets the City's Construction Standards and Zoning requirements.
2. That the applicant addresses any red-lines.

Exhibits

1. Final Plat.





Quick Quack Car Wash Highway 6 Site Plan Approval Request

July 6, 2022, Development Review Committee Meeting.

Located at 1091 East Spanish Fork Parkway, including 1.46 acres.

The subject property is zoned C-1.

The applicant has requested that a Site Plan be approved.

Key Issues

1. Traffic Study.
2. Roundabout.
3. Landscaping.
4. Utilities.
5. Power.
6. Improvements.
7. Storm Drainage.
8. Access.

Recommendation

That the proposed Site Plan be approved based on the following findings and subject to the following conditions:

Findings

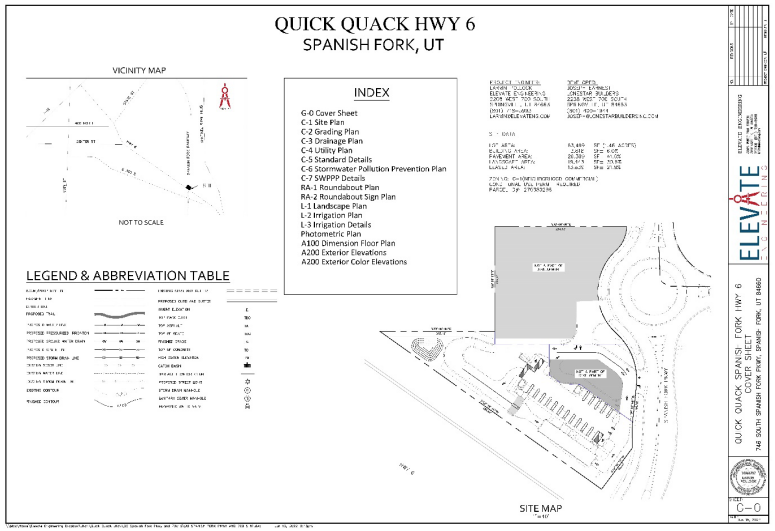
1. That the proposal conforms to the City's General Plan Designation and Zoning Map.

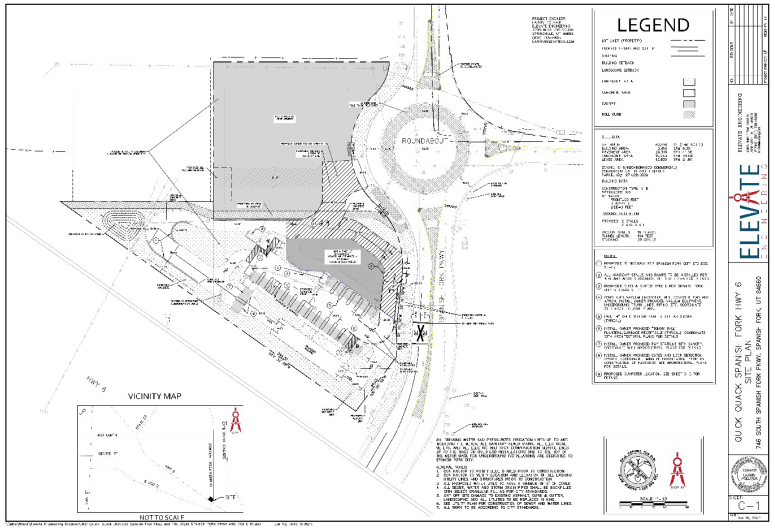
Conditions

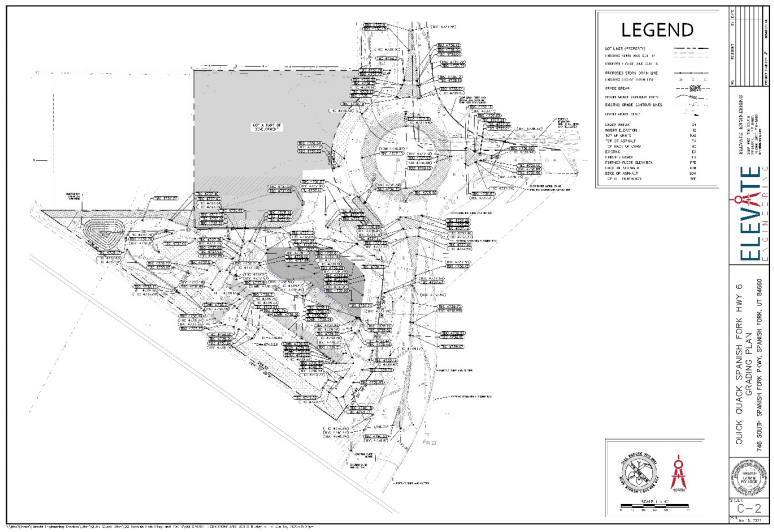
1. That the applicant meets the City's Construction Standards and Zoning requirements.
2. That the applicant addresses any red-lines.

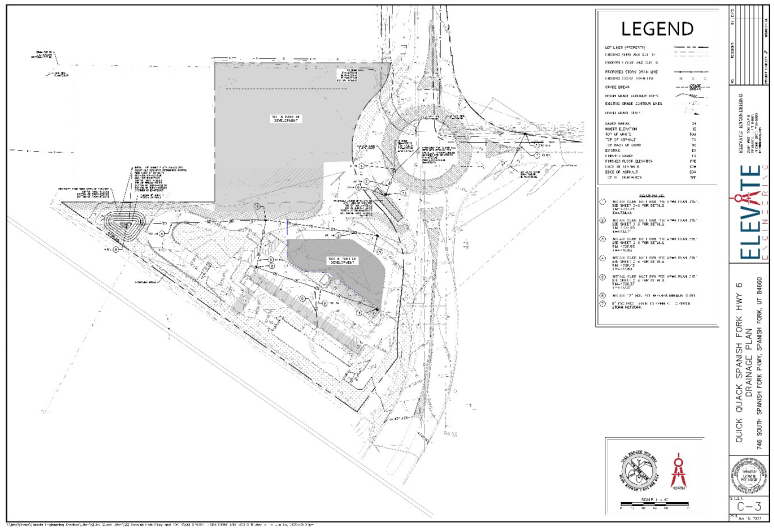
Exhibits

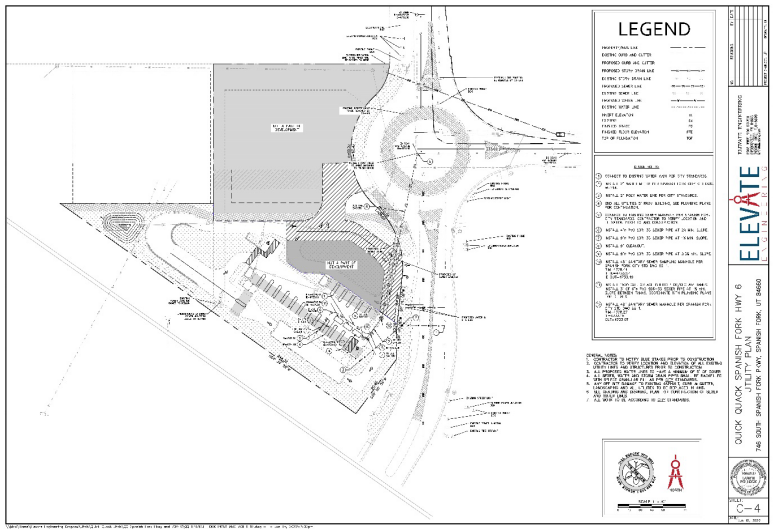
1. Plans.
2. Roundabout.
3. Traffic Study.

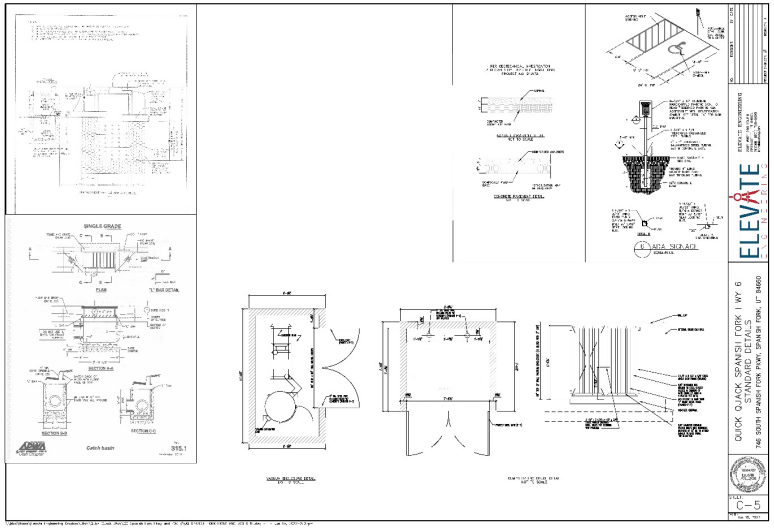


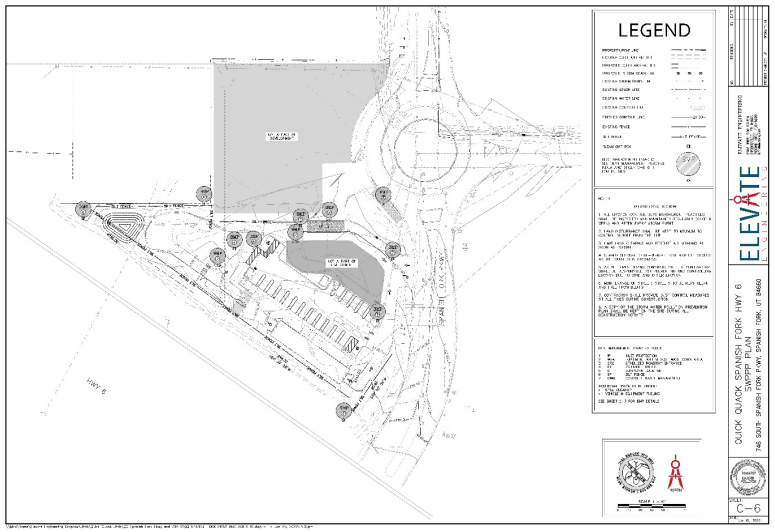


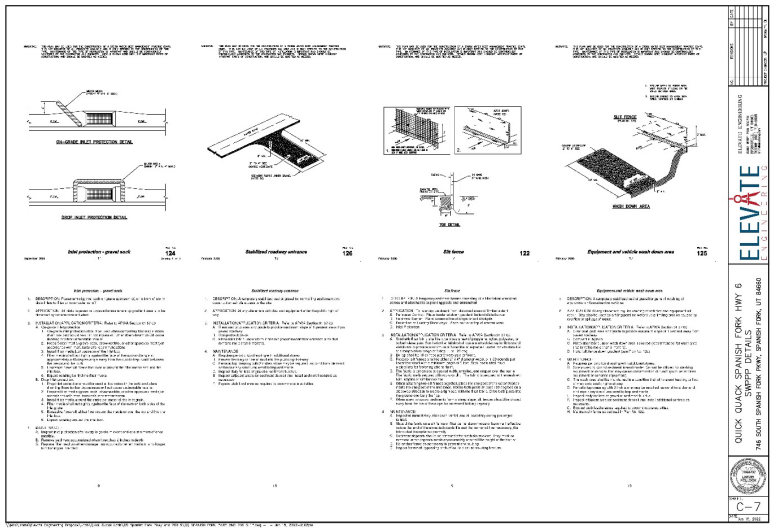

LEGEND
ELEVATE
QUICK QUACK SPANISH FORK HWY 6
GRADING PLAN
746 SOUTH SPANISH FORK PKWY, SPANISH FORK, UT 84660
C-2

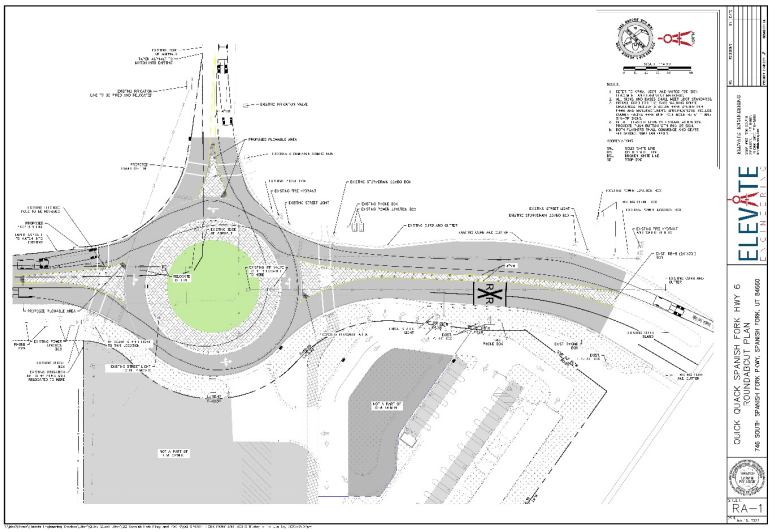

LEGEND
ELEVATE
QUICK QUACK SPANISH FORK HWY 6
DRAINAGE PLAN
746 SOUTH SPANISH FORK PKWY, SPANISH FORK, UT 84660
C-3

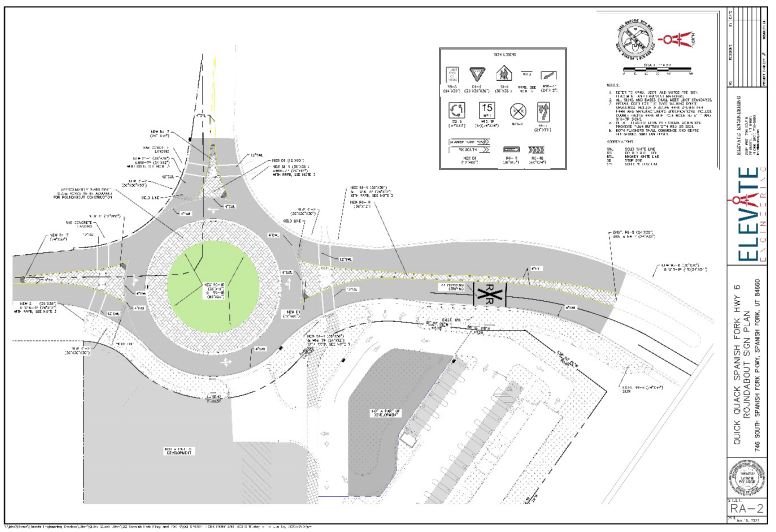

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UTILITY PLAN
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C-4

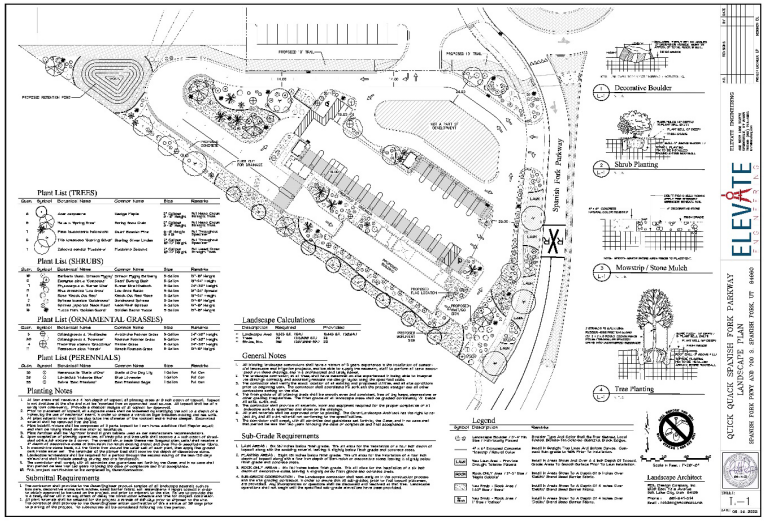

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C-5

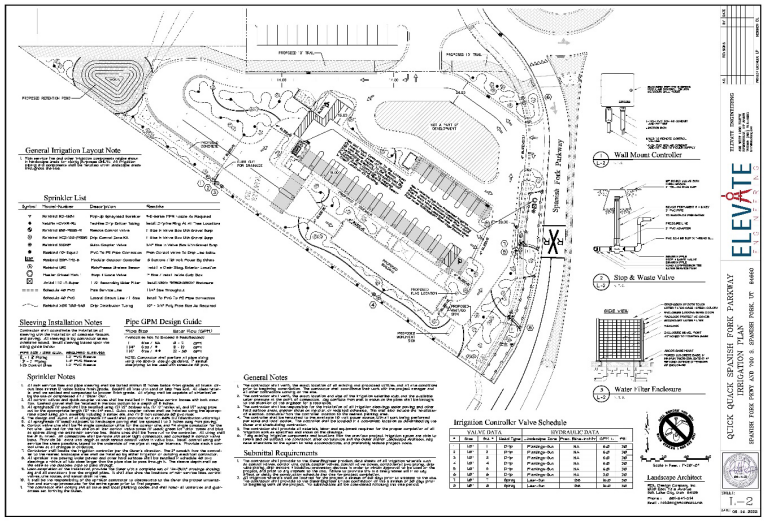

LEGEND
ELEVATE
QUICK QUACK SPANISH FORK HWY 6
746 SOUTH SPANISH FORK PKWY, SPANISH FORK, UT 84660
SWPPP PLAN
C-6

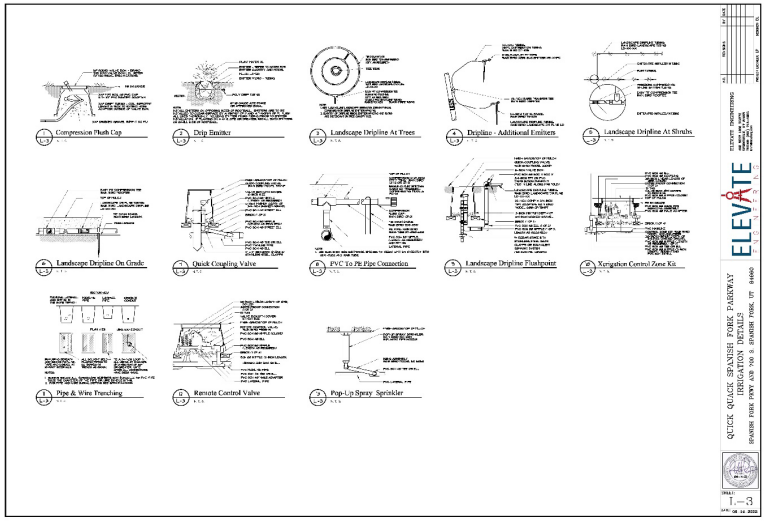

ELEVATE
QUICK QUACK SPANISH FORK HWY 6
746 SOUTH SPANISH FORK PKWY, SPANISH FORK, UT 84660
SWPPP DETAILS
C-7

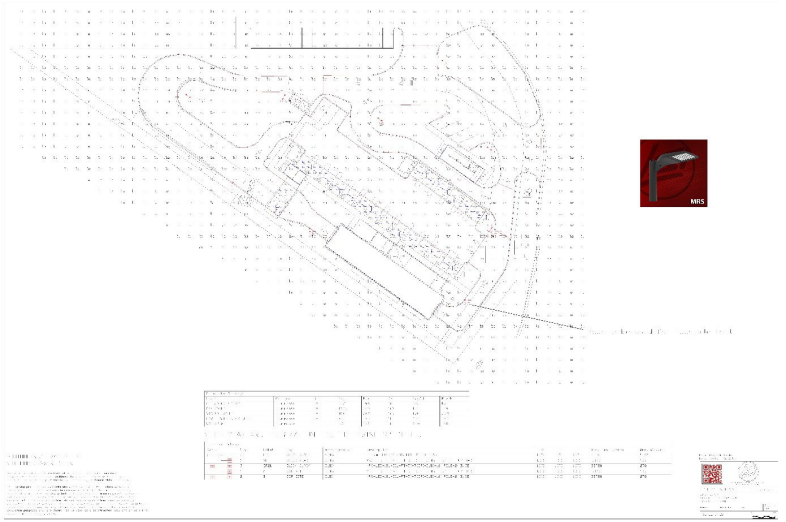

ELEVATE
QUICK QUACK SPANISH FORK HWY 6
746 SOUTH SPANISH FORK PKWY, SPANISH FORK, UT 84660
ROUNDABOUT PLAN
RA-1

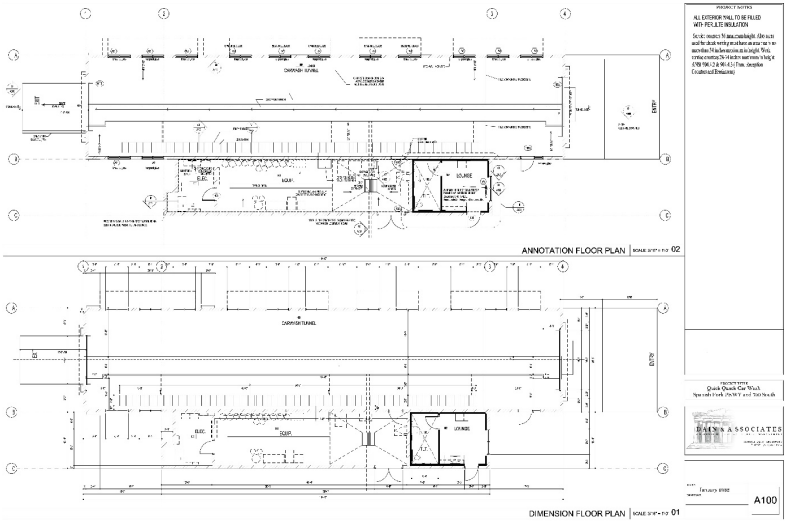

ELEVATE
QUICK QUACK SPANISH FORK HWY 6
746 SOUTH SPANISH FORK PKWY, SPANISH FORK, UT 84660
ROUNDABOUT SIGN PLAN
RA-2

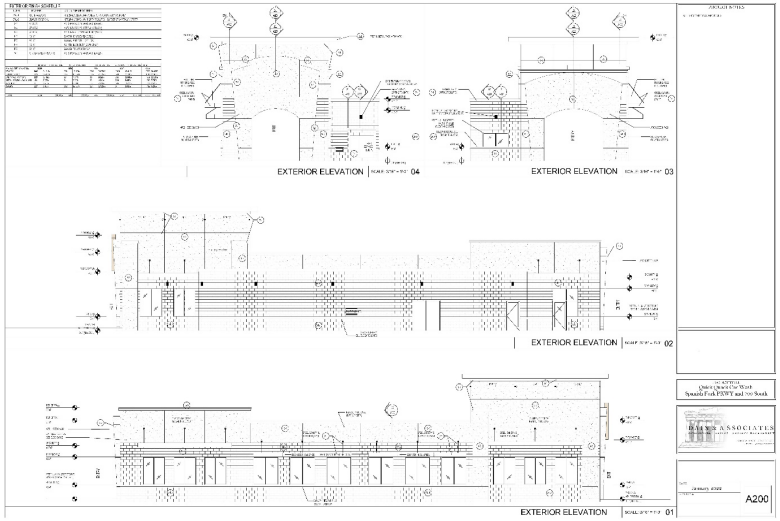

Plant List (TREES)
Plant List (SHRUBS)
Plant List (ORNAMENTAL GRASSES)
Plant List (PERENNIALS)
Planting Notes
Submittal Requirements
Landscape Calculations
General Notes
Sub-Grade Requirements
Legend
Decorative Boulder
Shrub Planting
Mowstrip / Stone Mulch
Tree Planting
Landscape Architect
Shamis Ford Parkway
QUICK QUACK SPANISH FORK PARKWAY
SPANISH FORK PKWY & SR 193 S SPANISH FORK, UT 84660
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L-1


General Irrigation Layout Note
Sprinkler List
Sleeving Installation Notes
Pipe GPM Design Guide:
Sprinkler Notes
General Notes
Submittal Requirements
Irrigation Controller Valve Schedule
Wall Mount Controller
Stop & Waste Valve
Water Filter Enclosure
Landscape Architect
Shamis Ford Parkway
QUICK QUACK SPANISH FORK PARKWAY
SPANISH FORK PKWY & SR 193 S SPANISH FORK, UT 84660
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L-2

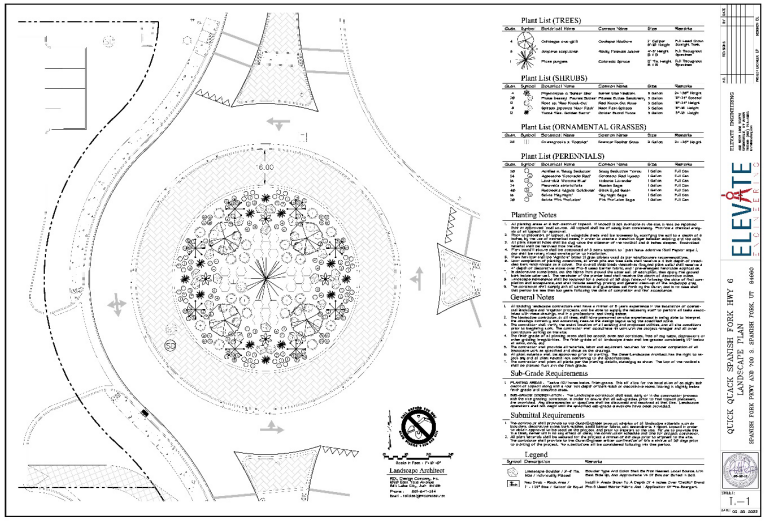

Compression Plush Cap
Drip Emitter
Landscape Dripline At Trees
Dripline - Additional Emitters
Landscape Dripline At Shrubs
Landscape Dripline On Grade
Quick Coupling Valve
PVC To Pe Pipe Connection
Landscape Dripline Flushpoint
Irrigation Control Zone Kit
Pipe & Wire Trenching
Remote Control Valve
Pop-Up Spray Sprinkler
QUICK QUACK SPANISH FORK PARKWAY
IRRIGATION DETAILS
SPANISH FORK PKWY & SR 193 S SPANISH FORK, UT 84660
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ANNOTATION FLOOR PLAN
DIMENSION FLOOR PLAN
A100


EXTERIOR ELEVATION 04
EXTERIOR ELEVATION 03
EXTERIOR ELEVATION 02
EXTERIOR ELEVATION 01
A200


EXTERIOR ELEVATION 04
EXTERIOR ELEVATION 03
EXTERIOR ELEVATION 02
EXTERIOR ELEVATION 01
A200



WALL CONSULTANT GROUP
2139 South 1260 West, Salt Lake City, UT 84119-1464

TECHNICAL MEMORANDUM

Date: Thursday, June 16th, 2022

To: Michael Clark, Assistant City Engineer

From: Jeremy Searle, PE, PTOE

Subject: Mixed Use – Spanish Fork Parkway & 700 South TIS Review

Purpose

WCG was asked to review the submitted Mixed Use – Spanish Fork Parkway & 700 South traffic impact study (TIS) completed by A-Trans Engineering, dated March, 2022. The proposed development is located on the west side of Spanish Fork Parkway at approximately 700 South. The proposed development includes a car wash, soda store drive-thru, and a 6,000 sf general retail store. This memorandum includes a summary of our review.

Summary

The TIS provides an analysis of the mixed use development for existing 2022 and future 2027 conditions. The TIS recommends the following mitigation measures in plus project scenarios:

- The master planned roundabout at 700 South / Spanish Fork Parkway should be constructed with the opening of the site
- Along with the roundabout, the south leg median should be extended down to the existing median near the railroad tracks to restrict the proposed access to a right-in right-out (RIRO) only access.
- The proposed RIRO access should be a minimum of 200 feet south of the roundabout.
- It is recommended that a minimum of 100 feet of throat length be preserved at the entrance to the roundabout. Otherwise queues from the roundabout, soda shop, and carwash will conflict onsite and could back through the roundabout at peak periods.

Review

After completing an initial review of the Mixed Use TIS and discussing with Spanish Fork City staff, WCG has the following observations, comments, and questions:

1. The proposed RIRO access south of the roundabout is too close to the roundabout. City standards require a minimum of 200 feet (the proposed is access is approximately 50 feet away from the roundabout). If left as is, the RIRO access will likely result in crashes and operational delays at the roundabout.
2. The comparable data collection for the drive-through soda shop (Table 3) indicates that the average queue during the peak hours is 13 vehicles long. This doesn't include the additional vehicles for the car wash or retail store that would also use the access. Rough measurements on the site plan show room for approximately 10 vehicles to queue before backing into the roundabout. As pointed out in the recommendations of the TIS, the current

site plan layout will likely result in queuing that will back through the roundabout, causing delays and safety issues. It is recommended that the internal circulation and/or land uses be reconsidered at this location.

3. Table 8 – why are the northbound right-turn and westbound right-turn movements operating so poorly? They should be able to turn right with relatively little delay.
4. The queueing table (Table 11) recommends 350 feet of storage for the EB left-turn, but only 225 are available. Should the project restripe the EB left-turn lane to provide additional storage?
5. The TIS was completed using Synchro, but did not use SimTraffic to simulate the study intersections. HCM methodologies do not capture how closely spaced intersections interact with each other, or how queuing can cause additional issues upstream. It is recommended that these intersections be simulated to better understand potential impacts.
6. The southbound turn pockets at the Spanish Fork Parkway / US-6 intersection quickly taper down to one lane north of the railroad tracks. It is recommended that extending these turn pocket lengths be considered to better facilitate operations at the signal.

Recommendations

WCG recommends the following regarding this site:

1. This site is too small to adequately accommodate dual drive-thrus. Further information revealed that the property will be deed restricted such that a drink or coffee shop would not be allowed. It is recommended that any type of drive-thru at this location be restricted, because the queues will likely combine with the car wash queues and back into the roundabout. Any future proposal for this small location adjacent to the car wash needs to be reviewed by the City to determine if operations or queuing will negatively impact the area.
2. It is recommended that the proposed access south of the roundabout be restricted to a right-out only access. This is because it does not meet City standards for access spacing and will likely result in crashes due to the close proximity of the roundabout.
3. It is recommended that the turn lanes north of the roundabout be extended to better facilitate operations at the signal.

Mixed Use Retail Development
Spanish Fork Parkway & 700 South
Traffic Impact Study

Spanish Fork, Utah

March 2022

TRANSPORTATION ENGINEERING

A-Trans Engineering
P.O. Box 521651
Salt Lake City, Utah 84152
(801) 949-0348 telephone
(801) 582-6252 fax

TRAFFIC STUDY

Mixed Use Retail Development
Spanish Fork Parkway & 700 South
Traffic Impact Analysis

Spanish Fork, Utah

Category II

March 2022

Prepared by:

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I. Introduction and Summary

The proposed retail site is located on the west side of Spanish Fork Parkway at 700 South in Spanish Fork, Utah. The site is planning to access Spanish Fork Parkway via the fourth approach to 700 South and a right in right out to the south of 700 South. The site is planned to include a 600 sf drive through soda store, a 1 tunnel car wash and 6,000 sf of general retail. The site is projected to generate 189 AM and 243 PM peak hour trips.

The intersection of Spanish Fork Parkway / US 6 operates with overall LOS D in the AM peak and LOS C in the PM peak period. This is maintained with the addition of the site in 2022 and in 2027 without the site. With the site in 2027 the intersection operates with LOS D in the AM and LOS D in the PM peak period. The site traffic represents a 7% increase in traffic at the intersection in the AM and 10% increases in traffic in the PM peak. 700 South / Spanish Fork Parkway operates with critical side street delay at LOS B. As a roundabout with and without the site the intersection operates at LOS A for all approaches. Access X along is along Spanish Fork Parkway is projected to operate with side street right turn egress at LOS B in the AM and PM peak periods throughout 2027.

Recommendations:

- The master planned roundabout at 700 South / Spanish Fork Parkway should be constructed with the opening of the site and the fourth leg added to the intersection.
- When the roundabout is built the median on the southern leg along Spanish Fork Parkway should be extended to tie into the existing median near the railroad tracks. This will restrict the existing gas station access to a right in right out and any site access along Spanish Fork Parkway will also be restricted to right in right out.
- The right in right out site access along Spanish Fork Parkway should be placed 200 feet south of the roundabout per city standard and outside the throat of the roundabout. (See Figure 10)
- The internal connection point between the Car Wash and the Retail Parking is extremely close to the entrance to the roundabout. It is recommended that a minimum of 100 feet of throating be preserved for the function of the roundabout. As the site is currently laid out, it is likely that the soda shop queue coming from the roundabout and the queue coming from the right in / right out access will create a merge point on-site at the internal access location and this queuing could back through the roundabout during peak periods. (See Figure 11).

II. Proposed Project

The proposed retail site is planned to include a 600 sf drive through soda store, a 1 tunnel car wash and 6,000 sf of general retail and is projected to generate 189 AM and 243 PM peak hour trips. The site is located on the west side of Spanish Fork Parkway at 700 South in Spanish Fork, Utah. The site is planning to access Spanish Fork Parkway via the fourth approach to 700 South and a right in right out to the south of 700 South. Per the Spanish Fork Transportation Master Plan Table 6 in Appendix D, street spacing along Spanish Fork Parkway is required at 500 feet and right in right out accesses are required at 200 feet. 700 South is located approximately 580 feet north of US 6 and meets the spacing requirement. The right in right out access is located approximately 100 feet south of the roundabout and does not meet the spacing requirements.

III. Study Area Conditions

The study area includes the following intersection.

- US 6 / Spanish Fork Parkway
- 700 South / Spanish Fork Parkway
- Access X (RIRO) / Spanish Fork Parkway

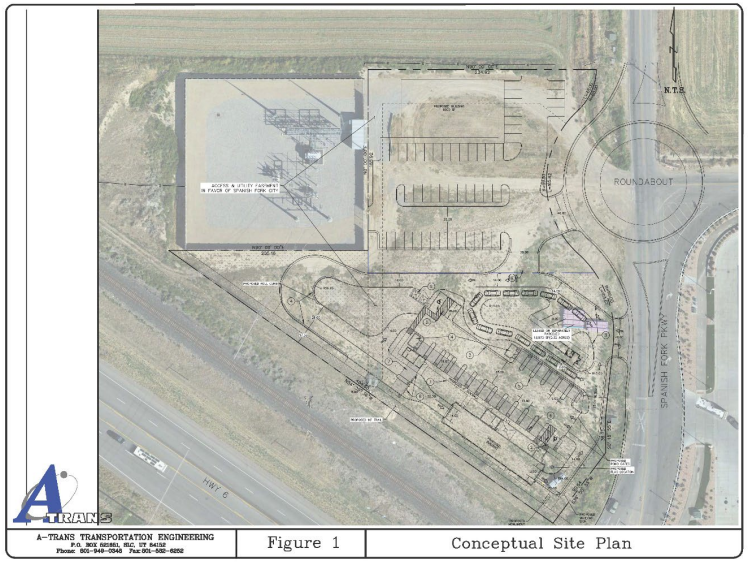
Figure 2 shows the access spacing. Figure 3 shows the location of the site. Figure 4 shows existing intersection geometry

Spanish Fork Parkway

Spanish Fork Parkway (Rt 3035) is currently a two lane facility with one lane in each direction. The 2019 AADT is 3,500 vehicles per day and the 2020 AADT is 3,100 vehicles per day with a posted speed limit is 25 MPH. The roadway is classified by Spanish Fork as a 3 Lane Major Collector.

US 6

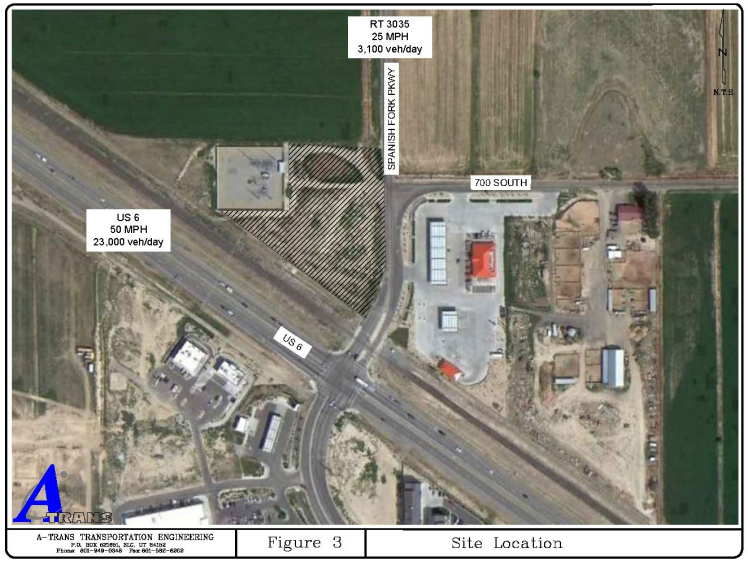
US 6 is currently a five lane facility with two lanes in each direction and a two way left turn lane. The 2019 AADT is 24,000 vehicles per day and the 2020 AADT is 23,000 vehicles per day with a posted speed limit is 50 MPH. US 6 is classified by UDOT as a category 3 roadway.



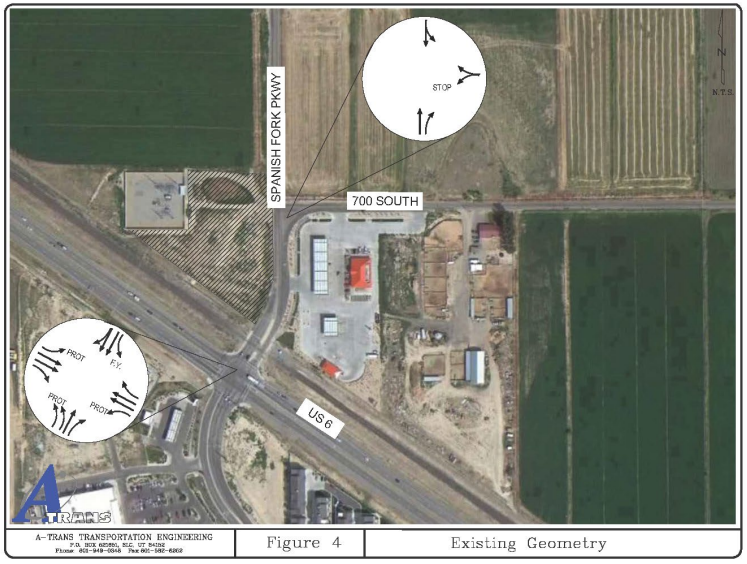
A-TRANS TRANSPORTATION ENGINEERING | Figure 1 | Conceptual Site Plan



A-TRANS TRANSPORTATION ENGINEERING | Figure 2 | Access Spacing



A-TRANS TRANSPORTATION ENGINEERING | Figure 3 | Site Location



A-TRANS TRANSPORTATION ENGINEERING | Figure 4 | Existing Geometry

IV. Analysis of Existing Condition

The existing traffic counts were performed on Tuesday February 15, 2022 during the AM and PM peak periods. Additional traffic counts and signal timing were taken from UDOT's Signal Performance Measures.

The 6th Edition Highway Capacity Manual defines the Level of Service (LOS) for both signalized and unsignalized intersections as a range of average experienced delay. LOS is a qualitative rating of traveler satisfaction from A to F whereby LOS A is good and LOS F poor. Table 1 shows the LOS range by delay for unsignalized and signalized intersections and accesses.

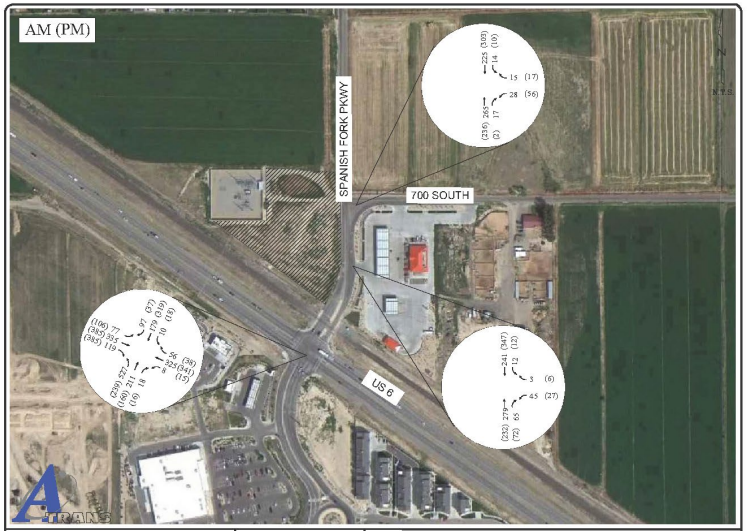
Table 1: Intersection LOS-Delay Relationship

	Unsignalized	Signalized
Level of Service	Total Delay per Vehicle (sec)	Total Delay per Vehicle (sec)
A	≤ 10.0	≤ 10.0
B	> 10.0 and ≤ 15.0	> 10.0 and ≤ 20.0
C	> 15.0 and ≤ 25.0	> 20.0 and ≤ 35.0
D	> 25.0 and ≤ 35.0	> 35.0 and ≤ 55.0
E	> 35.0 and ≤ 50.0	> 55.0 and ≤ 80.0
F	> 50.0	> 80.0

The intersection of US 6 / Spanish Fork Parkway operates with overall LOS D in the AM and LOS C in the PM peak period. The intersection of US 6 / Spanish Fork Parkway operates with overall LOS D in the AM and LOS C in the PM peak period. Table 2 shows the Existing LOS.

Table 2: Existing Level of Service

Delay (sec/veh)	US 6 / Spanish Fork Parkway (Overall)		700 South / Spanish Fork Parkway (Overall)	
AM	37.6	D	12.7	B
PM	31.5	C	13.7	B



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Figure 5 Existing Traffic

V. Projected Traffic

A. Trip Generation

Drive Through Soda

Trip generation is typically done per The Institute of Transportation Engineers (ITE) *Trip Generation* (10th Edition) handbook. However, there is currently no land use that appropriately represents the traffic patterns seen at other SWIG locations. Therefore 4 existing SWIG locations within Salt Lake County were counted to determine trip generation rates. The results of those counts are summarized in Table 3.

Table 3: Count Data for Drive Through Soda

Location	Two Hour Volume	Peak Hour	Peak Hour Trips	Max Queue	Average Time in Line (sec)	Average Time at Window (sec)
196 West 12300 South	125	4:45-5:45	61	13	435	50
437 East 12300 South	105	4:40-5:40	62	16	492	58
900 East 5575 South	118	4:40-5:40	72	11	295	43
2300 East 3300 South	132	4:00-5:00	71	10	225	42
Average	120		67	13	362	48

The 4 sites averaged 67 in trips and 67 out trips spending 48 seconds at the service window and 362 seconds in line. The max queue observed at any site was 16 vehicles and the average max queue was 13 vehicles. The trip generation for the site is estimated at 134 AM and 134 PM peak hour trips.

Quick Quack Car Wash

Trip generation for the site was done using The Institute of Transportation Engineers (ITE) *Trip Generation* (10th Edition) handbook and using data collected from similar sites within Utah. The site is planning to include a single tunnel automated car wash. ITE does not provide data for an automated car wash during the AM peak period therefore estimations based on land use 949 – Detail Car Wash were used to estimate trips in the AM peak period. The AM peak period was 63% of the PM and this percent difference was applied to land use 948 to project AM trips at the site. Per the ITE method, the site is projected to generate 49 AM and 78 PM peak hour trips. The trip generation for the site per ITE is shown in Table 4.

Table 4: ITE Trip Generation for Quick Quack

Land Use	Size	Trip Rate	Trips	% IN	% Out	Trips In	Trips Out
AM							
Automated Car Wash	1 Tunnel	49.0	49	63%	37%	31	18
PM							
Automated Car Wash	1 Tunnel	77.5	78	50%	50%	39	39

Data at three existing Quick Quack locations were collected in November of 2020 on a weekday evening to compare with ITE trip generation rates and queueing. The results of that count are shown in Table 5.

Table 5: PM Peak Hour Count Data for Quick Quack

November 2020	2041 West 12600 South Riverton	352 North State Street American Fork	7610 South Union Park Ave Midvale	Average
Number of Vacuums	24	11	12	
Service Time of Wash (sec)	144	138	135	139
Entering Vehicles	40	47	42	43
Leave without Vacuuming	31	30	27	29
Leave with Vacuuming	11	14	15	13
Total Exiting	42	44	42	43
Max Observed Vehicles in Queue	3	2	4	3
% Leave without Vacuuming	74%	68%	64%	69%

The PM peak count indicated that 69% of the site traffic is exiting directly from the car wash and not utilizing the vacuum area. The data indicates that a single lane Quick Quack Car Wash generates 86 PM peak hour trips with 50% entering and 50% exiting.

The traffic data collected for the PM peak period indicates 86 PM trips which is higher than the 78 projected by ITE and therefore the actual data collected is applied to this study. As only ITE projections are available for the AM peak period these are applied within the study. The site is estimated to generate 49 AM and 86 PM peak hour trips.

Total Site Trip Generation

Trip generation for the retail was done using The Institute of Transportation Engineers (ITE) *Trip Generation* (10th Edition) handbook and the drive through soda and car wash were applied as stated above. The site is planned to include a 600 sf drive through soda store, a 1 tunnel car wash and 6,000 sf of general retail. The site is projected to generate 189 AM and 243 PM peak hour trips. The trip generation for the site is shown in Table 6.

Table 6: Projected Trip Generation for Site

Land Use	Size	Trip Rate	Trips	% IN	% Out	Trips In	Trips Out
AM							
Retail	6,000 sf	0.94	6	62%	38%	4	2
Drive Thru Soda	1 Drive Thru	134	134	50%	50%	67	67
Quick Quack	1 Tunnel	49	49	63%	37%	31	18
Total			**189**			**102**	**87**
PM							
Retail	6,000 sf	3.81	23	48%	52%	11	12
Drive Thru Soda	1 Drive Thru	134	134	50%	50%	67	67
Quick Quack	1 Tunnel	86	86	50%	50%	43	43
Total			**243**			**121**	**122**

B. Trip Distribution

Project site traffic was applied to the origin-destination (O-D) for the site. Origin-destination was determined from evaluating the existing traffic patterns and hourly traffic volumes on each leg of the included intersections as well as the location of retail centers and freeways relative to this site. This was used as a baseline for origin destination and engineering judgment was applied to this to determine the following OD for the site.

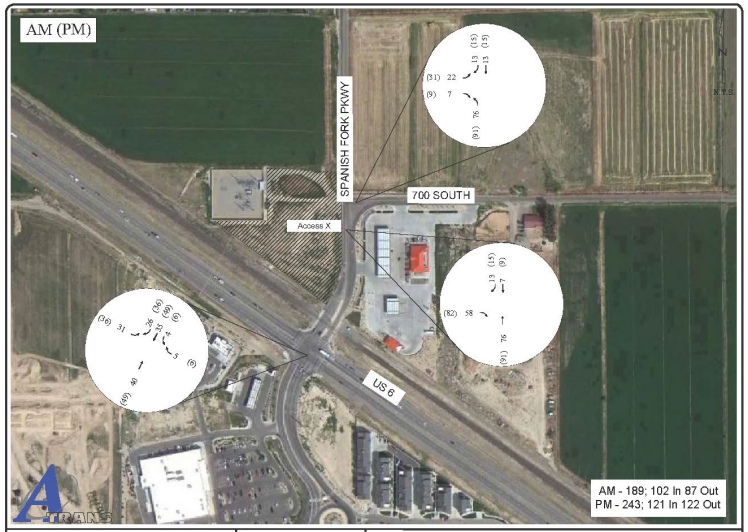
- 30% to/from west on US 6
- 5% to/from east on US 6
- 40% to/from south on Spanish Fork Parkway
- 25% to/from north on Spanish Fork Parkway

Origin Destination is shown in Figure 6. Site trip distribution is shown in Figure 7. With the addition of the roundabout and median along Spanish Fork Parkway, the gas station access is assumed to be restricted to right in right out. All gas station left turn traffic was redistributed to the roundabout.



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Figure 6 Origin Destination



A-TRANS TRANSPORTATION ENGINEERING | Figure 7 | Site Trip Distribution

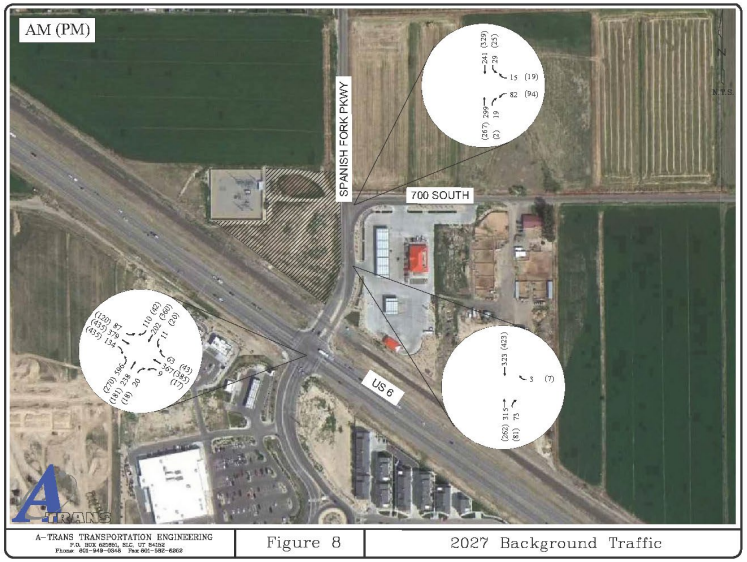
VI. Growth

Growth in the area was determined from UDOT's Traffic on Utah Highways and Wasatch Front Regional Council. The volumes and projections utilized to determine growth in the area is shown in Table 5. Based on this information an average growth of 2.53% was found and the growth rate for 2027 is 1.13.

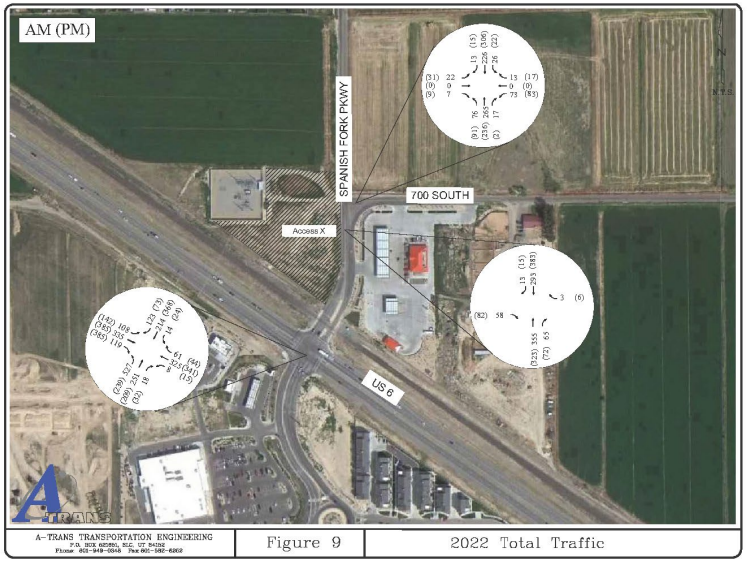
Table 7: Growth Projections

	US 6 West	US 6 East	Spanish Fork Parkway
2019	24,000	24,000	3,100
2050	39,000	35,500	13,000
Growth	**1.58%**	**1.27%**	**4.75%**

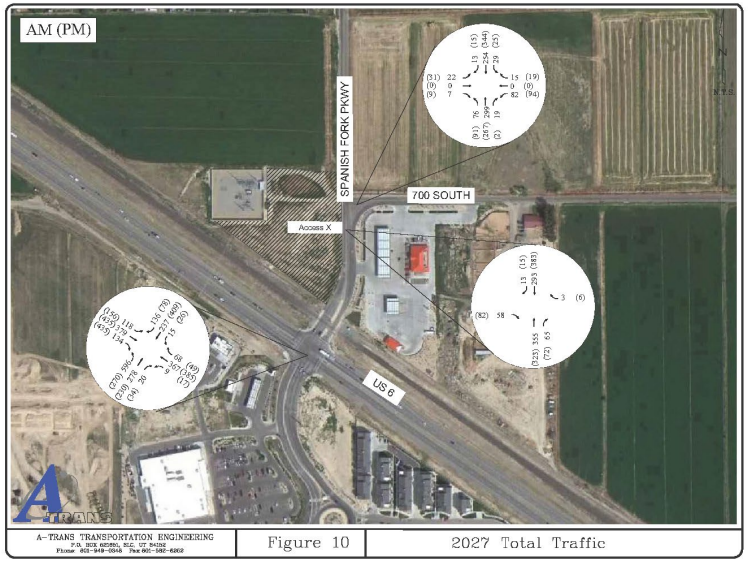
Background traffic is determined by multiplying the existing traffic by the growth factor for 2027. 2027 Background Traffic is shown in Figure 8. Total traffic in the area for the future projection years is derived by adding the non-site volume forecasts to the site trip distribution. 2022 Total Traffic is shown in Figure 9 and 2027 Total Traffic is shown in Figure 10.



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A–TRANS TRANSPORTATION ENGINEERING P.O. BOX 682881, SLC, UT 84152 Phone 801-949-0348 Fax 801-582-6262	Figure 9	2022 Total Traffic



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Figure 10 2027 Total Traffic

VII. Traffic Analysis

A. Level of Service Analysis

The intersection and access analysis evaluates the performance of each intersection and access using the measure of performance of delay and level of service (LOS). Tables 8 through 10 show the intersection and access analysis.

Analysis Results

- The intersection of Spanish Fork Parkway / US 6 operates with overall LOS D in the AM peak and LOS C in the PM peak period. This is maintained with the addition of the site in 2022 and in 2027 without the site. With the site in 2027 the intersection operates with LOS D in the AM and LOS D in the PM peak period. The site traffic represents a 7% increase in traffic at the intersection in the AM and 10% increases in traffic in the PM peak.

- 700 South / Spanish Fork Parkway operates with critical side street delay at LOS B. As a roundabout with and without the site the intersection operates at LOS A for all approaches.

- Access X along is along Spanish Fork Parkway is projected to operate with side street right turn egress at LOS B in the AM and PM peak periods throughout 2027.

Table 8: US 6 / Spanish Fork Parkway Intersection Analysis

		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	INT
Existing	AM	62.6 E	30.6 C	0.1 A	24.8 C	41.0 D	68.8 E	20.5 C	3.9 A	61.4 E	29.7 C	0.3 A	37.6 D
	PM	69.3 E	30.8 C	0.1 A	22.6 C	37.9 D	76.6 E	22.7 C	3.8 A	62.9 E	29.9 C	0.2 A	31.5 C
2022 Total	AM	62.6 E	32.0 C	0.1 A	24.9 C	43.8 D	69.9 E	20.5 C	3.9 A	61.4 E	31.6 C	0.3 A	38.9 D
	PM	69.3 E	32.4 C	0.1 A	22.7 C	39.1 D	90.1 F	22.7 C	3.9 A	62.9 E	30.6 C	0.2 A	33.7 C
2027 Background	AM	67.8 E	31.5 C	0.1 A	25.0 C	44.8 D	69.0 E	20.9 C	3.8 A	61.8 E	30.9 C	0.3 A	39.9 D
	PM	73.6 E	31.4 C	0.1 A	22.6 C	39.3 D	80.3 F	23.1 C	5.9 A	63.4 E	30.8 C	0.2 A	33.1 C
2027 Total	AM	67.8 E	33.0 C	0.1 A	25.1 C	48.5 D	70.9 E	20.9 C	3.8 A	61.8 E	32.7 C	0.4 A	41.3 D
	PM	73.6 E	33.1 C	0.2 A	22.8 C	40.7 D	98.5 F	23.1 C	7.0 A	63.4 E	31.3 C	0.2 A	35.5 D

Table 9: Spanish Fork Parkway / 700 South Intersection Analysis

		EB	WB	NB	SB
Existing	AM		12.7 B		8.0 A
	PM		13.7 B		7.8 A
2022 Total	AM	4.3 A	5.3 A	5.9 A	5.8 A
	PM	4.8 A	5.2 A	5.4 A	6.7 A
2027 Background	AM	0.0 A	5.0 A	5.3 A	5.3 A
	PM	0.0 A	4.7 A	4.7 A	6.0 A
2027 Total	AM	4.6 A	5.7 A	6.3 A	6.2 A
	PM	5.1 A	5.6 A	5.7 A	7.3 A

Table 10: Spanish Fork Parkway / Access X Intersection Analysis

		WBL	SBL
Existing	AM	14.8 B	8.2 A
	PM	14.1 B	8.0 A
		EBR	WBR
2022 Total	AM	10.8 B	11.0 B
	PM	11.8 B	10.6 B
2027 Background	AM		10.7 B
	PM		10.2 B
2027 Total	AM	11.2 B	11.4 B
	PM	12.4 B	10.9 B

B. Queue Analysis

Based on the projected traffic, queue storage length requirements can be determined. To determine if sufficient storage space exists to accommodate the projected demand, the intersection and accesses included in this traffic study are analyzed for queue storage capacity. The queue lengths are provided by the HCM analysis and are done through Synchro. Once the storage length is determined, this can typically be compared to the available storage length within the provided turn pockets or between intersections. Table 11 shows the minimum recommended queue storage length that should be provided based on the critical unsignalized and signalized calculation and projected traffic demand.

Table 11: 2027 Queue Analysis

		EBL	EBR	WBL	WBR	NBL	NBR	SBL
Spanish Fork Parkway / US 6	Available	225	225	400	250	200	200	150
	Recommended	350	100	100	175	175	100	100

The proposed car wash has on-site storage for 28 vehicles. The trip generation estimated for this site assumes 86 PM peak trips which is 43 entering vehicles in the peak hour. This would be an average arrival rate of 84 seconds per vehicle. Based on a service rate of 2 vehicles per minute, meaning a vehicle can enter the car wash every 30 seconds, the service capacity of the car wash is 120 vehicles per hour and exceeds the average arrival rate. The max observed vehicles waiting at the three locations counted was 4 vehicles, based on this observation the queuing available on site is sufficient for this location.

The traffic counts collected at 4 other SIWG locations indicated that an average maximum queue of 13 vehicles is expected during the peak period with an overall max of 16 vehicles. The current site plan shows on-site storage for 14 vehicles. The site plan has a merging point for vehicles entering the Soda Store queue at the 10 vehicle point, meaning after 10 vehicles are queued if they enter from the roundabout they will queue to the north towards the roundabout. This could potentially spill into the roundabout when the maximum queue occurred.

VIII. Conclusions

The proposed retail site is planned to include a 600 sf drive through soda store, a 1 tunnel car wash and 6,000 sf of general retail. The site is projected to generate 189 AM and 243 PM peak hour trips. The site is located on the west side of Spanish Fork Parkway at 700 South in Spanish Fork, Utah. The site is planning to access Spanish Fork Parkway via the fourth approach to 700 South and a right in / right out to the south of 700 South.

The following comments are made about the site:

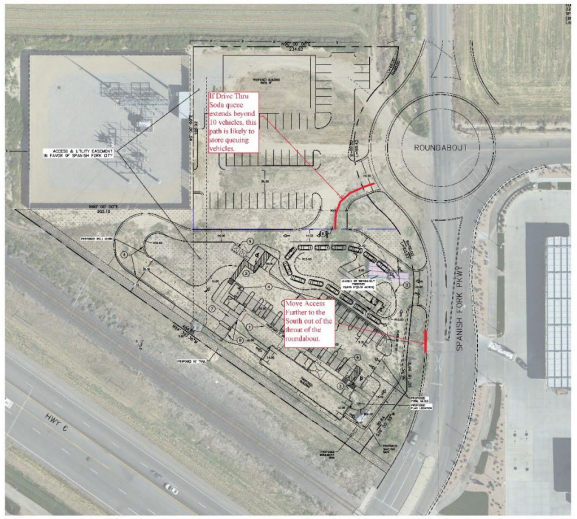
- The intersection of Spanish Fork Parkway / US 6 operates with overall LOS D in the AM peak and LOS C in the PM peak period. This is maintained with the addition of the site in 2022 and in 2027 without the site. With the site in 2027 the intersection operates with LOS D in the AM and LOS D in the PM peak period. The site traffic represents a 7% increase in traffic at the intersection in the AM and 10% increases in traffic in the PM peak.
- 700 South / Spanish Fork Parkway operates with critical side street delay at LOS B. As a roundabout with and without the site the intersection operates at LOS A for all approaches.
- Access X along is along Spanish Fork Parkway is projected to operate with side street right turn egress at LOS B in the AM and PM peak periods throughout 2027.
- Per the Spanish Fork Transportation Master Plan Table 6 in Appendix D, street spacing along Spanish Fork Parkway is required at 500 feet and right in / right out accesses are required at 200 feet. 700 South is located approximately 580 feet north of US 6 and meets the spacing requirement. The right in right out access is located approximately 100 feet south of the roundabout and does not meet the spacing requirements.
- The queuing for the Quick Quack is not expected to cause off-site or on-site issues. The queuing for the soda shop is likely to cause queuing towards the roundabout during peak periods. The current site plan shows on-site storage for 14 vehicles. The site plan has a merging point for vehicles entering the Soda Store queue at the 10 vehicle point, meaning after 10 vehicles are queued if they enter from the roundabout they will queue to the north towards the roundabout. This could potentially spill into the roundabout when the maximum queue occurred.

Recommendations:

- The master planned roundabout at 700 South / Spanish Fork Parkway should be constructed with the opening of the site and the fourth leg added to the intersection.
- When the roundabout is built the median on the southern leg along Spanish Fork Parkway should be extended to tie into the existing median near the railroad tracks. This will restrict the existing gas station access to a right in / right out and any site access along Spanish Fork Parkway will also be restricted to right in / right out.

- The right in / right out site access along Spanish Fork Parkway should be placed 200 feet south of the roundabout per city standard and outside the throat of the roundabout. (See Figure 11)

Figure 11: Recommendations



APPENDICES

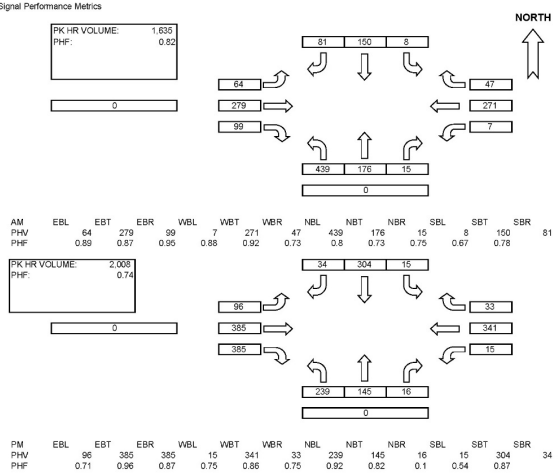
Appendix A Traffic Counts and Projections
Appendix B Signalized Intersection Analyses
Appendix C Unsignalized Access Analysis

Appendix A Traffic Counts and Projections

Data from UDOT's Signal Performance Metrics

6043

N-S STREET:
E-W STREET:



AM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
PHV	64	279	99	7	271	47	439	176	15	8	150	81
PHF	0.89	0.87	0.95	0.88	0.92	0.73	0.8	0.73	0.75	0.67	0.78	

PM	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
PHV	96	385	385	15	341	33	239	145	16	15	304	34
PHF	0.71	0.96	0.87	0.75	0.86	0.75	0.92	0.82	0.1	0.54	0.87	

AM PEAK HOUR VOLUMES

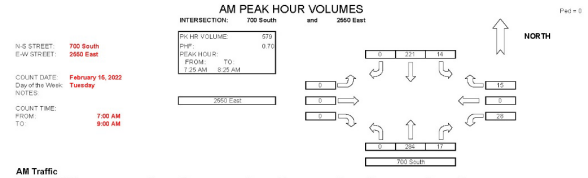
INTERSECTION: 700 South and 2650 East

N-S STREET: 700 South
E-W STREET: 2650 East

COUNT DATE: February 16, 2022
Day of the Week: Tuesday
NOTES:

COUNT TIME:
FROM: 7:00 AM
TO: 9:00 AM

PK HR VOLUME: 579
PHF: 0.70
PEAK HOUR:
FROM: TO:
7:25 AM 8:25 AM

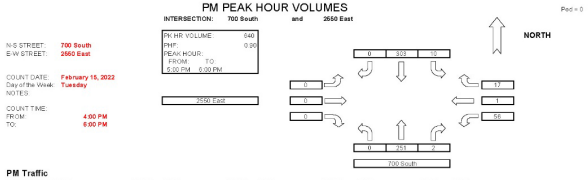


AM Traffic

COUNT DATA INPUT:

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL 4' VOLUMES	TOTAL 15' VOLUMES	PEDESTRIAN	
FROM:	TO:	NBL	NBT	NBR	EBL	EBT	EBR	SBL	SBT	SBR	WBL	WBT	WBR			E/W	N/S
7:00 AM	7:05 AM	0	12	0	0	0	0	0	5	0	0	0	0	17	77	0	0
7:05 AM	7:10 AM	0	10	0	0	0	0	0	16	0	0	0	0	32	89	0	0
7:10 AM	7:15 AM	0	15	0	0	0	0	0	10	0	3	0	1	28	90	0	0
7:15 AM	7:20 AM	0	14	1	0	0	0	1	8	0	0	0	1	25	104	0	0
7:20 AM	7:25 AM	0	16	1	0	0	0	0	14	0	1	0	2	34	128	0	0
7:25 AM	7:30 AM	0	20	0	0	0	0	1	15	0	0	0	0	42	103	0	0
7:30 AM	7:35 AM	0	26	4	0	0	0	1	13	0	4	0	4	50	191	0	0
7:35 AM	7:40 AM	0	44	3	0	0	0	1	17	0	0	0	3	71	207	0	0
7:40 AM	7:45 AM	0	38	1	0	0	0	0	22	0	0	0	0	70	180	0	0
7:45 AM	7:50 AM	0	30	3	0	0	0	0	32	0	3	0	0	88	162	0	0
7:50 AM	7:55 AM	0	17	0	0	0	0	1	22	0	2	0	1	44	147	0	0
7:55 AM	8:00 AM	0	27	3	0	0	0	2	16	0	0	0	3	52	133	0	0
8:00 AM	8:05 AM	0	20	4	0	0	0	2	20	0	4	0	1	51	117	0	0
8:05 AM	8:10 AM	0	30	0	0	0	0	0	10	0	4	0	1	35	90	0	0
8:10 AM	8:15 AM	0	12	0	0	0	0	0	16	0	0	0	0	31	93	0	0
8:15 AM	8:20 AM	0	8	0	0	0	0	2	13	0	0	0	1	24	92	0	0
8:20 AM	8:25 AM	0	21	1	0	0	0	0	19	0	3	0	0	43	102	0	0
8:25 AM	8:30 AM	0	7	1	0	0	0	0	16	0	0	0	1	25	94	0	0
8:30 AM	8:35 AM	0	17	4	0	0	0	1	10	0	2	0	0	34	95	0	0
8:35 AM	8:40 AM	0	21	0	0	0	0	0	11	0	1	0	2	35	95	0	0
8:40 AM	8:45 AM	0	13	2	0	0	0	1	7	0	2	0	0	25	99	0	0
8:45 AM	8:50 AM	0	10	3	0	0	0	1	15	0	2	0	1	34	104	0	0
8:50 AM	8:55 AM	0	20	3	0	0	0	0	11	0	0	0	1	32	70	0	0
8:55 AM	9:00 AM	0	13	1	0	0	0	1	15	0	1	0	1	31	51	0	0

PM PEAK HOUR VOLUMES

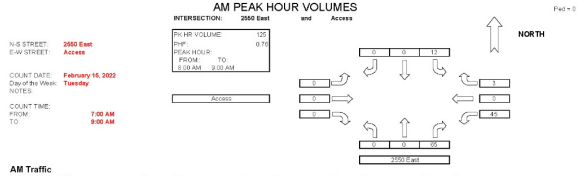


PM Traffic

COUNT DATA INPUT: Name: Adam Name: Adam Name: Adam Name: Adam

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL 6' VOLUMES	TOTAL 15' VOLUMES	PEDESTRIAN	
FROM:	TO:	NBL	NBT	NBR	EBL	EBT	EBR	SBL	SBT	SBR	WBL	WBT	WBR			E/W	N/S
4:00 PM	4:05 PM	0	19	1	0	0	0	0	19	0	0	0	2	40	109	0	0
4:05 PM	4:10 PM	0	19	1	0	0	0	6	19	0	0	0	2	45	116	0	0
4:10 PM	4:15 PM	0	19	2	0	0	0	1	35	0	2	0	3	65	179	0	0
4:15 PM	4:20 PM	0	24	4	0	0	0	1	21	0	2	0	4	65	155	0	0
4:20 PM	4:25 PM	0	20	1	0	0	0	1	20	0	0	0	1	49	123	0	0
4:25 PM	4:30 PM	0	14	1	0	0	0	4	20	0	0	0	2	41	127	0	0
4:30 PM	4:35 PM	0	17	1	0	0	0	1	18	0	0	0	3	41	109	0	0
4:35 PM	4:40 PM	0	19	1	0	0	0	3	20	0	4	0	0	45	136	0	0
4:40 PM	4:45 PM	0	19	1	0	0	0	1	19	0	3	0	0	37	109	0	0
4:45 PM	4:50 PM	0	16	1	0	0	0	1	20	0	0	0	6	46	156	0	0
4:50 PM	4:55 PM	0	12	4	0	0	0	0	22	0	3	0	0	46	129	0	0
4:55 PM	5:00 PM	0	14	0	0	0	0	1	23	0	5	0	1	43	139	0	0
5:00 PM	5:05 PM	0	14	0	0	0	0	0	20	0	1	1	0	36	137	0	0
5:05 PM	5:10 PM	0	21	0	0	0	0	0	23	0	4	0	2	60	156	0	0
5:10 PM	5:15 PM	0	12	1	0	0	0	1	23	0	4	0	1	41	156	0	0
5:15 PM	5:20 PM	0	23	1	0	0	0	0	23	0	1	0	2	55	150	0	0
5:20 PM	5:25 PM	0	17	1	0	0	0	3	32	0	1	0	1	55	156	0	0
5:25 PM	5:30 PM	0	23	0	0	0	0	1	23	0	1	0	1	44	156	0	0
5:30 PM	5:35 PM	0	13	0	0	0	0	0	27	0	0	0	3	53	174	0	0
5:35 PM	5:40 PM	0	23	1	0	0	0	0	20	0	0	0	3	57	171	0	0
5:40 PM	5:45 PM	0	30	0	0	0	0	0	17	0	0	0	0	60	177	0	0
5:45 PM	5:50 PM	0	12	0	0	0	0	0	29	0	2	0	1	50	172	0	0
5:50 PM	5:55 PM	0	29	0	0	0	0	0	33	0	0	0	1	63	125	0	0
5:55 PM	6:00 PM	0	28	1	0	0	0	0	25	0	4	0	2	59	59	0	0

AM PEAK HOUR VOLUMES



AM Traffic

COUNT DATA INPUT: Name: Adam Name: Adam Name: Adam Name: Adam

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL 6' VOLUMES	TOTAL 15' VOLUMES	PEDESTRIAN	
FROM:	TO:	NBL	NBT	NBR	EBL	EBT	EBR	SBL	SBT	SBR	WBL	WBT	WBR			E/W	N/S
7:00 AM	7:05 AM	0	0	0	4	0	0	0	0	0	2	0	0	6	19	0	0
7:05 AM	7:10 AM	0	0	0	4	0	0	0	0	0	2	0	0	6	24	0	0
7:10 AM	7:15 AM	0	0	0	5	0	0	0	0	0	3	0	0	7	30	0	0
7:15 AM	7:20 AM	0	0	0	7	0	0	0	0	0	4	0	0	11	51	0	0
7:20 AM	7:25 AM	0	0	0	7	0	0	0	0	0	4	0	0	12	52	0	0
7:25 AM	7:30 AM	0	0	0	9	0	0	0	0	0	5	0	0	8	30	0	0
7:30 AM	7:35 AM	0	0	0	11	0	0	0	0	0	7	0	0	10	33	0	0
7:35 AM	7:40 AM	0	0	0	9	0	0	0	0	0	6	0	0	10	33	0	0
7:40 AM	7:45 AM	0	0	0	8	0	0	0	0	0	4	0	0	11	32	0	0
7:45 AM	7:50 AM	0	0	0	8	0	0	0	0	0	4	0	0	10	28	0	0
7:50 AM	7:55 AM	0	0	0	5	0	0	0	0	0	3	0	0	9	25	0	0
7:55 AM	8:00 AM	0	0	0	4	0	0	0	0	0	3	0	0	7	24	0	0
8:00 AM	8:05 AM	0	0	0	4	0	0	0	0	0	3	0	0	9	27	0	0
8:05 AM	8:10 AM	0	0	0	4	0	0	0	0	0	3	0	0	8	26	0	0
8:10 AM	8:15 AM	0	0	0	5	0	0	0	0	0	3	0	0	10	24	0	0
8:15 AM	8:20 AM	0	0	0	5	0	0	0	0	0	3	0	0	8	21	0	0
8:20 AM	8:25 AM	0	0	0	4	0	0	0	0	0	3	0	0	6	23	0	0
8:25 AM	8:30 AM	0	0	0	4	0	0	0	0	0	2	0	0	7	36	0	0
8:30 AM	8:35 AM	0	0	0	7	0	0	0	0	0	6	0	1	15	41	0	0
8:35 AM	8:40 AM	0	0	0	7	0	0	0	0	0	6	0	1	14	38	0	0
8:40 AM	8:45 AM	0	0	0	8	0	0	0	0	0	6	0	1	12	35	0	0
8:45 AM	8:50 AM	0	0	0	8	0	0	0	0	0	5	0	0	12	36	0	0
8:50 AM	8:55 AM	0	0	0	7	0	0	0	0	0	4	0	0	11	34	0	0
8:55 AM	9:00 AM	0	0	0	6	0	0	0	0	0	4	0	0	13	13	0	0

PM PEAK HOUR VOLUMES

INTERSECTION: 2550 East and Access

N-S STREET: 2550 East
E-W STREET: Access

COUNT DATE: February 16, 2022
Day of the Week: Tuesday
NOTES:

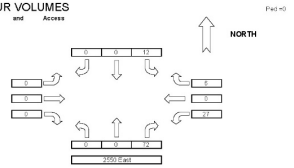
COUNT TIME:
FROM: 4:00 PM
TO: 6:00 PM

PK HR VOLUME: 117
PHF: 0.77
PEAK HOUR:
FROM: TO:
5:00 PM 6:00 PM

Access

Ped =0

NORTH



PM Traffic

COUNT DATA INPUT: Name: Adam Name: Adam Name: Adam Name: Adam

TIME PERIOD FROM:	TO:	NORTHBOUND NBL	NBT	NBR	EASTBOUND EBL	EBT	EBR	SOUTHBOUND SBL	SBT	SBR	WESTBOUND WBL	WBT	WBR	TOTAL 5' VOLUMES	TOTAL 15' VOLUMES	PEDESTRIAN E/W	N/S
4:00 PM	4:05 PM	0	0	1	0	0	0	0	0	0	3	0	0	10	34	0	0
4:05 PM	4:10 PM	0	0	1	0	0	0	1	0	0	3	0	0	11	32	0	0
4:10 PM	4:15 PM	0	0	1	0	0	0	1	0	0	4	0	1	13	33	0	0
4:15 PM	4:20 PM	0	0	0	0	0	0	0	0	0	3	0	0	8	29	0	0
4:20 PM	4:25 PM	0	0	0	0	0	0	1	0	0	3	0	1	10	34	0	0
4:25 PM	4:30 PM	0	0	1	0	0	0	0	0	0	4	0	0	11	35	0	0
4:30 PM	4:35 PM	0	0	1	0	0	0	0	0	0	2	0	0	8	30	0	0
4:35 PM	4:40 PM	0	0	0	0	0	0	0	0	0	4	0	0	6	31	0	0
4:40 PM	4:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	6	24	0	0
4:45 PM	4:50 PM	0	0	0	0	0	0	1	0	0	3	0	0	9	27	0	0
4:50 PM	4:55 PM	0	0	0	0	0	0	0	0	0	3	0	1	9	27	0	0
4:55 PM	5:00 PM	0	0	1	0	0	0	1	0	0	4	0	0	9	36	0	0
5:00 PM	5:05 PM	0	0	0	0	0	0	2	0	0	2	0	0	9	35	0	0
5:05 PM	5:10 PM	0	0	1	0	0	0	1	0	0	3	0	0	8	34	0	0
5:10 PM	5:15 PM	0	0	0	0	0	0	1	0	0	1	0	1	8	32	0	0
5:15 PM	5:20 PM	0	0	0	0	0	0	0	0	0	2	0	1	8	35	0	0
5:20 PM	5:25 PM	0	0	0	0	0	0	1	0	0	2	0	0	8	32	0	0
5:25 PM	5:30 PM	0	0	0	0	0	0	0	0	0	3	0	1	9	28	0	0
5:30 PM	5:35 PM	0	0	0	0	0	0	1	0	0	3	0	0	10	34	0	0
5:35 PM	5:40 PM	0	0	0	0	0	0	0	0	0	2	0	1	9	33	0	0
5:40 PM	5:45 PM	0	0	0	0	0	0	1	0	0	3	0	0	10	37	0	0
5:45 PM	5:50 PM	0	0	0	0	0	0	2	0	0	3	0	1	14	38	0	0
5:50 PM	5:55 PM	0	0	0	0	0	0	2	0	0	3	0	1	13	34	0	0
5:55 PM	6:00 PM	0	0	1	0	0	0	1	0	0	3	0	0	11	31	0	0

			Trip Rate		Trips		In / Out %				Total					
ITE 10th Edition	Size	Land Use	AM	PM	AM	PM	AM IN	AM Out	PM IN	PM OUT	AM IN	AM Out	PM IN	PM OUT	Sat IN	Sat OUT
Phase I																
Retail	6.000	820	0.94	3.81	6	23	62%	38%	48%	52%	4	2	11	12	14	13
Drive Thru Soda	1.000	938S	134	134	134	134	50%	50%	50%	50%	67	67	67	67	0	0
Quick Quack	1.000	948Q	49	86	49	86	63%	37%	50%	50%	31	18	43	43	0	0
Total					**189**	**243**					**102**	**87**	**121**	**122**	**14**	**13**

Long Term Growth

2.52%	Growth Factor	Years	Analysis Year
	1.00	10	2022
	1.13	5	2027
	2.02	28	2050

Straight line growth assumed between 2019 and 2050

US-6 West

2019	24,000	Traffic on Utah Highways
2050	59,000	Wasatch Front Regional Council
growth	1.50%	

2019	483.87	24000	
2020	483.87	24484	2.02%
2021	483.87	24968	1.98%
2022	483.87	25452	1.94%
2023	483.87	25935	1.90%
2024	483.87	26419	1.87%
2025	483.87	26903	1.83%
2026	483.87	27387	1.80%
2027	483.87	27871	1.77%
2028	483.87	28355	1.74%
2029	483.87	28839	1.71%
2030	483.87	29323	1.68%
2031	483.87	29806	1.65%
2032	483.87	30290	1.62%
2033	483.87	30774	1.60%
2034	483.87	31258	1.57%
2035	483.87	31742	1.55%
2036	483.87	32226	1.52%
2037	483.87	32710	1.50%
2038	483.87	33194	1.48%
2039	483.87	33677	1.46%
2040	483.87	34161	1.44%
2041	483.87	34645	1.42%
2042	483.87	35129	1.40%
2043	483.87	35613	1.38%
2044	483.87	36097	1.36%
2045	483.87	36581	1.34%
2046	483.87	37065	1.32%
2047	483.87	37548	1.31%
2048	483.87	38032	1.29%
2049	483.87	38516	1.27%
2050	483.87	39000	1.26%
			1.50%

US-6 East

2019	24,000	Traffic on Utah Highways
2050	35,500	Wasatch Front Regional Council
growth	1.27%	

2019	370.97	24000	
2020	370.97	24371	1.55%
2021	370.97	24742	1.52%
2022	370.97	25113	1.50%
2023	370.97	25484	1.48%
2024	370.97	25855	1.46%
2025	370.97	26226	1.43%
2026	370.97	26597	1.41%
2027	370.97	26968	1.39%
2028	370.97	27339	1.38%
2029	370.97	27710	1.36%
2030	370.97	28081	1.34%
2031	370.97	28452	1.32%
2032	370.97	28823	1.30%
2033	370.97	29194	1.29%
2034	370.97	29565	1.27%
2035	370.97	29935	1.25%
2036	370.97	30306	1.24%
2037	370.97	30677	1.22%
2038	370.97	31048	1.21%
2039	370.97	31419	1.19%
2040	370.97	31790	1.18%
2041	370.97	32161	1.17%
2042	370.97	32532	1.15%
2043	370.97	32903	1.14%
2044	370.97	33274	1.13%
2045	370.97	33645	1.11%
2046	370.97	34016	1.10%
2047	370.97	34387	1.09%
2048	370.97	34758	1.08%
2049	370.97	35129	1.07%
2050	370.97	35500	1.06%
			1.27%

Spanish Fork Parkway

2019	33,100	Traffic on Utah Highways
2050	53,000	Wasatch Front Regional Council
growth	4.75%	

2019	319.35	3100	
2020	319.35	3419	10.30%
2021	319.35	3739	9.34%
2022	319.35	4058	8.54%
2023	319.35	4377	7.87%
2024	319.35	4697	7.31%
2025	319.35	5016	6.80%
2026	319.35	5335	6.37%
2027	319.35	5655	5.99%
2028	319.35	5974	5.65%
2029	319.35	6294	5.35%
2030	319.35	6613	5.07%
2031	319.35	6932	4.83%
2032	319.35	7252	4.61%
2033	319.35	7571	4.41%
2034	319.35	7890	4.22%
2035	319.35	8210	4.05%
2036	319.35	8529	3.89%
2037	319.35	8849	3.74%
2038	319.35	9168	3.61%
2039	319.35	9487	3.48%
2040	319.35	9806	3.37%
2041	319.35	10126	3.26%
2042	319.35	10445	3.15%
2043	319.35	10765	3.06%
2044	319.35	11084	2.97%
2045	319.35	11403	2.88%
2046	319.35	11723	2.80%
2047	319.35	12042	2.73%
2048	319.35	12361	2.65%
2049	319.35	12681	2.58%
2050	319.35	13000	2.52%
			4.75%

Trip Distribution

1	Spanish Fork Parkway / US-6			1.13		
	2022	Site	2022	2027	2027	
AM	Existing	Phase I	Total	Background	Total	
EBL	77	31	108	87	118	
EBT	335		335	379	379	
EBR	119		119	134	134	% Increase
WBL	8		8	9	9	t
WBT	325		325	367	367	
WBR	56	5	61	63	68	
NBL	527		527	596	596	
NBT	211	40	251	238	278	
NBR	18		18	20	20	
SBL	10	4	14	11	15	
SBT	179	35	214	202	237	
SBR	97	26	123	110	136	
East	762	9		850	859	
West	1490	57		1672	1729	
North	630	141		712	853	
South	1062	75		1200	1275	

	2022	Site	2022	2027	2027	
PM	Existing	Phase I	Total	Background	Total	
EBL	106	36	142	120	156	
EBT	385		385	435	435	
EBR	385		385	435	435	% Increase
WBL	15		15	17	17	t
WBT	341		341	385	385	
WBR	38	6	44	43	49	
NBL	239		239	270	270	
NBT	160	49	209	181	230	
NBR	16	16	32	18	34	
SBL	18	6	24	20	26	
SBT	319	49	368	360	409	
SBR	37	36	73	42	78	
East	813	28		919	947	
West	1493	72		1687	1759	
North	678	192		766	948	
South	1134	114		1281	1395	

2	Spanish Fork Parkway / 700 South			1.13		
	2022	2022	Site	2022	2027	2027
AM	Existing	Redistributed	Phase I	Total	Background	Total
EBL			22	22	0	22
EBT				0	0	0
EBR			7	7	0	7
WBL	28	73		73	82	82
WBT				0	0	0
WBR	15	13		13	15	15
NBL			76	76	0	76
NBT	265	265		265	299	299
NBR	17	17		17	19	19
SBL	14	26		26	29	29
SBT	226	213	13	226	241	254
SBR			13	13	0	13
East	74		0		146	146
West	0		118		0	118
North	519		40		594	632
South	535		96		642	738

	2022	2022	Site	2022	2027	2027
PM	Existing	Redistributed	Phase I	Total	Background	Total
EBL			31	31	0	31
EBT				0	0	0
EBR			9	9	0	9
WBL	56	83		83	94	94
WBT				0	0	0
WBR	17	17		17	19	19
NBL			91	91	0	91
NBT	236	236		236	267	267
NBR	2	2		2	2	2
SBL	10	23		23	25	25
SBT	303	291	15	306	329	344
SBR			15	15	0	15
East	85		0		140	140
West	0		146		0	146
North	566		61		640	701
South	597		115		692	807

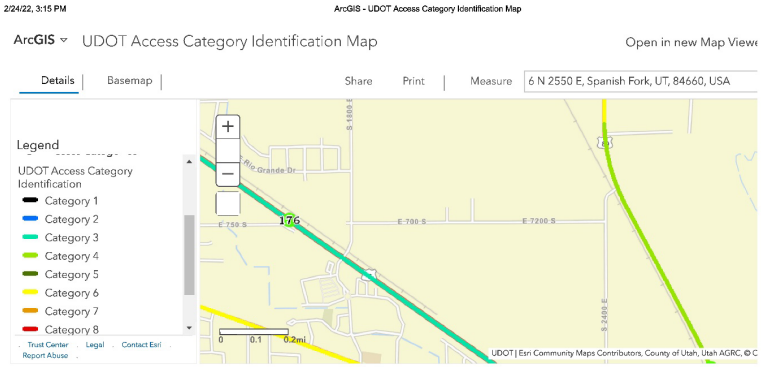
Trip Distribution

3	Spanish Fork Parkway / Accesses			1.13		
	2022	2022	Site	2022	2027	2027
AM	Existing	Redistributed	Phase I	Total	Background	Total
EBL				0	0	0
EBT				0	0	0
EBR			58	58	0	58
WBL	45			0	0	0
WBT				0	0	0
WBR	3	3		3	3	3
NBL				0	0	0
NBT	279	279	76	355	315	391
NBR	65	65		65	73	73
SBL	12			0	0	0
SBT	241	286	7	293	323	330
SBR			13	13	0	13
East	125		0		77	77
West	0		71		0	71
North	535		96		642	738
South	630		141		712	853
	2022	2022	Site	2022	2027	2027
PM	Existing	Redistributed	Phase I	Total	Background	Total
EBL				0	0	0
EBT				0	0	0
EBR			82	82	0	82
WBL	27			0	0	0
WBT				0	0	0
WBR	6	6		6	7	7
NBL				0	0	0
NBT	232	232	91	323	262	353
NBR	72	72		72	81	81
SBL	12			0	0	0
SBT	347	374	9	383	423	432
SBR			15	15	0	15
East	117		0		88	88
West	0		97		0	97
North	597		115		692	807
South	678		182		766	948

% Increase 1

% Increase 1

2/24/22, 3:15 PM ArcGIS - UDOT Access Category Identification Map



https://www.arcgis.com/home/webmap/viewer.html?webmap=0c9f352cf1dd4ae181fbe6513d429dfa 1/1

Appendix B Without Site Intersection Analyses

Timings
1: Spanish Fork Pkwy & US 6 03/01/2022

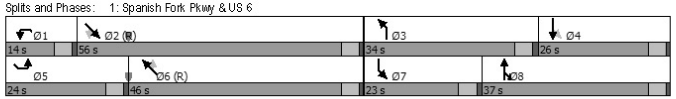
Lane Group	NBL	NBT	NBR	SBL	SBT	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations											
Traffic Volume (vph)	527	211	18	10	179	77	335	119	8	325	56
Future Volume (vph)	527	211	18	10	179	77	335	119	8	325	56
Lane Group Flow (vph)	620	248	21	12	325	91	394	140	9	382	66
Turn Type	Prot	NA	Prot	pm+pt	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	8	7	4	5	2		1	6	
Permitted Phases				4				2			6
Detector Phase	3	8	8	7	4	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	34.0	37.0	37.0	23.0	26.0	24.0	56.0	56.0	14.0	46.0	46.0
Total Split (%)	26.2%	28.5%	28.5%	17.7%	20.0%	18.5%	43.1%	43.1%	10.8%	35.4%	35.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	None	Max	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	27.2	51.0	51.0	29.9	23.8	12.0	63.1	63.1	6.3	49.0	49.0
Actuated g/C Ratio	0.21	0.39	0.39	0.23	0.18	0.09	0.49	0.49	0.05	0.38	0.38
v/c Ratio	0.86	0.34	0.03	0.04	0.49	0.56	0.23	0.17	0.11	0.29	0.09
Control Delay	62.6	30.6	0.1	24.8	41.0	68.8	20.5	3.9	61.4	29.7	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.6	30.6	0.1	24.8	41.0	68.8	20.5	3.9	61.4	29.7	0.3
LOS	E	C	A	C	D	E	C	A	E	C	A
Approach Delay		52.2			40.5		23.8			26.0	
Approach LOS		D			D		C			C	
Queue Length 50th (ft)	258	136	0	6	104	75	94	0	7	117	0
Queue Length 95th (ft)	303	220	0	18	144	121	143	34	25	156	0
Internal Link Dist (ft)		386			252		1038			1088	
Turn Bay Length (ft)	200		200	150		225		225	400		250
Base Capacity (vph)	779	731	698	458	667	265	1718	840	129	1333	698
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.34	0.03	0.03	0.49	0.34	0.23	0.17	0.07	0.29	0.09

Intersection Summary		
Cycle Length: 130		
Actuated Cycle Length: 130		
Offset: 52 (40%), Referenced to phase 2:SET and 6:NWT, Start of Green		
Natural Cycle: 75		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.86		
Intersection Signal Delay: 37.6	Intersection LOS: D	
Intersection Capacity Utilization 51.5%	ICU Level of Service A	
Analysis Period (min) 15		

2022 AM Existing 10:17 am 02/28/2022 2022 AM Existing Synchro 11 Report
Page 1

Timings
1: Spanish Fork Pkwy & US 6 03/01/2022

Splits and Phases: 1: Spanish Fork Pkwy & US 6



HCM 6th TWSC
2: Spanish Fork Pkwy & 700 South 03/01/2022

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	15	265	17	14	225
Future Vol, veh/h	28	15	265	17	14	225
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	-	-	100	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	18	312	20	16	265

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	609	312	0	0	332	0
Stage 1	312	-	-	-	-	-
Stage 2	297	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	458	728	-	-	1227	-
Stage 1	742	-	-	-	-	-
Stage 2	754	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	451	728	-	-	1227	-
Mov Cap-2 Maneuver	451	-	-	-	-	-
Stage 1	742	-	-	-	-	-
Stage 2	743	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.7	0	0.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	520	1227	-
HCM Lane V/C Ratio	-	-	0.097	0.013	-
HCM Control Delay (s)	-	-	12.7	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

HCM 6th TWSC
3: Spanish Fork Pkwy & Gas Station Access 03/01/2022

Intersection	
Int Delay, s/veh	1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	45	3	279	65	12	241
Future Vol, veh/h	45	3	279	65	12	241
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	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	4	328	76	14	284

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	678	366	0	0	404	0
Stage 1	366	-	-	-	-	-
Stage 2	312	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	418	679	-	-	1155	-
Stage 1	702	-	-	-	-	-
Stage 2	742	-	-	-	-	-
Platoon Blocked, %			-	-		-
Mov Cap-1 Maneuver	412	679	-	-	1155	-
Mov Cap-2 Maneuver	412	-	-	-	-	-
Stage 1	702	-	-	-	-	-
Stage 2	732	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.8	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	422	1155	-
HCM Lane V/C Ratio	-	-	0.134	0.012	-
HCM Control Delay (s)	-	-	14.8	8.2	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0	-

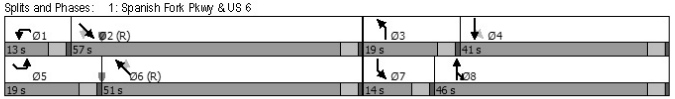
Timings
1: Spanish Fork Pkwy & US 6 03/01/2022

Lane Group	NBL	NBT	NBR	SBL	SBT	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations											
Traffic Volume (vph)	239	160	16	18	319	106	385	385	15	341	38
Future Volume (vph)	239	160	16	18	319	106	385	385	15	341	38
Lane Group Flow (vph)	266	178	18	20	395	118	428	428	17	379	42
Turn Type	Prot	NA	Prot	pm+pt	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	8	7	4	5	2		1	6	
Permitted Phases				4				2			6
Detector Phase	3	8	8	7	4	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	19.0	46.0	46.0	14.0	41.0	19.0	57.0	57.0	13.0	51.0	51.0
Total Split (%)	14.6%	35.4%	35.4%	10.8%	31.5%	14.6%	43.8%	43.8%	10.0%	39.2%	39.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	None	Max	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	13.7	48.7	48.7	43.7	37.3	12.7	60.5	60.5	6.8	48.3	48.3
Actuated g/C Ratio	0.11	0.37	0.37	0.34	0.29	0.10	0.47	0.47	0.05	0.37	0.37
v/c Ratio	0.74	0.26	0.03	0.05	0.39	0.69	0.26	0.44	0.18	0.29	0.06
Control Delay	69.3	30.8	0.1	22.6	37.9	76.6	22.7	3.8	62.9	29.9	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.3	30.8	0.1	22.6	37.9	76.6	22.7	3.8	62.9	29.9	0.2
LOS	E	C	A	C	D	E	C	A	E	C	A
Approach Delay		51.8			37.2		20.9			28.3	
Approach LOS		D			D		C			C	
Queue Length 50th (ft)	112	109	0	10	138	97	104	0	14	119	0
Queue Length 95th (ft)	160	172	0	26	187	163	168	63	40	162	0
Internal Link Dist (ft)		386			252		1038			1088	
Turn Bay Length (ft)	200		200	150		225		225	400		250
Base Capacity (vph)	382	697	671	474	1006	197	1647	965	115	1315	691
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.26	0.03	0.04	0.39	0.60	0.26	0.44	0.15	0.29	0.06

Intersection Summary		
Cycle Length: 130		
Actuated Cycle Length: 130		
Offset: 64 (49%), Referenced to phase 2:SET and 6:NWT, Start of Green		
Natural Cycle: 65		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.74		
Intersection Signal Delay: 31.5	Intersection LOS: C	
Intersection Capacity Utilization 49.3%	ICU Level of Service A	
Analysis Period (min) 15		

Timings
1: Spanish Fork Pkwy & US 6 03/01/2022

Splits and Phases: 1: Spanish Fork Pkwy & US 6



HCM 6th TWSC
2: Spanish Fork Pkwy & 700 South 03/01/2022

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	56	17	236	2	10	303
Future Vol, veh/h	56	17	236	2	10	303
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	-	-	100	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	62	19	262	2	11	337

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	621	262	0	0	264	0
Stage 1	262	-	-	-	-	-
Stage 2	359	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	451	777	-	-	1300	-
Stage 1	782	-	-	-	-	-
Stage 2	707	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	446	777	-	-	1300	-
Mov Cap-2 Maneuver	446	-	-	-	-	-
Stage 1	782	-	-	-	-	-
Stage 2	700	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.7	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	495	1300	-
HCM Lane V/C Ratio	-	-	0.164	0.009	-
HCM Control Delay (s)	-	-	13.7	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0	-

HCM 6th TWSC
3: Spanish Fork Pkwy & Gas Station Access 03/01/2022

Intersection						
Int Delay, s/veh	0.8					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	6	232	72	12	347
Future Vol, veh/h	27	6	232	72	12	347
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	7	258	80	13	386

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	710	298	0	0	338	0
Stage 1	298	-	-	-	-	-
Stage 2	412	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	400	741	-	-	1221	-
Stage 1	753	-	-	-	-	-
Stage 2	669	-	-	-	-	-
Platoon Blocked, %			-	-		-
Mov Cap-1 Maneuver	394	741	-	-	1221	-
Mov Cap-2 Maneuver	394	-	-	-	-	-
Stage 1	753	-	-	-	-	-
Stage 2	660	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.1	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	431	1221	-
HCM Lane V/C Ratio	-	-	0.085	0.011	-
HCM Control Delay (s)	-	-	14.1	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Timings
1: Spanish Fork Pkwy & US 6 03/01/2022

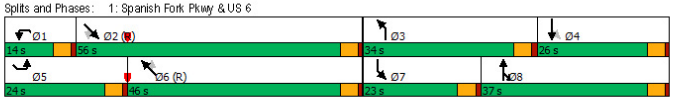
Lane Group	NBL	NBT	NBR	SBL	SBT	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations											
Traffic Volume (vph)	527	211	18	10	179	77	335	119	8	325	56
Future Volume (vph)	527	211	18	10	179	77	335	119	8	325	56
Lane Group Flow (vph)	701	281	24	13	367	102	445	158	11	432	74
Turn Type	Prot	NA	Prot	pm+pt	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	8	7	4	5	2		1	6	
Permitted Phases				4				2			6
Detector Phase	3	8	8	7	4	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	34.0	37.0	37.0	23.0	26.0	24.0	56.0	56.0	14.0	46.0	46.0
Total Split (%)	26.2%	28.5%	28.5%	17.7%	20.0%	18.5%	43.1%	43.1%	10.8%	35.4%	35.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	None	Max	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	28.8	51.0	51.0	28.3	22.2	12.8	63.0	63.0	6.4	48.2	48.2
Actuated g/C Ratio	0.22	0.39	0.39	0.22	0.17	0.10	0.48	0.48	0.05	0.37	0.37
v/c Ratio	0.92	0.38	0.03	0.05	0.59	0.59	0.26	0.19	0.13	0.33	0.11
Control Delay	67.8	31.5	0.1	25.0	44.8	69.0	20.9	3.8	61.8	30.9	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.8	31.5	0.1	25.0	44.8	69.0	20.9	3.8	61.8	30.9	0.3
LOS	E	C	A	C	D	E	C	A	E	C	A
Approach Delay		56.0			44.1		24.0			27.1	
Approach LOS		E			D		C			C	
Queue Length 50th (ft)	297	158	0	6	124	84	108	0	9	136	0
Queue Length 95th (ft)	#654	250	0	18	165	131	162	36	28	180	0
Internal Link Dist (ft)		386			252		1038			1088	
Turn Bay Length (ft)	200		200	150		225		225	400		250
Base Capacity (vph)	779	731	698	438	627	265	1716	848	129	1312	690
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.38	0.03	0.03	0.59	0.38	0.26	0.19	0.09	0.33	0.11

Intersection Summary		
Cycle Length: 130		
Actuated Cycle Length: 130		
Offset: 52 (40%), Referenced to phase 2:SET and 6:NWT, Start of Green		
Natural Cycle: 80		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.92		
Intersection Signal Delay: 39.9	Intersection LOS: D	
Intersection Capacity Utilization 56.1%	ICU Level of Service B	
Analysis Period (min) 15		

Timings
1: Spanish Fork Pkwy & US 6 03/01/2022

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Spanish Fork Pkwy & US 6



HCM 6th Roundabout
2: Spanish Fork Pkwy & 700 South 03/01/2022

Intersection	
Intersection Delay, s/veh	5.2
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	0	117	375	318
Demand Flow Rate, veh/h	0	119	382	325
Vehicles Circulating, veh/h	424	359	36	99
Vehicles Exiting, veh/h	0	59	388	379
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	5.0	5.3	5.3
Approach LOS	-	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	0	119	382	325
Cap Entry Lane, veh/h	895	957	1330	1247
Entry HV Adj Factor	1.000	0.983	0.982	0.979
Flow Entry, veh/h	0	117	375	318
Cap Entry, veh/h	895	941	1306	1222
V/C Ratio	0.000	0.124	0.287	0.261
Control Delay, s/veh	4.0	5.0	5.3	5.3
LOS	A	A	A	A
95th %tile Queue, veh	0	0	1	1

HCM 6th TWSC
3: Spanish Fork Pkwy & Gas Station Access 03/01/2022

Intersection												
Int Delay, s/veh	0.1											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	3	0	279	65	0	286	0
Future Vol, veh/h	0	0	0	0	0	3	0	279	65	0	286	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	4	0	371	86	0	380	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	380	-	-	414	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.22	-	-	6.22	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.318	-	-	3.318	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	667	0	0	638	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon Blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	667	-	-	638	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	10.7	0	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1WBLn1	SBT	SBR
Capacity (veh/h)	-	-	- 638	-	-
HCM Lane V/C Ratio	-	-	- 0.006	-	-
HCM Control Delay (s)	-	-	0 10.7	-	-
HCM Lane LOS	-	-	A B	-	-
HCM 95th %tile Q(veh)	-	-	- 0	-	-

Timings
1: Spanish Fork Pkwy & US 6 03/01/2022

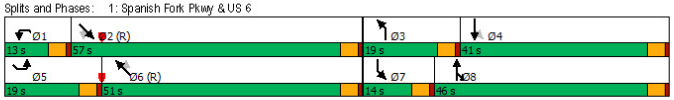
Lane Group	NBL	NBT	NBR	SBL	SBT	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations											
Traffic Volume (vph)	239	160	16	18	319	106	385	385	15	341	38
Future Volume (vph)	239	160	16	18	319	106	385	385	15	341	38
Lane Group Flow (vph)	300	201	20	23	447	133	483	483	19	428	48
Turn Type	Prot	NA	Prot	pm+pt	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	8	7	4	5	2		1	6	
Permitted Phases				4				2			6
Detector Phase	3	8	8	7	4	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	19.0	46.0	46.0	14.0	41.0	19.0	57.0	57.0	13.0	51.0	51.0
Total Split (%)	14.6%	35.4%	35.4%	10.8%	31.5%	14.6%	43.8%	43.8%	10.0%	39.2%	39.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	None	Max	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	14.1	48.6	48.6	43.4	36.9	13.2	60.5	60.5	6.9	47.8	47.8
Actuated g/C Ratio	0.11	0.37	0.37	0.33	0.28	0.10	0.47	0.47	0.05	0.37	0.37
v/c Ratio	0.81	0.29	0.03	0.05	0.45	0.74	0.29	0.50	0.20	0.33	0.07
Control Delay	73.6	31.4	0.1	22.6	39.3	80.3	23.1	5.9	63.4	30.8	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.6	31.4	0.1	22.6	39.3	80.3	23.1	5.9	63.4	30.8	0.2
LOS	E	C	A	C	D	F	C	A	E	C	A
Approach Delay		54.5			38.4		22.5			29.1	
Approach LOS		D			D		C			C	
Queue Length 50th (ft)	128	124	0	11	160	109	119	25	16	137	0
Queue Length 95th (ft)	#192	194	0	29	213	#195	191	117	42	183	0
Internal Link Dist (ft)		386			252		1038			1088	
Turn Bay Length (ft)	200		200	150		225		225	400		250
Base Capacity (vph)	382	696	670	463	995	197	1646	963	115	1299	685
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.29	0.03	0.05	0.45	0.68	0.29	0.50	0.17	0.33	0.07

Intersection Summary			
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 64 (49%), Referenced to phase 2:SET and 6:NWT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 33.1		Intersection LOS: C	
Intersection Capacity Utilization 53.7%		ICU Level of Service A	
Analysis Period (min) 15			

Timings
1: Spanish Fork Pkwy & US 6 03/01/2022

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Spanish Fork Pkwy & US 6



HCM 6th Roundabout
2: Spanish Fork Pkwy & 700 South 03/01/2022

Intersection	
Intersection Delay, s/veh	5.3
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	0	125	299	393
Demand Flow Rate, veh/h	0	127	305	401
Vehicles Circulating, veh/h	507	302	29	106
Vehicles Exiting, veh/h	0	32	478	323
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	4.7	4.7	6.0
Approach LOS	-	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	0	127	305	401
Cap Entry Lane, veh/h	823	1014	1340	1238
Entry HV Adj Factor	1.000	0.984	0.981	0.979
Flow Entry, veh/h	0	125	299	393
Cap Entry, veh/h	823	998	1314	1213
V/C Ratio	0.000	0.125	0.228	0.324
Control Delay, s/veh	4.4	4.7	4.7	6.0
LOS	A	A	A	A
95th %tile Queue, veh	0	0	1	1

HCM 6th TWSC
3: Spanish Fork Pkwy & Gas Station Access 03/01/2022

Intersection												
Int Delay, s/veh	0.1											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	6	0	232	72	0	374	0
Future Vol, veh/h	0	0	0	0	0	6	0	232	72	0	374	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	8	0	291	90	0	470	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	470	-	-	336	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.22	-	-	6.22	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.318	-	-	3.318	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	594	0	0	706	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon Blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	594	-	-	706	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	10.2	0	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	-	706	-	-
HCM Lane V/C Ratio	-	-	-	0.011	-	-
HCM Control Delay (s)	-	-	0	10.2	-	-
HCM Lane LOS	-	-	A	B	-	-
HCM 95th %tile Q(veh)	-	-	-	0	-	-

Appendix C With Site Intersection Analyses

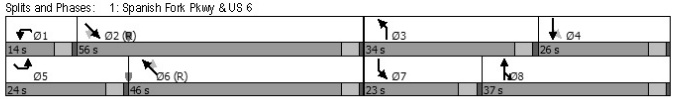
Timings
1: Spanish Fork Pkwy & US 6 03/01/2022

Lane Group	NBL	NBT	NBR	SBL	SBT	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations											
Traffic Volume (vph)	527	251	18	14	214	108	335	119	8	325	61
Future Volume (vph)	527	251	18	14	214	108	335	119	8	325	61
Lane Group Flow (vph)	620	295	21	16	397	127	394	140	9	382	72
Turn Type	Prot	NA	Prot	pm+pt	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	8	7	4	5	2		1	6	
Permitted Phases				4				2			6
Detector Phase	3	8	8	7	4	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	34.0	37.0	37.0	23.0	26.0	24.0	56.0	56.0	14.0	46.0	46.0
Total Split (%)	26.2%	28.5%	28.5%	17.7%	20.0%	18.5%	43.1%	43.1%	10.8%	35.4%	35.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	None	Max	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	27.2	50.9	50.9	30.0	23.8	14.5	63.1	63.1	6.3	46.5	46.5
Actuated g/C Ratio	0.21	0.39	0.39	0.23	0.18	0.11	0.49	0.49	0.05	0.36	0.36
v/c Ratio	0.86	0.40	0.03	0.06	0.59	0.65	0.23	0.17	0.11	0.30	0.11
Control Delay	62.6	32.0	0.1	24.9	43.8	69.9	20.5	3.9	61.4	31.6	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.6	32.0	0.1	24.9	43.8	69.9	20.5	3.9	61.4	31.6	0.3
LOS	E	C	A	C	D	E	C	A	E	C	A
Approach Delay		51.5			43.0		26.5			27.3	
Approach LOS		D			D		C			C	
Queue Length 50th (ft)	258	167	0	8	133	104	94	0	7	121	0
Queue Length 95th (ft)	303	264	0	21	177	155	143	34	25	162	0
Internal Link Dist (ft)		386			252		1038			1088	
Turn Bay Length (ft)	200		200	150		225		225	400		250
Base Capacity (vph)	779	729	696	449	673	265	1718	840	129	1266	671
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.40	0.03	0.04	0.59	0.48	0.23	0.17	0.07	0.30	0.11

Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 52 (40%), Referenced to phase 2:SET and 6:NWT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 38.9 Intersection LOS: D
Intersection Capacity Utilization 54.9% ICU Level of Service A
Analysis Period (min) 15

Timings
1: Spanish Fork Pkwy & US 6 03/01/2022

Splits and Phases: 1: Spanish Fork Pkwy & US 6



HCM 6th Roundabout
2: Spanish Fork Pkwy & 700 South 03/01/2022

Intersection	
Intersection Delay, s/veh	5.7
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	34	104	421	312
Demand Flow Rate, veh/h	35	106	429	318
Vehicles Circulating, veh/h	391	436	59	179
Vehicles Exiting, veh/h	106	52	367	363
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.3	5.3	5.9	5.8
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	35	106	429	318
Cap Entry Lane, veh/h	926	885	1299	1150
Entry HV Adj Factor	0.971	0.981	0.981	0.980
Flow Entry, veh/h	34	104	421	312
Cap Entry, veh/h	900	868	1274	1127
V/C Ratio	0.038	0.120	0.330	0.277
Control Delay, s/veh	4.3	5.3	5.9	5.8
LOS	A	A	A	A
95th %tile Queue, veh	0	0	1	1

HCM 6th TWSC
3: Spanish Fork Pkwy & Gas Station Access 03/01/2022

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	58	0	0	3	0	355	65	0	293	13
Future Vol, veh/h	0	0	58	0	0	3	0	355	65	0	293	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	68	0	0	4	0	418	76	0	345	15

Major/Minor	Minor2		Minor1			Major1		Major2				
Conflicting Flow All	-	-	353	-	-	456	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.22	-	-	6.22	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.318	-	-	3.318	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	691	0	0	604	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	691	-	-	604	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.8	11	0	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	691	604	-	-
HCM Lane V/C Ratio	-	-	0.099	0.006	-	-
HCM Control Delay (s)	-	-	10.8	11	-	-
HCM Lane LOS	-	-	B	B	-	-
HCM 95th %tile Q(veh)	-	-	0.3	0	-	-

Timings
1: Spanish Fork Pkwy & US 6 03/01/2022

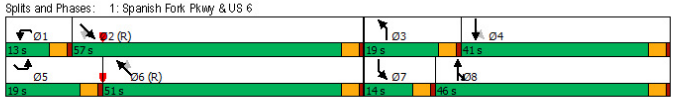
Lane Group	NBL	NBT	NBR	SBL	SBT	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations											
Traffic Volume (vph)	239	209	16	24	368	142	385	385	15	341	44
Future Volume (vph)	239	209	16	24	368	142	385	385	15	341	44
Lane Group Flow (vph)	266	232	18	27	490	158	428	428	17	379	49
Turn Type	Prot	NA	Prot	pm+pt	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	8	7	4	5	2		1	6	
Permitted Phases				4				2			6
Detector Phase	3	8	8	7	4	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	19.0	46.0	46.0	14.0	41.0	19.0	57.0	57.0	13.0	51.0	51.0
Total Split (%)	14.6%	35.4%	35.4%	10.8%	31.5%	14.6%	43.8%	43.8%	10.0%	39.2%	39.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	None	Max	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	13.7	48.4	48.4	44.0	37.3	13.9	60.5	60.5	6.8	47.1	47.1
Actuated g/C Ratio	0.11	0.37	0.37	0.34	0.29	0.11	0.47	0.47	0.05	0.36	0.36
v/c Ratio	0.74	0.33	0.03	0.06	0.49	0.84	0.26	0.44	0.18	0.30	0.07
Control Delay	69.3	32.4	0.1	22.7	39.1	90.1	22.7	3.9	62.9	30.6	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.3	32.4	0.1	22.7	39.1	90.1	22.7	3.9	62.9	30.6	0.2
LOS	E	C	A	C	D	F	C	A	E	C	A
Approach Delay		50.3			38.2		25.3			28.5	
Approach LOS		D			D		C			C	
Queue Length 50th (ft)	112	147	0	13	175	132	104	1	14	120	0
Queue Length 95th (ft)	160	225	0	32	231	#247	168	65	40	162	0
Internal Link Dist (ft)		386			252		1038			1088	
Turn Bay Length (ft)	200		200	150		225		225	400		250
Base Capacity (vph)	382	693	668	457	1003	197	1647	964	115	1280	677
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.33	0.03	0.06	0.49	0.80	0.26	0.44	0.15	0.30	0.07

Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 64 (49%), Referenced to phase 2:SET and 6:NWT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 33.7 Intersection LOS: C
Intersection Capacity Utilization 51.8% ICU Level of Service A
Analysis Period (min) 15

Timings
1: Spanish Fork Pkwy & US 6 03/01/2022

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Spanish Fork Pkwy & US 6



HCM 6th Roundabout
2: Spanish Fork Pkwy & 700 South 03/01/2022

Intersection	
Intersection Delay, s/veh	5.9
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	44	111	365	381
Demand Flow Rate, veh/h	45	113	372	388
Vehicles Circulating, veh/h	465	405	59	197
Vehicles Exiting, veh/h	120	26	451	321
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.8	5.2	5.4	6.7
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	45	113	372	388
Cap Entry Lane, veh/h	859	913	1299	1129
Entry HV Adj Factor	0.978	0.982	0.981	0.982
Flow Entry, veh/h	44	111	365	381
Cap Entry, veh/h	840	897	1274	1109
V/C Ratio	0.052	0.124	0.286	0.344
Control Delay, s/veh	4.8	5.2	5.4	6.7
LOS	A	A	A	A
95th %tile Queue, veh	0	0	1	2

HCM 6th TWSC
3: Spanish Fork Pkwy & Gas Station Access 03/01/2022

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	82	0	0	6	0	323	72	0	383	15
Future Vol, veh/h	0	0	82	0	0	6	0	323	72	0	383	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	91	0	0	7	0	359	80	0	426	17

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	435	-	-	399	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.22	-	-	6.22	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.318	-	-	3.318	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	621	0	0	651	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	621	-	-	651	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.8	10.6	0	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	621	651	-	-
HCM Lane V/C Ratio	-	-	0.147	0.01	-	-
HCM Control Delay (s)	-	-	11.8	10.6	-	-
HCM Lane LOS	-	-	B	B	-	-
HCM 95th %tile Q(veh)	-	-	0.5	0	-	-

Timings
1: Spanish Fork Pkwy & US 6 03/01/2022

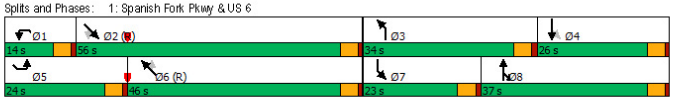
Lane Group	NBL	NBT	NBR	SBL	SBT	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations											
Traffic Volume (vph)	596	278	20	15	237	118	379	134	9	367	68
Future Volume (vph)	596	278	20	15	237	118	379	134	9	367	68
Lane Group Flow (vph)	701	327	24	18	439	139	446	158	11	432	80
Turn Type	Prot	NA	Prot	pm+pt	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	8	7	4	5	2		1	6	
Permitted Phases				4				2			6
Detector Phase	3	8	8	7	4	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	34.0	37.0	37.0	23.0	26.0	24.0	56.0	56.0	14.0	46.0	46.0
Total Split (%)	26.2%	28.5%	28.5%	17.7%	20.0%	18.5%	43.1%	43.1%	10.8%	35.4%	35.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	None	Max	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	28.8	50.9	50.9	28.5	22.2	15.1	63.0	63.0	6.4	45.9	45.9
Actuated g/C Ratio	0.22	0.39	0.39	0.22	0.17	0.12	0.48	0.48	0.05	0.35	0.35
v/c Ratio	0.92	0.45	0.03	0.07	0.69	0.67	0.26	0.19	0.13	0.35	0.12
Control Delay	67.8	33.0	0.1	25.1	48.5	70.9	20.9	3.8	61.8	32.7	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.8	33.0	0.1	25.1	48.5	70.9	20.9	3.8	61.8	32.7	0.4
LOS	E	C	A	C	D	E	C	A	E	C	A
Approach Delay		55.4			47.6		26.6			28.3	
Approach LOS		E			D		C			C	
Queue Length 50th (ft)	297	189	0	9	155	114	108	0	9	141	0
Queue Length 95th (ft)	#654	295	0	23	198	168	163	36	28	183	0
Internal Link Dist (ft)		386			252		1038			1088	
Turn Bay Length (ft)	200		200	150		225		225	400		250
Base Capacity (vph)	779	728	696	430	632	265	1716	848	129	1248	664
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.45	0.03	0.04	0.69	0.52	0.26	0.19	0.09	0.35	0.12

Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 52 (40%), Referenced to phase 2:SET and 6:NWT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 41.3 Intersection LOS: D
Intersection Capacity Utilization 59.6% ICU Level of Service B
Analysis Period (min) 15

Timings
1: Spanish Fork Pkwy & US 6 03/01/2022

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Spanish Fork Pkwy & US 6



HCM 6th Roundabout
2: Spanish Fork Pkwy & 700 South 03/01/2022

Intersection	
Intersection Delay, s/veh	6.1
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	34	114	463	348
Demand Flow Rate, veh/h	35	116	472	355
Vehicles Circulating, veh/h	438	477	62	189
Vehicles Exiting, veh/h	106	57	411	404
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.6	5.7	6.3	6.2
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	35	116	472	355
Cap Entry Lane, veh/h	883	848	1295	1138
Entry HV Adj Factor	0.971	0.983	0.981	0.980
Flow Entry, veh/h	34	114	463	348
Cap Entry, veh/h	858	834	1270	1116
V/C Ratio	0.040	0.137	0.364	0.312
Control Delay, s/veh	4.6	5.7	6.3	6.2
LOS	A	A	A	A
95th %tile Queue, veh	0	0	2	1

HCM 6th TWSC
3: Spanish Fork Pkwy & Gas Station Access 03/01/2022

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	58	0	0	3	0	391	73	0	330	13
Future Vol, veh/h	0	0	58	0	0	3	0	391	73	0	330	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	68	0	0	4	0	460	86	0	388	15

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	-	-	396	-	-	503	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.22	-	-	6.22	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.318	-	-	3.318	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	653	0	0	569	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	653	-	-	569	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.2	11.4	0	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	653	569	-	-
HCM Lane V/C Ratio	-	-	0.104	0.006	-	-
HCM Control Delay (s)	-	-	11.2	11.4	-	-
HCM Lane LOS	-	-	B	B	-	-
HCM 95th %tile Q(veh)	-	-	0.3	0	-	-

Timings
1: Spanish Fork Pkwy & US 6 03/01/2022

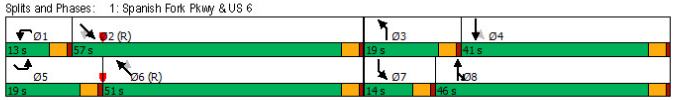
Lane Group	NBL	NBT	NBR	SBL	SBT	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations											
Traffic Volume (vph)	270	230	34	26	409	156	435	435	17	385	49
Future Volume (vph)	270	230	34	26	409	156	435	435	17	385	49
Lane Group Flow (vph)	300	256	38	29	541	173	483	483	19	428	54
Turn Type	Prot	NA	Prot	pm+pt	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8	8	7	4	5	2		1	6	
Permitted Phases				4				2			6
Detector Phase	3	8	8	7	4	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	19.0	46.0	46.0	14.0	41.0	19.0	57.0	57.0	13.0	51.0	51.0
Total Split (%)	14.6%	35.4%	35.4%	10.8%	31.5%	14.6%	43.8%	43.8%	10.0%	39.2%	39.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	None	Max	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	14.1	48.3	48.3	43.6	36.9	14.3	60.5	60.5	6.9	46.7	46.7
Actuated g/C Ratio	0.11	0.37	0.37	0.34	0.28	0.11	0.47	0.47	0.05	0.36	0.36
v/c Ratio	0.81	0.37	0.06	0.07	0.55	0.89	0.29	0.51	0.20	0.34	0.08
Control Delay	73.6	33.1	0.2	22.8	40.7	98.5	23.1	7.0	63.4	31.3	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.6	33.1	0.2	22.8	40.7	98.5	23.1	7.0	63.4	31.3	0.2
LOS	E	C	A	C	D	F	C	A	E	C	A
Approach Delay		51.4			39.8		27.7			29.2	
Approach LOS		D			D		C			C	
Queue Length 50th (ft)	128	164	0	14	198	146	119	36	16	137	0
Queue Length 95th (ft)	#192	249	0	34	257	#279	191	139	42	183	0
Internal Link Dist (ft)		386			252		1038			1088	
Turn Bay Length (ft)	200		200	150		225		225	400		250
Base Capacity (vph)	382	692	667	446	992	197	1646	950	115	1271	673
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.37	0.06	0.07	0.55	0.88	0.29	0.51	0.17	0.34	0.08

Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 64 (49%), Referenced to phase 2:SET and 6:NWT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 35.5 Intersection LOS: D
Intersection Capacity Utilization 56.1% ICU Level of Service B
Analysis Period (min) 15

Timings
1: Spanish Fork Pkwy & US 6 03/01/2022

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Spanish Fork Pkwy & US 6



HCM 6th Roundabout
2: Spanish Fork Pkwy & 700 South 03/01/2022

Intersection	
Intersection Delay, s/veh	6.4
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	44	125	400	427
Demand Flow Rate, veh/h	45	127	408	436
Vehicles Circulating, veh/h	525	441	64	209
Vehicles Exiting, veh/h	120	31	506	359
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.1	5.6	5.7	7.3
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	45	127	408	436
Cap Entry Lane, veh/h	808	880	1293	1115
Entry HV Adj Factor	0.978	0.984	0.981	0.980
Flow Entry, veh/h	44	125	400	427
Cap Entry, veh/h	790	866	1267	1093
V/C Ratio	0.056	0.144	0.316	0.391
Control Delay, s/veh	5.1	5.6	5.7	7.3
LOS	A	A	A	A
95th %tile Queue, veh	0	1	1	2

HCM 6th TWSC
3: Spanish Fork Pkwy & Gas Station Access 03/01/2022

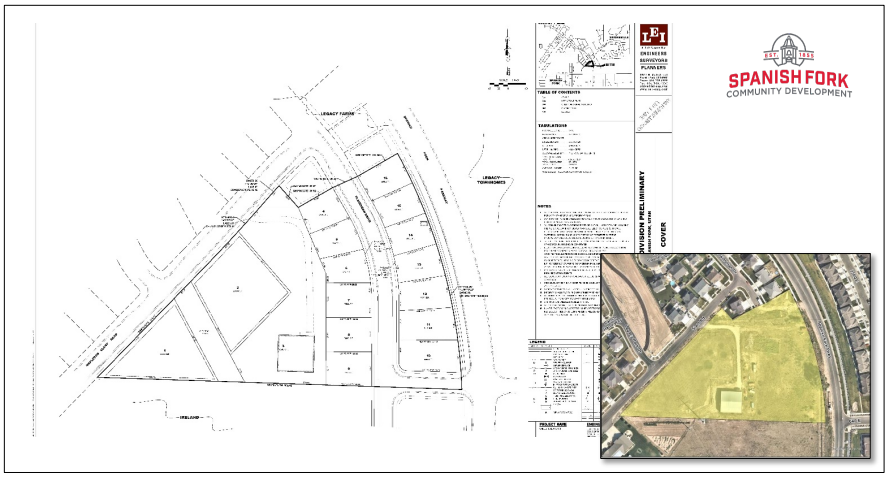
Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	82	0	0	7	0	353	81	0	432	15
Future Vol, veh/h	0	0	82	0	0	7	0	353	81	0	432	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	91	0	0	8	0	392	90	0	480	17

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	489	-	-	437	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.22	-	-	6.22	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.318	-	-	3.318	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	579	0	0	620	0	-	-	0	-	-
Stage 1	0	0	-	0	0	-	0	-	-	0	-	-
Stage 2	0	0	-	0	0	-	0	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	579	-	-	620	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.4	10.9	0	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	-	-	579	620	-	-
HCM Lane V/C Ratio	-	-	0.157	0.013	-	-
HCM Control Delay (s)	-	-	12.4	10.9	-	-
HCM Lane LOS	-	-	B	B	-	-
HCM 95th %tile Q(veh)	-	-	0.6	0	-	-



Shelly Subdivision Preliminary Plat and Zone Change Approval Request

July 6, 2022, Development Review Committee Meeting.

Located at 686 North Slant Road, including 5.71 acres.

The applicant has requested Preliminary Plat approval for a Master Planned Development that includes sixteen (16) residential lots.

The subject property is zoned R-3 and R-1-15 and the applicant has requested a change to the R-1-9 zone.

Key Issues

1. Zoning.
2. Density.
3. General Plan.
4. Existing Structure.
5. Trails.
6. Walls.
7. Utilities.

Recommendation

That the proposed Preliminary Plat and Zone Change be recommended for approval based on the following findings and subject to the following conditions:

Findings

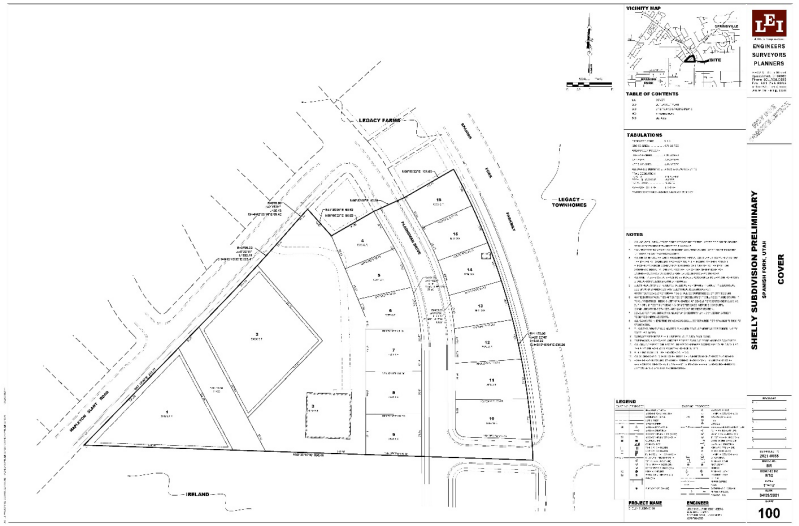
1. That maintaining similar lot sizes to existing development is appropriate.

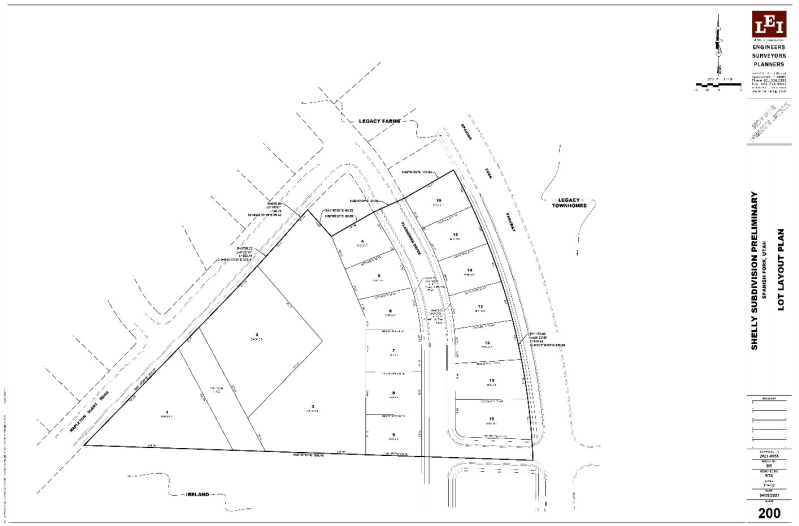
Conditions

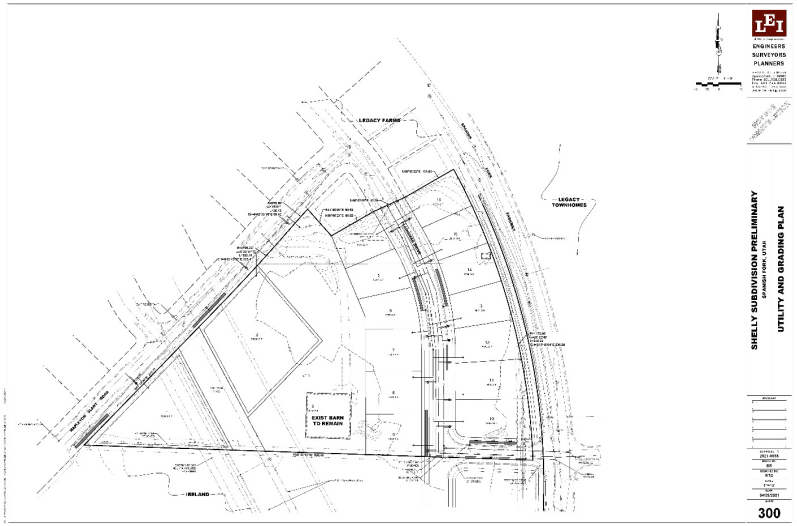
1. That the applicant meets the City's Zoning requirements and Construction Standards.
2. That the applicant addresses any red-lines.

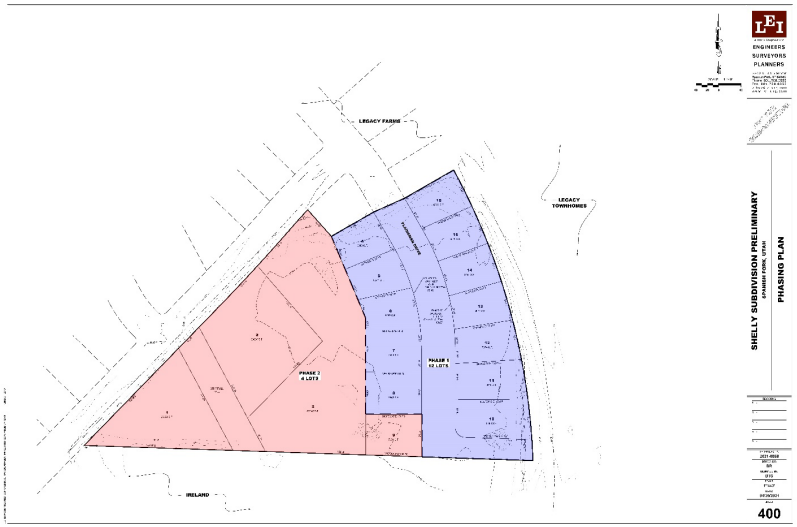
Exhibits

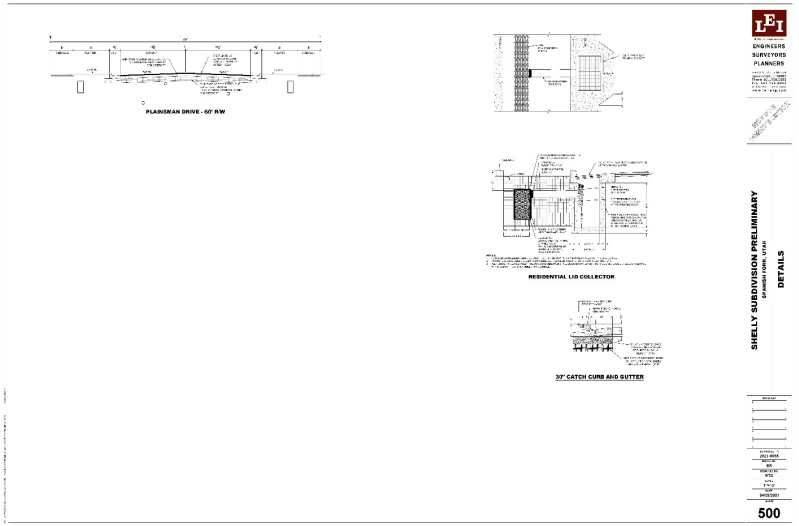
1. Preliminary Plat.






LEGACY FARMS
LEGACY TOWNHOMES
EXIST BARN TO REMAIN
IRELAND
SHELLY SUBDIVISION PRELIMINARY
UTILITY AND GRADING PLAN
300


LEGACY FARMS
LEGACY TOWNHOMES
PHASE 2
4 LOTS
PHASE 1
12 LOTS
IRELAND
SHELLY SUBDIVISION PRELIMINARY
PHASING PLAN
400


PLAINSMAN DRIVE - 60' R/W
RESIDENTIAL LID COLLECTOR
30' CATCH CURB AND GUTTER
SHELLY SUBDIVISION PRELIMINARY
DETAILS
500