

PRELIMINARY PLANNED DEVELOPMENT OF WHISPERING VIEW ESTATES

LEGAL DESCRIPTION

PARCEL A

THAT PORTION OF THE SOUTH HALF OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 25, TOWNSHIP 14 NORTH, RANGE 18 EAST, W.M. LYING EAST OF THE YAKIMA VALLEY TRANSPORTATION COMPANY'S RIGHT OF WAY AS DISCLOSED BY DEED RECORDED IN VOLUME 125, PAGE 136, RECORDS OF YAKIMA COUNTY, WASHINGTON;

EXCEPT THE EAST 420 FEET THEREOF;

AND EXCEPT THE SOUTH 25 FEET FOR COUNTY ROAD RIGHT OF WAY.

PARCEL B

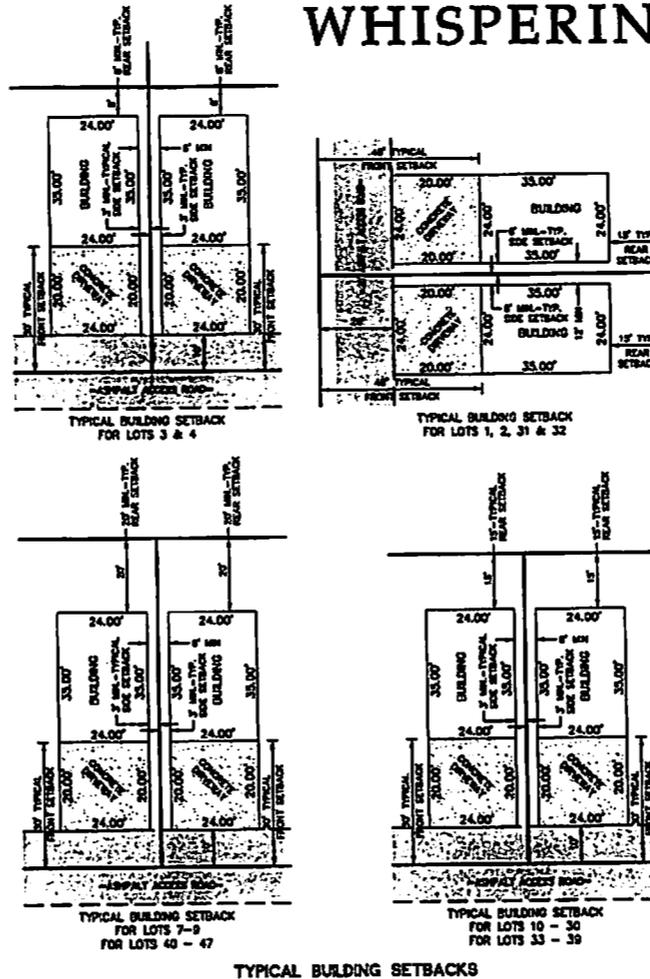
A STRIP OR PARCEL OF LAND 50 FEET WIDE THROUGH, OVER AND ACROSS THE SOUTH HALF OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 25, TOWNSHIP 14 NORTH, RANGE 18 EAST, W.M. IN YAKIMA COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS: TO WET COMMENCING AT A POINT 20 FEET NORTH AND 633 FEET EAST OF THE SOUTHWEST CORNER OF SECTION 25, TOWNSHIP 14 NORTH, RANGE 18 EAST, W.M.; THENCE NORTH A DISTANCE OF 666 FEET; THENCE EAST A DISTANCE OF 50 FEET; THENCE SOUTH A DISTANCE OF 666 FEET; THENCE WEST A DISTANCE OF 50 FEET TO THE POINT OF BEGINNING.

NOTES

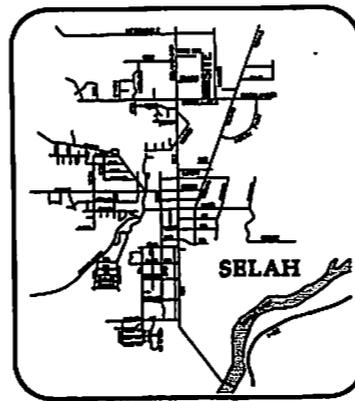
- TOTAL AREA OF PROPOSED SUBDIVISION IS 172,444 SQ. FT./3.95 ACRES.
- PERCENTAGE OF LAND COVERAGE BY ASPHALT ACCESS ROADS AND CONCRETE DRIVEWAYS IS 31.1%.
- P.S. ESMT INDICATES PUBLIC SERVICE EASEMENT. USAGE WILL INCLUDE BUT NOT BE LIMITED TO SEWER, WATER, POWER, IRRIGATION, NATURAL GAS, TELEPHONE, TELEVISION, ETC.
- ALL STORM WATER GENERATED BY NEW IMPERVIOUS SURFACES WILL BE RETAINED ON SITE.
- POWER, TV CABLES, TELEPHONE CABLES AND GAS MAINS ARE TO BE LOCATED WITHIN THE PUBLIC SERVICE EASEMENTS. THE INDIVIDUAL UTILITY COMPANY TO DETERMINE EXACT LOCATION.
- SUBJECT PROPERTY AND ADJACENT CITY OF SELAH PROPERTIES ARE ZONED R-2, MODERATE DENSITY DEVELOPMENT ZONE. ADJACENT PROPERTIES WITHIN YAKIMA COUNTY ARE ZONED R-1 SINGLE FAMILY.
- THE OPEN SPACE/OVERFLOW PARKING AREA EASEMENTS WILL BE DEDICATED ON THE FINAL PLAT MAP OR PROVIDED FOR IN THE DEVELOPMENT COVENANTS.

LEGEND

DISTINGUISH MARK



TYPICAL BUILDING SETBACKS



VICINITY MAP

LOT AREA TABLE

LOT 1	4277 SQ. FT.	LOT 12	2400 SQ. FT.	LOT 23	4650 SQ. FT.	LOT 34	2400 SQ. FT.	LOT 45	2733 SQ. FT.
LOT 2	3185 SQ. FT.	LOT 13	2400 SQ. FT.	LOT 24	2400 SQ. FT.	LOT 35	2400 SQ. FT.	LOT 46	2733 SQ. FT.
LOT 3	2400 SQ. FT.	LOT 14	2400 SQ. FT.	LOT 25	2400 SQ. FT.	LOT 36	2400 SQ. FT.	LOT 47	2733 SQ. FT.
LOT 4	2400 SQ. FT.	LOT 15	2400 SQ. FT.	LOT 26	2400 SQ. FT.	LOT 37	2400 SQ. FT.	LOT 48	2733 SQ. FT.
LOT 5	2400 SQ. FT.	LOT 16	2400 SQ. FT.	LOT 27	2400 SQ. FT.	LOT 38	2400 SQ. FT.	LOT 49	2733 SQ. FT.
LOT 6	2400 SQ. FT.	LOT 17	2400 SQ. FT.	LOT 28	2400 SQ. FT.	LOT 39	2400 SQ. FT.	LOT 50	2733 SQ. FT.
LOT 7	2400 SQ. FT.	LOT 18	2400 SQ. FT.	LOT 29	2400 SQ. FT.	LOT 40	2400 SQ. FT.	LOT 51	2733 SQ. FT.
LOT 8	2400 SQ. FT.	LOT 19	2400 SQ. FT.	LOT 30	2400 SQ. FT.	LOT 41	2400 SQ. FT.	LOT 52	2733 SQ. FT.
LOT 9	2400 SQ. FT.	LOT 20	2400 SQ. FT.	LOT 31	2400 SQ. FT.	LOT 42	2400 SQ. FT.	LOT 53	2733 SQ. FT.
LOT 10	2400 SQ. FT.	LOT 21	2400 SQ. FT.	LOT 32	2400 SQ. FT.	LOT 43	2400 SQ. FT.	LOT 54	2733 SQ. FT.
LOT 11	2400 SQ. FT.	LOT 22	2400 SQ. FT.	LOT 33	2400 SQ. FT.	LOT 44	2400 SQ. FT.	LOT 55	2733 SQ. FT.

SURVEYOR/ENGINEER

RICHARD L. WEAVER, PLS
PLSA ENGINEERING & SURVEYING
1120 WEST LINCOLN AVENUE
YAKIMA, WASHINGTON 98902

OWNER/DEVELOPER

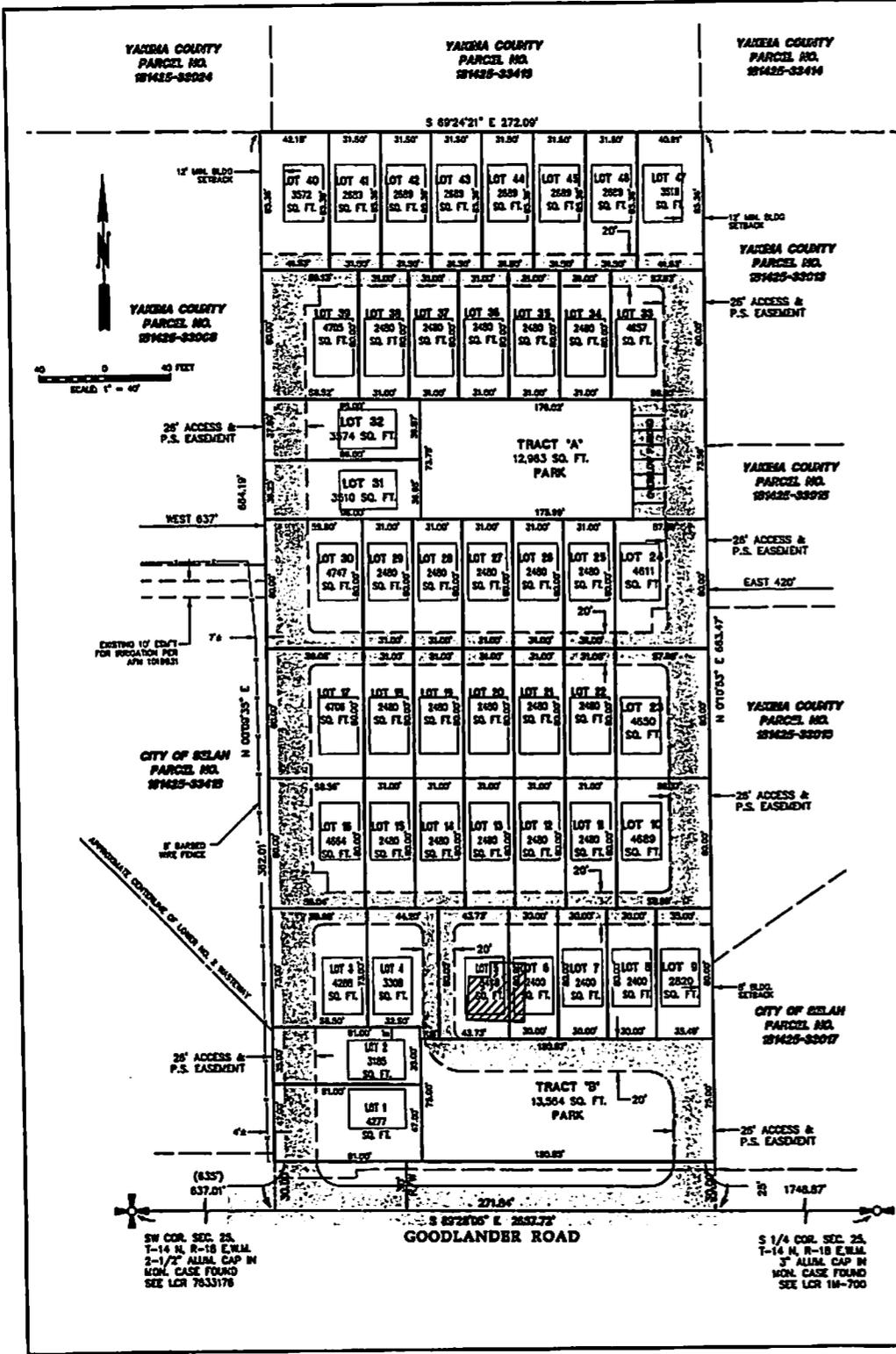
CARL TORKELSON
TORKELSON CONSTRUCTION
P.O. BOX 822
SELAH, WASHINGTON 98942

PLSA

ENGINEERING-SURVEYING-PLANNING
1120 WEST LINCOLN AVENUE
YAKIMA, WASHINGTON 98902
(509) 873-6990

PRELIMINARY PLANNED DEVELOPMENT OF PARCEL NO'S. 181425 - 33029 & 33030 — PREPARED FOR — TORKELSON CONSTRUCTION	DRAWN BY: RICK DATE: 4/2/2015 JOB NO: 13257 SHEET NO: 1 of 1
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SW 1/4, SW 1/4, SEC. 25, T-14 N, R-18 E, W.M.



GOODLANDER ROAD

SW COR. SEC. 25,
T-14 N, R-18 E, W.M.
2-1/4" ALUM. CAP IN
MON. CASE FOUND
SEE LCR 7633178

S 1/4 COR. SEC. 25,
T-14 N, R-18 E, W.M.
3" ALUM. CAP IN
MON. CASE FOUND
SEE LCR 1M-700



P.O. Box 292
 Selah, Washington 98942
 Phone: (509) 697-3305
 Fax: (509) 697-3504
 torkelson@fairpoint.net

Carl Torkelson
 Cell: (509) 945-0133
 Candi Torkelson
 Cell: (509) 961-7656

Why Pay \$1000's More? Buy Builder Direct!

1.) AN ACCURATE MAP DRAWN TO SCALE OF NOT LESS THAN ONE INCH TO ONE HUNDRED FEET DEPICTING THE FOLLOWING:

- (a) The Boundaries of the site:
(See Plat Map)
- (b) Names and dimensions of all street bounding or touching the boundaries of the site:
(See Plat Map)
- (c) Horizontal and vertical dimensions of all Buildings and structures proposed to be located on the site which shall include drawings, architectural renderings or photographs of proposed buildings which will become part of public record:
(See Plat Map for Horizontal Dimensions)

	Total	Horizontal Dimensions	Vertical Dimensions
3 Story	47	24 x 32	32.5' tall in ht

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Builder reserves the right to change floor plan or elevations



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- (l) Building types and intensities:

47	3 Story Buildings	1750 sq ft each
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47 TOTAL BUILDINGS

- (m) Pedestrian and vehicular circulation pattern:
(See Plat Map)
- (n) Proposed Subdivision map identifying proposed lot configuration and size in square feet:
(See Plat Map)

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- (m) Preliminary plans elevations of typical buildings and structures including general height, bulk, number of dwelling units and the exterior appearance of the buildings or structures:

	Total	Height	Appearance
3 Story Buildings	47	32.5'	Pictures Attached

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LOT #	LOT SIZE SQ. FT.	BUILDING ENVELOPE SQ. FT.	% OF BUILDING TO LOT	PARKING SPACE PER LOT	INDIVIDUAL YARD SPACE SQ. FT.	DRIVE-WAY SPACE SQ. FT.	ACCESS ROAD AREA SQ.FT.
1	4277	840	19.6%	4	2017	480	940
2	3185	840	26.4%	4	1165	480	700
3	4288	840	19.6%	4	1118.20	480	1849.8
4	3308	840	25.4%	4	146	480	1842
5	3498	840	24.0%	4	440.70	480	1737.3
6	2400	840	35.0%	4	780	480	300
7	2400	840	35.0%	4	780	480	300
8	2400	840	35.0%	4	780	480	300
9	2820	840	29.8%	4	1150	480	350
10	4689	840	17.9%	4	1380.20	480	1988.8
11	2480	840	33.9%	4	850	480	310
12	2480	840	33.9%	4	850	480	310
13	2480	840	33.9%	4	850	480	310
14	2480	840	33.9%	4	850	480	310
15	2480	840	33.9%	4	850	480	310
16	4664	840	18.0%	4	1363.6	480	1980.4
17	4706	840	17.8%	4	1395.20	480	1990.8
18	2480	840	33.9%	4	850	480	310
19	2480	840	33.9%	4	850	480	310
20	2480	840	33.9%	4	850	480	310

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21	2480	840	33.9%	4	850	480	310
22	2480	840	33.9%	4	850	480	310
23	4650	840	18.1%	4	1351.2	480	1978.8
24	4611	840	18.2%	4	1317.10	480	1973.9
25	2480	840	33.9%	4	850	480	310
26	2480	840	33.9%	4	850	480	310
27	2480	840	33.9%	4	850	480	310
28	2480	840	33.9%	4	850	480	310
29	2480	840	33.9%	4	850	480	310
30	4747	840	17.7%	4	1431	480	1996
31	3510	840	23.9%	4	1465	480	725
32	3574	840	23.5%	4	502	480	1752
33	4657	840	18.0%	4	1357.7	480	1979.3
34	2480	840	33.9%	4	850	480	310
35	2480	840	33.9%	4	850	480	310
36	2480	840	33.9%	4	850	480	310
37	2480	840	33.9%	4	850	480	310
38	2480	840	33.9%	4	850	480	310
39	4705	840	17.9%	4	1393.70	480	1991.3
40	3572	840	23.5%	4	1836.7	480	415.3

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41	2732	840	30.7%	4	1097	480	315
42	2689	840	31.2%	4	1054	480	315
43	2689	840	31.2%	4	1054	480	315
44	2689	840	31.2%	4	1054	480	315
45	2689	840	31.2%	4	1054	480	315
46	2689	840	31.2%	4	1054	480	315
47	3518	840	23.9%	4	1782.7	480	415.3
TRACT A	12979.26	0	0.0%	8	10036.86	0	1471.2
TRACT B	13563.75	0	0.0%	0	4128.95	0	4717.4
TOTALS	172499.01	39480		196	62485.81	22560	41784.60

Sq. Ft. of Green Belt Area =	62485.81	% of Parcel =	36.2%
Sq. Ft. of Private Road Way =	41784.60	% of Parcel =	24.2%
Sq. Ft. of Drive-Way =	22560	% of Parcel =	13.1%

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- (c) Tables indicating overall densities and density by dwelling types and any proposal for the limitation of density:

There will be 47 units with approximately 3 to 4 persons per unit.

- (d) Restrictive Covenants, other than those relating to retention and maintenance of common open space:
(See Attached Covenants)

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1.3 "Association" shall mean and refer to the Whispering View Estates Homeowners Association.

1.4 "Board" or "Board of Directors" shall mean and refer to the governing body of the Association.

1.5 "Common Area" shall mean and refer to the portions of the property and all improvements thereon owned by the Association for the common use and enjoyment of the owners, specifically including the common easements. The "common area" shall consist of: (i) the Road Easements comprised of the entry to the project from East Goodlander for ingress and egress to and from each of the lots in the project; (ii) the Maintenance and Yard Easement for the purpose of maintenance of the roofs and siding of the dwellings in the project as well as all yards in the project; and (iii) all improvements owned by the Association.

1.6 "Common Expenses" means and includes the actual and estimated expenses of operating the common area and any reasonable reserve for such purposes as found and determined by the Board and all such designated common expenses by or pursuant to this Declaration. Common expenses shall include the expense of periodic maintenance and testing of all built-in fire detection and protection devices.

1.7 "Declarant" shall mean and refer to CARL L. TORKELSON and CANDI R. TORKELSON, their successors and assigns.

1.8 "Declaration" shall mean and refer to this Declaration of Covenants, Conditions and Restrictions, as amended or supplemented from time to time.

1.9 "Eligible holder mortgages" shall mean mortgages held by "eligible mortgage holders".

1.10 "Eligible mortgage holder" shall mean a first lender who has requested notice of certain matters from the Association in accordance with Section 8.5C.

1.11 "Eligible insurer or guarantor" shall mean an insurer or governmental guarantor of a first mortgage who has requested notice of certain matters from the Association in accordance with Section 8.5C.

1.12 "First lender" shall mean any bank, savings and loan association, insurance company, or other financial institution holding a recorded first mortgage on any lot.

1.13 "Lot" shall mean and refer to any plot of land, together with any improvements thereon, shown upon any recorded subdivision map of the property with the exception of the common area and the private road or utility easements shown on the Map.

1.14 "Map" shall mean and refer to that Map entitled Whispering View Estates filed for record on _____, 2014, recorded in Yakima County, Washington, under Yakima County Auditor's File No. _____.

1.15 "Member" shall mean and refer to a person entitled to membership in the Association as provided herein.

1.16 "Mortgage" shall include a deed of trust as well as a mortgage.

1.17 "Mortgagee" shall include a beneficiary or holder of a deed of trust as well as a mortgagee.

1.18 "Mortgagor" shall include the grantor of a deed of trust as well as a mortgagor.

1.19 "Owner" or "owners" shall mean and refer to the record holder, whether one (1) or more persons or entities, of a fee simple title to any lot which is a part of the project but excluding those persons or entities having an interest merely as security for the performance of an obligation. If a lot is sold under a contract of sale and the contract is recorded, the purchaser, rather than fee owner, will be considered the "owner" from and after the date the Association receives a written notice of the recorded contract.

1.20 "Person" means a natural person, corporation, partnership, a trustee, or other legal entity.

1.21 "Project" shall mean and refer to the entire real property described above including all improvements and structures erected or to be erected thereon.

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EXCEPT THE EAST 420 FEET THEREOF;
 AND EXCEPT THE SOUTH 25 FEET FOR COUNTY ROAD RIGHT OF WAY.

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 A STRIP OR PARCEL OF LAND 50 FEET WIDE THROUGH, OVER AND ACROSS THE SOUTH HALF OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 25, TOWNSHIP 14 NORTH, RANGE 18 EAST, 116TH EAS T 1/4, AS FOLLOWS: TO WIT COMMENCING AT A POINT 20 FEET NORTH AND 432 FEET EAST OF THE SOUTHWEST CORNER OF SECTION 25, TOWNSHIP 14 NORTH, RANGE 18 EAST, 116TH EAS T 1/4, THENCE NORTH A DISTANCE OF 666 FEET; THENCE EAST A DISTANCE OF 90 FEET; THENCE SOUTH A DISTANCE OF 666 FEET; THENCE WEST A DISTANCE OF 50 FEET TO THE POINT OF BEGINNING.

PARCEL B
 THE POINT OF BEGINNING.

NOTES

- TOTAL AREA OF PROPOSED SUBDIVISION IS 172,444 SQ. FT./3.96 ACRES.
- DRIVEWAYS ARE 21 FEET.
- P.S. EAST PROVIDES PUBLIC SERVICE EASTWEST. USAGE WILL INCLUDE BUT NOT BE LIMITED TO SEWER, WATER, POWER, REFRIGERATION, NATURAL GAS, TELEPHONE, TELEVISION, ETC.
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- THE OPEN SPACE/OVERLOOK PARKING AREA EASEMENTS WILL BE DEDICATED ON THE FINAL PLAT MAP OR PROVIDED FOR IN THE DEVELOPMENT.

LEGEND

EXISTING ROAD

APPROXIMATE CORNER OF LOT 10 & 11

APPROXIMATE CORNER OF LOT 11 & 12

APPROXIMATE CORNER OF LOT 12 & 13

APPROXIMATE CORNER OF LOT 13 & 14

APPROXIMATE CORNER OF LOT 14 & 15

APPROXIMATE CORNER OF LOT 15 & 16

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APPROXIMATE CORNER OF LOT 34 & 35

APPROXIMATE CORNER OF LOT 35 & 36

APPROXIMATE CORNER OF LOT 36 & 37

APPROXIMATE CORNER OF LOT 37 & 38

APPROXIMATE CORNER OF LOT 38 & 39

APPROXIMATE CORNER OF LOT 39 & 40

APPROXIMATE CORNER OF LOT 40 & 41

APPROXIMATE CORNER OF LOT 41 & 42

APPROXIMATE CORNER OF LOT 42 & 43

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APPROXIMATE CORNER OF LOT 95 & 96

APPROXIMATE CORNER OF LOT 96 & 97

APPROXIMATE CORNER OF LOT 97 & 98

APPROXIMATE CORNER OF LOT 98 & 99

APPROXIMATE CORNER OF LOT 99 & 100

LOT AREA TABLE

LOT 1	4,377	57	LOT 51	13,240	57	LOT 101	2,488	57	LOT 151	2,488	57
LOT 2	4,377	57	LOT 52	13,240	57	LOT 102	2,488	57	LOT 152	2,488	57
LOT 3	4,377	57	LOT 53	13,240	57	LOT 103	2,488	57	LOT 153	2,488	57
LOT 4	4,377	57	LOT 54	13,240	57	LOT 104	2,488	57	LOT 154	2,488	57
LOT 5	4,377	57	LOT 55	13,240	57	LOT 105	2,488	57	LOT 155	2,488	57
LOT 6	4,377	57	LOT 56	13,240	57	LOT 106	2,488	57	LOT 156	2,488	57
LOT 7	4,377	57	LOT 57	13,240	57	LOT 107	2,488	57	LOT 157	2,488	57
LOT 8	4,377	57	LOT 58	13,240	57	LOT 108	2,488	57	LOT 158	2,488	57
LOT 9	4,377	57	LOT 59	13,240	57	LOT 109	2,488	57	LOT 159	2,488	57
LOT 10	4,377	57	LOT 60	13,240	57	LOT 110	2,488	57	LOT 160	2,488	57
LOT 11	4,377	57	LOT 61	13,240	57	LOT 111	2,488	57	LOT 161	2,488	57
LOT 12	4,377	57	LOT 62	13,240	57	LOT 112	2,488	57	LOT 162	2,488	57
LOT 13	4,377	57	LOT 63	13,240	57	LOT 113	2,488	57	LOT 163	2,488	57
LOT 14	4,377	57	LOT 64	13,240	57	LOT 114	2,488	57	LOT 164	2,488	57
LOT 15	4,377	57	LOT 65	13,240	57	LOT 115	2,488	57	LOT 165	2,488	57
LOT 16	4,377	57	LOT 66	13,240	57	LOT 116	2,488	57	LOT 166	2,488	57
LOT 17	4,377	57	LOT 67	13,240	57	LOT 117	2,488	57	LOT 167	2,488	57
LOT 18	4,377	57	LOT 68	13,240	57	LOT 118	2,488	57	LOT 168	2,488	57
LOT 19	4,377	57	LOT 69	13,240	57	LOT 119	2,488	57	LOT 169	2,488	57
LOT 20	4,377	57	LOT 70	13,240	57	LOT 120	2,488	57	LOT 170	2,488	57
LOT 21	4,377	57	LOT 71	13,240	57	LOT 121	2,488	57	LOT 171	2,488	57
LOT 22	4,377	57	LOT 72	13,240	57	LOT 122	2,488	57	LOT 172	2,488	57
LOT 23	4,377	57	LOT 73	13,240	57	LOT 123	2,488	57	LOT 173	2,488	57
LOT 24	4,377	57	LOT 74	13,240	57	LOT 124	2,488	57	LOT 174	2,488	57
LOT 25	4,377	57	LOT 75	13,240	57	LOT 125	2,488	57	LOT 175	2,488	57
LOT 26	4,377	57	LOT 76	13,240	57	LOT 126	2,488	57	LOT 176	2,488	57
LOT 27	4,377	57	LOT 77	13,240	57	LOT 127	2,488	57	LOT 177	2,488	57
LOT 28	4,377	57	LOT 78	13,240	57	LOT 128	2,488	57	LOT 178	2,488	57
LOT 29	4,377	57	LOT 79	13,240	57	LOT 129	2,488	57	LOT 179	2,488	57
LOT 30	4,377	57	LOT 80	13,240	57	LOT 130	2,488	57	LOT 180	2,488	57
LOT 31	4,377	57	LOT 81	13,240	57	LOT 131	2,488	57	LOT 181	2,488	57
LOT 32	4,377	57	LOT 82	13,240	57	LOT 132	2,488	57	LOT 182	2,488	57
LOT 33	4,377	57	LOT 83	13,240	57	LOT 133	2,488	57	LOT 183	2,488	57
LOT 34	4,377	57	LOT 84	13,240	57	LOT 134	2,488	57	LOT 184	2,488	57
LOT 35	4,377	57	LOT 85	13,240	57	LOT 135	2,488	57	LOT 185	2,488	57
LOT 36	4,377	57	LOT 86	13,240	57	LOT 136	2,488	57	LOT 186	2,488	57
LOT 37	4,377	57	LOT 87	13,240	57	LOT 137	2,488	57	LOT 187	2,488	57
LOT 38	4,377	57	LOT 88	13,240	57	LOT 138	2,488	57	LOT 188	2,488	57
LOT 39	4,377	57	LOT 89	13,240	57	LOT 139	2,488	57	LOT 189	2,488	57
LOT 40	4,377	57	LOT 90	13,240	57	LOT 140	2,488	57	LOT 190	2,488	57
LOT 41	4,377	57	LOT 91	13,240	57	LOT 141	2,488	57	LOT 191	2,488	57
LOT 42	4,377	57	LOT 92	13,240	57	LOT 142	2,488	57	LOT 192	2,488	57
LOT 43	4,377	57	LOT 93	13,240	57	LOT 143	2,488	57	LOT 193	2,488	57
LOT 44	4,377	57	LOT 94	13,240	57	LOT 144	2,488	57	LOT 194	2,488	57
LOT 45	4,377	57	LOT 95	13,240	57	LOT 145	2,488	57	LOT 195	2,488	57
LOT 46	4,377	57	LOT 96	13,240	57	LOT 146	2,488	57	LOT 196	2,488	57
LOT 47	4,377	57	LOT 97	13,240	57	LOT 147	2,488	57	LOT 197	2,488	57
LOT 48	4,377	57	LOT 98	13,240	57	LOT 148	2,488	57	LOT 198	2,488	57
LOT 49	4,377	57	LOT 99	13,240	57	LOT 149	2,488	57	LOT 199	2,488	57
LOT 50	4,377	57	LOT 100	13,240	57	LOT 150	2,488	57	LOT 200	2,488	57

PLSA
 ENGINEERING-SURVEYING-PLANNING
 120 WEST LINCOLN AVENUE
 YANVA, WASHINGTON 98902
 (509) 575-4990

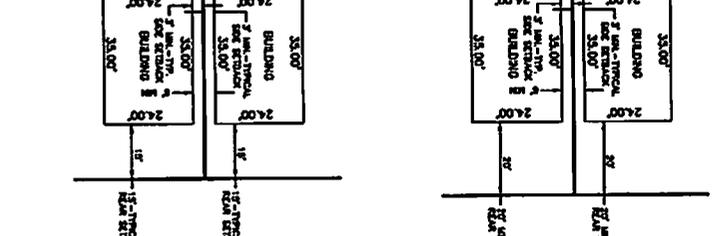
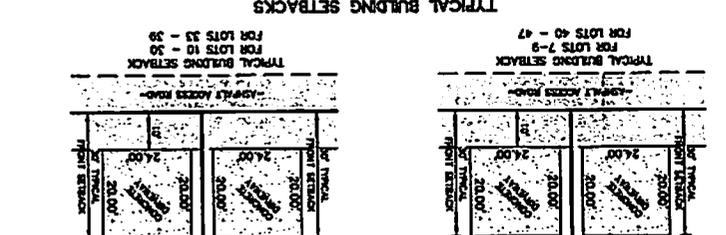
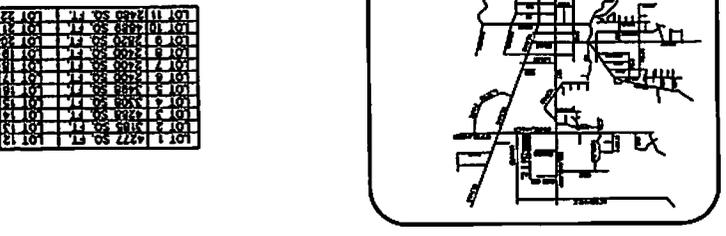
PRELIMINARY PLANNED DEVELOPMENT
 DRAWN BY ROCK
 DATE 4/27/2015
 JOB NO. 13237
 PREPARED FOR
 OF PARCEL NOS. 181425 - 2020 & 2020
 TORKEJLSON CONSTRUCTION
 P.O. BOX 522
 SELMA, WASHINGTON 98842

1 OF **1**

SURVEYOR/ENGINEER
 RICHARD L. WEAVER, PLS
 PLAN ENGINEERING & SURVEYING
 1120 WEST LINCOLN AVENUE
 YANVA, WASHINGTON 98902

OWNER/DEVELOPER
 CARL TORKEJLSON
 TORKEJLSON CONSTRUCTION
 1120 WEST LINCOLN AVENUE
 SELMA, WASHINGTON 98842

VICINITY MAP



**Whispering Views Estates
912.42.14-01 Preliminary Plat
914.42.14-01 Planned Development
971.42.14-01 Environmental Review**

Whispering View SEPA Exhibits

<u>Exhibit</u>		<u>Page</u>
S1	SEPA Environmental Checklist: January 8, 2014	
S2	Mitigated Determination of Nonsignificance: June 29, 2015	
S3	March 20, 2014 letter from Mark Fickes, Halverson Northwest	
S4	March 30, 2015 comment letter from Mark Fickes, Halverson Northwest	
S5	July 2, 2015 comment letter from Selah Fire Department	
S6	Final Mitigated Determination of Nonsignificance: July 15, 2015	
S7	Traffic Impact Analysis	



CITY OF SELAH

PLANNING DEPARTMENT
113 WEST NACHES AVENUE
SELAH, WA 98942
PHONE: (509) 698-7365 FAX (509) 698-7372
ENVIRONMENTAL CHECKLIST



FILE NUMBER: _____
DATE FEE PAID _____
RECEIVED BY _____ / _____
FEE: \$275

INTRODUCTION

The State Environmental Policy Act (SEPA), Chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal if it can be done) and to help the agency decide whether an EIS is required.

This environmental checklist asks you to describe some basic information about your proposal. Government agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply". Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist; may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impacts.

Complete this checklist for nonproject proposals, even though questions may be answered "does not apply". IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project applicant," and "property of site" should be read as "proposal," "proposer," and "affected geographic area," respectively.

BACKGROUND

1. Name of proposed project, if applicable: *Whispering view estates*
2. Name of applicant: *Torkelson Construction*
3. Address and phone number of applicant and contact person: *PO Box 292 Selah wa*
4. Date checklist submitted: *(509) 945-0133 (509) 697-3305*
1-08-14
5. Agency requiring checklist: *CITY OF SELAH*
6. Proposed timing or schedule (including phasing, if applicable): *ASAP*



7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain. **48 Lot Planned development**
8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal. **NONE**
9. Do you know whether applications are pending for governmental approvals or other proposals directly affecting the property covered by your proposal? If yes, explain. **listed above**
10. List any government approvals or permits that will be needed for your proposal, if known. **Building + Grading**
11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. **Permit to Create a 48 Lot Planned Development out of a 4 acre R-2 property**
12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. **207 Goodlander Rd**
13. Taxation parcel numbers(s): **181425-33029 181425-33030**

TO BE COMPLETED BY APPLICANT ONLY

EVALUATION FOR

AGENCY USE

B. Environmental Elements

1. Earth

- a. General description of the site (circle one): Flat, rolling, hilly, steep slopes, mountainous, other **Rolling then flat above**
- b. What is the steepest slope on the site (approximate percent slope)? **90%**
- c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland. **Clay base topsoil**
- d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe. **NONE**
- e. Describe the purpose, type, and approximate quantities of any filing or grading proposed. Indicate source of fill. **back fill foundation fill from dirt on site**
- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe. **NO**
- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? **500%**
- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any: **silt fences and waddles placed accordingly**

2. Air

- a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known. **Dust, automobile quantities UNKNOWN**
- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe. **NONE**

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

3. Water

a. Surface:

- 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. **NONE**
- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans. **NO**
- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material. **NONE**
- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. **NO**
- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan. **NO**
- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge. **NONE**

b. Ground:

- 1) Will groundwater be withdrawn, or will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known. **NO**
- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage, industrial, containing the following chemicals...; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve. **NONE**

c. Water Runoff (including storm water):

- 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (including quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe. **Storm water will flow into Containment facilities**
- 2) Could waste materials enter ground or surface waters? If so, generally describe.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any: **Grading,**

engineered Containment facilities

4. Plants

a. Check or circle types of vegetation found on the site:

- deciduous trees: alder, maple, aspen, **other**
 evergreen tree: fir, cedar, pine, other

- shrubs
- grass
- pasture
- crop or grain
- wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other
- water plants: water lily, eelgrass, milfoil, other
- other types of vegetation

- b. What kind of and amount of vegetation will be removed or altered? 100% mostly grass and shrubs
- c. List threatened or endangered species known to be on or near the site. None Known
- d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:
landscaped yards + green belt areas

5. Animals

- a. Circle any birds and animals, which have been observed on or near the site or are known to be on or near the site:
Bird: hawk, heron, eagle, songbirds, other Same Quail
Mammals: deer, bear, elk, beaver, other:
Fish: bass, salmon, trout, herring, shellfish, other:
- b. List any threatened or endangered species known to be on or near the site. NONE KNOWN
- c. Is the site part of a migration route? If so, explain. NO
- d. Proposed measures to preserve or enhance wildlife, if any: NONE

Energy and Natural Resources

- a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc. electric + Natural Gas
- b. Natural Gas heat
Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe. NO
- c. What kind of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any. higher insulating Qualities, Compliance with building Code

7. Environmental Health

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of the proposal? If so, describe. NONE
 - 1) Describe special emergency services that might be required. NONE
 - 2) Proposed measures to reduce or control environmental health hazards, if any: NONE
- b. Noise
 - 1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, construction, operation, other)?
Some Traffic and Normal living Noise

- 2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site. **Construction noise 7AM to 5pm Monday - Friday**
Normal household noise
- 3) Proposed measures to reduce or control noise impacts, if any: **NONE**

8. Land and Shoreline Use

- a. What is the current use of the site and adjacent properties? **R-2 + R-1**
- b. Has the site been used for agriculture? If so, describe. **NO**
- c. Describe any structures on the site. **1 existing house**
- d. Will any structures be demolished? If so, what? **yes**
- e. What is the current zoning classification of the site? **R-2 multi family**
- f. What is the current comprehensive plan designation of the site? **R-2**
- g. If applicable, what is the current shoreline master program designation of the site? **N/A**
- h. Has any part of the site been classified as an "environmentally sensitive" area? If so specify. **NONE**
- i. Approximately how many people would reside or work in the completed project? **150 to 200**
- j. Approximately how many people would the completed project displace? **NONE**
- k. Proposed measures to avoid or reduce displacement impacts, if any: **NONE**
- l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

9. Housing

- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing. **Compatible Larger building that match existing structures**
- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing. **52 middle income housing**
- c. Proposed measures to reduce or control housing impacts, if any: **NONE**
NONE

10. Aesthetics

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed? **33 feet tall standard wood siding**
- b. What views in the immediate vicinity would be altered or obstructed? **NONE**
- c. Proposed measures to reduce or control aesthetic impacts, if any: **Quality Controlled aesthetic homes**

11. Light and Glare

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur? **NONE**
- b. Could light or glare from the finished project be a safety hazard or interfere with views? **NO**

- c. What existing off-site sources of light or glare may affect your proposal? **NONE**
- d. Proposed measures to reduce or control light and glare impacts, if any: **NONE**

12. Recreation

- a. What designated and informal recreational opportunities are in the immediate vicinity? **NONE**
- b. Would the proposed project displace any existing recreational uses? If so, describe. **NO**
- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any: **NONE**

13. Historic and Cultural Preservation

- a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on the site? If so, generally describe. **NONE**
- b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site. **NONE**
- c. Proposed measures to reduce or control impacts, if any: **NONE**

14. Transportation

- a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any. **Goodlander Rd**
- b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop? **NO**
- c. How many parking spaces would the completed project have? How many would the project eliminate? **UNKNOWN**
4 per unit
- d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private). **NONE eliminated**
NO
- e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe. **NO**
- f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur. **TBD Peak volumes expected at beginning and end of work day**
- g. Proposed measures to reduce or control transportation impacts, if any: **NONE**

15. Public Services

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe. **Yes fire, police, schools ect**
- e. Proposed measures to reduce or control direct impacts on public services, if any. **NONE**

16. Utilities

- a. Circle utilities currently available at the site: **electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.**
Telephone + Cable

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

City water + Sewer
telephone, electricity, Natural Gas, Cable, TV

C.SIGNATURES

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.



Signature of Proponent or Person Completing Form

Date: 1-08-2014

Mitigated Determination of Nonsignificance

1. **Description of Proposal:** *"Whispering Views Estates"* Rezone eight lots totaling 3.97 acres from Two Family Residential (R-2) to Planned Development (PD) and subdivide the property into 47 lots and two open space tracts.
2. **Proponent:** Torkelson Construction, Inc.
PO Box 292
Selah, WA 98942
3. **Location of Proposal including street address, if any:** 207 E. Goodlander Road. North side of East Goodlander Road about 600 feet east of North First Street/Selah Loop Road and 400 feet west of Lancaster Road. (Yakima County Parcel Numbers: 181425-33419 through 33426).
4. **Lead Agency:** City of Selah
5. The lead agency for this proposal has determined that it will not have a probable significant adverse impact on the environment. An Environmental Impact Statement (EIS) is not required under RCW 43.21C.030(2)(c), provided the measures listed below are taken to mitigate potential adverse impacts. This decision was made after review of a completed environmental checklist and other information on file with the lead agency including a Traffic Impact Analysis. This information is available to the public on request.
6. **Identified Environmental Impacts and Mitigation Measures:** Substantive authority to require mitigation is derived from WAC 197-11-660, Selah Municipal Code, Chapter 11.40.410 and by reference, policies and regulations contained in the City of Selah Urban Growth Area Comprehensive Plan and the Selah Zoning, Platting and Subdivision Code (SMC 10).

A. Transportation:

Additional information was requested from the applicant including the following:

Preparation of a traffic impact analysis by a licensed professional engineer qualified to make such studies to evaluate project related traffic impacts on E. Goodlander Road including the intersections of 1st Street, Lancaster and Wenas Roads.

The requested traffic impact analysis was submitted on June 18, 2015. The TIA concluded that with the project, Year 2020 Level of Service at the identified intersections would be LOS B or better. A nearby pending project of 19 townhouse units was included in the background traffic. This indicates that this proposal does not have significant traffic impacts on these intersections and no mitigation is necessary.

A traffic or engineering analysis of the adequacy of proposed private roads, approved by a variance for the development of up to 16 two-family residential units, to accommodate traffic generated by 48 single or multiple-family residential units. Specific concerns include: Overall suitability of a private road designed to fire apparatus road standards to accommodate traffic generated by 48 residential units;

The traffic impact analysis made findings about the proposed private roads.

Lack of or insufficient overflow and visitor parking;

The applicant revised the site plan to include 8 overflow parking spaces. The traffic impact analysis also made findings that each unit can accommodate 4 vehicles including the two-car garage and that it is unusual for guests to visit all of the units all of the time.

Lack of pedestrian facilities;

The traffic impact analysis found that based on the peak hour traffic volume of 47 trips, or less than one trip per minute, that there would be no safety concern with vehicles and pedestrians sharing the roadway. The shared use of the private roads by vehicles and pedestrians was compared to that of the aisles in a shopping center parking lot. The TIA also noted illumination by the light of each residential unit and recommended warning signs and "Share the Road" plaques.

It appears that the street in the southeast part of the site would exceed ten percent due to steep slopes in that location.

The applicant amended the site plan to replace the straight road section in the steepest part of the site along the east boundary with an S-curve section that better accommodates the topography. However, the slope on this section still exceeds 10 percent. It has been reviewed by the Fire Chief and determined to be acceptable for emergency vehicle access. The applicant also submitted grading and drainage plans prepared by a licensed professional engineer for the site.

The proposed 47 lot subdivision will have frontage on E. Goodlander Road, a collector street with no curb, gutter or sidewalk on the side which fronts the property. There is a sidewalk on the south side of the street. The proposal site is located in walking distance from Selah High School, a City Park and a commercial area. Future improvements of E. Goodlander Road planned by the City include the installation of a sidewalk on the north side of the street from Wenas to Lancaster Road. Installation of sidewalk on this site and the site of the proposed 19 unit development to the east would provide continuous pedestrian access to Wenas Road.

Policies and Regulations

- A. Improve pedestrian safety [Sic.] and circulation within the City of Selah UGA (Urban Area Plan Objective TRAN 3). Require sidewalks on one side of all

local streets and both sides of all collectors and arterials (Urban Area Plan Policy TRAN 3.1).

- B. Safe and efficient movement of bicycle and pedestrian traffic throughout Selah, especially in school and recreational areas, in the business district and points of congestion should be provided (Urban Area Plan Policy TRAN 3.2).
- C. Ensure that roads are designed to allow emergency vehicle passage 24-hours a day. Dead-end street lengths and turnarounds, travel lane widths, maximum road grades, parking location, and other road design features should accommodate emergency and service vehicles (Urban Area Plan Policy TRAN 4.4).
- D. Adopt levels of service for principal, minor and collector arterials that reflect the preference of the community. The City of Selah has adopted a standard of LOS D for principal arterials and LOS C for all other minor arterials, collectors and local access roads (Urban Area Plan Policy TRAN 5.3).
- E. Each subdivision shall have at least two points of connection with the public street system, except for those subdivisions in which the only dedicated street is a cul-de-sac (SMC 10.50.041(c)(12)).

Mitigation Measures

1. The private access roads shall be constructed at minimum, to the fire apparatus road standards of the International Fire Code and as shown on the preliminary plat, except where variations have been authorized by the Fire Chief (such as for grades) in accordance with the IFC.
2. Recommendations made for the private roads by the Traffic Impact Analysis including illumination and warning signs shall be implemented
3. This negative determination is based on the current revised site plan and grading and drainage plans submitted by the applicant. Any future revisions shall at minimum include the provision of 8 overflow parking spaces, more than one access point to the public street system and construction of the easterly private access road to not exceed the slope shown on the site plan.
4. The applicant shall pay an amount to the City sufficient to pay for the installation of a sidewalk on the entire E. Goodlander Road frontage of the subject property. The amount of payment required shall represent the applicant's proportionate share of the cost of its installation based on lineal footage and on the City's engineering estimate for the costs of installation. In the event that the actual costs to install the sidewalk exceed the engineer's estimate, the applicant shall pay an amount in addition to the amount already

paid so that the sum of both payments does not exceed a total of 115% of the engineer's estimate.

This MDNS is issued under WAC 197-11-340(2); the lead agency will not act on the proposal for 14 days from the date below. Comments must be submitted by 5:00 PM, July 13, 2015.

7. **Appeals:** You may appeal this determination to the Selah City Council by filing a written appeal with the required \$300.00 filing fee at the Selah Planning Department no later than 5:00 p.m. on July 20, 2015. You should be prepared to make specific factual objections. Contact the Planning Department at 698-7365 to read or ask about the procedures for SEPA appeals.
8. **Responsible Official:** Donald C. Wayman
9. **Position / Title:** City Administrator
10. **Address:** 222 S. Rushmore Road, Selah, WA 98942
11. **Date:** June 29, 2015
12. **Signature**

FOR Joseph [Signature]

HALVERSON | NORTHWEST LAW GROUP

March 30, 2015

VIA EMAIL: tdurant@ci.selah.wa.us
and FAX: 698-7372

City of Selah Planning Department
Attention: Thomas R. Durant, Community Planner
222 Rushmore Road
Selah WA 98942

Re: Our Client: Helen and John Teske
Matter: Comments on Whispering View Estates Planned
Development, Rezone and Environmental Review (File
Nos. 914.45.14-01, 912.45.14-01, 971.45.14-01)

MAR 30 2014
CITY OF SELAH
PUBLIC WORKS

Raymond G. Alexander
Adam K. Anderson
Alan D. Campbell
J. Jay Carroll
James S. Elliott
Robert N. Faber
Mark E. Ficks
Carter L. Fjeld
Frederick N. Halverson*
Paul E. Hart*
Kellen J. Holgate
Lawrence E. Martin*
Terry C. Schmalz*
Linda A. Sellers
Michael F. Shinn
Sara L. Watkins*
Stephen R. Wintfree

*Also Oregon Bar Member
*Of Counsel

Dear Mr. Durant:

Our office represents one of the landowners most affected by the above-referenced development, John and Helen Teske, 182 Lancaster Road, Selah, whose single-family residential home immediately abuts this development on the north. Please consider this letter their initial comments opposed to the proposal, and an initial outline of their environmental concerns. These comments are being provided in response to the Amended Notice of Development Application & Environmental Review dated March 14, 2015. The Amended Notice was issued to our client in response to another failure of the City to provide adequate notice to some adjoining landowners of this pending application that has the potential to completely change the character of the neighborhood.

Because of the direct and adverse impacts of this project development on their home, our client (and the entire surrounding neighborhood) is vehemently opposed to what it believes is an illegal, overly dense and incompatible development, sandwiched between a high-quality residential neighborhood on three-quarter to one-acre lots and the City's high school. This developer is inappropriately attempting to use Selah's Planned Development zone to propose a dense, townhouse-type development at more than four times what would normally be an allowed density in an R-2 zone on some of the smallest lots ever proposed for residential development. Objectively reviewed, the project has no hope of meeting the eight or more rezone criteria in Selah's zoning ordinance, as we will be pointing out to the Planning Department and the Examiner.

From a legal standpoint, the present owner and developer, Carl Torkelson and Torkelson Construction, Inc., is simply trying to use the planned development zone to eliminate or take shortcuts on almost every reasonable development standard in the City of Selah's subdivision and zoning ordinance for the sole purpose to monetize his property and maximize the number of townhouse units that can physically be placed on the property. He is proposing to serve 48 separate units, generating 480 vehicle trips per day on substandard easements and roads, and not City streets. The development does not meet any of the residential setbacks required in R-1 or R-2 zone, and he is proposing to chop up his property into some of the smallest lots ever proposed for residential development. As we hope the Planning Department and City can appreciate, this is why our client and the adjoining residents are opposed to this development, which should simply be denied.

halversonNW.com

HALVERSON | NORTHWEST LAW GROUP P.C.

Yakima Office: 405 E. Lincoln Avenue | PO Box 22550 | Yakima, WA 98907 | p) 509.248.6030 | f) 509.453.6880

Sunnyside Office: 910 Franklin Avenue, Suite 1 | PO Box 210 | Sunnyside, WA 98944 | p) 509.837.5302 | f) 509.837.2465



March 30, 2015
City of Selah Planning Department
Attention: Thomas R. Durant, Community Planner
Page 2

Background Facts. As the City's Notice indicates, a similar (but not identical) application was filed by the applicant on January 10, 2014, under the same file numbers. The application and SEPA checklist was signed by Carl and Candy Torkelson as both the applicant and legal property owner, even though they did not own the property at the time. The application was never processed because of failure to conduct an environmental review and failed notice to the neighbors; and, ultimately, was put on hold by the applicant.

Instead of processing the dense rezone and plat (which is now clear was always the applicant's intention), he tried to start the development and construction process through what he thought was a more simple process, applying for a short plat to divide the property into eight lots served by a small private road, instead of a city street as required by Selah City subdivision ordinance. These applications were processed by the City and opposed by our clients and the entire neighborhood under City of Selah File Nos. 915.45.14-02, 915.45.14-03, 913.45.14-02 and 913.45.14-04. At the time, our client's and the neighborhood's opposition to the applications was based on the then-applicant's (not owner's) development intentions disclosed in his prior planned development rezone application for Whispering View Estates (an intention the applicant denied or downplayed at the public hearing before the Planning Commission and Council). The City, following a July 22, 2014, Council meeting narrowly approved the short plat and variance with conditions. However, it should be made clear that the variance was not approved to serve a 48-unit townhouse development, which is now being re-proposed, but was only approved to serve an 8-lot short plat on which could be located a maximum of 15 units (1 duplex on each lot plus the existing single-family residence).

After receiving his approvals and buying the property, the owner/developer quickly constructed the private road and has built or is in the process of building six or more units with the obvious intention and assumption that his 48-unit substandard plat would be approved. However, it is extremely clear that his variance to serve the lots by a private road was only for an 8-lot short plat, not for a 48-unit planned development and subdivision. The owner and applicant has absolutely no vested rights to have a 48-unit plat served by a small private easement.

From an environmental and substantive standpoint, it will be the position of our client and neighborhood – and hopefully the City Planning Department – that his plat can only be served by full-built, city streets meeting Selah's current development standards. Assuming Selah properly applies its own development standards and requires city streets, the density requested by the applicant will not be possible, and existing built units will need to be moved or razed – a consequence the owner/developer created himself.

On behalf of the Teskes, our office will be requesting that the entire administrative record of the short plats and variances be made part of the current record and applications being processed because they obviously are inter-related.

Procedural Defects. Because of procedural defects in the application, the Teskes' position is pending applications are illegal and cannot be processed under the Selah zoning ordinance. Applications for rezones must be signed by the "property owner." The application currently being processed was not signed by the property owner at the time. The property was owned by the Bowers family until December 2014. The original application also has been materially changed between its original filing on January 10, 2014, based on the current Notices and maps in the file. The map for the preliminary planned development of Whispering View Estates now

March 30, 2015
City of Selah Planning Department
Attention: Thomas R. Durant, Community Planner
Page 4

checklist submitted on the old application should have been updated for a new application after the applicant bought the property. The existing SEPA checklist contains significant inaccurate and incomplete information which would not allow the SEPA responsible official to make an adequate threshold determination. By way of example, the SEPA checklist submitted with the original application fails to adequately describe and mitigate the effects of grading and filling for the roads and infrastructure in Item 1b, fails to describe and mitigate the impacts of stormwater runoff, fails to describe or propose any mitigation measures to ensure the proposal is compatible with existing land uses under Section 8l, claims that no views will be blocked in Section 10b, which is not true ... the Teskes' view already has been obstructed by the units built. The transportation impacts in Section 14 are grossly understated. At a minimum under ITE trip generation figures, the as-built development would be expected to generate 480 peak hour trips per day on a 20-foot paved road located on a 24-foot easement that is inadequate to handle the traffic. The proposed private roadways come in with site distance issues on Goodlander Road, and frontage improvements are inadequate to handle pedestrian traffic, bus stops, children walking to school, et cetera. Full-built city streets should be required to serve a development this dense, assuming one would even be allowed, which it should not. Again, the applicant has no vested right to serve this new plat with the private road, which was narrowly approved by a city variance only to serve eight R-2 zoned lots (not 48 mini lots).

The Teskes' and the other neighbor's environmental concerns, some of which were outlined in the short plat and variance application, which they reassert in no particular order are as follows.

- (1) **Traffic.** City streets should be required to serve the development and impacts on Goodlander and nearby intersections should be done through a professional traffic impact analysis or EIS paid for by the applicant. Frontage improvements on the north side of Goodlander are completely inadequate to handle this size of development, and the proposed density has no room for the safe operation and flow of vehicle traffic and parking.
- (2) **Noise and Lighting.** Noise and lights in this dense development at such close proximity to each other and adjoining homes will have a substantial adverse environmental effect on the surrounding homes. There is no way to mitigate impacts other than to reduce density, increase setbacks, or limit building height. The developer was completely unwilling to consider these types of mitigation measures in earlier hearings, and we anticipate his position will be the same during the processing of this new application. In such event, this proposed plat and rezone should simply be denied.
- (3) **Construction Impacts.** The adjoining neighbors already have been adversely impacted by the environmental impacts of the applicant's construction. Significant cuts and fills of soil without compaction have occurred. Adjoining landowners are concerned about lateral support and slopes, especially along the private interior road. Slopes in excess of 2 to 1 ratios should require engineered retaining walls in accordance with development standards, and soil should be properly compacted along boundary lines to provide proper lateral support to the neighbors. The same construction impacts will be worse if this owner/developer were allowed to build the number of units he seeks.
- (4) **Aesthetic Impacts.** The aesthetic impacts on the neighborhood are striking. There are no site screening or safety fences proposed or being built. In stark contrast to the high-quality residential area, this owner/applicant has started building tall, narrow townhouse buildings

March 30, 2015
City of Selah Planning Department
Attention: Thomas R. Durant, Community Planner
Page 5

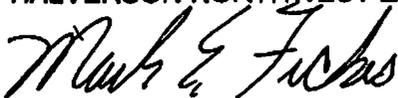
designed for rental, instead of owner occupied use, which looks like a development more appropriate for Seattle's east side.

Please consider this letter the initial comments on the proposal from the adjoining landowners John and Helen Teske. We ask that this letter be made part of the official record of this application. In addition, on behalf of the Teskes, we specifically request copies of all notices and additional information relating to the pending application received by the City in a timely matter so we can respond.

In summary, we are asking that the processing of the application and building permits be stopped, that a new application be filed, that a positive threshold determination be made requesting additional environmental information on the clear significant impacts of the project and, ultimately, that a recommendation for denial be made by the Planning Staff to the Selah City Council.

Yours very truly,

HALVERSON NORTHWEST LAW GROUP P.C.



Mark E. Fickes

MEF:tia

CC: Helen and John Teske

HALVERSON NORTHWEST

March 20, 2014

Dennis Davison, Community Planner
City of Selah
Planning Department
222 South Rushmore Road
Selah WA 98942

CITY OF SELAH
PUBLIC WORKS
FAX: 698-7372
& REGULAR MAIL

RE: Our Client: John and Helen Teske
Matter: Request for Additional Information on SEPA
Compliance
Torkelson Construction/Bowers Rezone
File Nos. 912.45.14-01 (subdivision); 914.45.14-01
(rezone); 971.45.14.01 (environmental issues)

Raymond G. Alexander
Adam K. Anderson
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West H. Campbell
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Linda A. Sellers
Michael F. Shinn
Sara L. Watkins*
Stephen R. Winfree

*Also Oregon Bar Member
*Of Counsel

Dear Mr. Davison:

As I advised you, our office represents John and Helen Teske, a landowner which adjoins the proposed Torkelson/Bowers rezone and subdivision. In reviewing the information, we noticed that despite an environmental review number and reference (Environmental Review No. 971.45.14.01), there was not any proposed threshold determination from the City of Selah in compliance with its SEPA ordinance and notice to property owners with 600 feet of the development proposal. You indicated you were checking on when the comment period expired.

My understanding is the preliminary threshold determination may not have been made and circulated. If this is the case, this would be a material procedural defect requiring additional notice to interested agencies and landowners in accordance with the City of Selah's SEPA ordinance. It would also mean that the public hearing set forth in the Notice on the Rezone and Subdivision Application currently scheduled for March 27, 2014, would have to be rescheduled. As the City attorney can advise you, under applicable law the City cannot proceed with any governmental action without procedural and substantive compliance with the State Environmental Policy Act.

Our client needs and would appreciate an opportunity for a full 14 days to comment on the environmental impacts of what looks like an extremely dense, residential development being proposed as a planned development under Selah's zoning code. In fact, it looks like the proposed density will be more than four times what would normally be allowed in an R-2 zone applying the City's current development standards on some of the smallest lots ever proposed for residential development. As you can appreciate, this presents some environmental and legal concerns to the adjoining landowners who have high-quality, single family residences immediately adjacent to the proposed

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March 20, 2014
Dennis Davison
City of Selah
Page 2 of 2

project. We would hope the City SEPA responsible official will take the obvious environmental impacts into consideration on making any threshold determination.

On behalf of the Teskes we are requesting copies of all notices and additional information relating to the pending application received by the City in a timely manner so we can respond. Unless we hear otherwise from the City, our understanding is that adjoining landowners and interested agencies will be provided the additional 14-day comment period required under SEPA **before** any hearing on the Application on the merits. If for any reason my understanding is incorrect, please let me know immediately.

Yours very truly,

HALVERSON NORTHWEST LAW GROUP P.C.



Mark E. Fickes

MEF:tia

CC: John and Helen Teske (via e-mail: jteske@argusinsurance.com)
Bob Noe, City Attorney (via e-mail: bob@Noe-law.net)



Chief Gary Hanna

Selah Fire Department Yakima County Fire District # 2

206 West Fremont Avenue - Selah, Washington 98942
Business Phone (509) 698-7310 • Fax (509) 698-7317

Date: July 2, 2015

To: Tom Durant, City Planner
Cc: Joe Henne, Public Works Director
Don Wayman, City Administrator

From: Gary Hanna, Fire Chief

Reference: SEPA comments, Whispering View Estates

I have reviewed the plans for this development for compliance with the International Fire Code and have noted the following.

1. **Called out on the plans.** The proposed twenty foot road widths are in compliance with Appendix D, FIRE APPARATUS ACCESS ROADS TABLE D103.4
2. **Called out on the plans.** Road widths increase from twenty feet to twenty six feet where fire hydrants are installed. See Appendix D, Fire Apparatus Access Roads, MINIMUM CLEARANCE AROUND A FIRE HYDRANT.
3. The International Fire Code requires that the maximum distance from any point on a street or road frontage to a hydrant not exceed two hundred and fifty feet in this particular scenario. This plan meets the requirement.
4. Must meet fire flow requirements. Minimum fire flow and flow duration for one and two family dwellings having a fire flow calculation area that does not exceed 3,600 sq ft shall be 1,000 gallons per minute for one hour. Fire flow and flow duration for dwellings having a fire flow calculation area in excess of 3,600 sq ft shall not be less than that specified in Table B105.1 of the 2012 edition of the International Fire Code.
5. The International Fire Code, Section 503.2.7 and Appendix D FIRE APPARATUS ACCESS ROADS, Section D103.2 addresses grade. Grades steeper than 10 percent are allowed when approved by the fire chief. In this particular scenario the secondary access road exceeds a 10 percent grade for a short distance. Given the natural terrain, distance, and that this is not the primary access road, I will allow.
6. No Parking Fire Lane signs shall be posted on both sides of all roads. See Appendix D FIRE APPARATUS ACCESS ROADS, Section D103.6 and D103.6.1

NOTE: As I have stated previously, twenty foot road widths are the minimum for fire apparatus access and are not intended to be used as a design standard.

Final Mitigated Determination of Nonsignificance

1. **Description of Proposal:** “*Whispering Views Estates*” Rezone eight lots totaling 3.97 acres from Two Family Residential (R-2) to Planned Development (PD) and subdivide the property into 47 lots and two open space tracts.
2. **Proponent:** Torkelson Construction, Inc.
 PO Box 292
 Selah, WA 98942
3. **Location of Proposal including street address, if any:** 207 E. Goodlander Road. North side of East Goodlander Road about 600 feet east of North First Street/Selah Loop Road and 400 feet west of Lancaster Road. (Yakima County Parcel Numbers: 181425-33419 through 33426).
4. **Lead Agency:** City of Selah
5. The lead agency for this proposal has determined that it will not have a probable significant adverse impact on the environment. An Environmental Impact Statement (EIS) is not required under RCW 43.21C.030(2)(c), provided the measures listed below are taken to mitigate potential adverse impacts. This decision was made after review of a completed environmental checklist and other information on file with the lead agency including a Traffic Impact Analysis. This information is available to the public on request.
6. **Identified Environmental Impacts and Mitigation Measures:** Substantive authority to require mitigation is derived from WAC 197-11-660, Selah Municipal Code, Chapter 11.40.410 and by reference, policies and regulations contained in the City of Selah Urban Growth Area Comprehensive Plan and the Selah Zoning, Platting and Subdivision Code (SMC 10).
 - A. Improve pedestrian safety [Sic.] and circulation within the City of Selah UGA (Urban Area Plan Objective TRAN 3). Require sidewalks on one side of all local streets and both sides of all collectors and arterials (Urban Area Plan Policy TRAN 3.1).
 - B. Safe and efficient movement of bicycle and pedestrian traffic throughout Selah, especially in school and recreational areas, in the business district and points of congestion should be provided (Urban Area Plan Policy TRAN 3.2).
 - C. Ensure that roads are designed to allow emergency vehicle passage 24-hours a day. Dead-end street lengths and turnarounds, travel lane widths, maximum road grades, parking location, and other road design features should

accommodate emergency and service vehicles (Urban Area Plan Policy TRAN 4.4).

- D. Adopt levels of service for principal, minor and collector arterials that reflect the preference of the community. The City of Selah has adopted a standard of LOS D for principal arterials and LOS C for all other minor arterials, collectors and local access roads (Urban Area Plan Policy TRAN 5.3).
- E. Each subdivision shall have at least two points of connection with the public street system, except for those subdivisions in which the only dedicated street is a cul-de-sac (SMC 10.50.041(c)(12)).

Mitigation Measures

1. The private access roads shall be constructed at minimum, to the fire apparatus road standards of the International Fire Code and as shown on the preliminary plat, except where variations have been authorized by the Fire Chief (such as for grades) in accordance with the IFC.
2. Recommendations made for the private roads by the Traffic Impact Analysis including illumination and warning signs shall be implemented
3. This negative determination is based on the current revised site plan and grading and drainage plans submitted by the applicant. Any future revisions shall at minimum include the provision of 8 overflow parking spaces, more than one access point to the public street system and construction of the easterly private access road to not exceed the slope shown on the site plan.
4. The applicant shall pay an amount to the City sufficient to pay for the installation of a sidewalk on the entire E. Goodlander Road frontage of the subject property. The amount of payment required shall represent the applicant's proportionate share of the cost of its installation based on lineal footage and on the City's engineering estimate for the costs of installation. In the event that the actual costs to install the sidewalk exceed the engineer's estimate, the applicant shall pay an amount in addition to the amount already paid so that the sum of both payments does not exceed a total of 115% of the engineer's estimate.

This Final MDNS is issued under WAC 197-11-340(2). There is no further comment on it.

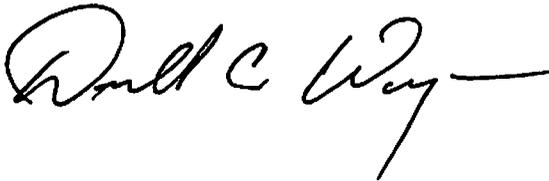
7. **Appeals:** You may appeal this determination to the Selah City Council by filing a written appeal with the required \$300.00 filing fee at the Selah Planning Department no later than 5:00 p.m. on July 22, 2015. You should be prepared to make specific factual objections. Contact the Planning Department at 698-7365 to read or ask about the procedures for SEPA appeals.

8. **Responsible Official:** Donald C. Wayman

9. **Position / Title:** City Administrator

10. **Address:** 222 S. Rushmore Road, Selah, WA 98942

11. **Date:** July 15, 2015

12. **Signature** 



Whipple Consulting Engineers, Inc.



June 11, 2015

W.O. No. 2015-1455

City of Selah
Public Works Department
222 South Rushmore Road
Selah, WA 98942

Attn: Joe Henne

Re: **Whispering View Estates**
207 E Goodlander Road
Traffic Study

Dear Joe:

This letter is in response to a requirement by the City of Selah to address the anticipated vehicular traffic associated with the above referenced development project. This analysis was scoped by the City of Selah per a letter dated April 6, 2015, and a follow up phone conversation on May 21, 2015. The development is located at 207 E Goodlander Road, across from the Selah High School. Please see Figure 1 (Vicinity Map). This TIA will be completed in accordance with the current traffic guidelines from Washington State Department of Transportation (WSDOT) and the Institute of Transportation Engineers (A Recommended Practice – Traffic Access and Impact Studies for Site Development, 2010).

PROJECT DESCRIPTION

The proposed plat, as shown on Figure 2, proposes the development of 3.96 acres +/- into 47 single family residential lots. The site is currently developed as a single family residence with large outbuildings that are proposed to be removed with this development. As shown on the preliminary plat, the development proposes to build private roads throughout the development. The main roadway will extend north from Goodlander Road along the western boundary to the back end of the property. The project proposes 3 east-west internal connecting roadways that will connect the main roadway to a north/south roadway on the eastern boundary. The second access from Goodlander is located along the eastern border, and after going into the property jogs west behind 5 houses before, turning north and connecting into an east-west roadway. Please see Figure 2 Preliminary Site Plan.

A concern was raised regarding overflow parking. As we understand the proposed residential units include a 2 car garage and 2 parking spaces in front of the garage for a total of 4 parking spaces for each unit. Given that the residents would generally have 2 vehicles per residence then there would be 2 vehicle spaces available for guests as well as the 8 parking spaces located at the "park area" that can also be used by guests. It is unusual for a subdivision to have guests for all



the units visit at the same time. Additionally, the standard for subdivisions generally requires 2 car parks per residential unit off the street and standard practice has noted this to be in the driveway, exclusive of garage or street parking. So with the two parking stalls per residence and the 8 parking stalls at the "park area" while parking will be limited it is our opinion that the site makes adequate provision for parking.

A concern was raised regarding pedestrian trips within the development. Although there is no standard to estimate pedestrian trips by land use it is anticipated that there will be some. The proposed development includes private roads. These private roads are intended to serve both the vehicular and pedestrian traffic within the development much like a shopping center parking lot drive aisle. The roadways are anticipated to be illuminated by the light of each residential unit, thus reducing light pollution and glare from the project while illuminating the roadway. With this illumination and the fact that the highest number of vehicular trips generated by the land use is 47 trips in the PM peak hour which is less than 1 trip per minute there would be no safety concern regarding the pedestrians and vehicles sharing the roadway. We do recommend that at each inbound entrance that a warning sign (W11-2) and a "Share the Road" Plaque (W16-1p) be installed to remind residents and visitors to share the road with pedestrians.

VICINITY / SITE PLAN

The site is currently zoned as residential (R2). The subject property is located on a portion of the S ½ of Section 25, T14N R18E W.M., within Yakima County, Washington. The parcel numbers for the subject properties are 18142533426, 18142533425, 18142533424, 18142533423, 18142533422, 18142533421, 18142533420, and 18142533419. The surrounding area is generally residential, undeveloped land uses and a vocational land use (Selah High School) to the south

EXISTING CONDITIONS

The surrounding transportation system consists of, a state route, arterials, neighborhood collectors and local access roads. Descriptions of the roads that will be utilized by the development are as follows:

Goodlander Road is an east/west two-way 2-lane collector that extends east from the 16th Street alignment down the hillside to Goodlander Drive where it continues through the intersection of Selah Loop Road /1st Street, Past the High School, and through Wenas Road/ SR823 where it then turns into the packing shed driveway. Goodlander Road serves primarily residential and vocational land uses. The speed limit on Goodlander Road is 35 MPH.

Selah Loop Road is generally a north/south two-way 2 & 4-lane arterial that extends north by northwest from Goodlander Road as the roadway weaves through the agricultural properties around Marisa Hill to Taylor Road before completing the "loop" on Speyers Road back to the City of Selah. Selah Loop Road serves generally residential and agricultural land uses. The speed limit on Selah Loop Road is 35 MPH.

1st Street is a north/south, two-way, 5-lane arterial that extends south from Goodlander Road past the High School, Middle School, and Elementary schools, through Naches Avenue to Valleyview Avenue where the roadway converges into State Route 823. 1st Street serves a mixture of residential, vocational, and commercial land uses. The speed limit on 1st Street is 30 MPH.

Lancaster Road is a two-way 2-lane road way that extends north From Goodlander Road through McGonagle Road before turning due east and going through Wenas Road and then terminating at private driveways. Lancaster Road serves residential land uses. The speed limit on Lancaster Road is 35 MPH.

Wenas Road/SR 823 is generally a north/south, two-way, 2, 3, 4, & 5-lane arterial that extends north from 2nd Avenue through Naches Avenue and Goodlander Road to Harrison Road, where SR 823 continues to the northeast. Wenas Road then continues north through Lancaster Road, Nagler Road, and Hexon Road before crossing over the point and dropping into Wenas Valley. Within the Valley, Wenas Road goes Northwest up the valley, past Wenas Lake where the roadway branches like a river into the hills above Wenas Valley. The speed limit on Wenas Road within the study area is 35 MPH.

Traffic Volumes and Peak Hours of Operation

Traffic counts were obtained and provided by the City of Selah, Yakima County and WSDOT at the following intersections:

- Goodlander Road & 1st Street/Selah Loop Road (PM)
- Goodlander Road & Lancaster Road (PM)
- Goodlander Road & Wenas Road (SR 823) (PM)

The raw data for these counts are located in the technical appendix. A concern was raised that the school release time around 2 PM would be the peak hour. However, when the ADT of each approach is totaled for each intersection by the hour. The highest traffic volume for the intersection falls in the 4 PM hour. Therefore this Peak hour was used for the analysis. Additionally this peak hour is consistent with the ITE Trip Generation Manual to ensure that the analysis peak hour falls within the land use generation window.

Traffic Control and Descriptions

Goodlander Road & 1st Street/Selah Loop Road is a signalized intersection with permitted/protected left turns, and has the following lane configuration: The east and westbound approaches have a through-right lane a left turn lane and a single receiving lane. The north and southbound approaches have a through-right lane, a through lane, a left turn lane, and two receiving lanes.

Goodlander Road & Lancaster Road is an unsignalized two-way stop controlled intersection with stop control on Lancaster Road and the driveway. The intersection has the following lane configuration: All approaches have a left-through-right lane and single receiving lane.

Goodlander Road & Wenas Road (SR 823) is a signalized intersection with permitted left turns, and the following lane configuration: The eastbound approach has a through-right lane, a left turn lane and a single receiving lane. The westbound approach has a through-right lane a left turn lane and two receiving lanes, the outside lane of which evolves into a right turn trap lane into the shopping center. The north and southbound approaches have a through-right lane, a through lane, a left turn lane, and two receiving lanes.

BACKGROUND TRAFFIC GROWTH & BACKGROUND PROJECT TRAFFIC

Background Traffic Growth

The background growth rate for traffic in the area of the proposed development was determined from historical WSDOT ADT counts of the area. For this analysis the background growth rate will be 0.0% per year, as the traffic volumes have remained the same over the past 10 years. Based on a build out year of 2020, the total background increase in traffic is anticipated to be 1.0%.

Background Project Traffic

For this analysis one project was vested prior to the proposed development. This project is a 19 unit Townhouse project located on the northwest corner of Goodlander Road & Lancaster Road with Access on Lancaster Road. Since the traffic from these projects are not fully completed and the trips from these projects are not on the transportation system the anticipated trips were included within this study. The trip Generation for the background project is shown on Table A and the background trips for this project are shown on Figure 4, in the appendix.

Trip Generation Characteristics for the Background Project

For the proposed 19 townhouse units of the background project, Land Use Code (LUC) 230 Residential Condominium/Townhouse was used to establish the number of potential trips generated by the proposed land use of the background project. The trip generation rates and the anticipated number of AM & PM peak hour trips for the proposed Background project are shown on Table A.

Table A-Trip Generation Rates for LUC # 230 – Residential Condominium/Townhouse

Dwelling Units	AM Peak Hour Trips			PM Peak Hour Trips		
	Vol. @ 0.44/ Unit	Directional Distribution		Vol. @ 0.52/ Unit	Directional Distribution	
		17% In	83% Out		67% In	33% Out
19	9	2	7	10	7	3
Average Daily Trip Ends (ADT)						
Units	Rate	ADT				
19	5.81	111				

As shown in Table A, the land use of the Background project is anticipated to generate 9 trips in the AM peak hour with 2 trips entering the site and 7 trips exiting the site. In the PM peak hour the land use of the Background project is anticipated to generate 10 trips with 7 trips entering the site and 3 trips exiting the site. The land use of the background project is anticipated to generate 111 average daily trips to/from the Background project.

Trip Generation and Distribution

Trip generation rates for the AM and PM peak hours are determined by the use of the *Trip Generation Manual, 9th Edition* published by the Institute of Transportation Engineers (ITE). The purpose of the *Trip Generation Manual* is to compile and quantify empirical data into trip generation rates for specific land uses within the US, UK and Canada.

Trip Generation Characteristics for the Proposed Project

For the proposed 47 residential lot, Land Use Code (LUC) 210 Single Family Detached Housing was used to establish the number of potential trips generated by the land use. The trip generation rates and the anticipated number of AM & PM peak hour trips for the proposed project are shown on Table 1.

Table 1-Trip Generation Rates for LUC # 210 – Single Family Detached Housing

Dwelling Units	AM Peak Hour Trips			PM Peak Hour Trips		
	Vol. @ 0.75/ Unit	Directional Distribution		Vol. @ 1.00/ Unit	Directional Distribution	
		25% In	75% Out		63% In	37% Out
47	36	9	27	47	30	17
Average Daily Trip Ends (ADT)						
Units	Rate	ADT				
47	9.52	448				

As shown in Table 1, the proposed land use of the development is anticipated to generate 36 trips in the AM peak hour with 9 trips entering the site and 27 trips exiting the site. In the PM peak hour the land use of the proposed project is anticipated to generate 47 trips with 30 trips entering the site and 17 trips exiting the site. The land use of the proposed project is anticipated to generate 448 average daily trips to/from the project.

TRIP DISTRIBUTION

Considering many factors such as the surrounding transportation facilities, typical commuting patterns, existing development in the area, and Average Daily Traffic counts, traffic for the proposed development is anticipated as follows. Generally 60% of trips will go to/from West on Goodlander Road, and 40% of trips will go to/from the east. Once the trips are on the system it is anticipated that the trips will follow the exiting traffic patterns. Please see Figure 5 for a graphical representation of this distribution.

Based upon field investigations, there does not appear to be any sight distance conflicts for this proposed use, at this time.

LEVEL OF SERVICE

Level of service (LOS) is an empirical premise developed by the transportation profession to quantify driver perception for such elements as travel time, number of stops, total amount of stopped delay, and impediments caused by other vehicles afforded to drivers who utilize the transportation network. It has been defined by the Transportation Research Board in the *2010 Highway Capacity Manual*. This document has quantified level of service into a range from "A" which indicates little, if any, vehicle delay, to "F" which indicates significant vehicle delay and traffic congestion that may lead to system breakdown due to volumes that may exceed capacity.

Signalized Intersections

For signalized intersections, research has determined that average stopped delay per vehicle is the best available measure of level of service. The following tables identify the relationships between level of service and average stopped delay per vehicle. WSDOT has adopted level of service D as the minimum acceptable level for all signalized intersections.

Level of Service Criteria and Descriptions

LOS	Delay Range (sec)	General Description
A	10	<ul style="list-style-type: none"> • Very low delay at intersection. • All signal cycles clear. • No vehicles wait through more than one signal cycle.
B	10 to 20	<ul style="list-style-type: none"> • Operating speeds beginning to be affected by other traffic. • Short traffic delays at intersections. • Higher average intersections delays resulting from more vehicles stopping.
C	20 to 35	<ul style="list-style-type: none"> • Operating speeds and maneuverability closely controlled by other traffic. • Higher delays at intersections than for LOS B due to a significant number of vehicles stopping. • Not all signal cycles clear the waiting vehicles.
D	35 to 55	<ul style="list-style-type: none"> • Tolerable operating speeds, but long traffic delays occur at intersections • The influence of congestion is noticeable. • Many vehicles stop and the proportion of vehicles not stopping declines. • The number of signal cycle failures, for which vehicles must wait through more than one signal cycle are noticeable.
E	55 to 80	<ul style="list-style-type: none"> • Speeds are restricted, very long traffic delays are experienced and traffic volumes are near capacity. • Traffic flow is unstable, any interruption, no matter how minor, will cause queues to form and service to deteriorate. • Traffic signal cycle failures are frequent occurrences.
F	80	<ul style="list-style-type: none"> • Extreme delays resulting in long queues which may interfere with other traffic movements • Stoppages of long duration and speeds may drop to zero. • Vehicle arrival rates are greater than capacity. • Considered unacceptable by most drivers.

Unsignalized Intersections

The calculation of level of service (LOS) at an unsignalized one/two-way stop-controlled intersection is examined in the Transportation Research Board's *2010 Highway Capacity Manual*. For unsignalized intersections, level of service is based on the delay experienced by each movement and approach within the intersection. The concept of delay as presented for unsignalized intersections in the Highway Capacity Manual is based on the amount of time a vehicle must spend at the intersection. Vehicles passing straight through the intersection on the major (uncontrolled) street experience no delay at the intersection. On the other hand, vehicles which are turning left from the minor street, because they must yield the right of way to all right turning vehicles, all left turning vehicles from the major street and all through vehicles on both the minor and major streets, must spend more time at the intersection. Levels of service are assigned to individual movements within the intersection, and are based upon the delay experienced by each movement or approach.

The Transportation Research Board has determined what levels of service for unsignalized intersections should be, by designating level of service A through F, where level of service A represents a facility where no vehicle in any movement is delayed very long and level of service F which represents a facility where there is excessive delay for the average vehicle in at least one movement in the intersection. WSDOT has adopted level of service E as the minimum acceptable LOS for all unsignalized intersections within the study area.

Level of Service Criteria and Descriptions

LOS	Delay Range (sec)	Expected Delay to Minor Street Traffic	General Description
A	10	Little to No Delay	<ul style="list-style-type: none"> Nearly all drivers find freedom of operation. Very seldom is there more than one vehicle in the queue.
B	10 to 15	Short Traffic Delays	<ul style="list-style-type: none"> Some drivers begin to consider the delay an inconvenience Occasionally there is more than one vehicle in the queue.
C	15 to 25	Average Traffic Delays	<ul style="list-style-type: none"> Many times there is more than one vehicle in the queue. Most drivers feel restricted, but not objectionably so.
D	25 to 35	Long Traffic Delays	<ul style="list-style-type: none"> Often there is more than one vehicle in the queue. Drivers feel quite restricted.
E	35 to 50	Very Long Traffic Delays	<ul style="list-style-type: none"> Represents conditions in which, demand is near or equal capacity. There is almost always more than one vehicle in the queue. Drivers find the delays approaching intolerable levels.
F	50	Stop-and-Go Condition Delays Generally Longer than Acceptable	<ul style="list-style-type: none"> Forced flow. Represents an intersection failure condition that is caused by geometric and/or operational constraints external to the intersection

All level of service analyses described in this report were performed in accordance with the procedures described above. As a final note, the Highway Capacity Manual (HCM) analysis and procedures are based upon worst case conditions. Therefore, most of each weekday and the weekends will experience traffic conditions better than those described within this document, which are only for the peak hours of operation.

LEVEL OF SERVICE

Existing Level of Service and Traffic Analysis

The existing levels of service at the existing intersections were calculated using the methods from the *2010 Highway Capacity Manual* as implemented in Synchro, *version 9 - Build 902*. The existing levels of service for the intersections within the study area are summarized on the following table. The existing traffic volumes used for this report are shown on Figure 3.

Table 2 - Existing Intersections Levels of Service

INTERSECTION	(S)ignalized (U)nsignalized	PM Peak Hour	
		Delay (sec)	LOS
Goodlander Road & 1 st Street/Selah loop Road	S	11.7	B
Goodlander Road & Lancaster Road	U	10.6	B
Goodlander Road & Wenas Road/State Route 823	S	6.3	A

WSDOT has established level of service D as the minimum acceptable level for signalized intersections and level of service E for unsignalized intersections.

Future Year Traffic Impact Analysis

The proposed project is anticipated to be fully built out in 5 years, therefore Level of service calculations for the Year 2020 conditions assumed that the existing traffic volumes as shown on Figure 3 experience an increase above the 2015 volumes at the established background rates. Two scenarios were examined for the year 2020 analysis. The first scenario assumes that the development has not moved forward and analyzes the scoped intersections with the background growth rate and the background project trips. The second scenario assumes that the development has moved forward and analyzes the scoped intersections with the background growth rate, the background project, and the project trips. These scenarios will allow a determination to be made of what the future conditions may be with and without the project.

Year 2020 without the Project

This section focuses on the project build out year 2020 without traffic from the project with the background project. This scenario assumes that the site remains vacant. This analysis will show how the traffic volumes will be handled by the existing facilities or what new elements will be needed for the traffic system to continue working at acceptable levels of service. The traffic volumes for this condition include the existing traffic (as shown on Figure 3) multiplied by the background growth rate, and the additional traffic from the background project as shown on Figure 4. Please see Figure 6 for the PM traffic volumes used for this scenario. A summary of the level of service results is shown in Table 3, which follows.

Table 3 – Year 2020 Intersections Levels of Service Without the Project

INTERSECTION	(S)ignalized (U)nsignalized	PM Peak Hour	
		Delay (sec)	LOS
Goodlander Road & 1 st Street/Selah loop Road	S	11.7	B
Goodlander Road & Lancaster Road	U	10.6	B
Goodlander Road & Wenas Road/State Route 823	S	6.4	A

In the Year 2020 without the project the intersections are anticipated to function within acceptable levels of service and no mitigation is required.

Year 2020 with the Project Traffic

The traffic volumes included in this scenario include the Year 2015 traffic volumes as shown on Figure 6 and the additional traffic from the development, as shown on Figure 5. The total traffic volumes anticipated under this condition are shown on Figure 7. A summary of the results are shown in Table 4, which follows.

Table 4 - Year 2020 Intersections Levels of Service With the Project

INTERSECTION	(S)ignalized (U)nsignalized	PM Peak Hour	
		Delay (sec)	LOS
Goodlander Road & 1 st Street/Selah loop Road	S	11.7	B
Goodlander Road & Lancaster Road	U	10.8	B
Goodlander Road & Wenas Road/State Route 823	S	6.4	A

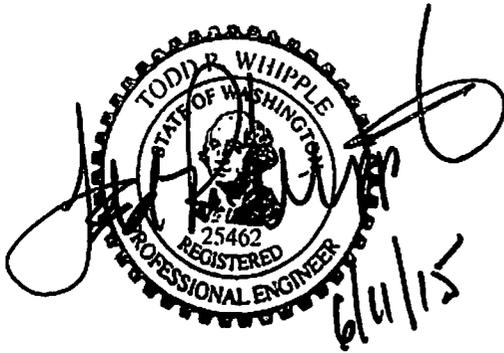
In the Year 2020 with the project the intersections are anticipated to function within acceptable levels of service and no mitigation is required.

CONCLUSIONS AND RECOMMENDATIONS

Based upon the analysis, field observations, assumptions, methodologies and results which are provided in the body of this report. It is concluded that the proposed project will generate new trips on the existing transportation system. However, these increased trips at the intersections scoped for analysis will not degrade the levels of service of these intersections below acceptable levels. Therefore, no offsite mitigation is required by this project. This conclusion was reached and has been documented within the body of this report.

Should you have any questions related to this document please do not hesitate to call at 893-2617.

Sincerely,



Todd R Whipple, P.E.

TRW/bg

encl. Appendix

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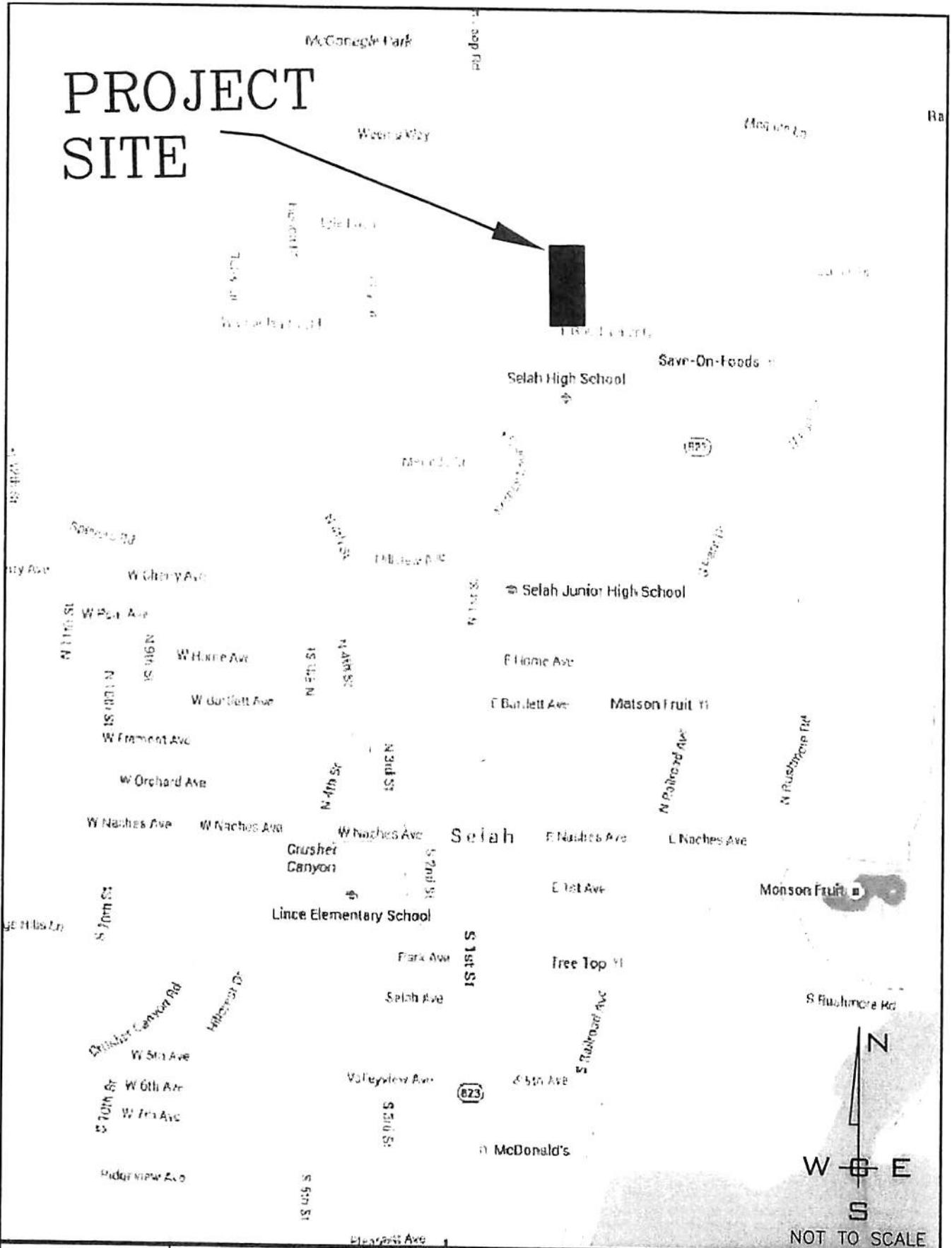
Appendix

1. Figure 1 Vicinity map
2. Figure 2 Preliminary Site Plan
3. Figure 3 Existing Traffic Volumes & LOS
4. Figure 4 Background Project Trip Distribution (PM)
5. Figure 5 Project Trip Distribution (PM)
6. Figure 6 Year 2020 Traffic Volumes W-O Project
7. Figure 7 Year 2020 Traffic Volumes W- Project
8. Raw Traffic Counts
9. Background Projects
10. Level of Service Calculations Existing
11. Level of Service Calculations without Project
12. Level of Service Calculations with Project

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11. Level of Service Calculations without Project
12. Level of Service Calculations with Project

PROJECT SITE



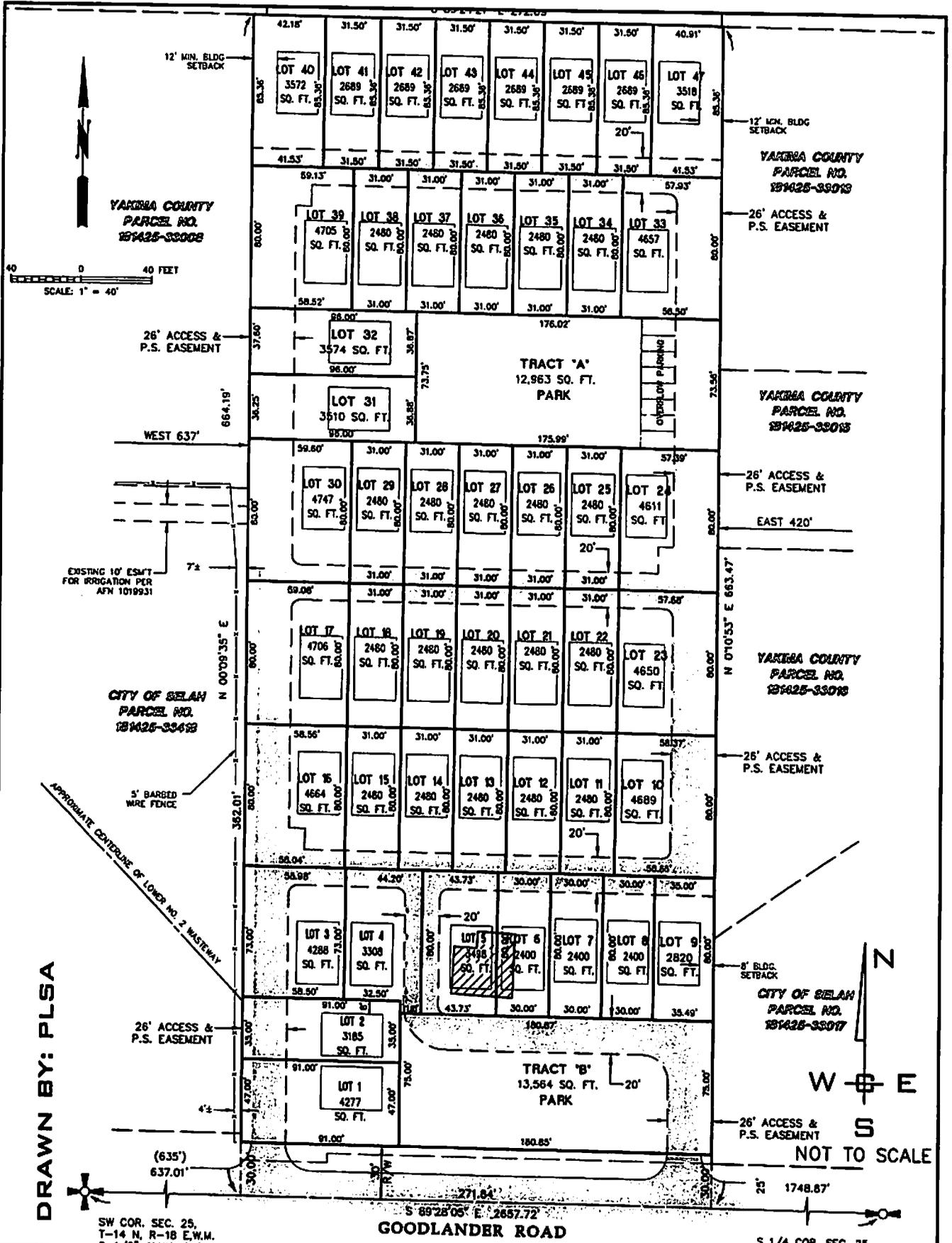
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TRAFFIC STUDY
WHISPERING VIEW ESTATES
GOODLANDER ROAD & 1ST STREET
SELAH, WASHINGTON


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 CIVIL AND TRANSPORTATION ENGINEERING
 2528 NORTH SULLIVAN ROAD
 SPOKANE VALLEY, WASHINGTON 99216
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FIGURE 1

VICINITY MAP



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FIGURE 2

PRELIMINARY SITE PLAN

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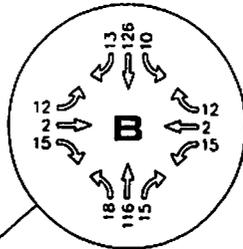
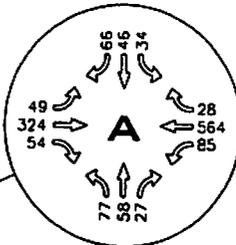
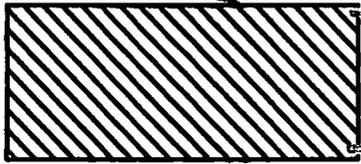
S 1/4 COR. SEC. 25,
T-14 N, R-18 E.W.M.

SW COR. SEC. 25,
T-14 N, R-18 E.W.M.

NOT TO SCALE

VOLUMES = TRAFFIC COUNTS

PROJECT SITE

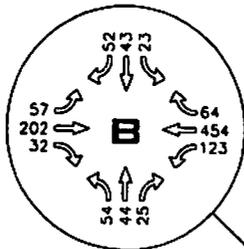


GOODLANDER ROAD

WENAS ROAD (SR 823)

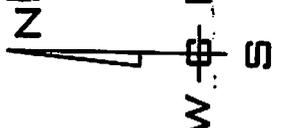
LANCASTER ROAD

SELAH HIGH SCHOOL



1ST STREET

SELAH LOOP ROAD



NOT TO SCALE

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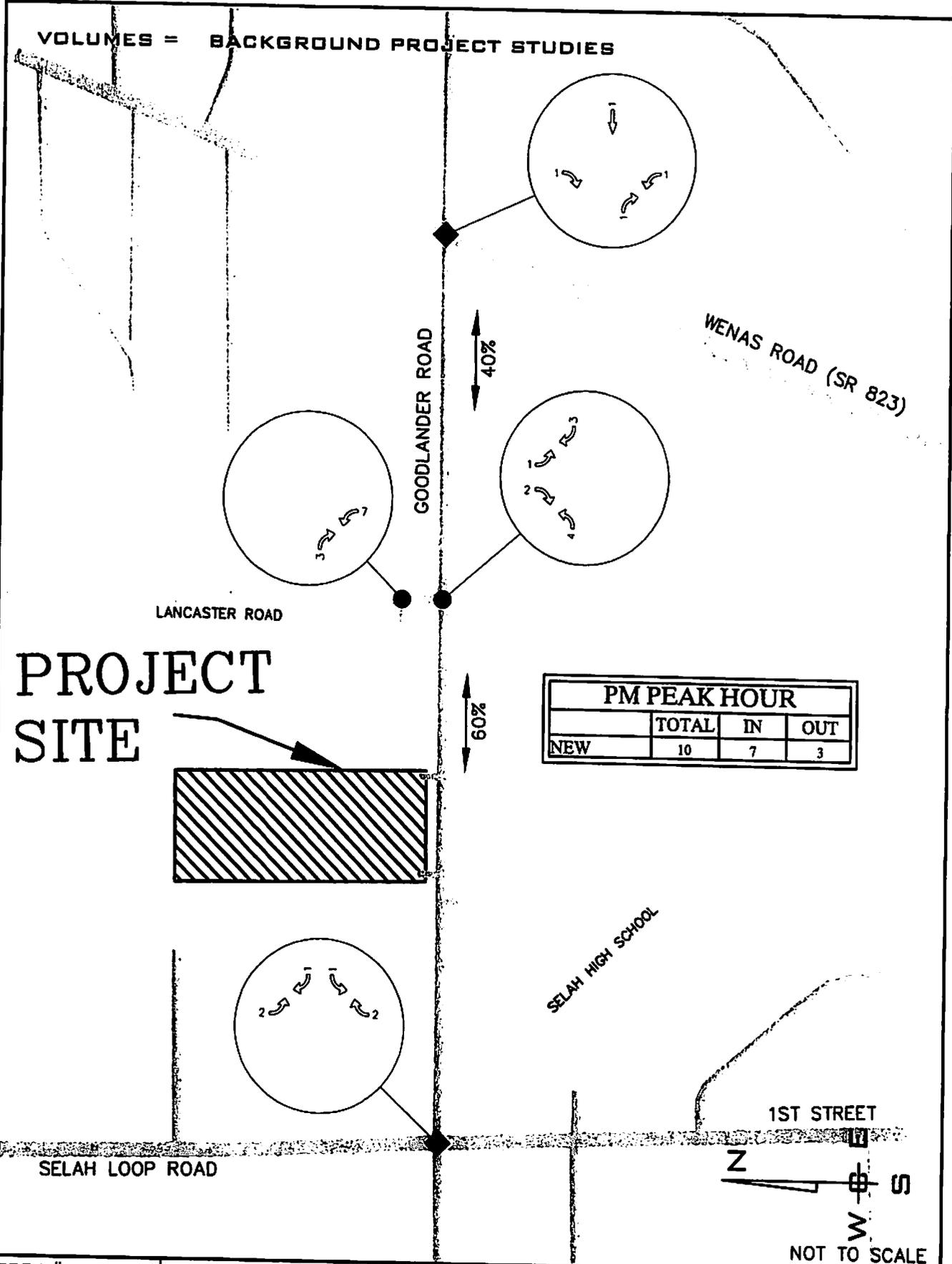
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FIGURE 3

2015 PM TRAFFIC VOLUMES & LOS

VOLUMES = BACKGROUND PROJECT STUDIES



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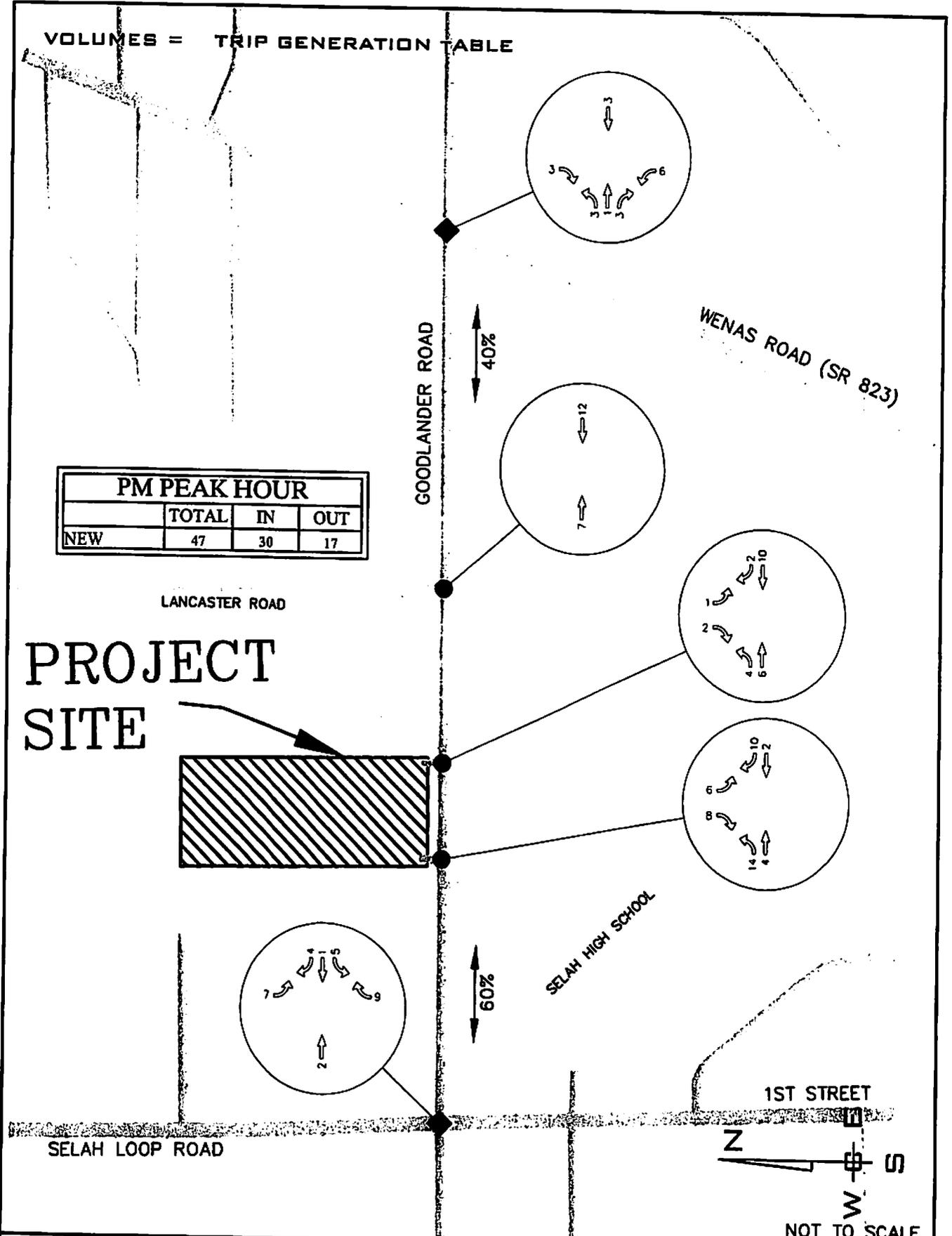
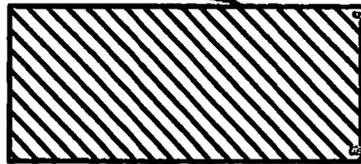
FIGURE 4

PM BACKGROUND TRIPS

VOLUMES = TRIP GENERATION TABLE

PM PEAK HOUR			
	TOTAL	IN	OUT
NEW	47	30	17

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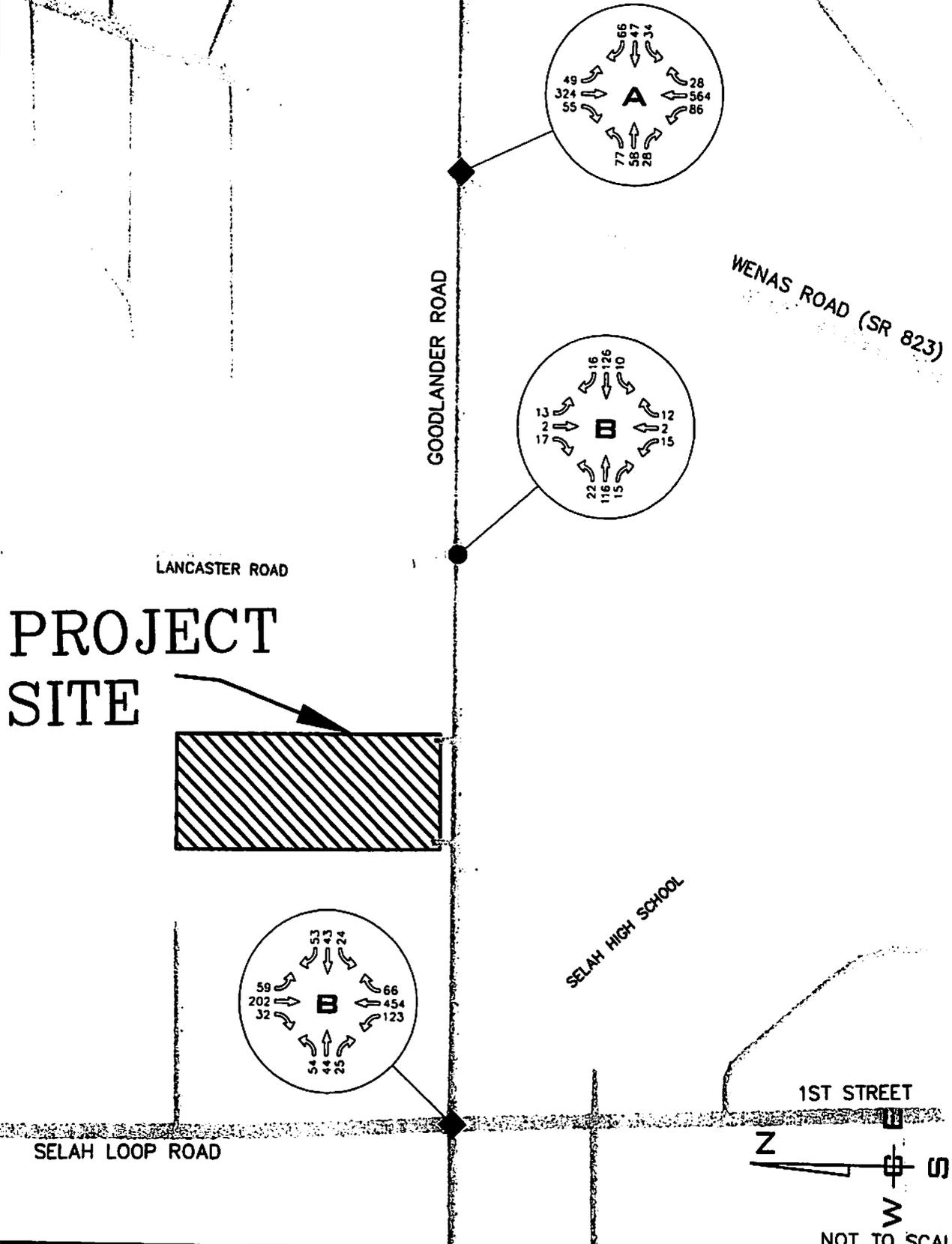
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FIGURE 5

PM PROJECT TRIP DISTRIBUTION

NOT TO SCALE

VOLUMES = FIGURE 3 * BACKGROUND GROWTH RATE
+ FIGURE 4



PROJECT
SITE

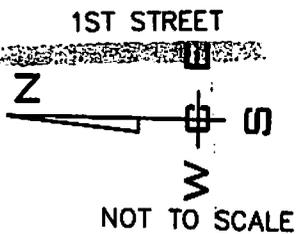
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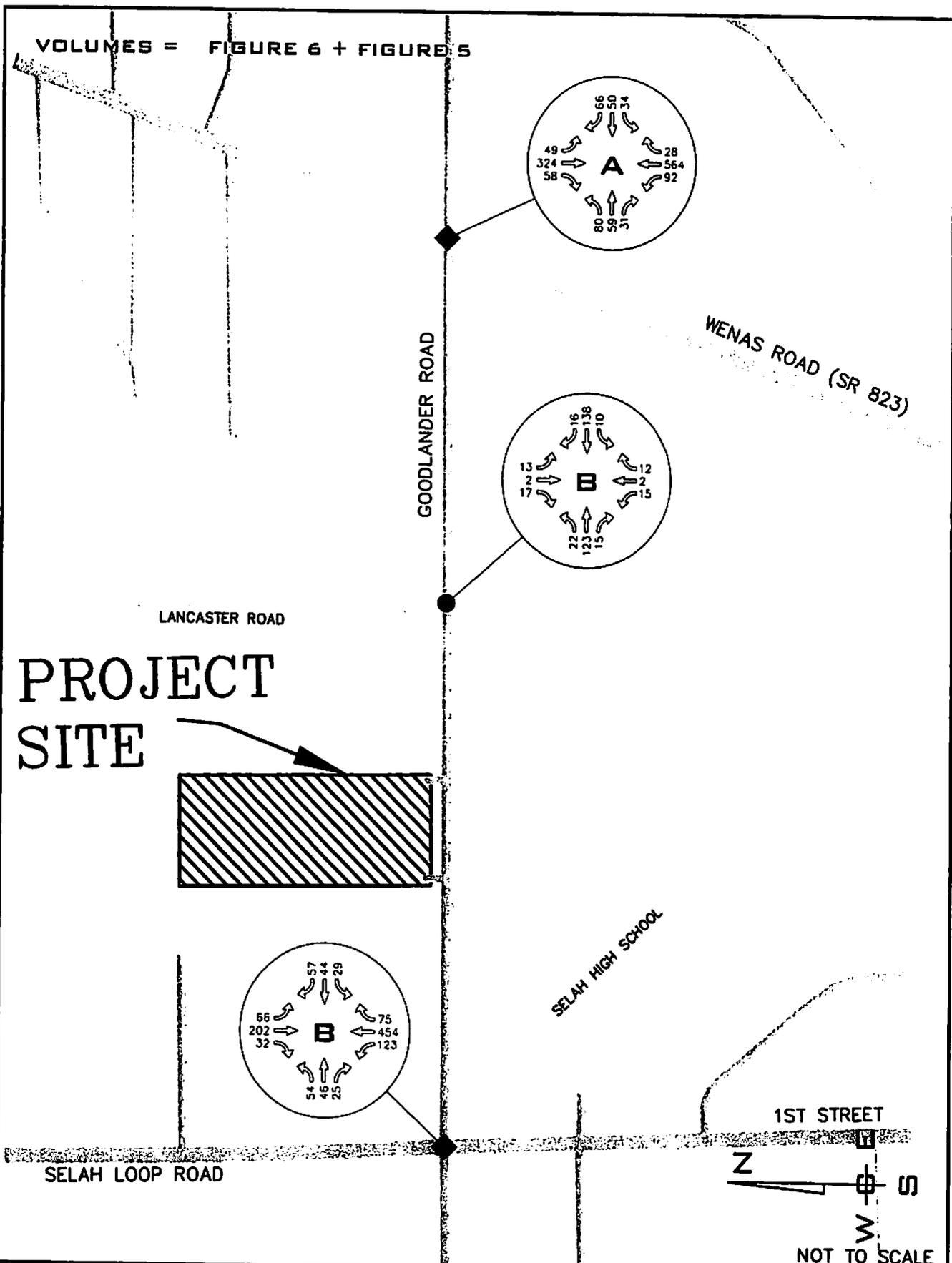
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FIGURE 6

2020 PM VOL. W-O PROJECT & LOS



VOLUMES = FIGURE 6 + FIGURE 5



WENAS ROAD (SR 823)

GOODLANDER ROAD

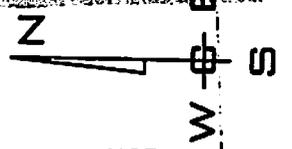
LANCASTER ROAD

PROJECT SITE

SELAH HIGH SCHOOL

1ST STREET

SELAH LOOP ROAD



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FIGURE 7

2020 PM VOL. W- PROJECT & LOS

RAW TRAFFIC COUNTS

Peak Hour
Background Projects

INTERSECTION: Goodlander & 1st/ Selah Loop
PM PEAK HOUR

	2	3	4	5	6	7	Total
EB LT							0
EB THRU	136	101	123	109	74	116	659
EB RT							0
WB LT							0
WB THRU	94	115	118	128	115	123	693
WB RT							0
NB LT	113	142	173	173	132	173	906
NB THRU	128	150	201	237	142	219	1077
NB RT	163	199	267	270	182	268.5	1350
SB LT	79	61	57	53	67	55	372
SB THRU	91	96	122	69	75	95.5	549
SB RT	99	124	113	121	122	117	696
	903	988	1174	1160	909	1167	

PEAK HOUR

Background Projects

INTERSECTION: Goodlander & Lancaster
PM PEAK HOUR

	2	3	4	5	6	7	Total
EB LT							0
EB THRU	162	121	149	190	147	113	882
EB RT							0
WB LT							0
WB THRU	175	178	203	204	137	86	983
WB RT							0
NB LT							0
NB THRU	32	38	29	31	14	4	148
NB RT							0
SB LT							0
SB THRU	34	26	29	53	32	25	199
SB RT							0
	403	363	410	478	330	228	

North
↓

Seich Loop

N. 1st

ED APINURU

Site: 100 BK E GOOD 2
4/28/2015
Tuesday

Daily Volume

Interval Start	EB	WB	Combined
12:00 AM	3	2	5
1:00 AM	0	3	3
2:00 AM	2	3	5
3:00 AM	4	2	6
4:00 AM	3	0	3
5:00 AM	19	3	22
6:00 AM	38	51	89
7:00 AM	112	170	282
8:00 AM	56	100	156
9:00 AM	64	61	125
10:00 AM	69	81	150
11:00 AM	61	73	134
12:00 PM	73	77	150
1:00 PM	72	80	152
2:00 PM	136	194	330
3:00 PM	101	144	245
4:00 PM	123	143	266
5:00 PM	109	189	298
6:00 PM	74	136	210
7:00 PM	68	106	174
8:00 PM	59	59	118
9:00 PM	29	34	63
10:00 PM	11	10	21
11:00 PM	7	6	13
Totals	1293 (42.8%)	1727 (57.2%)	3020

Peak Hours

12:00 AM - 12:00 PM	7:00 AM	6:45 AM	7:00 AM
Volume	112	170	282
Factor	0.55	0.73	0.65
12:00 PM - 12:00 AM	2:00 PM	2:00 PM	2:00 PM
Volume	136	194	330
Factor	0.72	0.62	0.66

2840
NB APPROACH

Site: N 1ST SHS 2
4/21/2015
Tuesday

Daily Volume						
Interval Start	Channel 1	Thru-RT NB	Thru NB	Turn lane	Combined	
12:00 AM	0	6	10	4	20	
1:00 AM	0	5	8	5	18	
2:00 AM	0	2	1	4	7	
3:00 AM	0	3	1	0	4	
4:00 AM	0	7	3	4	14	
5:00 AM	0	10	11	6	27	
6:00 AM	0	69	41	47	157	
7:00 AM	0	121	70	132	323	
8:00 AM	0	75	82	61	218	
9:00 AM	0	79	71	58	208	
10:00 AM	0	80	73	49	202	
11:00 AM	0	93	100	59	252	
12:00 PM	0	106	97	72	275	
1:00 PM	0	89	79	63	231	
2:00 PM	0	163	128	113	404	
3:00 PM	0	199	150	142	491	
4:00 PM	0	267	201	173	641	
5:00 PM	0	270	237	173	680	
6:00 PM	0	182	142	132	456	
7:00 PM	0	128	123	96	347	
8:00 PM	0	118	86	86	290	
9:00 PM	0	60	57	43	160	
10:00 PM	0	22	21	13	56	
11:00 PM	0	20	11	6	37	
Totals	0 (0.0%)	2174 (39.4%)	1803 (32.7%)	1541 (27.9%)	5518	

Peak Hours

12:00 AM - 12:00 PM	-	6:45 AM	10:45 AM	6:45 AM	6:45 AM
Volume	-	131	101	137	337
Factor	-	0.73	0.94	0.69	0.68
12:00 PM - 12:00 AM	-	4:30 PM	4:45 PM	4:30 PM	4:30 PM
Volume	-	280	250	203	732
Factor	-	0.97	0.64	0.88	0.84

~~WB~~ Approach
WB

Site: 200 W GOOD
4/21/2015
Tuesday

Daily Volume

Interval Start	EB	WB	Combined
12:00 AM	1	2	3
1:00 AM	0	2	2
2:00 AM	0	2	2
3:00 AM	6	1	7
4:00 AM	9	1	10
5:00 AM	33	1	34
6:00 AM	85	12	97
7:00 AM	160	37	197
8:00 AM	91	39	130
9:00 AM	64	43	107
10:00 AM	53	33	86
11:00 AM	55	55	110
12:00 PM	69	68	137
1:00 PM	48	54	102
2:00 PM	85	94	179
3:00 PM	60	115	175
4:00 PM	69	118	187
5:00 PM	70	128	198
6:00 PM	67	115	182
7:00 PM	51	80	131
8:00 PM	27	73	100
9:00 PM	14	37	51
10:00 PM	9	16	25
11:00 PM	4	10	14
Totals	1130 (49.9%)	1136 (50.1%)	2266

Peak Hours

12:00 AM - 12:00 PM	7:00 AM	11:00 AM	7:00 AM
Volume	160	55	197
Factor	0.89	0.92	0.83
12:00 PM - 12:00 AM	2:00 PM	4:30 PM	4:30 PM
Volume	85	145	216
Factor	0.71	0.84	0.84

SB 1511
 Receiving Approval

Site: 800 N 1ST SB
 4/21/2015
 Tuesday

Daily Volume

Interval Start	SB	SB	Combined
12:00 AM	13	0	13
1:00 AM	15	0	15
2:00 AM	3	0	3
3:00 AM	4	0	4
4:00 AM	9	0	9
5:00 AM	21	0	21
6:00 AM	89	0	89
7:00 AM	154	0	154
8:00 AM	157	0	157
9:00 AM	141	0	141
10:00 AM	153	0	153
11:00 AM	194	0	194
12:00 PM	214	0	214
1:00 PM	180	0	180
2:00 PM	282	0	282
3:00 PM	331	0	331
4:00 PM	444	0	444
5:00 PM	515	0	515
6:00 PM	335	0	335
7:00 PM	262	0	262
8:00 PM	201	0	201
9:00 PM	112	0	112
10:00 PM	41	0	41
11:00 PM	25	0	25
Totals	3895	0 (0.0%)	3895

Peak Hours

12:00 AM - 12:00 PM	11:00 AM	-	11:00 AM
Volume	194	-	194
Factor	0.87	-	0.87
12:00 PM - 12:00 AM	4:45 PM	-	4:45 PM
Volume	537	-	537
Factor	0.75	-	0.75

N/D
Receiving

Site: N SELAH LOOP
4/28/2015
Tuesday

Daily Volume

Interval Start	NB	NB	Combined
12:00 AM	12	4	16
1:00 AM	7	3	10
2:00 AM	1	2	3
3:00 AM	3	3	6
4:00 AM	9	6	15
5:00 AM	18	14	32
6:00 AM	53	54	107
7:00 AM	64	67	131
8:00 AM	85	77	162
9:00 AM	65	79	144
10:00 AM	75	67	142
11:00 AM	123	79	202
12:00 PM	117	90	207
1:00 PM	127	85	212
2:00 PM	185	124	309
3:00 PM	198	164	362
4:00 PM	238	199	437
5:00 PM	296	263	559
6:00 PM	172	152	324
7:00 PM	143	115	258
8:00 PM	101	89	190
9:00 PM	64	48	112
10:00 PM	20	23	43
11:00 PM	16	17	33
Totals	2192 (54.6%)	1824 (45.4%)	4016

Peak Hours

12:00 AM - 12:00 PM	11:00 AM	8:30 AM	11:00 AM
Volume	123	96	202
Factor	0.81	0.92	0.81
12:00 PM - 12:00 AM	4:45 PM	5:00 PM	4:45 PM
Volume	301	263	562
Factor	0.86	0.89	0.93

2891
SB APPROACH

Site: SELAH LOOP
4/21/2015
Tuesday

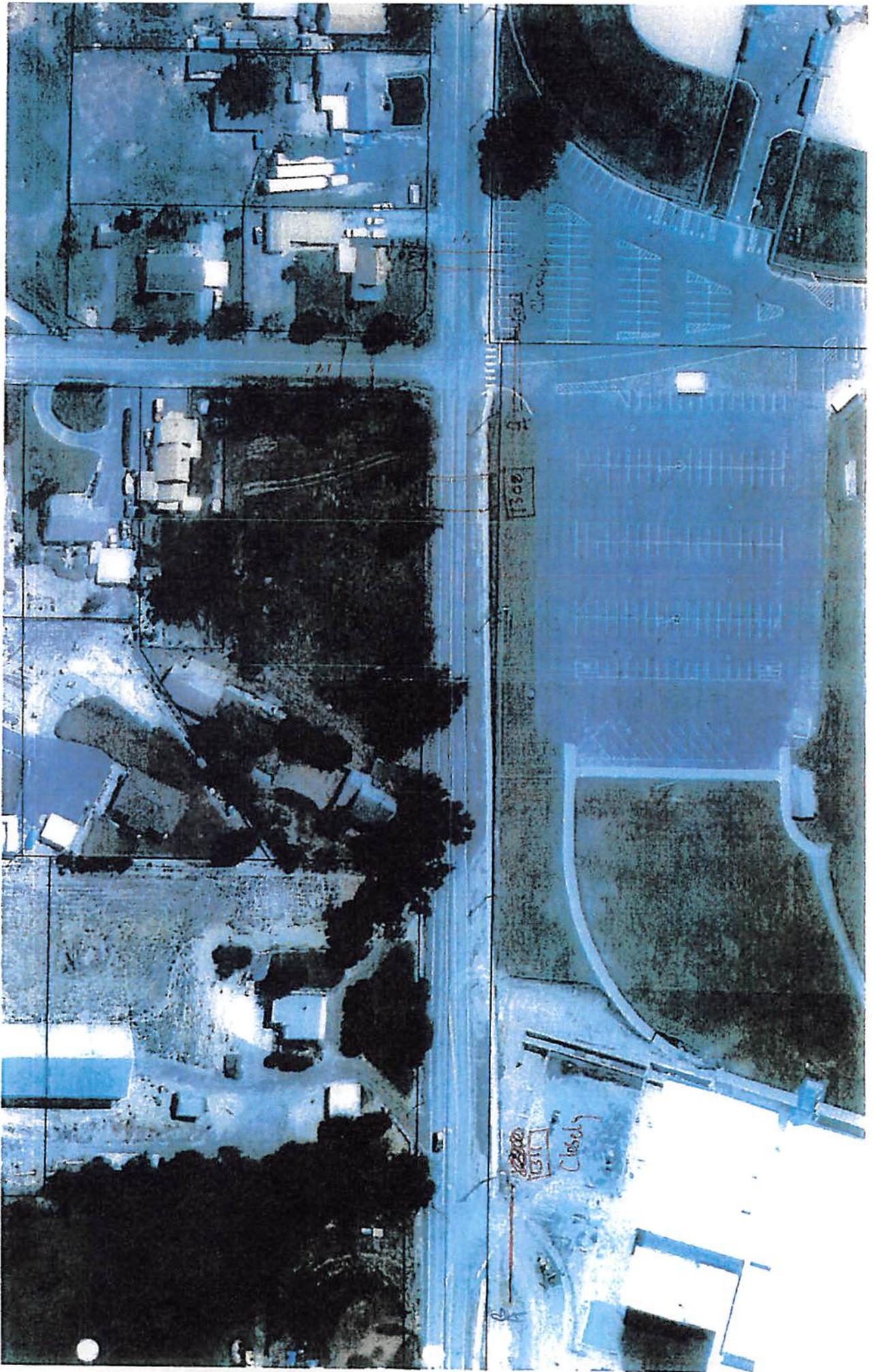
Daily Volume

Interval Start	Channel 1	SB	SB	Turn Lane	Combined
12:00 AM	0	5	2	0	7
1:00 AM	0	3	1	1	5
2:00 AM	0	4	1	0	5
3:00 AM	0	7	9	5	21
4:00 AM	0	24	21	11	56
5:00 AM	0	69	40	27	136
6:00 AM	0	152	142	108	402
7:00 AM	0	195	295	246	736
8:00 AM	0	174	138	87	399
9:00 AM	0	124	73	69	266
10:00 AM	0	97	86	48	231
11:00 AM	0	100	85	48	233
12:00 PM	0	84	65	40	189
1:00 PM	0	92	65	58	215
2:00 PM	0	99	91	79	269
3:00 PM	0	124	96	61	281
4:00 PM	0	113	122	57	292
5:00 PM	0	121	69	53	243
6:00 PM	0	122	75	67	264
7:00 PM	0	118	73	60	251
8:00 PM	0	70	31	41	142
9:00 PM	0	23	14	19	56
10:00 PM	0	12	7	5	24
11:00 PM	0	12	4	3	19

Totals 0 (0.0%) 1944 (41.0%) 1605 (33.8%) 1193 (25.2%) 4742

Peak Hours

12:00 AM - 12:00 PM	-	6:45 AM	6:45 AM	7:00 AM	7:00 AM
Volume	-	201	295	246	736
Factor	-	0.93	0.79	0.84	0.84
12:00 PM - 12:00 AM	-	6:15 PM	3:45 PM	2:15 PM	3:45 PM
Volume	-	133	122	81	311
Factor	-	0.92	0.80	0.88	0.85



APPROACH

Site: LANCASTER 2
4/21/2015
Tuesday

Daily Volume

Interval Start	SB	NB	Combined
12:00 AM	1	2	3
1:00 AM	1	1	2
2:00 AM	0	0	0
3:00 AM	1	1	2
4:00 AM	1	5	6
5:00 AM	1	5	6
6:00 AM	8	22	30
7:00 AM	10	48	58
8:00 AM	16	17	33
9:00 AM	10	27	37
10:00 AM	23	27	50
11:00 AM	16	20	36
12:00 PM	14	13	27
1:00 PM	23	29	52
2:00 PM	34	33	67
3:00 PM	26	22	48
4:00 PM	29	33	62
5:00 PM	53	25	78
6:00 PM	32	29	61
7:00 PM	25	17	42
8:00 PM	25	10	35
9:00 PM	8	9	17
10:00 PM	5	8	13
11:00 PM	6	0	6
Totals	368 (47.7%)	403 (52.3%)	771

Peak Hours

12:00 AM - 12:00 PM	10:00 AM	7:00 AM	7:15 AM
Volume	23	48	61
Factor	0.82	0.52	0.51
12:00 PM - 12:00 AM	5:00 PM	1:30 PM	4:30 PM
Volume	53	38	81
Factor	0.63	0.86	0.75

NB
APPROACH

Site: CARLON ENTER
4/14/2015
Tuesday

Dally Volume

Interval Start	NB	SB	Combined
12:00 AM	0	0	0
1:00 AM	0	0	0
2:00 AM	0	0	0
3:00 AM	0	0	0
4:00 AM	0	0	0
5:00 AM	0	0	0
6:00 AM	5	3	8
7:00 AM	66	7	73
8:00 AM	0	1	1
9:00 AM	0	8	8
10:00 AM	2	11	13
11:00 AM	3	8	11
12:00 PM	5	7	12
1:00 PM	8	5	13
2:00 PM	32	31	63
3:00 PM	38	34	72
4:00 PM	29	27	56
5:00 PM	31	13	44
6:00 PM	14	12	26
7:00 PM	4	7	11
8:00 PM	1	1	2
9:00 PM	0	0	0
10:00 PM	0	0	0
11:00 PM	0	0	0
Totals	238 (57.6%)	175 (42.4%)	413

Peak Hours

12:00 AM - 12:00 PM	6:45 AM	10:30 AM	6:45 AM
Volume	69	17	78
Factor	0.62	0.61	0.59
12:00 PM - 12:00 AM	4:30 PM	3:15 PM	3:00 PM
Volume	39	37	72
Factor	0.70	0.58	0.82

EV
APPROACH

Site: 200 E GOODLA
4/14/2015
Tuesday

Daily Volume

Interval Start	EB	WB	Combined
12:00 AM	10	5	15
1:00 AM	3	1	4
2:00 AM	2	1	3
3:00 AM	1	3	4
4:00 AM	4	9	13
5:00 AM	4	22	26
6:00 AM	58	69	127
7:00 AM	170	244	414
8:00 AM	108	88	196
9:00 AM	60	90	150
10:00 AM	71	79	150
11:00 AM	84	102	186
12:00 PM	123	96	219
1:00 PM	92	83	175
2:00 PM	162	226	388
3:00 PM	121	181	302
4:00 PM	149	145	294
5:00 PM	190	126	316
6:00 PM	147	84	231
7:00 PM	113	83	196
8:00 PM	52	50	102
9:00 PM	25	22	47
10:00 PM	22	9	31
11:00 PM	6	5	11

Totals	1777 (49.4%)	1823 (50.6%)	3600
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Peak Hours

12:00 AM - 12:00 PM	6:45 AM	6:45 AM	6:45 AM
Volume	172	250	422
Factor	0.66	0.67	0.75
12:00 PM - 12:00 AM	5:00 PM	2:15 PM	2:15 PM
Volume	190	230	389
Factor	0.90	0.57	0.68

W" APPROACH

Site: 300 E GOODLA
4/14/2015
Tuesday

Daily Volume

Interval Start	EB	WB	Combined
12:00 AM	12	7	19
1:00 AM	4	1	5
2:00 AM	3	3	6
3:00 AM	0	3	3
4:00 AM	4	12	16
5:00 AM	5	25	30
6:00 AM	62	84	146
7:00 AM	198	234	432
8:00 AM	110	99	209
9:00 AM	68	102	170
10:00 AM	87	99	186
11:00 AM	98	125	223
12:00 PM	147	120	267
1:00 PM	105	92	197
2:00 PM	175	282	457
3:00 PM	178	156	334
4:00 PM	203	149	352
5:00 PM	204	143	347
6:00 PM	137	148	285
7:00 PM	86	126	212
8:00 PM	48	54	102
9:00 PM	34	29	63
10:00 PM	25	14	39
11:00 PM	8	5	13

Totals 2001 (48.7%) 2112 (51.3%) 4113

Peak Hours

12:00 AM - 12:00 PM	6:45 AM	6:45 AM	6:45 AM
Volume	204	235	439
Factor	0.59	0.72	0.71
12:00 PM - 12:00 AM	4:30 PM	2:15 PM	2:15 PM
Volume	215	284	463
Factor	0.84	0.47	0.62

PROJECT: Tokelison
 JOB NO. 15-1455
 INTERSECTION: Goodlander Road & Wenas Road
 Whipple Consulting Engineers, Inc.
 Data Transfer
 Intersection No. 1

DATE OF COUNT: 12/13/2005
 Analyst
 BNG
 BNG

Whipple Consulting Engineers, Inc.
 PM PEAK HOUR BREAKDOWN

APPROACH	MOVEMENT		4:30 PM		4:45 PM		5:00 PM		5:15 PM		TOTAL	P.H.F.	Pct Trucks	
	Left	Through	Right	App. Total	Pct Trucks	Left	Through	Right	App. Total	Pct Trucks				Left
Eastbound	21	9	9	39	0.025	22	21	17	17	0.020833	72	0.68	0%	
		21	21	42	0.021739	42	28	4	47	0.020833	162	0.64	11%	
		9	9	18	0.021739	18	9	6	11	0.020833	34	0.47	0%	
Westbound	4	19	13	36	0.021739	36	23	0	0	0.020833	146	0.66	0%	
		19	25	44	0.021739	44	23	0	0	0.020833	146	0.66	0%	
		13	13	26	0.021739	26	15	0	0	0.020833	68	0.61	0%	
Northbound	22	22	22	66	0.01976	66	18	23	23	0.014851	85	0.92	0%	
		22	22	44	0.01976	44	18	23	23	0.014851	85	0.92	0%	
		10	10	20	0.01976	20	6	6	12	0.014851	28	0.64	4%	
Southbound	10	97	20	127	0.037879	127	15	97	112	0.020202	427	0.81	2%	
		10	10	20	0.037879	20	15	97	112	0.020202	427	0.81	2%	
		4	4	8	0.037879	8	3	107	110	0.033708	319	1.8%	0%	
		4	4	8	0.037879	8	3	107	110	0.033708	319	1.8%	0%	
		15	15	30	0.037879	30	11	13	24	0.037879	49	0.82	0%	
		15	15	30	0.037879	30	11	13	24	0.037879	49	0.82	0%	
		8	8	16	0.037879	16	3	375	378	0.037879	1412	0.93	0%	
		8	8	16	0.037879	16	3	375	378	0.037879	1412	0.93	0%	
Total Intersection Volume														
Intersection Pct Trucks														

APPROACH	MOVEMENT		7:15		7:30		7:45		8:00		TOTAL
	ped	bike	ped	bike	ped	bike	ped	bike	ped	bike	
Eastbound	0	0	0	0	0	0	0	0	0	0	0
Westbound	0	0	0	0	0	0	0	0	0	0	0
Northbound	0	0	0	0	0	0	0	0	0	0	0
Southbound	0	0	0	0	0	0	0	0	0	0	0
TOTAL											

Pedestrian Calls

BACKGROUND PROJECTS

Whispering Views Estates
912.42.14-01 Preliminary Plat
914.42.14-01 Planned
Development
971.42.14-01 Environmental
Review

Hearing Examines
Exhibits
And
Recommendation
Part II

Whispering Views Estates
912.42.14-01 Preliminary Plat
914.42.14-01 Planned Development
971.42.14-01 Environmental Review

Whispering View Hearing Examiner Exhibits

<u>Exhibit</u>		<u>Page</u>
HE1	Proposed Condition 19	
HE2	Drainage & Grading Plans	
HE3	Grading Permit for Bowers Road	
HE4	Memorandum from City Attorney Regarding Fairness & Conflict of interest	
HE5	Storm water Management Report-PLSA July 28.2015	
HE6	Applicants Packet Submitted By Torkelson Construction Inc	
HE7	Memorandum in Support Of Application of Torkelson Construction Inc	
HE8	Memorandum Opposing Whispering View Estates- Mark Fickes	
HE9	Aerial Photograph 2013 from Yakima County Website-Mark Fickes	
HE10	Aerial Photograph of Teske Residents Before and After	
HE11	Elevation Drawing Showing Closet Connection	
HE12	Written Statement to Hearing Examiner: Wayne Worby	
HE 13	Documents Submitted By Wayne Worby	
HE14	Public Document-Ordinance related to repeal of Chapter 10.24	
HE15	Petition to Deny Whispering View Estates	
HE16	Preliminary Short Plat	
HE17	Letter to Selah Planning Commission from Torkelson Construction Inc	
HE18	Amendment to Staff Report Dated May 16, 2014-Short Plat	
HE19	Photo of Vehicles Parking In a No Parking Zone	
HE20	Ultra Block Retaining Wall Design-PLSA	

Proposed Condition 19:

The project may be developed in phases following plat recording. All required plat improvements, whether public or private, shall be completed for each phase.

**LEVEL OF SERVICE
CALCULATIONS
EXISTING CONDITIONS**

HCM Signalized Intersection Capacity Analysis
 1: 1st Street/Selah Loop Road & Goodlander Road

2015 PM Existing
 6/10/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	54	44	25	23	43	52	123	454	64	57	202	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Fr _t	1.00	0.95		1.00	0.92		1.00	0.98		1.00	0.98	
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1762		1770	1710		1770	3473		1770	3466	
Fl _t Permitted	0.54	1.00		0.71	1.00		0.54	1.00		0.44	1.00	
Satd. Flow (perm)	1002	1762		1319	1710		1006	3473		821	3466	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	59	48	27	25	47	57	134	493	70	62	220	35
RTOR Reduction (vph)	0	19	0	0	44	0	0	9	0	0	10	0
Lane Group Flow (vph)	59	56	0	25	60	0	134	554	0	62	245	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	13.1	10.0		8.7	7.8		27.5	22.1		23.5	20.1	
Effective Green, g (s)	13.1	10.0		8.7	7.8		27.5	22.1		23.5	20.1	
Actuated g/C Ratio	0.25	0.19		0.17	0.15		0.52	0.42		0.45	0.38	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	2.0	3.0		2.0	3.5		2.0	3.5		2.0	3.5	
Lane Grp Cap (vph)	295	336		226	254		606	1464		429	1329	
v/s Ratio Prot	c0.01	0.03		0.00	0.03		c0.02	c0.16		0.01	0.07	
v/s Ratio Perm	c0.04			0.02			0.09			0.06		
v/c Ratio	0.20	0.17		0.11	0.24		0.22	0.38		0.14	0.18	
Uniform Delay, d ₁	15.3	17.7		18.5	19.7		6.4	10.4		8.3	10.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d ₂	0.1	0.2		0.1	0.6		0.1	0.2		0.1	0.1	
Delay (s)	15.4	17.9		18.6	20.2		6.5	10.6		8.3	10.8	
Level of Service	B	B		B	C		A	B		A	B	
Approach Delay (s)		16.8			19.9			9.8			10.3	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	52.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	38.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
 2: Goodlander Road & Lancaster Road

2015 PM Existing
 6/10/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	18	116	15	10	126	13	15	2	12	12	2	15
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	126	16	11	137	14	16	2	13	13	2	16
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)					903							
pX, platoon unblocked												
vC, conflicting volume	151			142			357	346	134	353	347	144
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	151			142			357	346	134	353	347	144
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			97	100	99	98	100	98
cM capacity (veh/h)	1430			1440			577	565	915	582	564	903

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	162	162	32	32
Volume Left	20	11	16	13
Volume Right	16	14	13	16
cSH	1430	1440	680	711
Volume to Capacity	0.01	0.01	0.05	0.04
Queue Length 95th (ft)	1	1	4	3
Control Delay (s)	1.0	0.6	10.6	10.3
Lane LOS	A	A	B	B
Approach Delay (s)	1.0	0.6	10.6	10.3
Approach LOS			B	B

Intersection Summary			
Average Delay		2.4	
Intersection Capacity Utilization		22.5%	ICU Level of Service
Analysis Period (min)		15	A

HCM Signalized Intersection Capacity Analysis
 3: Wenas Road & Goodlander Road

2015 PM Existing
 6/10/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	77	58	27	34	46	66	85	564	28	49	324	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.95		1.00	0.91		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1775		1770	1698		1770	3514		1770	3463	
Flt Permitted	0.68	1.00		0.70	1.00		0.51	1.00		0.41	1.00	
Satd. Flow (perm)	1264	1775		1299	1698		952	3514		759	3463	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	84	63	29	37	50	72	92	613	30	53	352	59
RTOR Reduction (vph)	0	23	0	0	58	0	0	6	0	0	23	0
Lane Group Flow (vph)	84	69	0	37	64	0	92	637	0	53	388	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	6.3	6.3		6.3	6.3		15.9	15.9		15.9	15.9	
Effective Green, g (s)	6.3	6.3		6.3	6.3		15.9	15.9		15.9	15.9	
Actuated g/C Ratio	0.20	0.20		0.20	0.20		0.49	0.49		0.49	0.49	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	247	347		254	332		470	1735		374	1709	
v/s Ratio Prot		0.04			0.04			c0.18			0.11	
v/s Ratio Perm	c0.07			0.03			0.10			0.07		
v/c Ratio	0.34	0.20		0.15	0.19		0.20	0.37		0.14	0.23	
Uniform Delay, d1	11.2	10.8		10.7	10.8		4.6	5.0		4.4	4.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	0.3		0.3	0.3		0.2	0.1		0.2	0.1	
Delay (s)	12.0	11.1		11.0	11.1		4.8	5.2		4.6	4.7	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		11.5			11.1			5.1			4.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	32.2	Sum of lost time (s)	10.0
Intersection Capacity Utilization	44.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

**LEVEL OF SERVICE
CALCULATIONS**

WITHOUT PROJECT

HCM Signalized Intersection Capacity Analysis
 1: 1st Street/Selah Loop Road & Goodlander Road

2020 PM W-O Project
 6/10/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	54	44	25	24	43	53	123	454	66	59	202	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.95		1.00	0.92		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1762		1770	1708		1770	3472		1770	3466	
Flt Permitted	0.53	1.00		0.71	1.00		0.54	1.00		0.44	1.00	
Satd. Flow (perm)	989	1762		1319	1708		1006	3472		819	3466	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	59	48	27	26	47	58	134	493	72	64	220	35
RTOR Reduction (vph)	0	19	0	0	45	0	0	9	0	0	10	0
Lane Group Flow (vph)	59	56	0	26	60	0	134	556	0	64	245	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	13.2	10.0		8.6	7.7		27.4	22.0		23.4	20.0	
Effective Green, g (s)	13.2	10.0		8.6	7.7		27.4	22.0		23.4	20.0	
Actuated g/C Ratio	0.25	0.19		0.16	0.15		0.52	0.42		0.45	0.38	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	2.0	3.0		2.0	3.5		2.0	3.5		2.0	3.5	
Lane Grp Cap (vph)	297	336		224	251		605	1460		428	1325	
v/s Ratio Prot	c0.01	0.03		0.00	0.04		c0.02	c0.16		0.01	0.07	
v/s Ratio Perm	c0.04			0.02			0.09			0.06		
v/c Ratio	0.20	0.17		0.12	0.24		0.22	0.38		0.15	0.18	
Uniform Delay, d1	15.2	17.7		18.5	19.7		6.5	10.5		8.3	10.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.2		0.1	0.6		0.1	0.2		0.1	0.1	
Delay (s)	15.3	17.9		18.6	20.3		6.5	10.6		8.3	10.8	
Level of Service	B	B		B	C		A	B		A	B	
Approach Delay (s)		16.8			20.0			9.9			10.3	
Approach LOS		B			B			A			B	

Intersection Summary

HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	52.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	38.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
2: Goodlander Road & Lancaster Road

2020 PM W-O Project
6/10/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	22	116	15	10	126	16	15	2	12	13	2	17
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	24	126	16	11	137	17	16	2	13	14	2	18
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)					903							
pX, platoon unblocked												
vC, conflicting volume	154			142			369	358	134	364	358	146
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	154			142			369	358	134	364	358	146
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			99			97	100	99	98	100	98
cM capacity (veh/h)	1426			1440			563	554	915	571	555	901
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	166	165	32	35								
Volume Left	24	11	16	14								
Volume Right	16	17	13	18								
cSH	1426	1440	669	708								
Volume to Capacity	0.02	0.01	0.05	0.05								
Queue Length 95th (ft)	1	1	4	4								
Control Delay (s)	1.2	0.6	10.6	10.3								
Lane LOS	A	A	B	B								
Approach Delay (s)	1.2	0.6	10.6	10.3								
Approach LOS			B	B								
Intersection Summary												
Average Delay			2.5									
Intersection Capacity Utilization			24.0%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis
3: Wenas Road & Goodlander Road

2020 PM W-O Project
6/10/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	77	58	28	34	47	66	86	564	28	49	324	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.95		1.00	0.91		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1773		1770	1699		1770	3514		1770	3462	
Flt Permitted	0.68	1.00		0.70	1.00		0.51	1.00		0.41	1.00	
Satd. Flow (perm)	1263	1773		1298	1699		951	3514		759	3462	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	84	63	30	37	51	72	93	613	30	53	352	60
RTOR Reduction (vph)	0	24	0	0	58	0	0	6	0	0	23	0
Lane Group Flow (vph)	84	69	0	37	65	0	93	637	0	53	389	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	6.3	6.3		6.3	6.3		15.8	15.8		15.8	15.8	
Effective Green, g (s)	6.3	6.3		6.3	6.3		15.8	15.8		15.8	15.8	
Actuated g/C Ratio	0.20	0.20		0.20	0.20		0.49	0.49		0.49	0.49	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	247	347		254	333		468	1729		373	1704	
v/s Ratio Prot		0.04			0.04			c0.18			0.11	
v/s Ratio Perm	c0.07			0.03			0.10			0.07		
v/c Ratio	0.34	0.20		0.15	0.20		0.20	0.37		0.14	0.23	
Uniform Delay, d1	11.1	10.8		10.7	10.8		4.6	5.1		4.4	4.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	0.3		0.3	0.3		0.2	0.1		0.2	0.1	
Delay (s)	11.9	11.1		10.9	11.1		4.8	5.2		4.6	4.7	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		11.5			11.0			5.1			4.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	32.1	Sum of lost time (s)	10.0
Intersection Capacity Utilization	44.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

**LEVEL OF SERVICE
CALCULATIONS**

WITH PROJECT

HCM Signalized Intersection Capacity Analysis
1: 1st Street/Selah Loop Road & Goodlander Road

2020 PM W- Project
6/10/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	54	46	25	29	44	57	123	454	75	66	202	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.95		1.00	0.92		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1765		1770	1705		1770	3464		1770	3466	
Flt Permitted	0.59	1.00		0.71	1.00		0.54	1.00		0.43	1.00	
Satd. Flow (perm)	1093	1765		1317	1705		1011	3464		807	3466	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	59	50	27	32	48	62	134	493	82	72	220	35
RTOR Reduction (vph)	0	19	0	0	47	0	0	10	0	0	10	0
Lane Group Flow (vph)	59	58	0	32	63	0	134	565	0	72	245	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)	11.4	8.3		9.0	7.1		27.4	22.0		23.6	20.1	
Effective Green, g (s)	11.4	8.3		9.0	7.1		27.4	22.0		23.6	20.1	
Actuated g/C Ratio	0.22	0.16		0.17	0.14		0.53	0.43		0.46	0.39	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	2.0	3.0		2.0	3.5		2.0	3.5		2.0	3.5	
Lane Grp Cap (vph)	281	283		245	234		615	1474		433	1347	
v/s Ratio Prot	c0.01	0.03		0.00	c0.04		c0.02	c0.16		0.01	0.07	
v/s Ratio Perm	0.03			0.02			0.09			0.06		
v/c Ratio	0.21	0.20		0.13	0.27		0.22	0.38		0.17	0.18	
Uniform Delay, d1	16.3	18.8		18.0	20.0		6.2	10.2		8.0	10.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.4		0.1	0.7		0.1	0.2		0.1	0.1	
Delay (s)	16.4	19.2		18.0	20.7		6.3	10.4		8.0	10.5	
Level of Service	B	B		B	C		A	B		A	B	
Approach Delay (s)		18.0			20.1			9.6			9.9	
Approach LOS		B			C			A			A	

Intersection Summary

HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	51.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	38.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
 2: Goodlander Road & Lancaster Road

2020 PM W- Project
 6/10/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	22	123	15	10	138	16	15	2	12	13	2	17
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	24	134	16	11	150	17	16	2	13	14	2	18
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)					903							
pX, platoon unblocked												
vC, conflicting volume	167			150			390	379	142	384	378	159
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	167			150			390	379	142	384	378	159
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			99			97	100	99	97	100	98
cM capacity (veh/h)	1410			1431			545	540	906	554	540	887

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	174	178	32	35
Volume Left	24	11	16	14
Volume Right	16	17	13	18
cSH	1410	1431	652	690
Volume to Capacity	0.02	0.01	0.05	0.05
Queue Length 95th (ft)	1	1	4	4
Control Delay (s)	1.2	0.5	10.8	10.5
Lane LOS	A	A	B	B
Approach Delay (s)	1.2	0.5	10.8	10.5
Approach LOS			B	B

Intersection Summary			
Average Delay		2.4	
Intersection Capacity Utilization		24.6%	ICU Level of Service
Analysis Period (min)		15	A

HCM Signalized Intersection Capacity Analysis
3: Wenas Road & Goodlander Road

2020 PM W- Project
6/10/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	59	31	34	50	66	92	564	28	49	324	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.95		1.00	0.91		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1766		1770	1703		1770	3514		1770	3459	
Flt Permitted	0.68	1.00		0.69	1.00		0.51	1.00		0.41	1.00	
Satd. Flow (perm)	1260	1766		1292	1703		948	3514		759	3459	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	87	64	34	37	54	72	100	613	30	53	352	63
RTOR Reduction (vph)	0	27	0	0	58	0	0	6	0	0	25	0
Lane Group Flow (vph)	87	71	0	37	68	0	100	637	0	53	390	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	6.4	6.4		6.4	6.4		15.7	15.7		15.7	15.7	
Effective Green, g (s)	6.4	6.4		6.4	6.4		15.7	15.7		15.7	15.7	
Actuated g/C Ratio	0.20	0.20		0.20	0.20		0.49	0.49		0.49	0.49	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	251	352		257	339		463	1718		371	1691	
v/s Ratio Prot		0.04			0.04			0.18			0.11	
v/s Ratio Perm	0.07			0.03			0.11			0.07		
v/c Ratio	0.35	0.20		0.14	0.20		0.22	0.37		0.14	0.23	
Uniform Delay, d1	11.1	10.7		10.6	10.7		4.7	5.1		4.5	4.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	0.3		0.3	0.3		0.2	0.1		0.2	0.1	
Delay (s)	11.9	11.0		10.9	11.0		4.9	5.3		4.7	4.8	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		11.4			11.0			5.2			4.8	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	32.1	Sum of lost time (s)	10.0
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Exhibit #2

CITY OF SELAH
C2.0
 PROJECT

DATE: 07/28/2015
 DRAWN BY: A. CALVORE
 CHECKED BY: S.D.C.
 JOB NO.: 12557
 JOB NAME: 125570021.DWG

PLSA
 ENGINEERING-SURVEYING-PLANNING
 1225 WEST LINCOLN AVENUE, WASHINGTON STATE 99078-4294

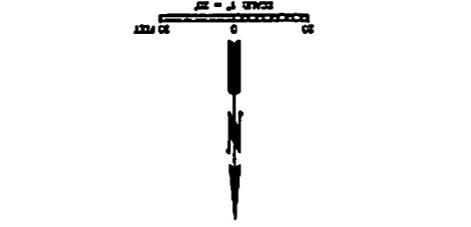


**WHISPERING VIEW ESTATES
 NORTH GRADING & DRAINAGE PLAN**
 SELAH, WASHINGTON
 PREPARED FOR:
TORKILSON CONSTRUCTION
 P.O. BOX 222 SELAH, WASHINGTON STATE 99078-0222

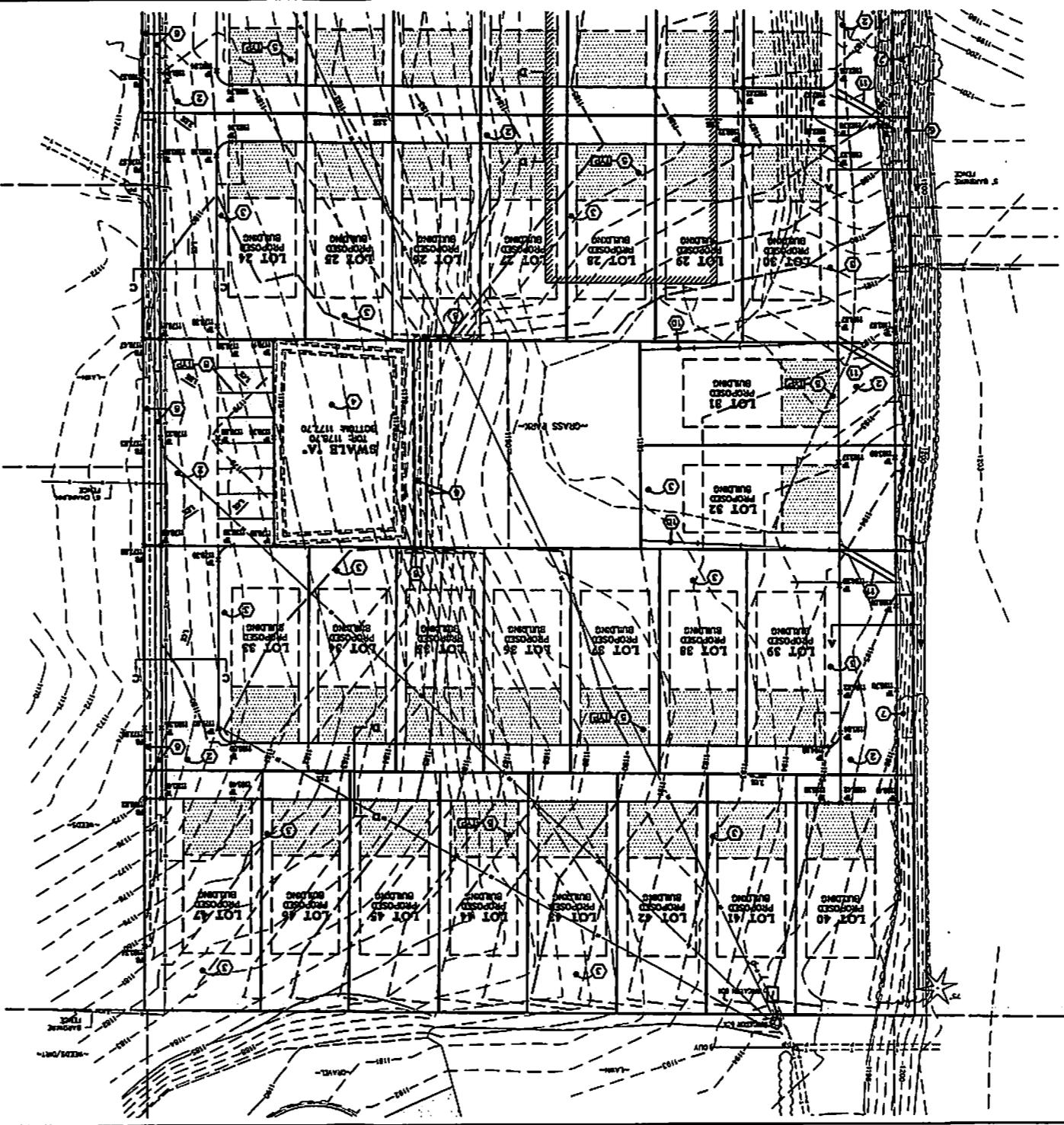
REVISION	DATE

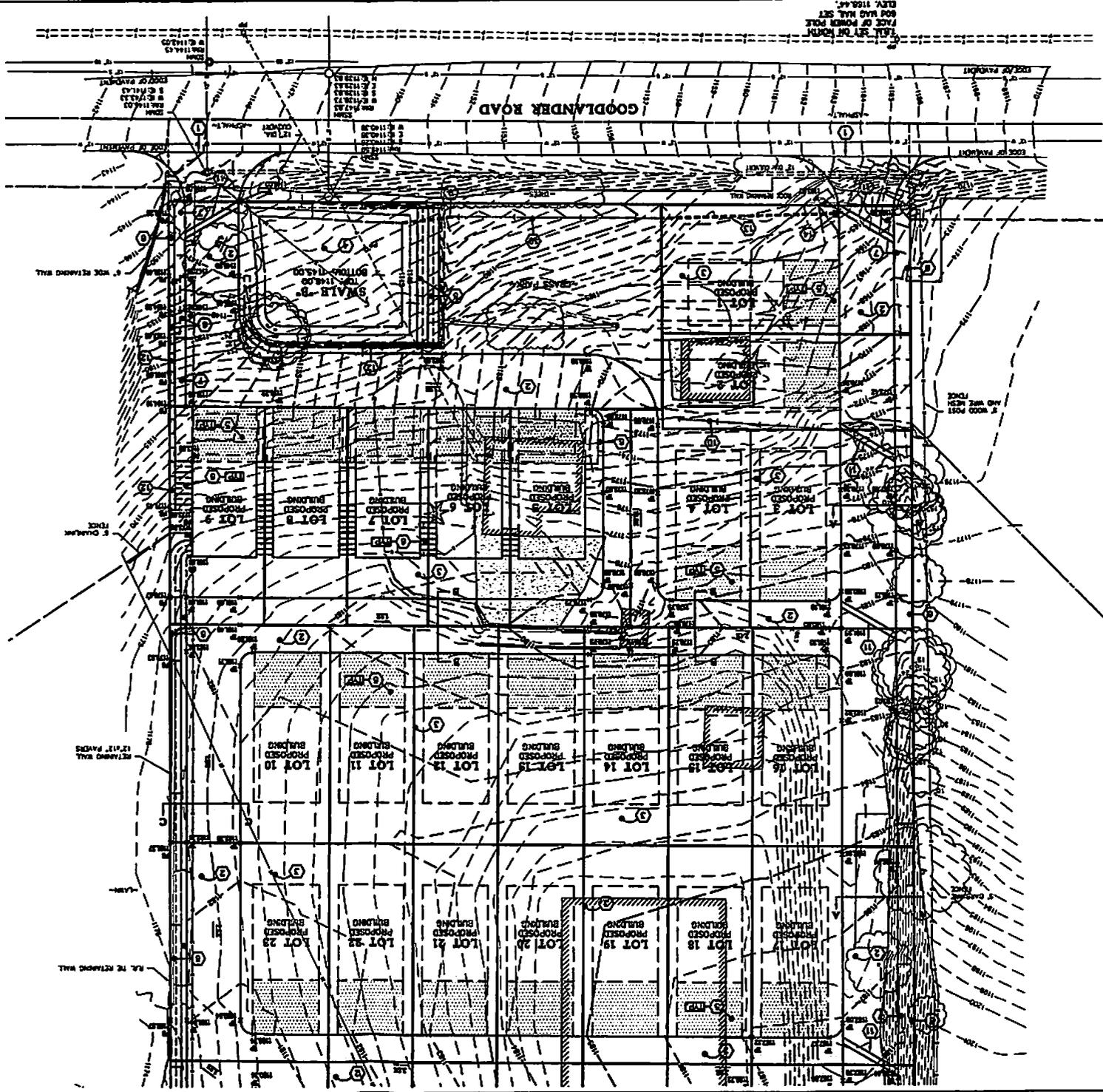
REVIEWED AND APPROVED BY CITY OF SELAH PUBLIC WORKS

DATE: _____



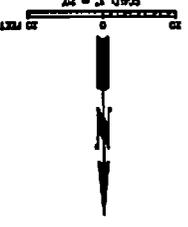
- GENERAL NOTES**
1. (1) DENOTES CONSTRUCTION NOTE CALLOUT.
 2. UNDERGROUND FEATURES SHOWN HEREIN REPRESENT BEST AVAILABLE INFORMATION AS OBTAINED FROM LOCAL RECORDS AND VISUAL SURFACE EVIDENCE. THE CONTRACTOR IS CAUTIONED TO VERIFY THE LOCATION AND DEPTH OF ALL UNDERGROUND FACILITIES THROUGH A ONE NUMBER LOCATOR SERVICE. 1-800-424-5533.
 3. INSTALL ALL WORK IN ACCORDANCE WITH THE 2014 EDITION OF THE SPECIFICATIONS FOR ROAD, BRIDGE, AND MAJOR CONSTRUCTION PREPARED BY THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION.
 4. CONTRACTOR TO PREVENT ANY SILT CONTAMINATION OF STORM WATER DETENTION FACILITIES BEFORE, DURING, AND AFTER CONSTRUCTION.
 5. STORMWATER DESIGN IS IN ACCORDANCE WITH STATE LDC REQUIREMENTS.
 6. DENOTES FINISHED GRADE SPOT ELEVATION.
 7. (7) - TOP OF PAVEMENT
 8. (8) - FINISH GRADE
 9. (9) - EXISTING GRADE
 10. (10) - TOP OF CURB
 11. (11) - TOP OF SIDEWALK
 12. (12) - TOP OF RETAINING WALL
- CONSTRUCTION NOTES**
1. MATCH DRAINAGE ELEVATIONS. EXISTING PAVEMENT SHALL BE SAWCUT TO PROVIDE A CLEAN EDGE FOR MATCHING.
 2. CONSTRUCT 7" ASPHALT PAVEMENT SECTION PER DETAIL ON SHEET C2.1.
 3. CONSTRUCT 5" GRAVEL GRADE SECTION AROUND BUILDINGS PER DETAIL ON SHEET C2.2.
 4. CONSTRUCT 80-40 STRATUM SWALE PER DETAIL ON SHEET C2.2.
 5. CONSTRUCT CONCRETE PAVEMENT SECTION PER CONTRACTOR.
 6. LANDSCAPE WALL MAXIMUM HEIGHT 4 FEET TALL. WALLS CAN BE TIERED WITH A 4 FOOT STRAPBACK LANDSCAPE WALLS BE OTHERS WHERE ADJACENT TO EXISTING WALLS. NOT REQUIRED FOR SUPPORT.
 7. CONSTRUCT 6" GRAVEL SECTION ALONG ASPHALT PER DETAIL ON SHEET C2.2.
 8. PAVED STRIPES, 4" WIDE.
 9. CONTRACTOR TO INSTALL 12" CALVERT AS REQUIRED.
 10. CONTRACTOR TO CONSTRUCT DRAINAGE CONDUIT SWALE TO THE 80-40 STRATUM SWALE. MINIMUM SIDE SLOPES OF 2:1.
 11. CONTRACTOR TO CONSTRUCT SPEED BUMP FOR DRAINAGE CONTROL.
 12. CONTRACTOR TO CONSTRUCT ULTRALOCK GRAVITY WALL OR EQUIVALENT.
 13. CONSTRUCT 12" DIA. 0-3024 SDR 26 PVC STORM DRAIN PER 0.22X DRAINAGE GRATE. DRAINAGE TO DRAIN INTO DRAINAGE CONDUIT/PIPE SWALE.
 14. INSTALL CATCH BASIN TYPE 1 WITH SLOTTED GRADE PER WEDOT STANDARD PLAN S-03-20-01 ON SHEET C2.1.





1511 ST. OF POINT
FACE OF POWER POLE
604 MAG. NAL. SET
DAY 1100-44

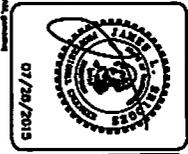
REVIEWED AND APPROVED BY CITY OF SELMA PUBLIC WORKS
DATE _____



- GENERAL NOTES**
1. ⑦ DENOTES CONSTRUCTION NOTE CALLOUT.
 2. LANDSCAPE FEATURES SHOWN HEREON REPRESENT BEST AVAILABLE INFORMATION AS OBTAINED FROM LOCAL RECORDS AND VISUAL SURFACE EVIDENCE. THE CONTRACTOR IS CAUTIONED TO VERIFY THE LOCATION AND DEPTH OF ALL UNDERGROUND FACILITIES. STATE LAW REQUIRES THAT ALL EXCAVATION WORK MUST BE PRECEDED BY NOTIFICATION TO ALL OWNERS OF UNDERGROUND FACILITIES THROUGH A ONE NUMBER LOCATOR SERVICE. 1-800-424-5333.
 3. INSTALL ALL WORK IN ACCORDANCE WITH THE 2014 EDITION OF THE SPECIFICATIONS FOR ROAD, BRIDGE AND LANDSCAPE CONSTRUCTION PREPARED BY THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION.
 4. CONTRACTOR TO PREVENT ANY SETI CONTAMINATION OF STORM WATER. AFTER SETTLEMENT FACILITIES BEFORE, DURING, AND AFTER CONSTRUCTION.
 5. STORMWATER DESIGN IS IN ACCORDANCE WITH STATE UIC REQUIREMENTS.
 6. ① DENOTES FINISHED GRADE SPOT ELEVATION.
 7. ② TOP OF PAVEMENT
 8. ③ FRESH GRADE
 9. ④ EXISTING GRADE
 10. ⑤ TOP OF CURB
 11. ⑥ TOP OF SIDEWALK
 12. ⑦ TOP OF RETAINING WALL
- CONSTRUCTION NOTES**
1. MATCH EXISTING ELEVATIONS. EXISTING PAVEMENT SHALL BE SAWCUT TO PROVIDE A CLEAN EDGE FOR RATCHING.
 2. CONSTRUCT 2\"/>

CITY OF SELMA PROJECT
C2.1
DATE 07/29/2015
DRAWN BY J. DAMACHE
CHECKED BY S.D.C.
JOB NO. 13517
DWG NO. 13517C(2) (L) (W)

PLSA
ENGINEERING-SURVEYING-PLANNING
150 WEST LINCOLN AVENUE, WASHINGTON, WA 987 57-4900
1325702R(2) (L) (W)



WHISPERING VIEW ESTATES
SOUTH GRADING & DRAINAGE PLAN
SELMA, WASHINGTON
PREPARED FOR
TORKELSON CONSTRUCTION
20 N. 3RD ST. SELMA, WASHINGTON 98140 (509) 838-8888

REVISION	DATE

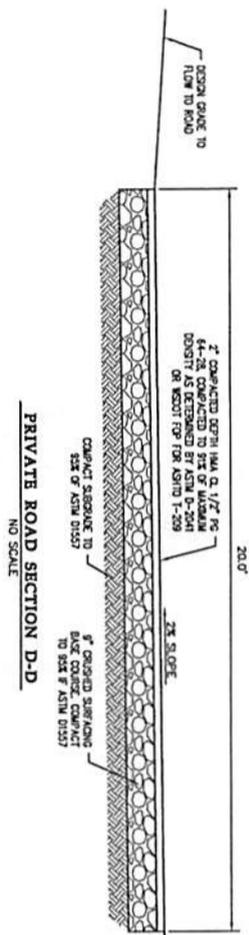
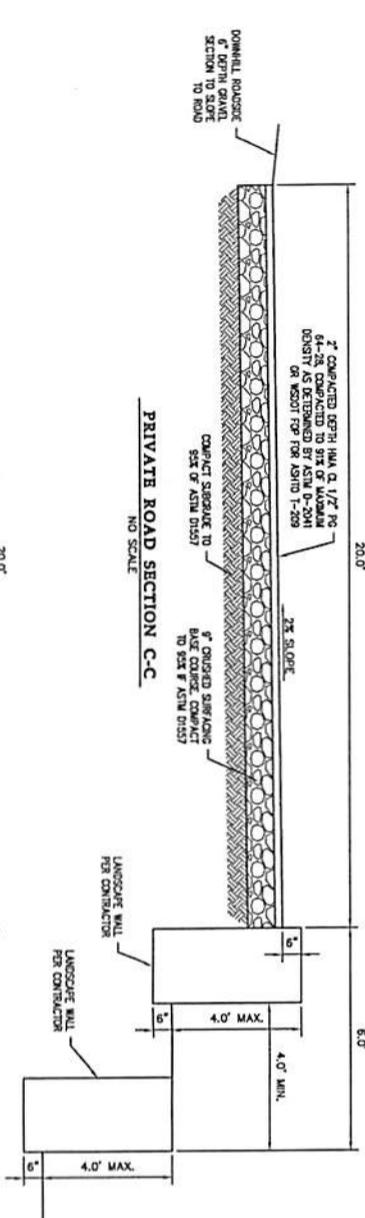
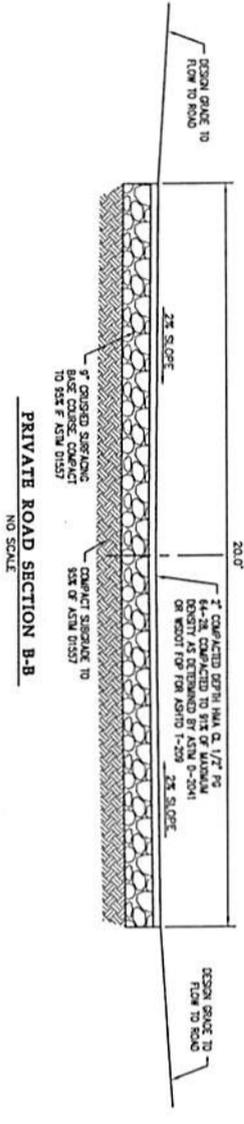
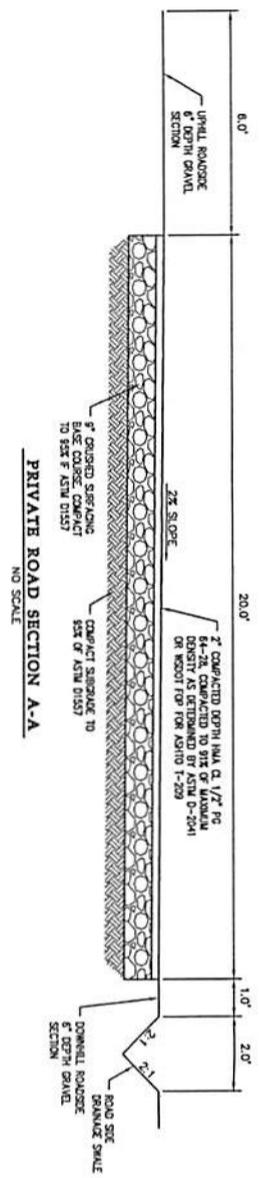
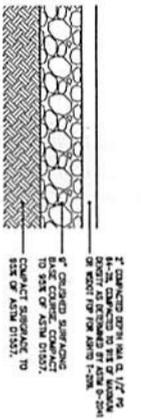
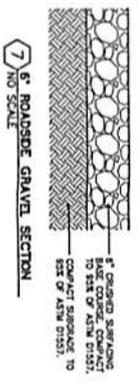
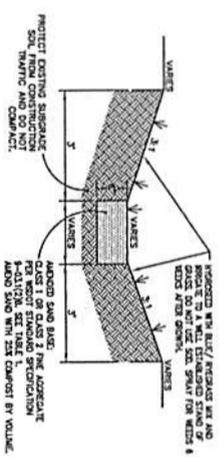
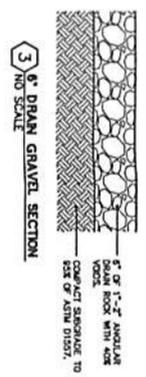


TABLE 1 SAND GRAVEL

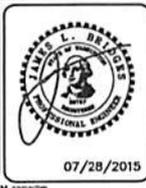
SIEVE SIZE	CLASS 1		CLASS 2	
	MIN.	MAX.	MIN.	MAX.
3/8"	99	100	99	100
NO. 4	95	100	95	100
NO. 10	85	95	85	95
NO. 20	65	85	65	80
NO. 40	45	65	45	55
NO. 60	25	45	25	35
NO. 100	5	25	5	15
NO. 200	0	10	0	5



REVIEWED AND APPROVED BY CITY OF SELAH PUBLIC WORKS
DATE _____

REVISION	DATE

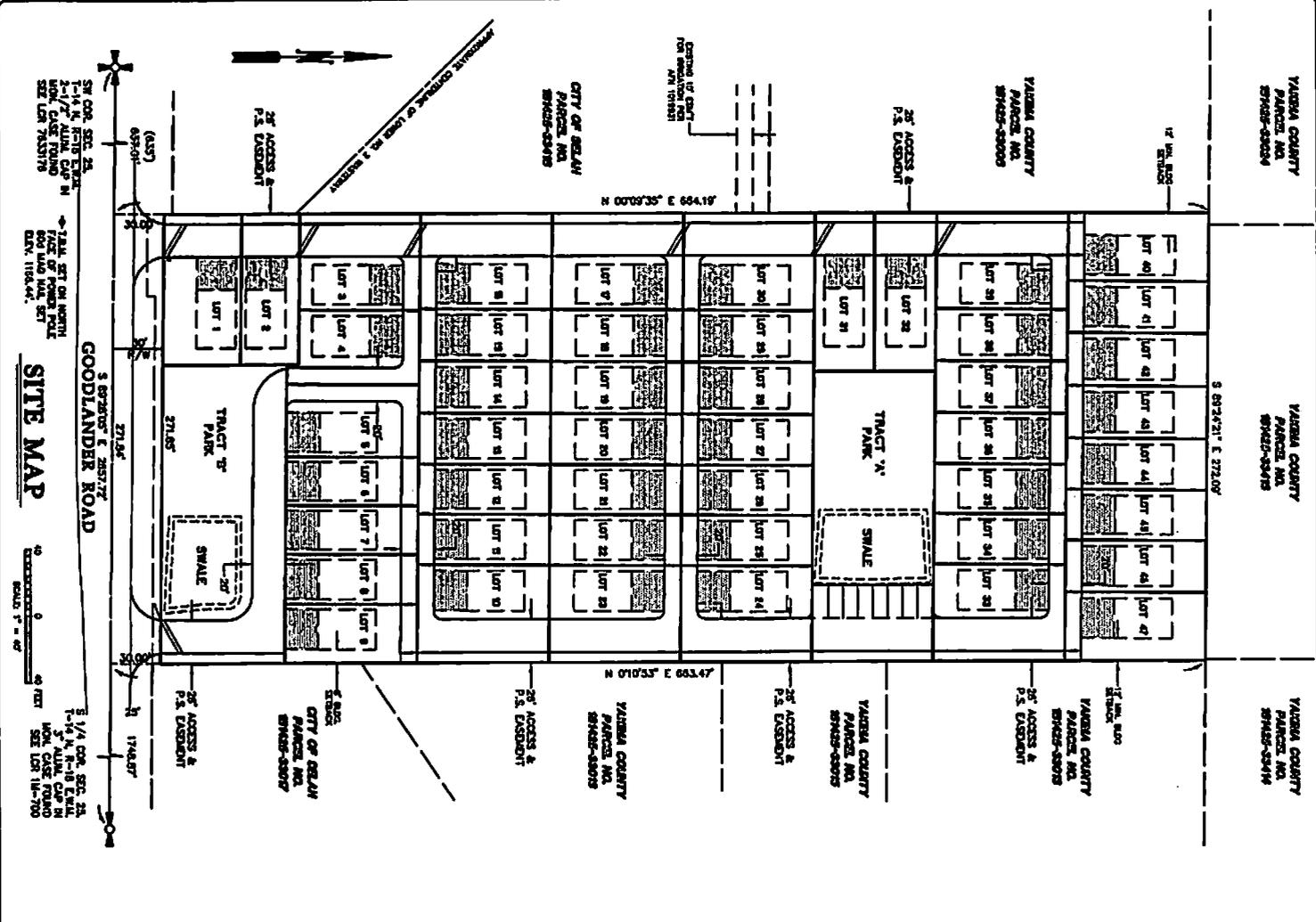
WHISPERING VIEW ESTATES
CONSTRUCTION DETAILS
SELAH, WASHINGTON
PREPARED FOR
TORKELSON CONSTRUCTION
P.O. BOX 232 SELAH, WASHINGTON 99142 (509) 697-3358



PLSA
ENGINEERING-SURVEYING-PLANNING
1120 WEST LINCOLN YAKIMA, WASHINGTON (509) 878-6990

DATE 07/28/2015
DRAWN BY J. GAMACHE
CHECKED BY S.D.G.
JOB NO. 13257
DWG NAME 13257CGR3.DWG

CITY OF SELAH PROJECT
C2.2



SITE MAP

SCALE 1" = 40'

3124' SET ON NORTH
FACE OF POWER POLE
800 W. 118th ST.
D.V. 118th St.

5 1/4 COR. SEC. 23
T-14 N. R-18 E. 1/4
3" VULN. CAP IN
WELL CASE FOUND
SEE LOT 18-100

5 1/4 COR. SEC. 23
T-14 N. R-18 E. 1/4
3" VULN. CAP IN
WELL CASE FOUND
SEE LOT 18-100

3124' SET ON NORTH
FACE OF POWER POLE
800 W. 118th ST.
D.V. 118th St.

5 1/4 COR. SEC. 23
T-14 N. R-18 E. 1/4
3" VULN. CAP IN
WELL CASE FOUND
SEE LOT 18-100

5 1/4 COR. SEC. 23
T-14 N. R-18 E. 1/4
3" VULN. CAP IN
WELL CASE FOUND
SEE LOT 18-100

5 1/4 COR. SEC. 23
T-14 N. R-18 E. 1/4
3" VULN. CAP IN
WELL CASE FOUND
SEE LOT 18-100

- SHEET INDEX**
- C1.0 COVER SHEET
 - C2.0 NORTH GRADING AND DRAINAGE PLAN
 - C2.1 SOUTH GRADING AND DRAINAGE PLAN
 - C2.2 CONSTRUCTION DETAILS
 - C2.3 CONSTRUCTION DETAILS

- LEGEND**
- EXISTING FEATURES**
- SAINTARY SEWER
 - DOMESTIC WATER
 - OVERHEAD POWER
 - OVERHEAD TELEPHONE
 - STORM DRAIN
 - REGULATION
 - EXISTING FENCE
 - 1' CONTAINERS
 - 5' CONTAINERS
 - EASEMENT
 - PROPERTY/ROOF OF WAY USE
 - WATER VALVE
 - SEWER MANHOLE
 - STORM DRAIN MANHOLE
 - POWER POLE
 - SON
 - WATER SERVICE LETTER
 - DAY WARE
 - CONCRETE

- PROPOSED FEATURES**
- STORM DRAIN
 - DOTS 1' CONTAINERS
 - DOTS 5' CONTAINERS
 - CONCRETE
 - PAVED/DIRT



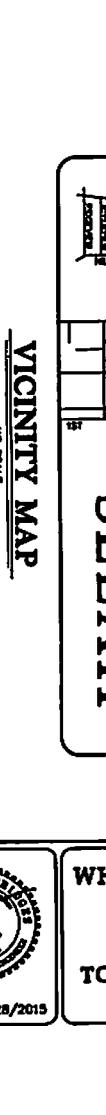
TALL SET ON NORTH
FACE OF POWER POLE
(20' E. WEST OF SON P)
D.V. 118th St.
WELLS, 118th St. AT GARDEN
REAL RESTAURANT
D.V. 118th St. WARDEN

REVIEWED AND APPROVED BY CITY OF SELAH PUBLIC WORKS

DATE

VICINITY MAP

NO SCALE



PLSA

ENGINEERING-SURVEYING-PLANNING

1226 WEST LINCOLN YAKIMA, WASHINGTON (509) 878-6990

07/28/2015

WHISPERING VIEW ESTATES

COVER SHEET

SELAH, WASHINGTON

PREPARED FOR

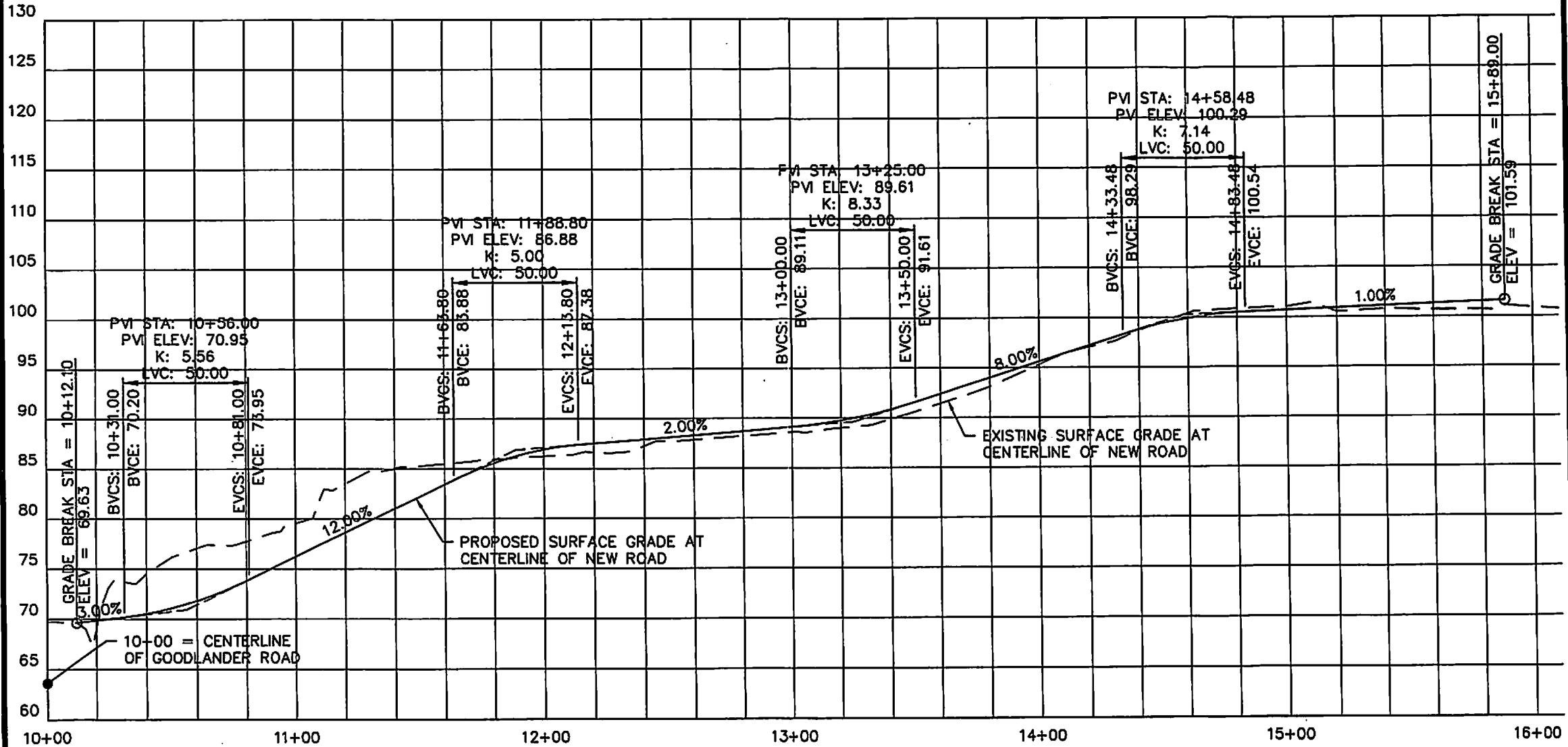
TORKELSON CONSTRUCTION

P.O. BOX 202 SELAH, WASHINGTON 99130 509-878-6990

REVISION	DATE

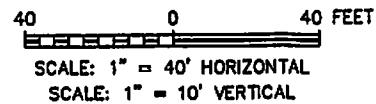
YAKIMA COUNTY
PARCELS AND
SPACES-80000

WEST ROAD PROFILE



Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
west road cut-fill	1.000	1.000	16917 Sq. Ft.	958.13 Cu. Yd.	162.39 Cu. Yd.	795.73 Cu. Yd.<Cut>
Totals			16917 Sq. Ft.	958.13 Cu. Yd.	162.39 Cu. Yd.	795.73 Cu. Yd.<Cut>



**NEW WEST ROAD PROFILE
AND CUT-FILL CALCS.**
— PREPARED FOR —
TORKELSON CONSTRUCTION

PLSA ENGINEERING & SURVEYING
JOB NO. 13257
SEPTEMBER 29, 2014

Exhibit AE 3

CITY OF SELAH
22 S. Rushmore Road
SELAH, WA 98942
CALL 698-7365 FOR INSPECTIONS
STATUS: ACTIVE

Permit Number: 006198
Permit Type: 420-EXCAVATION PERMIT

PROJECT: GRADING/EXCAVATION
LOCATION: GOODLANDER RD 207 E

ASSESSOR'S #: 181425-33029
ESTIMATED CONSTRUCTION VALUE:
\$.00

OWNER: TORKELSON CONSTRUCTION
Address: PO BOX 292
SELAH, WA 98942

FEEES:
BLDG PERMIT FEE 26.41
PLAN REVIEW FEE 17.17
WA ST BLDG CODE 4.50
TOTAL 48.08

Phone #: 509-945-0133

CONTRACTOR: TORKELSON CONSTRUCTION
Address: P.O. BOX 292
SELAH, WA 98942

Access Road ONLY-West Side

Signature: 

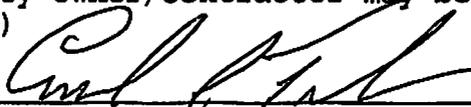
Phone #: 509-697-3305

State Contractors License #
TORKEC1066RK

Expiration date: 04/01/2015

ZONE: R-2
SETBACKS:
SQ. FT./BATHS:

THIS PERMIT BECOMES NULL AND VOID IF WORK OR CONSTRUCTION AUTHORIZED IS NOT COMMENCED WITHIN 180 DAYS OR IF CONSTRUCTION OR WORK IS SUSPENDED OR ABANDONED FOR A PERIOD OF 180 DAYS AT ANY TIME AFTER WORK HAS COMMENCED. I HEREBY CERTIFY THAT I HAVE READ AND EXAMINED THIS APPLICATION AND KNOW THE SAME TO BE TRUE UNDER PENALTY OF PERJURY BY THE LAWS OF THE STATE OF WASHINGTON, AND I AM AUTHORIZED TO APPLY FOR THIS PERMIT. The granting of a permit does not presume to give authority to violate or cancel any other state or local laws regulating construction or the performance of construction. NEW CONSTRUCTION ONLY: I further agree that I will be responsible for all water/sewer/garbage fees assessed upon this property from the time water meter is unlocked by City of Selah personnel until such time as the City is notified of new responsible party (locks removed or destroyed by property owner/contractor may be subject to a fine and/or legal action)


SIGNATURE OF OWNER OR AUTHORIZED AGENT

10/1/14
DATE

Cindy Graziano
CODE ADMINISTRATION CLEARANCE

10/1/14
DATE



CITY OF SELAH
698-7365 or 698-7369
PERMIT APPLICATION FORM

For all grading projects
Application to be filled out in full for proper consideration

Job Address: 207 Goodlander Parcel No: 181425-33029
(if available)

Valuation \$ _____ (if applicable) Amount of earth moved _____

Owner: Torkelson Construction Address: PO Box 292

City: Selah State: Wa Zip: 98942 Phone: _____

Mailing address: _____ City _____ State _____ Zip _____

Contractor: Same as above Phone No: _____

St. License No: _____ Exp Date: ____/____/____ UBI # _____

Address: _____ City _____ State _____ Zip _____

Engineer: PLSA Phone No: _____

Address: _____ City _____ State _____ Zip _____

Description of work: Grading Private Driveway

I hereby certify that I have read and examined this application and know the same to be true and correct. All provisions of laws and ordinances governing this type of work will be complied with whether specified herein or not. The grant of a permit does not presume to give authority to violate or cancel the provisions of any other state or local law regulating construction or the performance of construction.

Carl Torkelson 10/1/2014 _____ 1/1
 Signature of Contractor Date Signature of Owner (if builder) Date

Print Name Carl Torkelson Application accepted by: _____

(509) 575-6990
 FAX (509) 575-6993

DATE	9-29-14	JOB NO.	13257
ATTENTION			
RE:			
EXCAVATION QUANTITY			
FOR WEST ACCESS RD.			
FOR WHISPERING VIEW			
ESTATES ON GOODLANDER			
ROAD			

TO JOE HENNE

WE ARE SENDING YOU Attached Under separate cover via _____ the following items:

- Shop drawings Prints Plans Samples Specifications
 Copy of letter Change order _____

COPIES	DATE	NO.	DESCRIPTION
		1	ROAD PROFILE W/EXCAVATION QUANTITY CALC'S - 20' WIDE ASPHALT DRIVEWAY

THESE ARE TRANSMITTED as checked below:

- For approval Approved as submitted Resubmit _____ copies for approval
 For your use Approved as noted Submit _____ copies for distribution
 As requested Returned for corrections Return _____ corrected prints
 For review and comment _____
 FOR BIDS DUE _____ PRINTS RETURNED AFTER LOAN TO US

REMARKS _____

COPY TO _____

SIGNED: RICK WEHR

Michael R. Kenyon
Rachel B. Turpin
Ann Marie J. Soto
John P. Long, Jr.
Kim Adams Pratt
Robert F. Noe
David A. Linehan
Amy S. Mill
Charlotte A. Archer



Bruce L. Disend
Doug F. Mosich
Of Counsel

Shelley M. Kerlake
1967 - 2014

TO: Tom Durant, City of Selah Planner

FROM: Robert F. Noe, City Attorney

DATE: July 9, 2015

RE: Torkelson Class 2 Permit Application - Alleged Appearance of Fairness and Conflict of Interest Issues

There have been allegations made that the City Administrator violated the Appearance of Fairness Doctrine and that he has a "conflict" that precludes his ability to issue an administrative decision on a Class 2 land use permit application involving Applicant Torkelson Construction Company ("Torkelson"). The allegations are based, in part, on the fact that the City Administrator is currently a residential tenant and lessee of property owned by Torkelson.

The City Administrator has not violated the Appearance of Fairness Doctrine. In fact, that Doctrine is inapplicable to his decision. Further, the City Administrator does not have a "conflict" that would preclude him from making a decision on the Torkelson permit application.

Rather than re-write a summary of the law for both the Appearance of Fairness Doctrine and for addressing public official conflicts, I am simply taking excerpts from Municipal Research Services Center (MRSC) materials for use in this Memorandum. MRSC has examined both of the issues in great depth and provides municipal elected officials and appointed officers advice on these issues on a regular, if not daily, basis. The excerpted materials appear in italics, below.

A. The Appearance of Fairness Doctrine.

The Appearance of Fairness Doctrine does not apply to the City Administrator because he was not engaged in a quasi-judicial proceeding (hearing). MRSC explains:

The appearance of fairness doctrine is a rule of law requiring government decision-makers to conduct non-court hearings and proceedings in a way that is fair and unbiased in both appearance and fact. It was developed by the courts as a method of insuring that due process protections, which normally apply in courtroom settings, extend to certain types of administrative decision-making hearings, such as rezones of specific property. The doctrine

attempts to make sure that all parties to an argument receive equal treatment.

The doctrine requires that adjudicatory or quasi-judicial public hearings meet two requirements:

- they must be procedurally fair, and*
- they must appear to be conducted by impartial decision-makers.*

In 1982, the state legislature codified the requirements for the doctrine, and applied them only to quasi-judicial actions of local decision-making bodies when a hearing is required by statute or local ordinance. See Ch. 42.36 RCW. . . .

MRSC further provides:

Types of Proceedings to Which it Applies

In 1982, the state legislature enacted what is now chapter 42.36 RCW, codifying the appearance of fairness doctrine. The statutory doctrine applies only to local quasi-judicial land use actions, as defined in RCW 42.36.010: ... those actions of the legislative body, planning commission, hearing examiner, zoning adjuster, board of adjustment, or boards that determine the legal rights, duties or privileges of specific parties in a hearing or other contested case proceeding.

The primary characteristics of a quasi-judicial matter are that:

- the decision has a greater impact on a limited number of persons or property owner, and has limited impact on the community at large;*
- the proceedings are aimed at reaching a fact-based decision by choosing between two distinct alternatives; and*
- the decision involves policy application rather than policy setting.*

The following types of land use matters meet this definition: subdivisions, preliminary plat approvals, conditional use permits, SEPA appeals, rezones of specific parcels of property, variances, and other types of discretionary zoning permits if a hearing must be held.

The statutory doctrine does not apply to the following actions:

- adoption, amendment, or revision of comprehensive plans*
- adoption of area-wide zoning ordinances*
- adoption of area-wide zoning amendments*

- building permit denial.

Officials and Employees Who Are Not Subject to the Doctrine

Department heads, planning department staff, and other municipal officials who don't conduct hearings or engage in quasi-judicial decision-making functions are not subject to the doctrine.

(Emphasis supplied).

Ex parte communications are prohibited in quasi-judicial proceedings. Here, because there was no quasi-judicial proceeding, the City Administrator engaged in no ex parte communication. In fact, the very nature of the City Administrator's position requires that he speak with a broad spectrum of persons on a daily basis on all sorts of issues, including proposed development activity within the City. The City Administrator cannot be bound to refrain from communications where there is no quasi-judicial proceeding and where he must be free to communicate with many persons with differing opinions and positions on various issues on a daily basis as part of his job.

B. Conflicts of Interest.

With respect to Conflicts of Interest, MRSC explains as follows:

Washington law governing conflicts of interest regarding municipalities is derived from the State Constitution, statutes, and from law made from court decisions (also known as common law). The general rule from which our state's conflict of interest law derives is that a municipal officer shall not use his or her position to secure special privileges or exemptions for himself, herself, or others. As expressed by our state supreme court many decades ago, the common law principle that a municipal officer is prohibited from adjudicating his or her own cause is "a maxim as old as the law itself." See, Smith v. Centralia, 55 Wash. 573 (1909).

Our state law rules regarding conflicts of interest are based on the fundamental principle that municipal officers hold a public trust and they are required to uphold that trust. These rules apply to real and perceived conflicts of interest and, as below described in more detail, include a prohibition against elected officials voting on matters in which they stand to benefit financially.

What is a Municipal Officer?

Under RCW 42.23.020(2), "municipal officer" is defined broadly to include:

1. *All elected and appointed officers of a municipality (i.e., councilmembers, county commissioners, district commissioners); together with:*
2. *All deputies and assistants of such officers; and*
3. *All persons exercising or undertaking to exercise any of the powers or functions of a municipal officer (including, for example, city managers, city administrators, county administrators, special district superintendents, and others).*

Common Law Conflict of Interest - Special Privileges & Exemptions

Under common law conflict of interest principles, as articulated, for example, in Smith v. Centralia, 55 Wash. 573 (1909), there is a general prohibition against a municipal officer specially benefitting financially from a matter he or she votes upon. In Smith v. Centralia, the court invalidated a street vacation ordinance because a councilmember who stood to benefit financially from its enactment cast the deciding vote.

This court-made law has subsequently been codified under chapter 42.23 RCW, specifically RCW 42.23.070. The general rule is that no municipal officer may use his or her position to obtain special privileges for himself, herself, or others. A "special privilege" relates to being allowed to do something that would otherwise be prohibited. A "special exemption" relates to being relieved from doing something that would be otherwise mandated.

Here there is absolutely nothing to suggest that the City Administrator was financially benefited or that he was otherwise impacted financially when he made his decision on this Class 2 land use permit application. There is nothing to suggest that he is receiving a special privilege or special exemption (as defined above) because he rendered a decision on the Class 2 permit application. Moreover, the City Administrator has no "contract interest" impacted by his decision on the Class 2 permit application. The City Administrator is not being asked to consider a contract and to approve a contract in which he might have some beneficial interest. MRSC explains:

What Constitutes a Contract Interest?

As provided in RCW 42.23.030, a contract interest is one in which a municipal officer would benefit from financially, either directly or indirectly. The contract must be one that is made by, through, or under the supervision of the municipal officer, in whole or in part.

Note also that a municipal officer cannot accept, directly or indirectly, any compensation, gratuity, or reward in connection with

such a contract from any other person who is beneficially interested in the contract. See RCW 42.23.030.

What is a "contract" under chapter 42.23 RCW? Under RCW 42.23.020(3), the term is defined broadly to include contracts generally (e.g., employment agreements, contracts for services, public works contracts), and also includes any sale, lease, or purchase. . . .

What is the "Making" of a Contract?

What does it mean for a contract to be "made by, through or under the supervision" of the officer under RCW 42.23.030? The Washington state supreme court has emphasized that it is the making of the contract that implicates 42.23 RCW. Only certain municipal officers are prohibited by state law from entering into contracts with their municipality because many officers do not have any authority with respect to the making (entering into) of contracts on behalf of their municipality. Note, however, that local codes of ethics may include prohibitions that are broader than those in chapter 42.23 RCW. Also, keep in mind that a municipal officer with authority over the making of the contract may not simply delegate that authority to another officer and then enter into the contract.

Because there is not contract at issue in the Class 2 permit application process, the provisions in RCW 42.23.030 are inapplicable. The City Administrator's lease agreement for rental of a residential unit from the applicant is not such a contractual issue. The City Administrator has no interest in the applicant's business or in any other business endeavor of the applicant.

Even if there were a contract at issue (a lease agreement), the City Administrator's status as a lessee of the applicant would not be a sufficient basis to serve as a conflict. MRSC explains:

What is a Remote Interest?

Under RCW 42.23.040, certain contract interests are considered acceptable "remote interests," regardless of the dollar amount. A "remote interest" is:

- *That of a nonsalaried officer of a nonprofit corporation;*
- *That of an employee or agent of a contracting party where the compensation of such employee or agent consists entirely of fixed wages or salary;*
- *That of a landlord or tenant of a contracting party; [or]*
- *That of a holder of less than 1% of the shares of a corporation or cooperative which is a contracting party.*

In summary, there is no Appearance of Fairness issues associated with the City Administrator's decision on the Torkelson Class 2 permit application. The Appearance of Fairness Doctrine only applies to quasi-judicial hearings. The City Administrator did not conduct a hearing. Further, because the Doctrine does not apply, the City Administrator is free to communicate with anyone he so desires when making his decision, and he is not bound by rules applicable to ex parte communications. There is also no cognizable conflict in this matter. The City Administrator does not have a pecuniary or contract interest in the outcome of the Torkelson Class 2 review, and, therefore, does not have a conflict.

PLSA

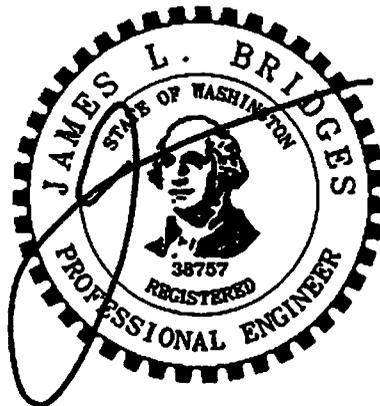
Engineering & Surveying

STORMWATER MANAGEMENT REPORT

WHISPERING VIEW ESTATES
SELAH, WASHINGTON

Goodlander Road
Selah, Washington 98942
Yakima County Tax Parcel No. 181425-33419 thru 33426

July 28, 2015
PLSA Project No. 13257



Prepared for:
Torkelson Construction

A

Torkelson Const., Selah Whispering View Estates
Stormwater Design Report

AK Exhibit 5,

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1.0 Introduction

Torkelson Construction is developing a residential townhome community on approximately 121,181 square feet (sf) of vacant land. See Appendix "A" for Vicinity Map and Yakima County Parcel Maps. The proposed development consists of approximately 39,040 sf of buildings, 63,832 sf of private access roads and driveways, and 9,309 sf of open space lawns. The total approximate impervious surface area is 102,872 sf. Stormwater will be conveyed to 6 bio-infiltration stormwater swales (approx. 45636 sf total swale area) on-site. Calculations include tributary areas for all 6 swales of the completed project.

2.0 Existing Conditions

The site at the time of this report is used as residential with a home a several small out buildings and a large shop. The land coverage consists of lawn and pasture with gravel driveways accessing the buildings. Design drawings include recommended Construction Stormwater Best Management Practices (BMP's) that are maintained and revised as needed by an on-site Certified Erosion and Sedimentation Control Lead (CESCL). The site fronts Goodlander Road on the southerly property line. This section of Goodlander Road is paved with shoulders and has no curb, gutter, and sidewalk in place.

3.0 Soils Properties/ Geotechnical Site Characteristics

A geotechnical investigation was performed by a licensed engineer at a nearby location with extensive knowledge of similar soils. The test pits at the nearby location, which were excavated at locations selected so as to fully characterize the soils present, revealed a surface stratum of silt approximately 10 feet thick. This silt stratum is followed by a deep stratum of cobbles, gravel, and sand. Based on other nearby excavations, this gravel stratum extends to 30 feet or more below the surface.

Online soil data published by the National Resources Conservation Service (NRCS) is consistent with field observations and indicates the native site top soils consist of a variety of Loams and Silt Loams with a Unified Soil Classification (USC) of SM. Infiltration rates for these soils is reported to range from 0.57 to 1.98 inches per hour. Cation Exchange Capacity (CEC) is reported to range between 5.0 to 10 milliequivalents of per 100 grams of soil.

4.0 Surface Water and Floodplains

There are no known surface waters near the subject parcels. There are no flood plains or critical areas on or adjacent to the site.

5.0 Depth to Groundwater/Hardpan

Groundwater is expected to be encountered at 8 to 10 feet below the ground surface. Hardpan has not been observed on or near the site.

6.0 Design References

Stormwater management design is based on recommendations and requirements as published in the Stormwater Management Manual for Eastern Washington (SWMMEW), published by the Washington State Department of Ecology (DOE). Best management practices (BMP's) for infiltration and treatment of stormwater can be found in Chapter 5. Descriptions of the BMP's used on this project can be found under the following headings.

BMP T5.30 Bio-Infiltration Swales

Subsurface infiltration structures also known as Underground Injection Control Wells (UIC's) as described under BMP T5.20 are not used on this site. Since all stormwater is managed on the surface, UIC rules do not apply to this project.

Where local jurisdictional design requirements exceed the SWMMEW, the Yakima County Regional Stormwater Manual has been referenced.

7.0 Design Parameters and Methodologies

Stormwater retention and runoff calculations have been performed using HydroCad 10.0 stormwater hydrology software and the Santa Barbara Urban Hydrograph method. The infiltration swales have been sized to fully retain the 25-year 24-hour (peak volume) long duration rain fall event and the 25-year 3-hour (peak flow) rainfall event. Minimum time of concentrations (5 minutes) and infiltration rates (0.25 inches per hour) have been used based on experience with similar sites and soil conditions reported in the USDA Soil Survey for Yakima County. The runoff Curve Number for the post constructed roof and apron areas is 98.

8.0 Flow Control

The attached calculations demonstrate that the proposed swales have the capacity to retain the 25-year 24-hour rain fall event. Flow control is managed by means of complete retention and infiltration with no adverse impact to down gradient property. Peak flow rates are conveyed on-site using surface flow, gutter flow and underground piping. Peak flow rates are determined using the 25-year 3-hour short duration, high intensity storm.

9.0 Runoff Treatment

The bio-infiltration swale provides treatment by means of plant uptake, soil sorption, and filtration. The amended sand layer provides additional filtration and uniform distribution of stormwater over infiltration area.

10.0 Drainage analysis

Impervious Surfaces:

-  The "A1" sub-catchment includes 36,558 sf of the building roof area and driveways. .
-  The "A2" sub-catchment includes 5,160 sf of grassy lawn.
-  The "B1" sub-catchment includes 27,274 sf of roads and driveways. .
-  The "B2" sub-catchment includes 4,149 sf of grassy lawn.
-  The "C1" sub-catchment includes 11,480 sf of building roofs.
-  The "D1" sub-catchment includes 6,560 sf of building roofs. .
-  The "E1" sub-catchment includes 7,560 sf of building roofs. .
-  The "F1" sub-catchment includes 13,440 sf of building roofs.

Run Off Volumes:

Sub-catchment A1 & A2:

The calculated runoff volume for the combined areas, based upon the 24 hour, 25 year storm (1.8"), is approximately 4,819 cf. The design swale "A" is calculated to retain 4,819 of runoff.

Sub-catchment B1 & B2:

The calculated runoff volume for the combined areas, based upon the 24 hour, 25 year storm (1.8") is approximately 3,596 cf. The design swale "B" is calculated to retain 3,596 cf of runoff.

Sub-catchment C1:

The calculated runoff volume for the area, based upon the 24 hour, 25 year storm (1.8") is approximately 1,508 cf. The design swale "C" is calculated to retain 1,508 cf of runoff.

Sub-catchment D1:

The calculated runoff volume for the area, based upon the 24 hour, 25 year storm (1.8") is approximately 862 cf. The design swale "D" is calculated to retain 862 cf of runoff.

Sub-catchment E1:

The calculated runoff volume for the area, based upon the 24 hour, 25 year storm (1.8") is approximately 993 cf. The design swale "E" is calculated to retain 993 cf of runoff.

Sub-catchment F1:

The calculated runoff volume for the area, based upon the 24 hour, 25 year storm (1.8") is approximately 1,765 cf. The design swale "F" is calculated to retain 1,765 cf of runoff.

The geotechnical report predicts groundwater at an elevation ranging between 1040 and 1038 based on a depth of 8 to 10 feet below existing grade. With a swale base design infiltration, separation from groundwater is expected to be between 6 to 8 feet. Since the native silts overlie well drained sand and gravel, groundwater mounding is not anticipated on the site.

11.0 Operations and Maintenance

Provision should be made for regular and perpetual maintenance of the infiltration basin, including replacement and/or reconstruction of the treatment infiltration medium. Maintenance should be conducted when water remains in the basin or trench for more than 72 hours or overflows the swale. Maintenance for bio-infiltration swales is minimal, but would include the following.

Debris/sediment accumulation - Removal of accumulated debris/sediment in the swale should be conducted every six months or as needed to prevent clogging, or when water remains in the pond for greater than 72 hours.

Vegetation Maintenance - Grass should be cut at regular intervals and allowed to get no longer than 6 inches. The swale should be kept free of noxious weeds and irrigated as needed to maintain healthy vegetation. Use of dry land grass seed can reduce the need for irrigation. Use of fertilizers should be limited to only what is required to maintain healthy vegetation.

Appendices

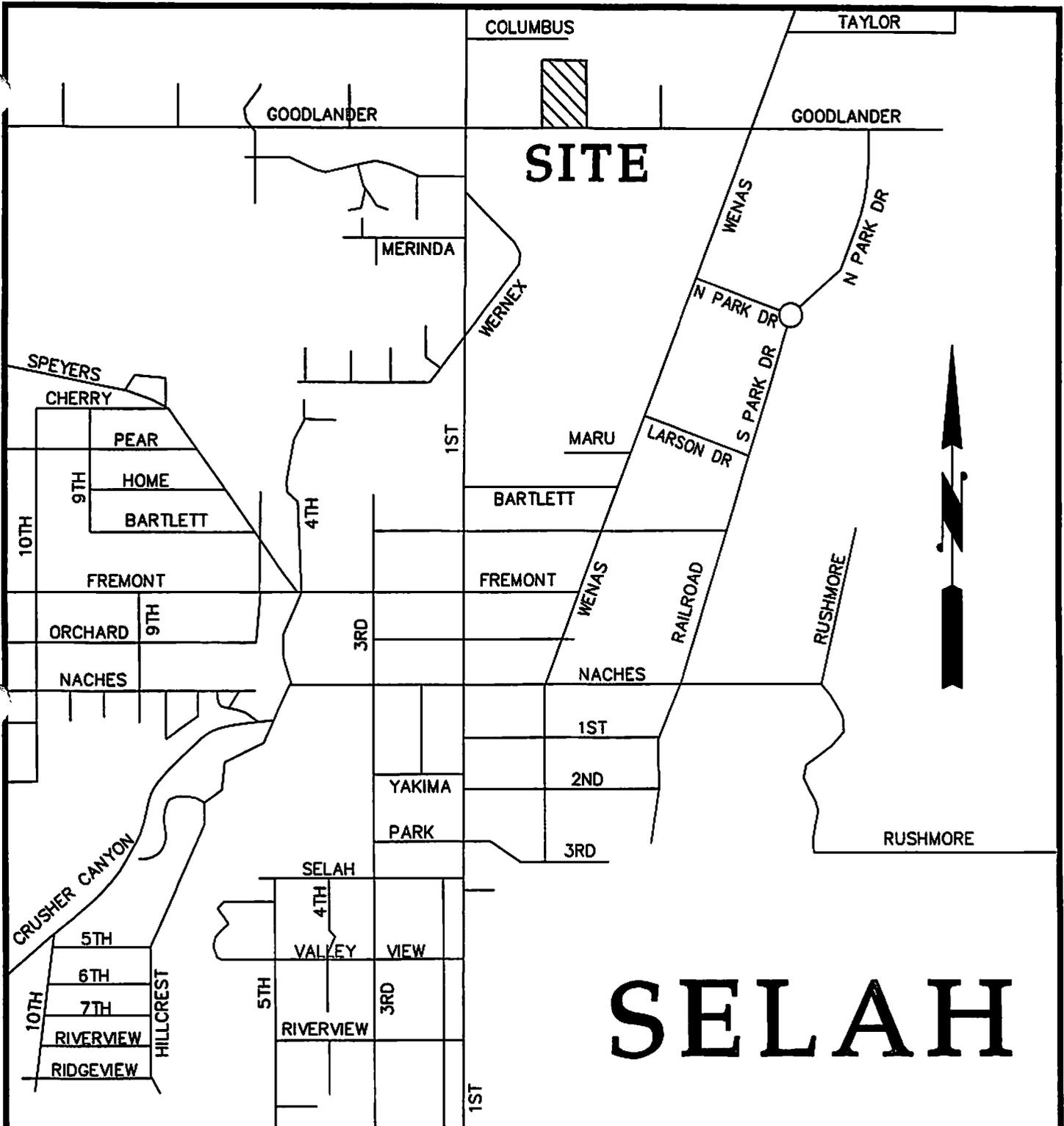
Appendix A Vicinity Map, Basin Map, Storm Water Flow Map, Tax Parcel Maps

Appendix B 25 year, 24 hour Long Duration Rainfall Calculations (Peak Volume)

Appendix C 25 year, 3 hour Short Duration Rainfall Calculations (Peak Flow)

Appendix A

VICINITY MAP, BASIN MAP, STORM WATER FLOW MAP, TAX PARCEL MAP



SELAH

VICINITY MAP

NO SCALE

JUNE 09, 2015
JOB NO. 13257

PARCEL NO. 181425 - 33419 THRU 33426

PLSA

ENGINEERING-SURVEYING-PLANNING
1120 WEST LINCOLN YAKIMA, WASHINGTON (509) 575-6990

VICINITY MAP
WHISPERING VIEW ESTATES
SELAH, WASHINGTON
— PREPARED FOR —
TORKELSON CONSTRUCTION

YAKIMA COUNTY
PARCEL NO.
181425-33008

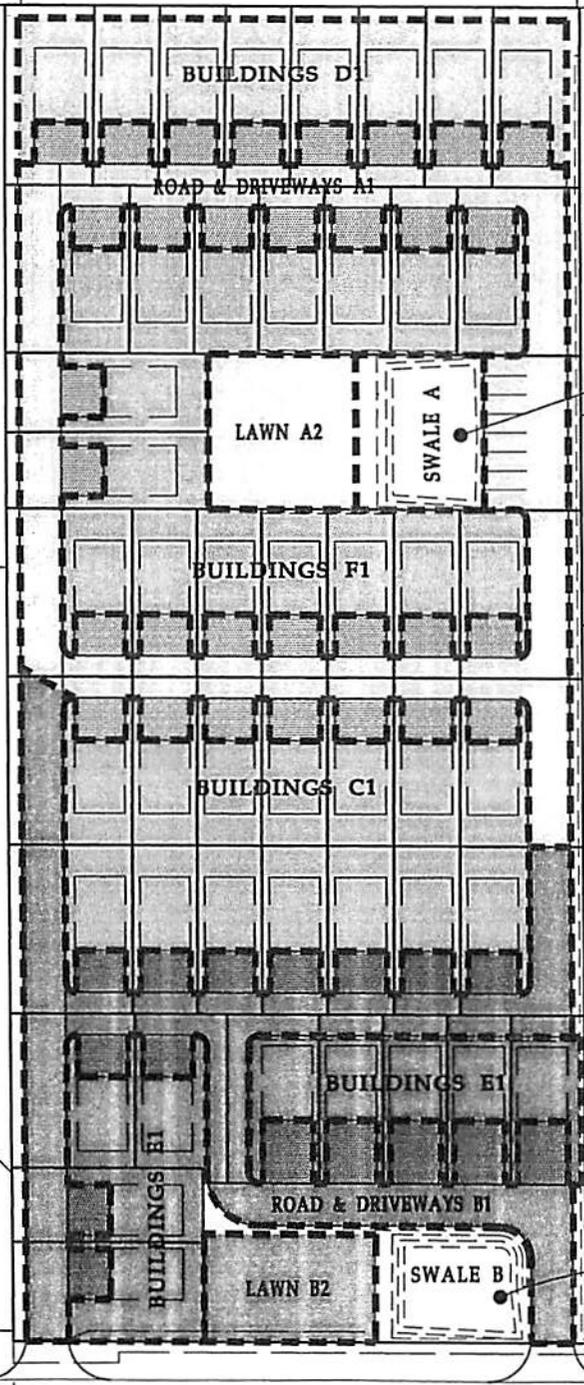
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PARCEL NO.
181425-33013

YAKIMA COUNTY
PARCEL NO.
181425-33015

YAKIMA COUNTY
PARCEL NO.
181425-33016

CITY OF SELAH
PARCEL NO.
181425-33412

CITY OF SELAH
PARCEL NO.
181425-33017



ELEV	AREA (sq. ft.)	DEPT H (ft)	AVG END INC. VOL. (cu. ft.)	AVG END TOTAL VOL. (cu. ft.)
1,177.70	2,425	N/A	N/A	0.00
1,178.70	3,065	1.00	2744.80	2744.80

A1 ROAD & DRIVEWAYS: 36,558 SQ.FT.
A2 LAWN: 5,160 SQ.FT.

B1 ROAD & DRIVEWAYS: 27,274 SQ.FT.
B2 LAWN: 4,149 SQ.FT.

C1 BUILDING ROOFS: 11,480 SQ.FT.
C SWALE/6" DEEP DRAIN ROCK: 12,290 SQ.FT.

D1 BUILDING ROOFS: 6,560 SQ.FT.
D SWALE/6" DEEP DRAIN ROCK: 7,477 SQ.FT.

E1 BUILDING ROOFS: 7,560 SQ.FT.
E SWALE/6" DEEP DRAIN ROCK: 7,219 SQ.FT.

F1 BUILDING ROOFS: 13,440 SQ.FT.
F SWALE/6" DEEP DRAIN ROCK: 14,256 SQ.FT.

ELEV	AREA (sq. ft.)	DEPT H (ft)	AVG END INC. VOL. (cu. ft.)	AVG END TOTAL VOL. (cu. ft.)
1,145.00	1,969	N/A	N/A	0.00
1,146.00	2,539	1.00	2254.10	2254.10

JUNE 09, 2015
JOB NO. 13257

PARCEL NO. 181425 - 33419 THRU 33426

PLSA

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BASIN MAP
WHISPERING VIEW ESTATES
SELAH, WASHINGTON
— PREPARED FOR —
TORKELSON CONSTRUCTION

GOODLANDER ROAD

GOODLANDER ROAD

PARCEL NO. 181425 - 33419 THRU 33426

STORM WATER FLOW MAP
WHISPERING VIEW ESTATES
SELAH, WASHINGTON
PREPARED FOR
TORKELSON CONSTRUCTION

PLSA

ENGINEERING-SURVEYING-PLANNING
1115 WEST LINCOLN YAKIMA, WASHINGTON (509) 871-6996

JULY 28, 2015
JOB NO. 13257

CITY OF SELAH
PARCEL NO.
181425-33017

YAKIMA COUNTY
PARCEL NO.
181425-33018

YAKIMA COUNTY
PARCEL NO.
181425-33019

YAKIMA COUNTY
PARCEL NO.
181425-33020

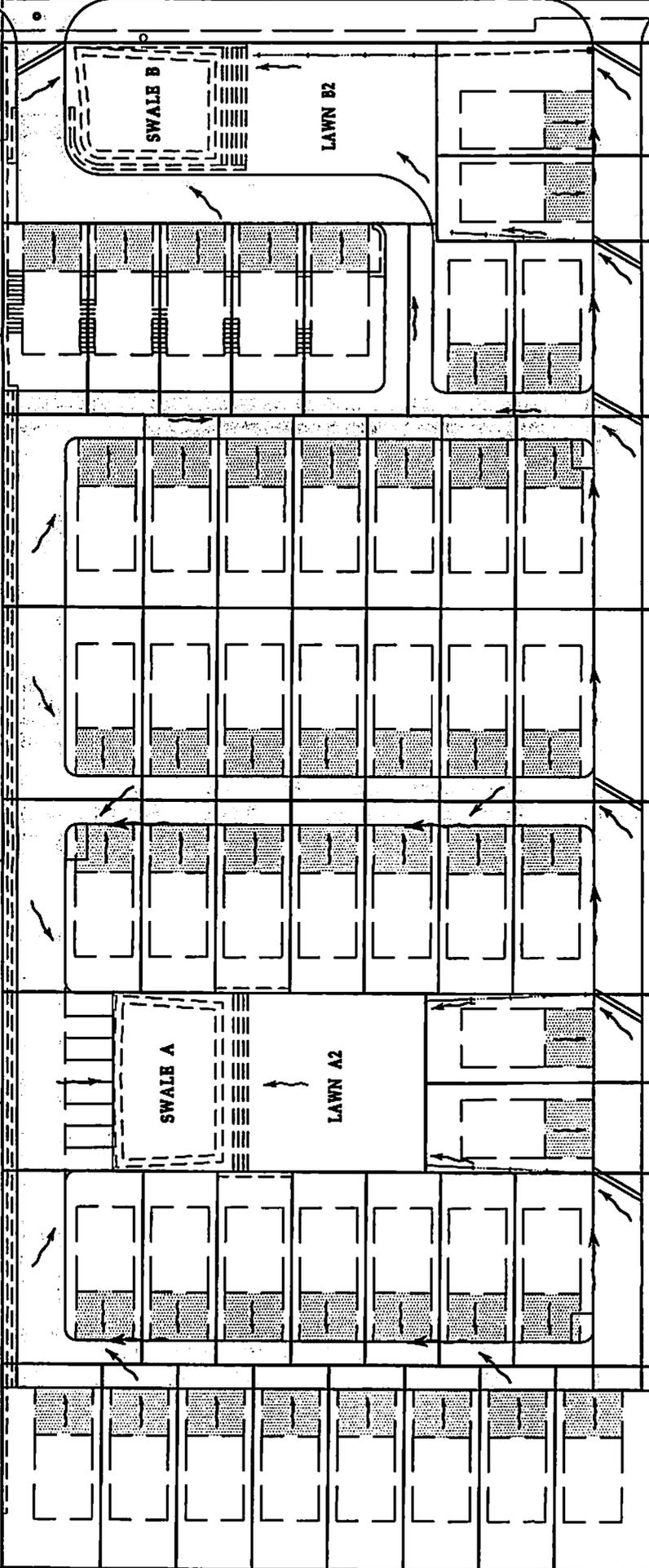
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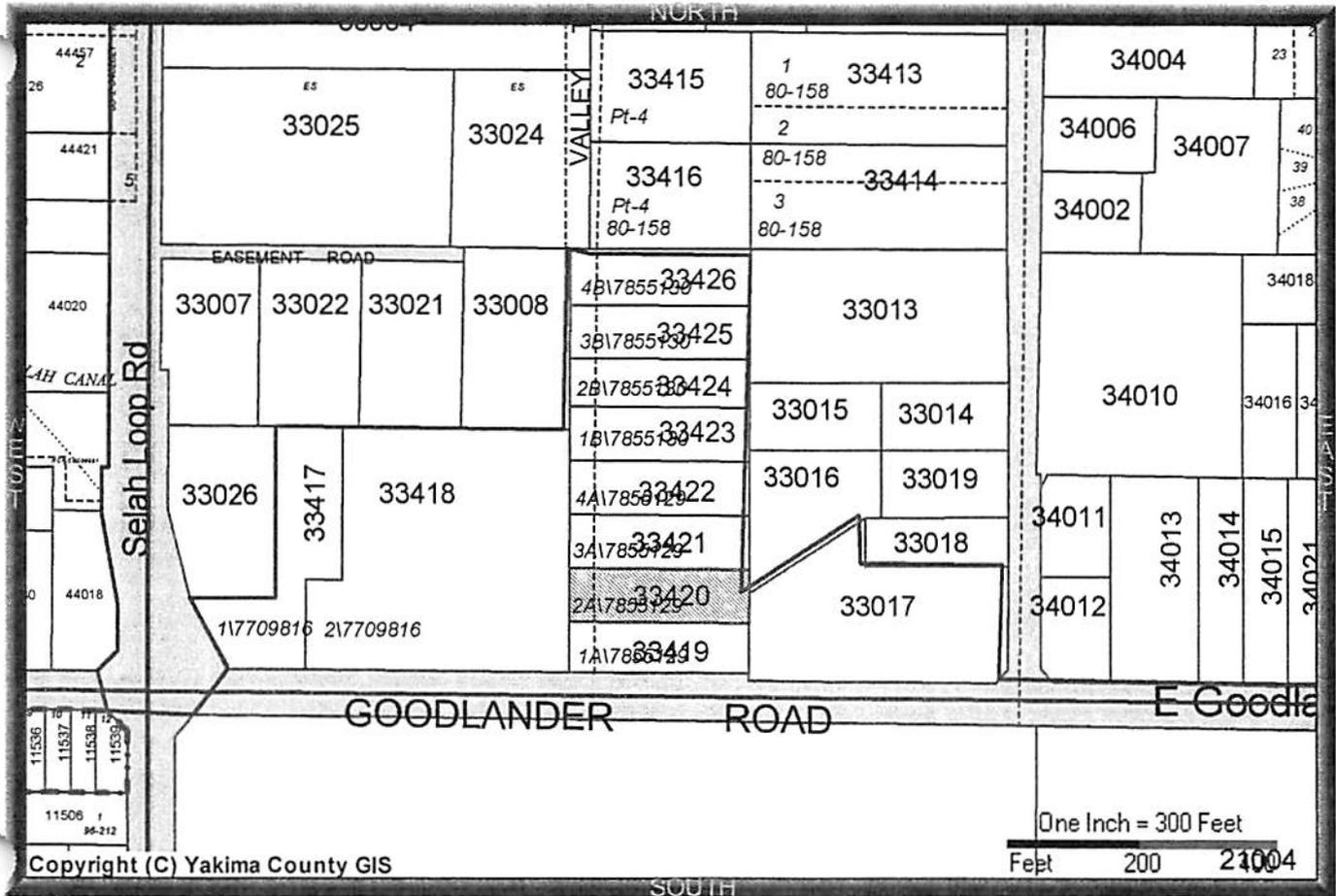
YAKIMA COUNTY
PARCEL NO.
181425-33024

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PARCEL NO.
181425-33008

CITY OF SELAH
PARCEL NO.
181425-33418



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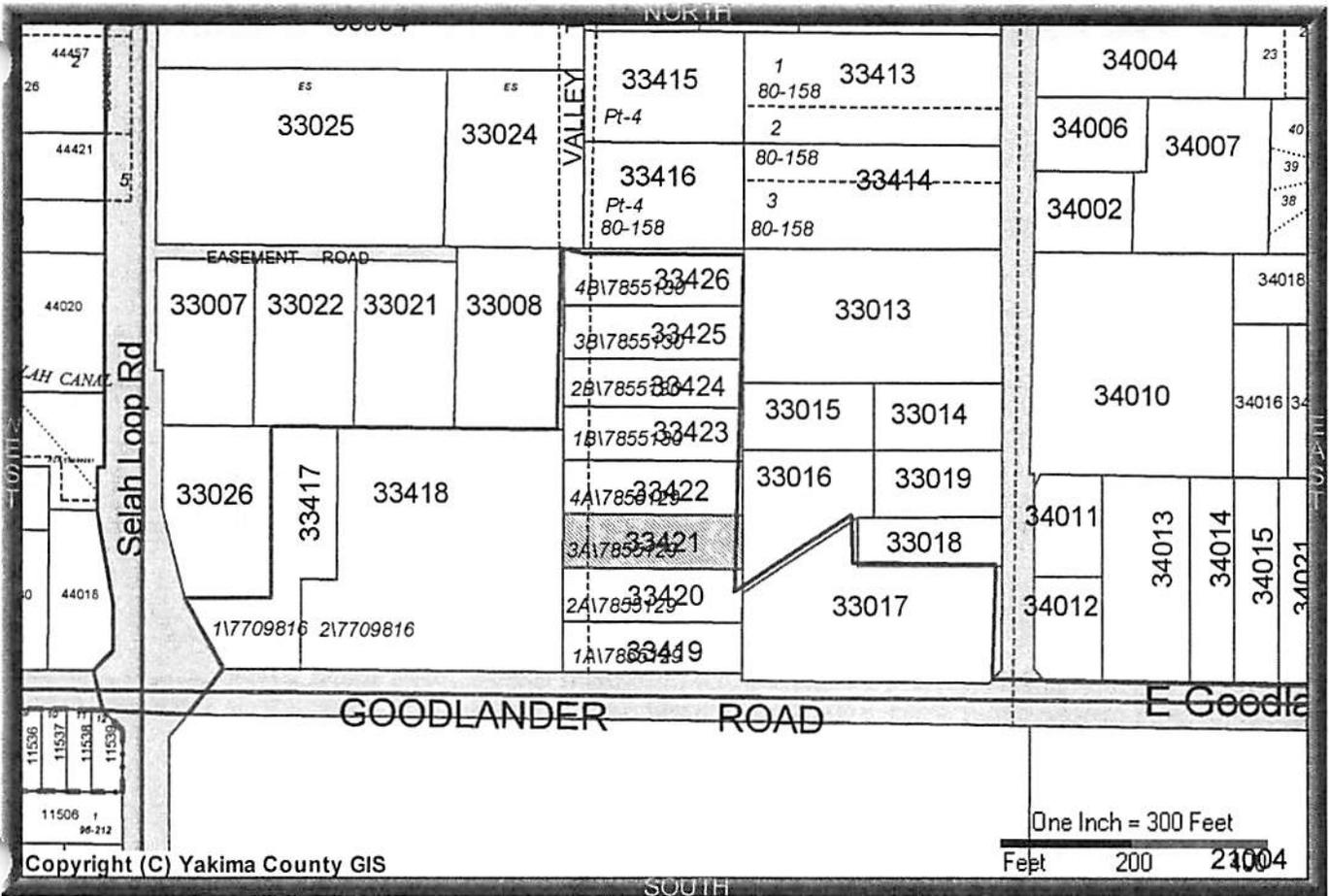


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One Inch = 300 Feet
Feet 200 21004

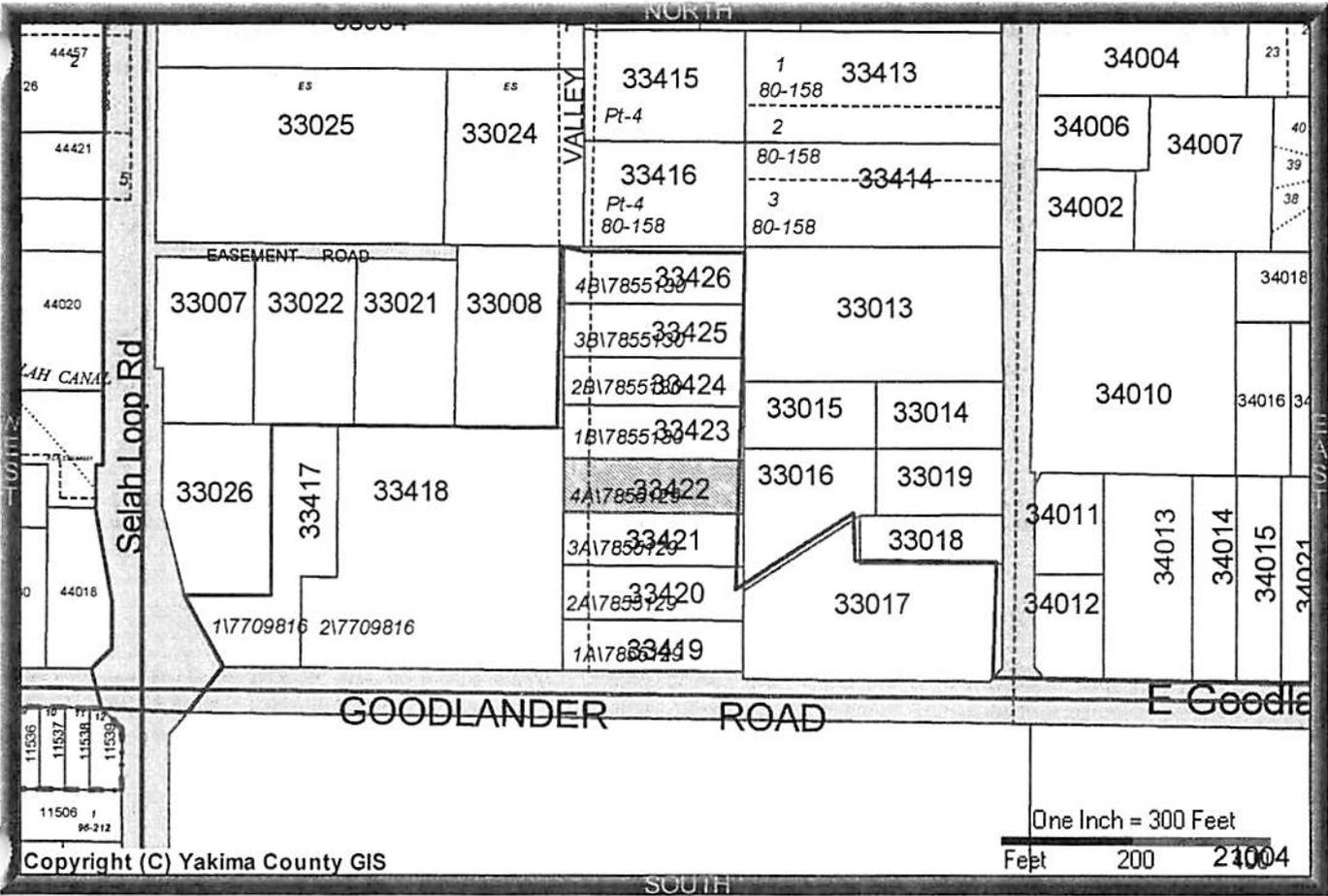
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	Parcel Owner(s): CARL L & CANDI TORKELSON	
	Parcel Number: 18142533420	Parcel Size: 21751 Square Feet
	Property Use: 11 Single Unit	
TAX AND ASSESSMENT INFORMATION		
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Improvement Value: \$92200		Land Value: \$46900
CurrentUse Value: \$0		CurrentUse Improvement: \$0
New Construction: \$0		Total Assessed Value: \$139100
OVERLAY INFORMATION		
Zoning:	Jurisdiction: Selah	
Urban Growth Area: Selah	Future Landuse Designation: UGA (Yakima County Plan 2015)	
FEMA: Not in floodplain (X)	FIRM Panel Number: 53077C0717D	
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Narrative Description: Section 25 Township 14 Range 18 Quarter SW: SPM 7855129 Lot 2A		
DISCLAIMER		
MAP AND PARCEL DATA ARE BELIEVED TO BE ACCURATE, BUT ACCURACY IS NOT GUARANTEED; THIS IS NOT A LEGAL DOCUMENT AND SHOULD NOT BE SUBSTITUTED FOR A TITLE SEARCH, APPRAISAL, SURVEY, FLOODPLAIN OR ZONING VERIFICATION		

[Print Map] [Close Map]



PROPERTY PHOTO	PROPERTY INFORMATION	
	Parcel Address: 207 3A E GOODLANDER RD, SELAH ,WA 98942	
	Parcel Owner(s): CARL L & CANDI TORKELSON	
	Parcel Number: 18142533421	Parcel Size: 21754 Square Feet
	Property Use: 18 Other Residential	
TAX AND ASSESSMENT INFORMATION		
Tax Code Area (TCA): 410		Tax Year: 2015
Improvement Value: \$600		Land Value: \$46900
Current Use Value: \$0		Current Use Improvement: \$0
New Construction: \$0		Total Assessed Value: \$47500
OVERLAY INFORMATION		
Zoning:	Jurisdiction: Selah	
Urban Growth Area: Selah	Future Landuse Designation: UGA (Yakima County Plan 2015)	
FEMA: Not in floodplain (X)	FIRM Panel Number: 53077C0717D	
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DISCLAIMER		
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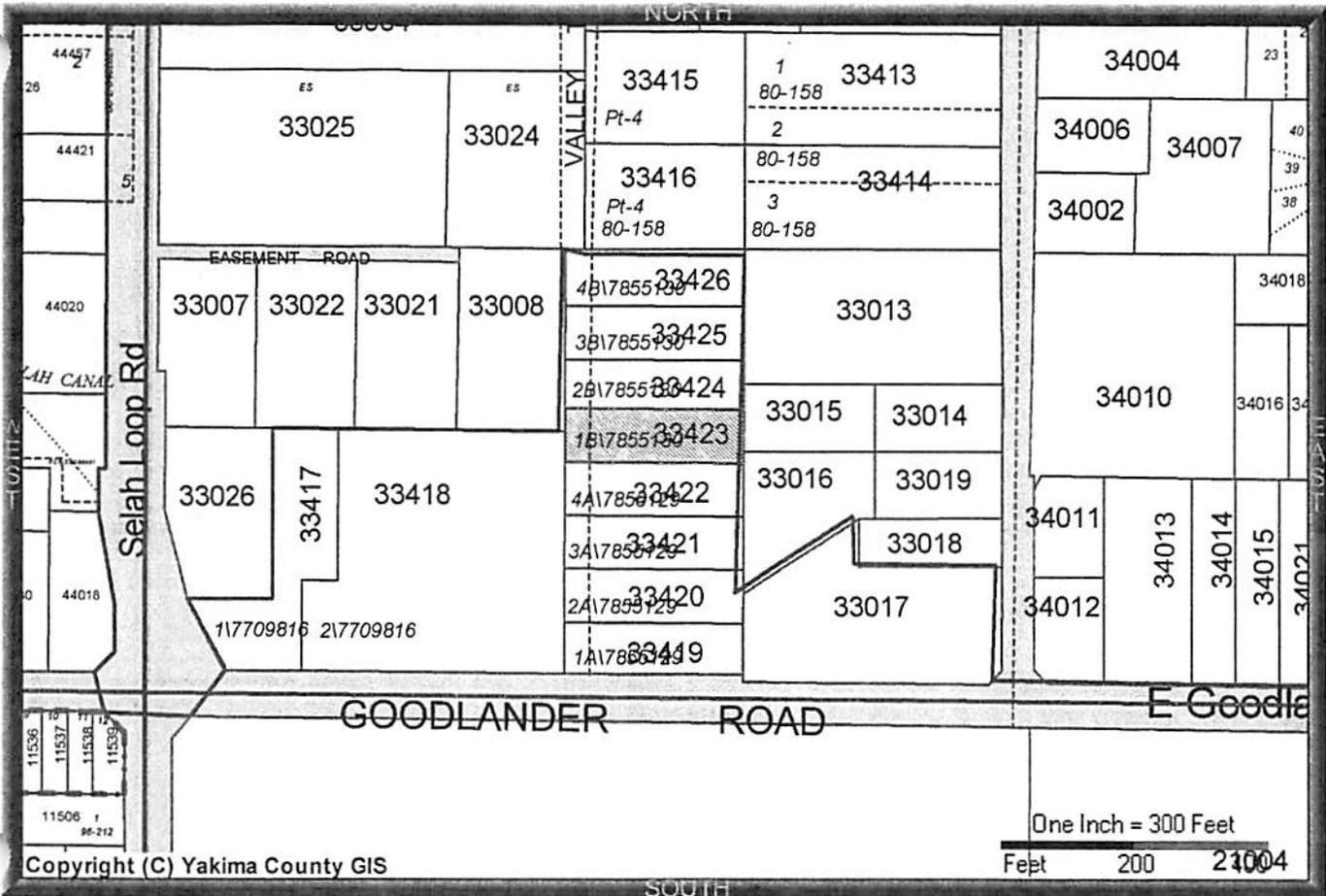


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One Inch = 300 Feet
 Feet 200 21004

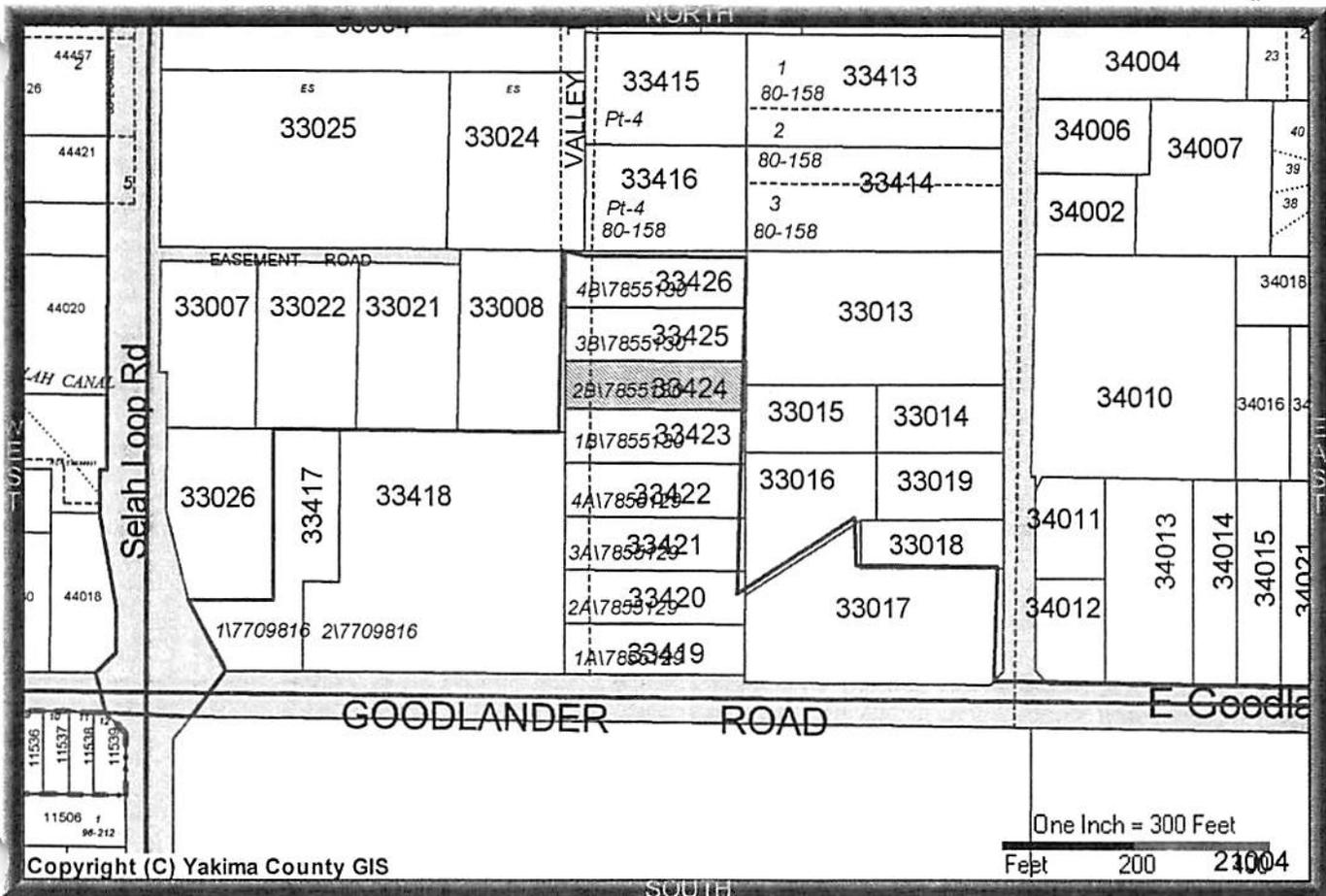
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	Parcel Owner(s): CARL L & CANDI TORKELSON	
	Parcel Number: 18142533422	Parcel Size: 21756 Square Feet
	Property Use: 18 Other Residential	
TAX AND ASSESSMENT INFORMATION		
Tax Code Area (TCA): 410		Tax Year: 2015
Improvement Value: \$4000		Land Value: \$46900
CurrentUse Value: \$0		CurrentUse Improvement: \$0
New Construction: \$0		Total Assessed Value: \$50900
OVERLAY INFORMATION		
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Urban Growth Area: Selah	Future Landuse Designation: UGA (Yakima County Plan 2015)	
FEMA: Not in floodplain (X)	FIRM Panel Number: 53077C0717D	
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DISCLAIMER		
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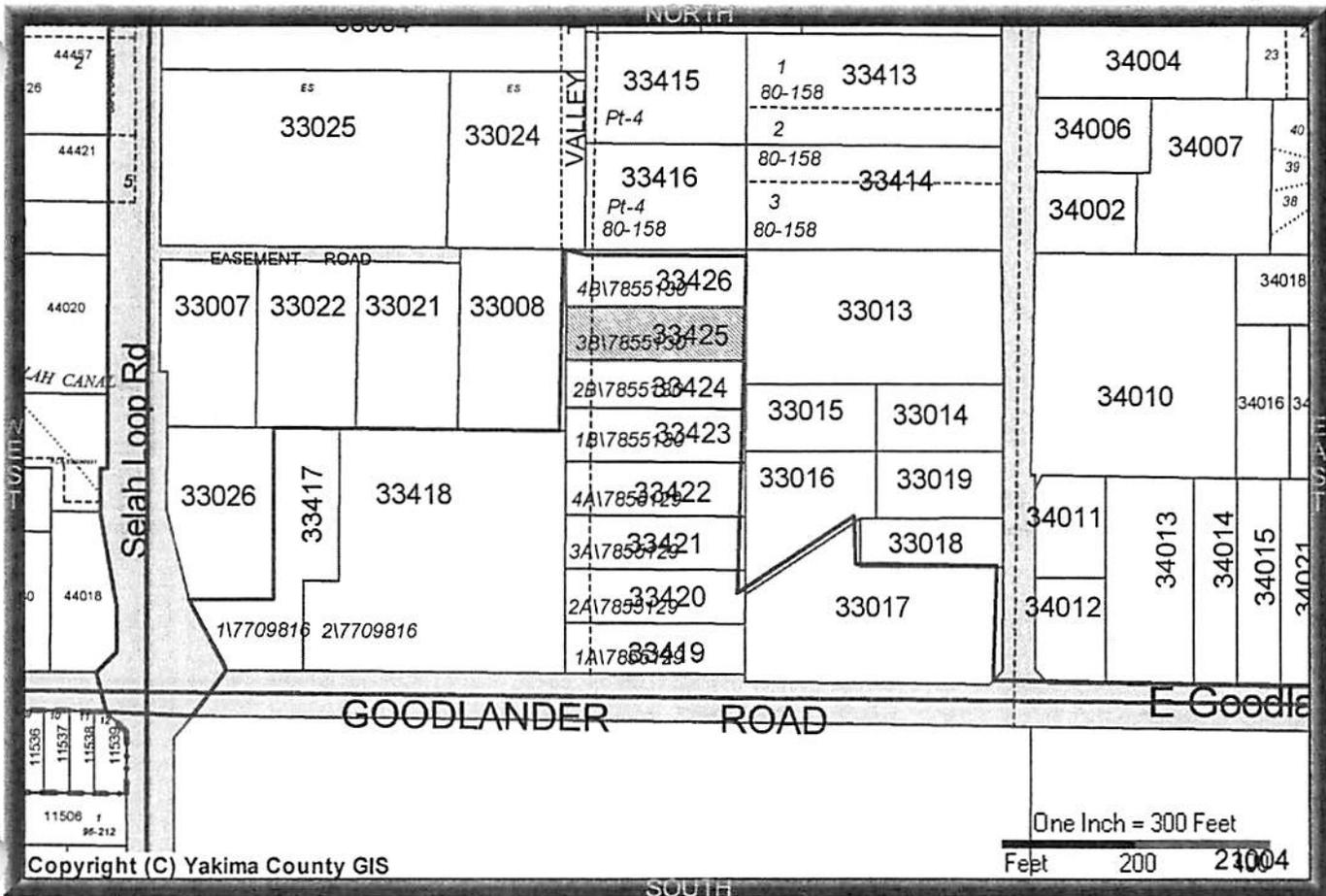
PROPERTY PHOTO	PROPERTY INFORMATION
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	Parcel Owner(s): CARL L & CANDI TORKELSON
	Parcel Number: 18142533423 Parcel Size: 21758 Square Feet
	Property Use: 91 Residential land Undeveloped
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New Construction:\$0 Total Assessed Value:\$46900	
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Urban Growth Area: Selah	Future Landuse Designation: UGA (Yakima County Plan 2015)
FEMA: Not in floodplain (X)	FIRM Panel Number: 53077C0717D
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DISCLAIMER	
MAP AND PARCEL DATA ARE BELIEVED TO BE ACCURATE, BUT ACCURACY IS NOT GUARANTEED; THIS IS NOT A LEGAL DOCUMENT AND SHOULD NOT BE SUBSTITUTED FOR A TITLE SEARCH, APPRAISAL, SURVEY, FLOODPLAIN OR ZONING VERIFICATION	

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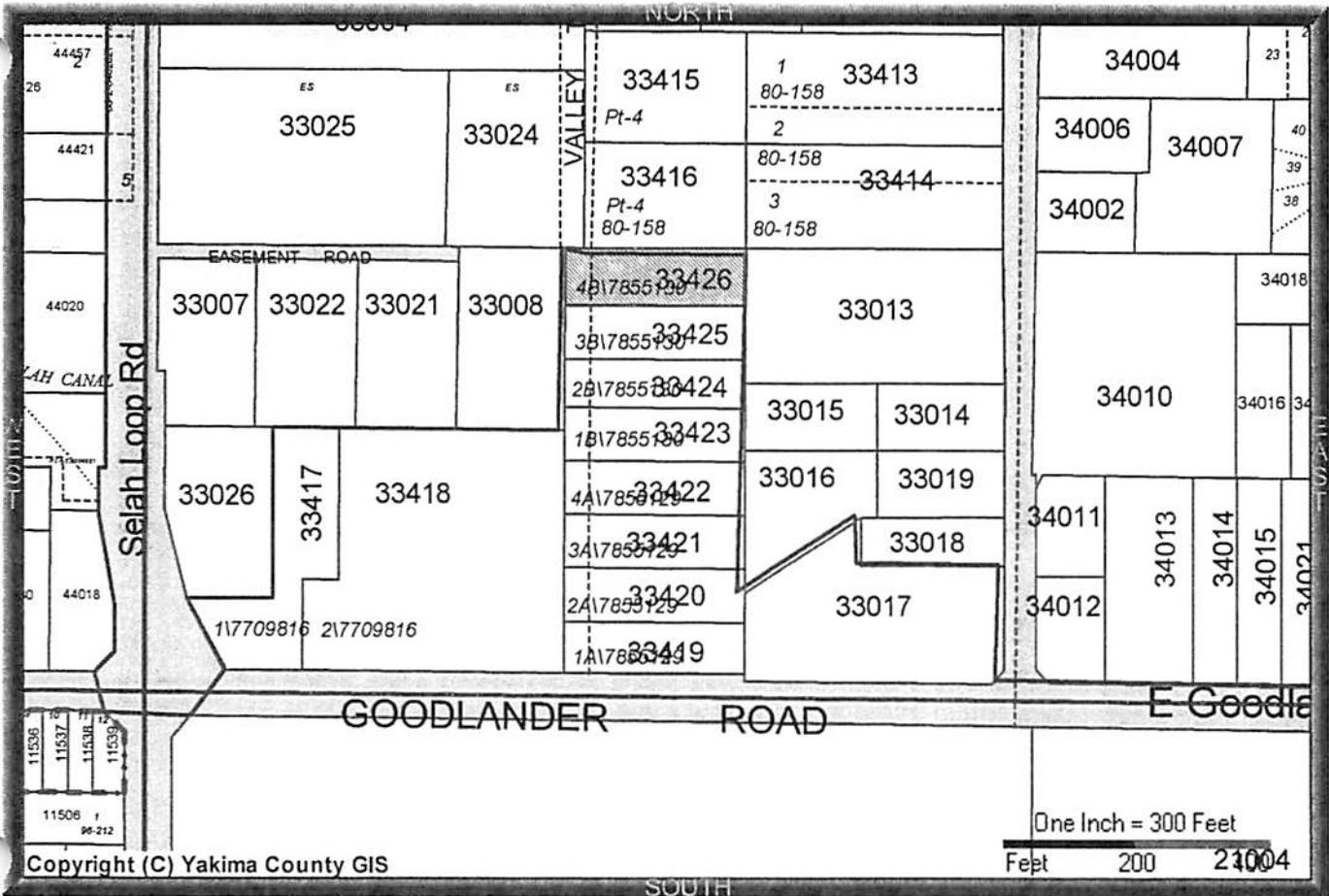
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Urban Growth Area: Selah	Future Landuse Designation: UGA (Yakima County Plan 2015)	
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DISCLAIMER		
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PROPERTY PHOTO	PROPERTY INFORMATION	
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	Parcel Owner(s): CARL L & CANDI TORKELOSON	
	Parcel Number: 18142533425	Parcel Size: 21764 Square Feet
	Property Use: 91 Residential land Undeveloped	
TAX AND ASSESSMENT INFORMATION		
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New Construction: \$0		Total Assessed Value: \$47000
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Zoning:	Jurisdiction: Selah	
Urban Growth Area: Selah	Future Landuse Designation: UGA (Yakima County Plan 2015)	
FEMA: Not in floodplain (X)	FIRM Panel Number: 53077C0717D	
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Narrative Description: Section 25 Township 14 Range 18 Quarter SW: SPM 7855130 Lot 3B		
DISCLAIMER		
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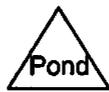
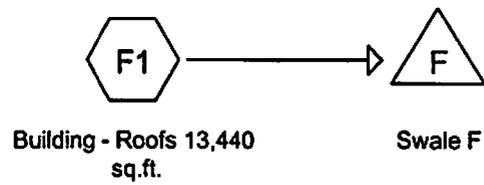
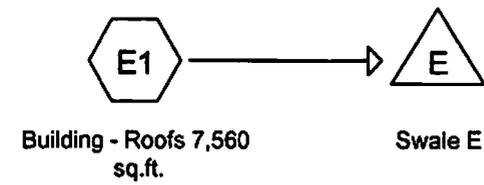
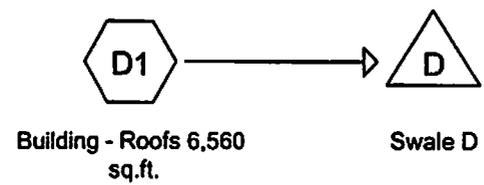
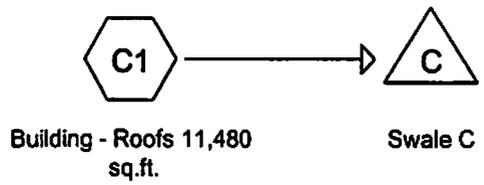
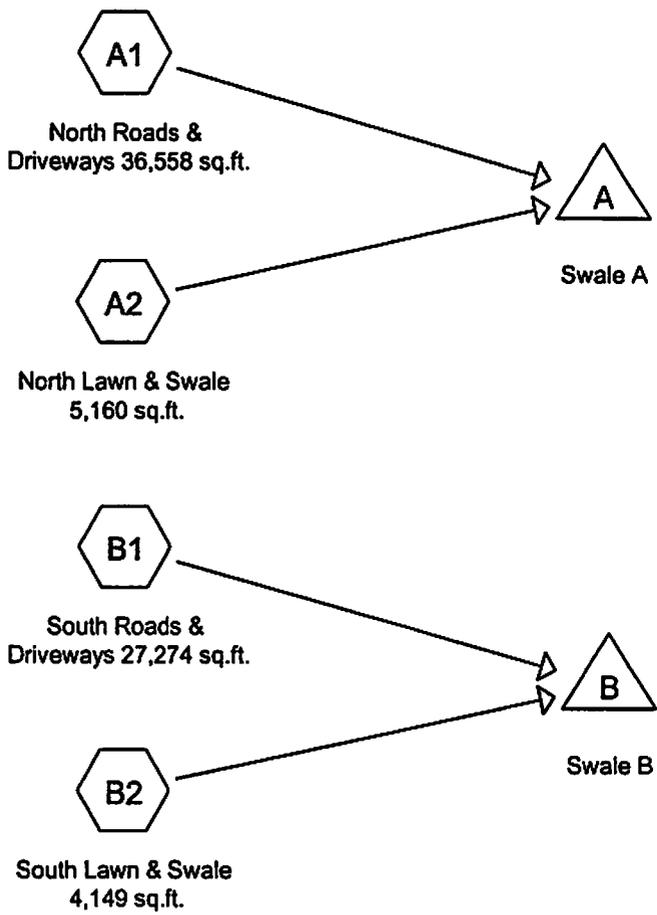
[Print Map] [Close Map]



PROPERTY PHOTO	PROPERTY INFORMATION
	Parcel Address: 207 4B E GOODLANDER RD, SELAH ,WA 98942
	Parcel Owner(s): CARL L & CANDI TORKE LSON
	Parcel Number: 18142533426 Parcel Size: 23223 Square Feet
	Property Use: 91 Residential land Undeveloped
TAX AND ASSESSMENT INFORMATION	
Tax Code Area (TCA): 410 Tax Year: 2015	
Improvement Value: \$0 Land Value: \$47400	
CurrentUse Value: \$0 CurrentUse Improvement: \$0	
New Construction: \$0 Total Assessed Value: \$47400	
OVERLAY INFORMATION	
Zoning:	Jurisdiction: Selah
Urban Growth Area: Selah	Future Landuse Designation: UGA (Yakima County Plan 2015)
FEMA: Not in floodplain (X)	FIRM Panel Number: 53077C0717D
LOCATION INFORMATION	
+ Latitude: 46° 40' 00.613"	+ Longitude: -120° 31' 38.528" Range: 18 Township: 14 Section: 25
Narrative Description: Section 25 Township 14 Range 18 Quarter SW: SPM 7855130 Lot 4B	
DISCLAIMER	
MAP AND PARCEL DATA ARE BELIEVED TO BE ACCURATE, BUT ACCURACY IS NOT GUARANTEED; THIS IS NOT A LEGAL DOCUMENT AND SHOULD NOT BE SUBSTITUTED FOR A TITLE SEARCH, APPRAISAL, SURVEY, FLOODPLAIN OR ZONING VERIFICATION	

Appendix B

25 YEAR, 24 HOUR LONG DURATION RAINFALL CALCULATIONS (PEAK VOLUME)



Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
9,309	61	>75% Grass cover, Good, HSG B (A2, B2)
39,040	98	Roof (C1, D1, E1, F1)
27,274	98	South Roads & Driveways (B1)
36,558	98	north roads & driveways (A1)
112,181	95	TOTAL AREA

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points

Runoff by SBUH method, Split Pervious/Imperv.

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment A1: North Roads &	Runoff Area=36,558 sf 100.00% Impervious Runoff Depth=1.58" Tc=5.0 min CN=0/98 Runoff=0.26 cfs 4,802 cf
Subcatchment A2: North Lawn & Swale	Runoff Area=5,160 sf 0.00% Impervious Runoff Depth=0.04" Tc=5.0 min CN=61/0 Runoff=0.00 cfs 17 cf
Subcatchment B1: South Roads &	Runoff Area=27,274 sf 100.00% Impervious Runoff Depth=1.58" Tc=5.0 min CN=0/98 Runoff=0.19 cfs 3,583 cf
Subcatchment B2: South Lawn & Swale	Runoff Area=4,149 sf 0.00% Impervious Runoff Depth=0.04" Tc=5.0 min CN=61/0 Runoff=0.00 cfs 14 cf
Subcatchment C1: Building - Roofs	Runoff Area=11,480 sf 100.00% Impervious Runoff Depth=1.58" Tc=5.0 min CN=0/98 Runoff=0.08 cfs 1,508 cf
Subcatchment D1: Building - Roofs 6,560	Runoff Area=6,560 sf 100.00% Impervious Runoff Depth=1.58" Tc=5.0 min CN=0/98 Runoff=0.05 cfs 862 cf
Subcatchment E1: Building - Roofs 7,560	Runoff Area=7,560 sf 100.00% Impervious Runoff Depth=1.58" Tc=5.0 min CN=0/98 Runoff=0.05 cfs 993 cf
Subcatchment F1: Building - Roofs	Runoff Area=13,440 sf 100.00% Impervious Runoff Depth=1.58" Tc=5.0 min CN=0/98 Runoff=0.10 cfs 1,765 cf
Pond A: Swale A	Peak Elev=1,178.61' Storage=2,477 cf Inflow=0.26 cfs 4,819 cf Outflow=0.03 cfs 4,819 cf
Pond B: Swale B	Peak Elev=1,145.80' Storage=1,765 cf Inflow=0.19 cfs 3,596 cf Outflow=0.03 cfs 3,596 cf
Pond C: Swale C	Peak Elev=99.51' Storage=33 cf Inflow=0.08 cfs 1,508 cf Outflow=0.07 cfs 1,508 cf
Pond D: Swale D	Peak Elev=99.51' Storage=17 cf Inflow=0.05 cfs 862 cf Outflow=0.04 cfs 862 cf
Pond E: Swale E	Peak Elev=99.51' Storage=30 cf Inflow=0.05 cfs 993 cf Outflow=0.04 cfs 993 cf
Pond F: Swale F	Peak Elev=99.51' Storage=40 cf Inflow=0.10 cfs 1,765 cf Outflow=0.08 cfs 1,765 cf

Total Runoff Area = 112,181 sf Runoff Volume = 13,544 cf Average Runoff Depth = 1.45"
8.30% Pervious = 9,309 sf 91.70% Impervious = 102,872 sf

Summary for Subcatchment A1: North Roads & Driveways 36,558 sq.ft.

Runoff = 0.26 cfs @ 9.06 hrs, Volume= 4,802 cf, Depth= 1.58"

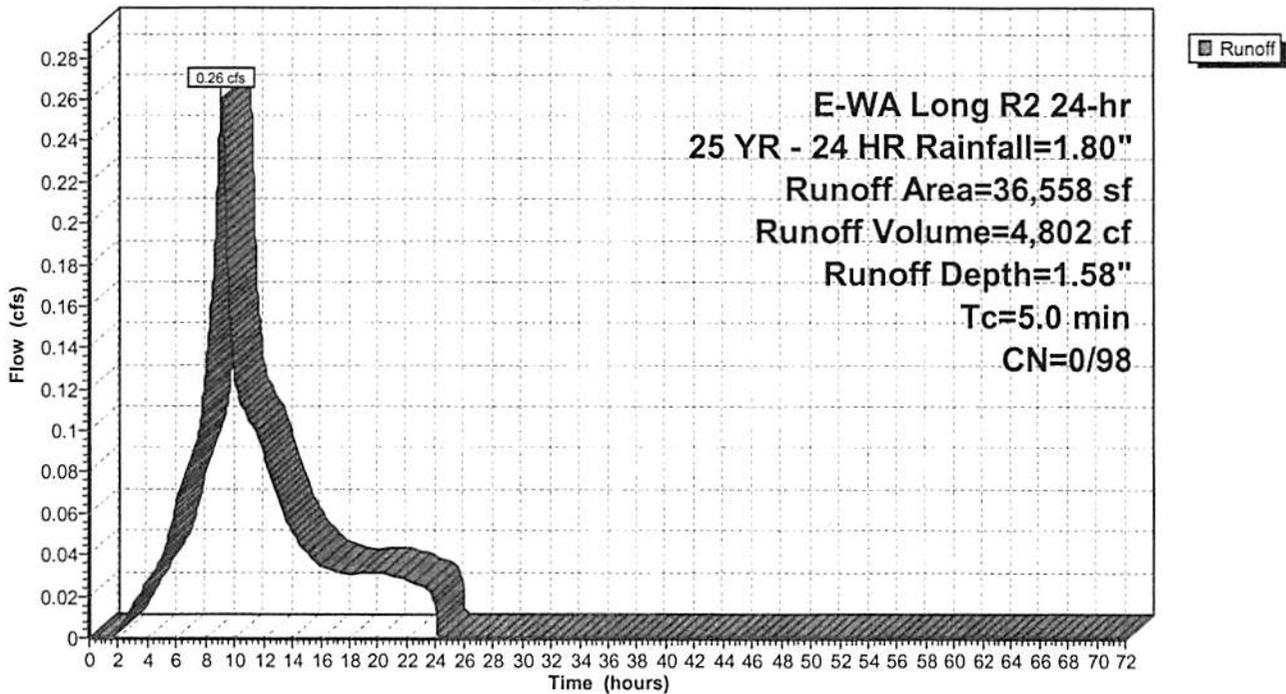
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 E-WA Long R2 24-hr 25 YR - 24 HR Rainfall=1.80"

Area (sf)	CN	Description
* 36,558	98	north roads & driveways
36,558		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Minimum Value

Subcatchment A1: North Roads & Driveways 36,558 sq.ft.

Hydrograph



Hydrograph for Subcatchment A1: North Roads & Driveways 36,558 sq.ft.

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
2.00	0.05	0.00	0.00	0.00
4.00	0.16	0.00	0.04	0.03
6.00	0.30	0.00	0.15	0.07
8.00	0.55	0.00	0.36	0.13
10.00	1.01	0.00	0.80	0.13
12.00	1.26	0.00	1.04	0.09
14.00	1.42	0.00	1.20	0.05
16.00	1.52	0.00	1.30	0.04
18.00	1.60	0.00	1.37	0.03
20.00	1.67	0.00	1.45	0.03
22.00	1.74	0.00	1.52	0.03
24.00	1.80	0.00	1.58	0.02
26.00	1.80	0.00	1.58	0.00
28.00	1.80	0.00	1.58	0.00
30.00	1.80	0.00	1.58	0.00
32.00	1.80	0.00	1.58	0.00
34.00	1.80	0.00	1.58	0.00
36.00	1.80	0.00	1.58	0.00
38.00	1.80	0.00	1.58	0.00
40.00	1.80	0.00	1.58	0.00
42.00	1.80	0.00	1.58	0.00
44.00	1.80	0.00	1.58	0.00
46.00	1.80	0.00	1.58	0.00
48.00	1.80	0.00	1.58	0.00
50.00	1.80	0.00	1.58	0.00
52.00	1.80	0.00	1.58	0.00
54.00	1.80	0.00	1.58	0.00
56.00	1.80	0.00	1.58	0.00
58.00	1.80	0.00	1.58	0.00
60.00	1.80	0.00	1.58	0.00
62.00	1.80	0.00	1.58	0.00
64.00	1.80	0.00	1.58	0.00
66.00	1.80	0.00	1.58	0.00
68.00	1.80	0.00	1.58	0.00
70.00	1.80	0.00	1.58	0.00
72.00	1.80	0.00	1.58	0.00

Hydrograph for Subcatchment A2: North Lawn & Swale 5,160 sq.ft.

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
2.00	0.05	0.00	0.00	0.00
4.00	0.16	0.00	0.00	0.00
6.00	0.30	0.00	0.00	0.00
8.00	0.55	0.00	0.00	0.00
10.00	1.01	0.00	0.00	0.00
12.00	1.26	0.00	0.00	0.00
14.00	1.42	0.00	0.00	0.00
16.00	1.52	0.01	0.00	0.00
18.00	1.60	0.01	0.00	0.00
20.00	1.67	0.02	0.00	0.00
22.00	1.74	0.03	0.00	0.00
24.00	1.80	0.04	0.00	0.00
26.00	1.80	0.04	0.00	0.00
28.00	1.80	0.04	0.00	0.00
30.00	1.80	0.04	0.00	0.00
32.00	1.80	0.04	0.00	0.00
34.00	1.80	0.04	0.00	0.00
36.00	1.80	0.04	0.00	0.00
38.00	1.80	0.04	0.00	0.00
40.00	1.80	0.04	0.00	0.00
42.00	1.80	0.04	0.00	0.00
44.00	1.80	0.04	0.00	0.00
46.00	1.80	0.04	0.00	0.00
48.00	1.80	0.04	0.00	0.00
50.00	1.80	0.04	0.00	0.00
52.00	1.80	0.04	0.00	0.00
54.00	1.80	0.04	0.00	0.00
56.00	1.80	0.04	0.00	0.00
58.00	1.80	0.04	0.00	0.00
60.00	1.80	0.04	0.00	0.00
62.00	1.80	0.04	0.00	0.00
64.00	1.80	0.04	0.00	0.00
66.00	1.80	0.04	0.00	0.00
68.00	1.80	0.04	0.00	0.00
70.00	1.80	0.04	0.00	0.00
72.00	1.80	0.04	0.00	0.00

Summary for Subcatchment B1: South Roads & Driveways 27,274 sq.ft.

Runoff = 0.19 cfs @ 9.06 hrs, Volume= 3,583 cf, Depth= 1.58"

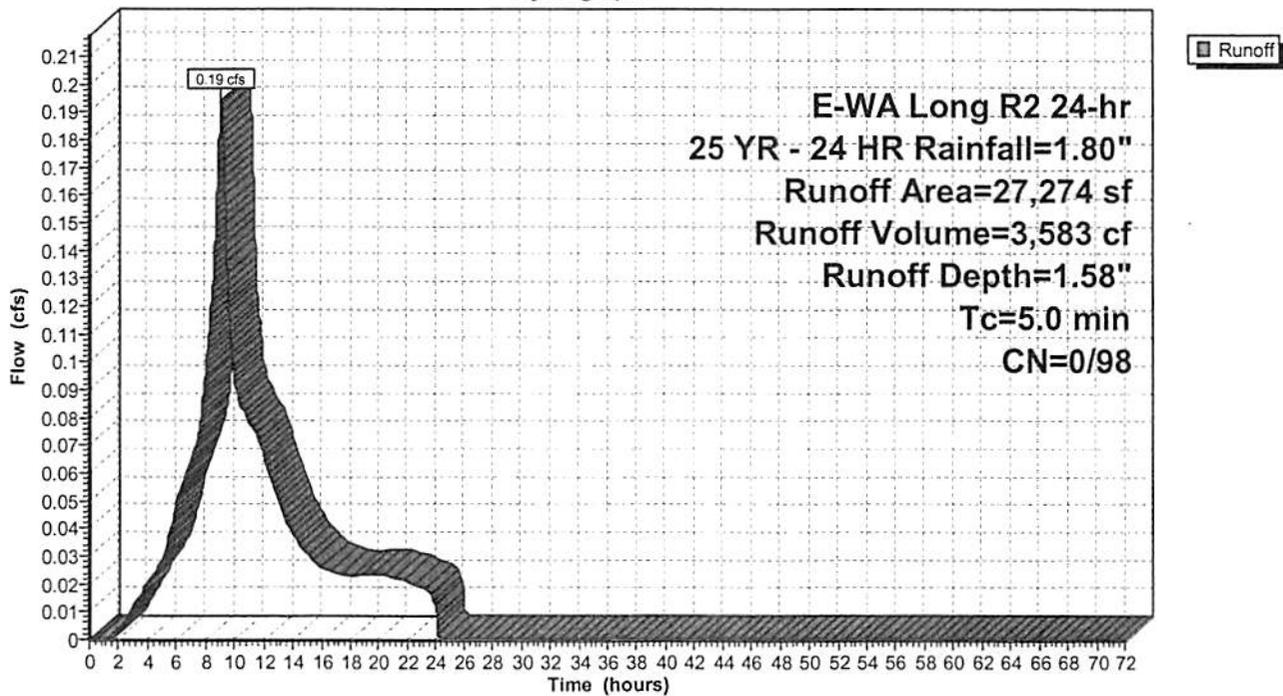
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 E-WA Long R2 24-hr 25 YR - 24 HR Rainfall=1.80"

Area (sf)	CN	Description
* 27,274	98	South Roads & Driveways
27,274		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Minimum Value

Subcatchment B1: South Roads & Driveways 27,274 sq.ft.

Hydrograph



Hydrograph for Subcatchment B1: South Roads & Driveways 27,274 sq.ft.

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
2.00	0.05	0.00	0.00	0.00
4.00	0.16	0.00	0.04	0.02
6.00	0.30	0.00	0.15	0.05
8.00	0.55	0.00	0.36	0.10
10.00	1.01	0.00	0.80	0.09
12.00	1.26	0.00	1.04	0.07
14.00	1.42	0.00	1.20	0.04
16.00	1.52	0.00	1.30	0.03
18.00	1.60	0.00	1.37	0.02
20.00	1.67	0.00	1.45	0.02
22.00	1.74	0.00	1.52	0.02
24.00	1.80	0.00	1.58	0.01
26.00	1.80	0.00	1.58	0.00
28.00	1.80	0.00	1.58	0.00
30.00	1.80	0.00	1.58	0.00
32.00	1.80	0.00	1.58	0.00
34.00	1.80	0.00	1.58	0.00
36.00	1.80	0.00	1.58	0.00
38.00	1.80	0.00	1.58	0.00
40.00	1.80	0.00	1.58	0.00
42.00	1.80	0.00	1.58	0.00
44.00	1.80	0.00	1.58	0.00
46.00	1.80	0.00	1.58	0.00
48.00	1.80	0.00	1.58	0.00
50.00	1.80	0.00	1.58	0.00
52.00	1.80	0.00	1.58	0.00
54.00	1.80	0.00	1.58	0.00
56.00	1.80	0.00	1.58	0.00
58.00	1.80	0.00	1.58	0.00
60.00	1.80	0.00	1.58	0.00
62.00	1.80	0.00	1.58	0.00
64.00	1.80	0.00	1.58	0.00
66.00	1.80	0.00	1.58	0.00
68.00	1.80	0.00	1.58	0.00
70.00	1.80	0.00	1.58	0.00
72.00	1.80	0.00	1.58	0.00

Summary for Subcatchment B2: South Lawn & Swale 4,149 sq.ft.

Runoff = 0.00 cfs @ 21.56 hrs, Volume= 14 cf, Depth= 0.04"

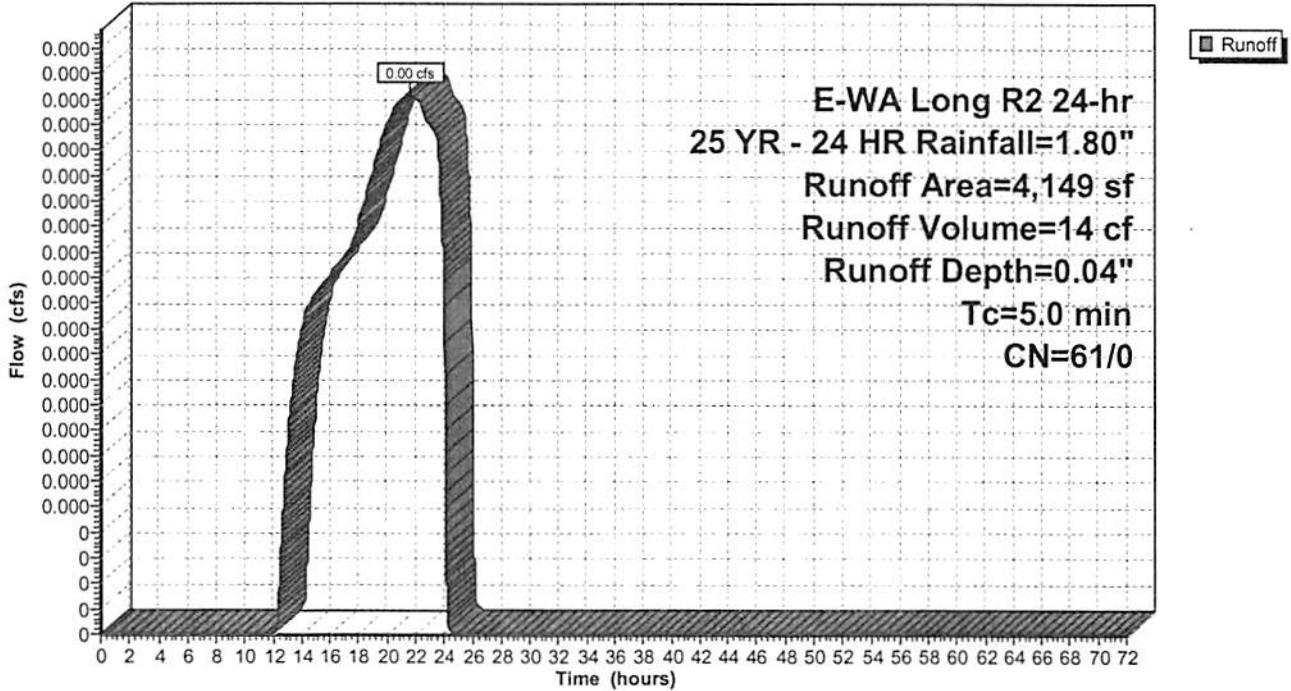
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 E-WA Long R2 24-hr 25 YR - 24 HR Rainfall=1.80"

Area (sf)	CN	Description
4,149	61	>75% Grass cover, Good, HSG B
4,149		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Minimum Value

Subcatchment B2: South Lawn & Swale 4,149 sq.ft.

Hydrograph



Hydrograph for Subcatchment B2: South Lawn & Swale 4,149 sq.ft.

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
2.00	0.05	0.00	0.00	0.00
4.00	0.16	0.00	0.00	0.00
6.00	0.30	0.00	0.00	0.00
8.00	0.55	0.00	0.00	0.00
10.00	1.01	0.00	0.00	0.00
12.00	1.26	0.00	0.00	0.00
14.00	1.42	0.00	0.00	0.00
16.00	1.52	0.01	0.00	0.00
18.00	1.60	0.01	0.00	0.00
20.00	1.67	0.02	0.00	0.00
22.00	1.74	0.03	0.00	0.00
24.00	1.80	0.04	0.00	0.00
26.00	1.80	0.04	0.00	0.00
28.00	1.80	0.04	0.00	0.00
30.00	1.80	0.04	0.00	0.00
32.00	1.80	0.04	0.00	0.00
34.00	1.80	0.04	0.00	0.00
36.00	1.80	0.04	0.00	0.00
38.00	1.80	0.04	0.00	0.00
40.00	1.80	0.04	0.00	0.00
42.00	1.80	0.04	0.00	0.00
44.00	1.80	0.04	0.00	0.00
46.00	1.80	0.04	0.00	0.00
48.00	1.80	0.04	0.00	0.00
50.00	1.80	0.04	0.00	0.00
52.00	1.80	0.04	0.00	0.00
54.00	1.80	0.04	0.00	0.00
56.00	1.80	0.04	0.00	0.00
58.00	1.80	0.04	0.00	0.00
60.00	1.80	0.04	0.00	0.00
62.00	1.80	0.04	0.00	0.00
64.00	1.80	0.04	0.00	0.00
66.00	1.80	0.04	0.00	0.00
68.00	1.80	0.04	0.00	0.00
70.00	1.80	0.04	0.00	0.00
72.00	1.80	0.04	0.00	0.00

Summary for Subcatchment C1: Building - Roofs 11,480 sq.ft.

Runoff = 0.08 cfs @ 9.06 hrs, Volume= 1,508 cf, Depth= 1.58"

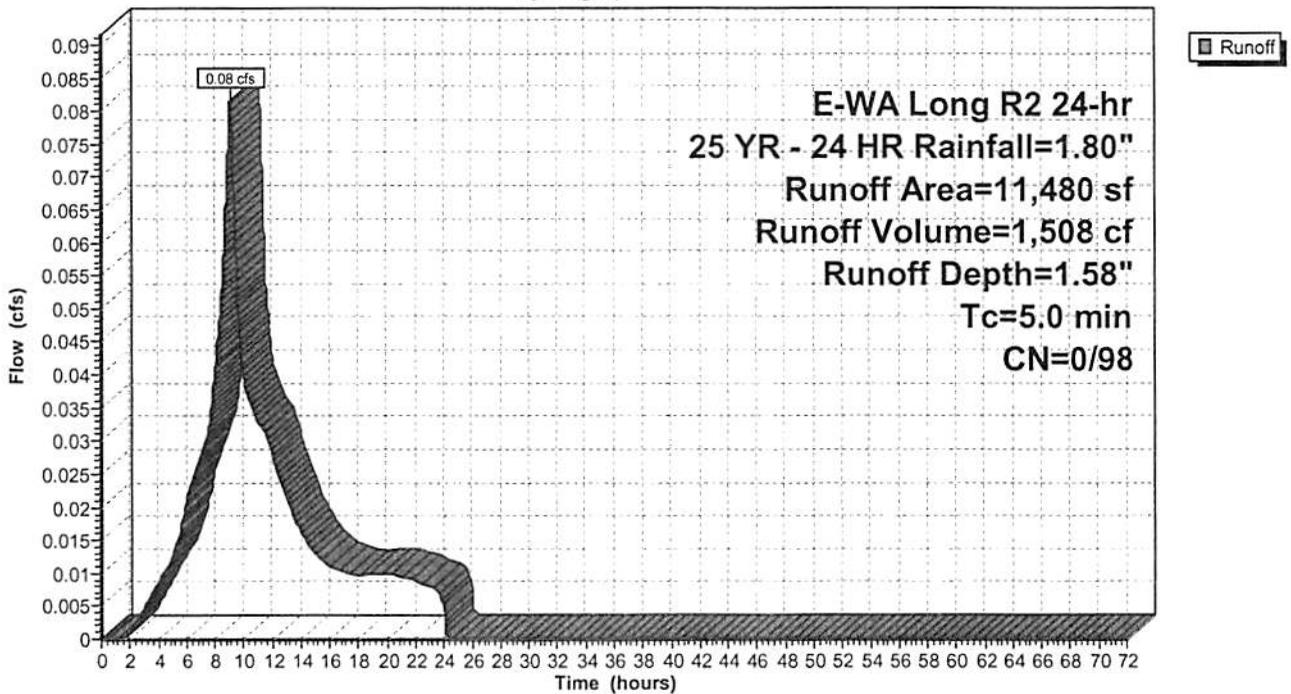
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 E-WA Long R2 24-hr 25 YR - 24 HR Rainfall=1.80"

Area (sf)	CN	Description
* 11,480	98	Roof
11,480		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Minimum Value

Subcatchment C1: Building - Roofs 11,480 sq.ft.

Hydrograph



Hydrograph for Subcatchment C1: Building - Roofs 11,480 sq.ft.

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
2.00	0.05	0.00	0.00	0.00
4.00	0.16	0.00	0.04	0.01
6.00	0.30	0.00	0.15	0.02
8.00	0.55	0.00	0.36	0.04
10.00	1.01	0.00	0.80	0.04
12.00	1.26	0.00	1.04	0.03
14.00	1.42	0.00	1.20	0.02
16.00	1.52	0.00	1.30	0.01
18.00	1.60	0.00	1.37	0.01
20.00	1.67	0.00	1.45	0.01
22.00	1.74	0.00	1.52	0.01
24.00	1.80	0.00	1.58	0.01
26.00	1.80	0.00	1.58	0.00
28.00	1.80	0.00	1.58	0.00
30.00	1.80	0.00	1.58	0.00
32.00	1.80	0.00	1.58	0.00
34.00	1.80	0.00	1.58	0.00
36.00	1.80	0.00	1.58	0.00
38.00	1.80	0.00	1.58	0.00
40.00	1.80	0.00	1.58	0.00
42.00	1.80	0.00	1.58	0.00
44.00	1.80	0.00	1.58	0.00
46.00	1.80	0.00	1.58	0.00
48.00	1.80	0.00	1.58	0.00
50.00	1.80	0.00	1.58	0.00
52.00	1.80	0.00	1.58	0.00
54.00	1.80	0.00	1.58	0.00
56.00	1.80	0.00	1.58	0.00
58.00	1.80	0.00	1.58	0.00
60.00	1.80	0.00	1.58	0.00
62.00	1.80	0.00	1.58	0.00
64.00	1.80	0.00	1.58	0.00
66.00	1.80	0.00	1.58	0.00
68.00	1.80	0.00	1.58	0.00
70.00	1.80	0.00	1.58	0.00
72.00	1.80	0.00	1.58	0.00

Summary for Subcatchment D1: Building - Roofs 6,560 sq.ft.

Runoff = 0.05 cfs @ 9.06 hrs, Volume= 862 cf, Depth= 1.58"

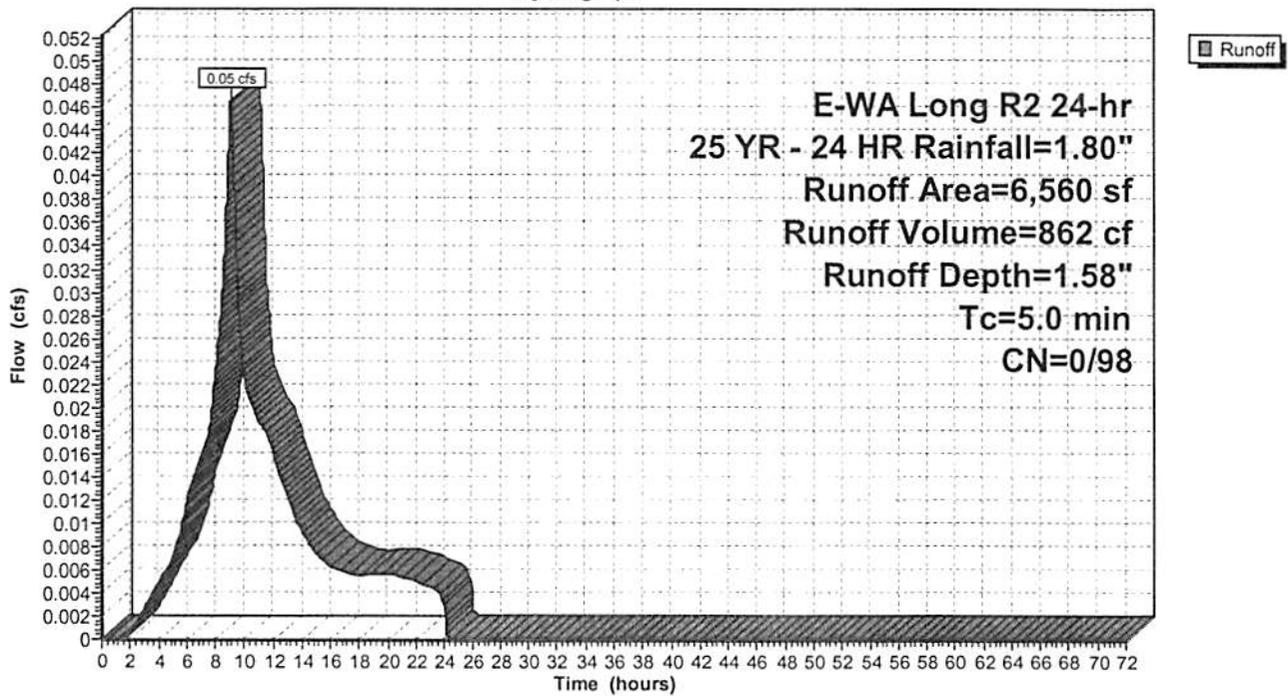
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 E-WA Long R2 24-hr 25 YR - 24 HR Rainfall=1.80"

Area (sf)	CN	Description
* 6,560	98	Roof
6,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Minimum Value

Subcatchment D1: Building - Roofs 6,560 sq.ft.

Hydrograph



Hydrograph for Subcatchment D1: Building - Roofs 6,560 sq.ft.

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
2.00	0.05	0.00	0.00	0.00
4.00	0.16	0.00	0.04	0.00
6.00	0.30	0.00	0.15	0.01
8.00	0.55	0.00	0.36	0.02
10.00	1.01	0.00	0.80	0.02
12.00	1.26	0.00	1.04	0.02
14.00	1.42	0.00	1.20	0.01
16.00	1.52	0.00	1.30	0.01
18.00	1.60	0.00	1.37	0.01
20.00	1.67	0.00	1.45	0.01
22.00	1.74	0.00	1.52	0.01
24.00	1.80	0.00	1.58	0.00
26.00	1.80	0.00	1.58	0.00
28.00	1.80	0.00	1.58	0.00
30.00	1.80	0.00	1.58	0.00
32.00	1.80	0.00	1.58	0.00
34.00	1.80	0.00	1.58	0.00
36.00	1.80	0.00	1.58	0.00
38.00	1.80	0.00	1.58	0.00
40.00	1.80	0.00	1.58	0.00
42.00	1.80	0.00	1.58	0.00
44.00	1.80	0.00	1.58	0.00
46.00	1.80	0.00	1.58	0.00
48.00	1.80	0.00	1.58	0.00
50.00	1.80	0.00	1.58	0.00
52.00	1.80	0.00	1.58	0.00
54.00	1.80	0.00	1.58	0.00
56.00	1.80	0.00	1.58	0.00
58.00	1.80	0.00	1.58	0.00
60.00	1.80	0.00	1.58	0.00
62.00	1.80	0.00	1.58	0.00
64.00	1.80	0.00	1.58	0.00
66.00	1.80	0.00	1.58	0.00
68.00	1.80	0.00	1.58	0.00
70.00	1.80	0.00	1.58	0.00
72.00	1.80	0.00	1.58	0.00

Summary for Subcatchment E1: Building - Roofs 7,560 sq.ft.

Runoff = 0.05 cfs @ 9.06 hrs, Volume= 993 cf, Depth= 1.58"

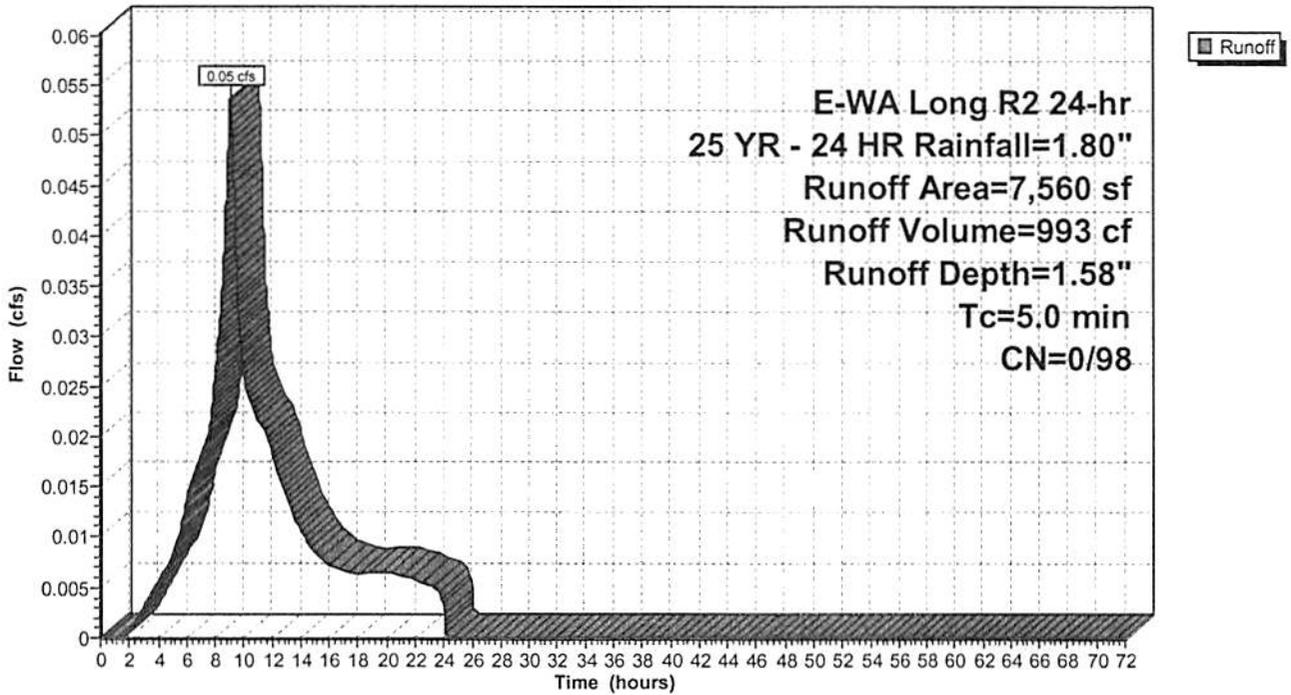
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
E-WA Long R2 24-hr 25 YR - 24 HR Rainfall=1.80"

Area (sf)	CN	Description
* 7,560	98	Roof
7,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Minimum Value

Subcatchment E1: Building - Roofs 7,560 sq.ft.

Hydrograph



Hydrograph for Subcatchment E1: Building - Roofs 7,560 sq.ft.

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
2.00	0.05	0.00	0.00	0.00
4.00	0.16	0.00	0.04	0.01
6.00	0.30	0.00	0.15	0.01
8.00	0.55	0.00	0.36	0.03
10.00	1.01	0.00	0.80	0.03
12.00	1.26	0.00	1.04	0.02
14.00	1.42	0.00	1.20	0.01
16.00	1.52	0.00	1.30	0.01
18.00	1.60	0.00	1.37	0.01
20.00	1.67	0.00	1.45	0.01
22.00	1.74	0.00	1.52	0.01
24.00	1.80	0.00	1.58	0.00
26.00	1.80	0.00	1.58	0.00
28.00	1.80	0.00	1.58	0.00
30.00	1.80	0.00	1.58	0.00
32.00	1.80	0.00	1.58	0.00
34.00	1.80	0.00	1.58	0.00
36.00	1.80	0.00	1.58	0.00
38.00	1.80	0.00	1.58	0.00
40.00	1.80	0.00	1.58	0.00
42.00	1.80	0.00	1.58	0.00
44.00	1.80	0.00	1.58	0.00
46.00	1.80	0.00	1.58	0.00
48.00	1.80	0.00	1.58	0.00
50.00	1.80	0.00	1.58	0.00
52.00	1.80	0.00	1.58	0.00
54.00	1.80	0.00	1.58	0.00
56.00	1.80	0.00	1.58	0.00
58.00	1.80	0.00	1.58	0.00
60.00	1.80	0.00	1.58	0.00
62.00	1.80	0.00	1.58	0.00
64.00	1.80	0.00	1.58	0.00
66.00	1.80	0.00	1.58	0.00
68.00	1.80	0.00	1.58	0.00
70.00	1.80	0.00	1.58	0.00
72.00	1.80	0.00	1.58	0.00

Summary for Subcatchment F1: Building - Roofs 13,440 sq.ft.

Runoff = 0.10 cfs @ 9.06 hrs, Volume= 1,765 cf, Depth= 1.58"

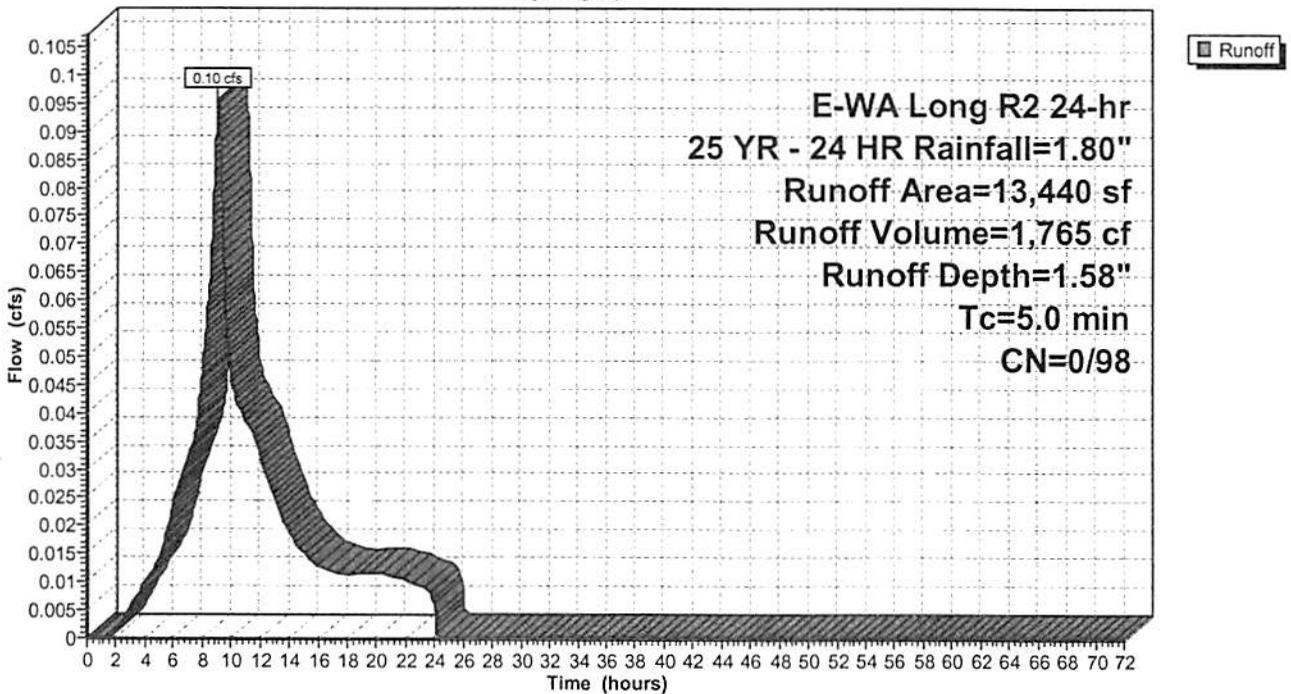
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 E-WA Long R2 24-hr 25 YR - 24 HR Rainfall=1.80"

Area (sf)	CN	Description
* 13,440	98	Roof
13,440		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Minimum Value

Subcatchment F1: Building - Roofs 13,440 sq.ft.

Hydrograph



Hydrograph for Subcatchment F1: Building - Roofs 13,440 sq.ft.

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
2.00	0.05	0.00	0.00	0.00
4.00	0.16	0.00	0.04	0.01
6.00	0.30	0.00	0.15	0.02
8.00	0.55	0.00	0.36	0.05
10.00	1.01	0.00	0.80	0.05
12.00	1.26	0.00	1.04	0.03
14.00	1.42	0.00	1.20	0.02
16.00	1.52	0.00	1.30	0.01
18.00	1.60	0.00	1.37	0.01
20.00	1.67	0.00	1.45	0.01
22.00	1.74	0.00	1.52	0.01
24.00	1.80	0.00	1.58	0.01
26.00	1.80	0.00	1.58	0.00
28.00	1.80	0.00	1.58	0.00
30.00	1.80	0.00	1.58	0.00
32.00	1.80	0.00	1.58	0.00
34.00	1.80	0.00	1.58	0.00
36.00	1.80	0.00	1.58	0.00
38.00	1.80	0.00	1.58	0.00
40.00	1.80	0.00	1.58	0.00
42.00	1.80	0.00	1.58	0.00
44.00	1.80	0.00	1.58	0.00
46.00	1.80	0.00	1.58	0.00
48.00	1.80	0.00	1.58	0.00
50.00	1.80	0.00	1.58	0.00
52.00	1.80	0.00	1.58	0.00
54.00	1.80	0.00	1.58	0.00
56.00	1.80	0.00	1.58	0.00
58.00	1.80	0.00	1.58	0.00
60.00	1.80	0.00	1.58	0.00
62.00	1.80	0.00	1.58	0.00
64.00	1.80	0.00	1.58	0.00
66.00	1.80	0.00	1.58	0.00
68.00	1.80	0.00	1.58	0.00
70.00	1.80	0.00	1.58	0.00
72.00	1.80	0.00	1.58	0.00

Summary for Pond A: Swale A

Inflow Area = 41,718 sf, 87.63% Impervious, Inflow Depth = 1.39" for 25 YR - 24 HR event
 Inflow = 0.26 cfs @ 9.06 hrs, Volume= 4,819 cf
 Outflow = 0.03 cfs @ 16.21 hrs, Volume= 4,819 cf, Atten= 87%, Lag= 429.4 min
 Discarded = 0.03 cfs @ 16.21 hrs, Volume= 4,819 cf

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 1,178.61' @ 16.21 hrs Surf.Area= 3,009 sf Storage= 2,477 cf

Plug-Flow detention time= 741.7 min calculated for 4,819 cf (100% of inflow)
 Center-of-Mass det. time= 741.7 min (1,425.6 - 683.9)

Volume	Invert	Avail.Storage	Storage Description
#1	1,177.70'	2,745 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

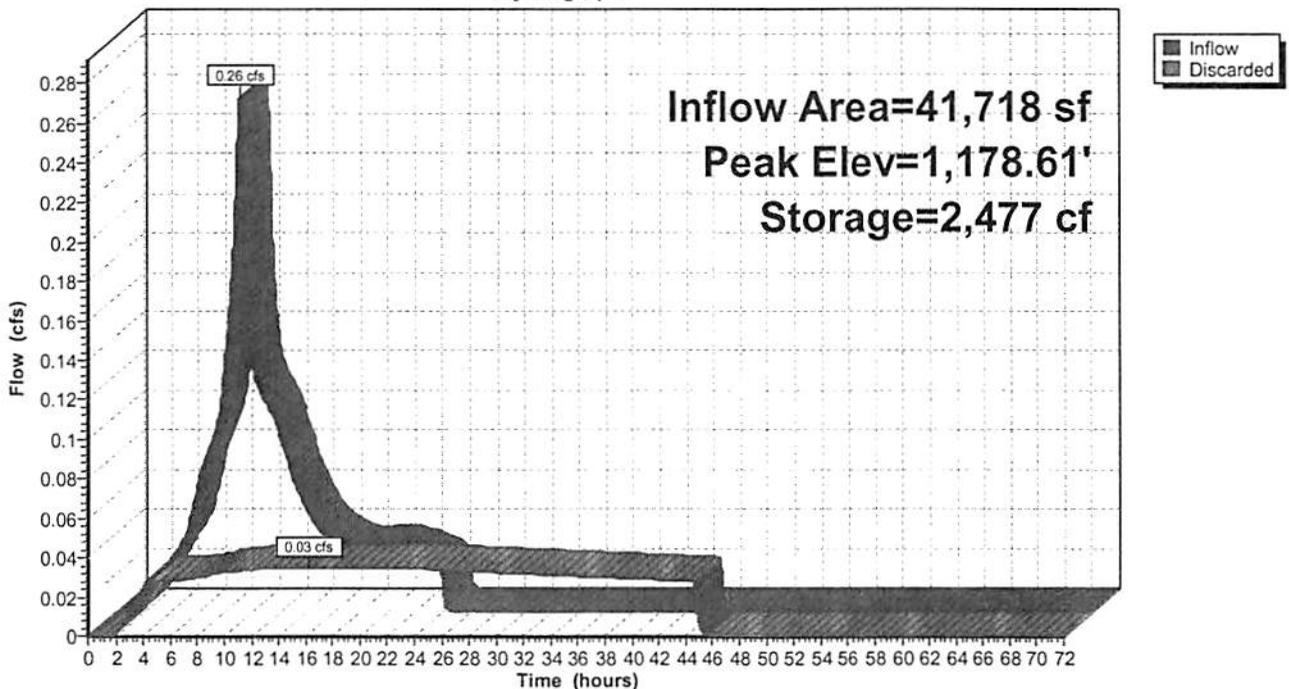
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,177.70	2,425	0	0
1,178.70	3,065	2,745	2,745

Device	Routing	Invert	Outlet Devices
#1	Discarded	1,177.70'	0.500 in/hr Exfiltration 0.50 In/Hr over Surface area

Discarded OutFlow Max=0.03 cfs @ 16.21 hrs HW=1,178.61' (Free Discharge)
 ↳ 1=Exfiltration 0.50 In/Hr (Exfiltration Controls 0.03 cfs)

Pond A: Swale A

Hydrograph



Hydrograph for Pond A: Swale A

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Discarded (cfs)
0.00	0.00	0	1,177.70	0.00
2.00	0.00	1	1,177.70	0.00
4.00	0.03	22	1,177.71	0.03
6.00	0.07	126	1,177.75	0.03
8.00	0.13	564	1,177.93	0.03
10.00	0.13	1,660	1,178.33	0.03
12.00	0.09	2,180	1,178.51	0.03
14.00	0.05	2,424	1,178.59	0.03
16.00	0.04	2,477	1,178.61	0.03
18.00	0.03	2,462	1,178.61	0.03
20.00	0.03	2,441	1,178.60	0.03
22.00	0.03	2,412	1,178.59	0.03
24.00	0.02	2,344	1,178.57	0.03
26.00	0.00	2,103	1,178.49	0.03
28.00	0.00	1,862	1,178.40	0.03
30.00	0.00	1,624	1,178.32	0.03
32.00	0.00	1,391	1,178.24	0.03
34.00	0.00	1,163	1,178.15	0.03
36.00	0.00	939	1,178.07	0.03
38.00	0.00	719	1,177.99	0.03
40.00	0.00	504	1,177.90	0.03
42.00	0.00	294	1,177.82	0.03
44.00	0.00	87	1,177.74	0.03
46.00	0.00	0	1,177.70	0.00
48.00	0.00	0	1,177.70	0.00
50.00	0.00	0	1,177.70	0.00
52.00	0.00	0	1,177.70	0.00
54.00	0.00	0	1,177.70	0.00
56.00	0.00	0	1,177.70	0.00
58.00	0.00	0	1,177.70	0.00
60.00	0.00	0	1,177.70	0.00
62.00	0.00	0	1,177.70	0.00
64.00	0.00	0	1,177.70	0.00
66.00	0.00	0	1,177.70	0.00
68.00	0.00	0	1,177.70	0.00
70.00	0.00	0	1,177.70	0.00
72.00	0.00	0	1,177.70	0.00

Summary for Pond B: Swale B

Inflow Area = 31,423 sf, 86.80% Impervious, Inflow Depth = 1.37" for 25 YR - 24 HR event
 Inflow = 0.19 cfs @ 9.06 hrs, Volume= 3,596 cf
 Outflow = 0.03 cfs @ 15.55 hrs, Volume= 3,596 cf, Atten= 86%, Lag= 389.6 min
 Discarded = 0.03 cfs @ 15.55 hrs, Volume= 3,596 cf

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 1,145.80' @ 15.55 hrs Surf.Area= 2,427 sf Storage= 1,765 cf

Plug-Flow detention time= 654.7 min calculated for 3,596 cf (100% of inflow)
 Center-of-Mass det. time= 654.7 min (1,338.8 - 684.1)

Volume	Invert	Avail.Storage	Storage Description
#1	1,145.00'	2,254 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

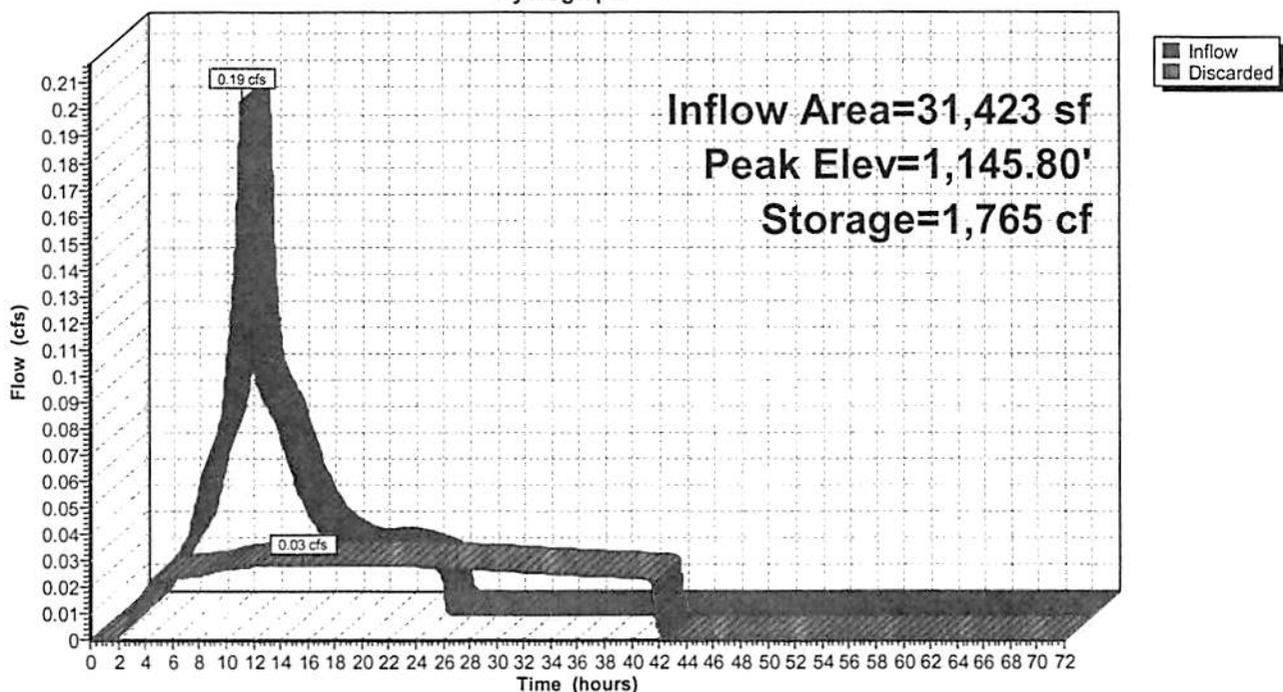
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,145.00	1,969	0	0
1,146.00	2,539	2,254	2,254

Device	Routing	Invert	Outlet Devices
#1	Discarded	1,145.00'	0.500 in/hr Exfiltration 0.50 In/Hr over Surface area

Discarded OutFlow Max=0.03 cfs @ 15.55 hrs HW=1,145.80' (Free Discharge)
 1=Exfiltration 0.50 In/Hr (Exfiltration Controls 0.03 cfs)

Pond B: Swale B

Hydrograph



Hydrograph for Pond B: Swale B

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Discarded (cfs)
0.00	0.00	0	1,145.00	0.00
2.00	0.00	1	1,145.00	0.00
4.00	0.02	16	1,145.01	0.02
6.00	0.05	83	1,145.04	0.02
8.00	0.10	397	1,145.20	0.02
10.00	0.09	1,200	1,145.56	0.03
12.00	0.07	1,572	1,145.72	0.03
14.00	0.04	1,740	1,145.79	0.03
16.00	0.03	1,764	1,145.80	0.03
18.00	0.02	1,738	1,145.79	0.03
20.00	0.02	1,708	1,145.78	0.03
22.00	0.02	1,672	1,145.76	0.03
24.00	0.01	1,608	1,145.74	0.03
26.00	0.00	1,414	1,145.66	0.03
28.00	0.00	1,221	1,145.57	0.03
30.00	0.00	1,032	1,145.49	0.03
32.00	0.00	846	1,145.41	0.03
34.00	0.00	665	1,145.32	0.02
36.00	0.00	488	1,145.24	0.02
38.00	0.00	314	1,145.16	0.02
40.00	0.00	145	1,145.07	0.02
42.00	0.00	2	1,145.00	0.00
44.00	0.00	0	1,145.00	0.00
46.00	0.00	0	1,145.00	0.00
48.00	0.00	0	1,145.00	0.00
50.00	0.00	0	1,145.00	0.00
52.00	0.00	0	1,145.00	0.00
54.00	0.00	0	1,145.00	0.00
56.00	0.00	0	1,145.00	0.00
58.00	0.00	0	1,145.00	0.00
60.00	0.00	0	1,145.00	0.00
62.00	0.00	0	1,145.00	0.00
64.00	0.00	0	1,145.00	0.00
66.00	0.00	0	1,145.00	0.00
68.00	0.00	0	1,145.00	0.00
70.00	0.00	0	1,145.00	0.00
72.00	0.00	0	1,145.00	0.00

Summary for Pond C: Swale C

Inflow Area = 11,480 sf, 100.00% Impervious, Inflow Depth = 1.58" for 25 YR - 24 HR event
 Inflow = 0.08 cfs @ 9.06 hrs, Volume= 1,508 cf
 Outflow = 0.07 cfs @ 8.95 hrs, Volume= 1,508 cf, Atten= 13%, Lag= 0.0 min
 Discarded = 0.07 cfs @ 8.95 hrs, Volume= 1,508 cf

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 99.51' @ 9.28 hrs Surf.Area= 12,290 sf Storage= 33 cf

Plug-Flow detention time= 5.9 min calculated for 1,508 cf (100% of inflow)
 Center-of-Mass det. time= 5.9 min (688.2 - 682.3)

Volume	Invert	Avail.Storage	Storage Description
#1	99.50'	2,458 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 6,145 cf Overall x 40.0% Voids

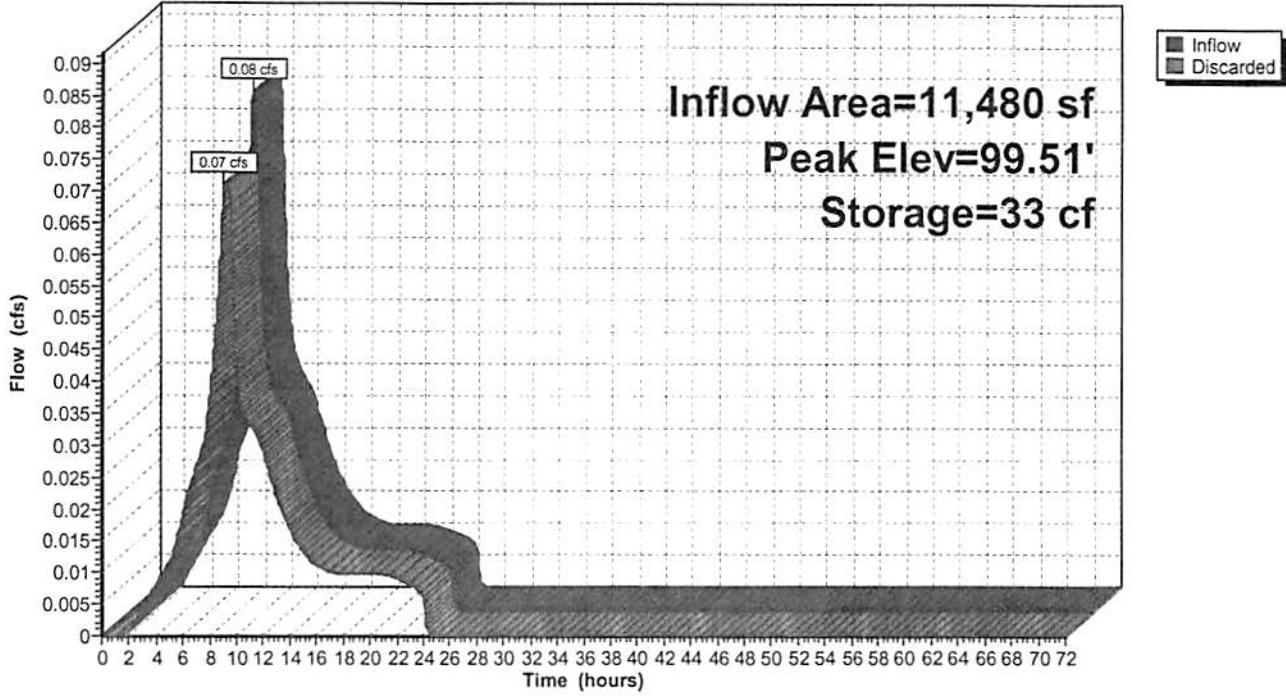
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
99.50	12,290	0	0
100.00	12,290	6,145	6,145

Device	Routing	Invert	Outlet Devices
#1	Discarded	99.50'	0.250 In/hr Exfiltration 0.25 In/Hr over Surface area

Discarded OutFlow Max=0.07 cfs @ 8.95 hrs HW=99.51' (Free Discharge)
 1=Exfiltration 0.25 In/Hr (Exfiltration Controls 0.07 cfs)

Pond C: Swale C

Hydrograph



Hydrograph for Pond C: Swale C

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Discarded (cfs)
0.00	0.00	0	99.50	0.00
2.00	0.00	0	99.50	0.00
4.00	0.01	3	99.50	0.01
6.00	0.02	7	99.50	0.02
8.00	0.04	13	99.50	0.04
10.00	0.04	14	99.50	0.04
12.00	0.03	10	99.50	0.03
14.00	0.02	6	99.50	0.02
16.00	0.01	4	99.50	0.01
18.00	0.01	3	99.50	0.01
20.00	0.01	3	99.50	0.01
22.00	0.01	3	99.50	0.01
24.00	0.01	2	99.50	0.01
26.00	0.00	0	99.50	0.00
28.00	0.00	0	99.50	0.00
30.00	0.00	0	99.50	0.00
32.00	0.00	0	99.50	0.00
34.00	0.00	0	99.50	0.00
36.00	0.00	0	99.50	0.00
38.00	0.00	0	99.50	0.00
40.00	0.00	0	99.50	0.00
42.00	0.00	0	99.50	0.00
44.00	0.00	0	99.50	0.00
46.00	0.00	0	99.50	0.00
48.00	0.00	0	99.50	0.00
50.00	0.00	0	99.50	0.00
52.00	0.00	0	99.50	0.00
54.00	0.00	0	99.50	0.00
56.00	0.00	0	99.50	0.00
58.00	0.00	0	99.50	0.00
60.00	0.00	0	99.50	0.00
62.00	0.00	0	99.50	0.00
64.00	0.00	0	99.50	0.00
66.00	0.00	0	99.50	0.00
68.00	0.00	0	99.50	0.00
70.00	0.00	0	99.50	0.00
72.00	0.00	0	99.50	0.00

Summary for Pond D: Swale D

Inflow Area = 6,560 sf, 100.00% Impervious, Inflow Depth = 1.58" for 25 YR - 24 HR event
 Inflow = 0.05 cfs @ 9.06 hrs, Volume= 862 cf
 Outflow = 0.04 cfs @ 9.03 hrs, Volume= 862 cf, Atten= 7%, Lag= 0.0 min
 Discarded = 0.04 cfs @ 9.03 hrs, Volume= 862 cf

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 99.51' @ 9.21 hrs Surf.Area= 7,477 sf Storage= 17 cf

Plug-Flow detention time= 5.8 min calculated for 862 cf (100% of inflow)
 Center-of-Mass det. time= 5.8 min (688.1 - 682.3)

Volume	Invert	Avail.Storage	Storage Description
#1	99.50'	1,495 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 3,739 cf Overall x 40.0% Voids

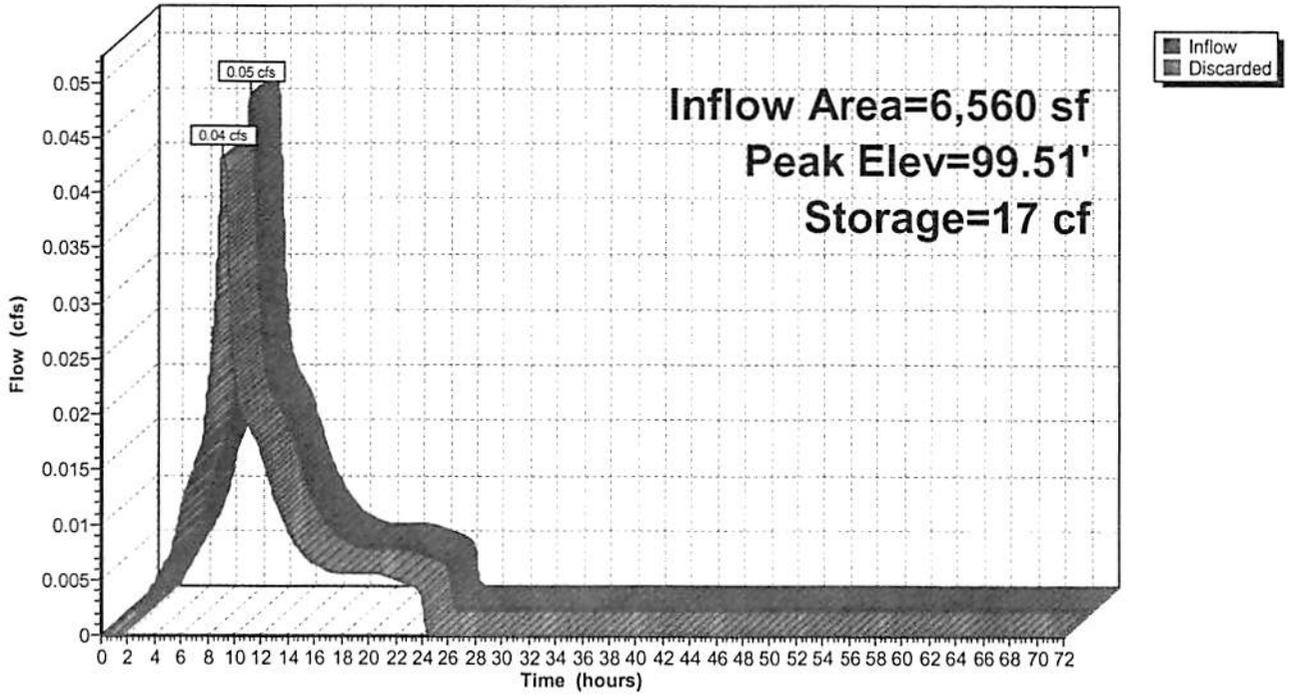
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
99.50	7,477	0	0
100.00	7,477	3,739	3,739

Device	Routing	Invert	Outlet Devices
#1	Discarded	99.50'	0.250 in/hr Exfiltration 0.25 In/Hr over Surface area

Discarded OutFlow Max=0.04 cfs @ 9.03 hrs HW=99.51' (Free Discharge)
 ↑1=Exfiltration 0.25 In/Hr (Exfiltration Controls 0.04 cfs)

Pond D: Swale D

Hydrograph



Hydrograph for Pond D: Swale D

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Discarded (cfs)
0.00	0.00	0	99.50	0.00
2.00	0.00	0	99.50	0.00
4.00	0.00	2	99.50	0.00
6.00	0.01	4	99.50	0.01
8.00	0.02	8	99.50	0.02
10.00	0.02	8	99.50	0.02
12.00	0.02	6	99.50	0.02
14.00	0.01	3	99.50	0.01
16.00	0.01	2	99.50	0.01
18.00	0.01	2	99.50	0.01
20.00	0.01	2	99.50	0.01
22.00	0.01	2	99.50	0.01
24.00	0.00	1	99.50	0.00
26.00	0.00	0	99.50	0.00
28.00	0.00	0	99.50	0.00
30.00	0.00	0	99.50	0.00
32.00	0.00	0	99.50	0.00
34.00	0.00	0	99.50	0.00
36.00	0.00	0	99.50	0.00
38.00	0.00	0	99.50	0.00
40.00	0.00	0	99.50	0.00
42.00	0.00	0	99.50	0.00
44.00	0.00	0	99.50	0.00
46.00	0.00	0	99.50	0.00
48.00	0.00	0	99.50	0.00
50.00	0.00	0	99.50	0.00
52.00	0.00	0	99.50	0.00
54.00	0.00	0	99.50	0.00
56.00	0.00	0	99.50	0.00
58.00	0.00	0	99.50	0.00
60.00	0.00	0	99.50	0.00
62.00	0.00	0	99.50	0.00
64.00	0.00	0	99.50	0.00
66.00	0.00	0	99.50	0.00
68.00	0.00	0	99.50	0.00
70.00	0.00	0	99.50	0.00
72.00	0.00	0	99.50	0.00

Summary for Pond E: Swale E

Inflow Area = 7,560 sf, 100.00% Impervious, Inflow Depth = 1.58" for 25 YR - 24 HR event
 Inflow = 0.05 cfs @ 9.06 hrs, Volume= 993 cf
 Outflow = 0.04 cfs @ 8.81 hrs, Volume= 993 cf, Atten= 22%, Lag= 0.0 min
 Discarded = 0.04 cfs @ 8.81 hrs, Volume= 993 cf

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 99.51' @ 9.39 hrs Surf.Area= 7,219 sf Storage= 30 cf

Plug-Flow detention time= 6.4 min calculated for 993 cf (100% of inflow)
 Center-of-Mass det. time= 6.4 min (688.7 - 682.3)

Volume	Invert	Avail.Storage	Storage Description
#1	99.50'	1,444 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 3,610 cf Overall x 40.0% Voids

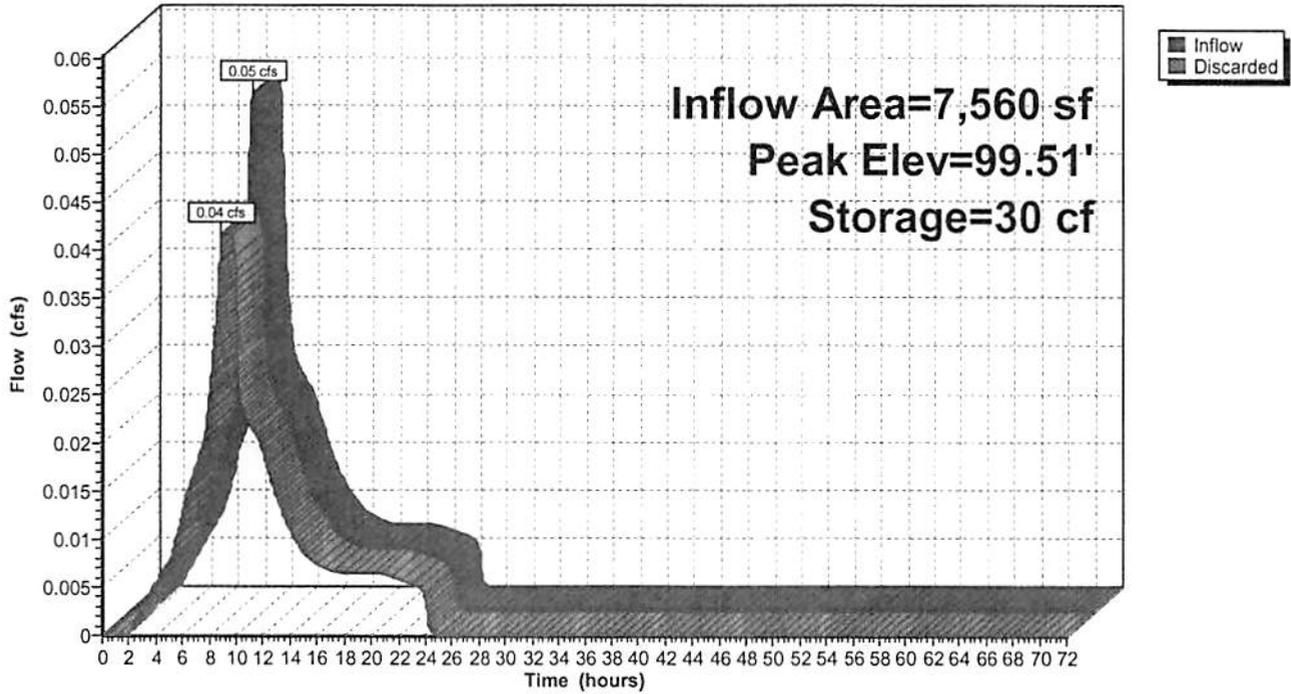
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
99.50	7,219	0	0
100.00	7,219	3,610	3,610

Device	Routing	Invert	Outlet Devices
#1	Discarded	99.50'	0.250 in/hr Exfiltration 0.25 In/Hr over Surface area

Discarded OutFlow Max=0.04 cfs @ 8.81 hrs HW=99.51' (Free Discharge)
 ↳1=Exfiltration 0.25 In/Hr (Exfiltration Controls 0.04 cfs)

Pond E: Swale E

Hydrograph



Hydrograph for Pond E: Swale E

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Discarded (cfs)
0.00	0.00	0	99.50	0.00
2.00	0.00	0	99.50	0.00
4.00	0.01	2	99.50	0.01
6.00	0.01	5	99.50	0.01
8.00	0.03	9	99.50	0.03
10.00	0.03	11	99.50	0.03
12.00	0.02	7	99.50	0.02
14.00	0.01	4	99.50	0.01
16.00	0.01	3	99.50	0.01
18.00	0.01	2	99.50	0.01
20.00	0.01	2	99.50	0.01
22.00	0.01	2	99.50	0.01
24.00	0.00	1	99.50	0.00
26.00	0.00	0	99.50	0.00
28.00	0.00	0	99.50	0.00
30.00	0.00	0	99.50	0.00
32.00	0.00	0	99.50	0.00
34.00	0.00	0	99.50	0.00
36.00	0.00	0	99.50	0.00
38.00	0.00	0	99.50	0.00
40.00	0.00	0	99.50	0.00
42.00	0.00	0	99.50	0.00
44.00	0.00	0	99.50	0.00
46.00	0.00	0	99.50	0.00
48.00	0.00	0	99.50	0.00
50.00	0.00	0	99.50	0.00
52.00	0.00	0	99.50	0.00
54.00	0.00	0	99.50	0.00
56.00	0.00	0	99.50	0.00
58.00	0.00	0	99.50	0.00
60.00	0.00	0	99.50	0.00
62.00	0.00	0	99.50	0.00
64.00	0.00	0	99.50	0.00
66.00	0.00	0	99.50	0.00
68.00	0.00	0	99.50	0.00
70.00	0.00	0	99.50	0.00
72.00	0.00	0	99.50	0.00

Summary for Pond F: Swale F

Inflow Area = 13,440 sf, 100.00% Impervious, Inflow Depth = 1.58" for 25 YR - 24 HR event
 Inflow = 0.10 cfs @ 9.06 hrs, Volume= 1,765 cf
 Outflow = 0.08 cfs @ 8.93 hrs, Volume= 1,765 cf, Atten= 14%, Lag= 0.0 min
 Discarded = 0.08 cfs @ 8.93 hrs, Volume= 1,765 cf

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 99.51' @ 9.29 hrs Surf.Area= 14,256 sf Storage= 40 cf

Plug-Flow detention time= 5.9 min calculated for 1,765 cf (100% of inflow)
 Center-of-Mass det. time= 5.9 min (688.2 - 682.3)

Volume	Invert	Avail.Storage	Storage Description
#1	99.50'	2,851 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 7,128 cf Overall x 40.0% Voids

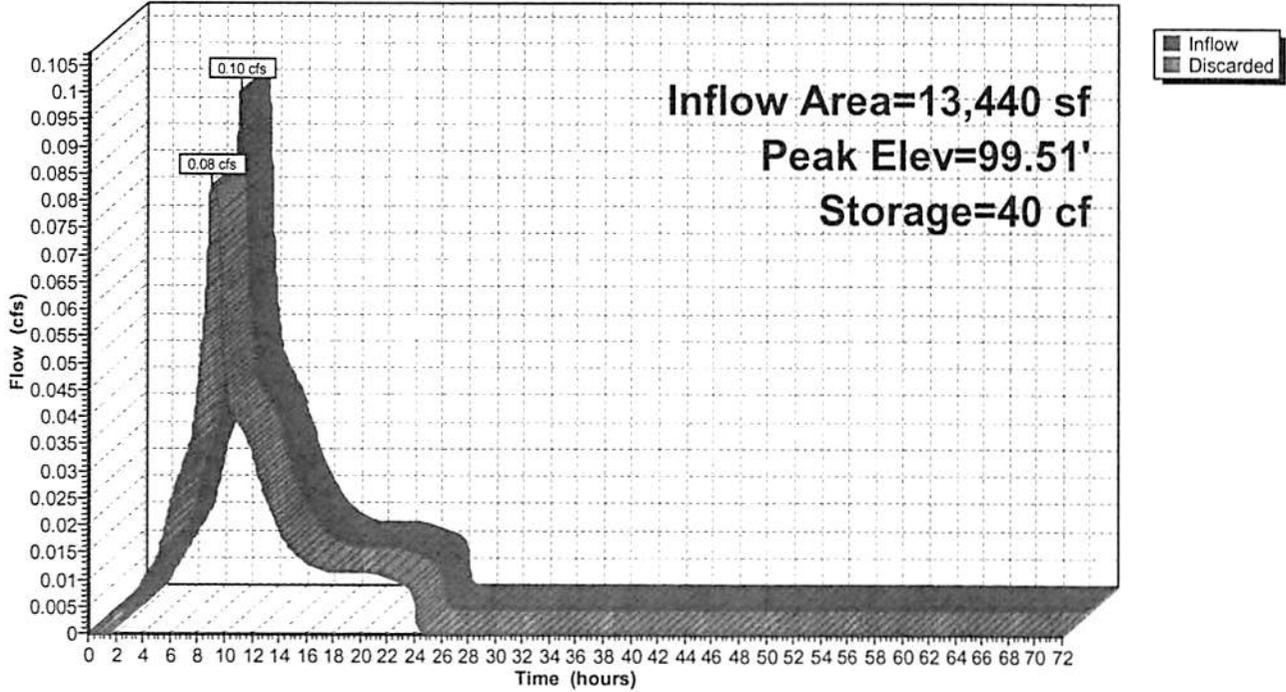
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
99.50	14,256	0	0
100.00	14,256	7,128	7,128

Device	Routing	Invert	Outlet Devices
#1	Discarded	99.50'	0.250 in/hr Exfiltration 0.25 In/Hr over Surface area

Discarded OutFlow Max=0.08 cfs @ 8.93 hrs HW=99.51' (Free Discharge)
 1=Exfiltration 0.25 In/Hr (Exfiltration Controls 0.08 cfs)

Pond F: Swale F

Hydrograph

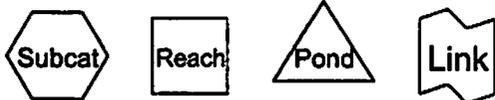
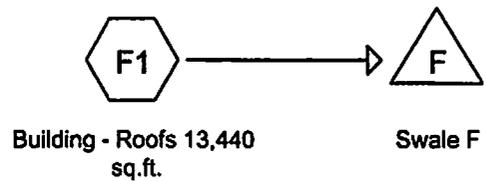
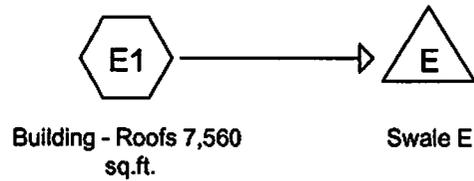
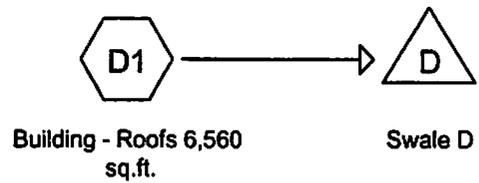
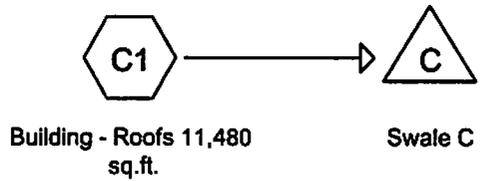
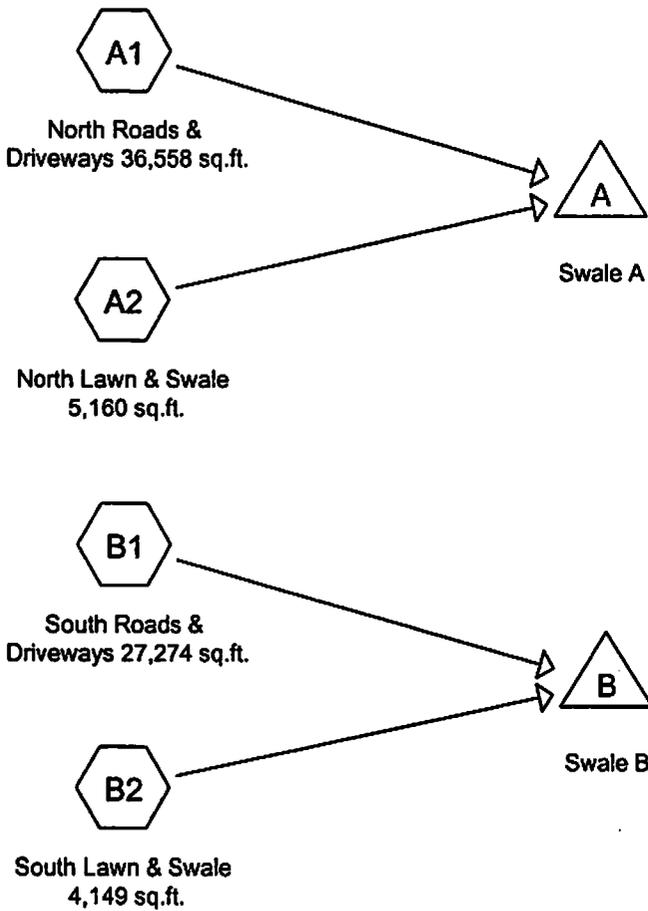


Hydrograph for Pond F: Swale F

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Discarded (cfs)
0.00	0.00	0	99.50	0.00
2.00	0.00	0	99.50	0.00
4.00	0.01	3	99.50	0.01
6.00	0.02	8	99.50	0.02
8.00	0.05	16	99.50	0.05
10.00	0.05	17	99.50	0.05
12.00	0.03	12	99.50	0.03
14.00	0.02	7	99.50	0.02
16.00	0.01	5	99.50	0.01
18.00	0.01	4	99.50	0.01
20.00	0.01	4	99.50	0.01
22.00	0.01	4	99.50	0.01
24.00	0.01	2	99.50	0.01
26.00	0.00	0	99.50	0.00
28.00	0.00	0	99.50	0.00
30.00	0.00	0	99.50	0.00
32.00	0.00	0	99.50	0.00
34.00	0.00	0	99.50	0.00
36.00	0.00	0	99.50	0.00
38.00	0.00	0	99.50	0.00
40.00	0.00	0	99.50	0.00
42.00	0.00	0	99.50	0.00
44.00	0.00	0	99.50	0.00
46.00	0.00	0	99.50	0.00
48.00	0.00	0	99.50	0.00
50.00	0.00	0	99.50	0.00
52.00	0.00	0	99.50	0.00
54.00	0.00	0	99.50	0.00
56.00	0.00	0	99.50	0.00
58.00	0.00	0	99.50	0.00
60.00	0.00	0	99.50	0.00
62.00	0.00	0	99.50	0.00
64.00	0.00	0	99.50	0.00
66.00	0.00	0	99.50	0.00
68.00	0.00	0	99.50	0.00
70.00	0.00	0	99.50	0.00
72.00	0.00	0	99.50	0.00

Appendix C

25 YEAR, 3 HOUR SHORT DURATION RAINFALL CALCULATIONS (PEAK FLOW)



Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
9,309	61	>75% Grass cover, Good, HSG B (A2, B2)
39,040	98	Roof (C1, D1, E1, F1)
27,274	98	South Roads & Driveways (B1)
36,558	98	north roads & driveways (A1)
112,181	95	TOTAL AREA

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
 Runoff by SBUH method, Split Pervious/Imperv.
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment A1: North Roads &	Runoff Area=36,558 sf 100.00% Impervious Runoff Depth=0.79" Tc=5.0 min CN=0/98 Runoff=1.65 cfs 2,409 cf
Subcatchment A2: North Lawn & Swale	Runoff Area=5,160 sf 0.00% Impervious Runoff Depth=0.00" Tc=5.0 min CN=61/0 Runoff=0.00 cfs 0 cf
Subcatchment B1: South Roads &	Runoff Area=27,274 sf 100.00% Impervious Runoff Depth=0.79" Tc=5.0 min CN=0/98 Runoff=1.23 cfs 1,798 cf
Subcatchment B2: South Lawn & Swale	Runoff Area=4,149 sf 0.00% Impervious Runoff Depth=0.00" Tc=5.0 min CN=61/0 Runoff=0.00 cfs 0 cf
Subcatchment C1: Building - Roofs	Runoff Area=11,480 sf 100.00% Impervious Runoff Depth=0.79" Tc=5.0 min CN=0/98 Runoff=0.52 cfs 757 cf
Subcatchment D1: Building - Roofs 6,560	Runoff Area=6,560 sf 100.00% Impervious Runoff Depth=0.79" Tc=5.0 min CN=0/98 Runoff=0.30 cfs 432 cf
Subcatchment E1: Building - Roofs 7,560	Runoff Area=7,560 sf 100.00% Impervious Runoff Depth=0.79" Tc=5.0 min CN=0/98 Runoff=0.34 cfs 498 cf
Subcatchment F1: Building - Roofs	Runoff Area=13,440 sf 100.00% Impervious Runoff Depth=0.79" Tc=5.0 min CN=0/98 Runoff=0.61 cfs 886 cf
Pond A: Swale A	Peak Elev=1,178.49' Storage=2,115 cf Inflow=1.65 cfs 2,409 cf Outflow=0.03 cfs 2,409 cf
Pond B: Swale B	Peak Elev=1,145.72' Storage=1,559 cf Inflow=1.23 cfs 1,798 cf Outflow=0.03 cfs 1,798 cf
Pond C: Swale C	Peak Elev=99.59' Storage=463 cf Inflow=0.52 cfs 757 cf Outflow=0.07 cfs 757 cf
Pond D: Swale D	Peak Elev=99.59' Storage=259 cf Inflow=0.30 cfs 432 cf Outflow=0.04 cfs 432 cf
Pond E: Swale E	Peak Elev=99.61' Storage=315 cf Inflow=0.34 cfs 498 cf Outflow=0.04 cfs 498 cf
Pond F: Swale F	Peak Elev=99.60' Storage=544 cf Inflow=0.61 cfs 886 cf Outflow=0.08 cfs 886 cf

Total Runoff Area = 112,181 sf Runoff Volume = 6,780 cf Average Runoff Depth = 0.73"
8.30% Pervious = 9,309 sf 91.70% Impervious = 102,872 sf

Summary for Subcatchment A1: North Roads & Driveways 36,558 sq.ft.

Runoff = 1.65 cfs @ 0.97 hrs, Volume= 2,409 cf, Depth= 0.79"

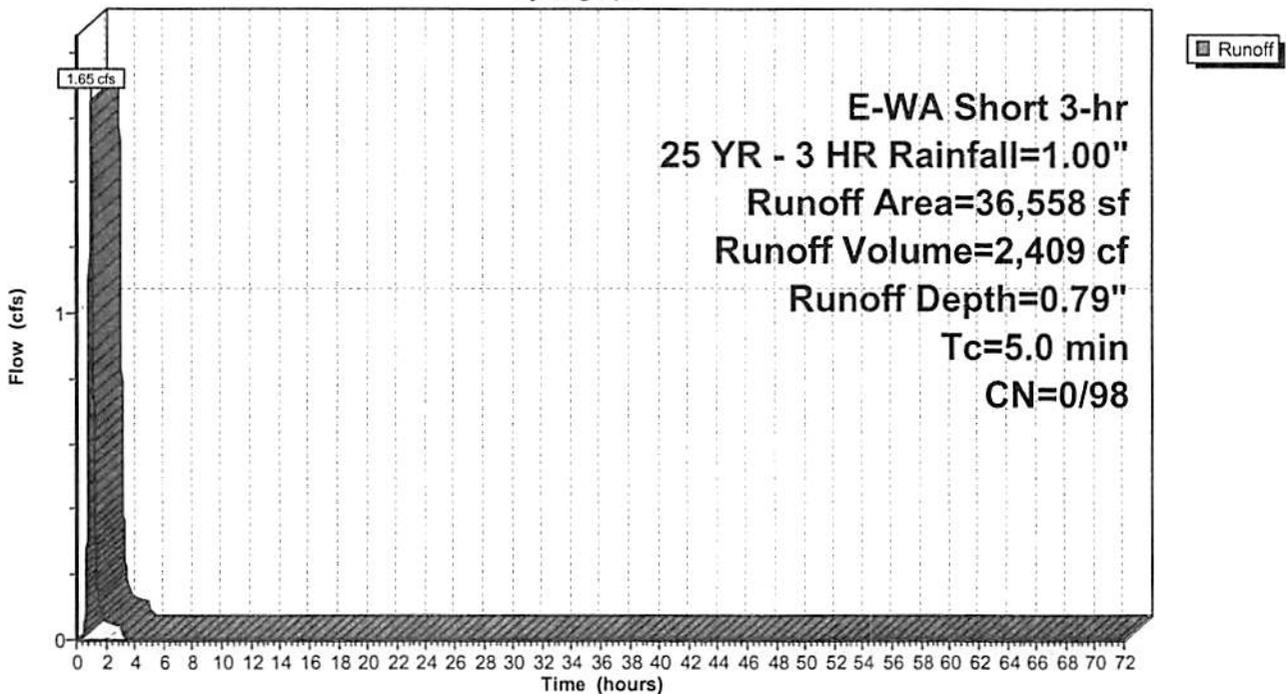
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 E-WA Short 3-hr 25 YR - 3 HR Rainfall=1.00"

Area (sf)	CN	Description
* 36,558	98	north roads & driveways
36,558		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Minimum Value

Subcatchment A1: North Roads & Driveways 36,558 sq.ft.

Hydrograph



Hydrograph for Subcatchment A1: North Roads & Driveways 36,558 sq.ft.

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
2.00	0.94	0.00	0.74	0.06
4.00	1.00	0.00	0.79	0.00
6.00	1.00	0.00	0.79	0.00
8.00	1.00	0.00	0.79	0.00
10.00	1.00	0.00	0.79	0.00
12.00	1.00	0.00	0.79	0.00
14.00	1.00	0.00	0.79	0.00
16.00	1.00	0.00	0.79	0.00
18.00	1.00	0.00	0.79	0.00
20.00	1.00	0.00	0.79	0.00
22.00	1.00	0.00	0.79	0.00
24.00	1.00	0.00	0.79	0.00
26.00	1.00	0.00	0.79	0.00
28.00	1.00	0.00	0.79	0.00
30.00	1.00	0.00	0.79	0.00
32.00	1.00	0.00	0.79	0.00
34.00	1.00	0.00	0.79	0.00
36.00	1.00	0.00	0.79	0.00
38.00	1.00	0.00	0.79	0.00
40.00	1.00	0.00	0.79	0.00
42.00	1.00	0.00	0.79	0.00
44.00	1.00	0.00	0.79	0.00
46.00	1.00	0.00	0.79	0.00
48.00	1.00	0.00	0.79	0.00
50.00	1.00	0.00	0.79	0.00
52.00	1.00	0.00	0.79	0.00
54.00	1.00	0.00	0.79	0.00
56.00	1.00	0.00	0.79	0.00
58.00	1.00	0.00	0.79	0.00
60.00	1.00	0.00	0.79	0.00
62.00	1.00	0.00	0.79	0.00
64.00	1.00	0.00	0.79	0.00
66.00	1.00	0.00	0.79	0.00
68.00	1.00	0.00	0.79	0.00
70.00	1.00	0.00	0.79	0.00
72.00	1.00	0.00	0.79	0.00

Summary for Subcatchment A2: North Lawn & Swale 5,160 sq.ft.

Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Depth= 0.00"

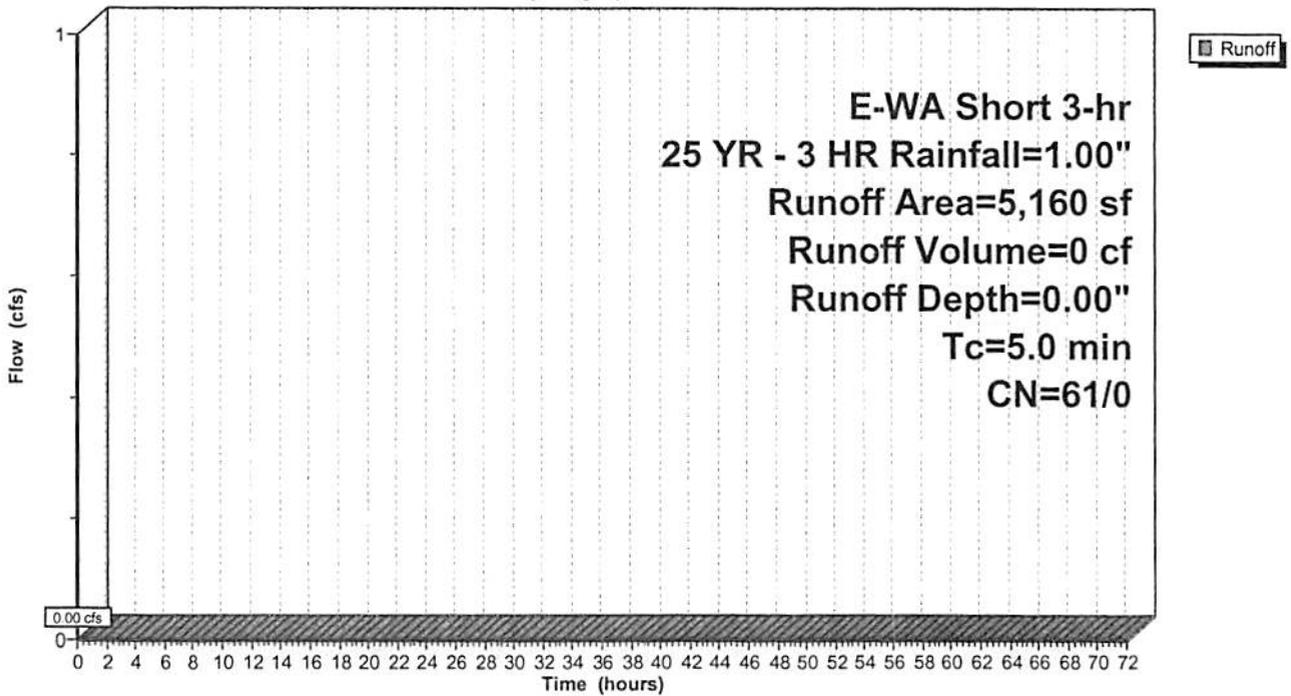
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 E-WA Short 3-hr 25 YR - 3 HR Rainfall=1.00"

Area (sf)	CN	Description
5,160	61	>75% Grass cover, Good, HSG B
5,160		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Minimum Value

Subcatchment A2: North Lawn & Swale 5,160 sq.ft.

Hydrograph



Hydrograph for Subcatchment A2: North Lawn & Swale 5,160 sq.ft.

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
2.00	0.94	0.00	0.00	0.00
4.00	1.00	0.00	0.00	0.00
6.00	1.00	0.00	0.00	0.00
8.00	1.00	0.00	0.00	0.00
10.00	1.00	0.00	0.00	0.00
12.00	1.00	0.00	0.00	0.00
14.00	1.00	0.00	0.00	0.00
16.00	1.00	0.00	0.00	0.00
18.00	1.00	0.00	0.00	0.00
20.00	1.00	0.00	0.00	0.00
22.00	1.00	0.00	0.00	0.00
24.00	1.00	0.00	0.00	0.00
26.00	1.00	0.00	0.00	0.00
28.00	1.00	0.00	0.00	0.00
30.00	1.00	0.00	0.00	0.00
32.00	1.00	0.00	0.00	0.00
34.00	1.00	0.00	0.00	0.00
36.00	1.00	0.00	0.00	0.00
38.00	1.00	0.00	0.00	0.00
40.00	1.00	0.00	0.00	0.00
42.00	1.00	0.00	0.00	0.00
44.00	1.00	0.00	0.00	0.00
46.00	1.00	0.00	0.00	0.00
48.00	1.00	0.00	0.00	0.00
50.00	1.00	0.00	0.00	0.00
52.00	1.00	0.00	0.00	0.00
54.00	1.00	0.00	0.00	0.00
56.00	1.00	0.00	0.00	0.00
58.00	1.00	0.00	0.00	0.00
60.00	1.00	0.00	0.00	0.00
62.00	1.00	0.00	0.00	0.00
64.00	1.00	0.00	0.00	0.00
66.00	1.00	0.00	0.00	0.00
68.00	1.00	0.00	0.00	0.00
70.00	1.00	0.00	0.00	0.00
72.00	1.00	0.00	0.00	0.00

Summary for Subcatchment B1: South Roads & Driveways 27,274 sq.ft.

Runoff = 1.23 cfs @ 0.97 hrs, Volume= 1,798 cf, Depth= 0.79"

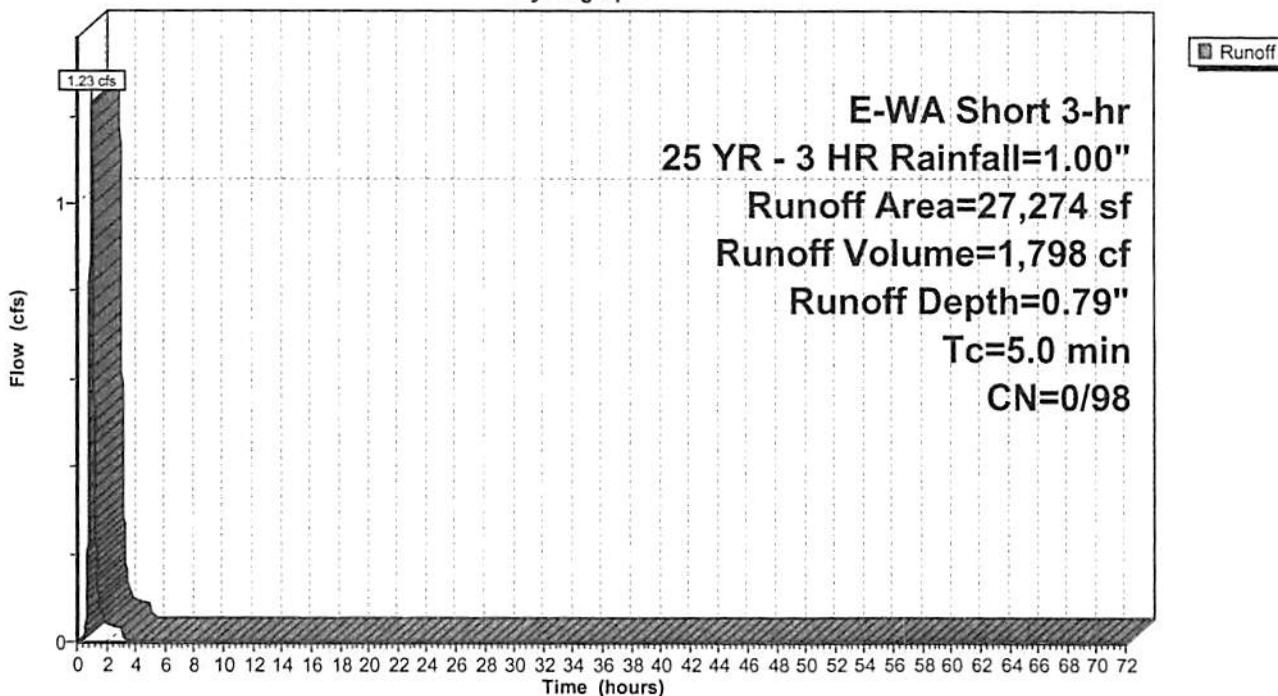
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 E-WA Short 3-hr 25 YR - 3 HR Rainfall=1.00"

Area (sf)	CN	Description
* 27,274	98	South Roads & Driveways
27,274		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Minimum Value

Subcatchment B1: South Roads & Driveways 27,274 sq.ft.

Hydrograph



Hydrograph for Subcatchment B1: South Roads & Driveways 27,274 sq.ft.

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
2.00	0.94	0.00	0.74	0.04
4.00	1.00	0.00	0.79	0.00
6.00	1.00	0.00	0.79	0.00
8.00	1.00	0.00	0.79	0.00
10.00	1.00	0.00	0.79	0.00
12.00	1.00	0.00	0.79	0.00
14.00	1.00	0.00	0.79	0.00
16.00	1.00	0.00	0.79	0.00
18.00	1.00	0.00	0.79	0.00
20.00	1.00	0.00	0.79	0.00
22.00	1.00	0.00	0.79	0.00
24.00	1.00	0.00	0.79	0.00
26.00	1.00	0.00	0.79	0.00
28.00	1.00	0.00	0.79	0.00
30.00	1.00	0.00	0.79	0.00
32.00	1.00	0.00	0.79	0.00
34.00	1.00	0.00	0.79	0.00
36.00	1.00	0.00	0.79	0.00
38.00	1.00	0.00	0.79	0.00
40.00	1.00	0.00	0.79	0.00
42.00	1.00	0.00	0.79	0.00
44.00	1.00	0.00	0.79	0.00
46.00	1.00	0.00	0.79	0.00
48.00	1.00	0.00	0.79	0.00
50.00	1.00	0.00	0.79	0.00
52.00	1.00	0.00	0.79	0.00
54.00	1.00	0.00	0.79	0.00
56.00	1.00	0.00	0.79	0.00
58.00	1.00	0.00	0.79	0.00
60.00	1.00	0.00	0.79	0.00
62.00	1.00	0.00	0.79	0.00
64.00	1.00	0.00	0.79	0.00
66.00	1.00	0.00	0.79	0.00
68.00	1.00	0.00	0.79	0.00
70.00	1.00	0.00	0.79	0.00
72.00	1.00	0.00	0.79	0.00

Summary for Subcatchment B2: South Lawn & Swale 4,149 sq.ft.

Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Depth= 0.00"

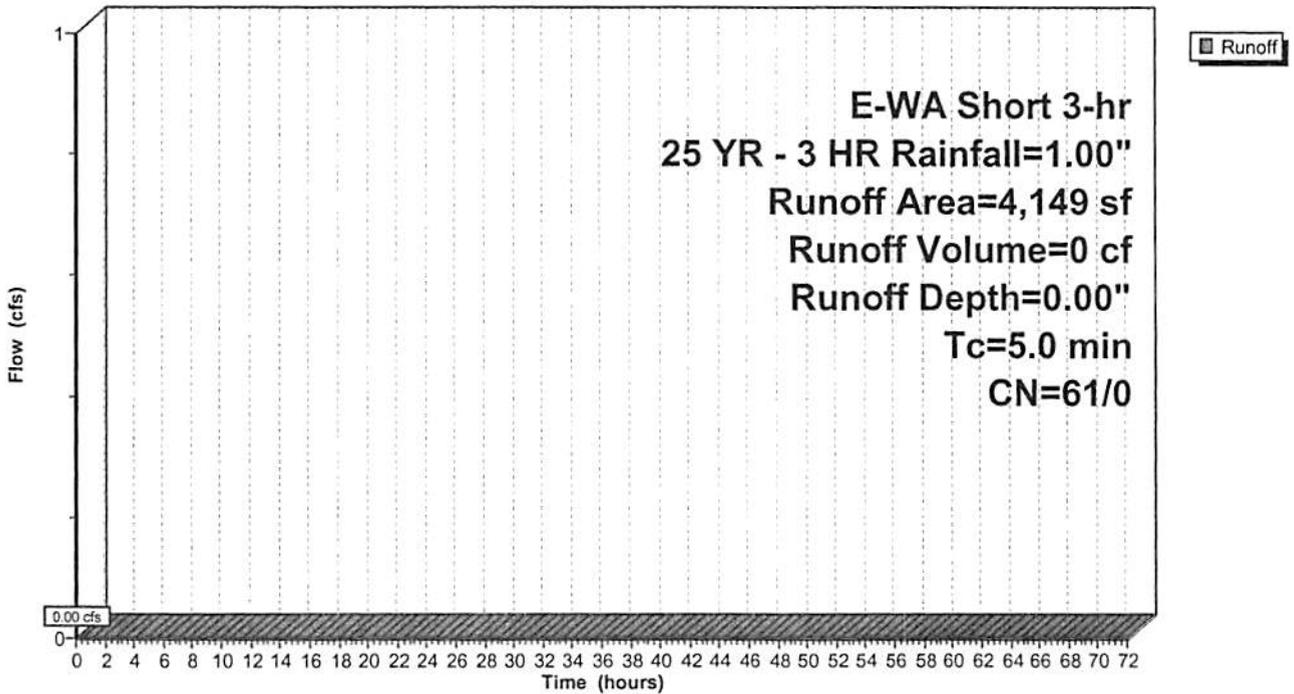
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 E-WA Short 3-hr 25 YR - 3 HR Rainfall=1.00"

Area (sf)	CN	Description
4,149	61	>75% Grass cover, Good, HSG B
4,149		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Minimum Value

Subcatchment B2: South Lawn & Swale 4,149 sq.ft.

Hydrograph



Hydrograph for Subcatchment B2: South Lawn & Swale 4,149 sq.ft.

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
2.00	0.94	0.00	0.00	0.00
4.00	1.00	0.00	0.00	0.00
6.00	1.00	0.00	0.00	0.00
8.00	1.00	0.00	0.00	0.00
10.00	1.00	0.00	0.00	0.00
12.00	1.00	0.00	0.00	0.00
14.00	1.00	0.00	0.00	0.00
16.00	1.00	0.00	0.00	0.00
18.00	1.00	0.00	0.00	0.00
20.00	1.00	0.00	0.00	0.00
22.00	1.00	0.00	0.00	0.00
24.00	1.00	0.00	0.00	0.00
26.00	1.00	0.00	0.00	0.00
28.00	1.00	0.00	0.00	0.00
30.00	1.00	0.00	0.00	0.00
32.00	1.00	0.00	0.00	0.00
34.00	1.00	0.00	0.00	0.00
36.00	1.00	0.00	0.00	0.00
38.00	1.00	0.00	0.00	0.00
40.00	1.00	0.00	0.00	0.00
42.00	1.00	0.00	0.00	0.00
44.00	1.00	0.00	0.00	0.00
46.00	1.00	0.00	0.00	0.00
48.00	1.00	0.00	0.00	0.00
50.00	1.00	0.00	0.00	0.00
52.00	1.00	0.00	0.00	0.00
54.00	1.00	0.00	0.00	0.00
56.00	1.00	0.00	0.00	0.00
58.00	1.00	0.00	0.00	0.00
60.00	1.00	0.00	0.00	0.00
62.00	1.00	0.00	0.00	0.00
64.00	1.00	0.00	0.00	0.00
66.00	1.00	0.00	0.00	0.00
68.00	1.00	0.00	0.00	0.00
70.00	1.00	0.00	0.00	0.00
72.00	1.00	0.00	0.00	0.00

Summary for Subcatchment C1: Building - Roofs 11,480 sq.ft.

Runoff = 0.52 cfs @ 0.97 hrs, Volume= 757 cf, Depth= 0.79"

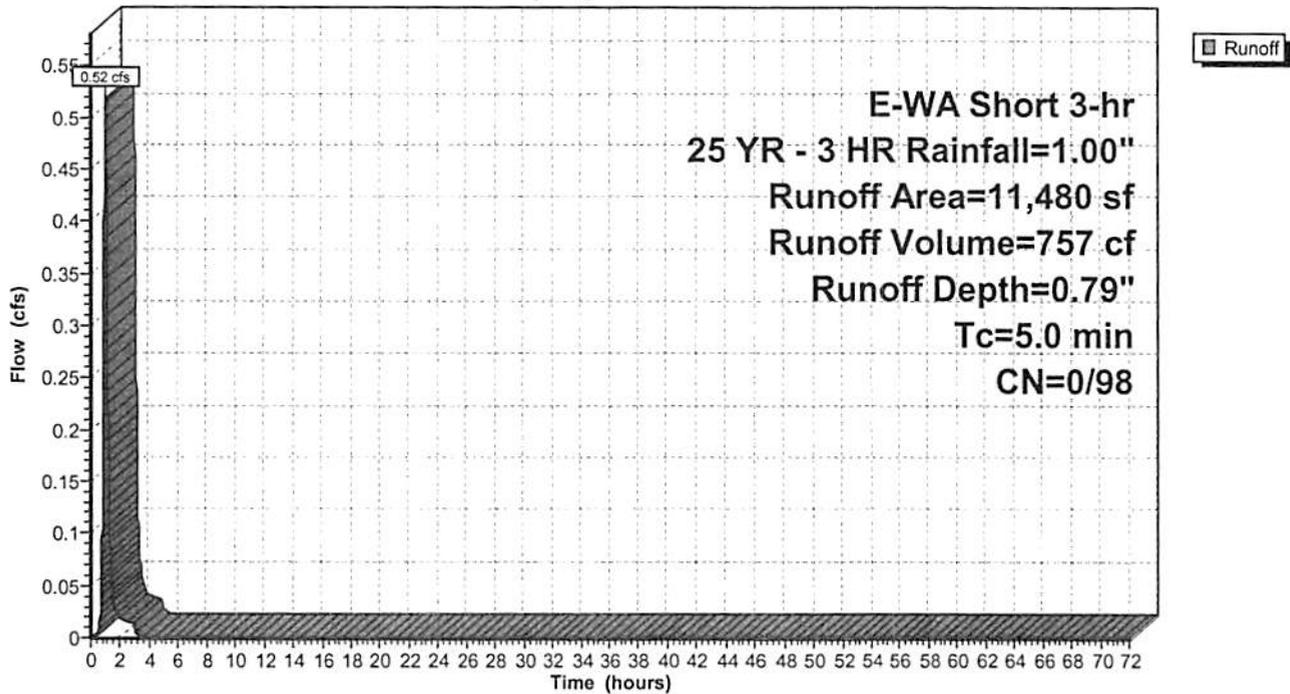
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
E-WA Short 3-hr 25 YR - 3 HR Rainfall=1.00"

Area (sf)	CN	Description
* 11,480	98	Roof
11,480		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Minimum Value

Subcatchment C1: Building - Roofs 11,480 sq.ft.

Hydrograph



Hydrograph for Subcatchment C1: Building - Roofs 11,480 sq.ft.

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
2.00	0.94	0.00	0.74	0.02
4.00	1.00	0.00	0.79	0.00
6.00	1.00	0.00	0.79	0.00
8.00	1.00	0.00	0.79	0.00
10.00	1.00	0.00	0.79	0.00
12.00	1.00	0.00	0.79	0.00
14.00	1.00	0.00	0.79	0.00
16.00	1.00	0.00	0.79	0.00
18.00	1.00	0.00	0.79	0.00
20.00	1.00	0.00	0.79	0.00
22.00	1.00	0.00	0.79	0.00
24.00	1.00	0.00	0.79	0.00
26.00	1.00	0.00	0.79	0.00
28.00	1.00	0.00	0.79	0.00
30.00	1.00	0.00	0.79	0.00
32.00	1.00	0.00	0.79	0.00
34.00	1.00	0.00	0.79	0.00
36.00	1.00	0.00	0.79	0.00
38.00	1.00	0.00	0.79	0.00
40.00	1.00	0.00	0.79	0.00
42.00	1.00	0.00	0.79	0.00
44.00	1.00	0.00	0.79	0.00
46.00	1.00	0.00	0.79	0.00
48.00	1.00	0.00	0.79	0.00
50.00	1.00	0.00	0.79	0.00
52.00	1.00	0.00	0.79	0.00
54.00	1.00	0.00	0.79	0.00
56.00	1.00	0.00	0.79	0.00
58.00	1.00	0.00	0.79	0.00
60.00	1.00	0.00	0.79	0.00
62.00	1.00	0.00	0.79	0.00
64.00	1.00	0.00	0.79	0.00
66.00	1.00	0.00	0.79	0.00
68.00	1.00	0.00	0.79	0.00
70.00	1.00	0.00	0.79	0.00
72.00	1.00	0.00	0.79	0.00

Summary for Subcatchment D1: Building - Roofs 6,560 sq.ft.

Runoff = 0.30 cfs @ 0.97 hrs, Volume= 432 cf, Depth= 0.79"

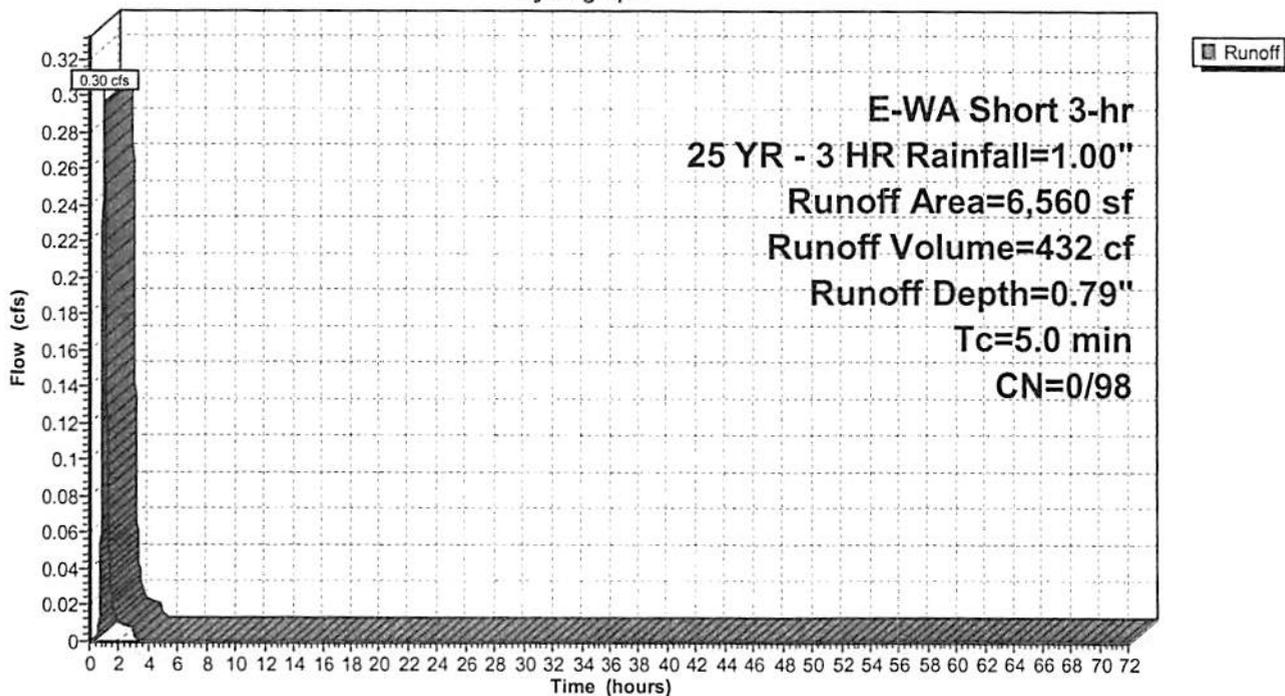
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 E-WA Short 3-hr 25 YR - 3 HR Rainfall=1.00"

Area (sf)	CN	Description
* 6,560	98	Roof
6,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Minimum Value

Subcatchment D1: Building - Roofs 6,560 sq.ft.

Hydrograph



Hydrograph for Subcatchment D1: Building - Roofs 6,560 sq.ft.

Time (hours)	Precip. (Inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
2.00	0.94	0.00	0.74	0.01
4.00	1.00	0.00	0.79	0.00
6.00	1.00	0.00	0.79	0.00
8.00	1.00	0.00	0.79	0.00
10.00	1.00	0.00	0.79	0.00
12.00	1.00	0.00	0.79	0.00
14.00	1.00	0.00	0.79	0.00
16.00	1.00	0.00	0.79	0.00
18.00	1.00	0.00	0.79	0.00
20.00	1.00	0.00	0.79	0.00
22.00	1.00	0.00	0.79	0.00
24.00	1.00	0.00	0.79	0.00
26.00	1.00	0.00	0.79	0.00
28.00	1.00	0.00	0.79	0.00
30.00	1.00	0.00	0.79	0.00
32.00	1.00	0.00	0.79	0.00
34.00	1.00	0.00	0.79	0.00
36.00	1.00	0.00	0.79	0.00
38.00	1.00	0.00	0.79	0.00
40.00	1.00	0.00	0.79	0.00
42.00	1.00	0.00	0.79	0.00
44.00	1.00	0.00	0.79	0.00
46.00	1.00	0.00	0.79	0.00
48.00	1.00	0.00	0.79	0.00
50.00	1.00	0.00	0.79	0.00
52.00	1.00	0.00	0.79	0.00
54.00	1.00	0.00	0.79	0.00
56.00	1.00	0.00	0.79	0.00
58.00	1.00	0.00	0.79	0.00
60.00	1.00	0.00	0.79	0.00
62.00	1.00	0.00	0.79	0.00
64.00	1.00	0.00	0.79	0.00
66.00	1.00	0.00	0.79	0.00
68.00	1.00	0.00	0.79	0.00
70.00	1.00	0.00	0.79	0.00
72.00	1.00	0.00	0.79	0.00

Summary for Subcatchment E1: Building - Roofs 7,560 sq.ft.

Runoff = 0.34 cfs @ 0.97 hrs, Volume= 498 cf, Depth= 0.79"

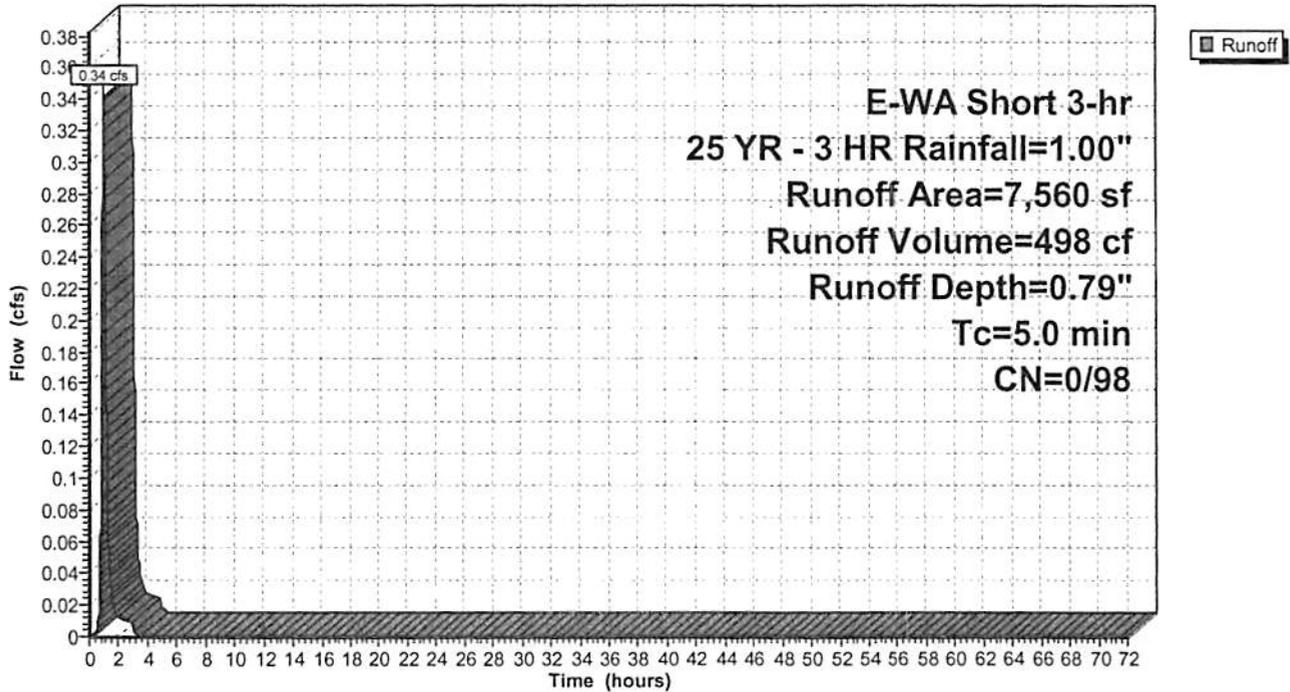
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 E-WA Short 3-hr 25 YR - 3 HR Rainfall=1.00"

Area (sf)	CN	Description
* 7,560	98	Roof
7,560		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Minimum Value

Subcatchment E1: Building - Roofs 7,560 sq.ft.

Hydrograph



Hydrograph for Subcatchment E1: Building - Roofs 7,560 sq.ft.

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
2.00	0.94	0.00	0.74	0.01
4.00	1.00	0.00	0.79	0.00
6.00	1.00	0.00	0.79	0.00
8.00	1.00	0.00	0.79	0.00
10.00	1.00	0.00	0.79	0.00
12.00	1.00	0.00	0.79	0.00
14.00	1.00	0.00	0.79	0.00
16.00	1.00	0.00	0.79	0.00
18.00	1.00	0.00	0.79	0.00
20.00	1.00	0.00	0.79	0.00
22.00	1.00	0.00	0.79	0.00
24.00	1.00	0.00	0.79	0.00
26.00	1.00	0.00	0.79	0.00
28.00	1.00	0.00	0.79	0.00
30.00	1.00	0.00	0.79	0.00
32.00	1.00	0.00	0.79	0.00
34.00	1.00	0.00	0.79	0.00
36.00	1.00	0.00	0.79	0.00
38.00	1.00	0.00	0.79	0.00
40.00	1.00	0.00	0.79	0.00
42.00	1.00	0.00	0.79	0.00
44.00	1.00	0.00	0.79	0.00
46.00	1.00	0.00	0.79	0.00
48.00	1.00	0.00	0.79	0.00
50.00	1.00	0.00	0.79	0.00
52.00	1.00	0.00	0.79	0.00
54.00	1.00	0.00	0.79	0.00
56.00	1.00	0.00	0.79	0.00
58.00	1.00	0.00	0.79	0.00
60.00	1.00	0.00	0.79	0.00
62.00	1.00	0.00	0.79	0.00
64.00	1.00	0.00	0.79	0.00
66.00	1.00	0.00	0.79	0.00
68.00	1.00	0.00	0.79	0.00
70.00	1.00	0.00	0.79	0.00
72.00	1.00	0.00	0.79	0.00

Summary for Subcatchment F1: Building - Roofs 13,440 sq.ft.

Runoff = 0.61 cfs @ 0.97 hrs, Volume= 886 cf, Depth= 0.79"

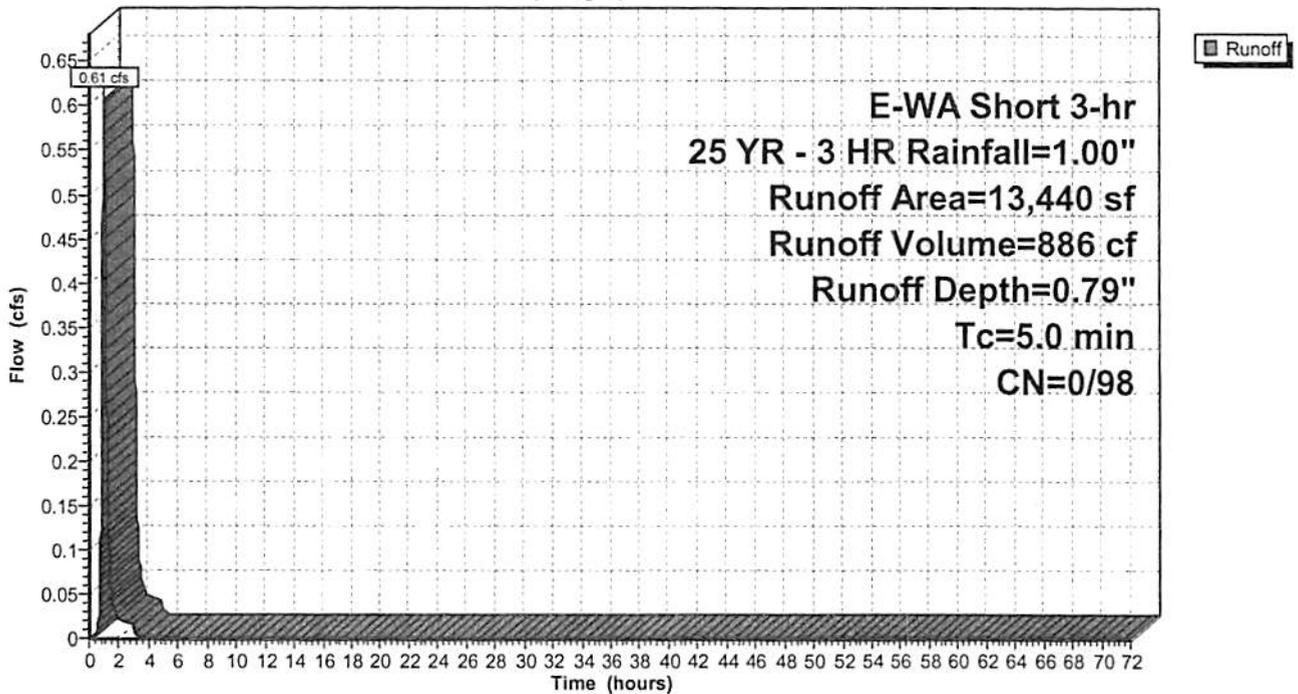
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 E-WA Short 3-hr 25 YR - 3 HR Rainfall=1.00"

Area (sf)	CN	Description
* 13,440	98	Roof
13,440		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Minimum Value

Subcatchment F1: Building - Roofs 13,440 sq.ft.

Hydrograph



Hydrograph for Subcatchment F1: Building - Roofs 13,440 sq.ft.

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
2.00	0.94	0.00	0.74	0.02
4.00	1.00	0.00	0.79	0.00
6.00	1.00	0.00	0.79	0.00
8.00	1.00	0.00	0.79	0.00
10.00	1.00	0.00	0.79	0.00
12.00	1.00	0.00	0.79	0.00
14.00	1.00	0.00	0.79	0.00
16.00	1.00	0.00	0.79	0.00
18.00	1.00	0.00	0.79	0.00
20.00	1.00	0.00	0.79	0.00
22.00	1.00	0.00	0.79	0.00
24.00	1.00	0.00	0.79	0.00
26.00	1.00	0.00	0.79	0.00
28.00	1.00	0.00	0.79	0.00
30.00	1.00	0.00	0.79	0.00
32.00	1.00	0.00	0.79	0.00
34.00	1.00	0.00	0.79	0.00
36.00	1.00	0.00	0.79	0.00
38.00	1.00	0.00	0.79	0.00
40.00	1.00	0.00	0.79	0.00
42.00	1.00	0.00	0.79	0.00
44.00	1.00	0.00	0.79	0.00
46.00	1.00	0.00	0.79	0.00
48.00	1.00	0.00	0.79	0.00
50.00	1.00	0.00	0.79	0.00
52.00	1.00	0.00	0.79	0.00
54.00	1.00	0.00	0.79	0.00
56.00	1.00	0.00	0.79	0.00
58.00	1.00	0.00	0.79	0.00
60.00	1.00	0.00	0.79	0.00
62.00	1.00	0.00	0.79	0.00
64.00	1.00	0.00	0.79	0.00
66.00	1.00	0.00	0.79	0.00
68.00	1.00	0.00	0.79	0.00
70.00	1.00	0.00	0.79	0.00
72.00	1.00	0.00	0.79	0.00

Summary for Pond A: Swale A

Inflow Area = 41,718 sf, 87.63% Impervious, Inflow Depth = 0.69" for 25 YR - 3 HR event
 Inflow = 1.65 cfs @ 0.97 hrs, Volume= 2,409 cf
 Outflow = 0.03 cfs @ 3.03 hrs, Volume= 2,409 cf, Atten= 98%, Lag= 123.7 min
 Discarded = 0.03 cfs @ 3.03 hrs, Volume= 2,409 cf

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 1,178.49' @ 3.03 hrs Surf.Area= 2,930 sf Storage= 2,115 cf

Plug-Flow detention time= 590.7 min calculated for 2,409 cf (100% of inflow)
 Center-of-Mass det. time= 590.7 min (661.5 - 70.8)

Volume	Invert	Avail.Storage	Storage Description
#1	1,177.70'	2,745 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

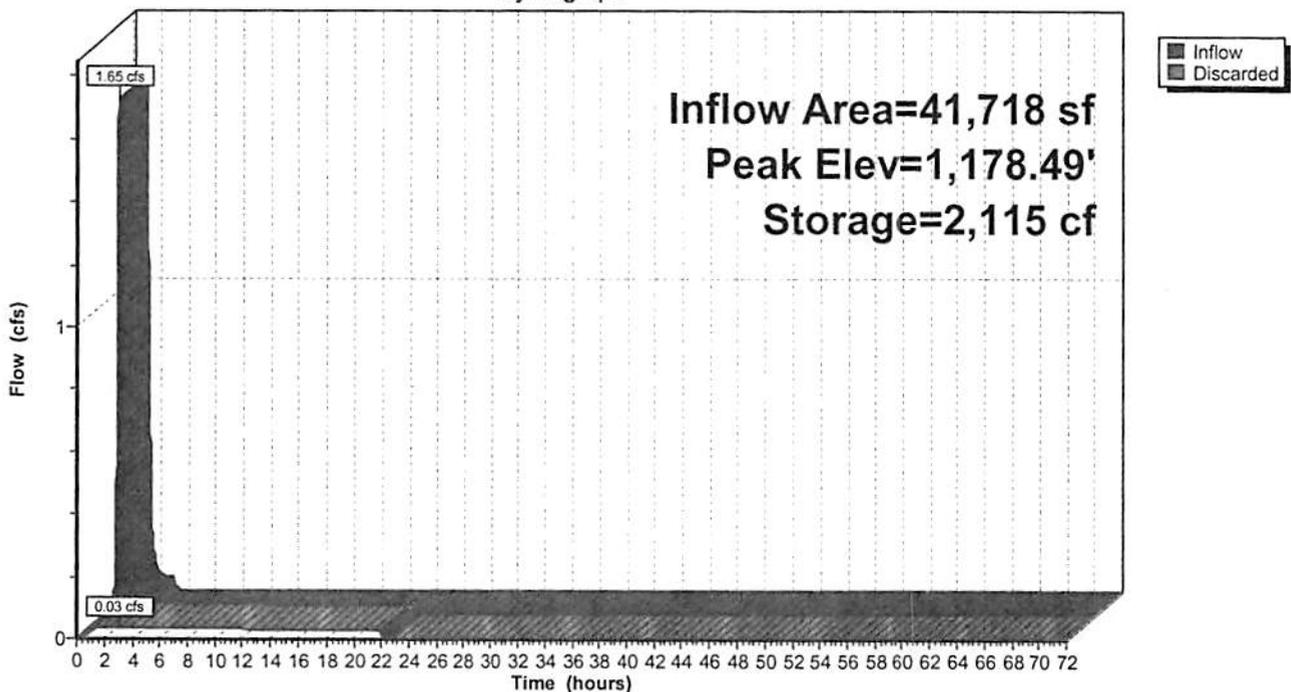
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,177.70	2,425	0	0
1,178.70	3,065	2,745	2,745

Device	Routing	Invert	Outlet Devices
#1	Discarded	1,177.70'	0.500 in/hr Exfiltration 0.50 In/Hr over Surface area

Discarded OutFlow Max=0.03 cfs @ 3.03 hrs HW=1,178.49' (Free Discharge)
 ↳1=Exfiltration 0.50 In/Hr (Exfiltration Controls 0.03 cfs)

Pond A: Swale A

Hydrograph



Hydrograph for Pond A: Swale A

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Discarded (cfs)
0.00	0.00	0	1,177.70	0.00
2.00	0.06	2,065	1,178.47	0.03
4.00	0.00	2,007	1,178.45	0.03
6.00	0.00	1,767	1,178.37	0.03
8.00	0.00	1,532	1,178.29	0.03
10.00	0.00	1,300	1,178.20	0.03
12.00	0.00	1,074	1,178.12	0.03
14.00	0.00	852	1,178.04	0.03
16.00	0.00	634	1,177.95	0.03
18.00	0.00	420	1,177.87	0.03
20.00	0.00	212	1,177.79	0.03
22.00	0.00	12	1,177.70	0.01
24.00	0.00	0	1,177.70	0.00
26.00	0.00	0	1,177.70	0.00
28.00	0.00	0	1,177.70	0.00
30.00	0.00	0	1,177.70	0.00
32.00	0.00	0	1,177.70	0.00
34.00	0.00	0	1,177.70	0.00
36.00	0.00	0	1,177.70	0.00
38.00	0.00	0	1,177.70	0.00
40.00	0.00	0	1,177.70	0.00
42.00	0.00	0	1,177.70	0.00
44.00	0.00	0	1,177.70	0.00
46.00	0.00	0	1,177.70	0.00
48.00	0.00	0	1,177.70	0.00
50.00	0.00	0	1,177.70	0.00
52.00	0.00	0	1,177.70	0.00
54.00	0.00	0	1,177.70	0.00
56.00	0.00	0	1,177.70	0.00
58.00	0.00	0	1,177.70	0.00
60.00	0.00	0	1,177.70	0.00
62.00	0.00	0	1,177.70	0.00
64.00	0.00	0	1,177.70	0.00
66.00	0.00	0	1,177.70	0.00
68.00	0.00	0	1,177.70	0.00
70.00	0.00	0	1,177.70	0.00
72.00	0.00	0	1,177.70	0.00

Summary for Pond B: Swale B

Inflow Area = 31,423 sf, 86.80% Impervious, Inflow Depth = 0.69" for 25 YR - 3 HR event
 Inflow = 1.23 cfs @ 0.97 hrs, Volume= 1,798 cf
 Outflow = 0.03 cfs @ 3.02 hrs, Volume= 1,798 cf, Atten= 98%, Lag= 123.3 min
 Discarded = 0.03 cfs @ 3.02 hrs, Volume= 1,798 cf

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 1,145.72' @ 3.02 hrs Surf.Area= 2,378 sf Storage= 1,559 cf

Plug-Flow detention time= 540.2 min calculated for 1,798 cf (100% of inflow)
 Center-of-Mass det. time= 540.2 min (611.0 - 70.8)

Volume	Invert	Avail.Storage	Storage Description
#1	1,145.00'	2,254 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

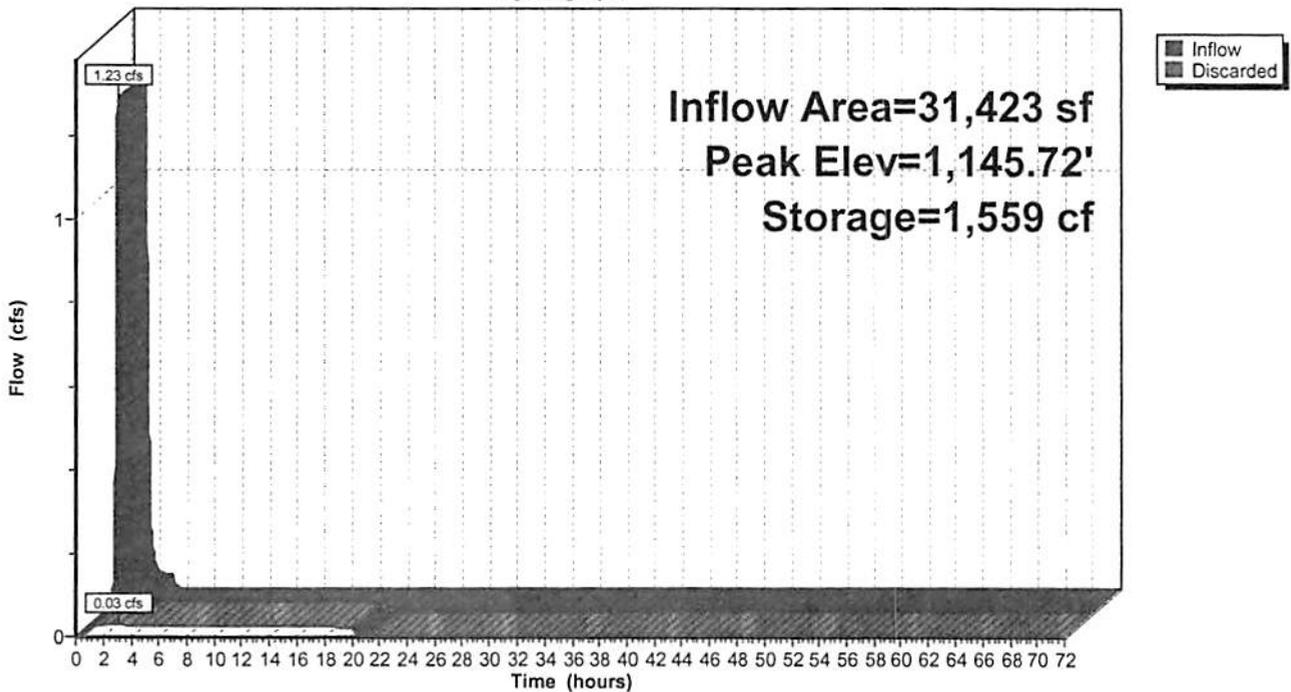
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,145.00	1,969	0	0
1,146.00	2,539	2,254	2,254

Device	Routing	Invert	Outlet Devices
#1	Discarded	1,145.00'	0.500 in/hr Exfiltration 0.50 In/Hr over Surface area

Discarded OutFlow Max=0.03 cfs @ 3.02 hrs HW=1,145.72' (Free Discharge)
 1=Exfiltration 0.50 In/Hr (Exfiltration Controls 0.03 cfs)

Pond B: Swale B

Hydrograph



Hydrograph for Pond B: Swale B

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Discarded (cfs)
0.00	0.00	0	1,145.00	0.00
2.00	0.04	1,530	1,145.71	0.03
4.00	0.00	1,471	1,145.68	0.03
6.00	0.00	1,277	1,145.60	0.03
8.00	0.00	1,087	1,145.51	0.03
10.00	0.00	900	1,145.43	0.03
12.00	0.00	717	1,145.35	0.03
14.00	0.00	539	1,145.26	0.02
16.00	0.00	364	1,145.18	0.02
18.00	0.00	194	1,145.10	0.02
20.00	0.00	27	1,145.01	0.02
22.00	0.00	0	1,145.00	0.00
24.00	0.00	0	1,145.00	0.00
26.00	0.00	0	1,145.00	0.00
28.00	0.00	0	1,145.00	0.00
30.00	0.00	0	1,145.00	0.00
32.00	0.00	0	1,145.00	0.00
34.00	0.00	0	1,145.00	0.00
36.00	0.00	0	1,145.00	0.00
38.00	0.00	0	1,145.00	0.00
40.00	0.00	0	1,145.00	0.00
42.00	0.00	0	1,145.00	0.00
44.00	0.00	0	1,145.00	0.00
46.00	0.00	0	1,145.00	0.00
48.00	0.00	0	1,145.00	0.00
50.00	0.00	0	1,145.00	0.00
52.00	0.00	0	1,145.00	0.00
54.00	0.00	0	1,145.00	0.00
56.00	0.00	0	1,145.00	0.00
58.00	0.00	0	1,145.00	0.00
60.00	0.00	0	1,145.00	0.00
62.00	0.00	0	1,145.00	0.00
64.00	0.00	0	1,145.00	0.00
66.00	0.00	0	1,145.00	0.00
68.00	0.00	0	1,145.00	0.00
70.00	0.00	0	1,145.00	0.00
72.00	0.00	0	1,145.00	0.00

Summary for Pond C: Swale C

Inflow Area = 11,480 sf, 100.00% Impervious, Inflow Depth = 0.79" for 25 YR - 3 HR event
 Inflow = 0.52 cfs @ 0.97 hrs, Volume= 757 cf
 Outflow = 0.07 cfs @ 0.80 hrs, Volume= 757 cf, Atten= 86%, Lag= 0.0 min
 Discarded = 0.07 cfs @ 0.80 hrs, Volume= 757 cf

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 99.59' @ 1.35 hrs Surf.Area= 12,290 sf Storage= 463 cf

Plug-Flow detention time= 61.0 min calculated for 757 cf (100% of inflow)
 Center-of-Mass det. time= 61.0 min (131.8 - 70.8)

Volume	Invert	Avail.Storage	Storage Description
#1	99.50'	2,458 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 6,145 cf Overall x 40.0% Voids

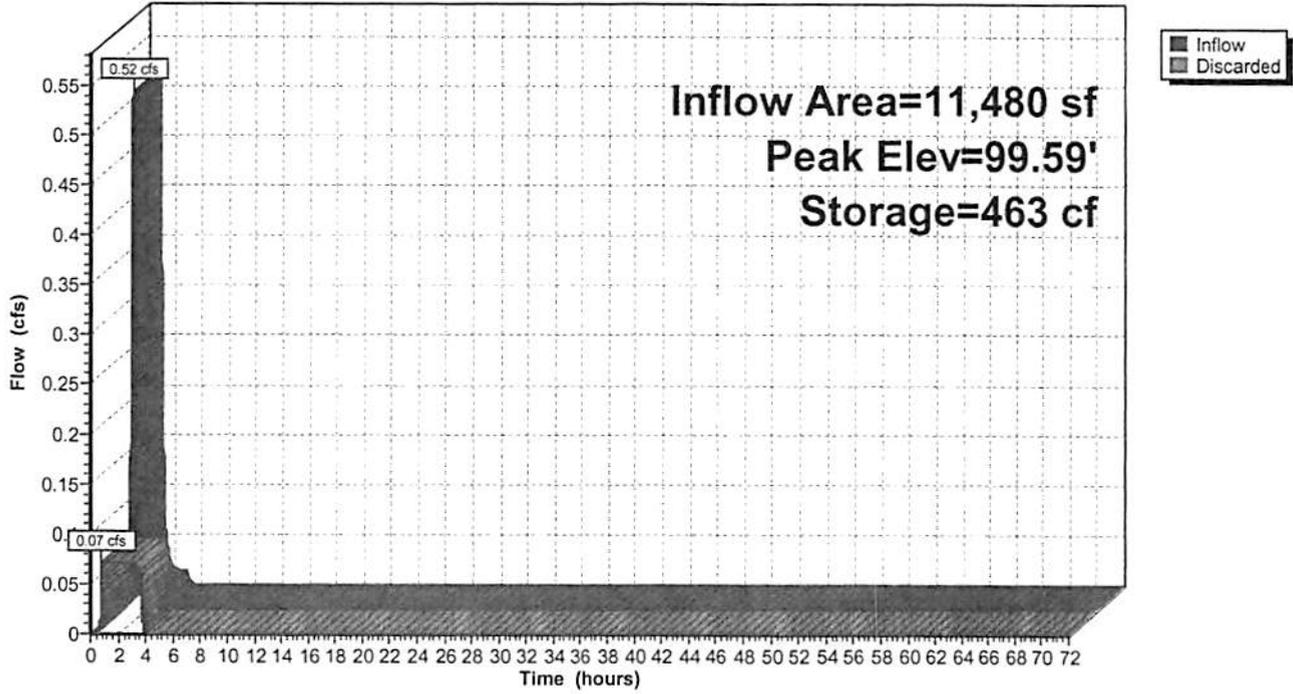
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
99.50	12,290	0	0
100.00	12,290	6,145	6,145

Device	Routing	Invert	Outlet Devices
#1	Discarded	99.50'	0.250 in/hr Exfiltration 0.25 In/Hr over Surface area

Discarded OutFlow Max=0.07 cfs @ 0.80 hrs HW=99.51' (Free Discharge)
 ↑ 1=Exfiltration 0.25 In/Hr (Exfiltration Controls 0.07 cfs)

Pond C: Swale C

Hydrograph



Hydrograph for Pond C: Swale C

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Discarded (cfs)
0.00	0.00	0	99.50	0.00
2.00	0.02	370	99.58	0.07
4.00	0.00	0	99.50	0.00
6.00	0.00	0	99.50	0.00
8.00	0.00	0	99.50	0.00
10.00	0.00	0	99.50	0.00
12.00	0.00	0	99.50	0.00
14.00	0.00	0	99.50	0.00
16.00	0.00	0	99.50	0.00
18.00	0.00	0	99.50	0.00
20.00	0.00	0	99.50	0.00
22.00	0.00	0	99.50	0.00
24.00	0.00	0	99.50	0.00
26.00	0.00	0	99.50	0.00
28.00	0.00	0	99.50	0.00
30.00	0.00	0	99.50	0.00
32.00	0.00	0	99.50	0.00
34.00	0.00	0	99.50	0.00
36.00	0.00	0	99.50	0.00
38.00	0.00	0	99.50	0.00
40.00	0.00	0	99.50	0.00
42.00	0.00	0	99.50	0.00
44.00	0.00	0	99.50	0.00
46.00	0.00	0	99.50	0.00
48.00	0.00	0	99.50	0.00
50.00	0.00	0	99.50	0.00
52.00	0.00	0	99.50	0.00
54.00	0.00	0	99.50	0.00
56.00	0.00	0	99.50	0.00
58.00	0.00	0	99.50	0.00
60.00	0.00	0	99.50	0.00
62.00	0.00	0	99.50	0.00
64.00	0.00	0	99.50	0.00
66.00	0.00	0	99.50	0.00
68.00	0.00	0	99.50	0.00
70.00	0.00	0	99.50	0.00
72.00	0.00	0	99.50	0.00

Summary for Pond D: Swale D

Inflow Area = 6,560 sf, 100.00% Impervious, Inflow Depth = 0.79" for 25 YR - 3 HR event
 Inflow = 0.30 cfs @ 0.97 hrs, Volume= 432 cf
 Outflow = 0.04 cfs @ 0.81 hrs, Volume= 432 cf, Atten= 85%, Lag= 0.0 min
 Discarded = 0.04 cfs @ 0.81 hrs, Volume= 432 cf

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 99.59' @ 1.34 hrs Surf.Area= 7,477 sf Storage= 259 cf

Plug-Flow detention time= 55.9 min calculated for 432 cf (100% of inflow)
 Center-of-Mass det. time= 55.9 min (126.7 - 70.8)

Volume	Invert	Avail.Storage	Storage Description
#1	99.50'	1,495 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 3,739 cf Overall x 40.0% Voids

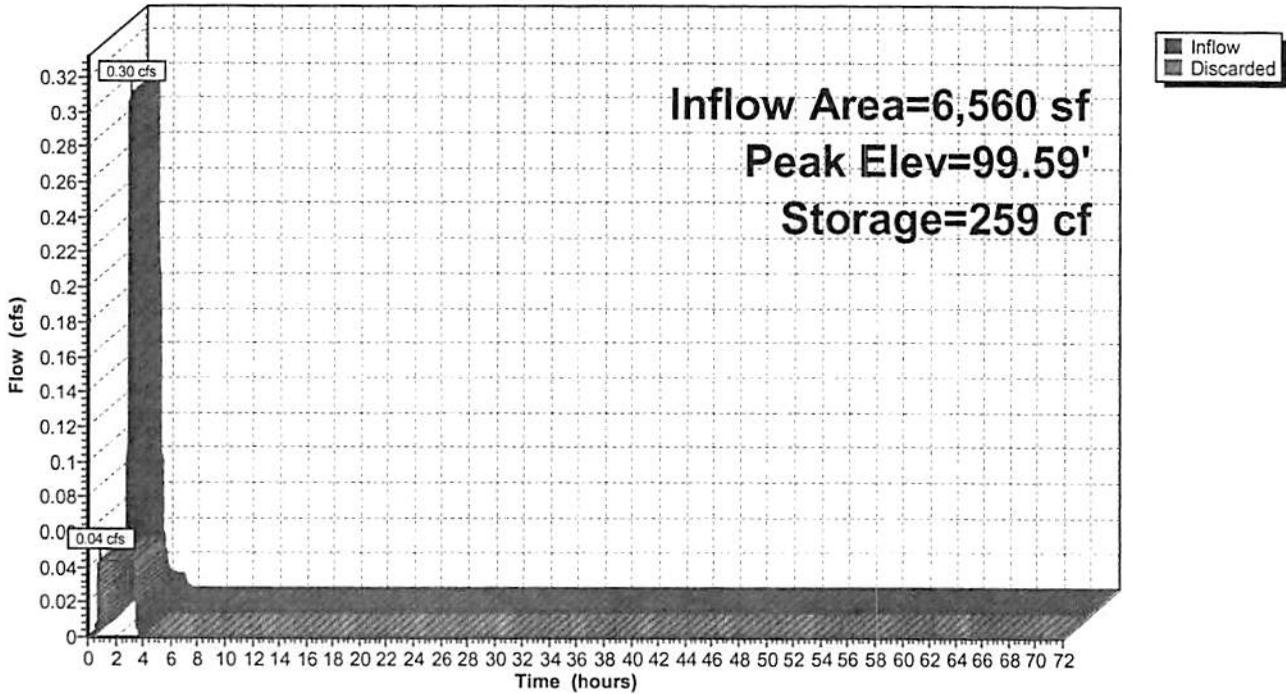
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
99.50	7,477	0	0
100.00	7,477	3,739	3,739

Device	Routing	Invert	Outlet Devices
#1	Discarded	99.50'	0.250 in/hr Exfiltration 0.25 In/Hr over Surface area

Discarded OutFlow Max=0.04 cfs @ 0.81 hrs HW=99.51' (Free Discharge)
 ↳1=Exfiltration 0.25 In/Hr (Exfiltration Controls 0.04 cfs)

Pond D: Swale D

Hydrograph



Hydrograph for Pond D: Swale D

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Discarded (cfs)
0.00	0.00	0	99.50	0.00
2.00	0.01	200	99.57	0.04
4.00	0.00	0	99.50	0.00
6.00	0.00	0	99.50	0.00
8.00	0.00	0	99.50	0.00
10.00	0.00	0	99.50	0.00
12.00	0.00	0	99.50	0.00
14.00	0.00	0	99.50	0.00
16.00	0.00	0	99.50	0.00
18.00	0.00	0	99.50	0.00
20.00	0.00	0	99.50	0.00
22.00	0.00	0	99.50	0.00
24.00	0.00	0	99.50	0.00
26.00	0.00	0	99.50	0.00
28.00	0.00	0	99.50	0.00
30.00	0.00	0	99.50	0.00
32.00	0.00	0	99.50	0.00
34.00	0.00	0	99.50	0.00
36.00	0.00	0	99.50	0.00
38.00	0.00	0	99.50	0.00
40.00	0.00	0	99.50	0.00
42.00	0.00	0	99.50	0.00
44.00	0.00	0	99.50	0.00
46.00	0.00	0	99.50	0.00
48.00	0.00	0	99.50	0.00
50.00	0.00	0	99.50	0.00
52.00	0.00	0	99.50	0.00
54.00	0.00	0	99.50	0.00
56.00	0.00	0	99.50	0.00
58.00	0.00	0	99.50	0.00
60.00	0.00	0	99.50	0.00
62.00	0.00	0	99.50	0.00
64.00	0.00	0	99.50	0.00
66.00	0.00	0	99.50	0.00
68.00	0.00	0	99.50	0.00
70.00	0.00	0	99.50	0.00
72.00	0.00	0	99.50	0.00

Summary for Pond E: Swale E

Inflow Area = 7,560 sf, 100.00% Impervious, Inflow Depth = 0.79" for 25 YR - 3 HR event
 Inflow = 0.34 cfs @ 0.97 hrs, Volume= 498 cf
 Outflow = 0.04 cfs @ 0.79 hrs, Volume= 498 cf, Atten= 88%, Lag= 0.0 min
 Discarded = 0.04 cfs @ 0.79 hrs, Volume= 498 cf

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 99.61' @ 1.37 hrs Surf.Area= 7,219 sf Storage= 315 cf

Plug-Flow detention time= 71.2 min calculated for 498 cf (100% of inflow)
 Center-of-Mass det. time= 71.2 min (142.0 - 70.8)

Volume	Invert	Avail.Storage	Storage Description
#1	99.50'	1,444 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 3,610 cf Overall x 40.0% Voids

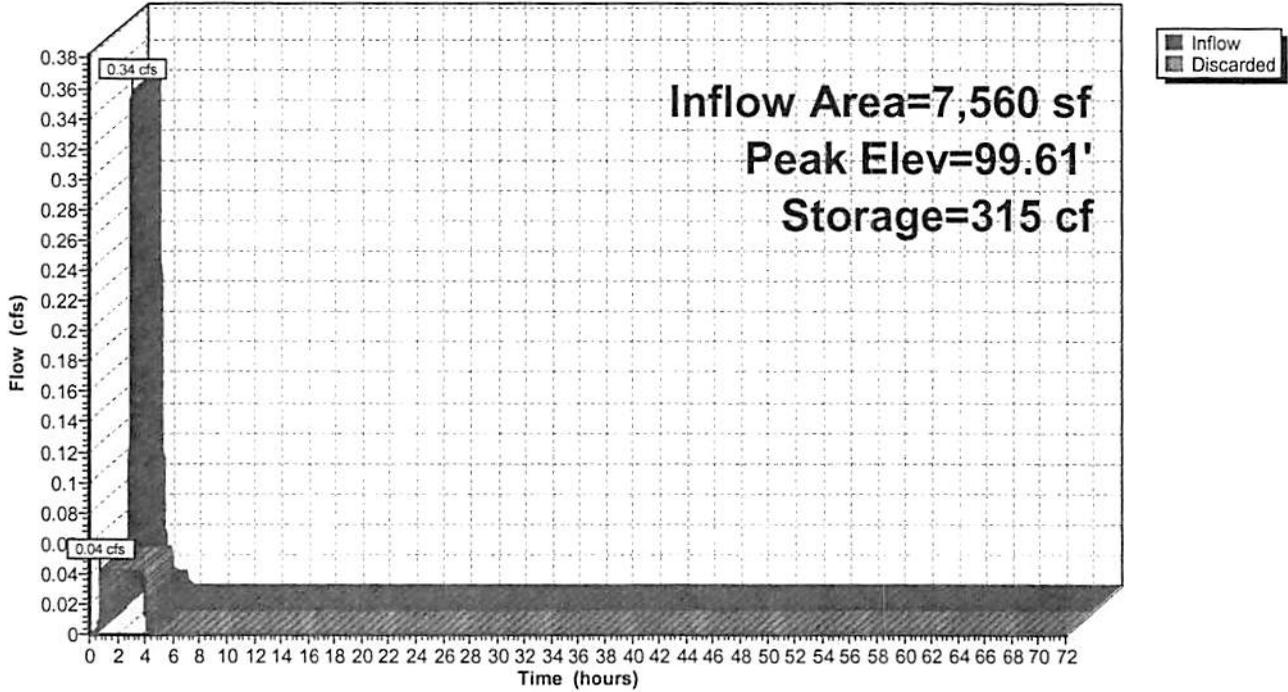
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
99.50	7,219	0	0
100.00	7,219	3,610	3,610

Device	Routing	Invert	Outlet Devices
#1	Discarded	99.50'	0.250 in/hr Exfiltration 0.25 In/Hr over Surface area

Discarded OutFlow Max=0.04 cfs @ 0.79 hrs HW=99.51' (Free Discharge)
 1=Exfiltration 0.25 In/Hr (Exfiltration Controls 0.04 cfs)

Pond E: Swale E

Hydrograph



Hydrograph for Pond E: Swale E

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Discarded (cfs)
0.00	0.00	0	99.50	0.00
2.00	0.01	266	99.59	0.04
4.00	0.00	7	99.50	0.02
6.00	0.00	0	99.50	0.00
8.00	0.00	0	99.50	0.00
10.00	0.00	0	99.50	0.00
12.00	0.00	0	99.50	0.00
14.00	0.00	0	99.50	0.00
16.00	0.00	0	99.50	0.00
18.00	0.00	0	99.50	0.00
20.00	0.00	0	99.50	0.00
22.00	0.00	0	99.50	0.00
24.00	0.00	0	99.50	0.00
26.00	0.00	0	99.50	0.00
28.00	0.00	0	99.50	0.00
30.00	0.00	0	99.50	0.00
32.00	0.00	0	99.50	0.00
34.00	0.00	0	99.50	0.00
36.00	0.00	0	99.50	0.00
38.00	0.00	0	99.50	0.00
40.00	0.00	0	99.50	0.00
42.00	0.00	0	99.50	0.00
44.00	0.00	0	99.50	0.00
46.00	0.00	0	99.50	0.00
48.00	0.00	0	99.50	0.00
50.00	0.00	0	99.50	0.00
52.00	0.00	0	99.50	0.00
54.00	0.00	0	99.50	0.00
56.00	0.00	0	99.50	0.00
58.00	0.00	0	99.50	0.00
60.00	0.00	0	99.50	0.00
62.00	0.00	0	99.50	0.00
64.00	0.00	0	99.50	0.00
66.00	0.00	0	99.50	0.00
68.00	0.00	0	99.50	0.00
70.00	0.00	0	99.50	0.00
72.00	0.00	0	99.50	0.00

Summary for Pond F: Swale F

Inflow Area = 13,440 sf, 100.00% Impervious, Inflow Depth = 0.79" for 25 YR - 3 HR event
 Inflow = 0.61 cfs @ 0.97 hrs, Volume= 886 cf
 Outflow = 0.08 cfs @ 0.80 hrs, Volume= 886 cf, Atten= 86%, Lag= 0.0 min
 Discarded = 0.08 cfs @ 0.80 hrs, Volume= 886 cf

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 99.60' @ 1.35 hrs Surf.Area= 14,256 sf Storage= 544 cf

Plug-Flow detention time= 61.8 min calculated for 886 cf (100% of inflow)
 Center-of-Mass det. time= 61.8 min (132.6 - 70.8)

Volume	Invert	Avail.Storage	Storage Description
#1	99.50'	2,851 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 7,128 cf Overall x 40.0% Voids

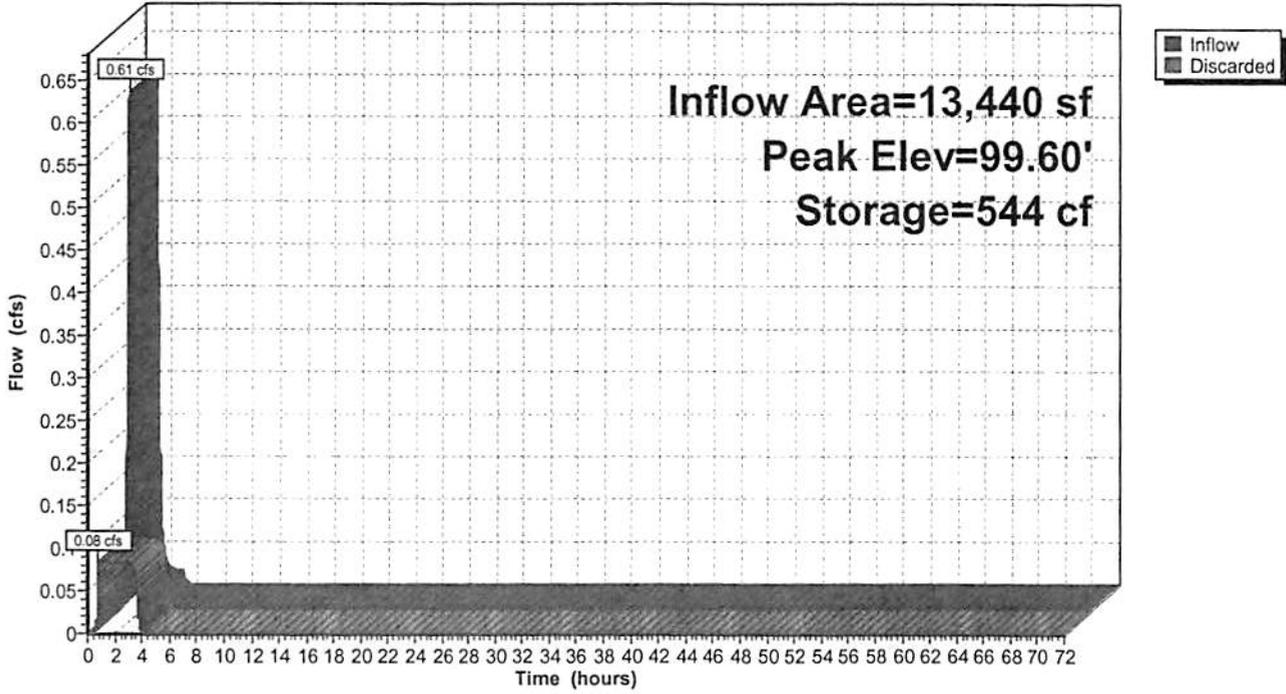
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
99.50	14,256	0	0
100.00	14,256	7,128	7,128

Device	Routing	Invert	Outlet Devices
#1	Discarded	99.50'	0.250 in/hr Exfiltration 0.25 In/Hr over Surface area

Discarded OutFlow Max=0.08 cfs @ 0.80 hrs HW=99.51' (Free Discharge)
 ↳1=Exfiltration 0.25 In/Hr (Exfiltration Controls 0.08 cfs)

Pond F: Swale F

Hydrograph



Hydrograph for Pond F: Swale F

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Discarded (cfs)
0.00	0.00	0	99.50	0.00
2.00	0.02	436	99.58	0.08
4.00	0.00	0	99.50	0.00
6.00	0.00	0	99.50	0.00
8.00	0.00	0	99.50	0.00
10.00	0.00	0	99.50	0.00
12.00	0.00	0	99.50	0.00
14.00	0.00	0	99.50	0.00
16.00	0.00	0	99.50	0.00
18.00	0.00	0	99.50	0.00
20.00	0.00	0	99.50	0.00
22.00	0.00	0	99.50	0.00
24.00	0.00	0	99.50	0.00
26.00	0.00	0	99.50	0.00
28.00	0.00	0	99.50	0.00
30.00	0.00	0	99.50	0.00
32.00	0.00	0	99.50	0.00
34.00	0.00	0	99.50	0.00
36.00	0.00	0	99.50	0.00
38.00	0.00	0	99.50	0.00
40.00	0.00	0	99.50	0.00
42.00	0.00	0	99.50	0.00
44.00	0.00	0	99.50	0.00
46.00	0.00	0	99.50	0.00
48.00	0.00	0	99.50	0.00
50.00	0.00	0	99.50	0.00
52.00	0.00	0	99.50	0.00
54.00	0.00	0	99.50	0.00
56.00	0.00	0	99.50	0.00
58.00	0.00	0	99.50	0.00
60.00	0.00	0	99.50	0.00
62.00	0.00	0	99.50	0.00
64.00	0.00	0	99.50	0.00
66.00	0.00	0	99.50	0.00
68.00	0.00	0	99.50	0.00
70.00	0.00	0	99.50	0.00
72.00	0.00	0	99.50	0.00



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torkelson@fairpoint.net

Carl Torkelson
Cell: (509) 945-0133
Candi Torkelson
Cell: (509) 961-7656

Why Pay \$1000's More? Buy Builder Direct!

July 30, 2015

City of Selah
Mr. Patrick Sprugin
Hearing Examiner

RE: Planned Development Application for 207 E. Goodlander Rd. Whispering View Estates

Dear Mr. Sprugin,

I would like to thank you for taking the time to review our Whispering View Estates, Planned Development application. My wife Candi and I own Torkelson Construction, Inc and Torkelson Rental Properties. We have primarily developed land and built hundreds of single family homes for private buyers in addition to rental properties in Selah for the past 22 years. Through our vast experience with the community of Selah and the citizens I feel we have a strong understanding of the housing market and needs of the community. We have successfully developed several long and short plats, built seven P.D's and presently own 90 rental properties within the City limits of Selah. Additionally, my wife and I have lived here for many years and have raised our family in Selah.

As you know in 2008 our economy began to decline on both a local and national level. The impact of this turn of events caused a change of circumstance leaving numerous families facing financial difficulties such as job loss, home foreclosures and bankruptcy. The American Dream was quickly slipping away. Those individuals and families who were able to buy during this down turn faced struggles from the Lending Industries disasters and had difficulties securing home loans. Families in Selah were facing these same issues and it lead to a decrease in the purchases of single family homes.

For many of those individuals who have regained positions in the job market are now facing the shift in the job security in today's job market as well. Now instead of being at the same job or the same company for 20 plus year employees are facing job transfers every 4 to 5 years. Today's economy and job demands are forcing individuals and families to look for housing opportunities that are affordable to purchase, desirable on the resale market when it is time for them to transfer or rentals. Their housing choices must easily fit their lifestyle needs.

Because of these change of circumstances we as a company found it necessary to redirect how we did business as well and fit the needs of the community as a whole. We went from a primary focus of building and selling single family homes to developing rental properties. We sensed the change happening in our industry.

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Exh. 617 HE6

We saw the demand of rental properties on the rise and filled the need of having rental properties available. We also saw that it made better business sense for us to focus on the rental market until the economy started to rebound. We shifted our focus to designing and building planned developments that provide quality, affordable housing for the demanding rental market. We knew our rentals would produce a better return on our investment than trying to sell single family homes at that time. Again, we saw the demand and filled the need. Torkelson Rental Properties has had a 98% rental occupancy rate for the past three years and are currently at 100%. We have a waiting list for individuals and families for our rental properties as well. Our rental properties are mostly 3 bedrooms, 2 1/2 baths units. Our rent prices on our townhomes range from \$1100.00 to \$1250.00 per month. Present only 4 to 5 % of existing rental properties in Selah range from \$1000.00 to \$1500.00 per month.

We feel the economy is improving, we are facing yet another change of circumstances and once again we are preparing for the change. People no longer desire to have the responsibility of a large family home on a large piece of property. The consumers needs have shifted to wanting a smaller, low maintenance home in a quaint community. They want the luxury of a home without all the upkeep involved.

Our intention for Whispering View Estates is to market it as low maintenance individual single family and vacation homes for those enjoying our regions fast expanding wine industry. Our focus for advertising the homes will be in Yakima, Seattle, Portland, and Boise. We have been contacted by interested buyers for homes in the Whispering View Estates and see that the demand for these home sales rising. We presently have one of the vacant lots under contract and two other parties expressing interest in purchasing homes in the Whispering View Estate Planned Development. We look forward to more new home sales. This in turn will benefit Selah, adding to the tax base and bringing new patrons to other businesses in Selah.

The housing market is rebounding and there are improvements to the Zero Down USDA Loans available. Per the USDA Guidelines: "USDA recently updated guidelines allowing for additional Washington State Cities to be considered eligible for USDA loans. A unique Government insured financing program makes homeownership possible for individuals and families buying a home in selected areas. Qualified borrowers under certain income caps can take advantage of the USDA Rural Development loan program to get a fixed rate home loan with Zero down."

We will present single family buyers with this USDA Zero Down Loan information while marketing Whispering View Estates. These same families will be able to buy a home with Zero down and their house payment would be less than what we currently would charge them for rent of the same property. We are giving them the chance to realize their own American Dream right here in Selah.

Our target single family home buyers want to locate their families in nice neighborhoods, live in a home with nice upgrades, a home that they can be proud of and take pride in. A home with beautiful outdoor living spaces, close to good schools, shopping and transportation, all at an affordable price. This is the concept we had in mind when Candi and I began developing Whispering View Estates.

Our goal as a company has always been to better our community. Candi and I have a great deal of pride in the quality of work we do in building our homes and serving the needs of our community and its citizens.

Again, I would like to thank you for the time in reviewing our P.D application for Whispering Views Estate.

Sincerely,

A handwritten signature in black ink, appearing to read 'Carl L. Torkelson', with a long horizontal stroke extending to the right.

Carl L. Torkelson
President

Change in Circumstance:

- **2008 Local and National Economic turn down**
- **People losing jobs, homes and facing bankruptcy**
- **Lending Industry disaster**
- **Demands for quality rental properties**
- **Job market changes forcing employees to transfer job and positions every 4 to 5 years.**
- **Industries in our region for example the Training Center and PNWU Medical University bring professionals to our area for a short term but looking for quality low maintenance housing.**
- **Rental capacity at 98% for past three years, currently at 100% occupancy**
- **Economy now improving**
- **Individuals and single families no longer wanting large home on large lots.**
- **Individuals and single families now want low maintenance, good quality homes that fits their carefree lifestyles**
- **Zero Down home loans for single family homes**
- **Bring new homeowners, tax base and business to Selah**

yakima craigslist > manage posting

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Your posting can be seen at <http://yakima.craigslist.org/reo/5149021184.html>.

[Stating a discriminatory preference in a housing post is illegal, and prohibited on craigslist.](#)

- [Edit this Posting](#) You can make changes to the content of your post.
- [Update Images](#) Add or remove images attached to this posting
- [Edit Location](#) Change how this posting appears on a map.
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CL yakima > housing > real estate - by owner

Posted: about a minute ago

\$190000 / 3br - 1700ft² - Beautiful Brand New Townhouse - Selah (205 Whisper Way)



3BR / 2.5Ba 1700ft² available oct 15

townhouse
w/d hookups
attached garage



Brand New Townhouse that consists of 1700 sq ft 3 Br 2.5 Baths. Large Living Room, Kitchen with walk-in Pantry and Stainless Steel appliances. Deck off the Dining Room. Granite counter tops, and Slate and carpet floors. Master Bedroom has large walk-in closet and Master Bath has double sinks. 2 Car oversized Garage.

Call today for a tour.

- do NOT contact me with unsolicited services or offers

Has a Mortgage	46.2% 1,195 Homes	43.1% 1,219,571 Homes	39.8% 51,696,841 Homes
No Mortgage	10.2% 263 Homes	15.9% 449,925 Homes	18.8% 24,392,809 Homes

Selah Monthly Owner Costs for Housing Homes with a Mortgage

The following table displays information on monthly cost averages for home owners in Selah, WA. The average monthly cost to owners is \$1,290.

Monthly Mortgage	City	State	USA
< \$500	0.0% 0 Homes	1.3% 15,428 Homes	2.1% 1,067,631 Homes
\$500 - \$999	33.8% 404 Homes	11.7% 142,168 Homes	19.8% 10,235,704 Homes
\$1,000 - \$1,499	31.0% 370 Homes	23.9% 291,281 Homes	27.1% 13,996,238 Homes
\$1,500 - \$1,999	15.6% 187 Homes	24.8% 302,719 Homes	19.9% 10,369,611 Homes
\$2,000 - \$2,999	18.9% 226 Homes	26.5% 323,383 Homes	19.4% 10,022,149 Homes
> \$3,000	0.7% 8 Homes	11.9% 144,592 Homes	11.7% 6,063,508 Homes

Selah Rental Prices

The information in the table below represents monthly rental price averages in Selah, WA. Renters pay an average of \$573 monthly.

Monthly Rent	City	State	USA
< \$300	1.6% 16 Homes	6.2% 56,349 Homes	9.0% 3,437,912 Homes
\$300 - \$499	31.0% 315 Homes	10.4% 94,346 Homes	16.3% 6,217,643 Homes
\$500 - \$699	32.6% 332 Homes	22.0% 199,487 Homes	21.9% 8,360,537 Homes
\$700 - \$999	29.5% 300 Homes	31.6% 286,645 Homes	24.0% 9,150,071 Homes
\$1,000 - \$1,499	4.5% 46 Homes	19.1% 173,187 Homes	15.3% 5,825,969 Homes
\$1,500 - \$1,999	0.0% 0 Homes	4.7% 42,263 Homes	5.0% 1,893,263 Homes
> \$2,000	0.0% 0 Homes	2.1% 19,441 Homes	2.8% 1,078,925 Homes

Notes

City rating based on comparing Selah to other Washington cities.
 State rating based on comparing Washington to other U.S. states.
 All ratings are segmented into quintiles (very low, low, average, high, very high).
 Data provided by the 2010 U.S. Census.

Selah, Washington Population.

Census 2010 and 2000 Interactive Map, Demographics, Statistics, Quick Facts



2000 to 2010 Census Changes

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Compare population statistics about Selah, WA by race, age, gender, Latino/Hispanic origin etc. [CensusViewer](#) delivers detailed demographics and population statistics from the 2010 Census, 2000 Census, American Community Survey (ACS), registered voter files, commercial data sources and more.

Experience breakthrough technology for census data discovery, population analysis and visualization over Bing Maps. Visually "fly over" a state, viewing in great detail the census blocks, census tracts, cities, counties and various political districts in your selection or "zoom down" to the street level to get demographic statistics and information about the population in an individual census block or census tract.

Click on any map link to see our blazing-fast data visualization over Bing Maps in action. [Read more](#) about the unprecedented demographic insight and analytical power of CensusViewer interactive maps.

[CensusViewer maps, data and statistics pages for all states, counties and cities.](#)

Selah, Washington - Overview

	2010 Census		2000 Census		2000-2010 Change	
	Counts	Percentages	Counts	Percentages	Change	Percentages
Total Population						
Total Population	7,147	100.00%	6,321	100.00%	826	13.07%
Population by Race						
American Indian and Alaska native alone	92	1.29%	78	1.23%	14	17.95%
Asian alone	48	0.67%	52	0.82%	-4	-7.69%
Black or African American alone	37	0.52%	38	0.60%	-1	-2.63%
Native Hawaiian and Other Pacific native alone	14	0.20%	5	0.08%	9	180.00%
Some other race alone	598	8.37%	407	6.44%	191	46.93%
Two or more races	224	3.13%	156	2.47%	68	43.59%
White alone	6,134	85.83%	5,585	88.36%	549	9.83%
Population by Hispanic or Latino Origin (of any race)						
Persons Not of Hispanic or Latino Origin	5,975	83.60%	5,621	88.93%	354	6.30%
Persons of Hispanic or Latino Origin	1,172	16.40%	700	11.07%	472	67.43%
Population by Gender						
Female	3,701	51.78%	3,226	51.04%	475	14.72%
Male	3,446	48.22%	3,095	48.96%	351	11.34%
Population by Age						
Persons 0 to 4 years	587	8.21%	520	8.23%	67	12.88%
Persons 5 to 17 years	1,529	21.39%	1,478	23.38%	51	3.45%
Persons 18 to 64 years	4,309	60.29%	3,770	59.64%	539	14.30%
Persons 65 years and over	722	10.10%	553	8.75%	169	30.56%

Selah, Washington Registered Voters - Overview Statistics and Quick Facts

[CensusViewer - Graphs & Tables: Race by Age](#)

[CensusViewer - Graphs & Tables: Hispanic/Latino Origin](#)

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In the 10 year span from 2000 to 2010, the City of Selah census facts:

- Selah grew by 826 residents, of which 118 were children under 17 yrs of age and 169 were senior citizens
- Selah's seniors now make up 10%, children 17 and under 30%, the balance of 60% is from 18 – 64 years old (total pop.)
- School age children from 5-17 yrs old had the lowest amount of change at 3.5% (51 children)
- Seniors, 65 and older, had the highest amount of change at 30% (169 seniors)

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Zero Down and Updated Guidelines on USDA Loans



USDA recently updated guidelines allowing for additional Washington state cities to be considered eligible for USDA loans. Call me today!

A unique government-insured financing program makes homeownership possible for individuals and families buying a home in selected areas. Qualified borrowers under certain income caps can take advantage of the USDA Rural Development loan program to get a fixed-rate home loan with ZERO down.

BENEFITS OF THIS PROGRAM:

- Finance up to 100% of the value of the home
- NO DOWN PAYMENT required

- Seller can pay up to 100% of the closing costs
- A Mortgage Credit Certificate may be used, provided requirements for both programs are met
- Also available for refinancing existing home loans

Locally-based HomeStreet Bank has been providing families with home loans for over 92 years, and we'd like to help you too. We would be happy to review the income and location requirements to see if you are eligible for this program and get the process started. We look forward to hearing from you!



Michael Dubrule
Licensed Loan Officer
NMLS ID# 92043

Direct 509-961-5773
Office 1-877-882-0715

Michael.Dubrule@homestreet.com
michaeldubrule.com

I deliver mortgages, not promises!

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FDIC

Your New Home!

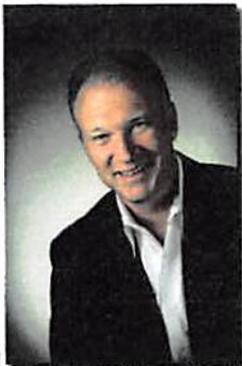
Stop paying rent!

QUIET AND COMFORTABLE

This home is located in a family neighborhood with nice, low maintenance landscaping and plenty of room for outdoor recreation. An open floor plan and other amenities invite casual, comfortable living or entertaining friends or relatives. Close and convenient to schools, shopping and transportation, it is priced for a quick sale to qualified buyers.



Financing	FHA REG	USDA	CONV
Notes	Fixed Rate	Rural	Fixed Rate
Sales Price	\$190,000	\$190,000	\$190,000
% Down	3.50%	0.00%	10.00%
First Loan	\$186,558	\$193,878	\$171,000
Term	30 Years	30 Years	30 Years
Rate	4.000%	4.125%	4.125%
APR	5.167%	4.734%	4.500%
CASH TO CLOSE			
Down Payment	\$6,650	\$0	\$19,000
Closing Costs	\$2,421	\$2,439	\$2,394
PrePays/Impounds	\$1,887	\$1,989	\$1,939
Total \$ Required	\$10,958	\$4,427	\$23,333
HOUSING EXPENSE			
First Loan P & I	\$891	\$940	\$829
Taxes, Ins & MI	\$335	\$286	\$275
Total Monthly Pmt	\$1,226	\$1,225	\$1,104
INCOME TO QUALIFY			
Income Guide	\$3,950	\$4,380	\$3,340



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Rates effective 07/30/15. This financing is designed to assist you in selecting the loan program that most closely suits your budget. Financing is shown for informational purposes only and should not be relied upon by you. Financing is shown for comparison only. This is not an offer of credit or commitment to lend. Loans are subject to buyer/property qualification and underwriting approval. Rates/fees are subject to change without notice. Cash reserves may be required for some conventional loans.

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State & County QuickFacts

Try the today and tell us what you think!

Selah (city), Washington

People QuickFacts	Selah	Yakima	Washington
Population, 2013 estimate	7,398	93,257	6,973,742
Population, 2010 (April 1) estimates base	7,176	91,276	6,724,543
Population, percent change - April 1, 2010 to July 1, 2013	3.1%	2.2%	3.7%
Population, 2010	7,147	91,067	6,724,540
Persons under 5 years, percent, 2010	8.2%	8.6%	6.5%
Persons under 18 years, percent, 2010	29.6%	28.3%	23.5%
Persons 65 years and over, percent, 2010	10.1%	13.1%	12.3%
Female persons, percent, 2010	51.8%	50.7%	50.2%
White alone, percent, 2010 (a)	85.8%	67.1%	77.3%
Black or African American alone, percent, 2010 (a)	0.5%	1.7%	3.6%
American Indian and Alaska Native alone, percent, 2010 (a)	1.3%	2.0%	1.5%
Asian alone, percent, 2010 (a)	0.7%	1.5%	7.2%
Native Hawaiian and Other Pacific Islander alone, percent, 2010 (a)	0.2%	0.1%	0.6%
Two or More Races, percent, 2010	3.1%	4.4%	4.7%
Hispanic or Latino, percent, 2010 (b)	16.4%	41.3%	11.2%
White alone, not Hispanic or Latino, percent, 2010	79.5%	52.2%	72.5%
Living in same house 1 year & over, percent, 2009-2013	84.6%	78.4%	82.7%
Foreign born persons, percent, 2009-2013	8.3%	17.1%	13.2%
Language other than English spoken at home, pct age 5+, 2009-2013	18.5%	36.7%	18.5%
High school graduate or higher, percent of persons age 25+, 2009-2013	85.2%	72.3%	90.0%
Bachelor's degree or higher, percent of persons age 25+, 2009-2013	26.4%	17.1%	31.9%
Veterans, 2009-2013	490	6,037	582,265
Mean travel time to work (minutes), workers age 16+, 2009-2013	18.7	18.2	25.7
Housing units, 2010	2,759	34,829	2,885,677
Homeownership rate, 2009-2013	59.5%	53.5%	63.2%
Housing units in multi-unit structures, percent, 2009-2013	24.3%	30.6%	25.6%
Median value of owner-occupied housing units, 2009-2013	\$187,200	\$157,300	\$262,100
Households, 2009-2013	2,610	32,971	2,629,126
Persons per household, 2009-2013	2.73	2.72	2.54
Per capita money income in past 12 months (2013 dollars), 2009-2013	\$22,951	\$19,908	\$30,742
Median household income, 2009-2013	\$48,600	\$39,462	\$59,478
Persons below poverty level, percent, 2009-2013	21.7%	24.4%	13.4%

60% of Selah households own their homes

24% of Selah households rent a duplex, triplex, apartment

16% of Selah households rent others homes, condo's, etc

Selah Density = 1,610.4 people per square mile
(7, 147 pop. /4.44 sq miles)

Yakima Density = 3,350.5 people per square mile
(91,067 pop. / 27.18 sq miles)

Business QuickFacts	Selah	Yakima	Washington
Total number of firms, 2007	604	5,741	551,340
Black-owned firms, percent, 2007	F	F	S
American Indian- and Alaska Native-owned firms, percent, 2007	F	1.5%	1.2%
Asian-owned firms, percent, 2007	F	S	6.8%
Native Hawaiian and Other Pacific Islander-owned firms, percent, 2007	F	S	0.2%
Hispanic-owned firms, percent, 2007	F	10.2%	3.2%
Women-owned firms, percent, 2007	S	26.5%	28.7%

Plan Development Review

TORKELSON CONSTRUCTION, INC.

Census 2000-2010

Selah WA 2010 – 7,147 residents

Selah's Population by Age

- Persons 0 - 4 years – 587 (8.21%)
- Persons 5 – 17 years – 1,529 (21.39%)
- Persons 18 – 64 years – 4,309 (60.29%)
- Persons 65 years and over – 722 (10.10%)



Selah Facts



- Selah has 7,176 Residents
- Housing units available – 2,759
- Home ownership percent – 59.5%
- Multi unit structures – 24.3%
- Median household income - \$48,600

*Information obtained from 2010 Census
(website)

Screen Shot Selah Rental Facts

Selah Monthly Owner Costs for Housing Homes with a Mortgage

The following table displays information on monthly cost averages for home owners in Selah, WA. The average monthly cost to owners is \$1,290.

Monthly Mortgage	City	State	USA
< \$500	0.0% 0 Homes	1.3% 15,528 Homes	2.1% 1,007,031 Homes
\$500 - \$999	33.8% 434 Homes	11.7% 142,108 Homes	19.8% 10,295,704 Homes
\$1,000 - \$1,499	31.0% 379 Homes	23.9% 291,281 Homes	27.1% 13,996,288 Homes
\$1,500 - \$1,999	15.6% 187 Homes	24.8% 302,719 Homes	19.9% 10,309,611 Homes
\$2,000 - \$2,999	18.9% 226 Homes	26.5% 323,383 Homes	19.4% 10,022,149 Homes
> \$3,000	0.7% 8 Homes	11.9% 144,592 Homes	11.7% 6,053,505 Homes

Selah Rental Prices

The information in the table below represents monthly rental price averages in Selah, WA. Renters pay an average of \$573 monthly.

Monthly Rent	City	State	USA
< \$300	1.6% 16 Homes	6.2% 52,349 Homes	9.0% 3,437,312 Homes
\$300 - \$499	31.0% 415 Homes	10.4% 94,246 Homes	16.3% 6,217,043 Homes
\$500 - \$699	32.6% 332 Homes	22.0% 193,487 Homes	21.9% 8,350,517 Homes
\$700 - \$999	29.5% 330 Homes	31.6% 296,241 Homes	24.0% 9,150,071 Homes
\$1,000 - \$1,499	4.5% 46 Homes	19.1% 173,197 Homes	15.3% 5,875,059 Homes
\$1,500 - \$1,999	0.0% 0 Homes	4.7% 42,263 Homes	5.0% 1,398,263 Homes
> \$2,000	0.0% 0 Homes	2.1% 19,441 Homes	2.8% 1,078,025 Homes

Notes

City rating based on comparing Selah to other Washington cities.
 State rating based on comparing Washington to other U.S. states.
 All ratings are segmented into quintiles (very low, low, average, high, very high).
 Data provided by the 2010 U.S. Census.

Front Facade



Notes:

Quality Built Homes

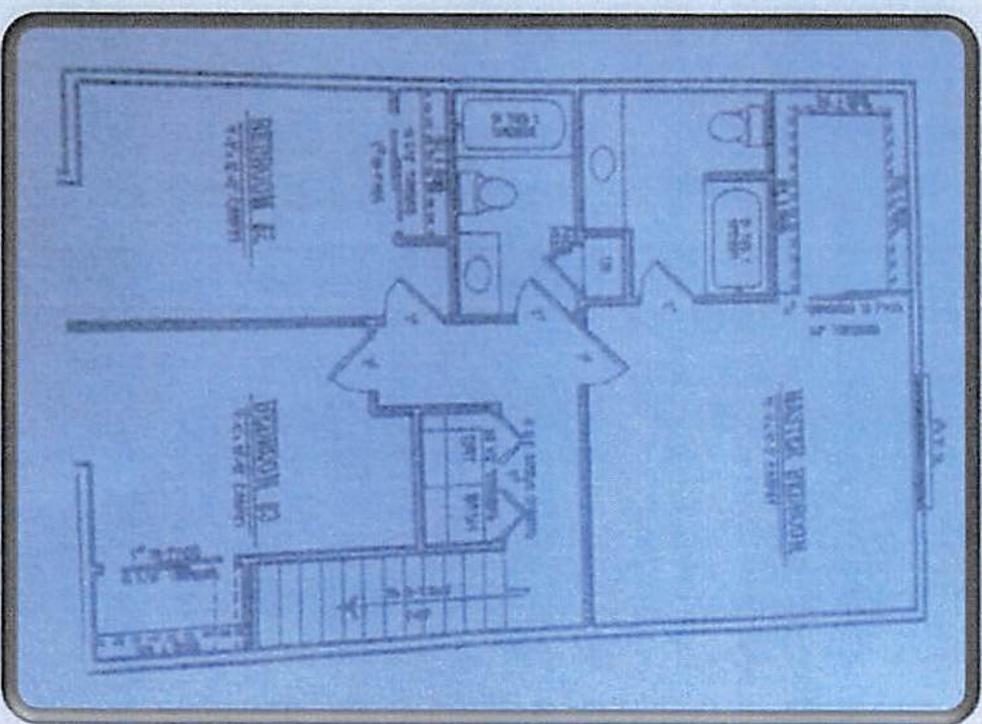
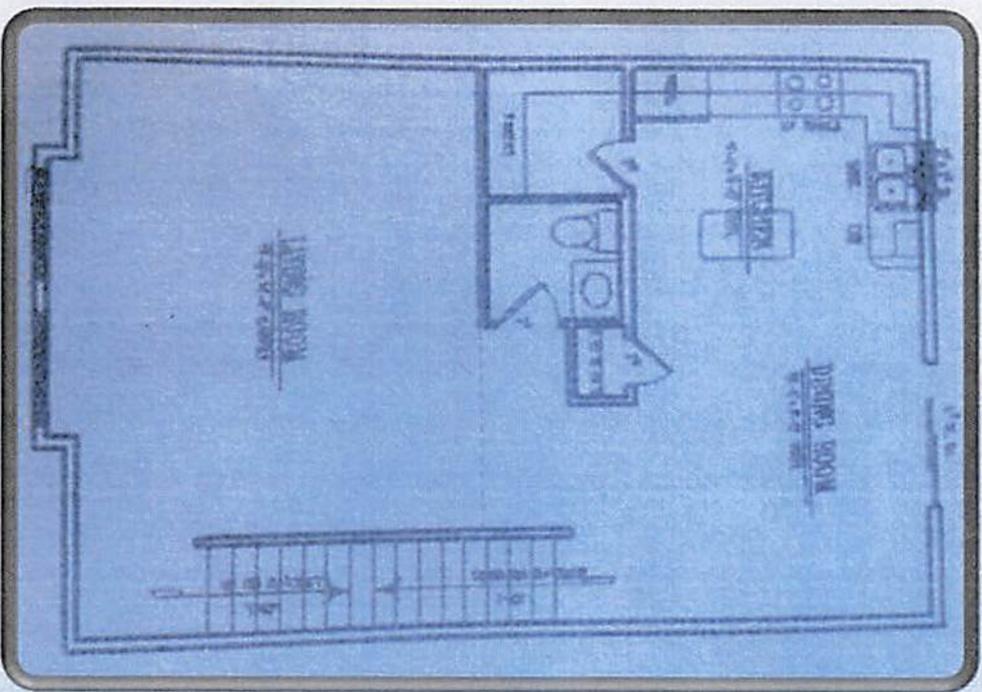
◆ Lap Siding

◆ Stone & Shake
Facade

◆ 25 yr Roof



Home Renderings

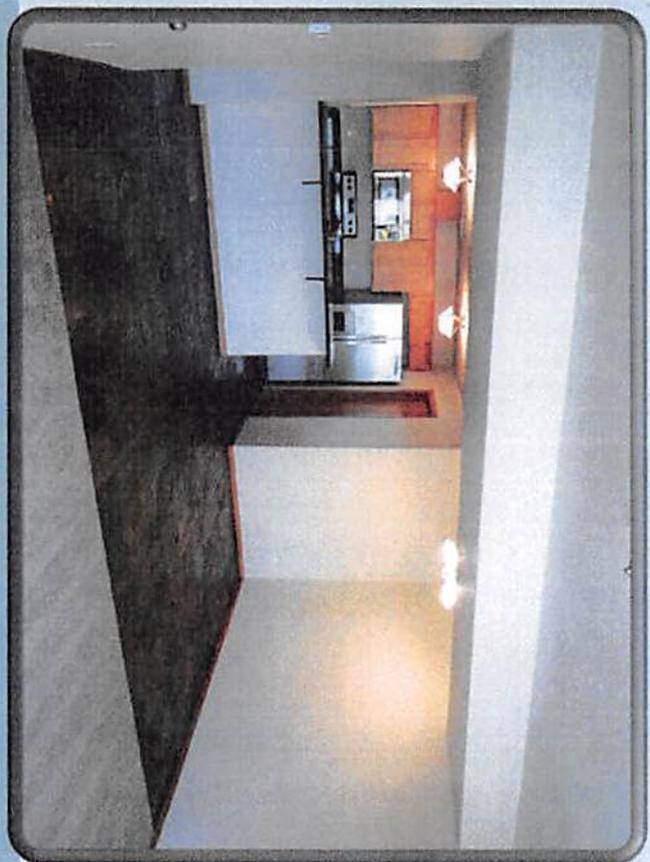
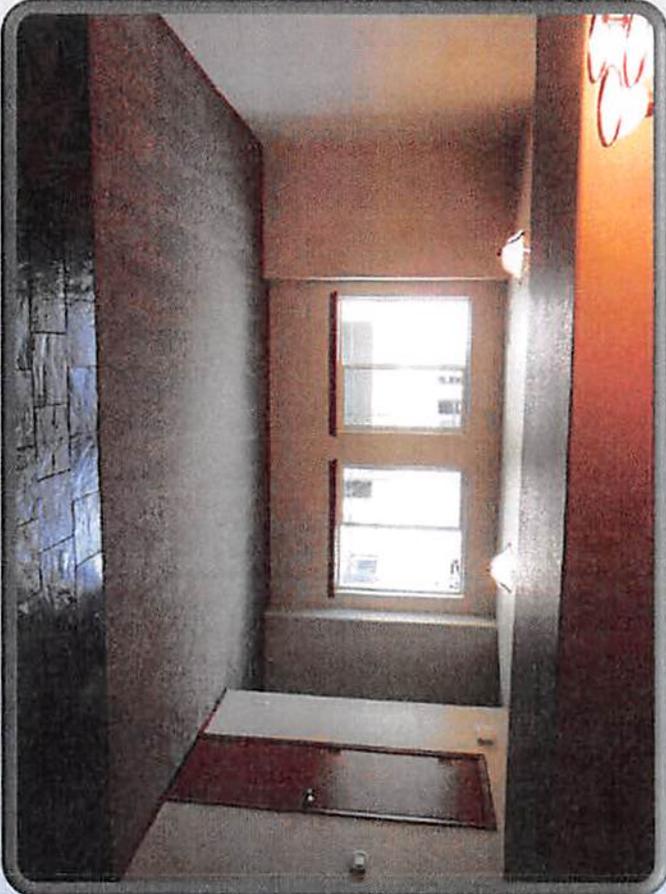


Living Room



Notes:

- ❖ Open Concept
- ❖ Spacious Living



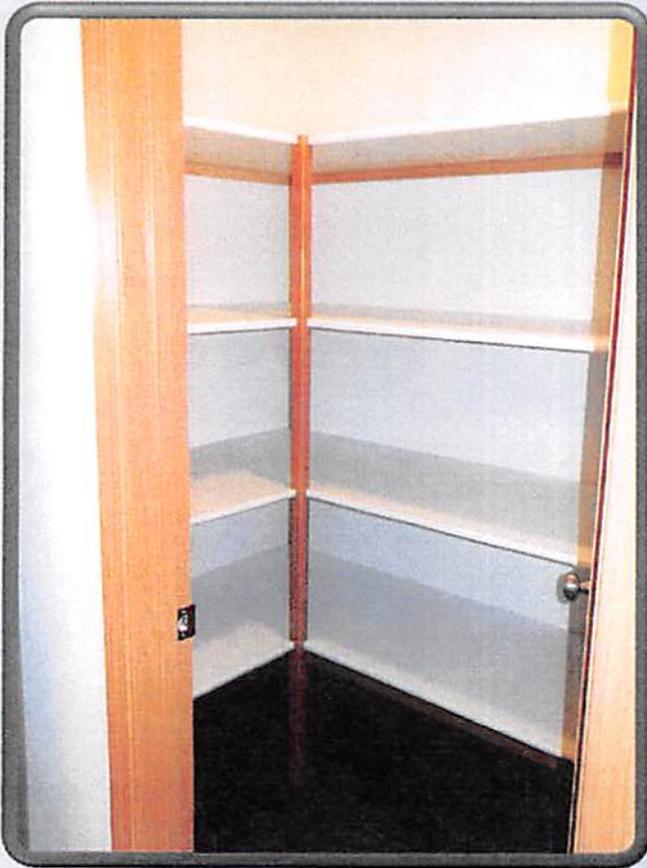
Kitchen & Dining Room



Notes:

- ◆ Upgraded Stainless Steel Appliances
- ◆ Maple Cabinets
- ◆ Granite Counter Tops
- ◆ Slate Flooring

Walk-in Pantry & Dining Room



Notes:

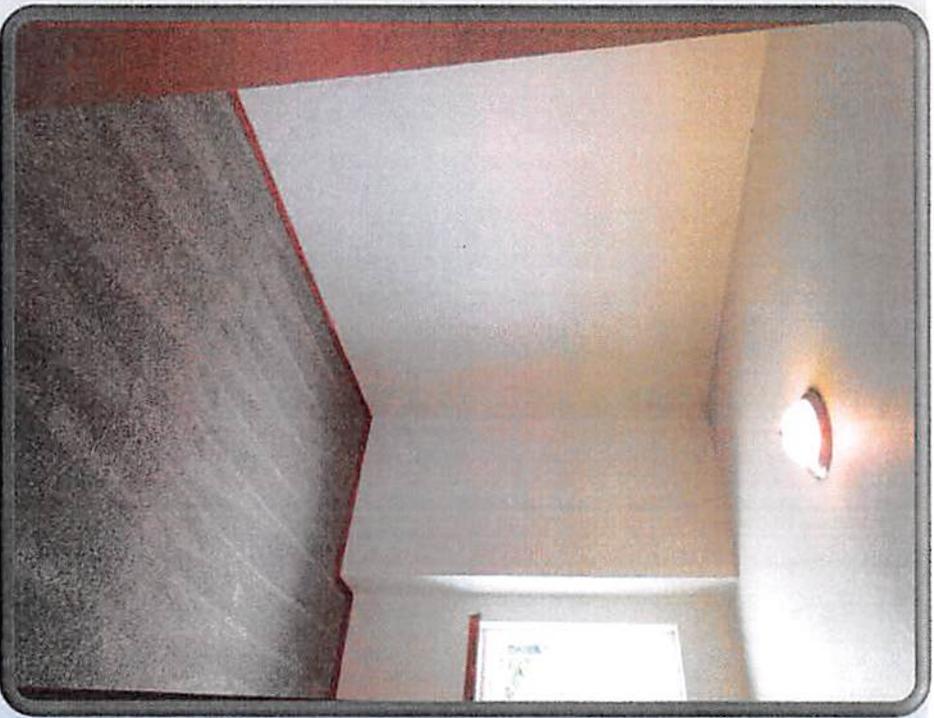
✧ Large Walk-in Pantry for additional storage space

✧ Breakfast Bar

✧ Slate Floors

✧ Open Concept Dining

Bedroom 1 & 2



Notes:

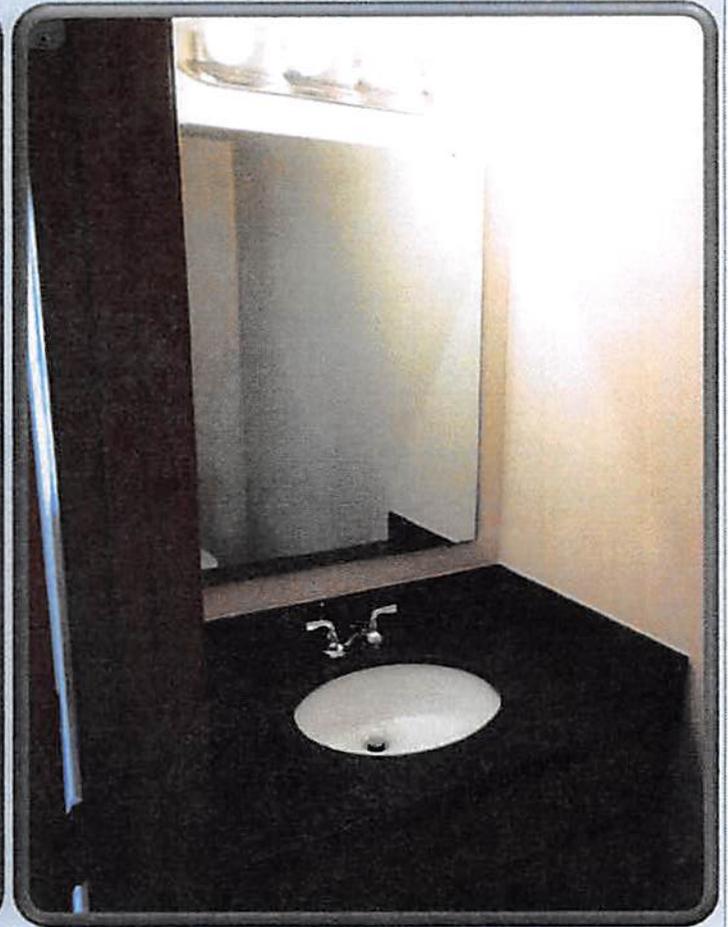
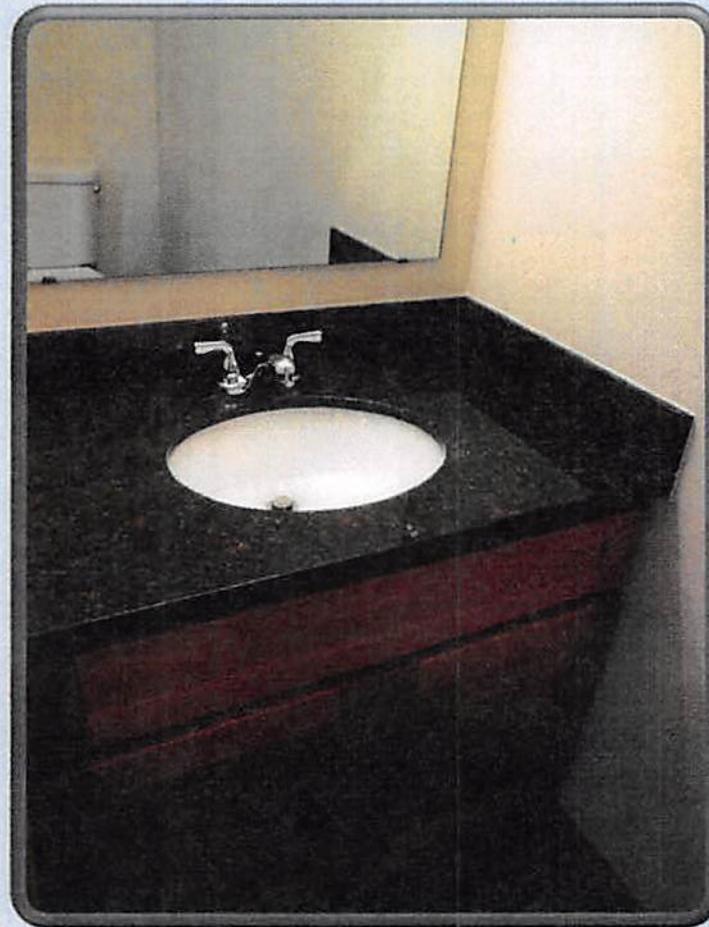
❖ Oversized Closets with Mirrored Bypass Doors

Half Bathroom

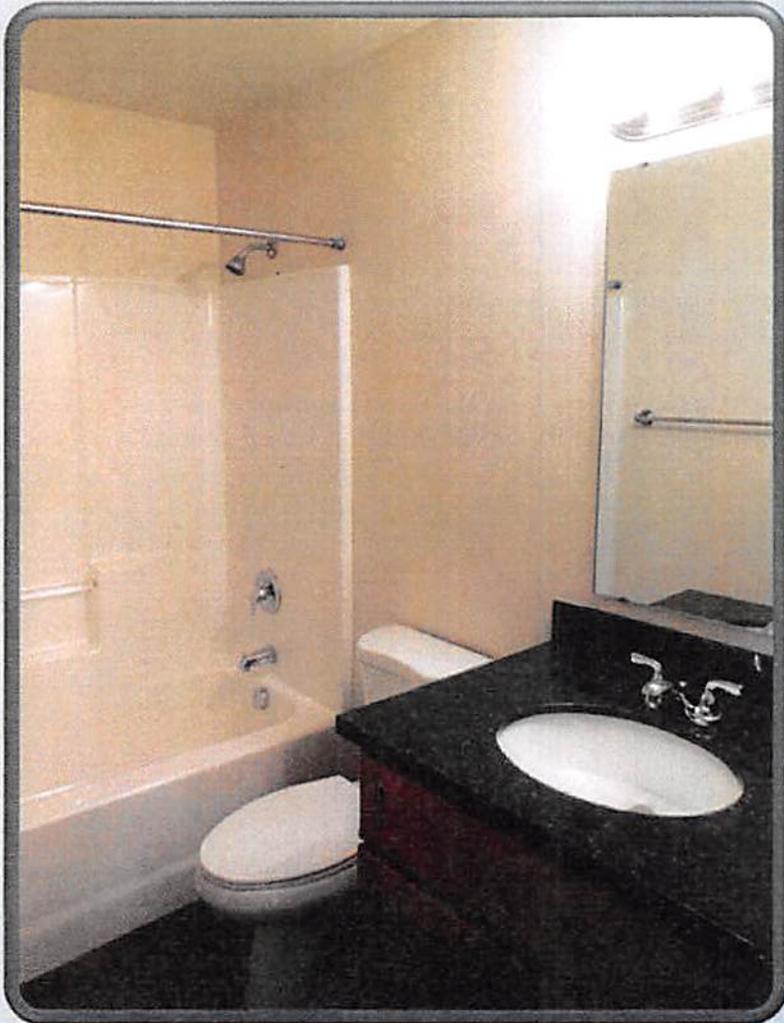


Notes:

- ◆ Upgraded Granite Counter Tops
- ◆ Slate Floors



Main Bathroom



Notes:

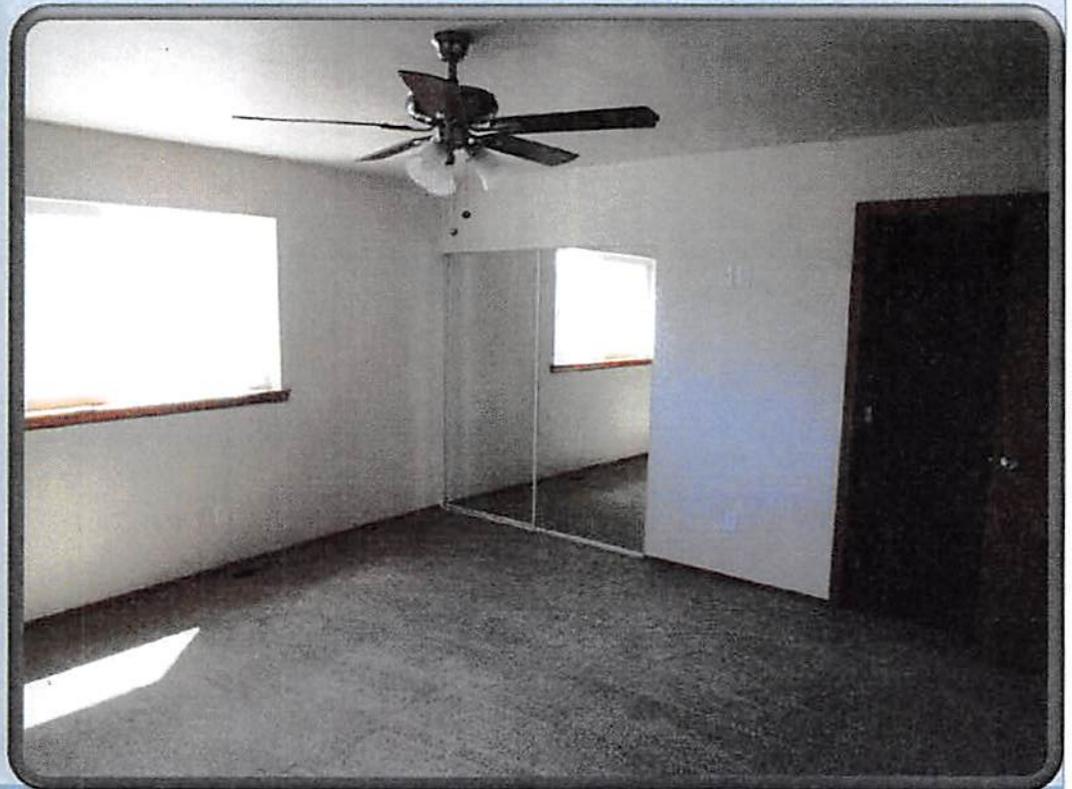
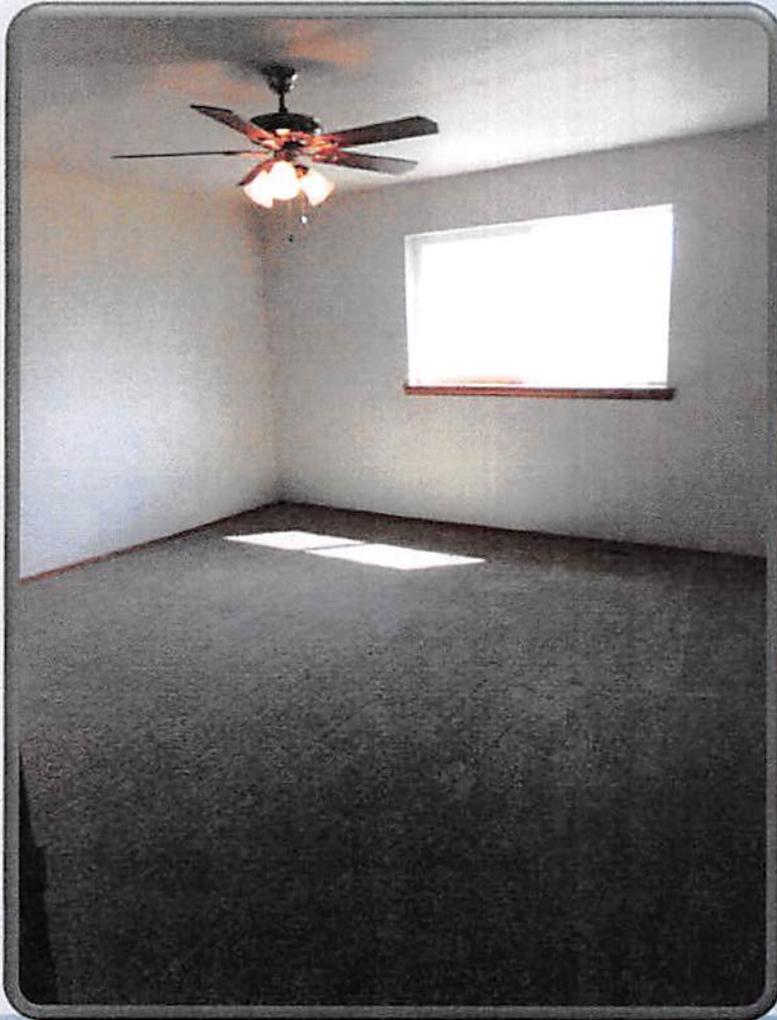
- ✧ Upgraded Granite Counter Tops
- ✧ Slate Floors

Master Bedroom

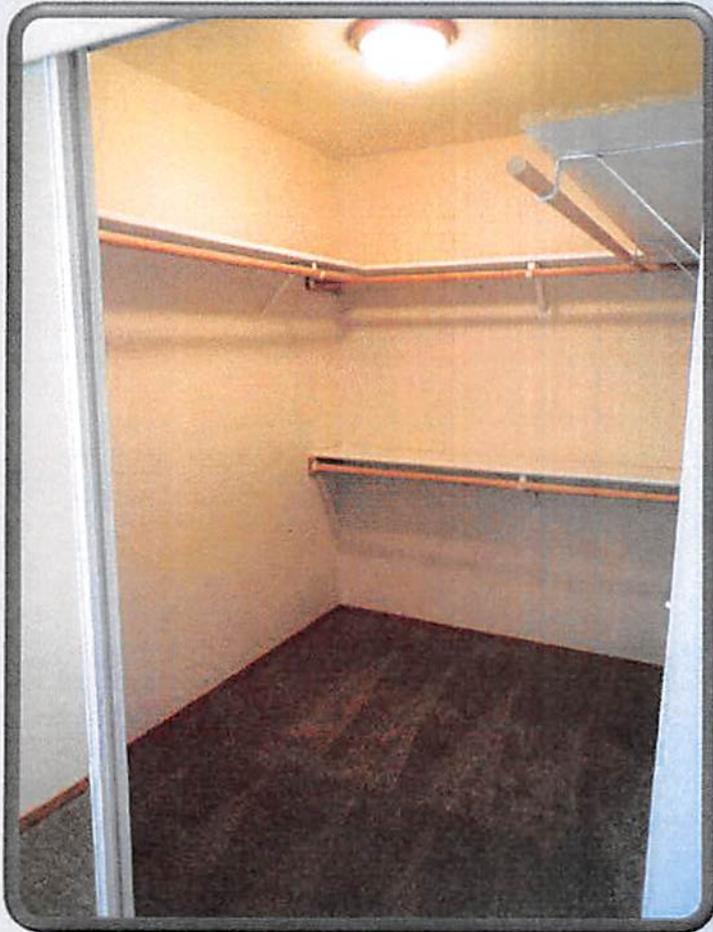


Notes:

- ✧ Large Walk-in Closet
- ✧ On-Suite Bathroom



Walk in Closet



Notes:

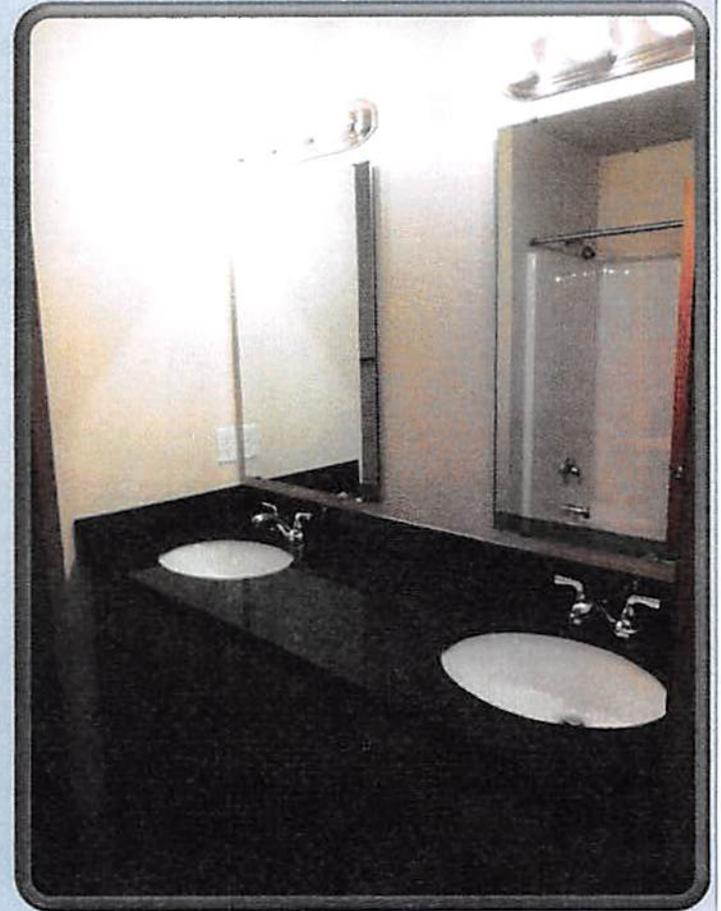
- ✧ Large Walk-in Closet
- ✧ Mirrored Bypass

Master Bathroom



Notes:

- ✧ Upgraded Granite Counter Tops
- ✧ Slate Floors
- ✧ Double Sinks



Covered Patio



Notes:

- ✧ 10x11 Covered Patio
- ✧ 5ft Privacy Walls
- ✧ Stamped Concrete

Utility Room & Garage



Notes:

- ✧ Upstairs
- ✧ Washer & Dryer Included

- ✧ 24x32 Oversized Garage
- ✧ Finished – Taped, Textured, Insulated
- ✧ Automatic Doors

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8 **City of Selah, Washington**
9 **Office of the Hearing Examiner**

10
11 **In re: Applications of Torkelson) City of Selah File Nos. 914.45.14-01;**
12 **Construction, Inc., Relating to Rezoning) 912.45.14-01; 971.45.14-01**
13 **and Subdividing Real Property Located)**
14 **at 207 E. Goodlander Road) MEMORANDUM IN SUPPORT OF**
15 **) APPLICATIONS OF TORKELSON**
16 **) CONSTRUCTION, INC.**

17
18 Torkelson Construction, Inc., ("Torkelson") through its counsel of record, Kenneth W.
19 Harper and Menke Jackson Beyer, LLP, submits this memorandum in support of its above-
20 identified applications.

21 **I. BACKGROUND**

22 Torkelson has filed an application to reclassify eight approximately ½ acre lots (totaling
23 3.96 acres) from Two Family Residential (R-2) to Planned Development (PD). Torkelson has
24 also applied to subdivide the property pursuant to a final development plan and program. The
25 subdivision will enable individual sale of single-family residential lots. The proposal has
26 undergone environmental review under the State Environmental Policy Act, Ch. 43.21C RCW.
27 A SEPA mitigated determination of nonsignificance has been issued by the City. The MDNS

28
29 **MEMORANDUM IN SUPPORT OF**
30 **APPLICATIONS OF TORKELSON**
CONSTRUCTION, INC. - 1

MENKE JACKSON BEYER, LLP
807 North 39th Avenue
Yakima, WA 98902
Telephone (509)575-0313
Fax (509)575-0351

Exhibit HE7

1
2
3 has not been appealed. Due to the absence of any administrative appeal, the environmental
4 impact aspects of this case are now settled.

5 The City's staff report contains a thorough discussion of the attributes of the site and the
6 proposal. The staff report recommends approval of the reclassification to PD and approval of the
7 preliminary plat. Both recommendations of approval are conditioned on Torkelson's compliance
8 with terms that are generally consistent with the application materials and with the MDNS
9 mitigation measures. Because the staff report is quite comprehensive, only a few aspects of it
10 will be noted here.

11
12 **A. SEPA considerations.**

13 As to considerations of environmental impacts, it bears repeating that there is no appeal
14 of the SEPA MDNS. The City used the standard process for disseminating its threshold
15 determination pursuant to WAC 197-11-340, rather than the truncated process allowed for
16 certain types of applications by WAC 197-11-355. The City promulgated a preliminary MDNS
17 and accepted comments on that draft. Prior to issuing the preliminary MDNS, the City used its
18 authority under SEPA to request additional information from Torkelson, primarily on issues
19 relating to transportation impacts and various design and engineering matters internal to the
20 project's layout. (Exhibit A). Following review of the additional information and the
21 consideration of comments filed in response to the preliminary MDNS, the City issued its final
22 MDNS.
23
24

25 In the absence of an appeal of the MDNS there is no basis to deny the proposal on
26 grounds that relate to elements of the environment, as listed at WAC 197-11-444. The topics
27 which are now essentially foreclosed as criticisms of the proposal under SEPA include items
28

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3 relating to: 1) the natural environment (topographic features, surface water, and runoff); and 2)
4 the built environment (impacts such as noise, light and glare, aesthetics, recreational
5 characteristics, transportation, vehicular traffic, movement/circulation of people, fire, police, and
6 schools).

7
8 Even aside from the absence of an appeal, it is basic land use law that a determination of
9 the SEPA responsible official must be given "substantial weight" on review. SMC 11.40.420(3).
10 The "substantial weight" requirement directs the reviewing official to review the agency's
11 decision under a "clearly erroneous" standard. A finding is clearly erroneous when, although
12 there is evidence to support it, a reviewing tribunal is left with the definite and firm conviction
13 that a mistake has been made. *Wenatchee Sportsmen Ass'n v. Chelan County*, 141 Wn.2d 169,
14 176, 4 P.3d 123 (2000).
15

16 An appellant bears the burden of showing that the record does not provide prima facie
17 demonstration of compliance with SEPA procedural requirements. This would include
18 overcoming the substantial weight to be given the responsible official's procedural
19 determinations.
20

21 Here, the main thrust of comment letters that might pose SEPA-type issues relates to
22 transportation. But the use of private streets pursuant to SMC 10.50.041(d)(4) has not been
23 shown to have any impairment of traffic circulation on public streets, nor has the trip generation
24 potential of the proposal been shown to have any reduction in prescribed transportation levels of
25 service. There is no record of any fire safety or similar irreconcilable conflicts held by local
26 officials regarding the configuration of the development or means of access.
27

28 **B. PD reclassification and background of relevant code provisions.**

1
2
3 When a local government provides only a general standard in a land use ordinance, the
4 burden falls on the government to show that the standard has not been satisfied. *Sunderland*
5 *Family Treatment Services v. City of Pasco*, 127 Wn.2d 782, 797, 903 P.2d 986 (1995). Zoning
6 laws are “in derogation of the common-law right of an owner to use private property so as to
7 utilize its highest utility. Such ordinances must be strictly construed in favor of property owners
8 and should not be extended by implication to cases not clearly within their scope and purpose.”
9 *Sleasman v. Olympia*, 159 Wn.2d 639, 643, 151 P.3d 990 (2007) (citing *Morin v. Johnson*, 49
10 Wn.2d 275, 279, 300 P.2d 569 (1956)).
11

12 It should be noted that the City has had some experience with Torkelson in prior similar
13 development proposals. (Exhibit B). Although these developments have sometimes taken the
14 form of rezones and sometimes required other types of approval, the basic development plans
15 have been consistent over the course of several years. This fact has important implications for
16 assessments of compatibility, which is a topic addressed below.
17

18 More recently, the City has expressed a desire to reevaluate its approach to PD zoning
19 overall. Over the past several months, legal counsel for the City has helped write a new
20 proposed code section that would essentially supersede (now-repealed) Ch. 10.24 SMC and
21 replace it with considerably more detailed text. (Exhibit C). The new ordinance would set
22 specific standards for using PD developments to alter density for types of residential uses (draft
23 SMC 10.24.040). It would also create standards emphasizing pedestrian-oriented design and
24 other site layout considerations (draft SMC 10.24.100(A)-(B)). The new ordinance would
25 impose requirements for specifying how compatibility would be measured, including
26 requirements relating to housing types and styles and requirements of diversity of floor plans and
27
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3 setbacks (draft SMC 10.24.100(C)-(E)). Also covered by the new ordinance would be
4 heightened standards for open space areas and parking and road design (draft SMC 10.24.110,
5 .120).

6
7 At the present time, it is unknown whether the draft ordinance on PD zoning will be
8 approved. The work program on the review of this proposed ordinance commenced in May
9 2015. (Exhibit D). No final action by Selah City Council is expected before late August 2015.

10 The City has acknowledged that the current Torkelson proposal is vested to the version of
11 Ch. 10.24 SMC that existed at the time the application was accepted as complete. (Exhibit E).

12 Also by way of background as to the City's PD zoning ordinance, it should be noted that
13 Ch. 10.24 SMC and PD zoning have been occasionally re-evaluated by the City for suitability.

14 In October 2009, after certain PD projects, including projects of Torkelson, raised awareness of
15 the use of PD zoning for residential projects, the City considered whether the then-current
16 version of the ordinance was appropriate. The main point at issue in 2009 was whether the
17 City's requirement of public streets within PD projects (when combined with subdivision
18 actions) should be retained. The City Council heard from planning staff that planned
19 developments could be designed to have private streets as well as other variations in lot size
20 requirements, etc. The City Council review was preceded by earlier analysis by the Planning
21 Commission, including a public hearing and a study session. With a favorable recommendation
22 from the Planning Commission urging that "there is a demonstrated and/or recognized need to
23 expand the opportunity and flexibility of the Chapter 10.24 (Planned Development zone)" and
24 the endorsement of planning staff, the City Council adopted revisions to Ch. 10.24 SMC. See
25 Exhibit F for Planning Commission minutes dated September 15, 2009, and Exhibit G for City
26
27
28

1
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3 Council minutes dated March 23, 2010. An expanded role for PD zoning was reflected in the
4 amendatory ordinance itself, Ordinance 1779, adopted on October 13, 2009. (Exhibit H).

5 Further PD-related development activity ensued. A proposed PD was recommended for
6 denial by the Hearing Examiner at 614 and 622 South Fifth Street in a decision dated September
7 13, 2010. See Hearing Examiner Recommendation, Selah File Nos. 912.79.10-01; 914.79.10-01
8 (Exhibit I). This decision was appealed. In considering the appeal, the Selah City Attorney
9 commented to the City Council that a difficulty with the decision was that SMC 10.24.010(1)
10 was "admittedly vague." See City Council minutes dated October 12, 2010, at p. 7 (Exhibit J).
11 A Councilmember stated that the intent of the chapter was to "allow new development that is
12 consistent with the Comprehensive Plan." *Id.* at 9. The City Attorney further noted that
13 subsections (2) through (8) of former SMC 10.24.010 had been erroneously relied upon by the
14 Hearing Examiner when those subsections had been "eliminated by the Ordinance." *Id.*

15
16
17 In a subsequent recommendation by the Hearing Examiner for property located at 605
18 Southern Ave. it was recognized that the PD code had been "authoritatively interpreted by the
19 Selah City Council to place the burden upon the City to establish that a proposal fails to serve the
20 purpose of the Planned Development zone set forth in Section 10.24.010 of the SMC because of
21 the vagueness of the standards therein." See Hearing Examiner's Recommendation dated
22 December 20, 2010, Selah File Nos. 914.79.10-02; 912.79.10-02; 971.79.10-09, at p. 10.
23 (Exhibit K).

24
25 The concept of flexibility inherent in PD zoning is also expressed in the SMC through
26 different standards for PD review as compared to ordinary rezone criteria. In the case of PD
27 zoning, the purpose statement of SMC 10.24.010 contemplates project-specific relief from
28

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3 otherwise applicable zoning standards in order to allow creative use of property consistent with
4 the comprehensive plan. This may be contrasted with the general rezone criteria of SMC
5 10.40.050(c), which concerns adjustments to zoning to allow a different array of uses than would
6 be allowable under existing zoning.
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8 Torkelson contends that the standards made specifically applicable to PD applications by
9 Ch. 10.24 SMC control this review in lieu of the general rezone criteria of Ch. 10.40 SMC. The
10 reference at SMC 10.24.050 to "verified rezone application" seems to be only a description of an
11 application form, and does not indicate any intended purpose to rather perplexingly overlay one
12 review process on top of another.
13

14 **C. Subdivision considerations.**

15 Generally speaking, subject to comprehensive plan consistency, it has already been
16 recognized that the Selah PD ordinance provides for relaxation of zoning and subdivision
17 standards. This concept is carried over into subdivision review by SMC 10.50.041, which allows
18 modification of various design standards in the context of a PD zone for good cause shown and
19 otherwise where appropriate. SMC 10.50.041(e). Further specific discussion on this point can
20 be found below in context of consistency review between the PD application and the
21 comprehensive plan.
22

23 **II. LEGAL ARGUMENT**

24 The basic criteria for the Hearing Examiner's review are adequately stated in the staff
25 report and need not be repeated. The following legal argument is intended to identify key points
26 of law and to address various contentions that are expressed in comment letters received in
27 opposition to the application.
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3 **A. Overview of Washington law on compatibility considerations.**

4 A major focus of the public opposition comments relates to claims of incompatibility. It
5 is important to place these claims in the proper context of Washington law. This is helpful not
6 only for the sake of the background legal standards but also as an aid to interpreting and applying
7 compatibility concepts expressed in the comprehensive plan.
8

9 Outright incompatibility may exist where a smaller area is identified for a use that is
10 totally different from and inconsistent with the classification of surrounding land and otherwise
11 not in accordance with the comprehensive plan. *Smith v. Skagit County*, 75 Wn.2d 715, 743, 453
12 P.2d 832 (1969). Comprehensive plans are not ordinarily used to make specific land use
13 decisions, but rather function as a guide or a blueprint to be used when making land use
14 decisions. *Barrie v. Kitsap County*, 93 Wn.2d 843, 849, 613 P.2d 1148 (1980). All that is
15 required is general conformance with the blueprint provided by the comprehensive plan.
16 *Cathcart-Maltby-Clearview Cmty. Council v. Snohomish County*, 96 Wn.2d 201, 211, 634 P.2d
17 853 (1981).
18

19 There is no authority in Washington which construes, or even supports, the concept of
20 "compatible" as synonymous with "identical" or "nearly the same." While townhouse-style
21 detached single-family residences are not identical to detached single-family homes, the
22 construction of such townhouse-style units, separated from adjacent properties by setbacks and
23 otherwise consistent with the policies of the comprehensive plan, should reasonably be viewed as
24 compatible.
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26 There is no dramatic change or incongruity in the transition from detached single-family
27 homes to detached single-family townhouse-style residences. As was the case in *Cathcart*, one
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3 use is substituted for a different type of still overwhelmingly residential use, the average density
4 of which is no more than would have been permitted in the background R-2 zone as “generally
5 allowed.” SMC 10.06.020(2). It has been observed by Washington courts that “the PUD
6 technique is characterized by flexibility.” *Schneider Homes, Inc. v. City of Kent*, 87 Wn. App.
7 774, 775-76, 942 P.2d 1096 (1997). This is not a case where a commercial use is proposed to be
8 located in an area of surrounding neighborhood zoning. In that event, it might fairly be said that
9 the use is inconsistent with, and distinctly different from, the surrounding uses. *Citizens for*
10 *Mount Vernon v. City of Mount Vernon*, 133 Wn.2d 861, 876, 947 P.2d 1208 (1997) (planned
11 unit developments intended to foster flexibility in planning, in design, and in density, but not
12 mere carte blanche land use approval of distinctly different uses).
13

14
15 **B. Compatibility considerations and local factors.**

16 In the present case, the proposed PD zone will implement a level of density that is
17 “generally allowed” in the underlying R-2 zone. SMC 10.06.020(2); Table 10.28A-5. The PD
18 proposal will specifically complement the Moderate Density Residential standard of the
19 comprehensive plan. *See* City of Selah Comprehensive Plan at 35.
20

21 It is helpful that this application follows several years’ worth of experience in Selah with
22 similar types of development. At Exhibit B one may find photographs of townhouse-style
23 residences that reflect the general features of the current proposal. For each section within
24 Exhibit B there is a photograph of the relevant subject property followed by several additional
25 photographs of surrounding residences. Even allowing for a degree of interpretation, there can
26 be no serious argument that the subjects are incompatible with their surrounding environs. As
27 can be seen in the photographs (each taken on July 29, 2015), the subject properties are
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3 attractive, well-maintained, and useful additions to Selah's housing stock. The surrounding
4 properties, likewise, present themselves as attractive homes, with perhaps more mature
5 landscaping. There is nothing in any of these photographs to support a claim that purported
6 incompatibility of the subject properties has inflicted any duress on a neighboring property. All
7 of the photographs depict residential dwellings in harmony with one another. A claim of
8 incompatibility in this context can only be a results-oriented label and not a fair description of
9 years of actual documented co-existence.
10

11 Compatibility considerations also must reflect that this segment of East Goodlander Road
12 is in close proximity to other mixed uses. Immediately adjacent to the subject property are
13 several other tracts of land also designated R-2. (Exhibit L). Other nearby uses include
14 relatively intense commercial businesses near the intersection of East Goodlander Road and
15 North Wenas Road. These non-residential uses include a grocery store, fast food restaurants, a
16 gas station, a hotel, and other businesses. Also near the site is a high school and a
17 park/recreation complex. Within only a few hundred feet to the east-northeast may be found two
18 significant mobile home parks. These premises (at 1060 North Wenas Road and 1130 North
19 Wenas Road) comprise approximately 13 acres and 82 mobile home units. These premises are
20 zoned R-2 under the County's zoning regime. Pursuant to the County's Urban Residential
21 Zoning district, R-2 zones may allow up to 24 units per acre in conjunction with planned
22 developments. See YCC Table 19.12.020-1. To the south of the subject site are several tracts
23 zoned R3. A currently-existing PD zone may be found at the southwest corner of East
24 Goodlander Road and Selah Loop Road. Evaluation of existing development is a proper basis to
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3 gauge compatibility. *Timberlake Christian Fellowship v. King County*, 114 Wn. App. 174, 188,
4 61 P.3d 332 (2002).

5 **C. Comprehensive plan provisions.**

6 The purpose of PD zoning in Selah has been repeatedly identified as a means of varying
7 otherwise applicable zoning standards in order to allow creative use of property consistent with
8 the comprehensive plan. SMC 10.24.010. This does not mean, however, that the Selah
9 Municipal Code makes the comprehensive plan specifically regulatory. See SMC 10.24.010 (“in
10 conformance with the policies [of the plan]” and “consistent with the comprehensive plan”);
11 SMC 10.24.060 (“substantial conformance to [the plan]”). By using terms such as
12 “conformance” and “consistent” the point of the SMC is to ensure basic consistency review,
13 which is always required in project permitting under state law. RCW 37.70B.030. No text of the
14 SMC indicates express regulatory significance of the comprehensive plan. The comprehensive
15 plan itself disavows this purpose: “The Plan is not a dictation of what must be or an answer
16 book for complicated questions.” City of Selah Comprehensive Plan at p. 1.

17 Washington cases have held that a comprehensive plan may not be used to make a
18 specific land use decision. See *Citizens for Mount Vernon*, 133 Wn.2d at 873 (citing *Barrie v.*
19 *Kitsap County*, 93 Wn.2d 843, 613, P.2d 1148 (1980) (not to be used to make specific land use
20 decision; only general conformance may be required)). For this reason, even if a comprehensive
21 plan prohibits a particular use but the zoning code permits it, the use must be permitted. *Citizens*
22 *for Mount Vernon*, 133 Wn.2d at 874 (citing *Weyerhaeuser v. Pierce County*, 124 Wn.2d 26, 43,
23 873 P.2d 498 (1994)).

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28 **D. Review of the proposal under the comprehensive plan.**