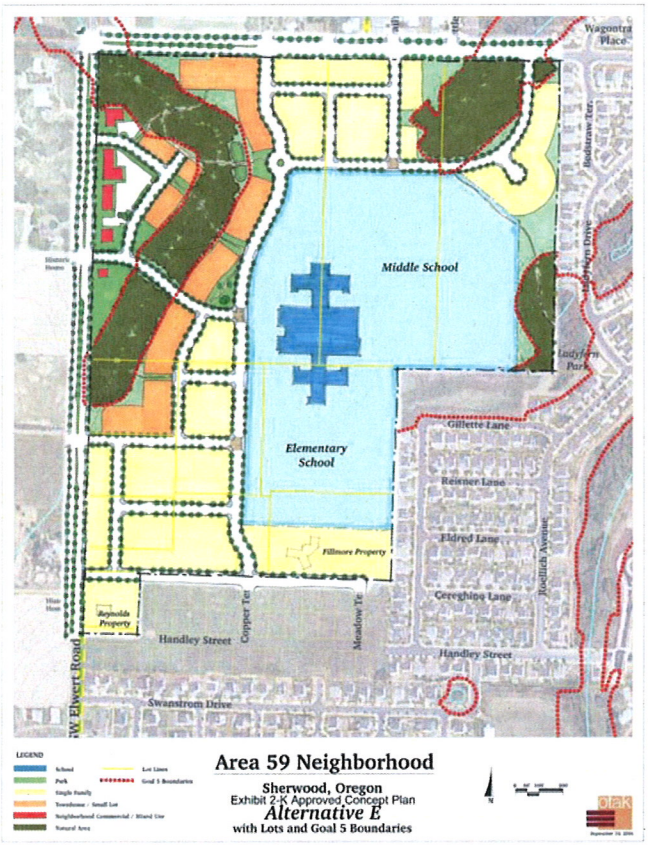
New Elementary and Middle School Reimbursement District Report

(Area 59)



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Preliminary submittal: November 16, 2007
Final submittal: January 15, 2008

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Introduction

This report is intended to meet the City of Sherwood Municipal Code requirements per Chapter 13.24 Public Improvement Reimbursement Districts for the establishment of a Reimbursement District for the construction of public roadway, sanitary sewer, watermain, and storm sewer within Area 59. A copy of Chapter 13.24 is included in Appendix C for reference.

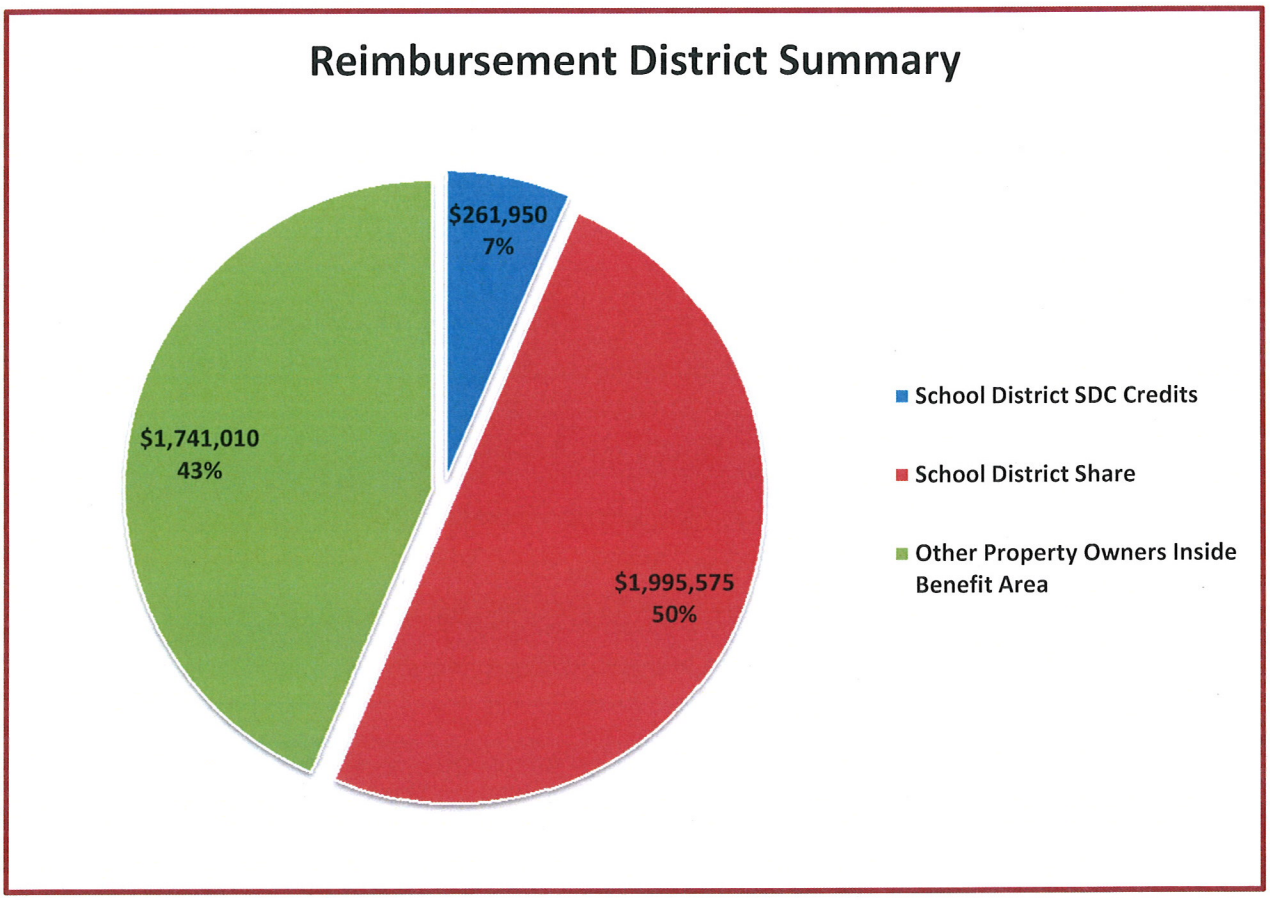
The reimbursement district boundaries are provided in this report and have been established for each of the public improvements based on the area that can be served by the respective improvement. The boundaries include property that can derive benefit from the public improvements for future development. Maps showing these boundaries are included in Appendix B.

A method is recommended in this report for the allocation of costs within the reimbursement district boundary in order to reimburse the school district for the costs to install the public improvements that will benefit an area larger than the school property. These improvements include the construction of a public roadway, Copper Terrace, from Edy Road to Cereghino Lane; a 16" watermain from Edy Road to Cereghino Lane, an 8" watermain in Nursery Way, a 12" watermain in Edy Road; a 15" sanitary sewer line in Edy Road and Copper Terrace, storm sewer lines in Copper Terrace and Nursery Way sized for future development and a regional storm water quality facility.

The public improvement construction costs, construction inspection, construction engineering, construction surveying and offsite right-of-way costs total $4 million. This is an estimated amount based on the bids received to construct the improvements. The public improvements are currently under construction and will be completed in September 2008. The improvements are currently being funded by the Bond Measure that was passed in November 2006. The school district's share of the public improvements within the reimbursement district will be 50%. The Reimbursement District will fund 43%. The remaining 7% is the amount that the school district received in System Development Charge Credits from the City of Sherwood. The cost of the public improvements will only be recovered by the school district if the benefiting property within the reimbursement district boundary is developed and applies for building permits within the next 10 years.

Sherwood School District has requested System Development Charge Credits from the City of Sherwood for the portion of the public improvements that qualify. The amount that was requested in System Development Charge Credits is deducted from the construction cost for each item. Credits are only available up to the System Development Charge Amount, so the remainder of these costs that benefit property outside of the school site were put into the Reimbursement District. Please refer to System Development Charge Credit Memo to City of Sherwood dated November 16, 2007 (Revised January 3, 2008) in Appendix D for a detailed description of each credit requested. This amount requested is listed on the Reimbursement District Cost Allocation Spreadsheet for each public improvement.

Below is a summary that shows how the public improvement costs that were eligible for the reimbursement district were distributed between the Sherwood School District and the other property owners inside the Benefit Area. Also shown is a portion that was not included in the reimbursement district because it was eligible for System Development Charge Credits from the City of Sherwood.



	Water	Sanitary	Storm	Copper Terrace	Total
Estimated Construction Cost	$370,301	$812,606	$629,332	$2,186,296	$3,998,535
School District SDC Credits	$35,011	$128,335	$98,604	$0	$261,950
Reimbursement District	$335,290	$684,271	$530,728	$2,186,296	$3,736,585
School District Share	$99,459	$172,327	$208,425	$1,515,364	$1,995,575
Other Property Owners Inside Benefit Area	$235,831	$511,945	$322,303	$670,932	$1,741,010

Allocation of Costs

The cost allocation method proposed for the public utilities is an equally weighted split between property area and frontage length along the utility improvement. The frontage component is intended to reflect the construction cost advantage that a property directly adjacent to the public improvements has when developing their property and connecting to existing public improvements. Therefore, properties within the service area that front the improvement will pay a larger portion of the costs than a property that is within the service area but does not have direct access to the improvement.

The cost allocation method proposed for the public road improvements is a distribution by frontage length along the east side of Copper Terrace. The school district is constructing full street improvements on the east side of Copper Terrace from Edy Road to Cereghino Lane. When properties on the east side

of Copper Terrace develop they will not be required to construct street improvements associated with Copper Terrace because it will have been completed by the school district.

The costs were distributed based on the current tax lot information and ownership, but the final costs will be distributed based on ownership at the time that the building permits are issued. The benefit area within a tax lot may be less than the entire tax lot area. This is true for the benefit area of the storm and sanitary sewer because the benefit area limits were derived from existing topography.

The frontage cost distribution was calculated based on the length of utility or road in front of the tax lot. The frontage cost length in some cases is less than the frontage of the lot because the utility does not extend along the entire frontage. This is true at the upstream end of the sanitary and storm sewer in Copper Terrace and Nursery Way. Frontage was not counted in areas that are limited by environmentally sensitive areas determined during the Area 59 planning process. This is the case in the sanitary sewer frontage calculations for the Rychlick property.

Please refer to the Reimbursement District Cost Allocation Spreadsheets for each public improvement for detailed information. The spreadsheets are included in Appendix A.

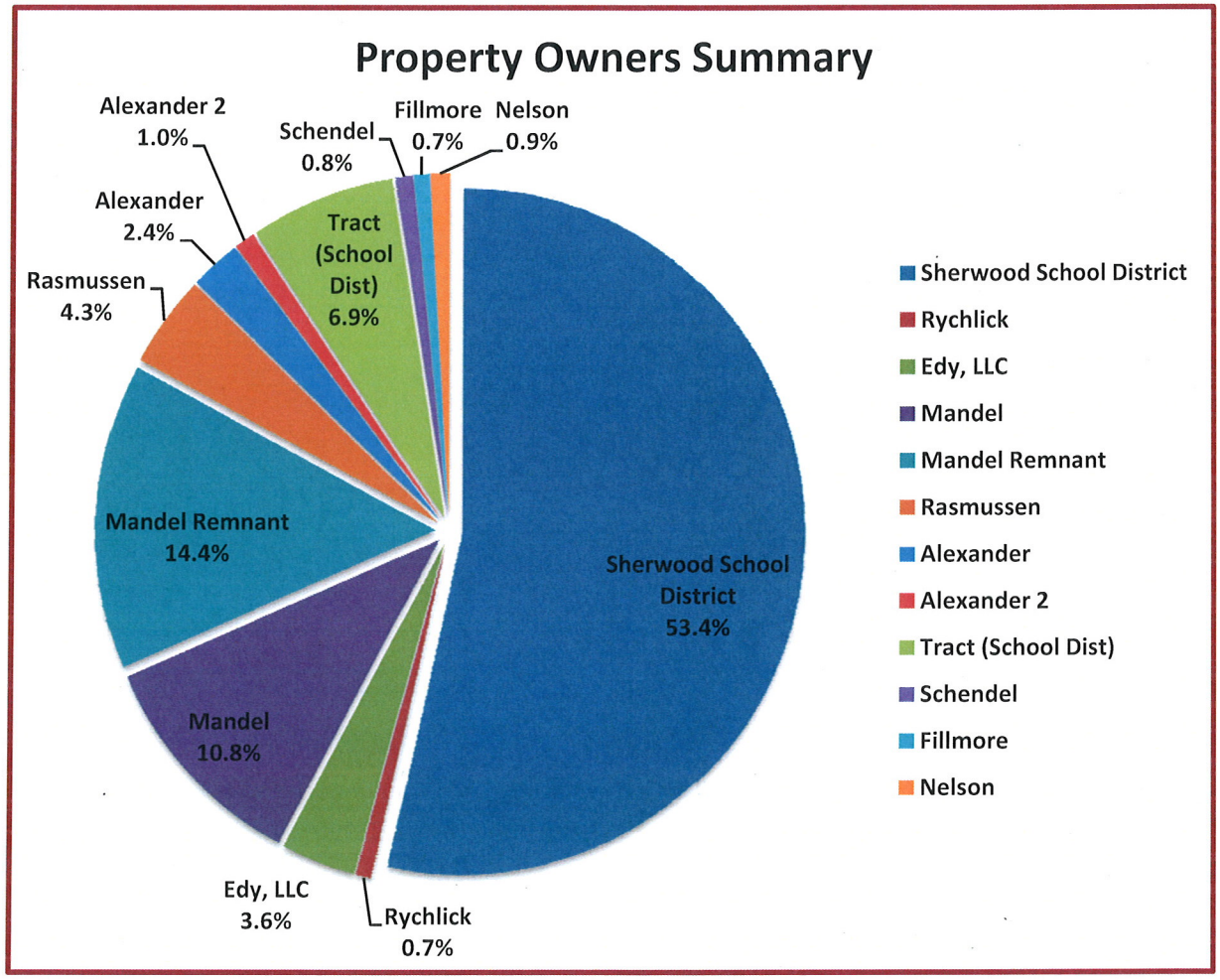
Benefit District Area

The Benefit District Area generally includes twelve separate tax lots under nine separate property owners. The school ball fields are not included in the benefit area because they do not utilize the public sanitary sewer or water systems. The Benefit area for the storm sewer does include portions of the proposed track, field and tennis courts at the Middle School that discharge to the public storm sewer system. As discussed in the previous section, 50% of the utility improvement costs were distributed by benefit area but the road costs were distributed by frontage only. The school district is approximately 15 acres of the total 40-50 acres that make up the Benefit District Area. The total area varies depending on the utility. The sanitary and water have the largest benefit areas (50 acres) but the storm sewer area is smaller (43 acres).

Maps showing the Benefit District Area for the sanitary, storm, and water are included in Appendix B.

The Benefit District Area is within the limits of the Area 59 Master Plan. The zoning listed on the drawings was taken from the Area 59 Zone Matrix. A copy is included in Appendix B for reference. The zoning was listed for each tax lot because it is a requirement in the reimbursement district code. However, the zoning is for reference only and was not used in the allocation of costs.

The Benefit District Area is the buildable area after the school district has purchased property for road Right of Way. Environmentally sensitive and open space areas identified during the Area 59 planning process were excluded from the Benefit District Area. The proposed right-of-way for the water quality facility access road and the property for the regional water quality facility construction were also excluded from the Benefit District Area. The table below summarizes the cost share distribution between property owners within the Benefit District Area.



		Water	Sanitary	Storm	Copper Terrace	Total
1	Sherwood School District	$99,459	$172,327	$208,425	$1,515,364	$1,995,575
2	Rychlick	$0	$27,007	$0	$0	$27,007
3	Edy, LLC	$26,796	$60,633	$46,239	$0	$133,669
4	Mandel	$92,936	$190,880	$118,065	$0	$401,881
5	Mandel Remnant	$19,273	$40,777	$37,565	$440,268	$537,883
6	Rasmussen	$32,417	$67,283	$62,104	$0	$161,803
7	Alexander	$22,794	$46,944	$20,721	$0	$90,459
8	Alexander 2	$7,669	$14,960	$13,898	$0	$36,527
9	Tract (School Dist)	$9,081	$19,392	$0	$230,664	$259,138
10	Schendel	$6,414	$12,511	$11,624	$0	$30,549
11	Fillmore	$9,400	$18,335	$0	$0	$27,735
12	Nelson	$9,051	$13,221	$12,087	$0	$34,360
Total						$3,736,585

Description of Public Improvements

Storm Sewer:

The public improvement costs included in the reimbursement district are for the storm sewer pipe, manhole, catch basins, tees and pipe stubs constructed in Copper Terrace and Nursery Way that are sized to convey the storm sewer flows for future development to the regional water quality swale. The storm sewer pipe was upsized from 12"-15" to 18"-24" in Copper Terrace in order to handle the developed storm water flows from property within the Benefit District Area. The construction costs of the regional water quality swale, access road, grading, fencing, landscaping and irrigation are also included. The storm sewer construction costs also include the property acquired (0.53 acres) by the school district to construct the access road and regional water quality facility that will be dedicated to the City of Sherwood.

Sanitary Sewer:

The public improvement costs included in the reimbursement district are for the 15" sanitary sewer and associated manholes in Edy Road and Copper Terrace. Also included in the costs are the 8" sanitary sewer, associated manholes, and sewer stubs for future connections in Copper Terrace. The construction costs include the traffic control and asphalt trench repair in Edy Road. The cost to abandon the existing septic systems and the new sanitary sewer service to the Fillmore property was not included in the public improvement costs because that work is associated with the school site grading. The cost to abandon the existing septic system for the Rasmussen property and the new sanitary sewer service to their property was included because it is required for the sanitary sewer main line construction.

Water:

The public improvement costs included in the reimbursement district include the cost to construct a 12" main in Edy Road, an 8" main in Nursery Way and a 16" main in Copper Terrace from Edy Road to Cereghino Lane. The construction costs include the pipe, fittings, hydrants, valves, trench excavation and backfill associated with the watermain installation.

Roadway:

The school district is constructing full street improvements on the east side of Copper Terrace from Edy Road to Cereghino Lane. When properties on the east side of Copper Terrace develop they will not be required to construct street improvements associated with Copper Terrace because it will have been completed by the school district. There will be sidewalk, street trees, street lighting, concrete curb and gutter, asphalt pavement and signing and striping. Right-of-Way costs and the cost of the 8' Public Utility Easement (PUE) were also included since the full right-of-way and 8' PUE was purchased and dedicated to the City on the east side of Copper Terrace. The intersection improvements associated with Edy Road and Cereghino were not included in the reimbursement district because the intersections will need to be reconstructed once frontage improvements and right-of-way dedication are completed

when the property develops. The electrical service costs were included with the cost of the roadway associated with the street lights along with the electrical conduit and vaults required along the entire length of Copper Terrace from Edy Road to Cereghino. This underground electric will serve future developments to the north and south of the school site east of Copper Terrace.

Other Construction Costs:

As allowed by Chapter 13.24, Section 13.24.040, the costs included in the reimbursement district are the construction costs and the cost associated with construction inspection, surveying, and construction engineering. Permit fees, legal expenses, and design engineering were not included in accordance with City Code. A detailed breakdown of the costs included for each utility are listed on the spreadsheets in Appendix A.

APPENDIX A

Reimbursement District Cost Allocation Spreadsheets

SHERWOOD NEW ELEMENTARY AND MIDDLE SCHOOL
PUBLIC STORM SEWER LINE & REGIONAL WATER QUALITY FACILITY
REIMBURSEMENT DISTRICT COST ALLOCATION

STORM SEWER COST SUMMARY

Storm Sewer Construction Cost:	$629,332.20
System Development Charges Creditable Amount:	$98,604.41
Reimbursement District Eligible Cost:	$530,727.79

COST ALLOCATION METHODOLOGY

50% of Cost Distributed by Frontage of Property	$69.89 /LF	($265,363.90 / 3797 LF)
50% of Cost Distributed by Service Area of Property	$0.14 /SF	($265,363.90 / 1,857,654 SF)

REIMBURSEMENT DISTRICT SUMMARY

Total School District Cost:	$208,425.14	
Total Offsite Cost:	$322,302.65	*
Total Cost:	$530,727.79	

* Estimated construction cost that may be recovered by School District within next 10 years if property develops

ID	Taxlot No.	Owner	Frontage Length (LF)	% Total Length	Total Frontage Cost	Area (SF)	% Total Area	Total Area Cost	Total Cost	% of Total Cost
1	2S-1W-30CC 100	Sherwood School District	1537	40.48%	$107,417.52	707,094	38.06%	$101,007.62	**$208,425.14**	**39.27%**
2	2S-1W-30CA 100	Rychlick	0	0.00%	$0.00	0	0.00%	$0.00	**$0.00**	**0.00%**
3	2S-1W-30CB 100	Edy, LLC	281	7.40%	$19,638.47	186,217	10.02%	$26,600.90	**$46,239.37**	**8.71%**
4	2S-1W-30CB 200	Mandel	972	25.60%	$67,930.92	350,956	18.89%	$50,133.69	**$118,064.61**	**22.25%**
5	2S-1W-30CB 200	Mandel Remnant	436	11.48%	$30,471.07	49,658	2.67%	$7,093.59	**$37,564.66**	**7.08%**
6	2S-1W-30CC 300	Rasmussen	555	14.62%	$38,787.72	163,220	8.79%	$23,315.80	**$62,103.52**	**11.70%**
7	2S-1W-30CC 700	Alexander	16	0.42%	$1,118.20	137,227	7.39%	$19,602.73	**$20,720.94**	**3.90%**
8	2S-1W-30CC 400	Alexander 2	0	0.00%	$0.00	97,295	5.24%	$13,898.49	**$13,898.49**	**2.62%**
9		Tract (School Dist)	0	0.00%	$0.00	0	0.00%	$0.00	**$0.00**	**0.00%**
10	2S-1W-30CC 600	Schendel	0	0.00%	$0.00	81,370	4.38%	$11,623.62	**$11,623.62**	**2.19%**
11	2S-1W-30CC 200	Fillmore	0	0.00%	$0.00	0	0.00%	$0.00	**$0.00**	**0.00%**
12	2S-1W-30CC 500	Nelson	0	0.00%	$0.00	84,617	4.56%	$12,087.45	**$12,087.45**	**2.28%**
		Totals:	**3797**	**100.00%**	**$265,363.90**	**1,857,654**	**100.00%**	**$265,363.90**	**$530,727.79**	

Estimated Storm Sewer Construction Cost Breakdown

Storm Sewer Cost:	$388,216.00
Construction Inspection (City of Sherwood):	$19,410.80
Construction Engineering (HHPR):	$6,105.40
Construction Surveying (HHPR):	$3,600.00
Property for Swale (0.53 acres)	$212,000.00
Total Cost:	$629,332.20

* Construction engineering, inspection and surveying shall not exceed 7.5% of public improvement cost.

SHERWOOD NEW ELEMENTARY AND MIDDLE SCHOOL
PUBLIC WATER LINE
REIMBURSEMENT DISTRICT COST ALLOCATION

WATER LINE COST SUMMARY

Water Line Construction Cost:	$370,300.95
System Development Charges Creditable Amount:	$35,010.75
Reimbursement District Eligible Cost:	$335,290.20

COST ALLOCATION METHODOLOGY

50% of Cost Distributed by Frontage of Property	$35.23 /LF	($167,645.10 / 4759 LF)
50% of Cost Distributed by Service Area of Property	$0.08 /SF	($167,645.10 / 2,126,833 SF)

REIMBURSEMENT DISTRICT SUMMARY

Total School District Cost:	$99,459.32
Total Offsite Cost:	$235,830.88 *
Total Cost:	$335,290.20

* Estimated construction cost that may be recovered by School District within next 10 years if property develops

ID	Taxlot No.	Owner	Frontage Length (LF)	% Total Length	Total Frontage Cost	Area (SF)	% Total Area	Total Area Cost	Total Cost	% of Total Cost
1	2S-1W-30CC 100	Sherwood School District	1539	32.34%	$54,214.29	574,002	26.99%	$45,245.03	**$99,459**	**29.66%**
2	2S-1W-30CA 100	Rychlick	0	0.00%	$0.00	0	0.00%	$0.00	**$0**	**0.00%**
3	2S-1W-30CB 100	Edy, LLC	344	7.23%	$12,118.07	186,217	8.76%	$14,678.34	**$26,796**	**7.99%**
4	2S-1W-30CB 200	Mandel	1315	27.63%	$46,323.45	591,347	27.80%	$46,612.23	**$92,936**	**27.72%**
5	2S-1W-30CB 200	Mandel Remnant	436	9.16%	$15,358.95	49,658	2.33%	$3,914.23	**$19,273**	**5.75%**
6	2S-1W-30CC 300	Rasmussen	555	11.66%	$19,550.96	163,220	7.67%	$12,865.62	**$32,417**	**9.67%**
7	2S-1W-30CC 700	Alexander	340	7.14%	$11,977.17	137,227	6.45%	$10,816.76	**$22,794**	**6.80%**
8	2S-1W-30CC 400	Alexander 2	0	0.00%	$0.00	97,295	4.57%	$7,669.16	**$7,669**	**2.29%**
9		Tract (School Dist)	230	4.83%	$8,102.20	12,418	0.58%	$978.83	**$9,081**	**2.71%**
10	2S-1W-30CC 600	Schendel	0	0.00%	$0.00	81,370	3.83%	$6,413.89	**$6,414**	**1.91%**
11	2S-1W-30CC 200	Fillmore	0	0.00%	$0.00	119,248	5.61%	$9,399.58	**$9,400**	**2.80%**
12	2S-1W-30CC 500	Nelson	0	0.00%	$0.00	114,831	5.40%	$9,051.42	**$9,051**	**2.70%**
		Totals:	**4759**	**100.00%**	**$167,645.10**	**2,126,833**	**100.00%**	**$167,645.10**	**$335,290.20**	

Estimated Water Line Construction Cost Breakdown

Waterline Cost:	$344,466.00
Construction Inspection (City of Sherwood):	$17,223
Construction Engineering (HHPR):	$6,112
Construction Surveying (HHPR):	$2,500
Total Cost:	$370,301

* Construction engineering, inspection and surveying shall not exceed 7.5% of public improvement cost.

SHERWOOD NEW ELEMENTARY AND MIDDLE SCHOOL
PUBLIC SANITARY SEWER LINE
REIMBURSEMENT DISTRICT COST ALLOCATION

SANITARY SEWER COST SUMMARY

Sanitary Sewer Construction Cost:	$812,606.48
System Development Charges Creditable Amount:	$128,335.00
Reimbursement District Eligible Cost:	$684,271.48

REIMBURSEMENT DISTRICT SUMMARY

Total School District Cost:	$172,326.70	
Total Offsite Cost:	$511,944.77	*
Total Cost:	$684,271.48	

COST ALLOCATION METHODOLOGY

50% of Cost Distributed by Frontage of Property	$76.01 /LF	($342,135.74 / 4501 LF)
50% of Cost Distributed by Service Area of Property	$0.15 /SF	($342,135.74 / 2,225,192 SF)

* Estimated construction cost that may be recovered by School District within next 10 years if property develops

ID	Taxlot No.	Owner	Frontage Length (LF)	% Total Length	Total Frontage Cost	Area (SF)	% Total Area	Total Area Cost	Total Cost	% of Total Cost
1	2S-1W-30CC 100	Sherwood School District	1106	24.57%	$84,070.68	574,002	25.80%	$88,256.02	**$172,326.70**	**25.18%**
2	2S-1W-30CA 100	Rychlick	98	2.18%	$7,449.30	127,202	5.72%	$19,558.02	**$27,007.32**	**3.95%**
3	2S-1W-30CB 100	Edy, LLC	421	9.35%	$32,001.59	186,217	8.37%	$28,631.91	**$60,633.49**	**8.86%**
4	2S-1W-30CB 200	Mandel	1315	29.22%	$99,957.45	591,347	26.58%	$90,922.91	**$190,880.37**	**27.90%**
5	2S-1W-30CB 200	Mandel Remnant	436	9.69%	$33,141.79	49,658	2.23%	$7,635.20	**$40,776.98**	**5.96%**
6	2S-1W-30CC 300	Rasmussen	555	12.33%	$42,187.37	163,220	7.34%	$25,095.99	**$67,283.36**	**9.83%**
7	2S-1W-30CC 700	Alexander	340	7.55%	$25,844.51	137,227	6.17%	$21,099.42	**$46,943.93**	**6.86%**
8	2S-1W-30CC 400	Alexander 2	0	0.00%	$0.00	97,295	4.37%	$14,959.65	**$14,959.65**	**2.19%**
9		Tract (School Dist)	230	5.11%	$17,483.05	12,418	0.56%	$1,909.34	**$19,392.39**	**2.83%**
10	2S-1W-30CC 600	Schendel	0	0.00%	$0.00	81,370	3.66%	$12,511.09	**$12,511.09**	**1.83%**
11	2S-1W-30CC 200	Fillmore	0	0.00%	$0.00	119,248	5.36%	$18,335.05	**$18,335.05**	**2.68%**
12	2S-1W-30CC 500	Nelson	0	0.00%	$0.00	85,988	3.86%	$13,221.14	**$13,221.14**	**1.93%**
		Totals:	**4501**	**100.00%**	**$342,135.74**	**2,225,192**	**100.00%**	**$342,135.74**	**$684,271.48**	

Estimated Sanitary Sewer Construction Cost Breakdown

Sanitary Sewer Cost:	$755,913
Construction Inspection (City of Sherwood):	$22,256
Construction Engineering (HHPR):	$29,937
Construction Surveying (HHPR):	$4,500
Total Cost:	$812,606

* Construction engineering, inspection and surveying shall not exceed 7.5% of public improvement cost.

SHERWOOD NEW ELEMENTARY AND MIDDLE SCHOOL
PUBLIC ROAD IMPROVEMENTS - SW COPPER TERRACE
REIMBURSEMENT DISTRICT COST ALLOCATION

SW COPPER TERRACE SUMMARY

SW Copper Terrace Construction Cost:	$2,186,296
System Development Charges Creditable Amount:	$0
Reimbursement District Eligible Cost:	$2,186,296

REIMBURSEMENT DISTRICT SUMMARY

School District Cost:	$1,515,363.62
Total Offsite Cost:	$670,932.01 *
Total Cost:	$2,186,295.63

COST ALLOCATION METHODOLOGY

Cost Distributed by Frontage Length of Property $1,002.89 /LF ($2,186,295.63 / 2180 LF)

* Estimated construction cost that may be recovered by School District within next 10 years if property develops

ID	Taxlot No.	Owner	Frontage Length (LF)	% Total Length	Total Frontage Cost
1	2S-1W-30CC 100	Sherwood School District	1511	69.31%	**$1,515,363.62**
2	2S-1W-30CA 100	Rychlick	0	0.00%	**$0.00**
3	2S-1W-30CB 100	Edy, LLC	0	0.00%	**$0.00**
4	2S-1W-30CB 200	Mandel	0	0.00%	**$0.00**
5	2S-1W-30CB 200	Mandel Remnant	439	20.14%	**$440,267.79**
6	2S-1W-30CC 300	Rasmussen	0	0.00%	**$0.00**
7	2S-1W-30CC 700	Alexander	0	0.00%	**$0.00**
8	2S-1W-30CC 400	Alexander 2	0	0.00%	**$0.00**
9		Tract (School District)	230	10.55%	**$230,664.22**
10	2S-1W-30CC 600	Schendel	0	0.00%	**$0.00**
11	2S-1W-30CC 200	Fillmore	0	0.00%	**$0.00**
12	2S-1W-30CC 500	Nelson	0	0.00%	**$0.00**
		Totals:	**2180**	**100.00%**	**$2,186,295.63**

Estimated SW Copper Terrace Construction Cost Breakdown

SW Copper Terrace Cost:	$880,275
Construction Inspection (City of Sherwood):	$36,014
Construction Engineering (HHPR):	$20,807
Construction Surveying (HHPR):	$9,200
Right of Way (2.7 Acres):	$1,080,000
8' PUE (0.40 Acres):	$160,000
Total Cost:	$2,186,296

* Construction engineering, inspection and surveying shall not exceed 7.5% of public improvement cost.

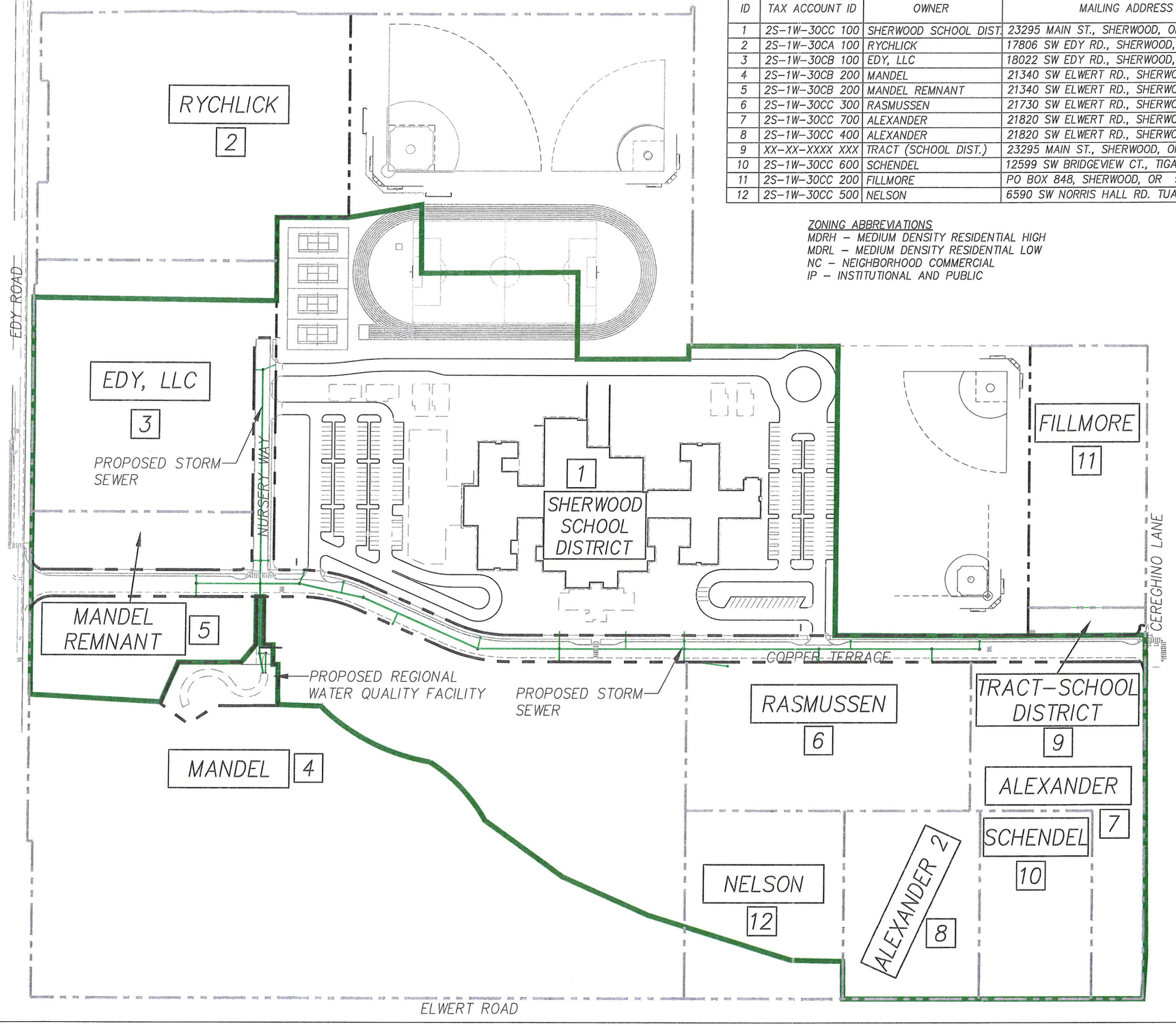
APPENDIX B

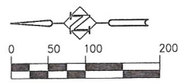
Benefit District Area Maps

Area 59 Zoning Map

ID	TAX ACCOUNT ID	OWNER	MAILING ADDRESS	ZONING DISTRICT	FRONTAGE LENGTH (LF)	SQUARE FOOTAGE (SF)
1	2S-1W-30CC 100	SHERWOOD SCHOOL DIST.	23295 MAIN ST., SHERWOOD, OR 97140	IP	1537	707,094
2	2S-1W-30CA 100	RYCHLICK	17806 SW EDY RD., SHERWOOD, OR 97140	MDRL	0	0
3	2S-1W-30CB 100	EDY, LLC	18022 SW EDY RD., SHERWOOD, OR 97140	MDRL	281	186,217
4	2S-1W-30CB 200	MANDEL	21340 SW ELWERT RD., SHERWOOD, OR 97140	MDRL/MDRH/NC	972	350,956
5	2S-1W-30CB 200	MANDEL REMNANT	21340 SW ELWERT RD., SHERWOOD, OR 97140	MDRL	436	49,658
6	2S-1W-30CC 300	RASMUSSEN	21730 SW ELWERT RD., SHERWOOD, OR 97140	MDRL/MDRH	555	163,220
7	2S-1W-30CC 700	ALEXANDER	21820 SW ELWERT RD., SHERWOOD, OR 97140	MDRL	16	137,227
8	2S-1W-30CC 400	ALEXANDER	21820 SW ELWERT RD., SHERWOOD, OR 97140	MDRL	0	97,295
9	XX-XX-XXXX XXX	TRACT (SCHOOL DIST.)	23295 MAIN ST., SHERWOOD, OR 97140	MDRL	0	0
10	2S-1W-30CC 600	SCHENDEL	12599 SW BRIDGEVIEW CT., TIGARD, OR 97223	MDRL	0	81,370
11	2S-1W-30CC 200	FILLMORE	PO BOX 848, SHERWOOD, OR 97140	MDRL	0	0
12	2S-1W-30CC 500	NELSON	6590 SW NORRIS HALL RD. TUALATIN, OR 97062	MDRH	0	84,617
				TOTAL	3797	1,857,654

ZONING ABBREVIATIONS
MDRH – MEDIUM DENSITY RESIDENTIAL HIGH
MDRL – MEDIUM DENSITY RESIDENTIAL LOW
NC – NEIGHBORHOOD COMMERCIAL
IP – INSTITUTIONAL AND PUBLIC





LEGEND
- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE
- PROPOSED R.O.W. LINE
- PROPOSED SERVICE BOUNDARY
- PROPOSED STORM SEWER

PUBLIC STORM BENEFIT DISTRICT AREA
NEW ELEMENTARY AND MIDDLE SCHOOL
SHERWOOD, OREGON

Harper Houf Peterson Righellis Inc.
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DESIGNED:	HHPR
DRAWN:	HHPR
CHECKED:	KAS
DATE:	11-14-2007

REVISIONS

SHEET NO. 1 OF 1

JOB NO. SHD-12

ID	TAX ACCOUNT ID	OWNER	MAILING ADDRESS	ZONING DISTRICT	FRONTAGE LENGTH (LF)	SQUARE FOOTAGE (SF)
1	2S-1W-30CC 100	SHERWOOD SCHOOL DIST.	23295 MAIN ST., SHERWOOD, OR 97140	IP	1539	574,002
2	2S-1W-30CA 100	RYCHLICK	17806 SW EDY RD., SHERWOOD, OR 97140	MDRL	0	0
3	2S-1W-30CB 100	EDY, LLC	18022 SW EDY RD., SHERWOOD, OR 97140	MDRL	344	186,217
4	2S-1W-30CB 200	MANDEL	21340 SW ELWERT RD., SHERWOOD, OR 97140	MDRL/MDRH/NC	1315	591,347
5	2S-1W-30CB 200	MANDEL REMNANT	21340 SW ELWERT RD., SHERWOOD, OR 97140	MDRL	436	49,658
6	2S-1W-30CC 300	RASMUSSEN	21730 SW ELWERT RD., SHERWOOD, OR 97140	MDRL/MDRH	555	163,220
7	2S-1W-30CC 700	ALEXANDER	21820 SW ELWERT RD., SHERWOOD, OR 97140	MDRL	340	137,227
8	2S-1W-30CC 400	ALEXANDER	21820 SW ELWERT RD., SHERWOOD, OR 97140	MDRL	0	97,295
9	XX-XX-XXXX XXX	TRACT (SCHOOL DIST.)	23295 MAIN ST., SHERWOOD, OR 97140	MDRL	230	12,418
10	2S-1W-30CC 600	SCHENDEL	12599 SW BRIDGEVIEW CT., TIGARD, OR 97223	MDRL	0	81,370
11	2S-1W-30CC 200	FILLMORE	PO BOX 848, SHERWOOD, OR 97140	MDRL	0	119,248
12	2S-1W-30CC 500	NELSON	6590 SW NORRIS HALL RD. TUALATIN, OR 97062	MDRH	0	114,831
				TOTAL	479	2,126,833

ZONING ABBREVIATIONS
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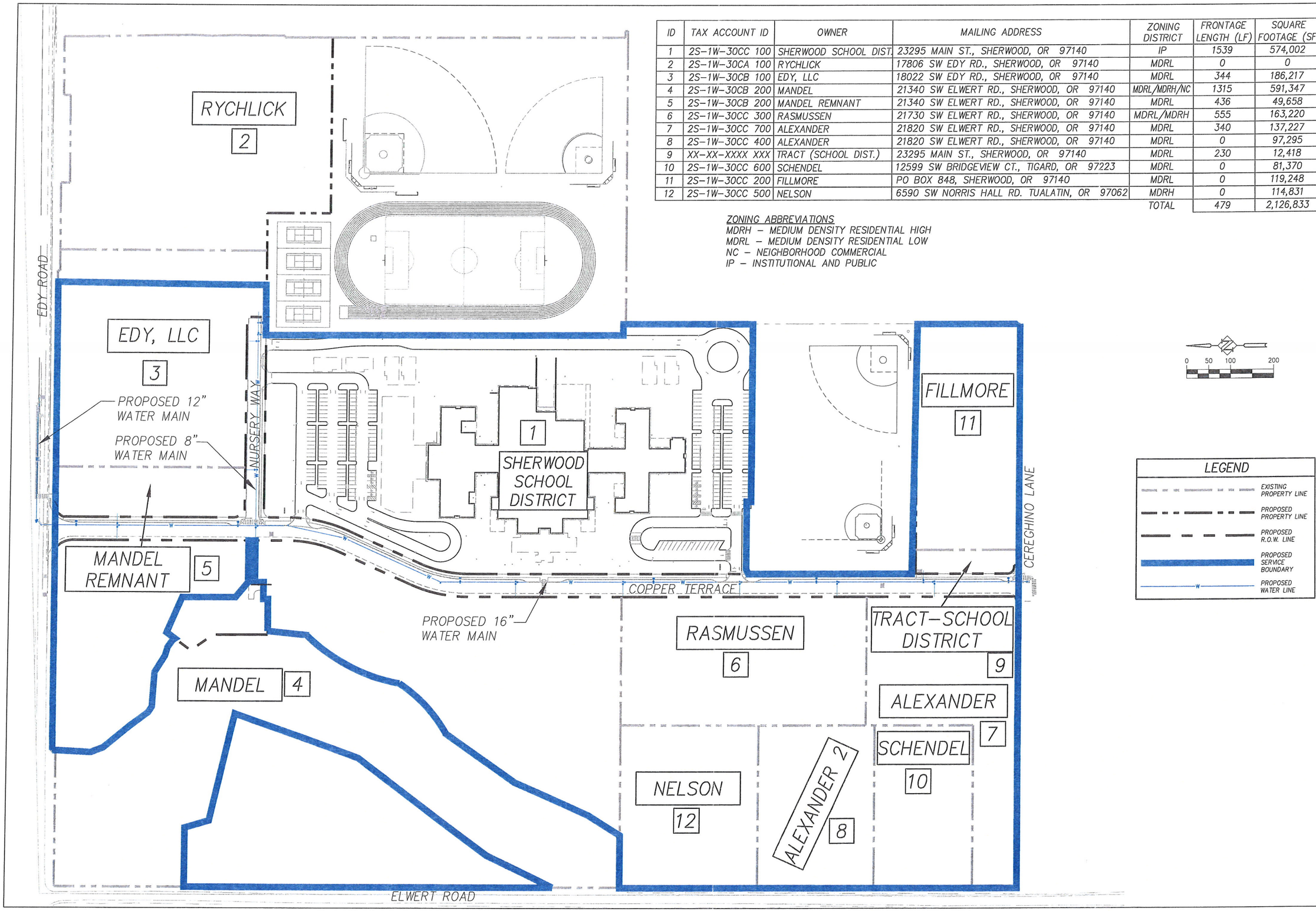

0 50 100 200

LEGEND
- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE
- PROPOSED R.O.W. LINE
- PROPOSED SERVICE BOUNDARY
- PROPOSED WATER LINE

PUBLIC WATER BENEFIT DISTRICT AREA
NEW ELEMENTARY AND MIDDLE SCHOOL
SHERWOOD, OREGON

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DATE:	11-14-2007

REVISIONS

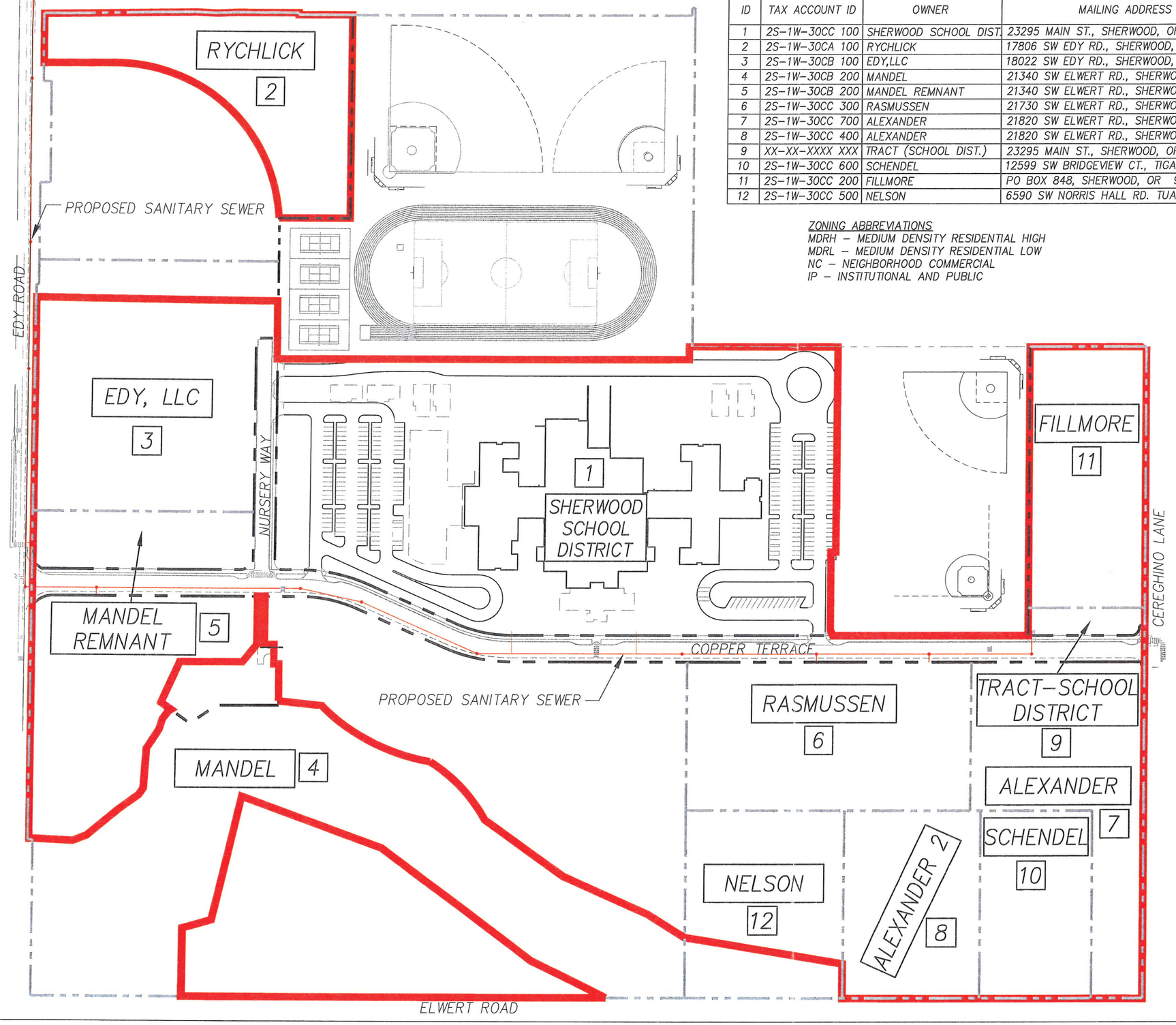
SHEET NO 1 OF 1

JOB NO. SHD-12

PUBLIC SANITARY BENEFIT DISTRICT AREA
NEW ELEMENTARY AND MIDDLE SCHOOL
SHERWOOD, OREGON

ID	TAX ACCOUNT ID	OWNER	MAILING ADDRESS	ZONING DISTRICT	FRONTAGE LENGTH (LF)	SQUARE FOOTAGE (SF)
1	2S-1W-30CC 100	SHERWOOD SCHOOL DIST.	23295 MAIN ST., SHERWOOD, OR 97140	IP	1106	574,002
2	2S-1W-30CA 100	RYCHLICK	17806 SW EDY RD., SHERWOOD, OR 97140	MDRL	98	127,202
3	2S-1W-30CB 100	EDY,LLC	18022 SW EDY RD., SHERWOOD, OR 97140	MDRL	421	186,217
4	2S-1W-30CB 200	MANDEL	21340 SW ELWERT RD., SHERWOOD, OR 97140	MDRL/MDRH/NC	1315	591,347
5	2S-1W-30CB 200	MANDEL REMNANT	21340 SW ELWERT RD., SHERWOOD, OR 97140	MDRL	436	49,658
6	2S-1W-30CC 300	RASMUSSEN	21730 SW ELWERT RD., SHERWOOD, OR 97140	MDRL/MDRH	555	163,220
7	2S-1W-30CC 700	ALEXANDER	21820 SW ELWERT RD., SHERWOOD, OR 97140	MDRL	340	137,227
8	2S-1W-30CC 400	ALEXANDER	21820 SW ELWERT RD., SHERWOOD, OR 97140	MDRL	0	97,295
9	XX-XX-XXXX XXX	TRACT (SCHOOL DIST.)	23295 MAIN ST., SHERWOOD, OR 97140	MDRL	230	12,418
10	2S-1W-30CC 600	SCHENDEL	12599 SW BRIDGEVIEW CT., TIGARD, OR 97223	MDRL	0	81,370
11	2S-1W-30CC 200	FILLMORE	PO BOX 848, SHERWOOD, OR 97140	MDRL	0	119,248
12	2S-1W-30CC 500	NELSON	6590 SW NORRIS HALL RD. TUALATIN, OR 97062	MDRH	0	85,988
				TOTAL	4501	2,225,192

ZONING ABBREVIATIONS
MDRH – MEDIUM DENSITY RESIDENTIAL HIGH
MDRL – MEDIUM DENSITY RESIDENTIAL LOW
NC – NEIGHBORHOOD COMMERCIAL
IP – INSTITUTIONAL AND PUBLIC



0 50 100 200

LEGEND
- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE
- PROPOSED R.O.W. LINE
- PROPOSED SERVICE BOUNDARY
- PROPOSED SANITARY SEWER

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DESIGNED:	HHPR
DRAWN:	HHPR
CHECKED:	KAS
DATE	11-14-2007

REVISIONS

SHEET NO. 1 OF 1

JOB NO. SHD-12

PUBLIC ROAD IMPROVEMENTS-SW COPPER TERRACE
NEW ELEMENTARY AND MIDDLE SCHOOL
SHERWOOD, OREGON

ID	TAX ACCOUNT ID	OWNER	MAILING ADDRESS	ZONING DISTRICT	FRONTAGE LENGTH (LF)
1	2S-1W-30CC 100	SHERWOOD SCHOOL DIST.	23295 MAIN ST., SHERWOOD, OR 97140	IP	1511
2	2S-1W-30CA 100	RYCHLICK	17806 SW EDY RD., SHERWOOD, OR 97140	MDRL	0
3	2S-1W-30CB 100	EDY, LLC	18022 SW EDY RD., SHERWOOD, OR 97140	MDRL	0
4	2S-1W-30CB 200	MANDEL	21340 SW ELWERT RD., SHERWOOD, OR 97140	MDRL/MDRH/NC	0
5	2S-1W-30CB 200	MANDEL REMNANT	21340 SW ELWERT RD., SHERWOOD, OR 97140	MDRL	439
6	2S-1W-30CC 300	RASMUSSEN	21730 SW ELWERT RD., SHERWOOD, OR 97140	MDRL/MDRH	0
7	2S-1W-30CC 700	ALEXANDER	21820 SW ELWERT RD., SHERWOOD, OR 97140	MDRL	0
8	2S-1W-30CC 400	ALEXANDER	21820 SW ELWERT RD., SHERWOOD, OR 97140	MDRL	0
9	XX-XX-XXXX XXX	TRACT (SCHOOL DIST.)	23295 MAIN ST., SHERWOOD, OR 97140	MDRL	230
10	2S-1W-30CC 600	SCHENDEL	12599 SW BRIDGEVIEW CT., TIGARD, OR 97223	MDRL	0
11	2S-1W-30CC 200	FILLMORE	PO BOX 848, SHERWOOD, OR 97140	MDRL	0
12	2S-1W-30CC 500	NELSON	6590 SW NORRIS HALL RD. TUALATIN, OR 97062	MDRH	0
				TOTAL	2180

ZONING ABBREVIATIONS
MDRH – MEDIUM DENSITY RESIDENTIAL HIGH
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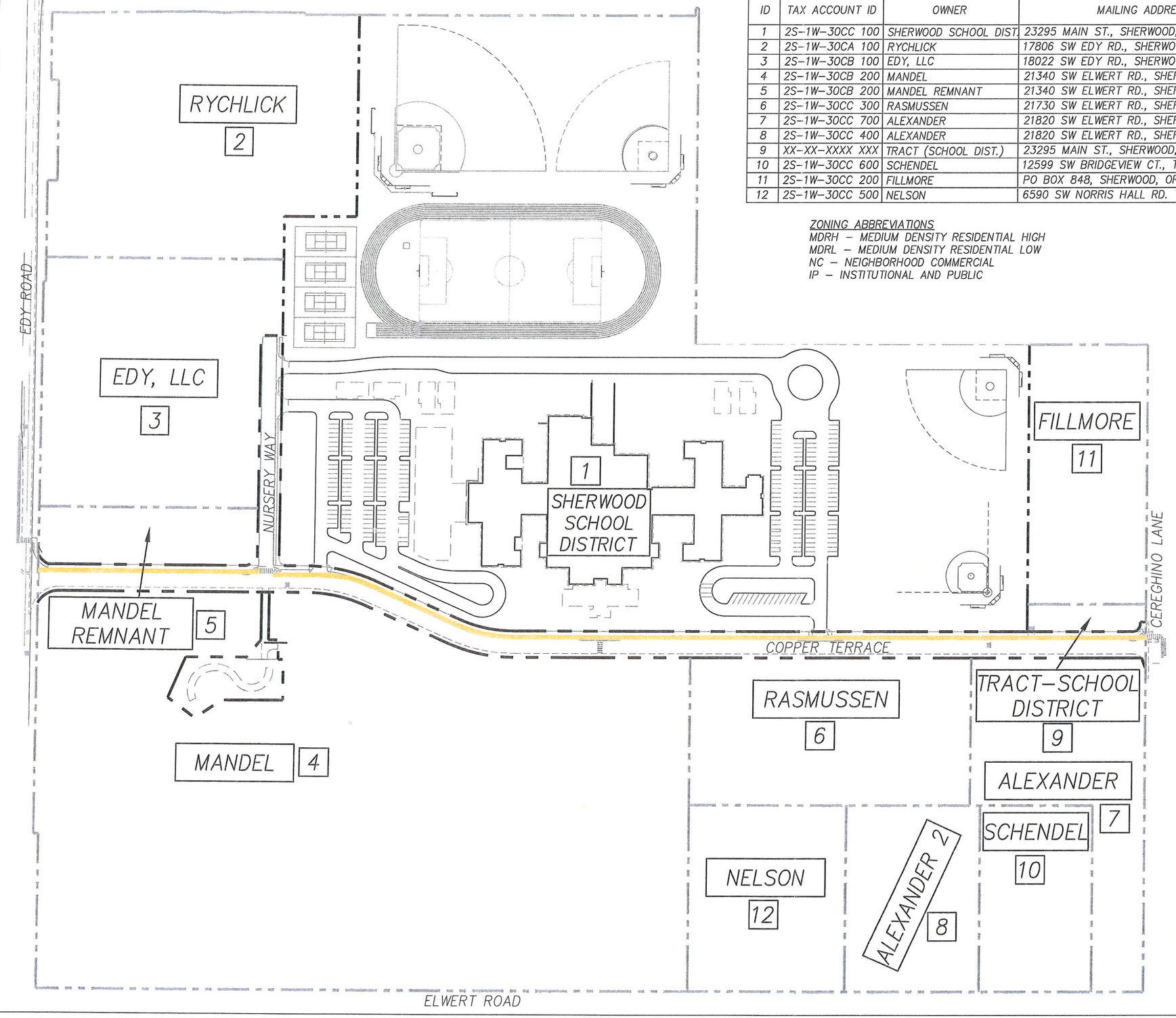

0 50 100 200

LEGEND
- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE
- PROPOSED R.O.W. LINE
- FRONTAGE LENGTH

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REVISIONS

SHEET NO. 1 OF 1

JOB NO. SHD-12

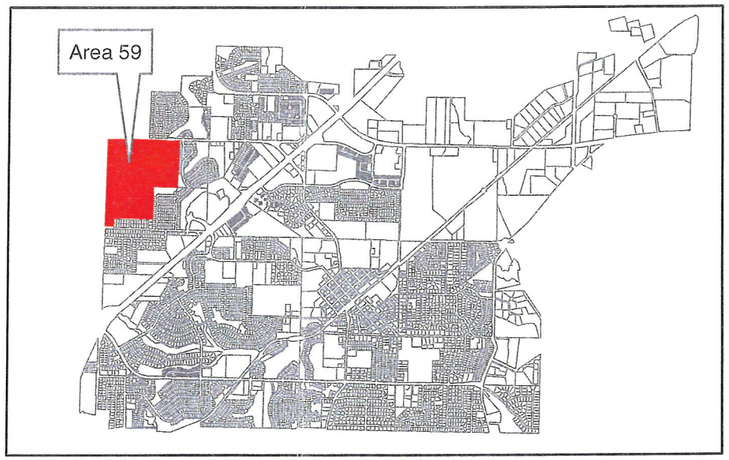
City of Sherwood Oregon

Home of the Tualatin River National Wildlife Refuge

Area 59 Zone Matrix- Option 1

Legend

- Medium Density Residential Low
- Medium Density Residential High
- Neighborhood Commercial
- Institutional and Public
- Open Space
- Urban Growth Boundary



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Map Created May 24, 2006
Source: RLIS Lite 2005 and Sherwood Shapefiles
PA 06-01- Exhibit 2C

APPENDIX C

City of Sherwood Municipal Code Chapter 13.24

Title 13 PUBLIC SERVICES

Chapter 13.24 PUBLIC IMPROVEMENT REIMBURSEMENT DISTRICTS

13.24.010 Definitions.

The following terms are defined as follows for the purposes of this chapter:
"City" means the City of Sherwood, Oregon.
"Developer" means a person who is required or chooses to finance some or all of the cost of a street, water or sewer improvement which is available to provide service to property, other than property owned by the person, and who applies to the city for reimbursement for the expense of the improvement.
"Development permit" means any final land use decision, limited land use decision, expedited land division decision, partition, subdivision, planned unit development, or driveway permit.
"Person" means a natural person, the person's heirs, executors, administrators or assigns; a firm, partnership, corporation, association or legal entity, its or their successors or assigns; and any agent, employee or representative thereof.
"Public improvement" means any construction, reconstruction or upgrading of public water, stormwater, sanitary sewer or street improvements.
"Public works director" means the public works director of the city of Sherwood.
"Reimbursement agreement" means the agreement between the developer and the city which is authorized by the city council and executed by the city manager, providing for the installation of

and payment for reimbursement district public improvements.
"Reimbursement district" means the area which is determined by the city council to derive a benefit from the construction of public improvements, financed in whole or in part by the developer.
"Reimbursement fee" means the fee required to be paid by a resolution of the city council and the reimbursement agreement. The city council resolution and reimbursement agreement shall determine the boundaries of the reimbursement district and shall determine the methodology for imposing a fee which considers the cost of reimbursing the developer for financing the construction of the improvement within the reimbursement district. (Ord. 01-1114 § 1)

13.24.020 Application to establish a reimbursement district.

A. A person who is required to or chooses to finance some or all of the cost of a public improvement which will be available to provide service to property other than property owned by the person may by written application filed with the public works director request that the city establish a reimbursement district. The public improvement must be of a size greater than that which would otherwise ordinarily be required in connection with an application for a building permit or development permit or must be available to provide service to property other than property owned by the developer, so that the public will benefit by making the improvement.
B. The application shall be accompanied by an application fee, as set by council resolution which is reasonably calculated to cover the cost of the preparation of the public works director's report and notice pursuant to this chapter.
C. The application shall include the following:
1. A written description of the location, type, size and cost of each public improvement which is to be eligible for reimbursement.
2. A map showing the boundaries of the proposed reimbursement district, the tax account number of each property, its size and boundaries.
3. A map showing the properties to be included in the proposed reimbursement district; the zoning district for the properties; the front footage and square footage of said properties, or similar data necessary for calculating the apportionment of the cost; the property or properties owned by the developer; and the names and mailing addresses of owners of other properties to be included in the proposed reimbursement district.
4. The actual or estimated cost of the public improvements.
D. The application may be submitted to the city prior to the installation of the public improvement but not later than one hundred eighty (180) days after completion and acceptance of the public improvements by the city. This time period may be extended by the city manager for good cause shown. (Ord. 01-1114 § 3)

13.24.030 Public works director's report.

The public works director shall review the application for the establishment of a reimbursement district and evaluate whether a district should be established. The public works director may require the submission of other relevant information from the developer in order to assist in the evaluation. The public works director shall prepare a written report for the city council that considers and makes a recommendation concerning each of the following factors:
A. Whether the developer will finance, or has financed some or all of the cost of the public improvement, thereby making service available to property, other than that owned by the developer.
B. The boundary and size of the reimbursement district.
C. The actual or estimated cost of the public improvement serving the area of the proposed reimbursement district and the portion of the cost for which the developer should be reimbursed for each public improvement.
D. A methodology for spreading the cost among the properties within the reimbursement district and, where appropriate, defining a "unit" for applying the reimbursement fee to property which may, with city approval, be partitioned, subdivided, altered or modified at some future date. City may use any methodology for apportioning costs on properties specially benefited that is just and reasonable.
E. The amount to be charged by the city for an administration fee for the reimbursement agreement. The administration fee shall be fixed by the city council and will be included in the

resolution approving and forming the reimbursement district. The administration fee may be a percentage of the total reimbursement fee expressed as an interest figure, or may be a flat fee per unit to be deducted from the total reimbursement fee.
F. Whether the public improvements will or have met city standards.
G. Whether it is fair and in the public interest to create a reimbursement district. (Ord. 01-1114 § 3)

13.24.040 Amount to be reimbursed.

A. A reimbursement fee shall be computed by the city for all properties within the reimbursement district, excluding property owned by or dedicated to the city or the state of Oregon, which have the opportunity to use the public improvements, including the property of the developer, for formation of a reimbursement district. The fee shall be calculated separately for each public improvement The developer for formation of the reimbursement district shall not be reimbursed for the portion of the reimbursement fee computed for its own property.
B. The cost to be reimbursed to the developer shall be limited to the cost of construction engineering, construction, and off-site dedication of right of way. Construction engineering shall include surveying and inspection costs and shall not exceed seven and a half (7.5) percent of eligible public improvement construction cost. Costs to be reimbursed for right of way shall be limited to the reasonable market value of land or easements purchased by the developer from a third party in order to complete off-site improvements.
C. No reimbursement shall be allowed for the cost of legal expenses, design engineering, financing costs, permits or fees required for construction permits, land or easements dedicated by the developer, the portion of costs which are eligible for systems development charge credits or any costs which cannot be clearly documented.
D. Reimbursement for the amount of the application fee required by Section 13.24.020 in this chapter. (Ord. 01-1114 § 4)

13.24.050 Public hearing.

A. Within forty-five (45) days after the public works director has completed the report required in Section 13.24.030, the city council shall hold an informational public hearing in which any person shall be given the opportunity to comment on the proposed reimbursement district. Developer shall provide the mailing list for all property owners within the proposed district. Because formation of the reimbursement district does not result in an assessment against property or lien against property, the public hearing is for informational purposes only and is not subject to mandatory termination because of remonstrances. The city council has the sole discretion after the public hearing to decide whether a resolution approving and forming the reimbursement district shall be adopted.
B. Not less than ten (10) days prior to any public hearing held pursuant to this chapter, the developer and all owners of property within the proposed district shall be notified of the public hearing and the purpose thereof. Such notification shall be accomplished by either regular and certified mail or by personal service. Notice shall be deemed effective on the date that the letter of notification is mailed. Failure of the developer or any affected property owner to be so notified shall not invalidate or otherwise affect any reimbursement district resolution or the city council's action to approve the same. (Ord. 01-1114 § 5)

13.24.060 City council action.

A. After the public hearing held pursuant to Section 13.24.050A, the city council shall approve, reject or modify the recommendations contained in the public works director's report. The city council's decision shall be contained in a resolution. If a reimbursement district is established, the resolution shall include the public works director's report as approved or modified, and specify that payment of the reimbursement fee, as designated for each parcel, is a precondition of receiving any city permits applicable to development of that parcel as provided for in Section 13.24.100.
B. The resolution shall establish an interest rate to be applied to the reimbursement fee as a return on the investment of the developer. The interest rate shall be fixed and computed against

the reimbursement fee as simple interest and will not compound.
C. The resolution shall instruct the city manager to enter into an agreement with the developer pertaining to the reimbursement district improvements. If the agreement is entered into prior to construction, the agreement shall be contingent upon the improvements being accepted by the city. The agreement shall contain at least the following provisions:
1. The public improvement(s) shall meet all applicable city standards.
2. The total amount of potential reimbursement to the developer shall be specified.
3. The total amount of potential reimbursement shall not exceed the actual cost of the public improvement(s).
4. The developer shall guarantee the public improvement(s) for a period of twelve (12) months after the date of installation.
5. A clause in a form acceptable to the city attorney stating that the developer shall defend, indemnify and hold harmless the city from any and all losses, claims, damage, judgments or other costs or expense arising as a result of or related to the city's establishment of the reimbursement district, including any city costs, expenses and attorney fees related to collection of the reimbursement fee should the city council decide to pursue collection of an unpaid reimbursement fee under Section 13.24.110H.
6. A clause in a form acceptable to the city attorney stating that the developer agrees that the city, cannot be held liable for any of the developer's alleged damages, including all costs and attorney fees, under the agreement or as a result of any aspect of the formation of the reimbursement district, or the reimbursement district process, and that the developer waives, and is stopped from bringing, any claim, of any
kind, including a claim in inverse condemnation, because the developer has benefited by the city's approval of its development and the required improvements.
7. Other provisions the city determines necessary and proper to carry out the provisions of this chapter.
C. If a reimbursement district is established by the city council, the date, of the formation of the district shall be the date that the city council adopts the resolution forming the district. (Ord. 01-1114 § 6)

13.24.070 Notice of adoption of resolution.

The city shall notify all property owners within the district and the developer of the adoption of a reimbursement district resolution. The notice shall include a copy of the resolution, the date it was adopted and a short explanation specifying the amount of the reimbursement fee and that the property owner is legally obligated to pay the fee pursuant to this chapter. (Ord. 01-1114 § 7)

13.24.080 Recording the resolution.

The city recorder shall cause notice of the formation and nature of the reimbursement district to be filed in the office of the Washington County clerk so as to provide notice to potential purchasers of property within the district. Said recording shall not create a lien. Failure to make such recording shall not affect the legality of the resolution or the obligation to pay the reimbursement fee. (Ord. 01-1114 § 8)

13.24.090 Contesting the reimbursement district.

No legal action intended to contest the formation of the district or the reimbursement fee, including the amount of the charge designated for each parcel, shall be filed after sixty (60) days following the adoption of a resolution establishing a reimbursement district and any such legal action shall be exclusively by Writ of Review pursuant to ORS 34.0 10 to ORS 34.102. (Ord. 01-1114 § 9)

13.24.100 Obligation to pay reimbursement fee.

A. The applicant for a permit related to property within any reimbursement district shall pay the city, in addition to any other applicable fees and charges, the reimbursement fee established by

the council, if within ten years after the date of the passage of the resolution forming the reimbursement district, the person applies for and receives approval from the city for any of the following activities:
1. A building permit for a new building;
2. Building permits for any addition(s) of a building, which cumulatively exceed twenty-five (25) percent of the existing square footage in any thirty-six (36) month period;
3. A development permit, as that term is defined by this chapter;
4. A city permit issued for connection to a public improvement.
B. The city's determination of who shall pay the reimbursement fee and when the reimbursement fee is due is final.
C. In no instance shall the city, or any officer or employee of the city, be liable for payment of any reimbursement fee, or portion thereof, as a result of the city's determination as to who should pay the reimbursement fee.
Only those payments which the city has received from or on behalf of those properties within a reimbursement district shall be payable to the developer. The city's general fund or other revenue sources shall not be liable for or subject to payment of outstanding and unpaid reimbursement fees imposed upon private property.
D. Nothing in this chapter is intended to modify or limit the authority of the city to provide or require access management.
E. Nothing in this chapter is intended to modify or limit the authority of the city to enforce development conditions which have already been imposed against specific properties.
F. Nothing in this chapter is intended to modify or limit the authority of the city, in the future, to impose development conditions against specific properties as they develop.
G. No person shall be required to pay the reimbursement fee on an application or upon property for which the reimbursement fee has been previously paid, unless such payment was for a different type of improvement. No permit shall be issued for any of the activities listed in subsection 10A unless the reimbursement fee, together with the amount of accrued interest, has been paid in full. Where approval is given as specified in subsection 10A, but no permit is requested or issued, then the requirement to pay the reimbursement fee lapses if the underlying approval lapses.
H. The date of reimbursement under this chapter shall extend ten years from the date of the formation of a reimbursement district formation by city council resolution.
I. The reimbursement fee is immediately due and payable to the city by property owners upon use of a public improvement as provided by this chapter in subsection 10A. If connection is made or construction commenced without required city permits, then the reimbursement fee is immediately due and payable upon the earliest date that any such permit was required.
J. Whenever the full reimbursement fee has not been paid and collected for any reason after it is due, the city manager shall report to the city council the amount of the uncollected reimbursement, the legal description of the property on which the reimbursement is due, the date upon which the reimbursement was due and the property owner's name or names. The city council shall then, by motion, set a public hearing date and direct the city manager to give notice of that hearing to each of the identified property owners, together with a copy of the city manager's report concerning the unpaid reimbursement fee. Such notice may be either by certified mail or personal service. At the public hearing, the city council may accept, reject or modify the city manager's report. If the city council determines that the reimbursement fee is due but has not been paid for whatever reason, the city council may, at its sole discretion, act, by resolution, to take any action, it deems appropriate, including all legal or equitable means necessary to collect the unpaid amount. However, nothing in this chapter requires the city to take any action to collect such amounts. (Ord. 01-1114 § 10)

13.24.110 Public improvements.

Public improvements installed pursuant to reimbursement district agreements shall become and remain the sole property of the city. (Ord. 01-1114 § 11)

13.24.120 Multiple public improvements.

More than one public improvement may be the subject of a reimbursement district. (Ord. 01-1114

§ 12)

13.24.130 Collection and payment--Other fees and charges.

A. The developer shall receive all reimbursement collected by the city for reimbursement district public improvements. Such reimbursement shall be delivered to the developer for as long as the reimbursement district agreement is in effect. Such payments shall be made by the city within ninety (90) days of receipt of the reimbursements.
B. The reimbursement fee is not intended to replace or limit, and is in addition to, any other existing fees or charges collected by the city. (Ord. 01-1114 § 13)

13.24.140 Nature of the fees.

The city council finds that the fees imposed by this chapter are not taxes subject to the property tax limitations of Article XI, Section 11(b) of the Oregon Constitution. (Ord. 01-1114 § 14)

13.24.150 Severability.

If any section, phrase, clause, or part of this chapter is found to be invalid by a court of competent jurisdiction, the remaining phrases, clauses, and parts shall remain in full force and effect. (Ord. 01-1114 § 15)

<< previous | next >>

APPENDIX D

System Development Charge Credit Memo

Job No.: SHD-12

Date: November 16, 2007 (Revised January 3, 2008)

To: Tom Pessemier, P.E.- City of Sherwood

From: Kim Shera, P.E.- Harper Houf Peterson Righellis, Inc.

Harper Houf Peterson Righellis Inc.
ENGINEERS ◆ PLANNERS
LANDSCAPE ARCHITECTS ◆ SURVEYORS

Project/Subject: Sherwood New Elementary/Middle School System Development Charge Credits

☐ Fax - Number:_____; Number of pages_____
(If you did not receive the correct number of pages, please call 503-221-1131)
☒ E-mail ☐ Mail ☐ Hand Deliver ☐ Interoffice

This memo is to request System Development Charge (SDC) Credits for the Sherwood New Elementary and Middle School Project in Area 59 in accordance with City of Sherwood Municipal Code Chapter 15.16 Section 15.16.100 Credits.

System Development Credits are issued for qualified public improvements that are designed and constructed to provide additional capacity to meet projected future capacity needs for an undeveloped area. These improvements must also be determined by the City to further the objectives of the capital improvement programs, comprehensive development plan, or public facility master plans.

The public improvement costs that are requested below are contained in the recently completed utility master plans and the capital improvement program.

WATER MAIN

A 16" water main is proposed in Copper Terrace in accordance with the Water Master Plan developed by Murray Smith and Associates. A 12" water main in Copper Terrace is sufficient to serve the new school site domestic and fire flows. Calculations are included for reference, along with the relevant information from the water master plan. Therefore, the school district is requesting SDC credits for the construction cost difference between a 12" water main and a 16" water main for the 2265 lineal feet of 16" water main being installed in Copper Terrace. The cost difference is a total SDC credit of $35,010.75. A detailed cost breakdown is also included for reference.

The Water SDC per the City of Sherwood for the school site is $54,717.76 based on the installation of a 2" meter.

SANITARY SEWER

A 15" Sanitary sewer is proposed in Copper Terrace in accordance with the Sanitary Sewer Master Plan prepared by Murray Smith and Associates. An 8" sanitary sewer main would serve the school site and the sanitary sewer service area within Area 59 (46 acres), but the 15" was provided to serve approximately 200 acres of future development on the west side of Elwert Road. Calculations are included for reference along with the relevant information from the Sanitary Sewer Master Plan. Therefore the school district is requesting SDC credits for the

construction cost difference between an 8" sanitary sewer and a 15" sanitary sewer for the 3630 lineal feet of 15" sanitary sewer being installed in Edy Road and Copper Terrace. The cost difference varies depending on the depth and a detailed cost breakdown is included for reference. The total cost difference is $128,335.

The Sanitary Sewer SDC per the City of Sherwood for the school site is $212,480.55.

STORM SEWER

A regional water quality facility was identified in the Area 59 Master Planning Process. A regional water quality facility was also identified in this area in the Storm Water Master Plan. The school district has purchased land for the access and construction of a regional water quality swale that would treat the majority of Area 59 future development. The property purchased by the school district for the swale is 0.53 acres and is estimated to cost $400,000/acre for a total of $212,000. There are additional construction costs associated with constructing a regional facility rather than a site specific water quality facility for the school, but because the SDC's for storm are less than the cost of the property needed to construct an offsite regional facility it is the only item presented for credit.

The Storm Sewer SDC per the City of Sherwood for the school site is $98,604.41.

TRANSPORTATION

Offsite improvements are proposed at the intersection of Edy Road and Borchers Drive including installation of a 4 way stop and widening for construction of a westbound right turn lane on Edy Road at Borchers. This project is on the City of Sherwood's Capital Improvement Plan and is eligible for SDC Credits. The project is currently under design and the cost of the improvements at this preliminary level are estimated at $102,000. Final construction costs will be provided to the City as that information is available. The offsite improvements proposed at the intersection of Highway 99 and Edy Road and the intersection of Highway 99 and Sunset Boulevard are not eligible for SDC Credits.

The City Transportation SDC per the City of Sherwood is $206,200.

SUMMARY

PUBLIC IMPROVEMENT	CITY SDC	SDC CREDIT REQUESTED	BASIS OF REQUEST
Water	$54,717.76	$35,010.75	Master Plan
Sanitary	$212,480.55	$128,335.00	Master Plan
Storm	$98,604.41	$98,604.41	Master Plan
Transportation/Road	$206,200	$102,000	CIP
TOTAL	**$572,002.72**	**$363,950.16**	

Sherwood New Elementary/Middle School
System Development Charge Credits

Water Main Cost Comparison

	Master Plan			School Only		
Quantity	Item	Unit Price	Total Price	Item	Unit Price	Total Price
2265 LF	16" DIP	$ 57.75	$ 130,803.75	12" DIP	$ 48.00	$ 108,720.00
7 EA	16" Butterfly Valve	$ 2,135.00	$ 14,945.00	12" Butterfly Valve	$ 1,550.00	$ 10,850.00
2 EA	16"x8" Cross	$ 1,615.00	$ 3,230.00	12"x8" Cross	$ 725.00	$ 1,450.00
6 EA	16"x8" Tee	$ 1,240.00	$ 7,440.00	12"x8" Tee	$ 765.00	$ 4,590.00
6 EA	16"x6" Tee	$ 1,190.00	$ 7,140.00	12"x6" Tee	$ 655.00	$ 3,930.00
1 EA	16"x8" Reducer	$ 512.00	$ 512.00	12"x8" Reducer	$ 300.00	$ 300.00
3 EA	16" 22° Bend	$ 920.00	$ 2,760.00	12" 22° Bend	$ 540.00	$ 1,620.00
2 EA	16" 45° Bend	$ 360.00	$ 720.00	12" 45° Bend	$ 540.00	$ 1,080.00
	Total:		$ 167,550.75			$ 132,540.00

Master Plan Total Cost	$ 167,550.75
School Only Total Cost	$ 132,540.00
Difference	$ 35,010.75

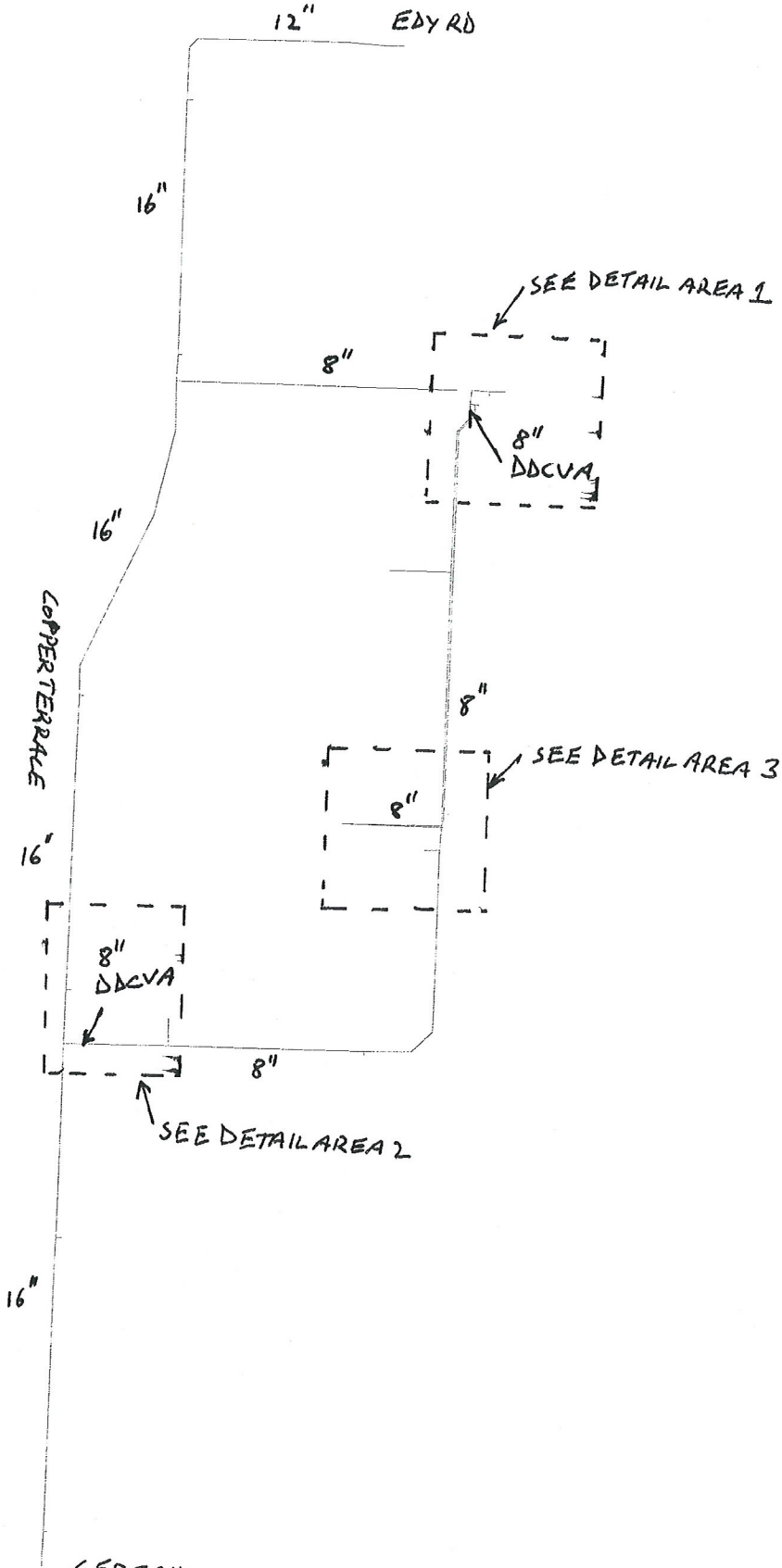
Sanitary Cost Comparison

	Master Plan			School Only		
Quantity	Item	Unit Price	Total Price	Item	Unit Price	Total Price
1195 LF	15" Sewer (5'-10' deep)	$ 80.00	$ 95,600.00	8" Sewer (5'-10' deep)	$ 48.00	$ 57,360.00
2435 LF	15" Sewer (10'-20' deep)	$ 112.00	$ 272,720.00	8" Sewer (10'-20' deep)	$ 75.00	$ 182,625.00
	Total:		$ 368,320.00			$ 239,985.00

Master Plan Total Cost	$ 368,320.00
School Only Total Cost	$ 239,985.00
Difference	$ 128,335.00

Note: Unit prices from C&M Construction, who was awarded construction contract for public improvements.

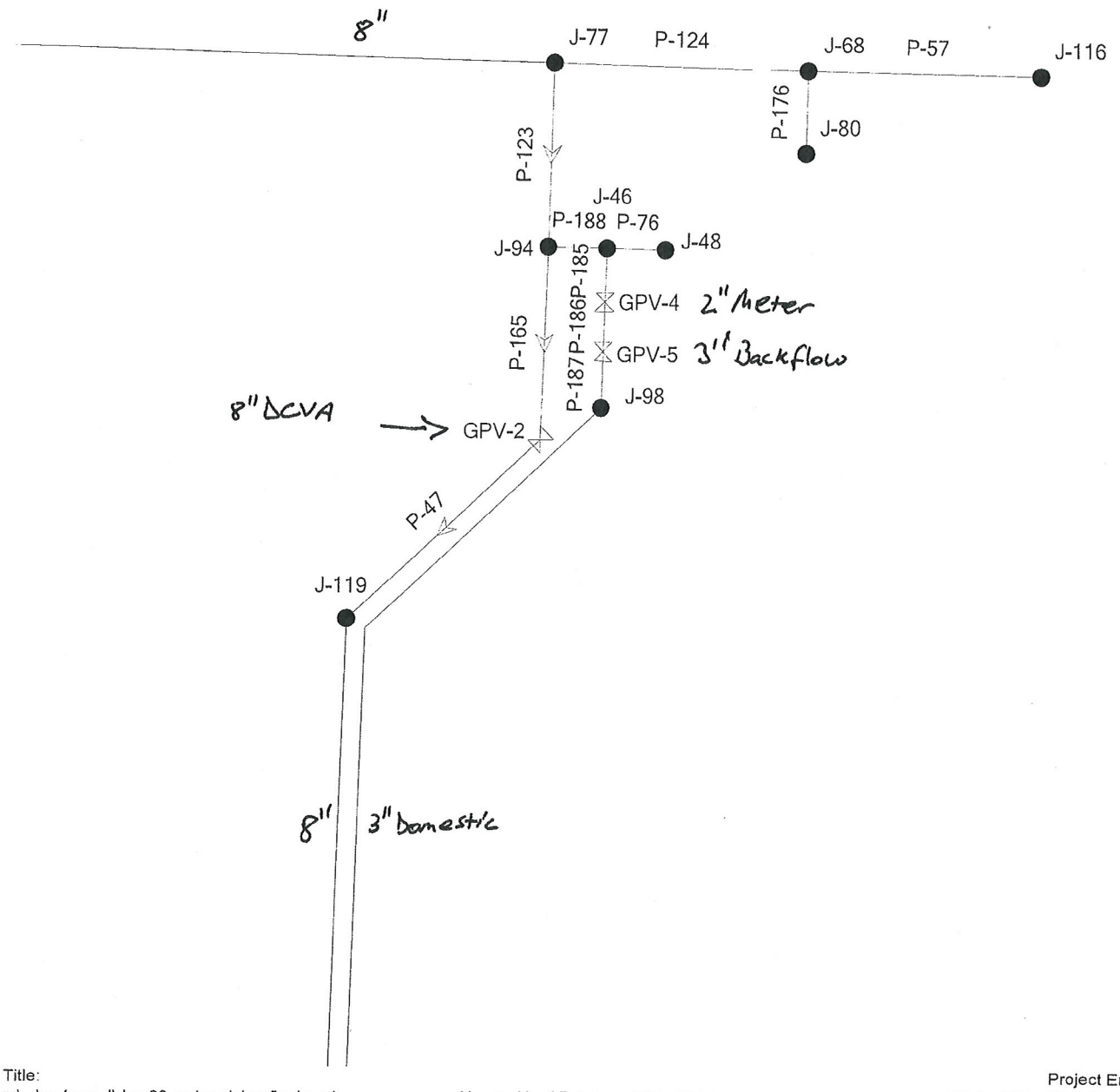
Scenario: Base



PER MASTER PLAN

DETAIL AREA 1

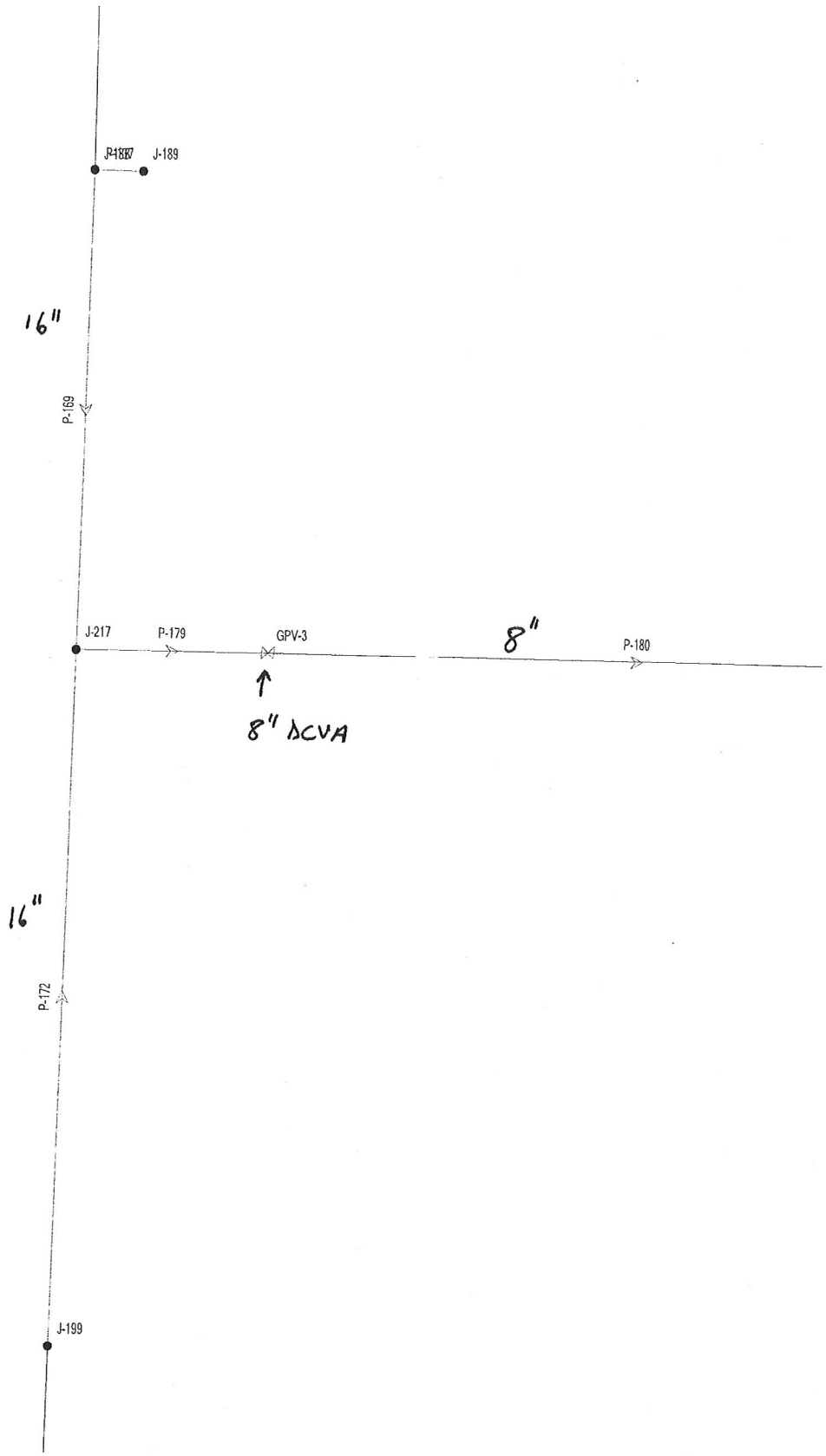
Scenario: Base



PER MASTER PLAN

DETAIL AREA 2

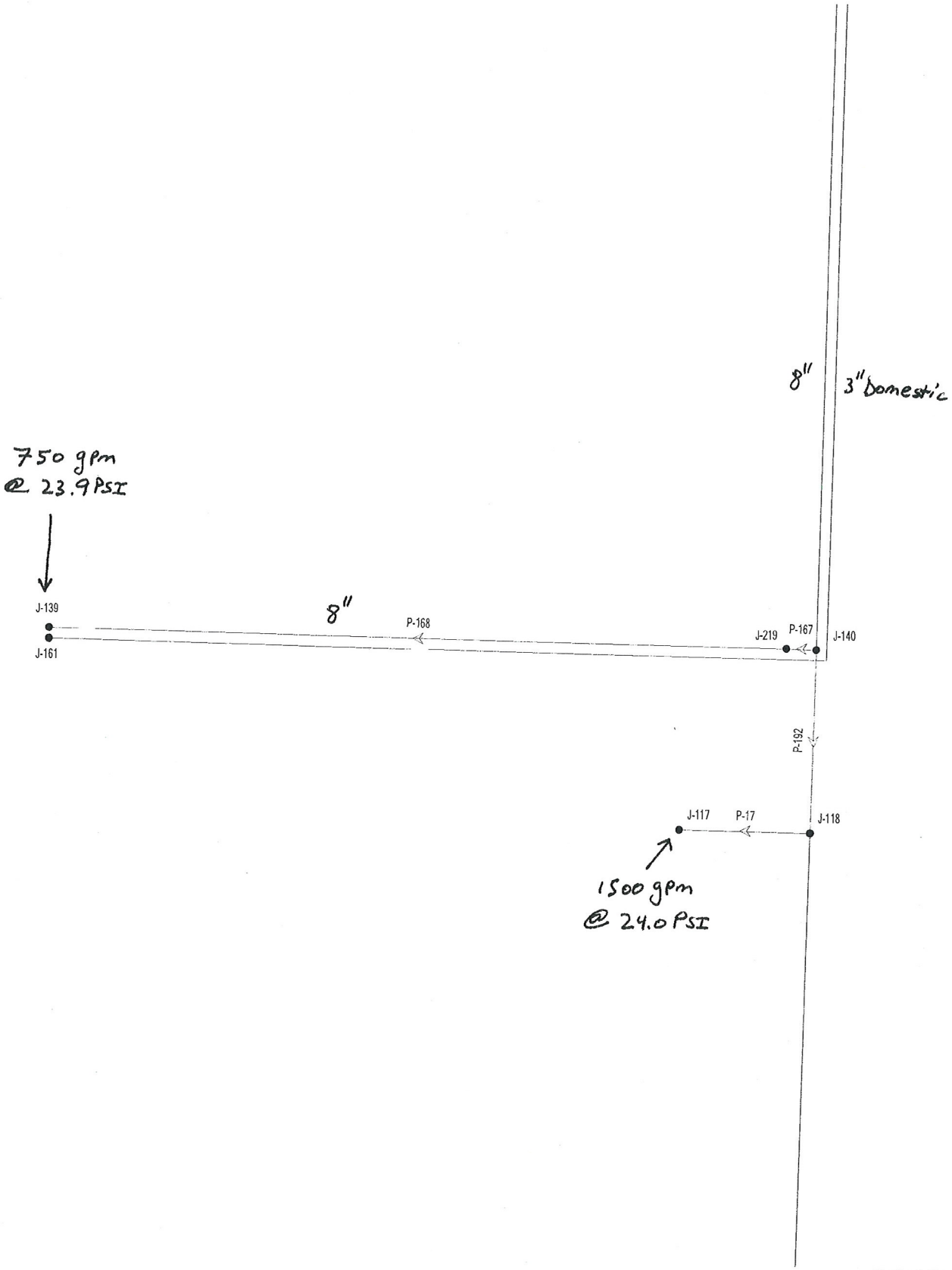
Scenario: Base



PER MASTER PLAN

DETAIL AREA 3

Scenario: Base



PER MASTER PLAN

Scenario: Base
Steady State Analysis
Junction Report

Label	Elevation (ft)	Zone	Type	Base Flow (gpm)	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-134	197.00	Zone	Demand	0.00	Fixed	0.00	267.34	30.43
J-118	198.00	Zone	Demand	0.00	Fixed	0.00	255.77	25.00
J-103	190.00	Zone	Demand	0.00	Fixed	0.00	311.20	52.44
J-116	191.00	Zone	Demand	0.00	Fixed	0.00	295.11	45.04
J-138	194.00	Zone	Demand	0.00	Fixed	0.00	268.21	32.11
J-92	200.00	Zone	Demand	0.00	Fixed	0.00	272.25	31.26
J-82	185.00	Zone	Demand	0.00	Fixed	0.00	309.94	54.06
J-101	188.00	Zone	Demand	0.00	Fixed	0.00	310.91	53.18
J-98	191.00	Zone	Demand	0.00	Fixed	0.00	259.86	29.79
J-68	191.00	Zone	Demand	0.00	Fixed	0.00	295.11	45.04
J-46	191.00	Zone	Demand	0.00	Fixed	0.00	294.22	44.66
J-80	191.00	Zone	Demand	0.00	Fixed	0.00	295.11	45.04
J-48	191.00	Zone	Demand	0.00	Fixed	0.00	294.22	44.66
J-104	190.00	Zone	Demand	0.00	Fixed	0.00	311.14	52.41
J-140	198.00	Zone	Demand	0.00	Fixed	0.00	255.90	25.05
J-137	194.00	Zone	Demand	0.00	Fixed	0.00	268.21	32.11
J-94	191.00	Zone	Demand	0.00	Fixed	0.00	294.22	44.66
J-161	198.00	Zone	Demand	0.00	Fixed	0.00	259.86	26.76
J-139	198.00	Zone	Demand	750.00	Fixed	750.00	253.34	23.94
J-40	185.00	Zone	Demand	0.00	Fixed	0.00	309.72	53.96
J-100	188.00	Zone	Demand	0.00	Fixed	0.00	310.91	53.18
J-77	191.00	Zone	Demand	0.00	Fixed	0.00	295.11	45.04
J-117	198.00	Zone	Demand	1,500.00	Fixed	1,500.00	253.55	24.03
J-119	191.00	Zone	Demand	0.00	Fixed	0.00	274.93	36.31
J-38	185.00	Zone	Demand	0.00	Fixed	0.00	309.94	54.06
J-185	185.00	Zone	Demand	0.00	Fixed	0.00	309.72	53.96
J-189	198.00	Zone	Demand	0.00	Fixed	0.00	309.35	48.17
J-193	209.00	Zone	Demand	0.00	Fixed	0.00	309.47	43.47
J-191	230.00	Zone	Demand	0.00	Fixed	0.00	309.69	34.48
J-194	194.00	Zone	Demand	0.00	Fixed	0.00	309.53	49.98
J-197	197.00	Zone	Demand	0.00	Fixed	0.00	309.38	48.62
J-198	196.00	Zone	Demand	0.00	Fixed	0.00	309.48	49.10
J-188	198.00	Zone	Demand	0.00	Fixed	0.00	309.35	48.17
J-186	230.00	Zone	Demand	0.00	Fixed	0.00	309.72	34.49
J-195	194.00	Zone	Demand	0.00	Fixed	0.00	309.53	49.98
J-200	223.00	Zone	Demand	0.00	Fixed	0.00	309.59	37.46
J-190	230.00	Zone	Demand	0.00	Fixed	0.00	309.69	34.48
J-192	209.00	Zone	Demand	0.00	Fixed	0.00	309.47	43.47
J-196	212.00	Zone	Demand	0.00	Fixed	0.00	309.49	42.18
J-199	201.00	Zone	Demand	0.00	Fixed	0.00	309.38	46.89
J-216	200.00	Zone	Demand	0.00	Fixed	0.00	272.25	31.26
J-217	198.00	Zone	Demand	0.00	Fixed	0.00	309.31	48.16
J-218	200.00	Zone	Demand	0.00	Fixed	0.00	272.25	31.26
J-219	198.00	Zone	Demand	0.00	Fixed	0.00	255.80	25.01
J-220	199.00	Zone	Demand	0.00	Fixed	0.00	284.69	37.07
J-221	199.00	Zone	Demand	0.00	Fixed	0.00	284.69	37.07
J-222	199.00	Zone	Demand	0.00	Fixed	0.00	284.69	37.07

PER MASTER PLAN

Scenario: Base
Steady State Analysis
Pipe Report

Label	Length (ft)	Diameter (in)	Material	Hazen-Williams C	Check Valve?	Minor Loss Coefficient	Control Status	Discharge (gpm)	Upstream Structure Hydraulic Grade (ft)	Downstream Structure Hydraulic Grade (ft)	Pressure Pipe Headloss (ft)	Headloss Gradient (ft/1000ft)
P-40	16.00	16.0	Ductile Iro	100.0	false	0.23	Open	1,625.83	311.20	311.14	0.06	4.00
P-17	25.00	8.0	Ductile Iro	100.0	false	0.46	Open	-1,500.00	253.55	255.77	2.23	89.11
P-76	6.00	2.0	Ductile Iro	100.0	false	0.00	Open	0.00	294.22	294.22	0.00	0.00
P-49	91.00	8.0	Ductile Iro	100.0	false	0.46	Open	0.00	268.21	268.21	0.00	0.00
P-57	25.00	8.0	Ductile Iro	100.0	false	0.00	Open	0.00	295.11	295.11	0.00	0.00
P-48	766.00	3.0	Ductile Iro	100.0	false	0.77	Open	0.00	259.86	259.86	0.00	0.00
P-159	281.00	12.0	Ductile Iro	100.0	false	1.36	Open	1,625.83	314.50	311.20	3.30	11.73
P-182	78.00	16.0	Ductile Iro	100.0	false	0.35	Open	1,625.83	311.14	310.91	0.23	2.96
P-191	269.00	8.0	Ductile Iro	100.0	false	0.35	Open	-1,202.86	255.77	267.34	11.57	43.00
P-192	35.00	8.0	Ductile Iro	100.0	false	0.35	Open	297.14	255.90	255.77	0.13	3.70
P-173	208.00	8.0	Ductile Iro	100.0	false	0.00	Open	1,047.14	274.93	268.21	6.73	32.34
P-47	28.00	8.0	Ductile Iro	100.0	false	0.20	Open	1,047.14	275.98	274.93	1.04	37.29
P-176	9.00	6.0	Ductile Iro	100.0	false	0.39	Open	0.00	295.11	295.11	0.00	0.00
P-174	373.00	8.0	Ductile Iro	100.0	false	0.35	Open	1,047.14	268.21	255.90	12.30	32.99
P-131	437.00	8.0	Ductile Iro	100.0	false	0.70	Open	1,047.14	309.72	295.11	14.62	33.45
P-170	40.00	16.0	Ductile Iro	100.0	false	1.14	Open	1,625.83	309.94	309.72	0.22	5.47
P-127	9.00	6.0	Ductile Iro	100.0	false	0.39	Open	0.00	309.94	309.94	0.00	0.00
P-125	9.00	6.0	Ductile Iro	100.0	false	0.39	Open	0.00	310.91	310.91	0.00	0.00
P-124	27.00	8.0	Ductile Iro	100.0	false	0.74	Open	0.00	295.11	295.11	0.00	0.00
P-123	19.00	8.0	Ductile Iro	100.0	false	0.39	Open	1,047.14	295.11	294.22	0.88	46.57
P-128	1.00	10.0	Ductile Iro	100.0	false	0.00	Open	1,625.83	189.00	188.98	0.02	24.63
P-126	372.00	16.0	Ductile Iro	100.0	false	0.35	Open	1,625.83	310.91	309.94	0.97	2.59
P-143	68.00	16.0	Ductile Iro	100.0	false	0.74	Open	578.69	309.38	309.35	0.03	0.51
P-139	8.00	16.0	Ductile Iro	100.0	false	0.00	Open	0.00	309.69	309.69	0.00	0.00
P-140	190.00	16.0	Ductile Iro	100.0	false	1.48	Open	-624.17	309.59	309.69	0.10	0.54
P-145	5.00	16.0	Ductile Iro	100.0	false	0.39	Open	578.69	309.72	309.72	0.01	1.40
P-141	195.00	16.0	Ductile Iro	100.0	false	0.74	Open	-624.17	309.49	309.59	0.09	0.48
P-132	47.00	16.0	Ductile Iro	100.0	false	0.35	Open	-624.17	309.47	309.49	0.03	0.54
P-142	173.00	16.0	Ductile Iro	100.0	false	0.74	Open	-624.17	309.38	309.47	0.08	0.49
P-134	6.00	16.0	Ductile Iro	100.0	false	0.08	Open	-624.17	309.72	309.72	0.00	0.63
P-138	9.00	16.0	Ductile Iro	100.0	false	0.00	Open	0.00	309.53	309.53	0.00	0.00
P-136	9.00	16.0	Ductile Iro	100.0	false	0.00	Open	0.00	309.47	309.47	0.00	0.00
P-144	244.00	16.0	Ductile Iro	100.0	false	0.74	Open	578.69	309.48	309.38	0.10	0.41
P-130	123.00	16.0	Ductile Iro	100.0	false	0.35	Open	578.69	309.53	309.48	0.05	0.41
P-129	485.00	16.0	Ductile Iro	100.0	false	0.60	Open	-578.69	309.53	309.72	0.19	0.38
P-135	41.00	16.0	Ductile Iro	100.0	false	0.74	Open	-624.17	309.69	309.72	0.03	0.70
P-137	8.00	16.0	Ductile Iro	100.0	false	0.00	Open	0.00	309.35	309.35	0.00	0.00
P-163	1.00	8.0	Ductile Iro	100.0	false	0.00	Open	624.17	230.00	229.99	0.01	12.41
P-162	4.00	6.0	Ductile Iro	100.0	false	0.00	Open	0.00	272.25	272.25	0.00	0.00
P-165	21.00	8.0	Ductile Iro	100.0	false	0.00	Open	1,047.14	294.22	293.54	0.68	32.34
P-167	6.00	8.0	Ductile Iro	100.0	false	0.00	Open	750.00	255.90	255.80	0.10	17.43
P-168	141.00	8.0	Ductile Iro	100.0	false	0.00	Open	750.00	255.80	253.34	2.46	17.43
P-169	79.00	16.0	Ductile Iro	100.0	false	0.35	Open	578.69	309.35	309.31	0.03	0.43
P-172	116.00	16.0	Ductile Iro	100.0	false	1.28	Open	-624.17	309.31	309.38	0.07	0.59
P-177	113.00	8.0	Ductile Iro	100.0	false	0.20	Open	1,202.86	272.25	267.34	4.91	43.42
P-178	4.00	6.0	Ductile Iro	100.0	false	0.39	Open	0.00	272.25	272.25	0.00	0.00
P-179	32.00	8.0	Ductile Iro	100.0	false	0.00	Open	1,202.86	309.31	307.97	1.34	41.80
P-180	124.00	8.0	Ductile Iro	100.0	false	0.35	Open	1,202.86	290.19	284.69	5.50	44.39
P-181	290.00	8.0	Ductile Iro	100.0	false	0.35	Open	1,202.86	284.69	272.25	12.44	42.91
P-183	35.00	8.0	Ductile Iro	100.0	false	0.39	Open	0.00	284.69	284.69	0.00	0.00
P-184	6.00	6.0	Ductile Iro	100.0	false	0.00	Open	0.00	284.69	284.69	0.00	0.00
P-185	6.00	3.0	Ductile Iro	100.0	false	0.00	Open	0.00	294.22	294.22	0.00	0.00
P-186	5.00	3.0	Ductile Iro	100.0	false	0.00	Open	0.00	271.14	271.14	0.00	0.00

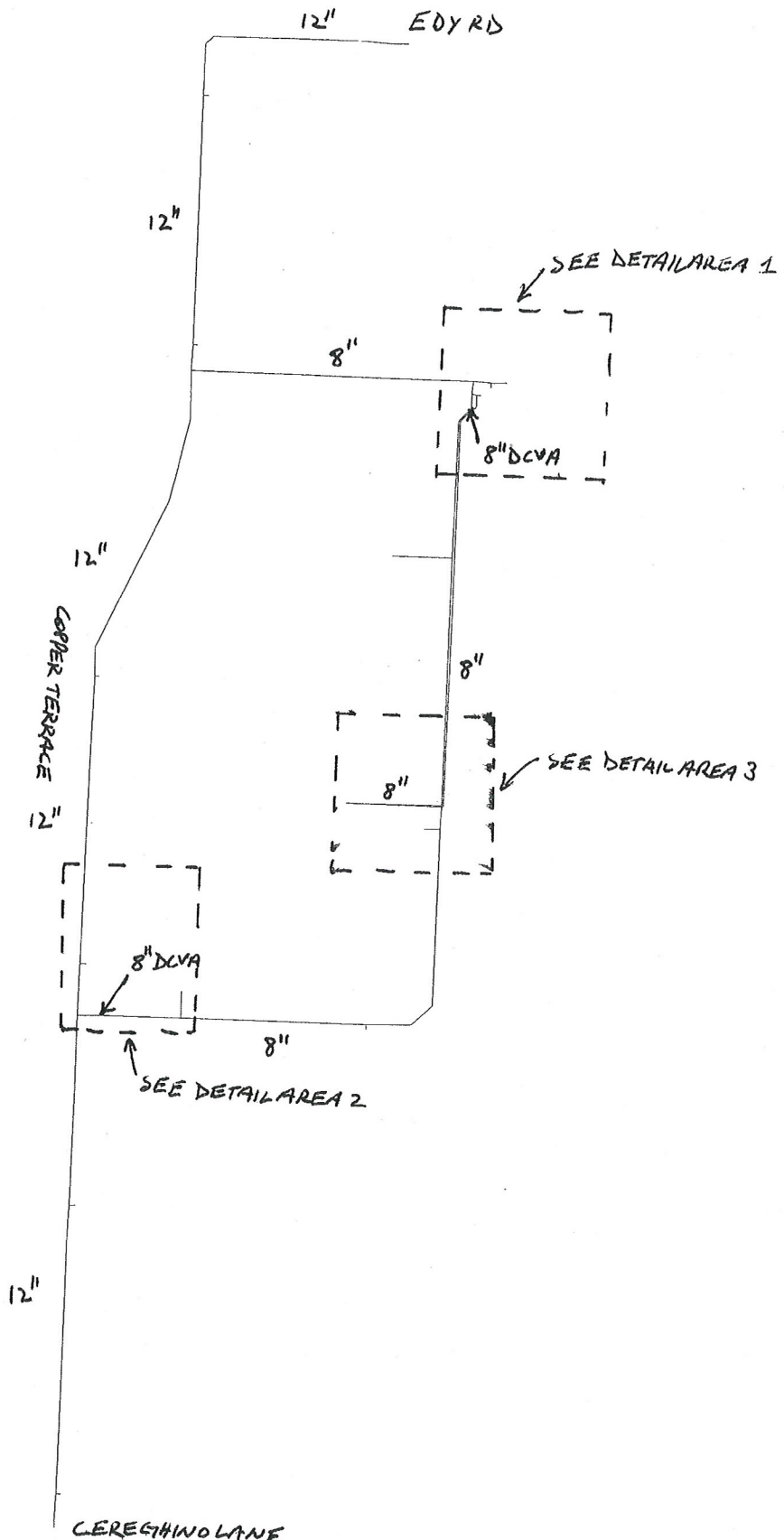
PER MASTER PLAN

Scenario: Base
Steady State Analysis
Pipe Report

Label	Length (ft)	Diameter (in)	Material	Hazen-Williams C	Check Valve?	Minor Loss Coefficient	Control Status	Discharge (gpm)	Upstream Structure Hydraulic Grade (ft)	Downstream Structure Hydraulic Grade (ft)	Pressure Pipe Headloss (ft)	Headloss Gradient (ft/1000ft)
P-187	6.00	3.0	Ductile Iro	100.0	false	0.00	Open	0.00	259.86	259.86	0.00	0.00
P-188	6.00	3.0	Ductile Iro	100.0	false	0.00	Open	0.00	294.22	294.22	0.00	0.00

PER MASTER PLAN

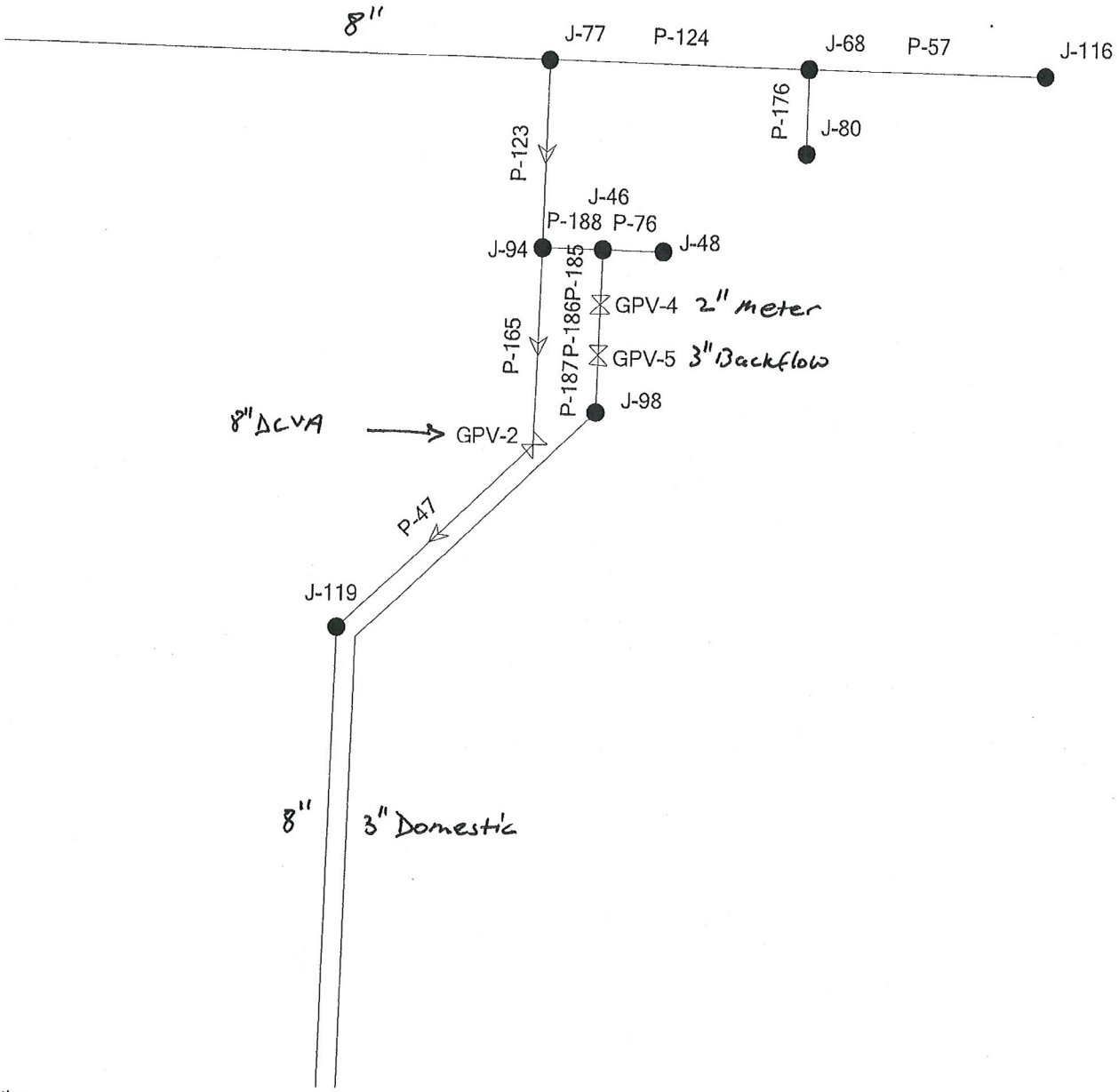
Scenario: Base



SCHOOL ONLY

DETAIL AREA 1

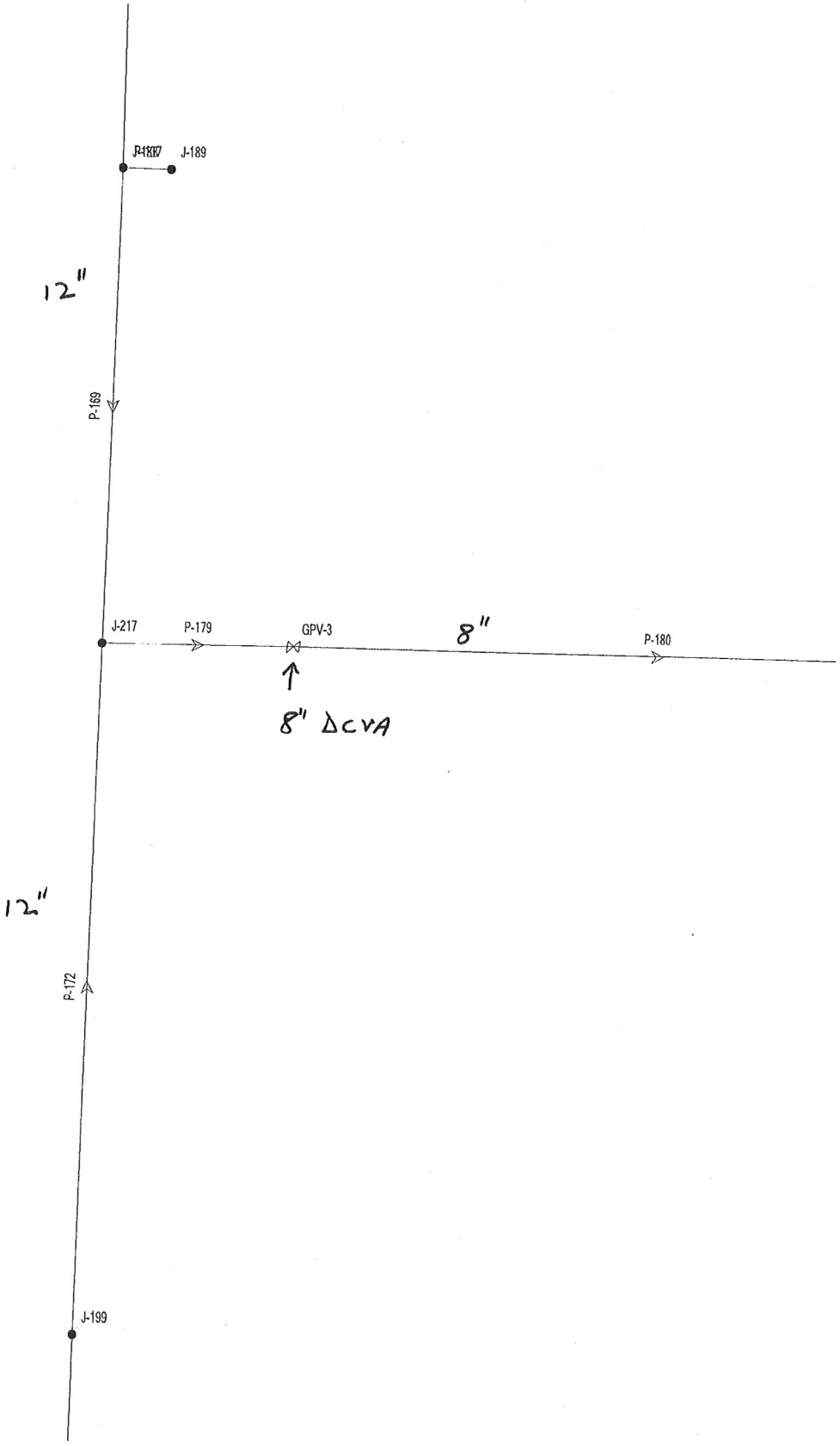
Scenario: Base



SCHOOL ONLY

DETAIL AREA 2

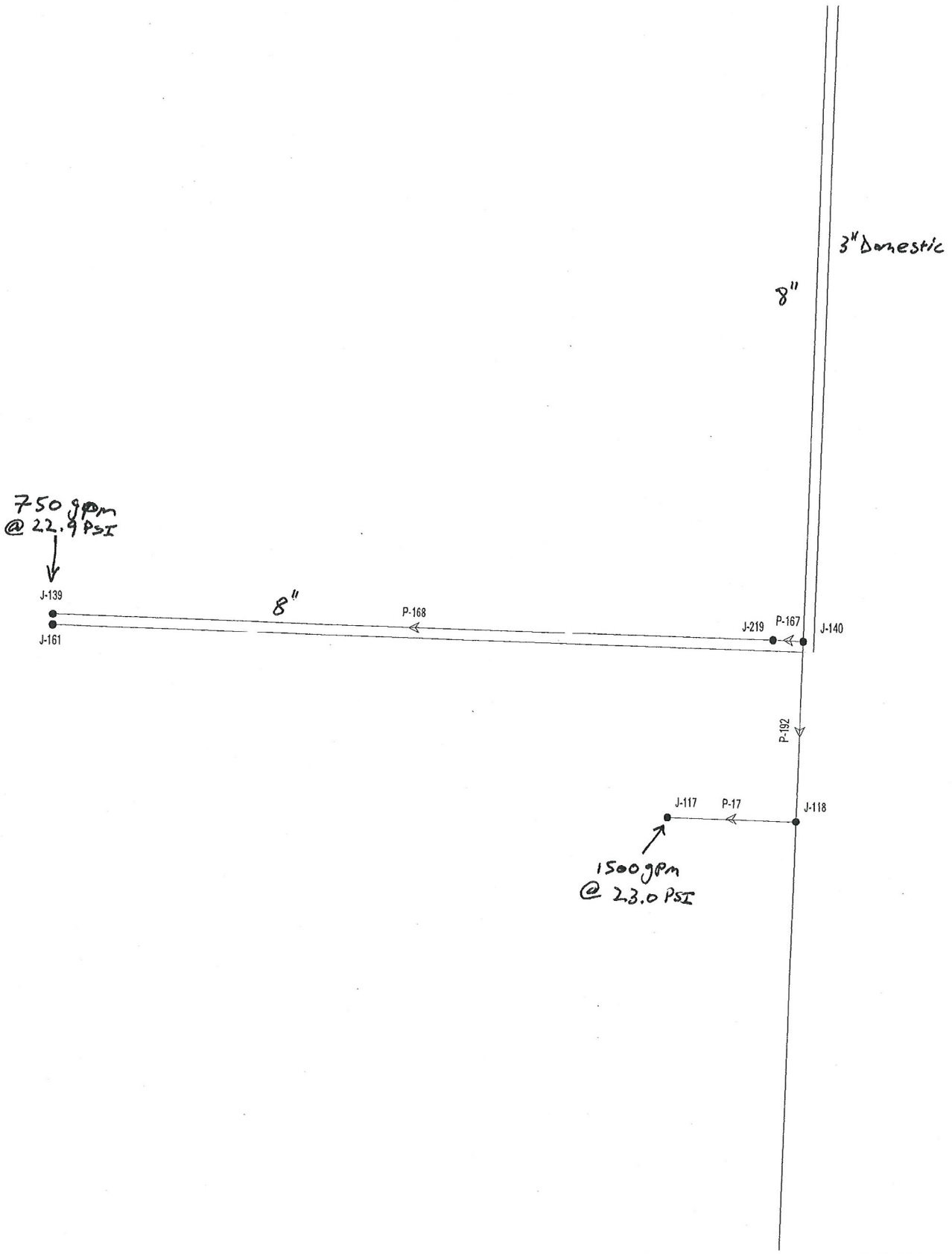
Scenario: Base



SCHOOL ONLY

DETAIL AREA 3

Scenario: Base



SCHOOL ONLY

Scenario: Base
Steady State Analysis
Junction Report

Label	Elevation (ft)	Zone	Type	Base Flow (gpm)	Pattern	Demand (Calculated) (gpm)	Calculated Hydraulic Grade (ft)	Pressure (psi)
J-134	197.00	Zone	Demand	0.00	Fixed	0.00	264.79	29.33
J-118	198.00	Zone	Demand	0.00	Fixed	0.00	253.35	23.95
J-103	190.00	Zone	Demand	0.00	Fixed	0.00	313.18	53.29
J-116	191.00	Zone	Demand	0.00	Fixed	0.00	292.97	44.12
J-138	194.00	Zone	Demand	0.00	Fixed	0.00	265.94	31.13
J-92	200.00	Zone	Demand	0.00	Fixed	0.00	269.64	30.13
J-82	185.00	Zone	Demand	0.00	Fixed	0.00	308.50	53.43
J-101	188.00	Zone	Demand	0.00	Fixed	0.00	312.11	53.70
J-98	191.00	Zone	Demand	0.00	Fixed	0.00	257.71	28.86
J-68	191.00	Zone	Demand	0.00	Fixed	0.00	292.97	44.12
J-46	191.00	Zone	Demand	0.00	Fixed	0.00	292.07	43.73
J-80	191.00	Zone	Demand	0.00	Fixed	0.00	292.97	44.12
J-48	191.00	Zone	Demand	0.00	Fixed	0.00	292.07	43.73
J-104	190.00	Zone	Demand	0.00	Fixed	0.00	312.96	53.20
J-140	198.00	Zone	Demand	0.00	Fixed	0.00	253.48	24.00
J-137	194.00	Zone	Demand	0.00	Fixed	0.00	265.94	31.13
J-94	191.00	Zone	Demand	0.00	Fixed	0.00	292.07	43.73
J-161	198.00	Zone	Demand	0.00	Fixed	0.00	257.71	25.83
J-139	198.00	Zone	Demand	750.00	Fixed	750.00	250.92	22.90
J-40	185.00	Zone	Demand	0.00	Fixed	0.00	307.77	53.12
J-100	188.00	Zone	Demand	0.00	Fixed	0.00	312.11	53.70
J-77	191.00	Zone	Demand	0.00	Fixed	0.00	292.97	44.12
J-117	198.00	Zone	Demand	1,500.00	Fixed	1,500.00	251.12	22.98
J-119	191.00	Zone	Demand	0.00	Fixed	0.00	272.75	35.37
J-38	185.00	Zone	Demand	0.00	Fixed	0.00	308.50	53.43
J-185	185.00	Zone	Demand	0.00	Fixed	0.00	307.75	53.11
J-189	198.00	Zone	Demand	0.00	Fixed	0.00	306.59	46.98
J-193	209.00	Zone	Demand	0.00	Fixed	0.00	307.19	42.48
J-191	230.00	Zone	Demand	0.00	Fixed	0.00	307.90	33.70
J-194	194.00	Zone	Demand	0.00	Fixed	0.00	307.16	48.96
J-197	197.00	Zone	Demand	0.00	Fixed	0.00	306.69	47.46
J-198	196.00	Zone	Demand	0.00	Fixed	0.00	307.00	48.03
J-188	198.00	Zone	Demand	0.00	Fixed	0.00	306.59	46.98
J-186	230.00	Zone	Demand	0.00	Fixed	0.00	308.03	33.76
J-195	194.00	Zone	Demand	0.00	Fixed	0.00	307.16	48.96
J-200	223.00	Zone	Demand	0.00	Fixed	0.00	307.42	36.53
J-190	230.00	Zone	Demand	0.00	Fixed	0.00	307.90	33.70
J-192	209.00	Zone	Demand	0.00	Fixed	0.00	307.19	42.48
J-196	212.00	Zone	Demand	0.00	Fixed	0.00	307.31	41.24
J-199	201.00	Zone	Demand	0.00	Fixed	0.00	306.79	45.77
J-216	200.00	Zone	Demand	0.00	Fixed	0.00	269.64	30.13
J-217	198.00	Zone	Demand	0.00	Fixed	0.00	306.48	46.93
J-218	200.00	Zone	Demand	0.00	Fixed	0.00	269.64	30.13
J-219	198.00	Zone	Demand	0.00	Fixed	0.00	253.38	23.96
J-220	199.00	Zone	Demand	0.00	Fixed	0.00	281.95	35.89
J-221	199.00	Zone	Demand	0.00	Fixed	0.00	281.95	35.89
J-222	199.00	Zone	Demand	0.00	Fixed	0.00	281.95	35.89

SCHOOL ONLY

Scenario: Base
Steady State Analysis
Pipe Report

Label	Length (ft)	Diameter (in)	Material	Hazen-Williams C	Check Valve?	Minor Loss Coefficient	Control Status	Discharge (gpm)	Upstream Structure Hydraulic Grade (ft)	Downstream Structure Hydraulic Grade (ft)	Pressure Pipe Headloss (ft)	Headloss Gradient (ft/1000ft)
P-40	16.00	12.0	Ductile Iro	100.0	false	0.23	Open	1,564.12	313.18	312.96	0.22	13.83
P-17	25.00	8.0	Ductile Iro	100.0	false	0.46	Open	-1,500.00	251.12	253.35	2.23	89.11
P-76	6.00	2.0	Ductile Iro	100.0	false	0.00	Open	0.00	292.07	292.07	0.00	0.00
P-49	91.00	8.0	Ductile Iro	100.0	false	0.46	Open	0.00	265.94	265.94	0.00	0.00
P-57	25.00	8.0	Ductile Iro	100.0	false	0.00	Open	0.00	292.97	292.97	0.00	0.00
P-48	766.00	3.0	Ductile Iro	100.0	false	0.77	Open	0.00	257.71	257.71	0.00	0.00
P-159	281.00	12.0	Ductile Iro	100.0	false	1.36	Open	1,564.12	316.25	313.18	3.07	10.91
P-182	78.00	12.0	Ductile Iro	100.0	false	0.35	Open	1,564.12	312.96	312.11	0.84	10.81
P-191	269.00	8.0	Ductile Iro	100.0	false	0.35	Open	-1,195.75	253.35	264.79	11.44	42.53
P-192	35.00	8.0	Ductile Iro	100.0	false	0.35	Open	304.25	253.48	253.35	0.14	3.86
P-173	208.00	8.0	Ductile Iro	100.0	false	0.00	Open	1,054.25	272.75	265.94	6.81	32.75
P-47	28.00	8.0	Ductile Iro	100.0	false	0.20	Open	1,054.25	273.81	272.75	1.06	37.77
P-176	9.00	6.0	Ductile Iro	100.0	false	0.39	Open	0.00	292.97	292.97	0.00	0.00
P-174	373.00	8.0	Ductile Iro	100.0	false	0.35	Open	1,054.25	265.94	253.48	12.46	33.41
P-131	437.00	8.0	Ductile Iro	100.0	false	0.70	Open	1,054.25	307.77	292.97	14.80	33.87
P-170	40.00	12.0	Ductile Iro	100.0	false	1.14	Open	1,564.12	308.50	307.77	0.73	18.15
P-127	9.00	6.0	Ductile Iro	100.0	false	0.39	Open	0.00	308.50	308.50	0.00	0.00
P-125	9.00	6.0	Ductile Iro	100.0	false	0.39	Open	0.00	312.11	312.11	0.00	0.00
P-124	27.00	8.0	Ductile Iro	100.0	false	0.74	Open	0.00	292.97	292.97	0.00	0.00
P-123	19.00	8.0	Ductile Iro	100.0	false	0.39	Open	1,054.25	292.97	292.07	0.90	47.18
P-128	1.00	10.0	Ductile Iro	100.0	false	0.00	Open	1,564.12	189.00	188.98	0.02	22.93
P-126	372.00	12.0	Ductile Iro	100.0	false	0.35	Open	1,564.12	312.11	308.50	3.62	9.72
P-143	68.00	12.0	Ductile Iro	100.0	false	0.74	Open	509.87	306.69	306.59	0.10	1.54
P-139	8.00	16.0	Ductile Iro	100.0	false	0.00	Open	0.00	307.90	307.90	0.00	0.00
P-140	190.00	12.0	Ductile Iro	100.0	false	1.48	Open	-685.88	307.42	307.90	0.48	2.51
P-145	5.00	12.0	Ductile Iro	100.0	false	0.39	Open	509.87	307.77	307.75	0.02	3.72
P-141	195.00	16.0	Ductile Iro	100.0	false	0.74	Open	-685.88	307.31	307.42	0.11	0.58
P-132	47.00	12.0	Ductile Iro	100.0	false	0.35	Open	-685.88	307.19	307.31	0.12	2.49
P-142	173.00	12.0	Ductile Iro	100.0	false	0.74	Open	-685.88	306.79	307.19	0.40	2.30
P-134	6.00	12.0	Ductile Iro	100.0	false	0.08	Open	-685.88	308.03	308.04	0.02	2.83
P-138	9.00	16.0	Ductile Iro	100.0	false	0.00	Open	0.00	307.16	307.16	0.00	0.00
P-136	9.00	16.0	Ductile Iro	100.0	false	0.00	Open	0.00	307.19	307.19	0.00	0.00
P-144	244.00	12.0	Ductile Iro	100.0	false	0.74	Open	509.87	307.00	306.69	0.31	1.28
P-130	123.00	12.0	Ductile Iro	100.0	false	0.35	Open	509.87	307.16	307.00	0.16	1.28
P-129	485.00	12.0	Ductile Iro	100.0	false	0.60	Open	-509.87	307.16	307.75	0.59	1.22
P-135	41.00	12.0	Ductile Iro	100.0	false	0.74	Open	-685.88	307.90	308.03	0.13	3.11
P-137	8.00	16.0	Ductile Iro	100.0	false	0.00	Open	0.00	306.59	306.59	0.00	0.00
P-163	1.00	8.0	Ductile Iro	100.0	false	0.00	Open	685.88	230.00	229.99	0.01	14.77
P-162	4.00	6.0	Ductile Iro	100.0	false	0.00	Open	0.00	269.64	269.64	0.00	0.00
P-165	21.00	8.0	Ductile Iro	100.0	false	0.00	Open	1,054.25	292.07	291.39	0.69	32.75
P-167	6.00	8.0	Ductile Iro	100.0	false	0.00	Open	750.00	253.48	253.38	0.10	17.43
P-168	141.00	8.0	Ductile Iro	100.0	false	0.00	Open	750.00	253.38	250.92	2.46	17.43
P-169	79.00	12.0	Ductile Iro	100.0	false	0.35	Open	509.87	306.59	306.48	0.10	1.33
P-172	116.00	12.0	Ductile Iro	100.0	false	1.28	Open	-685.88	306.48	306.79	0.31	2.70
P-177	113.00	8.0	Ductile Iro	100.0	false	0.20	Open	1,195.75	269.64	264.79	4.85	42.95
P-178	4.00	6.0	Ductile Iro	100.0	false	0.39	Open	0.00	269.64	269.64	0.00	0.00
P-179	32.00	8.0	Ductile Iro	100.0	false	0.00	Open	1,195.75	306.48	305.16	1.32	41.35
P-180	124.00	8.0	Ductile Iro	100.0	false	0.35	Open	1,195.75	287.39	281.95	5.44	43.90
P-181	290.00	8.0	Ductile Iro	100.0	false	0.35	Open	1,195.75	281.95	269.64	12.31	42.44
P-183	35.00	8.0	Ductile Iro	100.0	false	0.39	Open	0.00	281.95	281.95	0.00	0.00
P-184	6.00	6.0	Ductile Iro	100.0	false	0.00	Open	0.00	281.95	281.95	0.00	0.00
P-185	6.00	3.0	Ductile Iro	100.0	false	0.00	Open	0.00	292.07	292.07	0.00	0.00
P-186	5.00	3.0	Ductile Iro	100.0	false	0.00	Open	0.00	268.99	268.99	0.00	0.00

SCHOOL ONLY

Scenario: Base
Steady State Analysis
Pipe Report

Label	Length (ft)	Diameter (in)	Material	Hazen-Williams C	Check Valve?	Minor Loss Coefficient	Control Status	Discharge (gpm)	Upstream Structure Hydraulic Grade (ft)	Downstream Structure Hydraulic Grade (ft)	Pressure Pipe Headloss (ft)	Headloss Gradient (ft/1000ft)
P-187	6.00	3.0	Ductile Iro	100.0	false	0.00	Open	0.00	257.71	257.71	0.00	0.00
P-188	6.00	3.0	Ductile Iro	100.0	false	0.00	Open	0.00	292.07	292.07	0.00	0.00

TUALATIN VALLEY WATER DISTRICT Test #: 552
FIRE HYDRANT FLOW TEST REPORT Hydrant ID #: Sherwood

Location: SW Handley St. & Copper Terr. Date: 1/3/2005

Test made by: Ryan, Herb

Witness: Time: 2:30

Project name: Copper Meadows

Flow Equation: 29.83(C)(D^2)(P^1/2)

C= Hydrant coefficient= 0.9

D = Inside dia. of outlet = 3.513 inches

P = Pitot reading = 22 psi **Pitot 2 =** 0 psi

Q = Observed flow rate = 1554.0 gpm

Flow method: HOSE MONSTER

Static pressure: 91 psi **Residual pressure:** 50 psi

Flow at 20psi residual pressure (calculated): **2090** gpm 1/4/05

Location map: To be attached to test report and to show which hydrants were used to monitor residual pressure and flow.

Gage information:

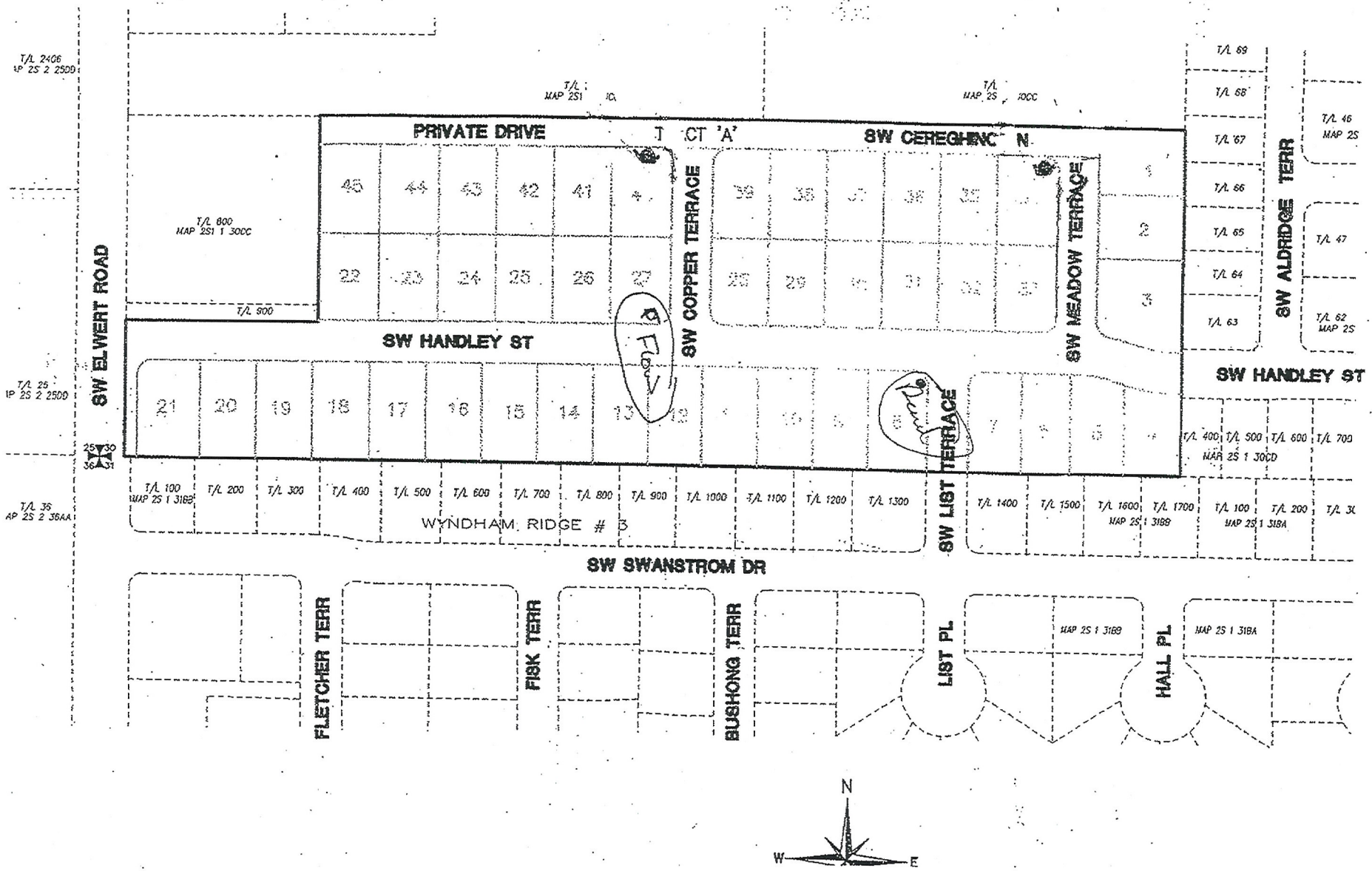
Static and residual pressure gage: 101097-3 Pitot gage: 011402B2

Hydrant information:

	Hydrant ID	Year	Make	Notes
Flow hydrant:	Sherwood	2004	MUELLER	*see map for location*
Read hydrant:	Sherwood	2004	MUELLER	*see map for location*

Remarks:

The mapping, flow or pressure information contained herein reflects conditions on the date and time of the test. Tualatin Valley Water District makes no representation as to the system's ability to meet specific fire flow requirements. Future system capability may differ from the flows reported herein because of subsequent modifications to the district's system and/or because flow and pressure may vary by time of day and season. Test gage callibration information available upon request.


PRIVATE DRIVE
TRACT 'A'
SW CEREGHINO N
SW ELWERT ROAD
SW COPPER TERRACE
SW MEADOW TERRACE
SW ALDRIDGE TERR
SW HANDLEY ST
SW HANDLEY ST
SW LIST TERRACE
WYNDHAM RIDGE # 3
SW SWANSTROM DR
FLETCHER TERR
FISK TERR
BUSHONG TERR
LIST PL
HALL PL
T/L 2406 MP 2S 2 25DD
T/L 600 MAP 2S1 1 30CC
T/L 900
T/L 25 MP 2S 2 25DD
T/L 35 MP 2S 2 36AA
T/L 100 MAP 2S 1 31BB
T/L 200
T/L 300
T/L 400
T/L 500
T/L 600
T/L 700
T/L 800
T/L 900
T/L 1000
T/L 1100
T/L 1200
T/L 1300
T/L 1400
T/L 1500
T/L 1600 MAP 2S 1 31BB
T/L 1700
T/L 100 MAP 2S 1 31BA
T/L 200
T/L 400 T/L 500 T/L 600 T/L 700 MAP 2S 1 30CD
T/L 69
T/L 68
T/L 67
T/L 66
T/L 65
T/L 64
T/L 63
T/L 46 MAP 2S
T/L 47
T/L 62 MAP 2S
MAP 2S 1 31BB
MAP 2S 1 31BA
N
W
E

TUALATIN VALLEY WATER DISTRICT
FIRE HYDRANT FLOW TEST REPORT

Test #: 539

Hydrant ID #: Sherwood

Location: Copper Meadows low pressure side Date: 11/16/2004

Test made by: Ryan, Herb

Witness: _____ Time: 11:15

Project name: Copper Meadows

Flow Equation: 29.83(C)(D^2)(P^1/2)

C= Hydrant coefficient= 0.9

D = Inside dia. of outlet = 3.513 inches

P = Pitot reading = 26 psi **Pitot 2 =** 0 psi

Q = Observed flow rate = 1689.4 gpm

Flow method: HOSE MONSTER

Static pressure: 67 psi **Residual pressure:** 51 psi

Flow at 20psi residual pressure (calculated): 3023 gpm SJ 11/17/04

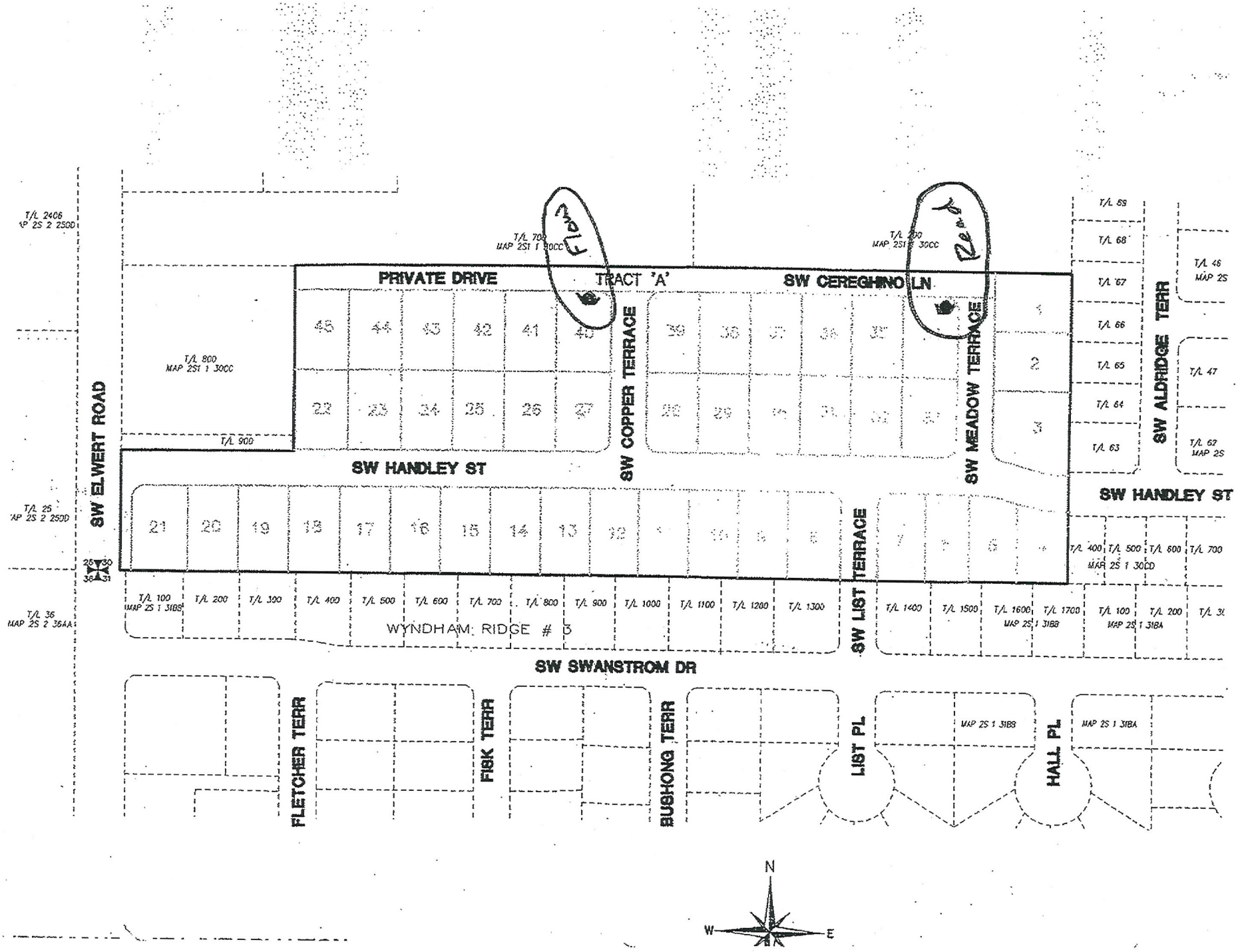
Location map: To be attached to test report and to show which hydrants were used to monitor residual pressure and flow.

Hydrant information:

	Hydrant ID	Year	Make	Notes
Flow hydrant:	Sherwood	2004	MUELLER	*see map for location*
Read hydrant:	Sherwood	2004	MUELLER	*see map for location*

Remarks:

The mapping, flow or pressure information contained herein reflects conditions on the date and time of the test. Tualatin Valley Water District makes no representation as to the system's ability to meet specific fire flow requirements. Future system capability may differ from the flows reported herein because of subsequent modifications to the district's system and/or because flow and pressure may vary by time of day and season.


PRIVATE DRIVE
TRACT 'A'
SW CEREGHINO LN
SW ELWERT ROAD
SW COPPER TERRACE
SW MEADOW TERRACE
SW ALDRIDGE TERR
SW HANDLEY ST
SW HANDLEY ST
SW LIST TERRACE
WYNDHAM RIDGE # 5
SW SWANSTROM DR
FLETCHER TERR
FISK TERR
BUSHONG TERR
LIST PL
HALL PL
T/L 800 MAP 2S 1 30CC
T/L 900
T/L 2406 MAP 2S 2 25DD
T/L 25 MAP 2S 2 25DD
T/L 36 MAP 2S 2 36AA
T/L 100 MAP 2S 1 31BB
T/L 200
T/L 300
T/L 400
T/L 500
T/L 600
T/L 700
T/L 800
T/L 900
T/L 1000
T/L 1100
T/L 1200
T/L 1300
T/L 1400
T/L 1500
T/L 1600 MAP 2S 1 31BB
T/L 1700
T/L 100 MAP 2S 1 31BA
T/L 200
T/L 400 MAP 2S 1 30CD
T/L 500
T/L 600
T/L 700
T/L 63
T/L 64
T/L 65
T/L 66
T/L 67
T/L 68
T/L 69
T/L 46 MAP 2S
T/L 47
T/L 62 MAP 2S
MAP 2S 1 31BB
MAP 2S 1 31BA
N
W
E

Dow-08.
technical

TUALATIN VALLEY WATER DISTRICT Test #: 732
FIRE HYDRANT FLOW TEST REPORT Hydrant ID #: 2S1W30B10H50

Location: Trails End Dr. & Edy Rd. Date: 5/9/2007

Test made by: Herb & James

Witness: Time: 9:20

Project name:

Discharge coefficient: .54816

Inside dia. of outlet = 4.5 inches

Pitot reading = 47 psi **Pitot 2 =** 0 psi

Observed flow rate = 2269.3 gpm

Flow method: HOSE MONSTER

Static pressure: 84 psi **Residual pressure:** 70 psi

Flow at 20psi residual pressure (calculated): **5156** gpm 0 gpm

5-9-07

Location map: To be attached to test report and to show which hydrants were used to monitor residual pressure and flow.

Gage information:

Static and residual pressure gage: N/A Pitot gage: N/A

Hydrant information:

	Hydrant ID	Year	Make	Notes
Flow hydrant:	2S1W30B10H50	1995	CLOW	*see map for location*
Read hydrant:	2S1W30B03H50	1995	CLOW	*see map for location*

Remarks:

The mapping, flow or pressure information contained herein reflects conditions on the date and time of the test. Tualatin Valley Water District makes no representation as to the system's ability to meet specific fire flow requirements. Future system capability may differ from the flows reported herein because of subsequent modifications to the district's system and/or because flow and pressure may vary by time of day and season. Test gage callibration information available upon request.


WEATHERFORD
AVE
SANTA FE TER
DR
NELS
BRIDGER
LN
TRAILS END
SETTLEMENT
FLOW
READ
WAGON TRAIL PL.
BLAZER PL
TRAIL
10"
SW EDY RD
SW
SEDGE
LN.
TER
BEDSTRAW
12" DI
8" DI
ST.
8" DI

Tualatin Valley Fire & Rescue

Fire Marshal's Division Offices

North - 14480 SW Jenkins Rd., Beaverton, OR 97005, (503) 356-4700
South - 7401 SW Wash Ct., Tualatin, OR 97062, (503) 612-7010

Fire Flow and Hydrant Worksheet

This worksheet is required to be submitted to and approved by the Authority Having Jurisdiction (AHJ) before any permits for new building construction, building expansion or fire hydrants will be issued by any building department within the TVF&R District. See the instructions for assistance completing this form or call one of the above numbers.

Preparer Information

Preparer Name: Kimberly A. Shera

Phone: 503-221-1131 **Fax:** 503-221-1171

Architect / Engineer of Record: Kimberly A. Shera

Phone: 503-221-1131 **Fax:** 503-221-1171

General Building Information

Project Name: Sherwood New Elementary School/Middle School

Project Address: Area 59 - Corner of Edy Rd and Elwert Rd

City: Sherwood **County:** Washington **Zip:** 97140

Construction Type(s): Type IIB and IIIB

Total Bldg Area: 154,400 **sqft**

Total Fire Area: 78,000 **sqft**

Bldg Fire Flow: 6033 **Gallons Per Minute (Light Hazard)**

Describe Fire Area: **(if more than one fire area, include an 8 1/2 x 11 or 11 x 17 drawing indicating the various fire areas)**

See attached 11x17 Code Plan by DOWA

Type of Occupancy or Use of Building: Educational

A. Occupancy Hazard

A1 Determine percent of each occupancy hazard in the fire area.

Occupancy Hazard Class	Fire Area		Total Fire Area			Percent of Fire Area
Light Hazard	78000 SF	/	78,000 SF	x 100	=	100 %
Ordinary Hazard Grp 1	0 SF	/	1 SF	x 100	=	0 %
Ordinary Hazard Grp 2	0 SF	/	1 SF	x 100	=	0 %
Extra Hazard Grp 1	0 SF	/	1 SF	x 100	=	0 %
Extra Hazard Grp 2	0 SF	/	1 SF	x 100	=	0 %

Total Must equal 100% **100 %**

A2 Calculate Fire Flow

Occupancy Hazard Class	Factor		Fire Area		Fire Flow		Bldg Fire Flow
Light Hazard	1.0	x	100 %	x	6033 GPM	=	6033 GPM
Ordinary Hazard Grp 1	1.2	x	0 %	x	6033 GPM	=	0 GPM
Ordinary Hazard Grp 2	1.3	x	0 %	x	6033 GPM	=	0 GPM
Extra Hazard Grp 1	1.4	x	0 %	x	6033 GPM	=	0 GPM
Extra Hazard Grp 2	1.5	x	0 %	x	6033 GPM	=	0 GPM

A3 Required Fire Flow **6033 GPM**

B. Minimum Number of Fire Hydrants Required

Required Fire Flow **6033** = **6** No. of Hydrants Required

C. Reduction of Fire Flow - Reductions are based on the following:

C1 - Reduced by 25% for all Group R Occupancies without fire sprinklers (multiply by .75)
C2 - Reduced by 25% for a NFPA 72 Fire Alarm System (multiply by .75)
C3 - Reduced by 75% for NFPA 13 Automatic Sprinklers (multiply by .25)

D. Required Fire Flow

D1 - Group R occupancy **No** x 1 = **6033** GPM (Max. 3000 - Min. 1500 gpm)

D2 - Fire Flow **6033** GPM x 0.25 = **1508.25** GPM (Max. 3000 - Min. 1500 gpm)

E. Available Fire Flow to the Building

Test Results: **5,156** **GPM**

Manually enter available fire flow here. Please attach documentation of the flow test that was made. It shall include date, time, location of static/residual and flow hydrants, and the tester's name, phone number and address.

WATER MASTER PLAN

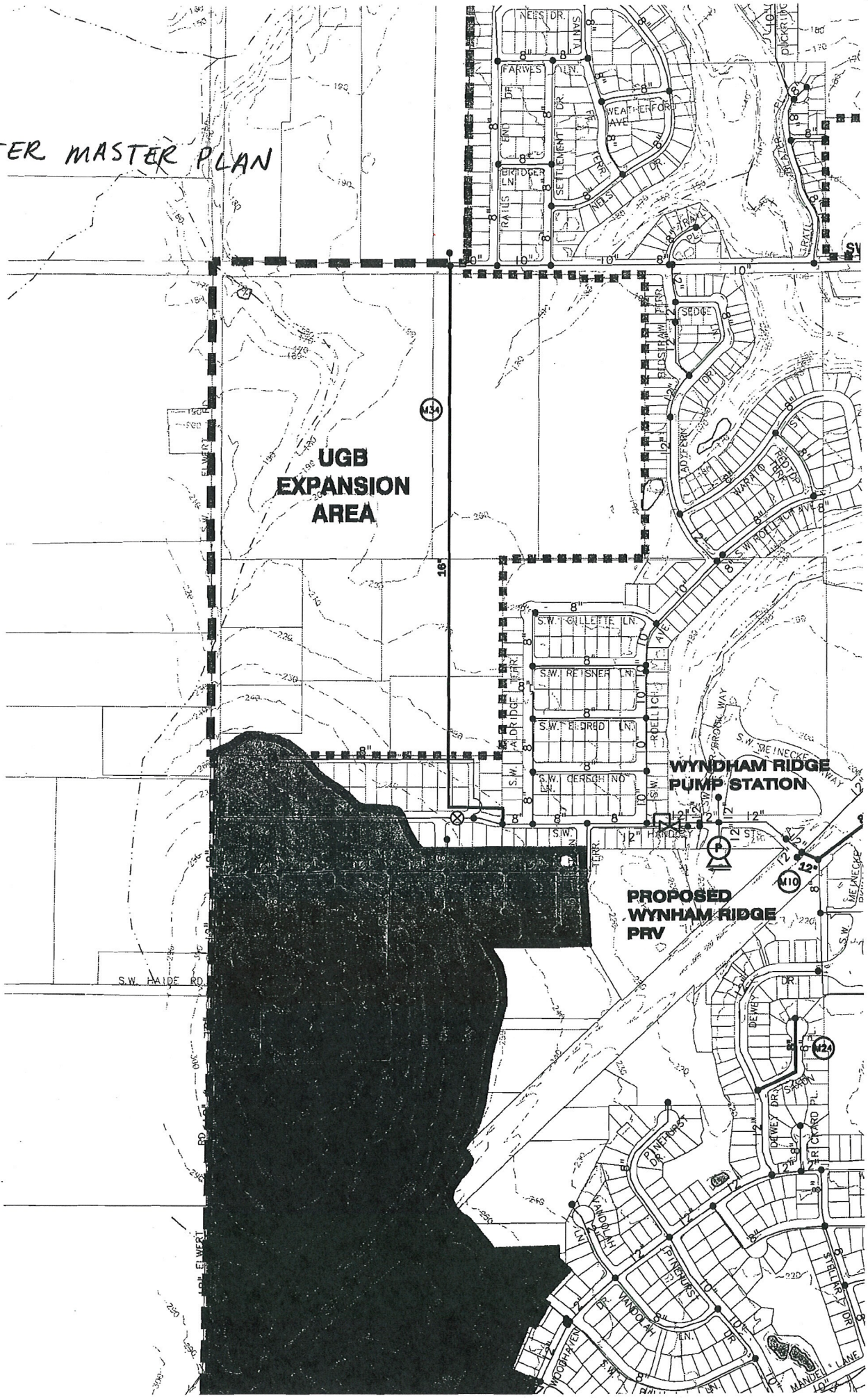


Table 6-2
Recommended Capital Improvements

Project No.	Project Category	Project Location	Size (inch)	Length (feet)	Unit Cost ($/linear foot)	Estimated Project Cost ($)
1	Collection System Extension	Area 59	15	3,730	$238	$887,740
2	Capacity Upgrade	Area 54/55	18	537	$248	$133,176
3	Capacity Upgrade	Area 54/55	15	533	$212	$112,996
4	Collection System Extension	Area 54/55	15	3,875	$238	$922,250
5	Collection System Extension	Area 54/55	12	2,555	$201	$513,555
6	Capacity Upgrade	Rock Creek Trunk	18	1,436	$248	$356,128
7	Capacity Upgrade	Rock Creek Trunk	24	1,349	$272	$366,928
8	Capacity Upgrade	Area 48 North	12	3,011	$227	$683,497
9	Collection System Extension	Area 48 North	12	3,280	$227	$744,560
10	Collection System Extension	Area 48 South	15	2,650	$238	$630,700
11	Rehabilitation	SW Willamette St. at Orcutt Place	8	362	$211	$76,382
12	Rehabilitation	SW Willamette St. at Highland Drive	8	592	$211	$124,912
13	Rehabilitation	SW Gleneagle Drive	8	145	$211	$30,595
14	Rehabilitation	SW Washington St.	8	250	$211	$52,750
15	Rehabilitation	SW Schamburg Dr. at Division	8	1,162	$211	$245,182
16	Rehabilitation	SW Sunset Blvd.	8	800	$211	$168,800
17	Rehabilitation	SW Pine/SW Park.	8	362	$211	$76,382
18	Rehabilitation	Old Town Laterals	-	-	-	$40,000
19	Rehabilitation	Ash Street Manhole	-	-	-	$10,000
					Total	**$6,176,533**

System Capacity Improvements

Recommendations for collection system capacity improvements were developed based on projected wastewater flows, hydraulic modeling, I&I assumptions and review of previous work. These improvements are further categorized as projects that either provide an extension of the collection system or an upgrade of system capacity to an existing facility.

Hydraulic modeling of the collection system indicates there are no areas of surcharging under current conditions. Modeling results indicate capacity improvements to the wastewater

collection system, in general, are only necessary to accommodate growth. The timing and sequencing of these projects will be determined as growth occurs. The projects are presented below based on an assumption of the sequencing of future growth.

1. Collection System Extension - Area 59

It is recommended that the collection system be extended from the Sherwood Trunk Sewer at Manhole 182NSan, with approximately 3,730 linear feet of 15-inch diameter pipe to serve Area 59. It is anticipated that the alignment of this pipe will be finalized with the completion of development plans for the area.

2. Capacity Upgrade - Area 54/55

It is recommended that approximately 537 linear feet of 12-inch diameter collection pipe be replaced with new 18-inch diameter pipe from Manhole 233NSan to Manhole 231NSan.

3. Capacity Upgrade - Area 54/55

It is recommended that approximately 533 linear feet of 12-inch diameter collection pipe be replaced with new 15-inch diameter pipe from Manhole 236NSan to Manhole 233NSan.

4. Collection System Extension - Area 54/55

It is recommended that the collection system be extended from Manhole 236NSan, with approximately 3,875 linear feet of new 15-inch diameter pipe to serve Area 54/55. It is anticipated that the alignment of this pipe will be finalized with the completion of development plans for the area.

5. Collection System Extension - Area 54/55

It is recommended that the previous 15-inch diameter pipe extension be further extended with approximately 2,555 linear feet of new 12-inch diameter pipe to serve Area 54/55. It is anticipated that the alignment of this pipe will be finalized with the completion of development plans for the area.

6. Capacity Upgrade - Rock Creek Trunk

It is recommended that approximately 1,436 linear feet of 15-inch diameter Rock Creek Trunk be replaced with new 18-inch diameter pipe from Manhole 414NSan to Manhole 402NSan. It is anticipated that the alignment of this pipe will be finalized with the completion of development plans for the area.

Project Description

Similar to Project CC-10. Construct a proprietary treatment system in pre-cast manhole or vault to provide removal of TSS and total phosphorus from runoff from older residential area. Facility may be constructed within right-of-way to facilitate maintenance access.

CC-12: Area 59 Regional Stormwater Facility

Project Location

South side of Edy Road, east of Cedar Creek, and northeast end of Area 59.

Project Need

Provide regional stormwater facility for impervious surfaces created as part of development of Area 59 future urban services area. Project would allow consolidation of stormwater facilities required at time of development into one single facility at the point of discharge into an unnamed tributary of Cedar Creek.

Project Description

Similar to Project CH-1. Construct a combined stormwater quality and quantity facility for stormwater runoff from the easterly portion of Area 59. The facility would handle stormwater from Cedar Creek drainage basin only.

CC-13: Upper Ladd Hill Regional Stormwater Facility

Project Location

North boundary of Area 54-55 (Brookman Study Area), along the east bank of Cedar Creek.

Project Need

Provide a regional stormwater facility for impervious surfaces created as part of development of Area 54-55 future urban services area. Project would allow consolidation of stormwater facilities required at time of development into one single facility.

Project Description

Construct a combined regional water quality and detention facility for runoff from future development area and improved Ladd Hill and Brookman Road rights-of-way. Facility would discharge directly to Cedar Creek system. The facility is assumed to be an extended dry basin, designed to CWS standards. If desired by the City or CWS, the facility may also