

MASTER DEVELOPMENT DRAINAGE PLAN
For
Interquest/Retail and Apartment Site
and
FINAL DRAINAGE REPORT
for
Shops at College Creek and Federal/Republic Drive Filing No. 1

April, 2006

Prepared for:

S2J, Inc.
P.O. Box 2076
Colorado Springs, CO 80901

Prepared by:

Rockwell-Minchow Consultants, Inc.
1955 North Union Boulevard, Suite 200
Colorado Springs, CO 80909
(719) 475-2575

Project# 05-003

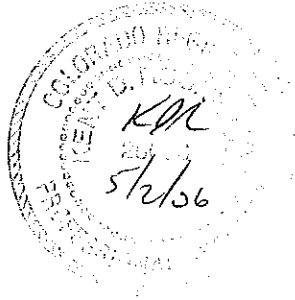
MASTER DEVELOPMENT DRAINAGE PLAN
For
Interquest/Retail and Apartment Site
and
FINAL DRAINAGE REPORT
for
Shops at College Creek and Federal/Republic Drive Filing No. 1

DRAINAGE PLAN STATEMENTS

ENGINEER'S STATEMENT

The attached drainage plan and report were prepared under my direction and supervision and are correct to the best of my knowledge and belief. Said drainage report has been prepared according to the criteria established by the City of Colorado Springs for drainage reports, and said drainage report is in conformity with the Master Plan of the drainage basin. I accept responsibility for any liability caused by any negligent acts, errors or omissions on my part in preparing this report.

Kent D. Rockwell, P.E.
Kent D. Rockwell, P.E.



DEVELOPER'S STATEMENT

I, the developer, have read and will comply with all the requirements specified in this drainage report and plan.

S2J, Inc.

BY: Stephen Jacobs DATE: 5/2/06
Stephen Jacobs, President

ADDRESS: P.O. Box 2076
Colorado Springs, CO 80901

CITY OF COLORADO SPRINGS

Filed in accordance with Section 7-7-906 of the code of the City of Colorado Springs, 2001, as amended.

Jim Minto
CITY ENGINEER

MAY 10, 2006
DATE

MASTER DEVELOPMENT DRAINAGE PLAN
For
Interquest/Retail and Apartment Site
and
FINAL DRAINAGE REPORT
for
Shops at College Creek and Federal/Republic Drive Filing No. 1

April, 2006

PURPOSE

The purpose of this Drainage Report is to identify the existing and proposed runoff patterns and facilities associated with the development of the Interquest Apartments/Commercial development. This report addresses approximately 25 acres of immediate and future development. Approximately 50 acres is controlled by the same developer, with the other 25 acres located directly south of the 25 acres analyzed within this report. A Preliminary Drainage Report for the southern 25 acres was submitted to the City of Colorado Springs Engineering in 2003. That report called for a overall project detention pond in the extreme southeast corner of the 50 acre project (See Exhibit 1 in the Appendix of this report).

The initial phase of development involves approximately 5 acres of commercial development including a 20,000 square foot office building and the associated parking. This area will be platted as The Shops at College Creek. This plat includes the first 5 acres of commercial development just southeast of the Interquest and Federal Drive intersection. The Federal/Republic Drive Filing No. 1 plat includes approximately 1,000 feet of Republic Drive directly south of Interquest Parkway and approximately 450 feet of Republic Drive east of Federal Drive.

Additional retail development to the west and south of this initial phase and apartment building to the east and southeast of the first phase is included in this report to determine runoff quantities, pipe sizes and approximate runoff patterns for the entire 25 acres. This future area will be analyzed in more detail once a more refined site plan is prepared.

SUMMARY OF DATA

The sources of information used in the development of this study are listed below:

1. City of Colorado Springs and El Paso County "Drainage Criteria Manual", October 1987, revised November 1991.
2. Soil Survey for El Paso County, Colorado, U.S. Department of Agriculture, Soil Conservation Service, June 1980.

3. "Flood Insurance Studies for Colorado Springs and El Paso County, Colorado", prepared by the Federal Emergency Management Agency (FEMA), 1997.
4. "Master Development Drainage Report and Plan for Fairlane Technology Park" by URS Consultant's, Inc., January, 1994.
5. "Final Drainage Report for Fairlane Technology Park Filing No. 1" by URS Consultant's, Inc., March, 1993.
6. "Preliminary & Final Drainage Report & Plan for Fairlane Technology Park Filing No. 3" by Obering, Wurth & Associates, May, 1996.
7. "Preliminary and Final Drainage Report and Plan for FAIRLANE TECHNOLOGY PARK FILING No.4" by Rockwell Minchow Consultants, Inc., August, 1997.

GENERAL LOCATION AND DESCRIPTION

Interquest Apartments/Commercial is located within the City of Colorado Springs, El Paso County, Colorado, being a portion of the west half of Section 21, Township 12 South, Range 66 West of the 6th P.M. (see Vicinity Map - Figure 1). The site is bound by Fairlane Technology Park Filing No. 1 on the west, a electric substation access drive and an existing substation on the south, Interquest Parkway on the north, and unplatted land on the east.

The majority of the site is in the Elkhorn Drainage Basin, which is a closed basin, the east side of the site is in the Kettle Creek Basin.

SOILS

According to the Soil Survey of El Paso County Area, Colorado, prepared by the U.S. Department of Agriculture Soil Conservation Service, the soils underlying the site consist of Blakeland Sandy Loam (soil no. 8), with small portions of Stapleton Sandy Loam (soil no. 83) and Stapleton Bernal Sandy Loam (soil no. 85) (see Soils Map - Figure 2). Blakeland sandy loam is classified as hydrological group A, Stapleton as hydrological group B, and Bernal as hydrological group D.

Existing ground cover consists of established native plants and grasses over much of the site. Soil survey maps show the existence of old gravel pits on site.

CLIMATE

This area of El Paso County can be described as the foothills, with total precipitation amounts typical of a semi-arid region. Winters are generally cold and dry, and summers relatively warm and dry. Precipitation ranges from 12 to 16 inches per year, with the majority of this moisture occurring in the spring and summer in the form of rainfall. Thunderstorms are common during the summer months.

FLOODPLAIN STATEMENT

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panel #08041C0506 F none of the site lies in a designated 100 year floodplain.

DRAINAGE CRITERIA

The current City of Colorado Springs/El Paso County Drainage Criteria was utilized in this report. Peak runoff quantities were determined using the Rational Method for both the 5 year and 100 year storms.

DRAINAGE CHARACTERISTICS

The site slopes generally to the east, southeast at grades of 2 to 20 percent. The western edge of the site slopes west at a grade of 2 to 20 percent. There are no existing drainage facilities on this site.

No storm water from Interquest Parkway along the north enters this site.

HISTORIC DRAINAGE BASIN DESCRIPTION

The Historic Drainage Basins shown in this report consists of 5 basins. Basins A and B are directed into the Elkhorn Basin. Basins C and E discharge into the Kettle Creek Basin. Basin D drains to an existing on-site low point where the flows percolate into the soils.

Developed flows discharging to the east will be limited to the flows which historically entered the Kettle Creek Basin. In the Elkhorn Basin, developed flows will be directed to a proposed detention pond and flows will be released from the pond at rates consistent with the downstream storm sewer facilities capacities per the agreement with the adjacent owners.

Elkhorn Basin: Basin A consist of 2.96 acres and generates flows of 1.2 cubic feet per second (cfs) during the 5 year storm and 3.0 cfs during the 100 year storm. These flows basically flow southerly within the future right-of-way of Federal Drive.

Basin B consists of the area in the mid to northwest portion of the site. This 8.87 acre basin generates flows of $Q_5 = 3.8$ cfs and $Q_{100} = 9.6$ cfs. These flows also currently reach Federal Drive and flow southerly within Federal.

The northeast 4.75 acres of the site comprise Basin C. Flow of $Q_5 = 3.4$ cfs and $Q_{100} = 8.3$ cfs generated from this site sheet flow easterly off-site into the Kettle Creek Basin.

Basin D consists of 3.13 acres in the middle of the site. The runoff rates of 2.5 cfs and 6.0 cfs generated from this basin reach a low point in the middle of the basin and percolate into the soils.

Basin E comprises 7.46 acres at the southeast corner of the site. Flow rates of $Q_5 = 6.0$ cfs and $Q_{100} = 14.4$ cfs generated from this basin sheet flow toward the entrance road to the electric sub-station and then flow easterly. These flows also discharge into the Kettle Creek Basin:

DEVELOPED DRAINAGE BASIN DESCRIPTION

A brief description of the developed drainage basins for the site and related off-site areas is provided in this section of the report. Proposed drainage conditions and facilities are described. A summary of peak developed runoff for the basins is depicted on the Developed Drainage Plan provided in the appendix. All proposed drainage facilities are approximate in size and may vary with actual layout and design.

Basin 1 consists of approximately 0.95 acres at the extreme northeast corner of the site. Runoff rates of 1.6 cfs during the 5 year storm and 3.5 cfs during the 100 year storm are generated from this basin. These flows reach a proposed swale which discharges to the south onto the adjacent property to the east. These flows are less than the flows which historically exited the site along this boundary into Kettle Creek. (Basins 23 and 24 will also discharge into the Kettle Creek basin.)

There is an existing small drainage structure at the northernmost corner of the site that collects ditch flows from Interquest Parkway. The developer is proposing to keep this structure as is, so no flows will enter the site from the north.

Basin 2 comprises approximately 0.96 acres of future apartment buildings and landscape areas to the north of the apartment buildings. The runoff rates of $Q_5 = 2.6$ cfs and $Q_{100} = 5.1$ cfs generated from this basin will be directed westerly within a proposed swale. These flows will discharge directly into Basin 3.

Approximately 0.58 acres of parking lot comprises Basin 3. Runoff rates of 1.8 cfs and 3.3 cfs are generated from this basin during the 5 year and 100 year storms. These flows along with the flows generated from Basin 2 reach a proposed 4' sump inlet within Basin 3. The combined collected flows of $Q_5 = 4.4$ cfs and $Q_{100} = 8.4$ cfs from Basins 2 and 3 will be conveyed southerly within an 18" reinforced concrete pipe (RCP).

Basin 4 comprises another 0.51 acres of parking lot and landscape area. Runoff rates of $Q_5 = 1.8$ cfs and $Q_{100} = 3.3$ cfs generated from this basin reach a second 4' inlet within the middle of this basin. An 18" RCP will convey these collected flows westerly to a sump inlet within Basin 5.

Runoff rates of $Q_5 = 2.7$ cfs and $Q_{100} = 5.0$ cfs generated from Basin 5 will be directed toward a 4' sump inlet located toward the western end of Basin 5.

Basin 6A consists of the east half of the proposed retail building. The runoff rates of 1.2 cfs and 2.1 cfs generated from this basin during the 5 year and 100 year storms, respectively, will be piped to the north via roof drains, discharging to the proposed 18" RCP extending from Basin 4 to 5.

Basin 6B, consisting of the southern portion of the proposed retail building generates flows of $Q_5 = 1.0$ cfs and $Q_{100} = 1.7$ cfs. These flows will be piped to the proposed 18" RCP extending from the inlet within Basin 5 southerly through Basins 9 and 10.

Flow rates of $Q_5 = 6.1$ cfs and $Q_{100} = 11.6$ cfs will reach Design Point #1 from Basins 4, 5, 6A and 6B. An 18" RCP extending through Basin 8 will convey these flows southerly.

The eastern half of Federal Drive from Interquest Parkway to the entrance of the retail area comprises Basin 7. This 1.15 acre basin generates runoff rates of 3.1 cfs during the 5 year storm and 5.7 cfs during the 100 year storm. These flows reach the southern end of this basin and then continue southerly into Basin 12 as street flow.

Approximately 1.27 acres of parking and future buildings just east of Federal Drive comprise Basin 8. Runoff rates of $Q_5 = 4.7$ cfs and $Q_{100} = 8.7$ cfs generated from Basin 8 will approach a 10' on-grade inlet located along the southern curb line of the entrance road from Federal Drive. This inlet will collect runoff rates of 2.8 cfs during the 5 year storm and 3.9 cfs during the 100 year storm. Flow rates of $Q_5 = 1.9$ cfs and $Q_{100} = 4.8$ cfs will bypass this inlet and enter Federal Drive (Basin 12) as street flows. The collected flows from Basin 8 will be conveyed southerly within an 18' RCP to the proposed inlet within Basin 10.

Total street flows entering Basin 12 from Basin 7 and Inlet 8 are $Q_5 = 5.0$ cfs and $Q_{100} = 10.5$ cfs. Federal Drive at a slope of 2% has a 5 year street capacity of 24 cfs per side which is adequate to convey these flows.

Basin 9 consists of the parking area, drive and future buildings south of the propose retail building. This 0.90 acre basin generates runoff rates of 3.4 cfs during the 5 year storm and 6.1 cfs during the 100 year storm. Runoff from this basin is directed to the southwest entering Basin 10 as street flows.

Basin 10 consists of an additional 1.29 acres of future parking lot, buildings and drives. Runoff rates of 4.8 cfs and 9.0 cfs are generated from this 1.29 acre basin. These flows along with the flows from Basin 9 will be directed toward a proposed 8' sump inlet located at the southwest corner of Basin 10. This inlet will collect total flow rates of $Q_5 = 8.2$ cfs and $Q_{100} = 15.1$ cfs.

Flow rates of $Q_5 = 18.7$ cfs and $Q_{100} = 34.7$ cfs reach Design Point #2 from Basins 4, 5, 6A, 6B, 8, 9 and 10. All these flows except for the small flows bypassing the on-grade inlet within Basin 8 will reach Design Point #2. A 30" RCP will convey these flows southerly into Basin 11.

Approximately 1.58 acres of future commercial development at the northeast corner of Federal Drive and Republic Drive comprise Basin 11. A 6' sump inlet to be installed at the southwest corner of this basin will collect runoff rates of $Q_5 = 6.6$ cfs and $Q_{100} = 11.8$ cfs generated from this basin.

Total combined flows of $Q_5 = 24.0$ cfs and $Q_{100} = 45.1$ cfs will reach this point (Design Point #3) from Basins 4, 5, 6, 9, 10 and 11. A 30" RCP will convey these flows to the east to the proposed inlet within Basin 22.

Basin 12 consists of the east half of Federal Drive from the retail entrance to Republic Drive. This 0.89 acre basin generates runoff rates of 2.6 cfs during the 5 year storm and 5.0 cfs during the 100 year storm. These flows will combine with the flows from Basin 7 and the inlet bypass flows from Basin 8. Total flow rates of $Q_5 = 7.6$ cfs and $Q_{100} = 15.5$ cfs will be flowing southerly within the east side of Federal Drive. These flows will reach a proposed 10' sump inlet along the south side of Federal Drive just east of Republic. Additional flows will reach this same inlet from Basin 13.

Basin 13 consists of 0.29 acres within the Federal Drive and Republic Drive intersection. This basin generates runoff rates of 0.7 cfs during the 5 year storm and 1.4 cfs during the 100 year storm. These flows along will combine with the flows from Basin 12 and reach a proposed 10' sump inlet along the south side of Republic Drive. This inlet will collect total flows of 8.3 cfs during the 5 year storm and 16.9 cfs during the 100 year storm. A 24" RCP will convey these flows southerly into the proposed development to the south. This pipe will connect to future storm sewer within the 25 acre parcel to the south. The same developer will be developing this site in the future and will accept these developed flows.

Basin 14 is at the extreme northeastern portion of the site and consists of future apartment buildings and parking. This 0.70 acre basin generates runoff rates of 2.3 cfs and 4.1 cfs during the 5 year and 100 year storms, respectively. These flows will be collected within a 4' sump inlet at the west end of this basin. An 18" RCP will convey these flows southerly to the proposed inlet within Basin 15.

Runoff rates of 1.9 cfs and 3.5 cfs are generated from the 0.47 acre Basin 15 located just south of Basin 14. These flows reach a proposed 4' sump inlet at the southwest corner of the Basin 15. The combined flows from Basins 14 and 15 will be piped southeasterly within an 18" RCP to a proposed storm sewer manhole. Additional flows from Basins 2 and 3 will reach this same manhole at Design Point #4. Total flow rates of 8.3 cfs during the 5 year storm and 15.6 cfs during the 100 year storm will reach Design Point #4 from Basins 2, 3, 14 and 15. A 24" RCP will convey these flows to the south side of Basin 16.

Basin 16, consisting of approximately 1.41 acres in the middle of the site, generates runoff rates of 5.0 cfs and 9.3 cfs during the 5 year and 100 year storms, respectively. These flows will reach a 10' on-grade inlet at the south end of Basin 16. This inlet will collect flows of 3.3 cfs during the 5 year storm and 5.3 cfs during the 100 year storm. Flow rates of $Q_5 = 1.7$ cfs and $Q_{100} = 4.0$ cfs will bypass this inlet and enter Basin 19 as street flows.

Basin 17 is located toward the eastern side of the site and generates runoff rates of 9.2 cfs and 16.5 cfs during the 5 year and 100 year storms, respectively. These flows will reach a 8' sump inlet toward the southwestern corner of this basin. A 24" RCP will convey these flows from this inlet through Basin 18.

Runoff rates of $Q_5 = 4.8$ cfs and $Q_{100} = 8.8$ cfs are generated from the 1.65 acre Basin 18. These flows will reach a 10' on-grade inlet at the southwest end of Basin 18. This inlet will collect flows of 3.2 cfs during the 5 year storm and 5.1 cfs during the 100 year storm. Flow rates of $Q_5 = 1.6$ cfs and $Q_{100} = 3.2$ cfs will bypass this inlet and enter Basin 19 as street flows.

Total runoff rates of $Q_5 = 26.3$ cfs and $Q_{100} = 49.0$ cfs will reach Design Point #5 from Basins 2, 3, 14, 15, 16, 17 and 18. All these flows except for the minor flows bypassing the inlets at the downstream side of Basin 16 and 18 will be conveyed westerly within a 30" RCP at Design Point #5.

Additional flow rates of 4.2 cfs during the 5 year storm and 7.6 cfs during the 100 year storm will be generated from Basin 19. Total flow rates of $Q_5 = 7.5$ cfs and $Q_{100} = 14.8$ cfs will reach a 8' sump inlet at the west end of Basin 19 at Design Point #6. A 30" RCP will convey flow rates of 31.0 cfs during the 5 year storm and 58.3 cfs during the 100 year storm into Basin 21.

Basin 20 is a 0.99 acre basin in the middle of the site. Flow rates of 2.9 cfs and 5.4 cfs generated from this basin during the 5 year and 100 year storms, respectively will enter Basin 21 as street flows.

These flows will combine with the runoff rates of $Q_5 = 1.2$ cfs and $Q_{100} = 2.2$ cfs generated from the 0.37 acres Basin 21. The combined flows from Basins 20 and 21 will approach a 4' sump inlet at Design Point #7 from the north.

Additional flow rates of 1.9 cfs and 3.4 cfs generated from Basin 22 will reach a 4' sump inlet at the south end of Basin 22. An 30" RCP will convey total flows of $Q_5 = 25.6$ cfs and $Q_{100} = 48.4$ cfs from Design Point #8 to proposed inlet at the south end of Basin 21 (Design Point #7). The combined flow from Design Points #7 and #8 will be piped within a 42" RCP to Design Point #9. Total flows of $Q_5 = 58.7$ cfs and $Q_{100} = 110.8$ cfs will be piped to the south through the future commercial development to the south eventually reaching the proposed overall site detention pond. This parcel is being developed by the same developer who will accept these flows.

Basin 23 consists of the rear portion of several future apartment buildings and a large landscape area just north of the entrance road to the Kettle Creek Electric Substation. Runoff rates of 5.6 cfs during the 5 year storm and 11.4 cfs during the 100 year storm generated from this basin reach the entrance road and then are directed easterly. These flows are less than the flows which historically reached this point from the area to the north.

Basin 24, located along the easterly property boundary of the site, consists mainly of landscaping with a small portion of a future apartment building. Runoff rates of $Q_5 = 1.0$ cfs and $Q_{100} = 2.6$ cfs generated from this basin will sheet flow onto the adjacent property to the east. These flows are also less than the historic flow rates exiting the site along the easterly property line.

Basin 25 consists of the west half of Federal Drive from Interquest to Republic Drive. This 1.60 acre basin generates runoff rates of $Q_5 = 3.9$ cfs and $Q_{100} = 7.3$ cfs. These flows will continue southerly as street flows within the west side of Federal and will be collected within existing inlets located to the south.

DRAINAGE FEES

Neither the Elkhorn or Kettle Creek Basins have drainage fees.

PLATTING

Shops At College Creek consists of 4.961 acres and will be platted into 2 lots.

DRAINAGE PHASING

The proposed developer of this 25 acre tract - Northern 25 acres, as shown on Exhibit 3, also controls 25 acres directly south of this parcel, shown as the Southern 25 acres. A detention pond for both parcels will be constructed in the southern tip of the Southern 25 acres. This pond is referred to as the "Project Detention Pond" on Exhibit 3.

The development of these two 25 acre parcels and the associated drainage were addressed in the enclosed "Agreement Regarding Joint Maintenance of Private Drainage Facilities". An existing 36" RCP has been constructed to the southern tip of the Southern 25 acre parcel to act as the discharge point for these two parcels and the pond. .

The 36" RCP will accommodate approximately 79 cfs, therefore, the pond will be sized based on that amount of discharge. Runoff from a total of approximately 40 acres of developed land will ultimately be tributary to the proposed "Project Detention Pond."

Historic flow rates of approximately 34 cfs are generated from the tributary 40 acres during the 100 year storm. According to the developed flow calculations of this report approximately 45 cfs reach Design Point #2 during the 100 year storm from the Phase 1 development. That equates to a total of 79 cfs based on the development of the area tributary to Design Point #2 and historic flows from the balance of the site.

Due to the fact that only a portion of the Northern 25 acres is being developed first and that exact alignments and vertical grades of storm sewers extending southerly to the pond are unknown at this time, we propose temporary measures for the handling of the storm water generated from the first phase of development.

We propose to construct the necessary Phase 1 on-site storm sewer to collect the flows from the Phase 1 development since this is at the high point of the overall drainage basin. This system will discharge to the south onto property owned by the same landowner. Temporary sedimentation ponds and temporary drop structures will be constructed at the outfall of the Phase 1 storm sewer system and downstream as required to control the runoff sediment and flows. Any development outside of Phase 1 will require the construction of the permanent detention pond.

Kiowa Engineering has performed the drainage analysis for the entire Fairlane Technology Park area and has sized the pond required for this development to account for the release rate of 79 cfs.. According to Kiowa's preliminary analysis of this parcel, a 3.20 acre pond is required for these two parcels for detention purposes only. An additional 0.7 acre feet will be required for water quality purposes.

WATER QUALITY

The "Project Detention Pond" will be sized to accommodate water quality measures for the Northern 25 acres and the Southern 25 acres. Approximately 40 acres are tributary to this pond via storm sewers extending from the northeast corner of the site to the southerly point of the site where the pond will be constructed,

As stated above, the first phase will consist of 5 acres of development within the northern 25 acre development. Due to the length of storm sewer pipe required to convey the developed flows to the south, a proposed temporary detention/water quality pond is being proposed just south of the Phase 1 development area. This pond will be maintained by the owner until such time that future development occurs to the south.

PROPOSED DRAINAGE FACILITIES

Phase 1 – Shops at College Creek and Federal/Republic Filing No. 1 (Private/Non-Reimbursable)

ITEM	QUANTITY	UNIT PRICE	EXTENDED COST
4" D-10-R Inlets	4 Ea.	\$3,000.00	\$ 12,000.00
10" D-10-R Inlets	1 Ea.	5,400.00	\$ 5,400.00
18" RCP	665 L.F.	\$29.00	\$ 19,285.00
		Sub-Total	\$ 36,685.00
10% Engineering and Contingency			\$ <u>3,668.50</u>
		Grand Total	\$ 40,353.50

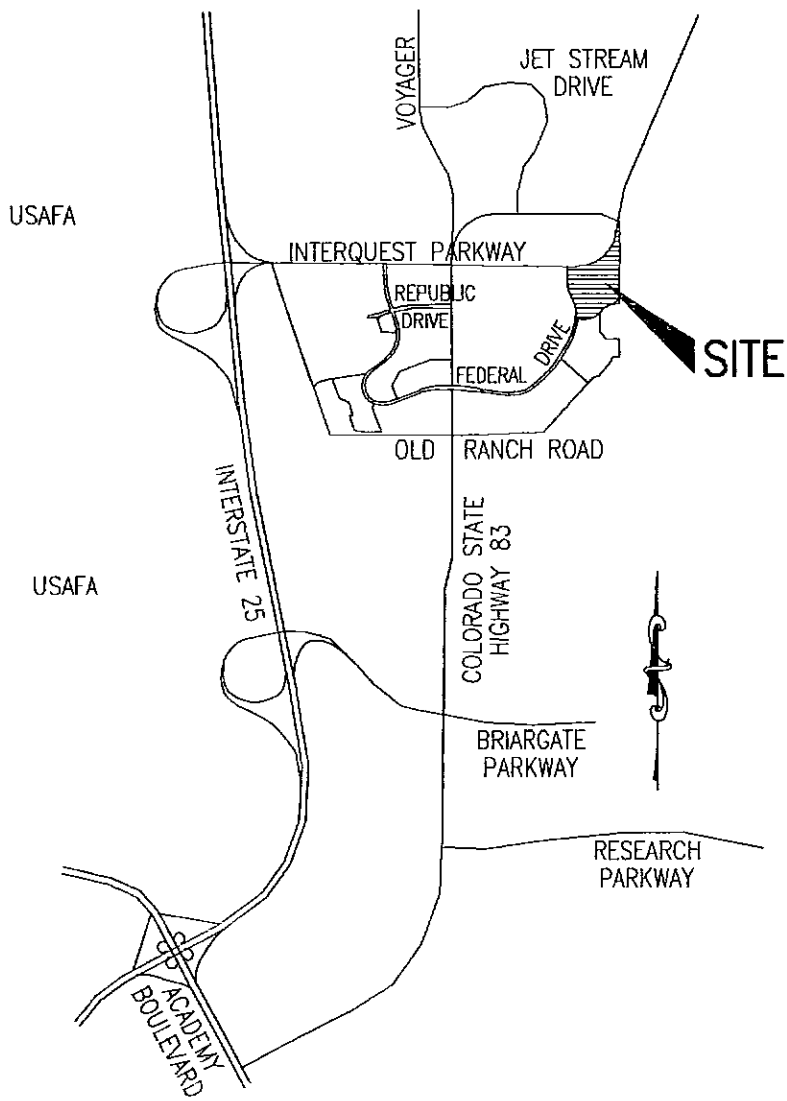
Future Phases – Interquest East (Private/Non-Reimbursable)

ITEM	QUANTITY		UNIT PRICE	EXTENDED COST
4' D-10-R Inlets	3	Ea.	\$3,000.00	\$ 9,000.00
6' D-10-R Inlets	1	Ea.	\$3,800.00	\$ 3,800.00
8' D-10-R Inlets	3	Ea.	\$4,600.00	\$ 13,800.00
10' D-10-R Inlets	3	Ea.	\$5,400.00	\$ 16,200.00
18" RCP	516	L.F.	\$29.00	\$ 14,964.00
24" RCP	861	L.F.	\$37.00	\$ 31,857.00
30" RCP	1065	L.F.	\$44.00	\$ 46,860.00
42" RCP	76	L.F.	\$75.00	\$ 5,700.00
			Sub-Total	\$ 142,181.00
10% Engineering and Contingency				\$ <u>14,218.10</u>
			Grand Total	\$ <u>156,399.10</u>

ELKHORN DRAINAGE FACILITY AGREEMENT

According to previous Drainage Reports for the Fairlane Technology Park, all drainage facilities in this area of the development are privately owned and maintained. A private maintenance agreement is in place and recorded at Reception No. 202056466, a copy is in the Appendix. Suitable easements will be provided for the storm water facilities.

APPENDIX



Vicinity Map

FIGURE 1

JOB NO. 05-003

FILE: 05003DEV.DWG
DATE: 8/7/05

	ROCKWELL CONSULTING, Inc.
	ENGINEERING • SURVEYING 1955 N. UNION BLVD., SUITE 200 COLORADO SPRINGS, CO 80909 (719) 475-2575 • FAX (719) 475-9223

(Joins sheet: 1)



HYDROLOGY

RATIONAL METHODOLOGY

PROJECT: Interquest Retail

BASIN: A
 AREA: 2.96
 SOIL TYPE: A & B

RUNOFF COEFFICIENT, C

ZONE/DEVELOPMENT TYPE	AREA	C5	C100	% AREA
Pasture	2.96	0.25	0.35	100.00%
	0	0.00	0.00	0.00%
	0	0.00	0.00	0.00%
	<u>0</u>	0.00	0.00	<u>0.00%</u>
	2.96			100%

COMPOSITE: C5= 0.25 C100= 0.35

TIME OF CONCENTRATION: Tc In Minutes:

Travel Type	L	s %	v5 (fps)	Tc (5 year)	v100 (fps)	Tc (100 year)
Overland	1000	2		51.75		51.75
				<u>51.75</u>		<u>51.75</u>
Tc Total:				51.75		51.75

Intensity, I (inches/hr) from Fig 5-1

I5	I100
<u> 1.6 in/hr </u>	<u> 2.9 in/hr </u>

PEAK FLOW: Q-CIA in cfs

Q5	Q100
<u> 1.2 cfs </u>	<u> 3.0 cfs </u>

HYDROLOGY

RATIONAL METHODOLOGY

PROJECT: Interquest Retail

BASIN:	C	
AREA:	4.75	
SOIL TYPE:	A & B	

RUNOFF COEFFICIENT, C

ZONE/DEVELOPMENT TYPE	AREA	C5	C100	% AREA
Pasture	4.75	0.25	0.35	100.00%
	0	0.00	0.00	0.00%
	0	0.00	0.00	0.00%
	0	0.00	0.00	0.00%
	4.75			100%

COMPOSITE: C5= 0.25 C100= 0.35

TIME OF CONCENTRATION: Tc In Minutes:

Travel Type	L	s %	v5 (fps)	Tc (5 year)	v100 (fps)	Tc (100 year)
Overland	350	6.3		20.96		20.96
				20.96		20.96
Tc Total:				20.96		20.96

Intensity, I (inches/hr) from Fig 5-1

I5	I100
2.9 in/hr	5.0 in/hr

PEAK FLOW: Q-CIA in cfs

Q5	Q100
3.4 cfs	8.3 cfs

HYDROLOGY
RATIONAL METHODOLOGY

PROJECT: Interquest Retail

BASIN: D
 AREA: 3.13
 SOIL TYPE: A & B

RUNOFF COEFFICIENT, C

ZONE/DEVELOPMENT TYPE	AREA	C5	C100	% AREA
Pasture	3.13	0.25	0.35	100.00%
	0	0.00	0.00	0.00%
	0	0.00	0.00	0.00%
	<u>0</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00%</u>
	3.13			100%

COMPOSITE: C5= 0.25 C100= 0.35

TIME OF CONCENTRATION: Tc In Minutes:

Travel Type	L	s %	v5 (fps)	Tc (5 year)	v100 (fps)	Tc (100 year)
Overland	250	7.2		16.95		16.95
				<u>16.95</u>		<u>16.95</u>
Tc Total:				16.95		16.95

Intensity, I (inches/hr) from Fig 5-1

I5	I100
<u>3.2 in/hr</u>	<u>5.5 in/hr</u>

PEAK FLOW: Q-CIA in cfs

Q5	Q100
<u>2.5 cfs</u>	<u>6.0 cfs</u>

HYDROLOGY

RATIONAL METHODOLOGY

PROJECT: Interquest Retail

BASIN:	E
AREA:	7.46
SOIL TYPE:	A & B

RUNOFF COEFFICIENT, C

ZONE/DEVELOPMENT TYPE	AREA	C5	C100	% AREA
Pasture	4.75	0.25	0.35	100.00%
	0	0.00	0.00	0.00%
	0	0.00	0.00	0.00%
	0	0.00	0.00	0.00%
	4.75			100%

COMPOSITE: C5= 0.25 C100= 0.35

TIME OF CONCENTRATION: Tc In Minutes:

Travel Type	L	s %	v5 (fps)	Tc (5 year)	v100 (fps)	Tc (100 year)
Overland	250	7.2		16.95		16.95
				16.95		16.95
Tc Total:				16.95		16.95

Intensity, I (inches/hr) from Fig 5-1

I5	I100
3.2 in/hr	5.5 in/hr

PEAK FLOW: Q-CIA in cfs

Q5	Q100
6.0 cfs	14.4 cfs

HYDROLOGY

RATIONAL METHODOLOGY

PROJECT: Interquest Retail

BASIN: I
 AREA: 0.95
 SOIL TYPE: A & B

RUNOFF COEFFICIENT, C

ZONE/DEVELOPMENT TYPE	AREA	C5	C100	% AREA
Commercial	0.10	0.90	0.90	10.53%
Landscaping	0.85	0.25	0.35	89.47%
	0	0.00	0.00	0.00%
	<u> 0 </u>	<u> 0.00 </u>	<u> 0.00 </u>	<u> 0.00% </u>
	0.95			100%

COMPOSITE: C5= 0.32 C100= 0.41

TIME OF CONCENTRATION: Tc In Minutes:

Travel Type	L	s %	v5 (fps)	Tc (5 year)	v100 (fps)	Tc (100 year)
Overland	60	25		4.26		3.76
Swale	260	7	4	1.08	4.5	0.96
				<u> 5.34 </u>		<u> 4.72 </u>
Tc Total:				5.34		4.72

Intensity, I (inches/hr) from Fig 5-1

I5	I100
<u> 5.2 in/hr </u>	<u> 9.0 in/hr </u>

PEAK FLOW: Q-CIA in cfs

Q5	Q100
<u> 1.6 cfs </u>	<u> 3.5 cfs </u>

HYDROLOGY
RATIONAL METHODOLOGY

PROJECT: Interquest Retail

BASIN: 2
 AREA: 0.96
 SOIL TYPE: A & B

RUNOFF COEFFICIENT, C

ZONE/DEVELOPMENT TYPE	AREA	C5	C100	% AREA
Commercial	0.43	0.90	0.90	44.79%
Landscaping	0.53	0.25	0.35	55.21%
	0	0.00	0.00	0.00%
	<u>0</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00%</u>
	0.96			100%

COMPOSITE: C5= 0.54 C100= 0.60

TIME OF CONCENTRATION: Tc In Minutes:

Travel Type	L	s %	v5 (fps)	Tc (5 year)	v100 (fps)	Tc (100 year)
Overland	30	30		2.83		2.50
Swale	400	2	2.2	3.03	2.4	2.78
				<u>5.86</u>		<u>5.28</u>
Tc Total:				5.86		5.28

Intensity, I (inches/hr) from Fig 5-1

I5	I100
<u>5.0 in/hr</u>	<u>8.9 in/hr</u>

PEAK FLOW: Q-CIA in cfs

Q5	Q100
<u>2.6 cfs</u>	<u>5.1 cfs</u>

HYDROLOGY

RATIONAL METHODOLOGY

PROJECT: Interquest Retail

BASIN: 3
 AREA: 0.58
 SOIL TYPE: A & B

RUNOFF COEFFICIENT, C

ZONE/DEVELOPMENT TYPE	AREA	C5	C100	% AREA
Commercial	0.40	0.90	0.90	68.97%
Landscaping	0.18	0.25	0.35	31.03%
	0	0.00	0.00	0.00%
	<u>0</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00%</u>
	0.58			100%

COMPOSITE: C5= 0.70 C100= 0.73

TIME OF CONCENTRATION: Tc In Minutes:

Travel Type	L	s %	v5 (fps)	Tc (5 year)	v100 (fps)	Tc (100 year)
Overland	50	3		7.82		6.90
Street	100	2.5	3.2	0.52	3.4	0.49
				<u>8.34</u>		<u>7.39</u>
Tc Total:				8.34		7.39

Intensity, I (inches/hr) from Fig 5-1

I5	I100
<u>4.4 in/hr</u>	<u>7.9 in/hr</u>

PEAK FLOW: Q-CIA in cfs

Q5	Q100
<u>1.8 cfs</u>	<u>3.3 cfs</u>

HYDROLOGY

RATIONAL METHODOLOGY

PROJECT: Interquest Retail

BASIN:	6A
AREA:	0.26
SOIL TYPE:	A & B

RUNOFF COEFFICIENT, C

ZONE/DEVELOPMENT TYPE	AREA	C5	C100	% AREA
Building	0.26	0.90	0.90	100.00%
	0	0.25	0.35	0.00%
	0	0.00	0.00	0.00%
	0	0.00	0.00	0.00%
	<hr style="width: 100%;"/>			<hr style="width: 100%;"/>
	0.26			100%

COMPOSITE: C5= 0.90 C100= 0.90

TIME OF CONCENTRATION: Tc In Minutes:

Travel Type	L	s %	v5 (fps)	Tc (5 year)	v100 (fps)	Tc (100 year)
Overland	125	1		4.18		4.18
				<hr style="width: 100%;"/>		<hr style="width: 100%;"/>
Tc Total:				4.18		4.18

Intensity, I (inches/hr) from Fig 5-1

I5	I100
<hr style="width: 100%;"/>	<hr style="width: 100%;"/>
5.2 in/hr	9.0 in/hr

PEAK FLOW: Q-CIA in cfs

Q5	Q100
<hr style="width: 100%;"/>	<hr style="width: 100%;"/>
1.2 cfs	2.1 cfs

HYDROLOGY

RATIONAL METHODOLOGY

PROJECT: Interquest Retail

BASIN: 7
 AREA: 1.15
 SOIL TYPE: A & B

RUNOFF COEFFICIENT, C

ZONE/DEVELOPMENT TYPE	AREA	C5	C100	% AREA
Commercial	0.90	0.90	0.90	78.26%
Landscaping	0.25	0.25	0.35	21.74%
	0	0.00	0.00	0.00%
	<u>0</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00%</u>
	1.15			100%

COMPOSITE: C5= 0.76 C100= 0.78

TIME OF CONCENTRATION: Tc In Minutes:

Travel Type	L	s %	v5 (fps)	Tc (5 year)	v100 (fps)	Tc (100 year)
Overland	100	3		11.06		9.76
Street	340	5	2	2.83	2.2	2.58
				<u>13.89</u>		<u>12.34</u>
Tc Total:						

Intensity, I (inches/hr) from Fig 5-1

I5	I100
<u>3.6 in/hr</u>	<u>6.3 in/hr</u>

PEAK FLOW: Q-CIA in cfs

Q5	Q100
<u>3.1 cfs</u>	<u>5.7 cfs</u>

HYDROLOGY
RATIONAL METHODOLOGY

PROJECT: Interquest Retail

BASIN: 8
 AREA: 1.27
 SOIL TYPE: A & B

RUNOFF COEFFICIENT, C

ZONE/DEVELOPMENT TYPE	AREA	C5	C100	% AREA
Commercial	1.12	0.90	0.90	88.19%
Landscaping	0.15	0.25	0.35	11.81%
	0	0.00	0.00	0.00%
	<u>0</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00%</u>
	1.27			100%

COMPOSITE: C5= 0.82 C100= 0.84

TIME OF CONCENTRATION: Tc In Minutes:

Travel Type	L	s %	v5 (fps)	Tc (5 year)	v100 (fps)	Tc (100 year)
Overland	30	3		6.06		5.35
Street	300	2.5	3.2	1.56	3.4	1.47
				<u>7.62</u>		<u>6.82</u>
Tc Total:				7.62		6.82

Intensity, I (inches/hr) from Fig 5-1

I5 **I100**
4.5 in/hr 8.2 in/hr

PEAK FLOW: Q-CIA in cfs

Q5 **Q100**
4.7 cfs 8.7 cfs

HYDROLOGY

RATIONAL METHODOLOGY

PROJECT: Interquest Retail

BASIN: 14
 AREA: 0.70
 SOIL TYPE: A & B

RUNOFF COEFFICIENT, C

ZONE/DEVELOPMENT TYPE	AREA	C5	C100	% AREA
Commercial	0.63	0.90	0.90	90.00%
Landscaping	0.07	0.25	0.35	10.00%
	0	0.00	0.00	0.00%
	<u>0</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00%</u>
	0.70			100%

COMPOSITE: C5= 0.84 C100= 0.85

TIME OF CONCENTRATION: Tc In Minutes:

Travel Type	L	s %	v5 (fps)	Tc (5 year)	v100 (fps)	Tc (100 year)
Overland	50	2		8.94		7.89
Street	300	1.5	2.00	2.50	2.2	2.27
				<u>11.44</u>		<u>10.16</u>
Tc Total:				11.44		10.16

Intensity, I (inches/hr) from Fig 5-1

I5 3.9 in/hr I100 7.0 in/hr

PEAK FLOW: Q-CIA in cfs

Q5 2.3 cfs Q100 4.1 cfs

HYDROLOGY

RATIONAL METHODOLOGY

PROJECT: Interquest Retail

BASIN: 15
 AREA: 0.47
 SOIL TYPE: A & B

RUNOFF COEFFICIENT, C

ZONE/DEVELOPMENT TYPE	AREA	C5	C100	% AREA
Commercial	0.40	0.90	0.90	85.11%
Landscaping	0.07	0.25	0.35	14.89%
	0	0.00	0.00	0.00%
	<u>0</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00%</u>
	0.47			100%

COMPOSITE: C5= 0.80 C100= 0.82

TIME OF CONCENTRATION: Tc In Minutes:

Travel Type	L	s %	v5 (fps)	Tc (5 year)	v100 (fps)	Tc (100 year)
Overland	20	2		5.66		4.99
Street	200	2	2.8	1.19	3	1.11
				<u>6.85</u>		<u>6.10</u>
Tc Total:				6.85		6.10

Intensity, I (inches/hr) from Fig 5-1

I5	I100
<u>5.0 in/hr</u>	<u>9.0 in/hr</u>

PEAK FLOW: Q-CIA in cfs

Q5	Q100
<u>1.9 cfs</u>	<u>3.5 cfs</u>

HYDROLOGY

RATIONAL METHODOLOGY

PROJECT: Interquest Retail

BASIN: 16
 AREA: 1.41
 SOIL TYPE: A & B

RUNOFF COEFFICIENT, C

ZONE/DEVELOPMENT TYPE	AREA	C5	C100	% AREA
Commercial	1.22	0.90	0.90	86.52%
Landscaping	0.19	0.25	0.35	13.48%
	0	0.00	0.00	0.00%
	0	0.00	0.00	0.00%
	<u>1.41</u>			<u>100%</u>

COMPOSITE: C5= 0.81 C100= 0.83

TIME OF CONCENTRATION: Tc In Minutes:

Travel Type	L	s %	v5 (fps)	Tc (5 year)	v100 (fps)	Tc (100 year)
Overland	40	2		8.00		7.06
Street	25	1.5	2	0.21	2.2	0.19
				<u>8.21</u>		<u>7.25</u>
Tc Total:				8.21		7.25

Intensity, I (inches/hr) from Fig 5-1

I5	I100
<u>4.4 in/hr</u>	<u>8.0 in/hr</u>

PEAK FLOW: Q-CIA in cfs

Q5	Q100
<u>5.0 cfs</u>	<u>9.3 cfs</u>

HYDROLOGY

RATIONAL METHODOLOGY

PROJECT: Interquest Retail

BASIN: 17
 AREA: 2.35
 SOIL TYPE: A & B

RUNOFF COEFFICIENT, C

ZONE/DEVELOPMENT TYPE	AREA	C5	C100	% AREA
Commercial	2.03	0.90	0.90	86.38%
Landscaping	0.32	0.25	0.35	13.62%
	0	0.00	0.00	0.00%
	<u>0</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00%</u>
	2.35			100%

COMPOSITE: C5= 0.81 C100= 0.83

TIME OF CONCENTRATION: Tc In Minutes:

Travel Type	L	s %	v5 (fps)	Tc (5 year)	v100 (fps)	Tc (100 year)
Overland	40	2		2.71		2.59
Street	600	2	2.8	3.57	3	3.33
				<u>6.29</u>		<u>5.92</u>
Tc Total:				6.29		5.92

Intensity, I (inches/hr) from Fig 5-1

I5	I100
<u>4.8 in/hr</u>	<u>8.5 in/hr</u>

PEAK FLOW: Q-CIA in cfs

Q5	Q100
<u>9.2 cfs</u>	<u>16.5 cfs</u>

HYDROLOGY

RATIONAL METHODOLOGY

PROJECT: Interquest Retail

BASIN: 18
 AREA: 1.65
 SOIL TYPE: A & B

RUNOFF COEFFICIENT, C

ZONE/DEVELOPMENT TYPE	AREA	C5	C100	% AREA
Commercial	1.40	0.90	0.90	84.85%
Landscaping	0.25	0.25	0.35	15.15%
	0	0.00	0.00	0.00%
	0	0.00	0.00	0.00%
	<u>1.65</u>			<u>100%</u>

COMPOSITE: C5= 0.80 C100= 0.82

TIME OF CONCENTRATION: Tc In Minutes:

Travel Type	L	s %	v5 (fps)	Tc (5 year)	v100 (fps)	Tc (100 year)
Overland	80	2		11.31		9.98
Swale	120	2	2.1	0.95	2.3	0.87
Street	150	1.5	2	<u>1.25</u>	2.2	<u>1.14</u>
Tc Total:				13.51		11.99

Intensity, I (inches/hr) from Fig 5-1

I5 **I100**
3.6 in/hr 6.5 in/hr

PEAK FLOW: Q-CIA in cfs

Q5 **Q100**
4.8 cfs 8.8 cfs

HYDROLOGY

RATIONAL METHODOLOGY

PROJECT: Interquest Retail

BASIN: 21
 AREA: 0.37
 SOIL TYPE: A & B

RUNOFF COEFFICIENT, C

ZONE/DEVELOPMENT TYPE	AREA	C5	C100	% AREA
Commercial	0.30	0.90	0.90	81.08%
Landscaping	0.07	0.25	0.35	18.92%
	0	0.00	0.00	0.00%
	<u>0</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00%</u>
	0.37			100%

COMPOSITE: C5= 0.78 C100= 0.80

TIME OF CONCENTRATION: Tc In Minutes:

Travel Type	L	s %	v5 (fps)	Tc (5 year)	v100 (fps)	Tc (100 year)
Overland	50	2		8.94		7.89
Street	140	3	3.4	0.69	3.6	0.65
				<u>9.63</u>		<u>8.54</u>
Tc Total:				9.63		8.54

Intensity, I (inches/hr) from Fig 5-1

I5	I100
<u>4.1 in/hr</u>	<u>7.5 in/hr</u>

PEAK FLOW: Q-CIA in cfs

Q5	Q100
<u>1.2 cfs</u>	<u>2.2 cfs</u>

HYDROLOGY

RATIONAL METHODOLOGY

PROJECT: Interquest Retail

BASIN: 23
 AREA: 2.60
 SOIL TYPE: A & B

RUNOFF COEFFICIENT, C

ZONE/DEVELOPMENT TYPE	AREA	C5	C100	% AREA
Commercial	1.10	0.90	0.90	42.31%
Landscaping	1.50	0.25	0.35	57.69%
	0	0.00	0.00	0.00%
	<u>0</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00%</u>
	2.60			100%

COMPOSITE: C5= 0.53 C100= 0.58

TIME OF CONCENTRATION: Tc In Minutes:

Travel Type	L	s %	v5 (fps)	Tc (5 year)	v100 (fps)	Tc (100 year)
Overland	80	7.5		7.31		6.45
Street	450	3.5	3.8	1.97	4.0	1.88
				<u>9.29</u>		<u>8.33</u>
Tc Total:				9.29		8.33

Intensity, I (inches/hr) from Fig 5-1

I5	I100
<u>4.1 in/hr</u>	<u>7.5 in/hr</u>

PEAK FLOW: Q-CIA in cfs

Q5	Q100
<u>5.6 cfs</u>	<u>11.4 cfs</u>

HYDROLOGY

RATIONAL METHODOLOGY

PROJECT: Interquest Retail

BASIN: 24
 AREA: 0.77
 SOIL TYPE: A & B

RUNOFF COEFFICIENT, C

ZONE/DEVELOPMENT TYPE	AREA	C5	C100	% AREA
Commercial	0.07	0.90	0.90	9.09%
Landscaping	0.7	0.25	0.35	90.91%
	0	0.00	0.00	0.00%
	<u>0</u>	0.00	0.00	<u>0.00%</u>
	0.77			100%

COMPOSITE: C5= 0.31 C100= 0.40

TIME OF CONCENTRATION: Tc In Minutes:

Travel Type	L	s %	v5 (fps)	Tc (5 year)	v100 (fps)	Tc (100 year)
Overland	125	11		8.05		7.11
				<u>8.05</u>		<u>7.11</u>
Tc Total:				8.05		7.11

Intensity, I (inches/hr) from Fig 5-1

I5	I100
<u>4.4 in/hr</u>	<u>8.5 in/hr</u>

PEAK FLOW: Q-CIA in cfs

Q5	Q100
<u>1.0 cfs</u>	<u>2.6 cfs</u>

HYDROLOGY

RATIONAL METHODOLOGY

PROJECT: Interquest Retail

BASIN: Design Point #1
 AREA: 1.78
 SOIL TYPE: A & B

RUNOFF COEFFICIENT, C

ZONE/DEVELOPMENT TYPE	AREA	C5	C100	% AREA
4	0.51	0.70	0.73	28.65%
5	0.80	0.66	0.69	44.94%
6A	0.26	0.90	0.90	14.61%
6B	0.21	0.90	0.90	11.80%
	<u>0</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00%</u>
	1.78			100%

COMPOSITE: C5= 0.73 C100= 0.76

TIME OF CONCENTRATION: Tc In Minutes:

Travel Type	L	s %	v5 (fps)	Tc (5 year)	v100 (fps)	Tc (100 year)
Overland	50	12		4.95		4.37
Swale	100	2	2.8	0.60	3	0.56
Pipe	440	1	6	1.22	7	1.05
Tc Total:				6.77		5.97

Intensity, I (inches/hr) from Fig 5-1

I5	I100
<u>4.7 in/hr</u>	<u>8.6 in/hr</u>

PEAK FLOW: Q-CIA in cfs

Q5	Q100
<u>6.1 cfs</u>	<u>11.6 cfs</u>

HYDROLOGY
RATIONAL METHODOLOGY

PROJECT: Interquest Retail

BASIN: Design Point #4
 AREA: 2.71
 SOIL TYPE: A & B

RUNOFF COEFFICIENT, C

ZONE/DEVELOPMENT TYPE	AREA	C5	C100	% AREA
2	0.96	0.54	0.60	35.42%
3	0.58	0.70	0.73	21.40%
14	0.70	0.84	0.85	25.83%
15	0.47	0.80	0.82	17.34%
	0	0.00	0.00	0.00%
	<u>0</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00%</u>
	2.71			100%

COMPOSITE: C5= 0.70 C100= 0.73

TIME OF CONCENTRATION: Tc In Minutes:

Travel Type	L	s %	v5 (fps)	Tc (5 year)	v100 (fps)	Tc (100 year)
Overland	50	3		7.82		6.90
Street	100	2.5	3.2	0.52	3.4	0.49
				<u>8.34</u>		<u>7.39</u>
Tc Total:				8.34		7.39

Intensity, I (inches/hr) from Fig 5-1

I5	I100
<u>4.4 in/hr</u>	<u>7.9 in/hr</u>

PEAK FLOW: Q-CIA in cfs

Q5	Q100
<u>8.3 cfs</u>	<u>15.6 cfs</u>

HYDROLOGY

RATIONAL METHODOLOGY

PROJECT: Interquest Retail

BASIN: Design Point #5
 AREA: 8.12
 SOIL TYPE: A & B

RUNOFF COEFFICIENT, C

ZONE/DEVELOPMENT TYPE	AREA	C5	C100	% AREA
DP#4	2.71	0.70	0.73	33.37%
16	1.41	0.81	0.83	17.36%
17	2.35	0.81	0.83	28.94%
18	1.65	0.80	0.82	20.32%
	0	0.00	0.00	0.00%
	<u>0</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00%</u>
	8.12			100%

COMPOSITE: C5= 0.77 C100= 0.79

TIME OF CONCENTRATION: Tc In Minutes:

Travel Type	L	s %	v5 (fps)	Tc (5 year)	v100 (fps)	Tc (100 year)
Overland	50	3		7.82		6.90
Street	100	2.5	3.2	0.52	3.4	0.49
Pipe	360	1	9	0.67	12	0.50
Tc Total:				9.01		7.89

Intensity, I (inches/hr) from Fig 5-1

I5	I100
<u>4.2 in/hr</u>	<u>7.6 in/hr</u>

PEAK FLOW: Q-CIA in cfs

Q5	Q100
<u>26.3 cfs</u>	<u>49.0 cfs</u>

HYDROLOGY
RATIONAL METHODOLOGY

PROJECT: Interquest Retail

BASIN: Design Point #6
 AREA: 9.89
 SOIL TYPE: A & B

RUNOFF COEFFICIENT, C

ZONE/DEVELOPMENT TYPE	AREA	C5	C100	% AREA
DP#5	8.12	0.77	0.79	82.10%
19	1.77	0.74	0.77	17.90%
	0.00	0.00	0.00	0.00%
	0	0.00	0.00	0.00%
	0	0.00	0.00	0.00%
	<u>0</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00%</u>
	9.89			100%

COMPOSITE: C5= 0.76 C100= 0.79

TIME OF CONCENTRATION: Tc In Minutes:

Travel Type	L	s %	v5 (fps)	Tc (5 year)	v100 (fps)	Tc (100 year)
Overland	50	3		7.82		6.90
Street	100	2.5	3.2	0.52	3.4	0.49
Pipe	520	1	9	0.96	12	0.72
				Tc Total:		
				9.31		8.11

Intensity, I (inches/hr) from Fig 5-1

I5	I100
<u>4.1 in/hr</u>	<u>7.5 in/hr</u>

PEAK FLOW: Q-CIA in cfs

Q5	Q100
<u>31.0 cfs</u>	<u>58.3 cfs</u>

HYDROLOGY

RATIONAL METHODOLOGY

PROJECT: Interquest Retail

BASIN: Design Point #8
 AREA: 7.26
 SOIL TYPE: A & B

RUNOFF COEFFICIENT, C

ZONE/DEVELOPMENT TYPE	AREA	C5	C100	% AREA
DP#3	6.82	0.78	0.81	93.94%
22	0.44	0.84	0.85	6.06%
	0.00	0.00	0.00	0.00%
	0	0.00	0.00	0.00%
	0	0.00	0.00	0.00%
	<u>0</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00%</u>
	7.26			100%

COMPOSITE: C5= 0.78 C100= 0.81

TIME OF CONCENTRATION: Tc In Minutes:

Travel Type	L	s %	v5 (fps)	Tc (5 year)	v100 (fps)	Tc (100 year)
Overland	50	12		4.95		4.37
Swale	100	2	2.8	0.60	3	0.56
Pipe	1140	1	9	2.11	10	1.90
Tc Total:				7.66		6.82

Intensity, I (inches/hr) from Fig 5-1

I5	I100
<u>4.5 in/hr</u>	<u>8.2 in/hr</u>

PEAK FLOW: Q-CIA in cfs

Q5	Q100
<u>25.6 cfs</u>	<u>48.4 cfs</u>

HYDROLOGY

RATIONAL METHODOLOGY

PROJECT: Interquest Retail

BASIN: Design Point #9
 AREA: 18.51
 SOIL TYPE: A & B

RUNOFF COEFFICIENT, C

ZONE/DEVELOPMENT TYPE	AREA	C5	C100	% AREA
DP#7	11.25	0.77	0.79	60.78%
DP#8	7.26	0.78	0.81	39.22%
	0.00	0.00	0.00	0.00%
	0	0.00	0.00	0.00%
	0	0.00	0.00	0.00%
	<u>0</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00%</u>
	18.51			100%

COMPOSITE: C5= 0.77 C100= 0.80

TIME OF CONCENTRATION: Tc In Minutes:

Travel Type	L	s %	v5 (fps)	Tc (5 year)	v100 (fps)	Tc (100 year)
Overland	50	3		7.82		6.90
Street	100	2.5	3.2	0.52	3.4	0.49
Pipe	680	1	9	1.26	12	0.94
Tc Total:				9.60		8.34

Intensity, I (inches/hr) from Fig 5-1

I5	I100
<u>4.1 in/hr</u>	<u>7.5 in/hr</u>

PEAK FLOW: Q-CIA in cfs

Q5	Q100
<u>58.7 cfs</u>	<u>110.8 cfs</u>

Shops at College Creek/Federal/Republic

Sump Inlet BASIN 3

	5 YEAR	100 YEAR		
APPROACH FLOWS	4.4	8.4	s(x)=	0.02
(worse case)			s(l)=	0.002
d =	0.34	0.43	n=	0.016
TOTAL FLOWS	4.4	8.4	L=	4
d(max)=	0.19	0.41		

Shops at College Creek/Federal/Republic

Sump Inlet BASIN 4

	5 YEAR	100 YEAR		
APPROACH FLOWS	1.8	3.3	s(x)=	0.02
(worse case)			s(l)=	0.002
d =	0.24	0.31	n=	0.016
TOTAL FLOWS	1.8	3.3	L=	4
d(max)=	-0.01	0.12		

Shops at College Creek/Federal/Republic

Sump Inlet BASIN 5

	5 YEAR	100 YEAR		
APPROACH FLOWS (worse case)	2.7	5	s(x)=	0.02
d =	0.28	0.36	s(l)=	0.002
TOTAL FLOWS	2.7	5	n=	0.016
d(max)=	0.07	0.23	L=	4

Shops at College Creek/Federal/Republic

INLET BASIN 8

Q5 =	4.7	Q100 =	8.7
SL =	0.03	SO =	0.02

5 YEAR

100 YEAR

T	10.48
FW	2.11
L1	17.1
L2	10.2
L3	36.6

T	13.20
FW	2.21
L1	22.5
L2	13.5
L3	48.2

Li = 10.00

5 YR Q =	4.7	100 YR Q	8.7
5 YR Qi =	<u>2.8</u>	100 YR Qi	<u>3.9</u>
5 YR Qfb =	1.9	100 YR Qfb	4.8

Shops at College Creek/Federal/Republic

Sump Inlet BASIN 10

	5 YEAR	100 YEAR		
APPROACH FLOWS	8.2	15.1	s(x)=	0.02
(worse case)			s(l)=	0.002
d =	0.43	0.54	n=	0.016
TOTAL FLOWS	8.2	15.1	L=	8
d(max)=	0.29	0.53		

Shops at College Creek/Federal/Republic

Sump Inlet BASIN 11

		5 YEAR	100 YEAR		
APPROACH FLOWS		6.6	11.8	s(x)=	0.02
(worse case)	d =	0.40	0.49	s(l)=	0.002
TOTAL FLOWS		6.6	11.8	n=	0.016
	d(max)=	0.26	0.48	L=	6

Shops at College Creek/Federal/Republic

Sump Inlet BASIN 12&13

	5 YEAR	100 YEAR		
APPROACH FLOWS	7.6	15.5	s(x)=	0.02
(worse case)				
d =	0.42	0.54	s(l)=	0.002
			n=	0.016
TOTAL FLOWS	8.3	16.9	L=	10
d(max)=	0.25	0.52		

Shops at College Creek/Federal/Republic

Sump Inlet BASIN 14

	5 YEAR	100 YEAR		
APPROACH FLOWS	2.3	4.1	s(x)=	0.02
(worse case)			s(l)=	0.002
d =	0.27	0.33	n=	0.016
TOTAL FLOWS	2.3	4.1	L=	4
d(max)=	0.04	0.17		

Shops at College Creek/Federal/Republic

Sump Inlet BASIN 15

	5 YEAR	100 YEAR		
APPROACH FLOWS	1.9	3.5	s(x)=	0.02
(worse case)			s(l)=	0.002
d =	0.25	0.31	n=	0.016
TOTAL FLOWS	1.9	3.5	L=	4
d(max)=	0.00	0.13		

Shops at College Creek/Federal/Republic

INLET BASIN 16

Q5 =	5.0	Q100 =	9.3
SL =	0.011	SO =	0.02

5 YEAR

100 YEAR

T	12.95	T	16.34
FW	1.34	FW	1.40
L1	13.3	L1	17.6
L2	8.0	L2	10.6
L3	28.5	L3	37.7

Li = 10.00

5 YR Q =	5	100 YR Q	9.3
5 YR Qi =	<u>3.3</u>	100 YR Qi	<u>5.3</u>
5 YR Qfb =	1.7	100 YR Qfb	4.0

Shops at College Creek/Federal/Republic

Sump Inlet BASIN 17

	5 YEAR	100 YEAR		
APPROACH FLOWS	9.2	16.5	s(x)=	0.02
(worse case)			s(l)=	0.002
d =	0.45	0.56	n=	0.016
TOTAL FLOWS	9.2	16.5	L=	8
d(max)=	0.33	0.57		

Shops at College Creek/Federal/Republic

INLET BASIN 18

Q5 =	4.8	Q100 =	8.8
SL =	0.011	SO =	0.02

5 YEAR

T	12.75
FW	1.33
L1	13.1
L2	7.9
L3	28.0

100 YEAR

T	16.01
FW	1.39
L1	17.1
L2	10.3
L3	36.7

Li = 10.00

5 YR Q =	4.8	100 YR Q	8.8
5 YR Qi =	<u>3.2</u>	100 YR Qi	<u>5.1</u>
5 YR Qfb =	1.6	100 YR Qfb	3.7

Shops at College Creek/Federal/Republic

Sump Inlet Basin 19

	5 YEAR	100 YEAR		
APPROACH FLOWS (worse case)	7.5	14.8	s(x)=	0.02
d =	0.42	0.54	s(l)=	0.002
TOTAL FLOWS	7.5	14.8	n=	0.016
d(max)=	0.26	0.52	L=	8

Shops at College Creek/Federal/Republic

Sump Inlet BASIN 21

	5 YEAR	100 YEAR		
APPROACH FLOWS	1.2	2.2	s(x)=	0.02
(worse case)			s(l)=	0.002
d =	0.21	0.26	n=	0.016
TOTAL FLOWS	1.2	2.2	L=	4
d(max)=	-0.07	0.03		

Shops at College Creek/Federal/Republic

Sump Inlet BASIN 22

	5 YEAR	100 YEAR		
APPROACH FLOWS	1.9	3.4	s(x)=	0.02
(worse case)			s(l)=	0.002
d =	0.25	0.31	n=	0.016
TOTAL FLOWS	1.9	3.4	L=	4
d(max)=	0.00	0.12		

**AGREEMENT REGARDING JOINT MAINTENANCE
OF PRIVATE DRAINAGE FACILITIES**

THIS AGREEMENT REGARDING JOINT MAINTENANCE OF PRIVATE DRAINAGE FACILITIES (the "Agreement") dated as of this 19th day of July, 2001 (the "Effective Date") is entered into by and between **SCHUCK HOLDINGS, LLC**, a Colorado limited liability company ("Schuck Holdings"), **MITSUI ADVANCED MEDIA, INC.**, a Delaware corporation ("MAM"), **MITSUI CHEMICALS AMERICA, INC.**, a Delaware corporation ("Mitsui"), and **SELCO SERVICE CORPORATION**, an Ohio Corporation ("Selco"), and is consented to by **QUANTUM CORPORATION**, a Delaware corporation ("Quantum"), **PEAK NATIONAL BANK**, a national banking association ("Peak National Bank"), **THE BANK OF CHERRY CREEK, N.A.**, a national banking association ("BOCC"), and **BANK OF NOVA SCOTIA** ("Bank of Nova Scotia"), all with respect to the following:

RECITALS

A. Schuck Holdings owns certain real property located in a development known as "InterQuest Business Park" in the City of Colorado Springs (the "City"), County of El Paso, State of Colorado more particularly described in Exhibit "A" attached hereto and as more particularly depicted in Exhibit "B" attached hereto (the "Schuck Property"), which Schuck Property comprises approximately 25.27 acres. The Schuck Property is encumbered by: (i) that certain "Deed of Trust" in favor of Peak National Bank recorded in the real property records of El Paso County, Colorado on December 22, 1999 at Reception No. 99191444 (the "Peak National Bank Deed of Trust"), and (ii) that certain "Indenture of Trust" by and between Colorado Springs Stout Allen Public Building Authority, a nonprofit corporation organized under the laws of the State of Colorado and BOCC dated December 15, 1998, as evidenced by that certain "Memorandum Of Indenture Of Trust" dated December 15, 1998 and recorded in the real property records of El Paso County, Colorado on December 17, 1998 at Reception No. 098186145 (together with such additional documents referenced therein or contemplated thereby, the "BOCC Indenture");

B. Selco owns certain real property located immediately adjacent to and west of the Schuck Property, which real property is also located in the City and is more particularly described in Exhibit "A" attached hereto and more particularly depicted in Exhibit "B" attached hereto (the "Selco Property"), which Selco Property comprises approximately 40.70 acres. Quantum is currently a tenant with respect to a portion of the improvements located on the Selco Property pursuant to that certain "Amended and Restated Master Lease" between Selco, as Landlord, and Quantum, as Tenant (the "Quantum Lease"). In addition, the Selco Property is currently encumbered by that certain "Deed of Trust" in favor of Bank of Nova Scotia recorded in the real property records of El Paso County, Colorado at Reception No. 97098647 (the "Bank of Nova Scotia Deed of Trust");

C. MAM owns certain real property located immediately adjacent to and west of the Selco Property, which real property is also located in the City and is more particularly described in Exhibit "A" attached hereto and more particularly depicted in Exhibit "B" attached hereto (the "MAM Property"), which MAM Property comprises approximately 9.87 acres;

D. Mitsui owns certain real property located immediately adjacent to and west of the MAM Property, which real property is also located in the City and is more particularly described in Exhibit "A" attached hereto and more particularly depicted in Exhibit "B" attached hereto (the "Mitsui Property"), which Mitsui Property comprises approximately 11.67 acres;

E. The MAM Property and the Selco Property have been improved with manufacturing and office buildings and facilities. The Mitsui Property and the Schuck Property currently remain unimproved. (For purposes of this Agreement, Schuck Holdings, Selco, MAM and Mitsui are sometimes collectively referred to as the "Parties",



and the Schuck Property, the Selco Property, the MAM Property and the Mitsui Property are sometimes collectively referred to as the "Properties");

F. In connection with constructing the facility located upon the MAM Property, the City required MAM to install certain private drainage facilities consisting of a forty-eight inch (48") RCP Pipe and related inlets and clean-outs (all as more particularly described in a drainage report filed with the City in May, 1996 entitled "Preliminary & Final Drainage Report and Plan for Fairlane Technology Park Filing No. 3", hereinafter, the "MAM Drainage Facilities"), all for purposes of enabling MAM to collect storm water flows from the MAM Property and transport such storm water flows across the Mitsui Property and into an open concrete channel located at the southeast corner of Colorado State Highway 83 and Federal Drive and leading into the City's Municipal Storm Sewer System (the "City Storm Sewer"). The MAM Drainage Facility has been completed and is in place as of the date of this Agreement;

G. In connection with construction of the improvements currently located upon the Selco Property, the City required installation of another private drainage facility (the "Selco Drainage Facility") which attaches to and extends the MAM Drainage Facility eastward onto the Selco Property and enables the owner of the Selco Property to transport storm water flows from the Selco Property into the MAM Drainage Facility and then onto the City Storm Sewer. The Selco Drainage Facility also extends to the easterly boundary of the Selco Property and incorporates a detention pond located on the Selco Property, all so as to enable the Selco Drainage Facility and the MAM Drainage Facility to also accommodate future storm water flows which will be generated once the Schuck Property is developed. The Selco Drainage Facility has been completed and is in place as of the date of this Agreement;

H. Certain ambiguity currently exists with respect to the ownership of the reinforced concrete pipe comprising the majority of the MAM Drainage Facility and the Selco Drainage Facility, but the Parties generally believe ownership is as follows: (i) Schuck Holdings is the owner with respect to that portion of the reinforced concrete pipe located upon the Mitsui Property, (ii) MAM and/or Selco is/are the owner(s) with respect to that portion of the reinforced concrete pipe located upon the MAM Property, and (iii) Selco is the owner of the detention pond on the Selco Property and that portion of the reinforced concrete pipe located upon the Selco Property. Currently, there is no common agreement among the Parties or their respective Properties concerning the ownership, use, maintenance and repair of the MAM Drainage Facility and/or the Selco Drainage Facility, or of any future extension thereof attached to the Selco Drainage Facility for purposes of servicing the Schuck Property. (The MAM Drainage Facility, the Selco Drainage Facility, the contemplated extension of the Selco Drainage Facility from its current stub out onto the Schuck Property, together with all inlets, grates, clean-outs and other amenities associated therewith or attached thereto are hereinafter collectively referred to as the "East InterQuest Private Drainage Facility"); and

I. The Parties now desire to enter into this Agreement for purposes of confirming their respective rights and obligations concerning the use and maintenance of the East-InterQuest Private Drainage Facility, and for purposes of agreeing upon conducting and sharing the costs associated with any requisite maintenance and repair of the East InterQuest Private Drainage Facility. Quantum in its capacity as Tenant under the Quantum Lease, Peak National Bank with respect to the Peak National Bank Deed of Trust, BOCC with respect to the BOCC Indenture, and Bank of Nova Scotia with respect to the Bank of Nova Scotia Deed of Trust, are each executing this Agreement as evidence of their consent to the terms of this Agreement, and as evidence of their agreement to subordinate each of their respective interests in the Properties to the terms of this Agreement. (Quantum, Peak National Bank, BOCC and Bank of Nova Scotia are sometimes collectively referred to herein as the "Other Interested Parties").

NOW, THEREFORE, in consideration for the mutual promises, covenants and agreements set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

J. Patrick Kelly El Paso Cty, CO 202056466
04/09/2002 08:36
Doc \$0.00 Page
Rec \$110.00 2 of 22

1. **Incorporation of Recitals.** The recitals set forth above are true and correct, and are incorporated into this Agreement by this reference.

2. **Right to Use and Maintain the East InterQuest Private Drainage Facility on the Respective Properties; Schuck Property Right to Connect to East InterQuest Private Drainage Facility.** The Parties each hereby agree that, to the extent such rights do not already exist, each of the Parties in their capacity as the owner of their respective Properties, and each of their respective successors, assigns, mortgagees, lenders, tenants, licensees and invitees with respect to their respective Properties, shall have the right to use the East InterQuest Private Drainage Facility for the benefit of all such Parties and their respective Properties, all for the purpose of transporting storm water drainage from the Properties to the City Storm Sewer. The Parties further agree that this Agreement is intended to and shall be binding upon each of the Parties, and their respective successors and assigns of all or any portion of their ownership interest in their respective Properties, and all other persons or entities now or at any time hereafter having or acquiring any right, title or interest in and to the respective Properties, or any part thereof. This Agreement is intended to and shall run with the land with respect to all of the Properties, and shall benefit and burden each of the Properties during the term hereof.

In addition, the Parties each hereby agree that Schuck Holdings in its current capacity as owner of the Schuck Property, and its successors and assigns of the Schuck Property and all future owner(s) of the Schuck Property from and after the date of this Agreement (collectively, "Schuck Successors" or individually, a "Schuck Successor"), shall have the right, without any additional cost, reimbursement or recapture payment obligation, to connect to and extend the East InterQuest Private Drainage Facility onto the Schuck Property, and to otherwise incorporate its site specific drainage facilities required in connection with any development of the Schuck Property into the East InterQuest Private Drainage Facility; provided, however, that the costs associated with physically attaching to and/or extending the East InterQuest Private Drainage Facility onto the Schuck Property, together with the cost of physically installing all catch basins or drains and other infrastructure upon the Schuck Property, shall be borne by Schuck Holdings or, if the connection and/or extension is performed by a Schuck Successor, such costs shall be borne by such Schuck Successor, without contribution from any of the other Parties. In connection therewith, Schuck Holdings agrees on behalf of itself, which agreement shall be automatically binding upon any Schuck Successor, that such connection and/or extension shall be: (i) installed in accordance with all applicable laws, requirements, building codes, rules and regulations, (ii) installed in a good and workmanlike manner, free of defects and liens, and in a manner which will avoid damage to or destruction of any portion of the existing East InterQuest Private Drainage Facility, and (iii) designed such that the storm water flow from the connection and/or extension shall not exceed the existing capacity of the East InterQuest Private Drainage Facility. All requisite building permits, drainage permits or other approvals from all governmental agencies having authority or otherwise associated with the attachment to and/or extension of the East InterQuest Private Drainage Facility shall be obtained by Schuck Holdings or the Schuck Successor performing the connection and/or extension, if applicable, prior to commencement of any such work. Schuck Holdings agrees on behalf of itself and the Schuck Successors that Schuck Holdings, or if the connection and/or extension is performed by a Schuck Successor, then such Schuck Successor, shall be responsible for any personal injury, damage or destruction to the East InterQuest Private Drainage Facility or the real or personal property of Selco or Quantum, or their successors or assigns, to the extent caused by Schuck Holdings or by such Schuck Successor, or their respective employees, agents or contractors, as applicable, in connection with the connection to and/or extension of the East InterQuest Private Drainage Facility. Notwithstanding anything in Paragraph 3 "Shared Maintenance Costs for East InterQuest Private Drainage Facility" below or any other Paragraph of this Agreement to the contrary, Schuck Holdings agrees on behalf of itself and the Schuck Successors that the owner of the Schuck Property at the time of the request by any other Party shall, upon the request of and as directed by any other Party hereto, promptly perform all labor and other work necessary to correct any defect in the connection and/or installation of the extension of the East InterQuest Private Drainage Facility, at the sole cost and expense of such owner of the Schuck Property at the time of such request. To the extent it is necessary for Schuck Holdings or a Schuck Successor to enter upon the Selco Property for purposes

of completing such connection and/or extension of the East InterQuest Private Drainage Facility, then prior to any such entry, Schuck Holdings or such Schuck Successor, if appropriate, shall execute and deliver to Selco an "Entry Permit" in the form of Exhibit "C" attached hereto and incorporated herein by this reference.

3. **Shared Maintenance Costs for East InterQuest Private Drainage Facility.** Notwithstanding any other agreement between the Parties, or any of them, to the contrary, and notwithstanding any past practices of the Parties with respect to the East InterQuest Private Drainage Facility, the Parties each hereby agree that, except as otherwise expressly set forth herein, each of the Parties shall share, on a pro-rata basis, the costs of all general maintenance, repair and upkeep associated with the East InterQuest Private Drainage Facility. The Parties pro-rata shares have been determined based upon the approximate gross acreage of their respective Properties, and the Parties have therefore agreed that their respective pro-rata shares, expressed in terms of percentages, are as follows:

Schuck Property share:	<u>28.88</u> %
Selco Property share:	<u>46.46</u> %
MAM Property share:	<u>11.31</u> %
Mitsui Property share:	<u>13.35</u> %

To the extent any of the Parties determines or believes that the East InterQuest Private Drainage Facility is not functioning properly or in need of general cleaning, maintenance and/or repair, such Party shall notify each of the other Parties in writing, and the Parties shall, within 30 days of such notice, meet and confer concerning the need for such general cleaning, maintenance or repair. At such meeting, the Parties shall cooperate in good faith and use good faith efforts to agree upon the need for and extent of the required general cleaning, maintenance and/or repair. The Parties shall thereupon coordinate to have such general cleaning, maintenance and/or repair performed, and shall further arrange for the payment of all costs associated therewith. Unless otherwise agreed by the Parties in writing, the Party who is the owner of the Property on which the general cleaning, maintenance and/or repair is required shall engage the contractor for the performance of the requisite general cleaning, maintenance and/or repair. Upon completion of such general cleaning, maintenance and/or repair, the Parties shall review the invoices related to such work, and except in the case of a defect in the connection and/or installation of that portion of the East InterQuest Private Drainage Facility required to service the Schuck Property performed by Schuck Holdings, the correction of which shall be performed at Schuck Holding's sole cost and expense, each Party shall, within thirty (30) days following receipt of such invoice, remit its pro-rata share of the cost for such general cleaning, maintenance and/or repair either directly to the contractor performing the work, or by way of reimbursement to the particular Party who may have previously paid the invoice.

Notwithstanding any other provision of this Agreement to the contrary, the Parties each hereby agree that none of the Parties shall have any individual obligation to contribute to such general cleaning, maintenance and/or repair expenses following the sale or assignment of their respective Properties, and each Party shall be released from any and all obligations associated with the general cleaning, maintenance and/or repair of the East InterQuest Private Drainage Facility from and after the date of any such sale or assignment, and all such obligations shall thereafter rest with the successors in interest to such ownership of the respective Properties, as applicable.

4. **Responsibility for Damages to East InterQuest Private Drainage Facility.** Notwithstanding the provisions of Paragraph 3 "Shared Maintenance Costs for East InterQuest Private Drainage Facility" above, the Parties each hereby agree that, to the extent that the East InterQuest Private Drainage Facility or any part or portion thereof is damaged or destroyed as a result of the act, negligence or willful misconduct of any of the Parties, or their officers, directors, contractors, subcontractors, employees, agents or invitees, either in connection with the ownership and/or maintenance of their respective

J. Patrick Kelly El Paso Cty, CO 202056466
04/09/2002 08:36
Doc \$0.00 Page
Rec \$110.00 4 of 22

Properties, or in connection with any improvements being made to or work being performed upon their respective Properties, then such Party shall be individually liable for all costs and expenses associated with repairing such damage, and each Party hereby protects, defends, indemnifies and holds the others harmless from and against all losses, costs, demands, damages, liabilities and expenses associated therewith.

5. **Term.** This Agreement shall remain in effect until the earlier of: (i) sixty (60) years from the Effective Date of this Agreement; (ii) the date the East InterQuest Private Drainage Facility is no longer necessary for use by all of the Properties, or (iii) until such time as all of the Parties to this Agreement unanimously agree to terminate this Agreement in a writing signed by all of the Parties, or their successors and assigns, and recorded in the real property records of El Paso County, Colorado.

6. **No Representations or Warranties.** Each of the Parties hereby understands, acknowledges and agrees that no representations or warranties of any kind, express or implied, have been given or shall be deemed to have been given or made by any of them, or their respective agents, officers, directors, members, managers, partners or employees, with respect to the East InterQuest Private Drainage Facility, its fitness for a particular purpose, its capacity or ability to service any or all of the surface drainage needs of the Properties, its proper installation, current condition or past maintenance, or its compliance with any applicable laws or building codes, drainage plans or other requirements. Each Party hereby accepts the East InterQuest Private Drainage Facility in its current "AS IS" condition.

7. **Notices.** All notices and other communications required or permitted under this Agreement shall be in writing and shall be personally delivered or be given by registered or certified mail, postage prepaid, return receipt requested. Any such notice shall be effective on the earlier of (a) the time when such notice is actually received, or (b) the fourth (4th) day following its deposit in the United States mail, certified or registered, postage prepaid, addressed as follows:

If to Schuck Holdings: Schuck Holdings, LLC
2 North Cascade, Suite 1280
Colorado Springs, CO 80903
Attn: William D. Schuck

With a copy to:
Hogan & Hartson
2 North Cascade, Suite 1300
Colorado Springs, CO 80903
Attn: David W. Isbell, Esq.

If to Selco: Selco Service Corporation
54 State Street
Albany, New York 12207
Attn: Donald Davis

With a copy to:
Quantum Corporation
10125 Federal Drive
Colorado Springs, CO 80903
Attn: Real Estate Department

And a copy to:
Quantum Corporation
501 Sycamore Drive
Milpitas, CA 95035
Attn: General Counsel

J. Patrick Kelly El Paso Cty, CO 202056466
04/09/2002 08:36
Doc \$0.00 Page
Rec \$110.00 5 of 22

If to MAM: Mitsui Advanced Media, Inc.
10045 Federal Drive
Colorado Springs, CO 80921
Attn: Plant Manager

If to Mitsui: c/o Mitsui Advanced Media, Inc.
10045 Federal Drive
Colorado Springs, CO 80921
Attn: Plant Manager

8. **Miscellaneous.** This Agreement shall be construed and governed under the laws of the State of Colorado. Time is of the essence with respect to this Agreement. This Agreement may be amended only by way of a written agreement executed by all of the Parties hereto or their respective successors and assigns. Unless the context requires a contrary construction, as used in this Agreement, the singular shall include the plural and the plural, the singular and the use of any gender shall include all genders. The titles, headings and captions used in this Agreement are intended solely for convenience of reference and are not intended to affect the meaning of any provision of this Agreement. This Agreement may be executed in any number of counterparts, each of which shall be an original, but all of which shall constitute one and the same document.

IN WITNESS WHEREOF, the Parties and the Other Interested Parties have each executed this Agreement as of the day and year first above written.

SCHUCK HOLDINGS, LLC, a
Colorado limited liability company

By: SCHUCK INTERESTS, INC., a
Colorado corporation, Manager

By: Steven L. Everson
Steven L. Everson, Vice President

MITSUI ADVANCED MEDIA, INC., a
Delaware corporation

By: [Signature]
Its: Secretary

MITSUI CHEMICALS AMERICA, INC., a
Delaware corporation

By: [Signature]
Its: president

SELCO SERVICE CORPORATION, an
Ohio corporation

By: _____
Its: _____

J. Patrick Kelly El Paso Cty, CO 202056466
04/09/2002 08:36
Doc \$0.00 Page
Rec \$110.00 6 of 22

If to MAM: Mitsui Advanced Media, Inc.
10045 Federal Drive
Colorado Springs, CO 80921
Attn: Plant Manager

If to Mitsui: c/o Mitsui Advanced Media, Inc.
10045 Federal Drive
Colorado Springs, CO 80921
Attn: Plant Manager

8. **Miscellaneous.** This Agreement shall be construed and governed under the laws of the State of Colorado. Time is of the essence with respect to this Agreement. This Agreement may be amended only by way of a written agreement executed by all of the Parties hereto or their respective successors and assigns. Unless the context requires a contrary construction, as used in this Agreement, the singular shall include the plural and the plural, the singular and the use of any gender shall include all genders. The titles, headings and captions used in this Agreement are intended solely for convenience of reference and are not intended to affect the meaning of any provision of this Agreement. This Agreement may be executed in any number of counterparts, each of which shall be an original, but all of which shall constitute one and the same document.

IN WITNESS WHEREOF, the Parties and the Other Interested Parties have each executed this Agreement as of the day and year first above written.

**SCHUCK HOLDINGS, LLC, a
Colorado limited liability company**

By: SCHUCK INTERESTS, INC., a
Colorado corporation, Manager

By: _____
Steven L. Everson, Vice President

**MITSUI ADVANCED MEDIA, INC., a
Delaware corporation**

By: _____
Its: _____

**MITSUI CHEMICALS AMERICA, INC., a
Delaware corporation**

By: _____
Its: _____

**SELCO SERVICE CORPORATION, an
Ohio corporation**

By: 
Its: Vice President

J. Patrick Kelly El Paso Cty, CO 202056466
04/09/2002 08:36
Doc \$0.00 Page
Rec \$110.00 7 of 22

J. Patrick Kelly El Paso Cty, CO 202056466
 04/09/2002 08:36
 Doc \$0.00 Page
 Rec \$110.00 8 of 22

AGREED AND CONSENTED TO:

**QUANTUM CORPORATION, a
 Delaware corporation**

By: Wayne M. Tomisin
 Its: Director Corp. Real Estate

**THE BANK OF CHERRY CREEK, N.A., a
 national banking association**

By: _____
 Its: _____

**PEAK NATIONAL BANK, a
 national banking association**

By: _____
 Its: _____

THE BANK OF NOVA SCOTIA

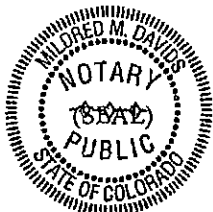
By: [Signature]
 Its: DIRECTOR.

STATE OF COLORADO)
) ss.
 COUNTY OF EL PASO)

The foregoing instrument was acknowledged before me this 4th day of April, 2002 by Steven L. Everson, Vice President of Schuck Interests, Inc., a Colorado corporation, as Manager of Schuck Holdings, LLC, a Colorado limited liability company, on behalf of such company.

Witness my hand and official seal.

My commission expires: 8/07/2004.



Mildred M. Davida
 Notary Public

STATE OF _____)
) ss.
 COUNTY OF _____)

The foregoing instrument was acknowledged before me this ___ day of _____, 2001 by _____ as _____ of Mitsui Advanced Media, Inc., a Delaware corporation, on behalf of such corporation.

Witness my hand and official seal.

My commission expires: _____.

(SEAL)

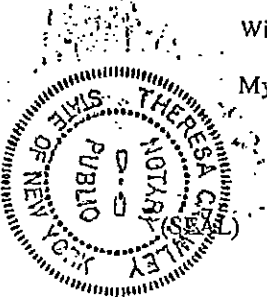
 Notary Public

STATE OF New York)
) ss.
COUNTY OF Dutchess)

~~2001~~ ²⁰⁰² The foregoing instrument was acknowledged before me this 20 day of MARCH,
~~2001~~ by KEISAKU MARUYAMA as PRESIDENT of
Mitsui Chemicals America, Inc., a Delaware corporation, on behalf of such
corporation.

Witness my hand and official seal.

My commission expires: 5/11/03



Theresa Crawley
Notary Public
THERESA CRAWLEY
NOTARY PUBLIC, State of New York
No. 4894746
Qualified in Dutchess County
Commission Expires May 11, ~~2002~~

STATE OF _____)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this ___ day of _____,
2001 by _____ as _____ of
Selco Service Corporation, an Ohio corporation, on behalf of such corporation.

Witness my hand and official seal.

My commission expires: _____

(SEAL) _____
Notary Public

STATE OF _____)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this ___ day of _____,
2001 by _____ as _____ of
Quantum Corporation, a Delaware corporation, on behalf of such corporation.

Witness my hand and official seal.

My commission expires: _____

(SEAL) _____
Notary Public

J. Patrick Kelly El Paso Cty, CO
04/09/2002 08:36 202056466
Doc \$0.00 Page
Rec \$110.00 11 of 22

STATE OF _____)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this ___ day of _____, 2001 by _____ as _____ of Mitsui Chemicals America, Inc., a Delaware corporation, on behalf of such corporation.

Witness my hand and official seal.

My commission expires: _____.

(SEAL) _____
Notary Public

STATE OF NEW YORK)
) ss.
COUNTY OF ALBANY)

The foregoing instrument was acknowledged before me this 2nd day of AUGUST, 2001 by DENNIS C. DAVIS as Vice President of Selco Service Corporation, an Ohio corporation, on behalf of such corporation.

Witness my hand and official seal.

My commission expires: RICHARD J. NELSON, SR.
Notary Public, State of New York
No. 01NE6006617
Qualified in Rensselaer County
Commission Expires May 04, 20 02

[Signature]
Notary Public



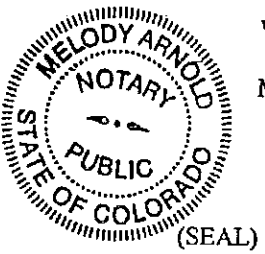
STATE OF Colorado)
) ss.
COUNTY OF El Paso)

The foregoing instrument was acknowledged before me this 17th day of July, 2001 by Wayne M. Turnura as Director, Corp. R.E. of Quantum Corporation, a Delaware corporation, on behalf of such corporation.

Witness my hand and official seal.

My commission expires: June 29, 2005.

[Signature]
Notary Public



CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

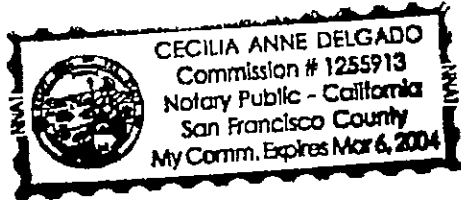
State of California

County of San Francisco } ss.

On July 31/01 before me, Cecilia Anne Delgado Notary Public
Date Name and Title of Officer (e.g., Jane Doe, Notary Public)

personally appeared Wiz Hanson
Name(s) of Signer(s)

personally known to me
 proved to me on the basis of satisfactory evidence



to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Delgado
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

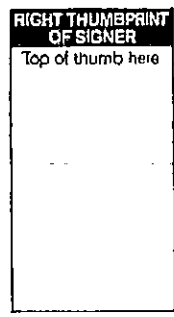
Description of Attached Document

Title or Type of Document: Agreement Regarding Joint Maintenance of Private Drainage Facilities
Document Date: undated Number of Pages: 1

Signer(s) Other Than Named Above: none

Capacity(ies) Claimed by Signer

Signer's Name: Wiz Hanson
 Individual
 Corporate Officer — Title(s): Director
 Partner — Limited General
 Attorney in Fact
 Trustee
 Guardian or Conservator
 Other: _____



Signer Is Representing: The Bank of Nova Scotia

STATE OF _____)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this ___ day of _____, 2001 by _____ as _____ of The Bank of Cherry Creek N.A., a national banking association, on behalf of such association.

Witness my hand and official seal.

My commission expires: _____.

(SEAL) _____
Notary Public

STATE OF _____)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this ___ day of _____, 2001 by _____ as _____ of Peak National Bank, a national banking association, on behalf of such association.

Witness my hand and official seal.

My commission expires: _____.

(SEAL) _____
Notary Public

STATE OF _____)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this ___ day of _____, 2001 by _____ as _____ of The Bank of Nova Scotia, on behalf of such bank.

Witness my hand and official seal.

My commission expires: _____.

(SEAL) _____
Notary Public

See Attached

EXHIBIT "A"

(Legal Description for Schuck Property, Selco Property, MAM Property; Mitsui Property)

J. Patrick Kelly El Paso Cty, CO 202056466
04/09/2002 08:36
Doc \$0.00 Page
Rec \$110.00 14 of 22

EXHIBIT "A"
Legal Description of Schuck Property

That portion of the west half of Section 21, Township 12 South, Range 66 West of the 6th P.M., and also being a portion of Elkhorn Acres Subdivision, as recorded in Plat Book Y at Page 26, now vacated, said vacation recorded in Plat Book N-2 at Page 30 of the El Paso County records and more particularly described as follows

Considering the South line of the Southeast 1/4 of Section 20 to bear S89°43'00"E and all bearings contained herein being relative thereto.

BEGINNING at the northeast corner of a tract of land described in Book 5280 at Page 816 of the records of said El Paso County, the following six (6) courses are on the north, west and south boundary of said tract of land, thence (1) N89°52'59"W a distance of 97.57 feet to a point of curve; (2) on said curve to the left having a central angle of 45°00'00", a radius of 368.00 feet for a distance of 289.03 feet; (3) S45°07'01"W a distance of 130.41 feet; (4) S00°07'01"W a distance of 446.00 feet; (5) S44°52'59"E a distance of 212.13 feet; (6) S89°52'59"E a distance of 300.00 feet to the southeast corner thereof; thence S00°07'01"W a distance of 398.00 feet to the northeast corner of Pendleton Subdivision as recorded in Plat Book N-2 at Page 31 of the records of said El Paso County; thence southwesterly along the northerly line of said subdivision the following five (5) courses, thence (1) S89°50'42"W a distance of 168.46 feet; (2) S21°08'07"W a distance of 118.25 feet; (3) S42°29'31"W a distance of 410.95 feet (4) along a non-tangent curve to the left having a central angle of 180°00'00", a radius of 50.00 feet for an arc distance of 157.08 feet, the chord of said curve bears S79°21'47"W; (5) S42°29'05"W a distance of 249.62 feet to the southeast corner of Lot 1, Fairlane Technology Park Filing No. 4 as recorded at Reception No. 97098095 of the records of said El Paso County; thence N47°30'55"W on the east line of said Lot 1, a distance of 795.09 feet to the northeast corner thereof, said point is on the southerly right-of-way line of Federal Drive as shown on the plat of Fairlane Technology Park Filing No. 1 as recorded in Plat Book E-5 at Page 216 of the records of said El Paso County, the following ten (10) courses are on the southerly and east boundary of said Filing No. 1, thence (1) northeasterly on a curve to the left having a central angle of 02°26'05", a radius of 1632.00 feet for an arc distance of 69.35 feet, the chord of said curve bears N32°18'23"E; (2) N31°05'21"E a distance of 322.00 feet to a point of curve; (3) on said curve to the left having a central angle of 19°00'00", a radius of 1532.00 feet for an arc distance of 508.03 feet, (4) N12°05'21"E a distance of 142.15 feet; (5) N77°54'39"W a distance of 64.00 feet; (6) N12°05'21"E a distance of 89.00 feet to point of curve, (7) on said curve to the left having a central angle of 41°59'14", a radius of 317.48 feet for an arc distance of 232.65 feet; (8) N29°53'53"W a distance of 80.13 feet to a point of curve, (9) on said curve to the right having a central angle of 31°00'00", a radius of 932.00 feet for an arc distance of 504.26 feet; (10) N01°06'07"E a distance of 119.38 feet to the south right-of-way line of InterQuest Parkway as described at Reception No. 99027022 of the records of said El Paso County, the following seven (7) courses are on said south right-of-way line; (1) S89°19'17"E a distance of 74.33 feet; (2) N57°38'45"E a distance of 56.07 feet; (3) S89°03'39"E a distance of 66.74 feet to a point of curve; (4) on said curve to the left having a central angle of 12°55'35", a radius of 1022.50 feet for an arc distance of 230.68 feet; (5) N71°04'08"E a distance of 123.62 feet to a point of curve; (6) on said curve to the left having a central angle of 49°55'09", a radius of 1015.00 feet for an arc distance of 884.32 feet; (7) N21°08'59"E a distance of 46.68 feet to the north-south center line of said Section 21; thence S00°06'58"W on said north-south center line, a distance of 1394.46 feet to the Point of Beginning, containing 52.607 acres of land more or less.

J. Patrick Kelly	El Paso Cty, CO	202056466
04/09/2002	08:36	
Doc	\$0.00	Page
Rec	\$110.00	15 of 22

EXHIBIT "A"
Legal Description of Selco Property

LOT 1, Fairlane Technology Park Filing No. 4, City of Colorado Springs, El Paso
County, Colorado

J. Patrick Kelly	El Paso Cty, CO	202056466
04/09/2002	08:36	
Doc	\$0.00	Page
Rec	\$110.00	16 of 22

EXHIBIT A

Legal Description of MAM Property

LOT 1 IN FAIRLANE TECHNOLOGY PARK, FILING NO. 3, IN THE CITY OF
COLORADO SPRINGS, COUNTY OF EL PASO, STATE OF COLORADO.

J. Patrick Kelly	El Paso Cty, CO	202056466
04/09/2002	08:36	
Doc	\$0.00	Page
Reo	\$110.00	17 of 22

EXHIBIT A

Legal Description of Mitsui Property

A TRACT OF LAND IN THE NORTHEAST QUARTER OF SECTION 29, TOWNSHIP 12 SOUTH, RANGE 66 WEST OF THE 6TH P.M. IN THE CITY OF COLORADO SPRINGS, EL PASO COUNTY, COLORADO LYING NORTH OF 60 FOOT WIDE OLD RANCH ROAD, SOUTH OF FEDERAL DRIVE (RIGHT-OF-WAY VARIES), EAST OF 160 FOOT WIDE COLORADO STATE HIGHWAY 83, AND WEST OF LOT 1, FAIRLANE TECHNOLOGY PARK FILING NO. 3 AS RECORDED IN PLAT BOOK H-6 AT PAGE 35 UNDER RECEPTION NO. 96050137 OF THE RECORDS OF EL PASO COUNTY, COLORADO AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE POINT OF INTERSECTION OF THE EASTERLY RIGHT-OF-WAY LINE OF AFORESAID 160 FOOT WIDE COLORADO STATE HIGHWAY 83 WITH THE SOUTHERLY RIGHT-OF-WAY LINE OF AFORESAID FEDERAL DRIVE (RIGHT-OF-WAY VARIES) AS PLATTED IN "FAIRLANE TECHNOLOGY PARK FILING NO. 1" AS RECORDED IN PLAT BOOK E-5 AT PAGE 216 UNDER RECEPTION NO. 2273961 OF THE RECORDS OF EL PASO COUNTY, COLORADO; THENCE N 89 DEGREES 35 MINUTES 21 SECONDS E ALONG SAID RIGHT-OF-WAY LINE, 106.96 FEET TO A POINT OF CURVE; THENCE CONTINUE ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE AND ON A CURVE TO THE RIGHT HAVING A RADIUS OF 1450.50 FEET AND A CENTRAL ANGLE OF 00 DEGREES 50 MINUTES 32 SECONDS, AN ARC DISTANCE OF 21.32 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE ON SAID CURVE TO THE RIGHT HAVING A RADIUS OF 1,450.50 FEET AND A CENTRAL ANGLE OF 03 DEGREES 58 MINUTES 42 SECONDS, AN ARC DISTANCE OF 100.72 FEET TO A POINT OF TANGENT; THENCE S 85 DEGREES 35 MINUTES 25 SECONDS E (BASIS OF BEARING) ALONG SAID TANGENT AND ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE, 286.97 FEET TO THE NORTHWEST CORNER OF LOT 1, "FAIRLANE TECHNOLOGY PARK FILING NO. 3" AS RECORDED IN PLAT BOOK H-6 AT PAGE 35 UNDER RECEPTION NO. 96050137 OF THE RECORDS OF EL PASO COUNTY, COLORADO; THENCE S 00 DEGREES 26 MINUTES 29 SECONDS E ALONG THE WESTERLY LINE OF SAID LOT 1 AND THE SOUTHERLY EXTENSION THEREOF, 966.96 FEET TO THE NORTHERLY RIGHT-OF-WAY LINE OF AFORESAID 60 FOOT WIDE OLD RANCH ROAD; THENCE S 89 DEGREES 11 MINUTES 55 SECONDS W ALONG SAID NORTHERLY RIGHT-OF-WAY LINE, 514.80 FEET TO INTERSECT THE AFORESAID EASTERLY RIGHT-OF-WAY LINE OF 160 FOOT WIDE COLORADO STATE HIGHWAY 83; THENCE N 00 DEGREES 26 MINUTES 29 SECONDS W ALONG SAID EASTERLY RIGHT-OF-WAY LINE 45.00 FEET; THENCE N 54 DEGREES 31 MINUTES 54 SECONDS E 117.44 FEET; THENCE N 09 DEGREES 39 MINUTES 05 SECONDS W, 208.05 FEET; THENCE N 00 DEGREES 26 MINUTES 29 SECONDS W, 360.59 FEET; THENCE N 11 DEGREES 04 MINUTES 19 SECONDS E, 327.72 FEET TO THE POINT OF BEGINNING.

J. Patrick Kelly El Paso Cty, CO

04/09/2002 08:36

202056466

Doc \$0.00 Page

Rec \$110.00 18 of 22

EXHIBIT "B"

(Depiction of Schuck Property, Selco Property, MAM Property and Mitsui Property)

J. Patrick Kelly El Paso Cty, CO 202056466
04/09/2002 08:36
Doc \$0.00 Page
Rec \$110.00 19 of 22

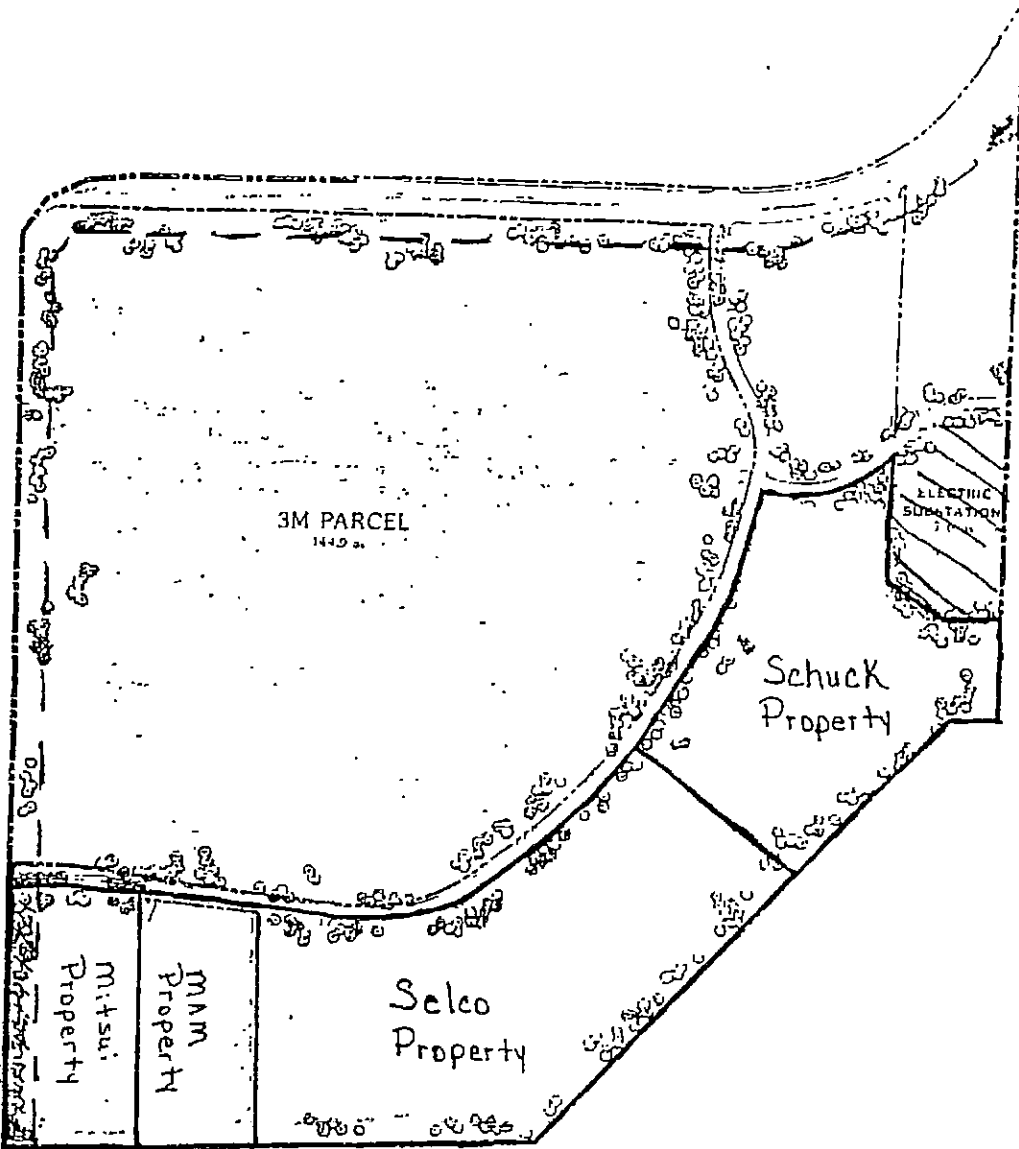


EXHIBIT "C"

TEMPORARY ENTRY PERMIT, CONSTRUCTION PERMIT AND INDEMNIFICATION AGREEMENT

THIS TEMPORARY ENTRY PERMIT, CONSTRUCTION PERMIT AND INDEMNIFICATION AGREEMENT (the "Entry Permit") is entered into as of this ____ day of _____, 20__ by and between SELCO SERVICE CORPORATION, an Ohio corporation ("Selco") and _____, a _____ ("Grantee") with respect to the following:

RECITALS

A. Selco owns certain improved real property located at 10125 Federal Drive, Colorado Springs, Colorado (the real property and improvements thereon are collectively referred to herein as the "Selco Property"), and Grantee owns certain real property located immediately adjacent thereto;

B. Grantee has requested permission to enter upon the Selco Property for purposes of attaching to and extending an existing drainage pipe which is the subject of that certain "Agreement Regarding Joint Maintenance Of Private Drainage Facilities" dated June __, 2001 by and between SCHUCK HOLDINGS, LLC, a Colorado limited liability company, MITSUI ADVANCED MEDIA, INC., a Delaware corporation, MITSUI CHEMICALS AMERICA, INC., a Delaware corporation, and Selco, and consented to by QUANTUM CORPORATION, a Delaware corporation, PEAK NATIONAL BANK, a national banking association, THE BANK OF CHERRY CREEK, N.A., a national banking association, and BANK OF NOVA SCOTIA;

C. As a condition precedent to Grantee's entry onto the Selco Property to perform such attachment and extension work, Selco is requiring that Grantee provide Selco with an originally executed copy of this Entry Permit, and Grantee has agreed to provide the same, all as more particularly set forth herein.

NOW, THEREFORE, in consideration of the Recitals and the other covenants set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties do hereby agree as follows:

AGREEMENT

1. **Permit to Enter Upon Selco Property.** Selco hereby grants to Grantee a nonexclusive license and permission to enter upon the Selco Property for the sole purpose of connecting to and extending the existing drainage pipe (the "Work") commencing as of the date of this Entry Permit, and for no other purpose, subject to Grantee's strict compliance with all the terms of this Entry Permit. Except as otherwise set forth herein, all such Work shall be performed at Grantee's sole cost and expense. Grantee's use of the Selco Property pursuant to this Entry Permit shall not interfere with the reasonable use and enjoyment thereof by Selco or any persons claim through or under Selco. Grantee shall not permit any other party, except Grantee's duly authorized representatives, employees, agents, contractors and subcontractors (hereinafter the "Representatives"), to enter upon or use the Selco Property during the term of this Entry Permit with out Selco's prior written consent. Notwithstanding the above, Grantee shall, obtain at its sole cost and expense, all governmental permits and authorizations of whatever nature required by any and all applicable governmental agencies for Grantee's use of the Selco Property, including, without limitation, the City's approval of the plans and specifications for the Work, all before commencing the Work. If requested, Grantee shall furnish Selco with evidence, of such permits and authorizations.

2. **Maintenance and Conditions of Selco Property.** During the term of this Entry Permit, Grantee shall at its sole cost and expense, maintain the Selco Property across which entry was made in good repair and in a clean, sanitary, orderly and attractive condition. Grantee shall be responsible for any damage done to the Selco Property by Grantee or its Representatives during the term of this Entry Permit, and upon departing from the Selco Property, Grantee shall repair and/or restore or cause to be repaired or restored, the Selco Property and every portion thereof to at least as good condition as existed prior to Grantee's entry onto the Selco Property,

including, without limitation, the replacement of any pavement, vegetation or landscaping disturbed by Grantee's attachment to and installation of the extension of the drainage pipe, Grantee warrants to Selco that all Work performed on the Selco Property shall be in a good and workmanlike manner and shall be free from defects. Selco shall have the right from time to time and at any time, to test, inspect and approve or require the testing, inspection and approval of all of the Work to be performed by Grantee hereunder. Notwithstanding the foregoing, no inspections, tests or approvals by Selco or any other party shall in anyway relieve Grantee from its obligation to perform the Work in accordance with all applicable laws, building codes and requirements of the City of Colorado Springs or other applicable governmental agencies. Grantee shall, upon the request of and as directed by Selco, promptly perform all labor and other work necessary to correct any defect in the Work, at Grantee's sole cost and expense.

3. **Liens.** Grantee shall not suffer or permit to be enforced against the Selco Property, or any part thereof, any mechanic's, materialmen's, contractor's or subcontractor's liens or any claims for damages arising from any aspect of said Work. Grantee shall pay or cause to be paid all of said liens, claims or damages before any action is brought to enforce, some against the Selco Property. Grantee expressly agrees to protect, defend, indemnify and hold Selco and the Selco Property harmless from and against all liability for any and all such liens, claims and demands, together with reasonable attorneys' fees and all costs and expenses in connection therewith.

4. **Owner Not Liable.** Grantee and its Representatives hereby understand and agree that they shall enter upon the Selco Property at their own risk. Selco shall have no duty to inspect the Selco Property to which this Entry Permit applies and shall have no duty to warn any person of any latent or patent defect, condition or risk that may exist on the Selco Property or that might be incurred in the exercise of the rights granted herein. Grantee shall protect, defend, indemnify and hold Selco and any tenants of the Selco Property entirely harmless from and against any and all loss, damage, injury, liability or claims of any kind or character to any person or property (including any property adjacent to the Selco Property) arising from, caused by or otherwise related to any act or omission of Grantee or any of its Representatives or by or from any accident on the Selco Property or any fire or other casualty on the Selco Property caused by any use of the Selco Property by Grantee or its Representatives, or any violation or alleged violation by Grantee or its Representatives of any law or regulation now in effect or hereafter enacted.

Prior to its entry onto the Selco Property, and at all times after initially entering upon the Selco Property for the purposes set forth herein, Grantee and its Representatives shall at their sole cost and expense, maintain with a reputable company or companies (i) a policy or policies of comprehensive general liability insurance, on a per occurrence basis with respect to the Selco Property and the operations of or on behalf of Grantee on or about the Selco Property, including, without limitation, personal injury and broad form property damage coverage, with coverage in an amount reasonably necessary in order to adequately protect Selco and the Selco Property, as determined by Selco in its reasonable discretion, and (ii) workers compensation insurance in an amount required by law, together with employers liability, each such policy with a Waiver of Subrogation endorsement by the insurance carrier as respects Selco. Upon request for the same, Grantee shall provide Selco with satisfactory evidence that Grantee and its Representatives carry such requisite insurance.

Selco shall not be responsible for any loss or theft of anything placed or stored by Grantee on or about the Selco Property. Grantee, as a material part of the consideration of this Entry Permit, waives all claims or damages against Selco for any such loss, damage or injury of Grantee, and agrees to so protect, defend, indemnify and hold Selco harmless from such claims or damages, including, without limitation, reasonable attorneys' fees and court costs incurred by Selco to enforce this provision of this Entry Permit. Grantee shall be totally responsible and liable for all acts and omissions of all of its Representatives whether or not such persons or parties are entitled to assert mechanics' liens, stop notices, equitable liens or labor and material bond rights against the Selco Property.

5. **Termination.** The right of entry granted by this Entry Permit shall terminate thirty (30) days after completion of the Work described in this Entry Permit, or within two (2) days of Grantee's receipt of a written demand from Selco to cease operations asserting that Grantee is not in compliance with the terms of this Entry Permit.

J. Patrick Kelly El Paso Cty, CO 202056466
04/09/2002 08:36
Doc \$0.00 Page
Rec \$110.00 21 of 22

6. **Assignability.** This Entry Permit may not be assigned by Grantee, whether voluntarily or by operation of law, and Grantee shall not permit the use of the Selco Property, or any part hereof, except in strict compliance with the provisions hereof.

7. **Miscellaneous.** This Entry Permit constitutes the entry agreement between the parties hereto pertaining to the subject matter herein. No supplements, modifications or amendments of this Entry Permit shall be binding unless in writing, executed by the parties hereto. This Entry Permit shall be construed and enforced in accordance with, and governed by, the laws of the State of Colorado. No waiver of any of the provisions of this Entry Permit shall be deemed or shall constitute a waiver of any other provisions, whether or not similar, nor shall any waiver be a continuing waiver. No waiver shall be binding unless executed in writing by the party making the waiver. The headings of this Entry Permit are for purposes of reference only and shall not limit or define the meaning of the provisions hereof. This Entry Permit may be executed in any number of counterparts, each of which shall be an original and all of which shall constitute one and the same instrument. Neither this Entry Permit nor any short form memorandum or assignment hereof shall be filed or recorded in any public office without Selco's prior written consent, and any attorneys' fees or other costs incurred in clearing such cloud on title to the Selco Property shall be Grantee's responsibility. Time is of the essence of every provision hereof. Grantee's obligations under its Entry Permit shall continue until all claims against Selco and the Selco Property are absolutely barred by the applicable statute of limitations.

IN WITNESS WHEREOF, the parties hereto have executed this Entry Permit as of the date first written above.

SELCO:

**SELCO SERVICE CORPORATION, an
Ohio corporation**

By: _____

Its: _____

GRANTEE:

J. Patrick Kelly	El Paso Cty, CO	202056466
04/09/2002	08:36	
Doc \$0.00	Page	
Rec \$110.00	22 of 22	

Designer: _____
 Company: Rockwell Consulting
 Date: March 12, 2006
 Project: Interquest Retail
 Location: Interquest and Federal

<p>1. Basin Storage Volume</p> <p>A) Tributary Area's Imperviousness Ratio ($i = I_a / 100$)</p> <p>B) Contributing Watershed Area (Area)</p> <p>C) Water Quality Capture Volume (WQCV) $(WQCV = 1.0 * (0.91 * I^3 - 1.19 * I^2 + 0.78 * I))$</p> <p>D) Design Volume: $Vol = (WQCV / 12) * Area * 1.2$</p>	<p>$I_a =$ <u>85.00</u> %</p> <p>$i =$ <u>0.85</u></p> <p>Area = <u>40.00</u> acres</p> <p>WQCV = <u>0.36</u> watershed inches</p> <p>Vol = <u>1,448</u> acre-feet</p>
<p>2. Outlet Works</p> <p>A) Outlet Type (Check One)</p> <p>B) Depth at Outlet Above Lowest Perforation (H)</p> <p>C) Required Maximum Outlet Area per Row, (A_o)</p> <p>D) Perforation Dimensions (enter one only): i) Circular Perforation Diameter OR ii) 2" Height Rectangular Perforation Width</p> <p>E) Number of Columns (nc, See Table 6a-1 For Maximum)</p> <p>F) Actual Design Outlet Area per Row (A_o)</p> <p>G) Number of Rows (nr)</p> <p>H) Total Outlet Area (A_{ot})</p>	<p><input type="checkbox"/> Orifice Plate <input checked="" type="checkbox"/> Perforated Riser Pipe <input type="checkbox"/> Other: _____</p> <hr/> <p>H = <u>1.00</u> feet</p> <p>$A_o =$ <u>9.07</u> square inches</p> <p>D = <u>2.0000</u> inches, OR W = _____ inches</p> <p>$nc =$ <u>3</u> number</p> <p>$A_o =$ <u>9.42</u> square inches</p> <p>$nr =$ <u>3</u> number</p> <p>$A_{ot} =$ <u>28.27</u> square inches</p>
<p>3. Trash Rack</p> <p>A) Needed Open Area: $A_t = 0.5 * (\text{Figure 7 Value}) * A_{ot}$</p> <p>B) Type of Outlet Opening (Check One)</p> <p>C) For 2", or Smaller, <u>Round Opening</u> (Ref.: Figure 6a):</p> <p>i) Width of Trash Rack and Concrete Opening (W_{conc}) from Table 6a-1</p> <p>ii) Height of Trash Rack Screen (H_{TR})</p>	<p>$A_t =$ <u>849</u> square inches</p> <p><input checked="" type="checkbox"/> <u>X</u> <u>< 2" Diameter Round</u> <input type="checkbox"/> <u>2" High Rectangular</u> <input type="checkbox"/> Other: _____</p> <hr/> <p>$W_{conc} =$ <u>45</u> inches</p> <p>$H_{TR} =$ <u>36</u> inches</p>

Designer: _____
 Company: Rockwell Consulting
 Date: March 12, 2006
 Project: Interquest Retail
 Location: Interquest and Federal

<p>iii) Type of Screen (Based on Depth H), Describe if "Other"</p> <p>iv) Screen Opening Slot Dimension, Describe if "Other"</p> <p>v) Spacing of Support Rod (O.C.) Type and Size of Support Rod (Ref.: Table 6a-2)</p> <p>vi) Type and Size of Holding Frame (Ref.: Table 6a-2)</p> <p>D) For 2" High <u>Rectangular Opening</u> (Refer to Figure 6b):</p> <p>i) Width of Rectangular Opening (W)</p> <p>ii) Width of Perforated Plate Opening ($W_{conc} = W + 12"$)</p> <p>iii) Width of Trashrack Opening ($W_{opening}$) from Table 6b-1</p> <p>iv) Height of Trash Rack Screen (H_{TR})</p> <p>v) Type of Screen (based on depth H) (Describe if "Other")</p> <p>vi) Cross-bar Spacing (Based on Table 6b-1, Klemp™ KPP Grating). Describe if "Other"</p> <p>vii) Minimum Bearing Bar Size (Klemp™ Series, Table 6b-2) (Based on depth of WQCV surcharge)</p>	<p><u>x</u> S.S. #93 VEE Wire (US Filter) Other: _____</p> <p><u>X</u> 0.139" (US Filter) Other: _____</p> <p><u>1.00</u> inches</p> <p>W = _____ inches</p> <p>W_{conc} = _____ inches</p> <p>$W_{opening}$ = _____ inches</p> <p>H_{TR} = _____ inches</p> <p>_____ Klemp™ KPP Series Aluminum Other: _____</p> <p>_____ inches Other: _____</p>
<p>4. Detention Basin length to width ratio</p>	<p><u>3.00</u> (L/W)</p>
<p>5 Pre-sedimentation Forebay Basin - Enter design values</p> <p>A) Volume (5 to 10% of the Design Volume in 1D)</p> <p>B) Surface Area</p> <p>C) Connector Pipe Diameter (Size to drain this volume in 5-minutes under inlet control)</p> <p>D) Paved/Hard Bottom and Sides</p>	<p><u>0.140</u> acre-feet</p> <p><u>0.500</u> acres</p> <p><u>12</u> inches</p> <p><u>no</u> yes/no</p>

Designer: _____
 Company: Rockwell Consulting
 Date: March 12, 2006
 Project: Interquest Retail
 Location: Interquest and Federal

<p>6. Two-Stage Design</p> <p>A) Top Stage ($D_{WQ} = 2'$ Minimum)</p> <p>B) Bottom Stage ($D_{BS} = D_{WQ} + 1.5'$ Minimum, $D_{WQ} + 3.0'$ Maximum, Storage = 5% to 15% of Total WQCV)</p> <p>C) Micro Pool (Minimum Depth = the Larger of $0.5 * \text{Top Stage Depth}$ or 2.5 Feet)</p> <p>D) Total Volume: $Vol_{tot} = \text{Storage from 5A} + \text{6A} + \text{6B}$ Must be \geq Design Volume in 1D</p>	<p>$D_{WQ} = \underline{2.00}$ feet Storage = <u>1.100</u> acre-feet</p> <p>$D_{BS} = \underline{3.50}$ feet Storage = <u>0.210</u> acre-feet Surf. Area = <u>0.060</u> acres</p> <p>Depth = <u>2.50</u> feet Storage = <u>0.500</u> acre-feet Surf. Area = <u>0.200</u> acres</p> <p>$Vol_{tot} = \underline{1.450}$ acre-feet</p>
<p>7. Basin Side Slopes (Z, horizontal distance per unit vertical) Minimum Z = 3, Flatter Preferred</p>	<p>Z = <u>3.00</u> (horizontal/vertical)</p>
<p>8. Dam Embankment Side Slopes (Z, horizontal distance) per unit vertical) Minimum Z = 3, Flatter Preferred</p>	<p>Z = <u>3.00</u> (horizontal/vertical)</p>
<p>9. Vegetation (Check the method or describe "Other")</p>	<p>_____ Native Grass _____ Irrigated Turf Grass _____ Other: _____ _____</p>

Notes: _____

**Jacobs Property
Kettle Creek Road
Detention basin sizing**
Q100 in= 150

Drainage Area	44.00 ac
Runoff Coef.	0.85
Design Flow	79.8 cfs

Storage (Rational Stored Rate Method):

100-year

Retention Time (min)	Inlet Velocity (in/hr)	Inlet Flow (cfs)	Retention Time (sec)	Volume (cf)	Volume (cu ft)	Volume (cu ft)	Volume (ac-ft)
5.0 min.	9.0 in/hr	336.6 cfs	300 sec.	100,980 cf	23,700 cf	77,280 cf	1.77 ac-ft
10.0 min.	7.0 in/hr	261.8 cfs	600 sec.	157,080 cf	47,400 cf	109,680 cf	2.52 ac-ft
15.0 min.	5.8 in/hr	216.9 cfs	900 sec.	195,228 cf	71,100 cf	124,128 cf	2.85 ac-ft
20.0 min.	5.2 in/hr	194.5 cfs	1200 sec.	233,376 cf	94,800 cf	138,576 cf	3.18 ac-ft
25.0 min.	4.6 in/hr	172.0 cfs	1500 sec.	258,060 cf	118,500 cf	139,560 cf	3.20 ac-ft
30.0 min.	4.1 in/hr	153.3 cfs	1800 sec.	276,012 cf	142,200 cf	133,812 cf	3.07 ac-ft
35.0 min.	3.7 in/hr	138.4 cfs	2100 sec.	290,598 cf	165,900 cf	124,698 cf	2.86 ac-ft
40.0 min.	3.5 in/hr	130.9 cfs	2400 sec.	314,160 cf	189,600 cf	124,560 cf	2.86 ac-ft
45.0 min.	3.2 in/hr	119.7 cfs	2700 sec.	323,136 cf	213,300 cf	109,836 cf	2.52 ac-ft
50.0 min.	3.0 in/hr	112.2 cfs	3000 sec.	336,600 cf	237,000 cf	99,600 cf	2.29 ac-ft
60.0 min.	2.6 in/hr	97.2 cfs	3600 sec.	350,064 cf	284,400 cf	65,664 cf	1.51 ac-ft
70.0 min.	2.4 in/hr	89.8 cfs	4200 sec.	376,992 cf	331,800 cf	45,192 cf	1.04 ac-ft
80.0 min.	2.2 in/hr	82.3 cfs	4800 sec.	394,944 cf	379,200 cf	15,744 cf	0.36 ac-ft
90.0 min.	2.0 in/hr	74.8 cfs	5400 sec.	403,920 cf	426,600 cf	-22,680 cf	-0.52 ac-ft

Detention Basin Sizing:

Volume	139,560 cf
Storage	3.20 ac-ft

Elevation	Basin Bottom
#REF!	#REF! #REF!

Post-It® Fax Note 7671

Date	2/28	# of pages	4
From	Ketch		
To	Ketch		
Co./Dept.	Co.		
Phone #	Phone #		
Fax #	Fax #		

CURRENT DATE: 02-28-2006
CURRENT TIME: 15:54:22

FILE DATE: 02-28-2006
FILE NAME: 36RCP

FHWA CULVERT ANALYSIS
HY-8, VERSION 6.1

C U L V E R T N O.	SITE DATA			CULVERT SHAPE, MATERIAL, INLET				
	INLET ELEV. (ft)	OUTLET ELEV. (ft)	CULVERT LENGTH (ft)	BARRELS SHAPE MATERIAL	SPAN (ft)	RISE (ft)	MANNING n	INLET TYPE
1	100.00	97.00	200.02	1 RCP	3.00	3.00	.012	CONVENTIONAL
2								
3								
4								
5								
6								

SUMMARY OF CULVERT FLOWS (cfs)

FILE: 36RCP

DATE: 02-28-2006

ELEV (ft)	TOTAL	1	2	3	4	5	6	ROADWAY	ITR
100.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	1
101.34	10.0	10.0	0.0	0.0	0.0	0.0	0.0	0.00	1
102.08	20.0	20.0	0.0	0.0	0.0	0.0	0.0	0.00	1
102.68	30.0	30.0	0.0	0.0	0.0	0.0	0.0	0.00	1
103.28	40.0	40.0	0.0	0.0	0.0	0.0	0.0	0.00	1
103.98	50.0	50.0	0.0	0.0	0.0	0.0	0.0	0.00	1
104.83	60.0	60.0	0.0	0.0	0.0	0.0	0.0	0.00	1
105.86	70.0	70.0	0.0	0.0	0.0	0.0	0.0	0.00	1
106.96	80.0	79.2	0.0	0.0	0.0	0.0	0.0	0.00	26
107.10	90.0	80.3	0.0	0.0	0.0	0.0	0.0	9.06	8
107.16	100.0	80.7	0.0	0.0	0.0	0.0	0.0	18.52	5
107.00	79.5	79.5	0.0	0.0	0.0	0.0	0.0	0.0	OVERTOPPING

SUMMARY OF ITERATIVE SOLUTION ERRORS

FILE: 36RCP

DATE: 02-28-2006

HEAD ELEV (ft)	HEAD ERROR (ft)	TOTAL FLOW (cfs)	FLOW ERROR (cfs)	% FLOW ERROR
100.00	0.000	0.00	0.00	0.00
101.34	0.000	10.00	0.00	0.00
102.08	0.000	20.00	0.00	0.00
102.68	0.000	30.00	0.00	0.00
103.28	0.000	40.00	0.00	0.00
103.98	0.000	50.00	0.00	0.00
104.83	0.000	60.00	0.00	0.00
105.86	0.000	70.00	0.00	0.00
106.96	-0.003	80.00	0.79	0.99
107.10	-0.004	90.00	0.65	0.72
107.16	-0.004	100.00	0.75	0.75

<1> TOLERANCE (ft) = 0.010

<2> TOLERANCE (%) = 1.000

CURRENT DATE: 02-28-2006
 CURRENT TIME: 15:54:22

FILE DATE: 02-28-2006
 FILE NAME: 36RCP

PERFORMANCE CURVE FOR CULVERT 1 - 1(3.00 (ft) BY 3.00 (ft)) RCP

DIS-CHARGE FLOW (cfs)	HEAD-WATER ELEV. (ft)	INLET CONTROL DEPTH (ft)	OUTLET CONTROL DEPTH (ft)	FLOW TYPE <F4>	NORMAL DEPTH (ft)	CRIT. DEPTH (ft)	OUTLET DEPTH (ft)	TW DEPTH (ft)	OUTLET VEL. (fps)	TW VEL. (fps)	
0.00	100.00	0.00	0.00	0-NF	0.00	0.00	0.00	0.00	0.00	0.00	
10.00	101.34	1.34	1.34	1-S2n	0.67	0.99	0.59	0.28	10.11	6.41	
20.00	102.08	2.08	2.08	1-S2n	0.96	1.43	0.97	0.42	10.03	8.13	
30.00	102.68	2.68	2.68	1-S2n	1.20	1.77	1.22	0.53	11.14	9.30	
40.00	103.28	3.28	3.28	5-S2n	1.41	2.06	1.36	0.63	12.88	10.21	
50.00	103.98	3.98	3.98	5-S2n	1.61	2.29	1.65	0.71	12.57	10.95	
60.00	104.83	4.83	4.83	5-S2n	1.81	2.49	1.85	0.79	13.15	11.59	
70.00	105.86	5.86	5.86	5-S2n	2.01	2.65	2.06	0.86	13.57	12.15	
79.21	106.96	6.96	6.96	5-S2n	2.22	2.79	2.26	0.92	13.87	12.65	
80.29	107.10	7.10	7.10	5-S2n	2.25	2.81	2.29	0.99	13.90	13.11	
80.72	107.15	7.15	7.15	5-S2n	2.26	2.82	2.30	1.04	13.92	13.52	
El. inlet face invert					100.00 ft	El. outlet invert					97.00 ft
El. inlet throat invert					0.00 ft	El. inlet crest					0.00 ft

***** SITE DATA ***** CULVERT INVERT *****
 INLET STATION
 INLET ELEVATION 100.00 ft
 OUTLET STATION 100.00 ft
 OUTLET ELEVATION 300.00 ft
 NUMBER OF BARRELS 97.00 ft
 SLOPE (V/H) 1
 CULVERT LENGTH ALONG SLOPE 0.0150
 200.02 ft

***** CULVERT DATA SUMMARY *****
 BARREL SHAPE CIRCULAR
 BARREL DIAMETER 3.00 ft
 BARREL MATERIAL CONCRETE
 BARREL MANNING'S n 0.012
 INLET TYPE CONVENTIONAL
 INLET EDGE AND WALL SQUARE EDGE WITH HEADWALL
 INLET DEPRESSION NONE

CURRENT DATE: 02-28-2006
CURRENT TIME: 15:54:22

FILE DATE: 02-28-2006
FILE NAME: 36RCP

TAILWATER

***** REGULAR CHANNEL CROSS SECTION *****
BOTTOM WIDTH 5.00 ft
SIDE SLOPE H/V (X:1) 2.0
CHANNEL SLOPE V/H (ft/ft) 0.020
MANNING'S n (.01-0.1) 0.013
CHANNEL INVERT ELEVATION 97.00 ft
CULVERT NO.1 OUTLET INVERT ELEVATION 97.00 ft

***** UNIFORM FLOW RATING CURVE FOR DOWNSTREAM CHANNEL

FLOW (cfs)	W.S.E. (ft)	FROUDE NUMBER	DEPTH (ft)	VEL. (f/s)	SHRAR (psf)
0.00	97.00	0.000	0.00	0.00	0.00
10.00	97.28	2.130	0.28	6.41	0.35
20.00	97.42	2.209	0.42	8.13	0.52
30.00	97.53	2.247	0.53	9.30	0.66
40.00	97.63	2.273	0.63	10.21	0.78
50.00	97.71	2.290	0.71	10.95	0.89
60.00	97.79	2.303	0.79	11.59	0.98
70.00	97.86	2.312	0.86	12.15	1.07
80.00	97.92	2.320	0.92	12.65	1.15
90.00	97.99	2.327	0.99	13.11	1.23
100.00	98.04	2.333	1.04	13.52	1.30

ROADWAY OVERTOPPING DATA

ROADWAY SURFACE PAVED
EMBANKMENT TOP WIDTH 30.00 ft
CREST LENGTH 100.00 ft
OVERTOPPING CREST ELEVATION 107.00 ft

Jacobs Property
Kettle Creek Road
Detention basin sizing
Q100 in= 150

Drainage Area	44.00 ac
Rainfall Coef.	0.9
Design Rain	58.0 cfs

Storage (Rational Stored Rate Method):

100-year

Retention Time	Inlet	Q	Retention Time	Volume (cf)	Volume (cu ft)	Detention Basin Volume	Area (ac-ft)
5.0 min.	9.0 in/hr	356.4 cfs	300 sec.	106,920 cf	17,400 cf	89,520 cf	2.06 ac-ft
10.0 min.	7.0 in/hr	277.2 cfs	600 sec.	166,320 cf	34,800 cf	131,520 cf	3.02 ac-ft
15.0 min.	5.8 in/hr	229.7 cfs	900 sec.	206,712 cf	52,200 cf	154,512 cf	3.55 ac-ft
20.0 min.	5.2 in/hr	205.9 cfs	1200 sec.	247,104 cf	69,600 cf	177,504 cf	4.07 ac-ft
25.0 min.	4.6 in/hr	182.2 cfs	1500 sec.	273,240 cf	87,000 cf	186,240 cf	4.28 ac-ft
30.0 min.	4.1 in/hr	162.4 cfs	1800 sec.	292,248 cf	104,400 cf	187,848 cf	4.31 ac-ft
35.0 min.	3.7 in/hr	146.5 cfs	2100 sec.	307,692 cf	121,800 cf	185,892 cf	4.27 ac-ft
40.0 min.	3.5 in/hr	138.6 cfs	2400 sec.	332,640 cf	139,200 cf	193,440 cf	4.44 ac-ft
45.0 min.	3.2 in/hr	126.7 cfs	2700 sec.	342,144 cf	156,600 cf	185,544 cf	4.26 ac-ft
50.0 min.	3.0 in/hr	118.8 cfs	3000 sec.	356,400 cf	174,000 cf	182,400 cf	4.19 ac-ft
60.0 min.	2.6 in/hr	103.0 cfs	3600 sec.	370,656 cf	208,800 cf	161,856 cf	3.72 ac-ft
70.0 min.	2.4 in/hr	95.0 cfs	4200 sec.	399,168 cf	243,600 cf	155,568 cf	3.57 ac-ft
80.0 min.	2.2 in/hr	87.1 cfs	4800 sec.	418,176 cf	278,400 cf	139,776 cf	3.21 ac-ft
90.0 min.	2.0 in/hr	79.2 cfs	5400 sec.	427,680 cf	313,200 cf	114,480 cf	2.63 ac-ft

Detention Basin Sizing:

Peak Volume	193,440 cf
Peak Volume	4.44 ac-ft

Retention	Basin Volume
#REF!	#REF! #REF!

Post-it® Fax Note 7671

Date 2/24 # of pages 1

To Kait

From [Signature]

Co. [Signature]

Phone #

Fax #