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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This report provides information and analysis on the physical condition of the dam as of the report date. Information and analysis are based on visual inspection of the dam by the performing organization. The examination of documents and the visual inspection of the Court Street Dam did not reveal conditions which constitute an immediate hazard to human life or property. However, the dam			

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has some deficiencies which require remedial action.

Under the conditions of flow exceeding approximately 25 percent of the PMF the capacity of the river channel itself will be exceeded. Therefore, the spillway is judged inadequate but with the understanding that this is not critical in view of the fact that the river channel will not pass the one-half PMF event without overtopping either. Hence, the hazard downstream is not significantly increased.

No stability analyses (either overturning or sliding) were deemed appropriate for the Court Street Dam since it is embedded into the underlying bedrock and the gates are below the channel bottom when open. Therefore, there are no sliding or overturning forces acting.

The dam has a number of problem areas which, if left uncorrected, have the potential for the development of hazardous conditions and must be corrected within one year. These areas are:

1. Correct concrete deterioration throughout the dam and along the east and west appurtenant structures.
2. Arrest or reduce leakage around the gates.
3. Develop and implement a detailed emergency operation-action plan and warning system.

GENESEE RIVER BASIN

COURT STREET DAM

MONROE COUNTY, NEW YORK
INVENTORY NO. N.Y. 683

**PHASE I INSPECTION REPORT
NATIONAL DAM SAFETY PROGRAM**



Prepared by
THOMSEN ASSOCIATES
105 CORONA AVE. GROTON, N.Y.

Prepared for
DEPARTMENT OF THE ARMY
NEW YORK DISTRICT, CORPS OF ENGINEERS
NEW YORK, NEW YORK

SEPTEMBER 1980

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PREFACE

This report is prepared under guidance contained in the Recommended Guidelines for Safety Inspection of Dams, for Phase I Investigations. Copies of these guidelines may be obtained from the Office of Chief of Engineers, Washington, D.C. 20314. The purpose of a Phase I Investigation is to identify expeditiously those dams which may pose hazards to human life or property. The assessment of the general condition of the dam is based upon available data and visual inspections. Detailed investigation, and analyses involving topographic mapping, subsurface investigations, testing, and detailed computational evaluations are beyond the scope of a Phase I Investigation, however, the investigation is intended to identify any need for such studies.

In reviewing this report, it should be realized that the reported condition of the dam is based on observations of field conditions at the time of inspection along with data available to the inspection team. In cases where the reservoir was lowered or drained prior to inspection, such action, while improving the stability and safety of the dam, removes the normal load on the structure and may obscure certain conditions which might otherwise be detectable if inspected under the normal operating environment of the structure.

It is important to note that the condition of a dam depends on numerous and constantly changing internal and external conditions, and is evolutionary in nature. It would be incorrect to assume that the present condition of the dam will continue to represent the condition of the dam at some point in the future. Only through frequent inspections can unsafe conditions be detected and only through continued care and maintenance can these conditions be prevented or corrected.

Phase I inspections are not intended to provide detailed hydrologic and hydraulic analyses. In accordance with the established Guidelines, the Spillway Test flood is based on the estimated "Probable Maximum Flood" for the region (greatest reasonably possible storm runoff), or fractions thereof. Because of the magnitude and rarity of such a storm event, a finding that a spillway will not pass the test flood should not be interpreted as necessarily posing a highly inadequate condition. The test flood provides a measure of relative spillway capacity and serves as an aide in determining the need for more detailed hydrologic and hydraulic studies, considering the size of the dam, its general condition and the downstream damage potential.

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10 Bent L. / Thomesen
Gary L. Wood

6 PHASE I INSPECTION REPORT
NATIONAL DAM SAFETY PROGRAM
COURT STREET DAM (Inventory Number
E-D-NO. N.Y. 683 NY683)
MONROE COUNTY, NEW YORK
Phase I Inspection Reports
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PHASE I INSPECTION REPORT
NATIONAL DAM SAFETY PROGRAM

NAME OF DAM: Court Street Dam
I. D. No. NY-683

STATE LOCATED: New York

COUNTY LOCATED: Monroe

WATERSHED: Genesee River

STREAM: Genesee River

DATES OF INSPECTION: June 12, June 27, July 15, 1980

ASSESSMENT

The examination of documents and the visual inspection of the Court Street Dam did not reveal conditions which constitute an immediate hazard to human life or property. However, the dam has some deficiencies which require remedial action.

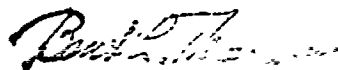
Under the conditions of flow exceeding approximately 25 percent of the PMF the capacity of the river channel itself will be exceeded. Therefore, the spillway is judged inadequate but with the understanding that this is not critical in view of the fact that the river channel will not pass the one-half PMF event without overtopping either. Hence, the hazard downstream is not significantly increased.

No stability analyses (either overturning or sliding) were deemed appropriate for the Court Street Dam since it is embedded into the underlying bedrock and the gates are below the channel bottom when open. Therefore, there are no sliding or overturning forces acting.

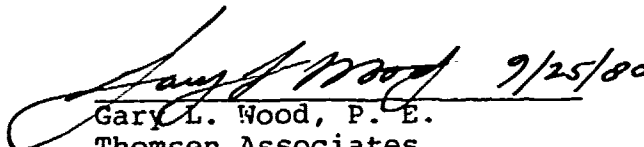
The dam has a number of problem areas which, if left uncorrected, have the potential for the development of hazardous

conditions and must be corrected within one year. These areas are:

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2. Arrest or reduce leakage around the gates.
3. Develop and implement a detailed emergency operation-action plan and warning system.

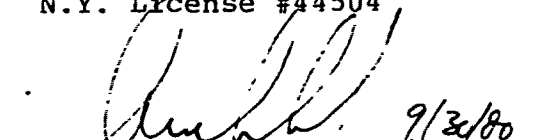


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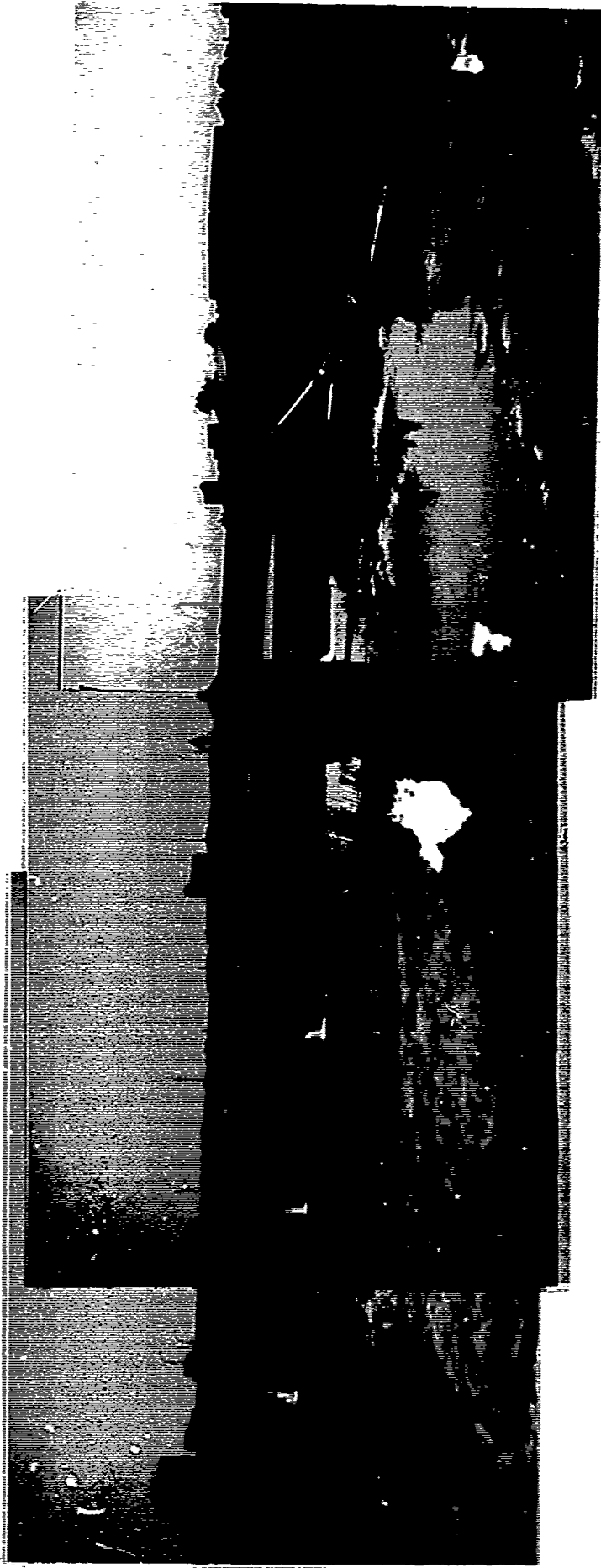


Gary L. Wood, P. E.
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APPROVED BY



Colonel W. M. Smith, Jr.
New York District Engineer



Panoramic View of
COURT STREET DAM

PHASE I INSPECTION REPORT
NATIONAL DAM SAFETY PROGRAM
COURT STREET DAM
I.D. NO. N.Y. - 683

MONROE COUNTY, NEW YORK

SECTION 1: PROJECT INFORMATION

1.1 GENERAL

a. Authority

The Phase I inspection reported herein was authorized by the Department of the Army, New York District, Corps of Engineers, to fulfill the requirements of the National Dam Inspection Act, Public Law 92-367.

b. Purpose of Inspection

This inspection was conducted to evaluate the existing conditions of the dam, to identify deficiencies and hazardous conditions, to determine if they constitute hazards to human life and property, and to recommend remedial measures where necessary.

1.2 DESCRIPTION OF PROJECT

a. Description of the Dam and Appurtenant Structures

The Court Street Dam consists primarily of 4 steel radial overflow gates, each with a maximum crest elevation of 513.1 (BCD-Barge Canal Datum). Proceeding from east to west, the gates have the following approximate widths:

- Gate #1 - 53 feet
- Gate #2 - 53 feet
- Gate #3 - 110 feet
- Gate #4 - 110 feet

Concrete piers separate the gates. There is an operating house on the pier between gates 1 and 2, and another operating house on the pier between gates 3 and 4.

The gates are supported and their levels are controlled by water pressure. A system of valves and chambers in the piers beneath the operating houses controls the water transmitted beneath the gates. For cleaning and inspection, the gates are supported in their full upright position by props.

Near the east end and upstream of the dam, there is a concrete wall equipped with 4 vertical gates. These gates are used by Rochester Gas and Electric to control a relatively small amount of flow in a channel running parallel and along the east bank of the Genesee River. This water, after being used for cooling of the city library, is returned to the Genesee River.

At the west end of the dam, Rochester Gas and Electric maintains a hydroelectric powerhouse. The intakes for this powerhouse are located just upstream of the dam. Water leaving the powerhouse flows in a channel parallel to the Genesee River, and rejoins the river north (downstream) of Court Street.

b. Location

The dam is located on the Genesee River, just south of the Court Street Bridge in the City of Rochester, New York.

c. Size Classification

The Court Street Dam has a head of approximately 19 feet.

Although the storage of the dam could not be computed, it was estimated to be approximately 3,000 acre-feet (based on a length of 3 1/2 miles, an average width of 470 feet, and an average depth of 15 feet). Therefore, the dam is classified as intermediate size.

d. Hazard Classification

The dam is classified "high" hazard because of downstream structures and the potential impact on navigation on the pool behind the dam and the Barge Canal which it feeds.

e. Ownership

The Court Street Dam is owned by the New York State Department of Transportation, Waterways Maintenance Subdivision. The controlling office is located near Rochester, New York.

New York State Department of Transportation
Region 4
Canals and Waterways
Jefferson Road
Rochester, New York
Mr. Clarence Burkwit
716-442-8550

f. Purpose of the Dam

The primary purpose of the dam is to provide a navigation pool in the Genesee River and provide water supply to the Barge Canal. Secondary purposes are to provide hydroelectric power and to provide cooling water for the city library.

g. Design and Construction History

The present dam was constructed in about the year 1926.

h. Normal Operational Procedures

The water level behind the dam is maintained as nearly as possible to elevation 513.1 (BCD). Upstream gauge readings are recorded hourly.

1.3

PERTINENT DATA

a. <u>Drainage Area</u> (square miles)	2460+
b. <u>Elevations</u> (Barge Canal Datum)	
Maximum Height of the Gates	513.1
Top of Dam (also upstream channel walls)	518
Design Pool	513.1
Maximum Recorded Pool	516+
Streambed at Dam Centerline	494.5+
c. <u>Dam</u>	
Type	Radial Sector Gates
Length	375'
Height of Maximum Pool	19'+
Foundation	Seated in Rock

SECTION 2: ENGINEERING DATA

2.1 GEOTECHNICAL DATA

a. Geology

The Court Street Dam is situated on the Genesee River in the heart of Rochester, New York, in the Erie-Ontario Lowlands physiographic province.

Bedrock at this location consists of limestones and dolostones, with interbedded shales, of the Silurian Lockport and underlying Clinton Groups. For the purposes of a small study area these strata may be considered flatly-lying, non faulted and seismically stable.

Pleistocene glacial deposits consist of three main types. Glacial till deposited as ground moraine during advance of the Wisconsinan ice mantles bedrock and underlies most of the area. Upon retreat of the Ontarian ice lobe from this region and submersion of much of the area beneath proglacial Lake Iroquois, those areas so covered became the lake floor and reflect this in their present level to gently rolling topography and fine-grained, lake-laid substrata. Lastly, drainage channels have been filled with granular outwash and alluvium associated with final glacial downwasting.

b. Subsurface Investigation

No records of subsurface investigation were available. Based upon the available plans and the site characteristics, it appears that the structure is founded on rock.

2.2 DESIGN/CONSTRUCTION RECORDS

Plans dated 1925 and 1926, and identified as "Rochester Gas and Electric, Proposed Location for Sector Type Control Gates at Court Street, Barge Canal Harbor" show the existing dam as it presently exists. Selected drawings are included in Appendix D.

2.3 OPERATION RECORDS

This site has an attendant on a continuous basis. Upstream water elevation readings are recorded hourly throughout the year. This level is maintained as nearly as possible to elevation 513.1 (BCD).

2.4 EVALUATION OF DATA

The data presented in this report was obtained during the site inspections and from the files of the New York State Department of Transportation. The information is considered adequate for Phase I inspection purposes.

SECTION 3: VISUAL INSPECTION

3.1 FINDINGS

a. General

Visual inspections of the dam and appurtenant structures were conducted on June 12, 1980, June 27, 1980, and July 15, 1980. The weather was generally fair. The upstream water elevation was approximately 513.1 (BCD) during all three inspections.

b. Dam

During the first inspection, the gates were in a normal operating condition with flow over the top and the chamber below flooded. The general condition of the concrete piers and operating houses between the gates, plus the abutments, were noted to be somewhat deteriorated. There was also some leakage noted around the gates which is the result of poorly maintained seals. These deficiencies are documented in the photographs attached as Appendix A.

The subsequent inspections were made at dates when the gates were propped in the open position for routine cleaning and maintenance (gates 1 and 2 were inspected on June 27, and the remaining gates were inspected on July 15). At this time it was possible to enter the gate recess chamber and observe the condition of the gate structures. They were found to be clean but poorly painted. There is however, little significant deterioration. It is reported that this cleaning is a routine annual operation.

These gates are operated by flooding or draining the chambers under the gates. While the system was not seen in operation, the fact that the gates were operated between visits attests to their satisfactory operating condition

c. East and West Appurtenant Structures

Concrete deterioration was noted along the east (wall, vertical gates, and channel) and west (powerhouse, intakes, and exit channel) appurtenant structures.

d. Upstream and downstream channels

The conditions of the upstream and downstream river channels appeared to be satisfactory.

3.2

EVALUATION OF OBSERVATIONS

The following deficiencies were noted:

- 1) Concrete deterioration throughout the dam
- 2) Leakage around the gates
- 3) Concrete deterioration along the east and west appurtenant structures.

SECTION 4: OPERATION AND MAINTENANCE PROCEDURES

4.1 PROCEDURE

Normal practice is to maintain the upstream water elevation as nearly as possible to elevation 513.1 (BCD). This is accomplished by manual operation and the dam is attended on an around-the-clock basis for this purpose. Records of the actual water stages are maintained by the New York State Department of Transportation.

The operation of the auxiliary gates along both sides of the upstream channel is controlled by Rochester Gas and Electric Corporation as previously noted, and their plan of operation (if any) was not considered significant to this investigation.

4.2 MAINTENANCE OF DAM

The dam is maintained by the New York State Department of Transportation. All of the gates are secured in the fully extended condition each year and the underlying recess chambers as well as the gate structures are cleaned and inspected. However, increased maintenance is required to correct concrete deterioration, and to arrest or reduce leakage around the gates.

4.3 MAINTENANCE OF EAST AND WEST APPURTENANT STRUCTURES

The east (wall, vertical gates, and channel) and west (powerhouse, intakes, and exit channel) appurtenant structures are maintained by Rochester Gas and Electric. Increased maintenance is required to correct concrete deterioration.

4.4 WARNING SYSTEM IN EFFECT

No apparent warning system is present.

4.5 EVALUATION

Additional maintenance is required to correct concrete deterioration of the concrete portions of the dam, and along the east and west appurtenant structures. In addition, leakage around the gates should be arrested or reduced, and a detailed emergency warning system should be developed.

SECTION 5: HYDROLOGIC/HYDRAULIC

5.1 DRAINAGE AREA CHARACTERISTICS

The major portion of the Genesee River basin is located in the western part of New York and it has a total drainage area of 2479 square miles. The drainage area above the Court Street Dam is approximately 2460 square miles, of which about 1075 square miles lies upstream of the Mount Morris Dam which was built and is operated for flood control by the Army Corps of Engineers. The Genesee River has a total length of about 157 river miles. It rises in the Allegheny Mountains in Potter County, Pennsylvania at an elevation of about 2400 feet, flows generally northwest to Houghton, and then generally northeast to its mouth on Lake Ontario, at an elevation of approximately 247 feet. The topography of the basin upstream of the Mount Morris Dam is steep and rugged, as compared to gently rolling terrain downstream of this dam. In Letchworth State Park, just upstream of Mount Morris Dam, the river elevation drops from 1080 feet to 768 feet, over three successive falls, flowing through a deep gorge cut in rock. The river flows through flat alluvial plains from the Village of Mount Morris to Rochester. The large tributaries to the Genesee River which enter below the Mount Morris dam are Canaseraga Creek, Honeoye Creek, Oatka Creek, Black Creek, and Conesus Creek.

5.2 ANALYSIS CRITERIA

The hydrologic analysis of this dam was performed using the Corps of Engineers HEC-1 computer program, Dam Safety Version. The spillway design flood selected for analysis was the Probable Maximum Flood (PMF) in accordance with the Recommended Guidelines of the U.S. Army Corps of Engineers.

The hydrologic analysis was performed using the unit hydrograph in the Genesee River and its major tributaries. The flood hydrographs were then routed downstream by the Modified Puls method and the Muskingum method.

The hydrologic model for the Genesee River was obtained from the U.S. Army Corps of Engineers, Buffalo District. The model, consisting of 6 hour unit hydrographs in the Genesee River at the Mount Morris Dam and its major tributaries in the lower basin, and the Muskingum routing coefficients from the outlet of the dam to the Rochester gauge in the Genesee River; was developed by the Corps of Engineers. This model was adopted for the hydrologic analysis of the Court Street Dam with minor adjustments. Unit hydrographs and routing coefficients were developed using the data from actual storms. Synthetic unit hydrographs were developed in the streams where there was lack of actual data.

The Probable Maximum Flood (PMF) was developed from the Probable Maximum Precipitation (PMP). Hydrometeorological Report No. 33 was used to obtain PMP values. The PMF hydrograph at Court Street dam was developed for the following 2 cases:

1. The Mount Morris Reservoir level at the spillway crest (elevation 760), and the Probable maximum precipitation applied to each subarea used in the analysis.
2. The Mount Morris Reservoir level at the conservation pool level (elevation 593), and the probable maximum precipitation applied to the center of the total drainage area.

Both analyses were made assuming the nine conduits in the outlet works as inoperative. The resulting peak inflows were:

<u>Case</u>	<u>1/2 PMF (cfs)</u>	<u>PMF (cfs)</u>
1	231,110	472,967
2	101,087	208,074

5.3 SPILLWAY CAPACITY

The dam has four sector gates and is a run-of-river structure. The gates are kept raised during the navigation season to maintain the elevation of the New York State Barge Canal (approximately 513.1 feet). The spillway is divided into four spans with a gate in each span. Two spans have lengths of 110 feet each and the other two have lengths of 54 feet each. A discharge coefficient of 3.1 was used to compute the discharge capacity of the spillway, with the gates assumed to be in the lowered position (i.e. maximum flow configuration). Under these conditions, the calculated capacity of the gates is 51,100 cfs with a stage at elevation 516 which is equivalent to the top of the channel sidewalls. Beyond this depth, the concept of weir flow is not applicable.

5.4 RESERVOIR CAPACITY

The reservoir storage above the top of the dam is not applicable. The reservoir elevation is regulated by raising and lowering the gates. The effective storage is the storage in the channel of the Genesee River which extends several miles above the dam with a channel width of 250 feet to 450 feet.

5.5 FLOODS OF RECORD

The maximum discharge recorded at the U.S.G.S. gauging station at Rochester, approximately 2.5 miles upstream of the dam, was 48,300 cfs in March of 1916. The elevation of the flood water was 519.15. Since the construction of the Mount Morris Dam in 1952, the flows have been regulated to prevent flooding in the lower basin. A discharge of 29,600 cfs was recorded at the gauge in June 1972 while the peak inflow to the Mount Morris reservoir was estimated at 91,350 cfs.

5.6 OVERTOPPING POTENTIAL

The hydrologic analyses were based upon the condition of having all gates completely lowered. In such a situation, the concept of overtopping the dam, per se, becomes meaningless. However, it is noteworthy that the top of channel walls would be overtopped by all flows in excess of approximately 25 percent of the PMF. The depth of this overtopping could not be calculated because of the inapplicability of the calculation procedure as described in Section 5.3.

5.7 EVALUATION

Under the conditions of flow exceeding approximately 25 percent of the PMF the capacity of the river channel itself will be exceeded. Therefore, the spillway is judged inadequate but with the understanding that this is not critical in view of the fact that the river channel will not pass the one-half PMF event either without overtopping. Hence, the hazard downstream would not be significantly increased by overtopping of the dam.

SECTION 6: STRUCTURAL STABILITY

6.1 EVALUATION OF STRUCTURAL STABILITY

a. Visual Observations

No visible evidence of structural instability was noted. The horizontal and vertical alignments, abutments, water passages, and joints in the concrete work all appeared to be satisfactory. The concrete deterioration and leakage noted in the visual inspection has not yet affected the structural stability.

b. Stability Evaluation

No stability analyses (either overturning or sliding) were deemed appropriate for the Court Street Dam since the gate chambers are embedded into the underlying bedrock. Therefore, there are no sliding or overturning forces acting on the structure when the gates are open (except for the narrow piers located between gates).

SECTION 7: ASSESSMENT/RECOMMENDATIONS

7.1 ASSESSMENT

a. Safety

The Phase I inspection of the Court Street Dam did not reveal conditions which constitute an immediate hazard to human life or property. However, increased maintenance is required to correct concrete deterioration and to arrest or reduce leakage around the gates.

Since the spillway does not have sufficient discharge capacity for passing one-half the PMF, it is considered to be inadequate. However, this is not considered to be a serious deficiency since the river channel will also be exceeded and there is no increased hazard downstream caused by spillway limitations.

During periods of unusually heavy precipitation and high runoff occurring over the watershed, continuous surveillance should be provided both at the dam and in the downstream areas to warn of high floodwater conditions. Such surveillance procedures, and such other measures as may be deemed necessary should be developed, documented and placed in readiness for future use as part of a detailed emergency operation-action plan. A warning system should also be developed and implemented.

b. Adequacy of Information

The information available for preparation of the report is considered adequate for a Phase I investigation.

c. Necessity for Additional Investigations

No additional investigations are deemed necessary at this time.

d. Urgency

The deficiencies noted in this investigation should be corrected within twelve (12) months of the date of notification of the owner.

7.2

RECOMMENDED MEASURES

The following actions should be undertaken:

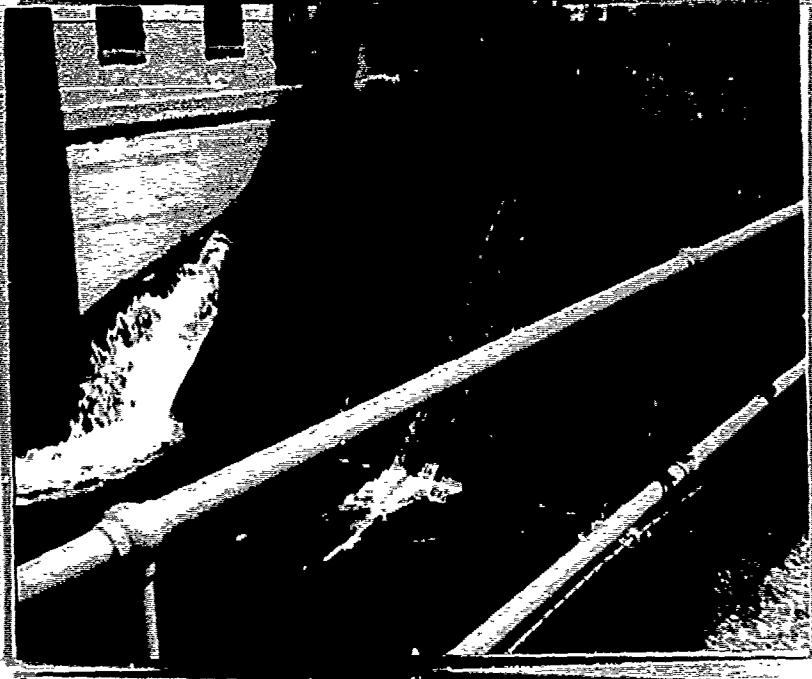
- a) Correct concrete deterioration throughout the dam and along the east and west appurtenant structures.
- b) Arrest or reduce leakage around the gates.
- c) Develop and implement a detailed emergency operation-action plan and warning system.

APPENDIX A

PHOTOGRAPHS



Gate #1;
NOTE: Concrete deterioration
and leakage

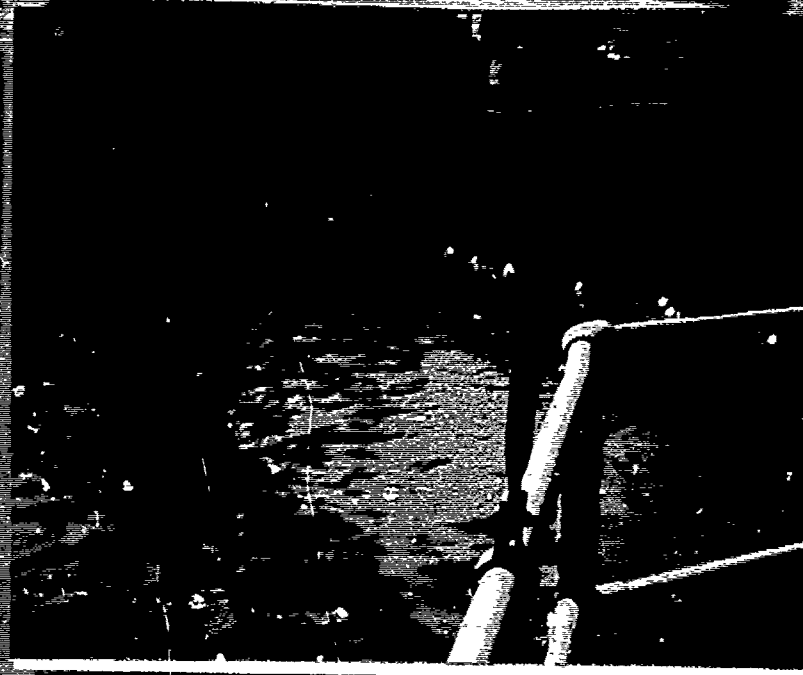


Gate #2;
NOTE: Leakage



Gate #3;
NOTE: Leakage

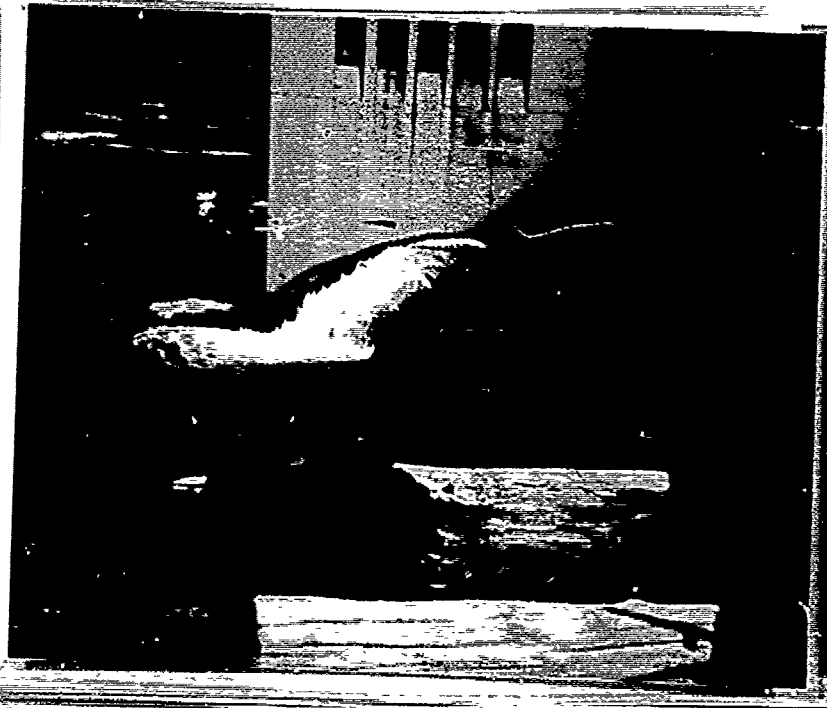
Upstream of Gate #2;
NOTE: Concrete deterioration



Upstream of Gate #1;
NOTE: Concrete deterioration



Gate #4;
NOTE: Leakage



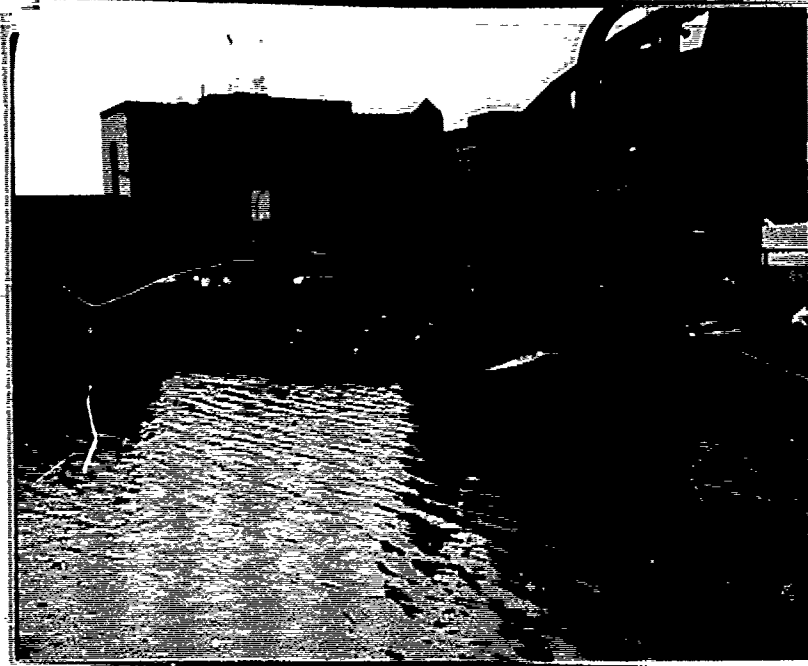
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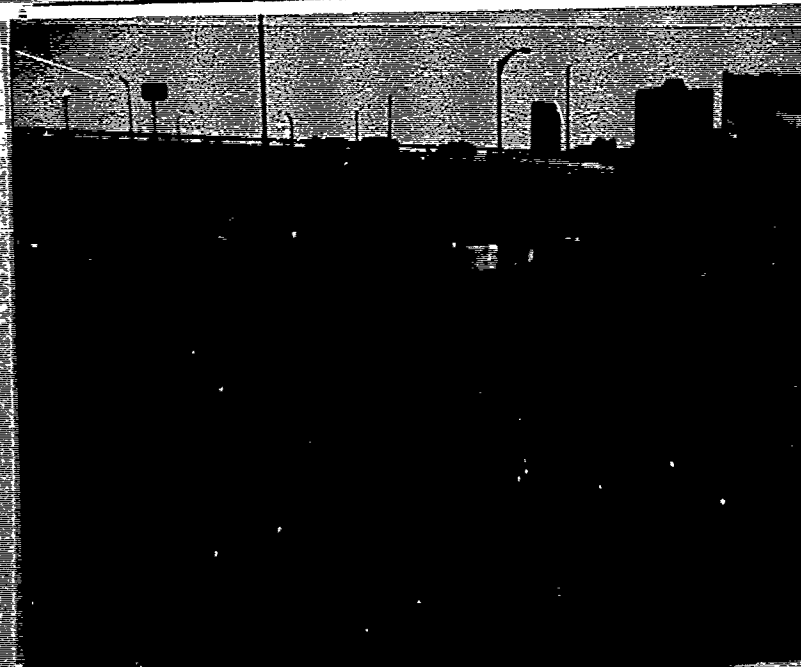
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Upstream of Gate #3;
NOTE: Concrete deterioration



Upstream of Gate #4

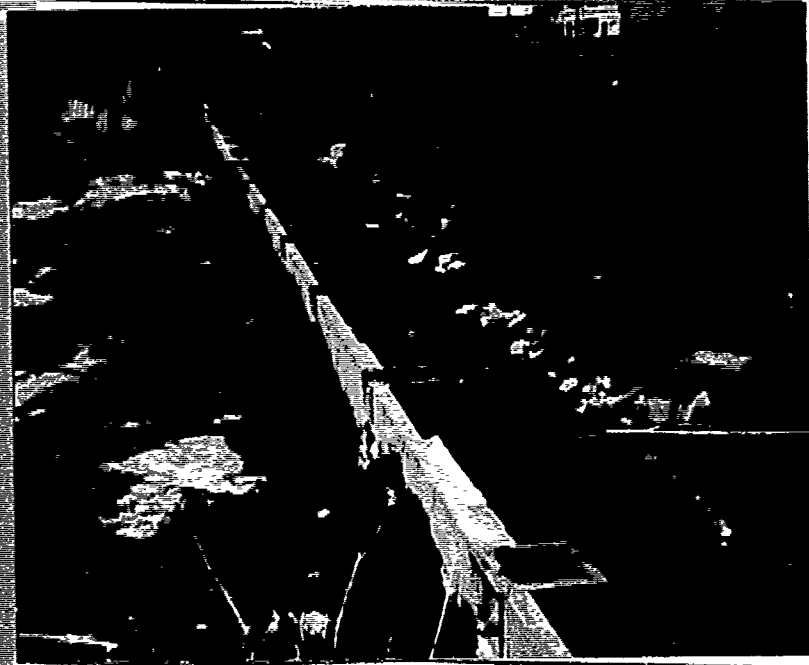


Gates east and upstream of
Dam

Powerhouse intakes, west and
upstream of Dam



Channel east of Dam, facing
downstream

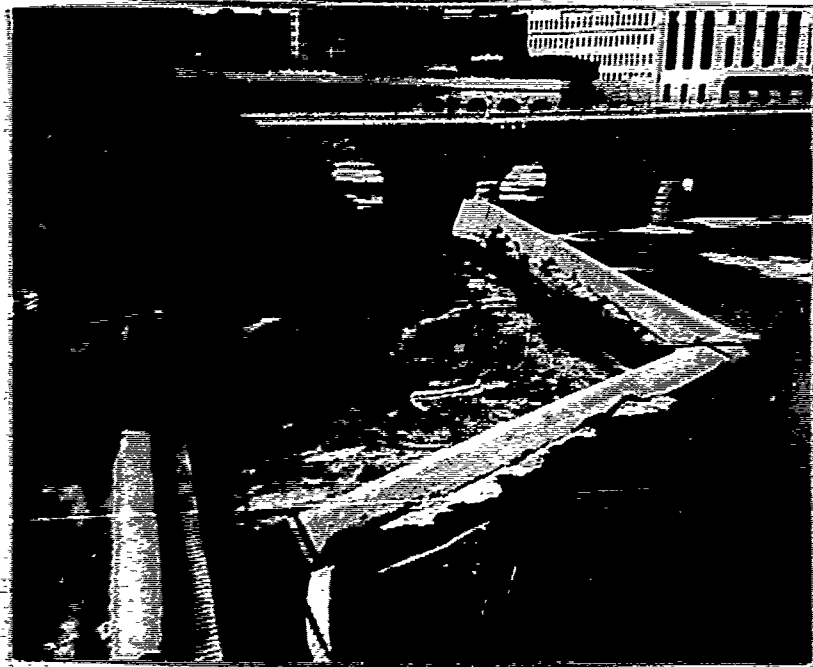


Channel east of Dam, facing
upstream





Powerhouse exit channel,
facing upstream



Powerhouse exit channel,
facing downstream



APPENDIX B

VISUAL INSPECTION CHECKLIST

THOMSEN ASSOCIATES
CONSULTING GEOTECHNICAL ENGINEERS & GEOLOGISTS

VISUAL INSPECTION CHECKLIST

1) Basic Data

a. General

Name of Dam COURT STREET DAM
I.D. # 40B-73 DEC. Dam No. 683
River Basin GENESEE RIVER
Location: Town ROCHESTER County MONROE
U.S.G.S. Quadrangle ROCHESTER EAST
Stream Name GENESEE RIVER
Tributary of LAKE ONTARIO
Latitude (N) 43° 9' Longitude (W) 170° 36' 30"
Type of Dam 4 GATES
Hazard Category HIGH 7/15/80 (GATES 301)
Date(s) of Inspection 6/12/80, 6/27/80 (GATES 1 & 2)
Weather Conditions SUNNY
Reservoir Level at Time of Inspection 513.1
Tailwater Level at Time of Inspection BELOW ROCK (≈ 494.5)

b. Inspection Personnel RAY TRAYER (TA)
PICK WOJOT (M&J)

c. Persons Contacted (Including Address & Phone No.)
CLARENCE BUCKHIT, NYS DOT (716-442-8550)
DICK BARLEY, NYS DOT (716-442-8550)
RAAT DAM 325-4882

d. History:
Date Constructed 1926 Date(s) Reconstructed _____
Designer R60E
Constructed by R60E
Owner PRESENTLY NYS DOT

e. Seismic Zone 3

THOMSEN ASSOCIATES
CONSULTING GEOTECHNICAL ENGINEERS & GEOLOGISTS

VISUAL INSPECTION CHECKLIST

2) Embankment

a. Characteristics

- 1) Embankment Material CONCRETE & METAL DAM
- 2) Cutoff Type NONE
- 3) Impervious Core N.A.
- 4) Internal Drainage System NONE
- 5) Miscellaneous _____

b. Crest

- 1) Vertical Alignment GOOD
- 2) Horizontal Alignment GOOD
- 3) Surface Cracks NONE NOTED
- 4) Miscellaneous _____

c. Upstream Slope

- 1) Slope (Estimate) (V:H) N.A.
- 2) Undesirable Growth or Debris, Animal Burrows N.A.
- 3) Sloughing, Subsidence or Depressions N.A.

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CONSULTING GEOTECHNICAL ENGINEERS & GEOLOGISTS

VISUAL INSPECTION CHECKLIST

4) Slope Protection N.A.

5) Surface Cracks or Movement at Toe N.A.

d. Downstream Slope

1) Slope (Estimate - V:H) N.A.

2) Undesirable Growth or Debris, Animal Burrows N.A.

3) Sloughing, Subsidence or Depressions N.A.

4) Surface Cracks or Movement at Toe N.A.

5) Seepage UNOBSERVABLE

6) External Drainage System (Ditches, Trenches; Blanket)
N.A.

7) Condition Around Outlet Structure N.A.

8) Seepage Beyond Toe N.A.

e. Abutments-Embankment Contact

THOMSEN ASSOCIATES
CONSULTING GEOTECHNICAL ENGINEERS & GEOLOGISTS

VISUAL INSPECTION CHECKLIST

1) Erosion at Contact NONE NOTED

2) Seepage Along Contract NONE NOTED

3) Drainage System

a. Description of System N.A.

b. Condition of System N.A.

c. Discharge from Drainage System N.A.

4) Instrumentation (Mumentation/Surveys, Observation Wells, Weirs, Piezometers, Etc.)

WATER LEVEL AND GATE LEVEL
GAUGES IN OPERATING HOUSE.

WATER LEVEL GAUGES ARE OPERATED
BY PLANTS.

GAUGES READ HOURLY.

THOMSEN ASSOCIATES
CONSULTING GEOTECHNICAL ENGINEERS & GEOLOGISTS

VISUAL INSPECTION CHECKLIST

5) Reservoir

- a. Slopes GENERALLY GOOD
- b. Sedimentation UNOBSERVABLE
- c. Unusual Conditions Which Affect Dam LAKE TREES
PERIODICALLY REMOVED

6) Area Downstream of Dam

- a. Downstream Hazard (No. of Homes, Highways, etc.) URBAN AREA
- b. Seepage, Unusual Growth NONE NOTED
- c. Evidence of Movement Beyond Toe of Dam NONE
- d. Condition of Downstream Channel GOOD

7) Spillway(s) (Including Discharge Conveyance Channel)

- a. General SPILLWAY IS SPILLING OVER
GATES
- b. Condition of Service Spillway APPEARS GOOD

THOMSEN ASSOCIATES
CONSULTING GEOTECHNICAL ENGINEERS & GEOLOGISTS

VISUAL INSPECTION CHECKLIST

c. Condition of Auxiliary Spillway N.A.

d. Condition of Discharge Conveyance Channel Good

8) Reservoir Drain/Outlet N.A.

Type: Pipe _____ Conduit _____ Other _____

Material: Concrete _____ Metal _____ Other _____

Size: _____ Length _____

Invert Elevations: Entrance _____ Exit _____

Physical Condition (Describe): _____ Unobservable _____

Material: _____

Joints: _____ Alignment _____

Structural Integrity: _____

Hydraulic Capability: _____

Means of Control: Gate _____ Valve _____ Uncontrolled _____

Operation: Operable _____ Inoperable _____ Other _____

Present Condition (Describe): _____

THOMSEN ASSOCIATES

CONSULTING GEOTECHNICAL ENGINEERS

9) Structural

a. Concrete Surfaces SOME DETRIORATION

b. Structural Cracking NONE NOTED

c. Movement - Horizontal & Vertical Alignment (Settlement)
NONE NOTED

d. Junctions with Abutments or Embankments
ALL ARE GOOD

e. Drains - Foundation, Joint, Face N.A.

f. Water Passages, Conduits, Sluices GENERALLY GOOD

g. Seepage or Leakage SOME NOTED BENEATH
GATES

THOMSEN ASSOCIATES

CONSULTING GEOTECHNICAL ENGINEERS & GEOLOGISTS

h. Joints - Construction, etc. APPEAR GOOD

i. Foundation UNOBSERVABLE

j. Abutments APPEAR GOOD

k. Control Gates APPEAR GOOD

l. Approach & Outlet Channels GOOD

m. Energy Dissipators (Plunge Pool, etc.) N.A.

n. Intake Structures ALL VALVES OPERATIONAL

o. Stability _____

p. Miscellaneous _____

APPENDIX C

HYDROLOGIC/HYDRAULIC: ENGINEERING DATA AND COMPUTATIONS

THOMSEN ASSOCIATES

CONSULTING ENGINEERS

CHECK LIST FOR DAMS HYDROLOGIC AND HYDRAULIC ENGINEERING DATA

AREA-CAPACITY DATA:

(EVER
RECORDED)

	<u>Elevation</u> (ft.)	<u>Surface Area</u> (acres)	<u>Storage Capacity</u> (acre-ft.)
1) Top of Dam	<u>513.1</u>	<u>—</u>	<u>—</u>
2) Design High Water (Max. Design Pool)	<u>516 ±</u>	<u>—</u>	<u>—</u>
3) Auxiliary Spillway Crest	<u>N.A.</u>	<u>N.A.</u>	<u>N.A.</u>
4) Pool Level with Flashboards	<u>N.A.</u>	<u>N.A.</u>	<u>N.A.</u>
5) Service Spillway Crest	<u>N.A.</u>	<u>N.A.</u>	<u>N.A.</u>

DISCHARGES

	<u>Volume</u> (cfs)
1) Average Daily	<u>—</u>
2) Spillway @ Maximum High Water	<u>—</u>
3) Spillway @ Design High Water	<u>—</u>
4) Spillway @ Auxiliary Spillway Crest Elevation	<u>N.A.</u>
5) Low Level Outlet	<u>N.A.</u>
6) Total (of all facilities) @ Maximum High Water	<u>—</u>
7) Maximum Known Flood	<u>29,600</u>

THOMSEN ASSOCIATES

CONSULTING ENGINEERS

OUTLET STRUCTURES/EMERGENCY DRAWDOWN FACILITIES:

Type: Gate X Sluice _____ Conduit _____ Penstock _____

Shape: RADIAL SECTOR GATES

Size: APPROX. 15' HIGH, APPROX. 110' AND 53' WIDE

Elevations: Entrance Invert VARIABLE

Exit Invert APPROX. 494.5

Tailrace Channel: Elevation APPROX. 494.5

HYDROMETEROLOGICAL GAGES:

Type: FLOAT

Location: OPERATING HOUSES

Records:

Date - _____

Max. Reading - 516 ±

FLOOD WATER CONTROL SYSTEM:

Warning System: FULL-TIME OPERATOR (24 HR./DAY).

NO FORMAL WARNING SYSTEM.

Method of Controlled Releases (mechanisms):

THOMSEN ASSOCIATES

300 W. BELL ST. P.O. BOX 10000, DENVER, CO. 80202

CREST:

ELEVATION: 513.1

Type: GATES

Width: N.A.

Length: Approx. 325'

Spillover All GATES

Location _____

SPILLWAY:

PRINCIPAL

EMERGENCY

513.1

Elevation

N.A.

GATES

Type

Approx. 325'

Width

Type of Control

Uncontrolled

Controlled:

GATES

Type

(Flashboards; gate)

4

Number

2 @ 15' x 110', 2 @ 15' x 53'

Size/Length

Invert Material

Anticipated Length
of operating service

N.A.

Chute Length

N.A.

Height Between Spillway Crest
& Approach Channel Invert
(Weir Flow)



McFarland-Johnson Engineers, Inc.
 171 Front Street
 BINGHAMTON, NEW YORK 13905

JOB HYDROLOGIC STUDY DAM # 1170-3

SHEET NO _____ OF _____

CALCULATED BY _____ DATE _____

CHECKED BY _____ DATE _____

SCALE _____

STORAGE - OUTFLOW-ELEVATION RELATION FOR MT. MORRIS DAM

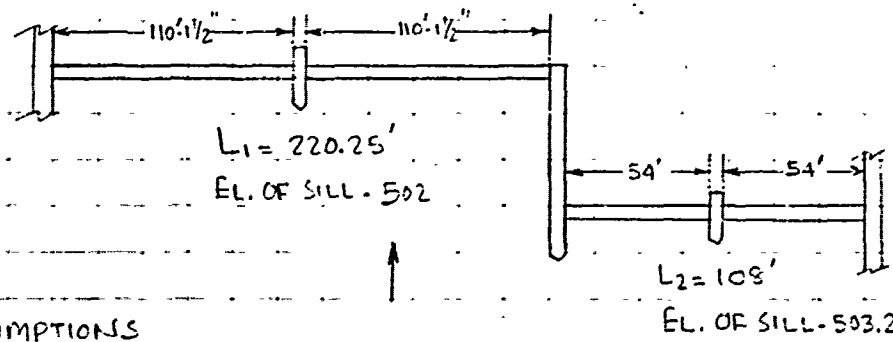
ELEV. IN FT. U.S.C & G.S.	STORAGE IN ACRE-FT.	OUTFLOW IN C.F.S.	REMARKS
598	4660	0	Conservation Pool
760	337,400	0	Spillway Crest
768	364,300	41,500	
772	377,700	78,500	
776	391,100	126,000	
780	405,000	182,000	
784	417,900	247,000	
788	431,300	318,000	
790	438,300	359,000	Top of dam
792	444,700	402,000	
794	451,400	447,000	

NOTE: Above information was obtained from Corps of Engineers, Buffalo District. Conduits in the outlet works were assumed inoperative. During the period of 15th June to 1st November, a pool elevation of 598, known as Conservation Pool is maintained. At other times run-of-the-river levels prevail in the reservoir. However, when river flows exceed the natural capacity of the downstream channel, floodwaters are stored.

McFarland-Johnson Engineers, Inc.
 171 Front Street
 BINGHAMTON, NEW YORK 13905

JOB HYDROLOGICAL STUDY Dam. # 1, 2, 3, 4
 SHEET NO. _____ OF _____
 CALCULATED BY P.S. DATE 5/10/77
 CHECKED BY _____ DATE _____
 SCALE _____

STAGE-DISCHARGE COMPUTATIONS (COURT STREET DAM)

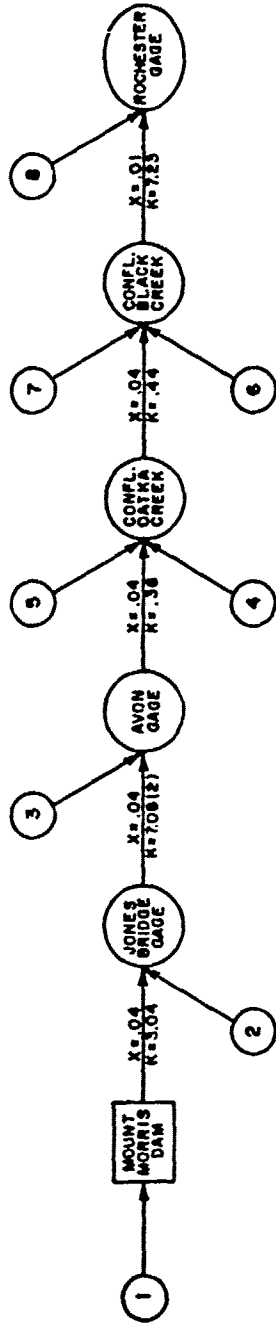


ASSUMPTIONS

- ① All four gates are lowered.
- ② Coefficient of discharge = 3.1
- ③ $Q = C L H^{3/2}$

ELEV.	H ₁	H ₁ ^{3/2}	H ₂	H ₂ ^{3/2}	L ₁	L ₂	Q ₁	Q ₂	TOTAL Q
502	0	0	0	0	220.25	108	0	0	0
503	1	1	0	0	"	"	693	0	693
504	2	2.83	.8	.71	"	"	1932	238	2170
505	3	5.19	1.8	2.41	"	"	3543	807	4350
506	4	8.0	2.8	4.68	"	"	5462	1566	7028
507	5	11.18	3.8	7.40	"	"	7633	2477	10,110
508	6	14.69	4.8	10.51	"	"	10,030	3515	13,545
509	7	18.52	5.8	13.97	"	"	12,645	4677	17,322
510	8	22.62	6.8	17.73	"	"	15,444	5936	21,380
511	9	27.0	7.8	21.78	"	"	18,435	7292	25,727
512	10	31.62	8.8	26.10	"	"	21,589	8738	30,327
513	11	36.48	9.8	30.68	"	"	24,909	10,271	35,180
514	12	41.57	10.8	35.5	"	"	28,383	11,885	40,268
515	13	46.87	11.8	40.53	"	"	32,002	13,569	45,571
516	14	52.38	12.8	45.79	"	"	35,764	15,320	51,084

**SCHEMATIC DIAGRAM OF HYDROLOGIC MODEL
WITH 6-HOUR UNITGRAPHS AND MUSKINGUM ROUTING COEFFICIENTS**



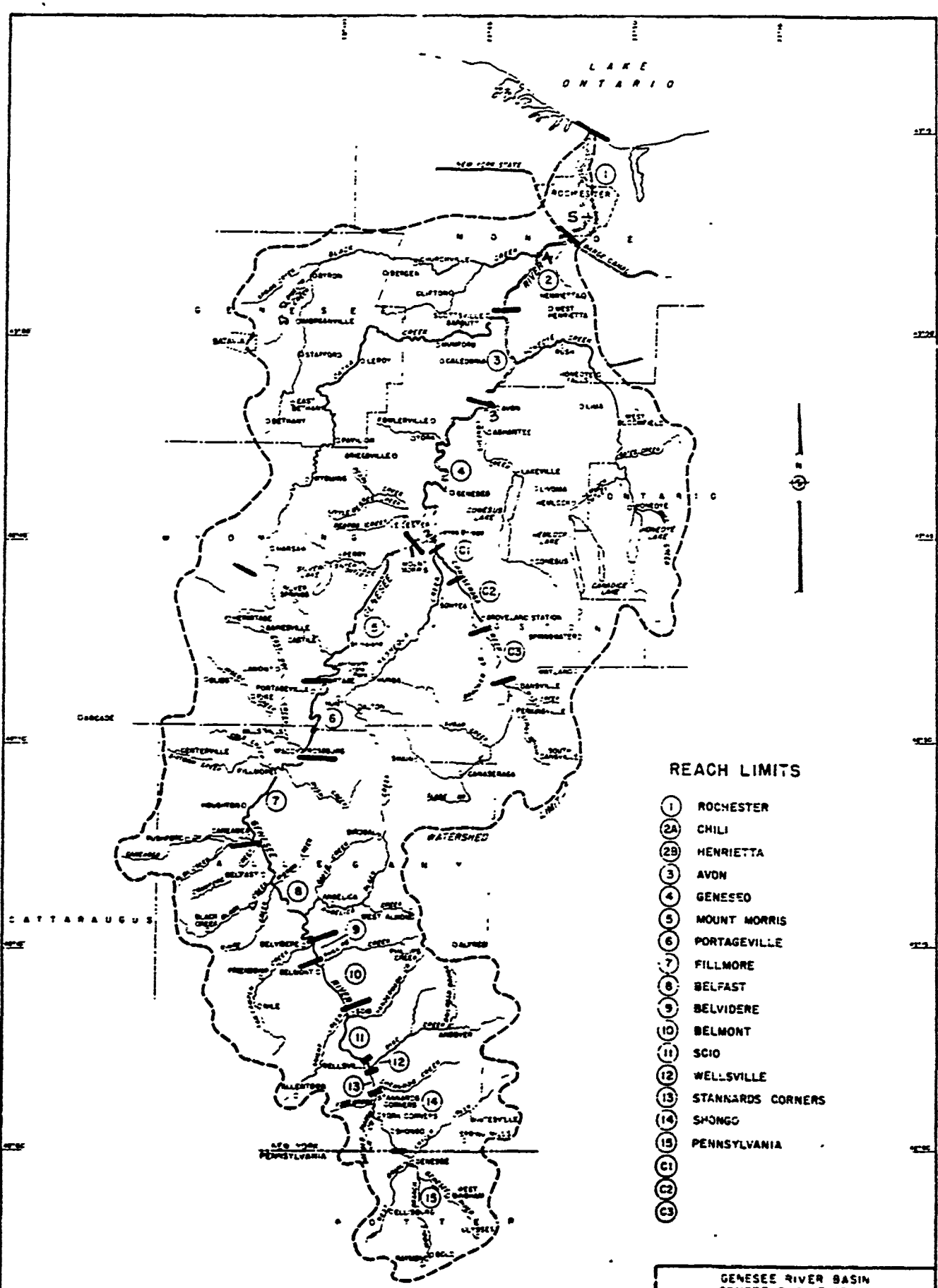
RUNOFF DISTRIBUTION IN THOUSANDS OF C.F.S.

HOURS	1 ABOVE DAM DA=1078 SQ. MI.	2 CANASERAGA DA=335 SQ. MI.	3 + 1B LOCAL DA=178 SQ. MI.	4 HONEOYE DA=260 SQ. MI.	5 CATTARAUGUS DA=215 SQ. MI.	6 LOCAL DA=71 SQ. MI.	7 BLACK DA=187 SQ. MI.	8 LOCAL DA=68 SQ. MI.
6	4.9	2.5	1.0	0.1	0.1	0.4	0.1	1.7
12	13.4	7.6	4.7	0.9	0.9	2.4	0.4	3.1
18	25.0	6.2	5.1	3.6	1.2	2.3	0.9	1.2
24	24.9	6.0	3.4	6.3	2.8	1.2	1.3	0.7
30	17.0	4.0	2.2	5.6	4.2	0.7	1.7	0.4
36	8.4	2.8	1.5	3.6	4.2	0.4	2.3	0.2
42	5.6	1.9	0.9	2.4	3.0	0.2	2.8	0.1
48	4.3	1.3	0.6	1.7	2.1	0.1	3.1	0.1
54	3.4	0.8	0.2	1.3	1.5	0.1	2.6	0.1
60	2.7	0.5	0.1	1.0	1.1	0.1	2.0	0.1
66	2.1	0.3	0.1	0.7	0.8	0.1	1.4	0.1
72	1.6	0.2	0.1	0.4	0.5	0.1	0.9	0.1
78	1.3	0.1	0.1	0.4	0.5	0.1	0.9	0.1
84	1.0	0.1	0.1	0.4	0.5	0.1	0.9	0.1

D.A. © COURT S.D. ADI
: 2460 7/19/61

GENESEE RIVER, MOUNT MORRIS, N. Y.
MOUNT MORRIS RESERVOIR
SCHEMATIC DIAGRAM
OF HYDROLOGIC MODEL

U.S. ARMY ENGINEER DISTRICT BUFFALO
PLATE 43



REACH LIMITS

- ① ROCHESTER
- ②A CHILI
- ②B HENRIETTA
- ③ AVON
- ④ GENESEO
- ⑤ MOUNT MORRIS
- ⑥ PORTAGEVILLE
- ⑦ FILLMORE
- ⑧ BELFAST
- ⑨ BELVIDERE
- ⑩ BELMONT
- ⑪ SCIO
- ⑫ WELLSVILLE
- ⑬ STANNARDS CORNERS
- ⑭ SHONGO
- ⑮ PENNSYLVANIA
- C1
- C2
- C3

SCALE IN MILES
 0 1 2 3 4

GENESEE RIVER BASIN
 COMPREHENSIVE STUDY
 NEW YORK AND PENNSYLVANIA
BASIN MAP
 U S ARMY ENGINEER DISTRICT, BUFFALO

PLATE E

U.S. GOVERNMENT PRINTING OFFICE: 1967 O 348-000

 FLOOD HYDROGRAPH PACKAGE (HEC-1)
 DAM SAFETY VERSION JULY 1975
 LAST MODIFICATION 26 Feb 79

GENESEE RIVER BASIN											
HYDROLOGIC-HYDRAULIC ANALYSIS OF SAFETY OF COURT STREET DAM											
RAILS OF PMF ROUTED THROUGH THE RESERVOIR											
1	A										
2	A										
3	A										
4	b	50	5	0	0	0	0	0	0	0	0
5	b1	5									
6	J	1	0	1							
7	J1	.2	.35	.5	.65	.8	1				
8	K	0	1	0	0	0	0	1			
9	K1	GENESEE RIVER INFLOW HYDROGRAPH AT JUNT MORRIS DAM									
10	M	1	-1	1075	0	1075	0	0	1	0	
11	P	0	22.5	52	65	73	84				
12	T	0	0	0	0	0	0	1	.1	0	0
13	U	14									
14	U1	4900	13400	23000	24900	17000	8400	5600	4300	3400	2700
15	U1	2100	1600	1300	1900						
16	X	-1	-.1	2							
17	K	1	2	0	0	0	0	1			
18	K1	ROUTING OF INFLOW HYDROGRAPH USING MODIFIED PULS METHOD									
19	Y	0	0	0	1	1					
20	Y1	1	0	0	0	0	0	337400			
21	Y2	4660	22500	50600	120000	337400	364300	377700	391100	405000	417900
22	Y2431300	438000	444700	451400							
23	Y3	0	0	0	0	0	41500	78500	126000	162000	247000
24	Y3518000	359000	402000	447000							
25	K	0	2	0	0	0	0	1	0	0	0
26	K1	CANASERAGA CREEK INFLOW HYDROGRAPH AT JONES BRIDGE GAGE									
27	M	1	-1	335	0	335	0	0	1	0	
28	P	0	22.1	73	83	93	103				
29	T	0	0	0	0	0	0	1	.1	0	0
30	U	11									
31	U1	2500	7800	8200	6000	4000	2800	1900	1300	800	500
32	U1	200									
33	X	-1	-.1	2							
34	K	2	2	0	0	0	0	1	0	0	0
35	K1	COMBINE OUTFLOW FROM JUNT MORRIS DAM AND CANASERAGA CREEK INFLOW									
36	K	1	3	0	0	0	0	1	0	0	0
37	K1	ROUTE COMBINE FLOWS TO AVON GAGE USING MUSKINGUM METHOD									
38	Y	0	0	0	0	1					
39	Y1	2	0	0	7.06	.04	0	0			
40	K	0	3	0	0	0	0	1	0	0	0
41	K1	LOCAL INFLOW HYDROGRAPH AT AVON GAGE									
42	M	1	-1	256	0	256	0	0	1	0	
43	P	0	22	77	87	97	107				
44	T	0	0	0	0	0	0	1	.1	0	0
45	U	10									
46	U1	1000	4700	5100	3400	2200	1500	900	500	200	100
47	X	-1	-.1	2							
48	K	2	3	0	0	0	0	1	0	0	0
49	K1	COMBINE FLOWS AT AVON GAGE									
50	K	1	4	0	0	0	0	1			

51	K1	ROUTE FLOWS TO CONFLUENCE OF BLACK CREEK BY LAGGING FLOWS									
52	I	0	0	0	0	1					
53	Y1	0	0	1	0	0	0	0	0	0	0
54	K	0	4	0	0	0	0	1	0	0	0
55	K1	HONEYCREEK CREEK INFLOW HYDROGRAPH									
56	M	1	-1	200	0	260	0	0	0	1	0
57	P	0	21.5	77	67	97	107				
58	I	0	0	0	0	0	0	1	.1	0	0
59	U	12									
60	U1	100	500	3000	6300	5600	3000	2400	1700	1300	1000
61	U1	700	400								
62	X	-1	-1	2							
63	K	0	4	0	0	0	0	1	0	0	0
64	K1	OATKA CREEK INFLOW HYDROGRAPH									
65	M	1	-1	215	0	215	0	0	0	1	0
66	P	0	21.8	78	88	98	108				
67	I	0	0	0	0	0	0	1	.1	0	0
68	U	12									
69	U1	100	400	1200	2800	4200	4200	3000	2100	1500	1100
70	U1	800	500								
71	X	-1	-1	2							
72	K	0	4	0	0	0	0	1	0	0	0
73	K1	LOCAL INFLOW HYDROGRAPH									
74	M	1	-1	71	0	71	0	0	0	1	0
75	P	0	21.5	92	102	113	124				
76	I	0	0	0	0	0	0	1	.1	0	0
77	U	8									
78	U1	400	2400	2300	1200	700	400	200	100		
79	X	-1.5	-1	2							
80	K	0	4	0	0	0	0	1	0	0	0
81	K1	BLACK CREEK INFLOW HYDROGRAPH									
82	M	1	-1	187	0	187	0	0	0	1	0
83	P	0	21.0	81	91	101	112				
84	I	0	0	0	0	0	0	1	.1	0	0
85	U	12									
86	U1	100	400	900	1300	1700	2300	2600	3100	2600	2000
87	U1	1400	900								
88	X	-1	-1	2							
89	K	5	4	0	0	0	0	1	0	0	0
90	K1	COMBINE FLOWS AT CONFLUENCE OF BLACK CREEK									
91	K	1	5	0	0	0	0	1	0	0	0
92	K1	ROUTE COMBINE FLOWS TO COURT STREET DAM OUTLET USING MUSKINGUM METHOD									
93	Y	0	0	0	1						
94	Y1	1	0	0	6.93	.01					
95	K	0	5	0	0	0	0	1	0	0	0
96	K1	LOCAL INFLOW HYDROGRAPH AT OUTLET OF COURT STREET DAM									
97	M	1	-1	61	0	61	0	0	0	1	0
98	P	0	21.5	94	104	116	126				
99	I	0	0	0	0	0	0	1	.1	0	0
100	U	8									



101	U1	1500	2900	1100	600	400	200	100	100		
102	A	-2	-1	2							
103	K	2	3	0	0	0	0	1	0		
104	K1	TOTAL EQUIPMENT AT COURT STREET DAM									
105	K	99									



PREVIEW OF SEQUENCE OF SIMPLIFIED NETWORK CALCULATIONS

RUNOFF HYDROGRAPH AT	1
RUNOFF HYDROGRAPH TO	2
RUNOFF HYDROGRAPH AT	2
COMBINE 2 HYDROGRAPHS AT	2
RUNOFF HYDROGRAPH TO	3
RUNOFF HYDROGRAPH AT	3
COMBINE 2 HYDROGRAPHS AT	3
RUNOFF HYDROGRAPH TO	4
RUNOFF HYDROGRAPH AT	4
RUNOFF HYDROGRAPH AT	4
RUNOFF HYDROGRAPH AT	4
RUNOFF HYDROGRAPH AT	4
COMBINE 5 HYDROGRAPHS AT	4
RUNOFF HYDROGRAPH TO	5
RUNOFF HYDROGRAPH AT	5
COMBINE 2 HYDROGRAPHS AT	5
END OF NETWORK	



 FLOOD HYDROGRAPH PACKAGE (HEC-1)
 DAM SAFETY VERSION JULY 1976
 LAST MODIFICATION 26 Feb 79

TIME OF EXECUTION 20-AUG-80 11:35:23

GENESEE RIVER BASIN
 HYDROLOGIC-HYDRAULIC ANALYSIS OF SAFETY OF COURT STREET DAM
 RATIOS OF PMS ROUTED THROUGH THE RESERVOIR

JOB SPECIFICATION

NU	NHR	NMIN	IDAY	IHR	IMIN	MEIRC	IPLT	IPRI	NSTAN
50	6	0	0	0	0	0	0	0	0
			JUPER	NMI	LROPI	TRACE			
			5	0	0	0			

MULTI-PLAN ANALYSES TO BE PERFORMED
 NPLAN= 1 NRTIO= 6 LRTIO= 1
 RTIOS= 0.20 0.35 0.50 0.65 0.80 1.00

SUB-AREA RUNOFF COMPUTATION

GENESEE RIVER INFLOW HYDROGRAPH AT MOUNT MORRIS DAM

ISTAQ	ICOMP	IECON	ITAPE	JPLI	JPRI	INAME	ISTAGE	IAUTO
1	0	0	0	0	0	1	0	0

HYDROGRAPH DATA

IHYD	IUNG	TAREA	SNAP	TKSVA	TRSPC	RATIO	ISNO	ISAME	LOCAL
1	-1	1075.00	0.00	1075.00	0.00	0.000	0	1	0

PRECIP DATA

SPFE	PMS	R6	R12	R24	R48	R72	R96
0.00	22.50	52.00	65.00	73.00	84.00	0.00	0.00

TRSPC COMPUTED BY THE PROGRAM IS 0.913

LOSS DATA

LROPT	STRKR	DLTKR	RTIOL	ERAIN	STRKS	RTIOK	STRIL	CNSTL	ALSMX	RTIMP
0	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.10	0.00	0.00

GIVEN UNIT GRAPH, NUHQ= 14

4900.	13400.	23000.	24900.	17000.	8400.	5600.	4300.	3400.	2700.
2100.	1600.	1300.	1000.						

UNIT GRAPH TOTALS 113000. CFS OR 0.98 INCHES OVER THE AREA

RECESSION DATA

STRIO=	-1.00	ORCSA=	-0.10	RTIOR=	2.00
--------	-------	--------	-------	--------	------

END-OF-PERIOD FLOW

MO,DA	HR,MM	PERIOD	RAIN	EXCS	LOSS	COMP Q	MO,DA	HR,MM	PERIOD	RAIN	EXCS	LOSS	COMP Q
1.01	6.00	1	0.10	0.00	0.10	1003.	1.07	12.00	26	0.00	0.00	0.00	15496.
1.01	12.00	2	0.40	0.00	0.40	936.	1.07	00	27	0.00	0.00	0.00	14458.

McFARLAND-JOHNSON ENGINEERS, INC.

1.01	18.00	3	1.01	0.70	0.91	4285.	1.08	0.00	28	0.00	0.00	0.00	13490.
1.02	0.00	4	0.15	0.00	0.15	10145.	1.08	6.00	29	0.00	0.00	0.00	12586.
1.02	6.00	5	0.00	0.00	0.00	17055.	1.08	12.00	30	0.00	0.00	0.00	11744.
1.02	12.00	6	2.07	2.07	0.00	23953.	1.08	18.00	31	0.00	0.00	0.00	10957.
1.02	18.00	7	10.00	10.00	0.60	90928.	1.09	0.00	32	0.00	0.00	0.00	10223.
1.03	0.00	8	0.99	0.39	0.60	192426.	1.09	6.00	33	0.00	0.00	0.00	9539.
1.03	6.00	9	0.00	0.00	0.00	293945.	1.09	12.00	34	0.00	0.00	0.00	8900.
1.03	12.00	10	0.00	0.00	0.00	299012.	1.09	18.00	35	0.00	0.00	0.00	8304.
1.03	18.00	11	0.00	0.00	0.00	201506.	1.10	0.00	36	0.00	0.00	0.00	7748.
1.04	0.00	12	0.00	0.00	0.00	105397.	1.10	6.00	37	0.00	0.00	0.00	7229.
1.04	6.00	13	0.00	0.00	0.00	70670.	1.10	12.00	38	0.00	0.00	0.00	6745.
1.04	12.00	14	0.00	0.00	0.00	54298.	1.10	18.00	39	0.00	0.00	0.00	6293.
1.04	18.00	15	0.00	0.00	0.00	42917.	1.11	0.00	40	0.00	0.00	0.00	5872.
1.05	0.00	16	0.00	0.00	0.00	34011.	1.11	6.00	41	0.00	0.00	0.00	5479.
1.05	6.00	17	0.00	0.00	0.00	23916.	1.11	12.00	42	0.00	0.00	0.00	5112.
1.05	12.00	18	0.00	0.00	0.00	26980.	1.11	18.00	43	0.00	0.00	0.00	4769.
1.05	18.00	19	0.00	0.00	0.00	25173.	1.12	0.00	44	0.00	0.00	0.00	4450.
1.06	0.00	20	0.00	0.00	0.00	23487.	1.12	6.00	45	0.00	0.00	0.00	4152.
1.06	6.00	21	0.00	0.00	0.00	21914.	1.12	12.00	46	0.00	0.00	0.00	3874.
1.06	12.00	22	0.00	0.00	0.00	20447.	1.12	18.00	47	0.00	0.00	0.00	3615.
1.06	18.00	23	0.00	0.00	0.00	19076.	1.13	0.00	48	0.00	0.00	0.00	3372.
1.07	0.00	24	0.00	0.00	0.00	17800.	1.13	6.00	49	0.00	0.00	0.00	3147.
1.07	6.00	25	0.00	0.00	0.00	16608.	1.13	12.00	50	0.00	0.00	0.00	2936.

SUM 17.25 13.29 3.96 1838290.
(438.)(337.)(101.)(52054.56)

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	299012.	296479.	235844.	120159.	1836321.
CMS	8467.	8395.	6078.	3403.	51999.
INCHES		2.57	8.16	12.48	15.89
MM		65.10	207.35	316.92	403.61
AC-FT		147014.	467789.	714994.	910572.
THOUS CU M		181339.	577010.	881931.	1123174.

HYDROGRAPH AT STA 1 FOR PLAN 1, R110 1

201.	187.	857.	2029.	3411.	5791.	18166.	38485.	58789.	59802.
40301.	21079.	14134.	10642.	8583.	802.	5783.	5396.	5035.	4697.
4383.	4069.	3810.	3500.	3322.	3099.	2892.	2698.	2517.	2349.
2191.	2045.	1908.	1780.	1661.	1550.	1446.	1349.	1259.	1174.
1096.	1022.	954.	890.	830.	775.	723.	674.	629.	587.

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	59802.	59296.	47169.	24032.	367264.
CMS	1693.	1679.	1336.	681.	10400.
INCHES		0.51	1.63	2.50	3.18
MM		13.03	41.47	63.38	80.72
AC-FT		29403.	93558.	142999.	182114.
THOUS CU M		36268.	115402.	176386.	224635.

HYDROGRAPH AT STA 1 FOR PLAN 1, R110 2

351.	328.	1500.	3551.	5969.	10134.	31825.	67349.	102861.	104654.
70527.	38889.	24734.	18973.	15021.	11904.	10121.	9443.	8811.	8221.
7670.	7156.	6077.	6230.	5813.	5424.	5060.	4721.	4405.	4110.
3835.	3578.	3339.	3115.	2906.	2712.	2530.	2361.	2205.	2055.
1918.	1789.	1609.	1558.	1453.	1356.	1265.	1180.	1101.	1028.

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	104654.	103768.	82545.	42050.	642712.
CMS	2963.	2938.	2337.	1191.	18200.
INCHES		0.90	2.80	4.37	5.50
MM		22.81	72.57	110.92	141.20
AC-FT		51455.	163720.	250248.	318700.
THOUS CU M		63409.	201953.	308070.	393111.

HYDROGRAPH AT STA 1 FOR PLAN 1, RTIO 3

502.	408.	2143.	5073.	8527.	14477.	45464.	96213.	146973.	149506.
100753.	52698.	35335.	27104.	21459.	17005.	14458.	13490.	12580.	11744.
10957.	10223.	9539.	8900.	8304.	7748.	7229.	6745.	6293.	5872.
5479.	5112.	4769.	4450.	4152.	3874.	3615.	3372.	3147.	2936.
2739.	2556.	2385.	2225.	2076.	1937.	1807.	1686.	1573.	1468.

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	149506.	148239.	117922.	60079.	918161.
CMS	4234.	4198.	3339.	1701.	25999.
INCHES		1.28	4.08	0.24	7.95
MM		32.56	103.67	158.46	201.81
AC-FT		73507.	233895.	357497.	455286.
THOUS CU M		90670.	288505.	440906.	561587.

HYDROGRAPH AT STA 1 FOR PLAN 1, RTIO 4

652.	600.	2705.	6594.	11056.	16820.	59103.	125077.	191065.	194358.
130979.	68508.	45935.	35235.	27896.	22107.	18796.	17537.	16362.	15267.
14244.	13290.	12400.	11570.	10795.	10072.	9396.	8768.	8181.	7633.
7122.	6645.	6200.	5785.	5398.	5036.	4699.	4384.	4091.	3817.
3501.	3323.	3100.	2893.	2699.	2518.	2349.	2192.	2045.	1908.

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	194358.	192711.	153290.	78103.	1193608.
CMS	5504.	5457.	4341.	2212.	33799.
INCHES		1.67	5.31	8.11	10.33
MM		42.36	134.79	206.00	262.35
AC-FT		95559.	304063.	464746.	591872.
THOUS CU M		117871.	375056.	532555.	730063.

HYDROGRAPH AT STA 1 FOR PLAN 1, RTIO 5

802.	749.	3420.	8116.	13644.	23103.	72742.	153941.	235156.	239210.
161205.	84317.	56536.	43367.	34334.	27209.	23133.	21584.	20138.	18790.
17531.	16357.	15202.	14240.	13286.	12397.	11506.	10792.	10069.	9395.
8760.	8179.	7031.	7120.	6643.	6198.	5783.	5396.	5035.	4697.
4383.	4089.	3816.	3560.	3322.	3099.	2892.	2698.	2517.	2349.

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	239210.	237183.	188675.	96127.	1469056.
CMS	6774.	6716.	5343.	2722.	41599.
INCHES		2.05	6.53	9.98	12.71
MM		52.13	165.88	253.54	322.89
AC-FT		117011.	374232.	571995.	728458.
THOUS CU M		145072.	461008.	705545.	898539.



1003. 730. 4205. 17055. 20953. 20928. 192420. 293945. 299014.
 201500. 105397. 70670. 14208. 14917. 34011. 28910. 20980. 25173. 23487.
 10957. 10243. 9539. 8900. 8304. 7740. 7249. 14458. 12587. 11744.
 5479. 5112. 4709. 4450. 4152. 3874. 3615. 3372. 0293. 5872. 2936.

HYDROGRAPH AT STA 1 FOR PLAN 1, RTIO 0
 10145. 17055. 20953. 20928. 192420. 293945. 299014.
 54208. 14208. 14917. 34011. 28910. 20980. 25173. 23487.
 17055. 14208. 14917. 34011. 28910. 20980. 25173. 23487.
 8900. 8304. 7740. 7249. 14458. 12587. 11744. 0293. 5872. 2936.

0-HOUR 24-HOUR 72-HOUR TOTAL VOLUME
 290479. 235844. 120159. 1836321.
 8395. 6078. 3403. 51999.
 2.57 8.10 12.48 15.89
 65.10 207.35 310.92 403.01
 147014. 467769. 714994. 910572.
 181339. 577010. 681932. 1123174.

HYDROGRAPH ROUTING
 ROUTING OF INFLUX HYDROGRAPH USING MODIFIED PULS METHOD

LSTA ICUMP IECUN ITAPE JPLF JPRT INAME ISIA GE IAUTO
 2 1 0 0 0 0 1 0 0
 CLUSS AVG IRES ISAME IOPI LPMP LSTRK
 0.0 0.00 1 1 0 0
 NSTPS RSIDL LAG AMSKK X ISK STORA ISPRAT
 1 0 0 0.00 0.000 0.000 0.000 337400. 0

STORAGE 4600.00 22500.00 120000.00 364300.00 377700.00 391100.00 405000.00 417900.00
 431300.00 430000.00 451400.00
 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
 318000.00 402000.00 470000.00 0.00 41500.00 78500.00 126000.00 182000.00 247000.00

STATION 2, PLAN 1, RTIO 1
 OUIFLO*
 157. 359. 559. 1933. 3409. 8150. 19322. 35544. 52056.
 50427. 26115. 10575. 13671. 10363. 8111. 6710. 5885. 5321.
 4889. 4209. 3921. 3655. 3409. 3180. 2907. 2768. 2583.
 2410. 2090. 1957. 1826. 1704. 1590. 1483. 1384. 1291.
 1205. 1049. 979. 852. 795. 742. 692. 646.

STOR
 337502. 337633. 338653. 339610. 342687. 349925. 360439. 368123.
 367533. 361160. 354328. 344117. 342657. 341753. 341215. 340849.
 340569. 310129. 339769. 339010. 339461. 339323. 339194. 339074.
 338902. 338657. 338009. 338504. 338431. 338362. 338297. 338237.
 338181. 338000. 337992. 337952. 337881. 337849. 337819.

STAGE
 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
|-----|------------|--------|--------|---------|---------|--------------|-----|-----|-----|
| | | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME | | | |
| | CFS | 52055. | 51242. | 42492. | 23715. | 366505. | | | |
| | CMS | 1474. | 1451. | 1203. | 672. | 10300. | | | |
| | INCHES | | 0.44 | 1.47 | 2.46 | 3.17 | | | |
| | MM | | 11.20 | 37.30 | 62.55 | 60.57 | | | |
| | AC-FT | | 25409. | 84282. | 141112. | 161768. | | | |
| | INJUS CU M | | 31342. | 103961. | 174059. | 224207. | | | |

MAXIMUM STORAGE = 308123.

STATION 2, PLAN 1, RTIO 2

| OUTFLOW | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 194. | 275. | 620. | 1678. | 3383. | 5966. | 14274. | 33814. | 71907. | 100718. |
| 86437. | 56906. | 37504. | 26978. | 22348. | 17431. | 13879. | 11612. | 10237. | 9284. |
| 8543. | 7918. | 7364. | 6800. | 6396. | 5966. | 5565. | 5192. | 4844. | 4520. |
| 4217. | 3935. | 3071. | 3425. | 3196. | 2982. | 2782. | 2596. | 2422. | 2260. |
| 2108. | 1967. | 1836. | 1713. | 1598. | 1491. | 1391. | 1298. | 1211. | 1130. |
| STOR | | | | | | | | | |
| 357526. | 337578. | 337807. | 338486. | 339593. | 341207. | 340652. | 359318. | 375312. | 383968. |
| 380503. | 370004. | 361905. | 355103. | 351886. | 348699. | 340397. | 344927. | 344035. | 343418. |
| 342938. | 342532. | 342173. | 341847. | 341546. | 341267. | 341007. | 340765. | 340540. | 340330. |
| 340133. | 339950. | 339700. | 339620. | 339472. | 339333. | 339203. | 339083. | 338970. | 338865. |
| 338767. | 338675. | 338590. | 338510. | 338430. | 338366. | 338302. | 338241. | 338185. | 338132. |
| STAGE | | | | | | | | | |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|---------|--------|---------|---------|--------------|
| CFS | 100718. | 94577. | 76855. | 41508. | 641469. |
| CMS | 2652. | 2678. | 2176. | 1175. | 18165. |
| INCHES | | 0.32 | 2.66 | 4.31 | 5.55 |
| MM | | 20.79 | 67.57 | 109.48 | 141.00 |
| AC-FT | | 40898. | 152440. | 240987. | 318094. |
| INJUS CU M | | 57848. | 188032. | 304054. | 392363. |

MAXIMUM STORAGE = 383968.

STATION 2, PLAN 1, RTIO 3

| OUTFLOW | | | | | | | | | |
|---------|--------|--------|--------|--------|--------|--------|--------|---------|---------|
| 278. | 392. | 897. | 2397. | 4833. | 8523. | 20391. | 51497. | 112995. | 147331. |
| 125197. | 79851. | 50549. | 36965. | 29947. | 24018. | 19433. | 16412. | 14545. | 13228. |
| 12189. | 11304. | 10517. | 9799. | 9137. | 8522. | 7950. | 7417. | 6920. | 6457. |
| 6024. | 5621. | 5244. | 4893. | 4565. | 4260. | 3975. | 3708. | 3460. | 3226. |
| 3012. | 2810. | 2622. | 2447. | 2283. | 2130. | 1987. | 1854. | 1730. | 1614. |

STOR
McFARLAND-JOHNSON ENGINEERS, INC.



| | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 337500. | 337054. | 337982. | 330954. | 340533. | 342925. | 350017. | 307920. | 307431. | 396395. |
| 390873. | 378001. | 307577. | 301300. | 350811. | 352900. | 349590. | 340030. | 340820. | 345974. |
| 345301. | 344127. | 344217. | 343752. | 343322. | 342924. | 342553. | 342200. | 341500. | 341505. |
| 341305. | 341043. | 340733. | 340572. | 340359. | 340101. | 339770. | 339004. | 339043. | 339493. |
| 339352. | 339222. | 339100. | 338906. | 338600. | 338701. | 338608. | 338002. | 338521. | 338446. |

| | | | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| STAGE | | | | | | | | | |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| | | | | | |
|------------|---------|---------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 147331. | 130204. | 112799. | 59300. | 910413. |
| CMS | 4172. | 3659. | 3194. | 1079. | 25950. |
| INCHES | | 1.18 | 3.90 | 6.10 | 7.93 |
| MM | | 29.95 | 99.17 | 156.42 | 201.42 |
| AC-FT | | 67509. | 223734. | 352890. | 454420. |
| INDUS CU M | | 83345. | 275972. | 435233. | 500518. |

MAXIMUM STORAGE = 396395.

STATION 2, PLAN 1, RIID 4

| | | | | | | | | | |
|---------|---------|--------|--------|--------|--------|--------|--------|---------|---------|
| OUTFLOW | | | | | | | | | |
| 301. | 510. | 1107. | 3110. | 6203. | 11080. | 26508. | 72783. | 153405. | 193880. |
| 161495. | 101455. | 62471. | 44007. | 30409. | 30097. | 24760. | 21111. | 18808. | 17152. |
| 15820. | 14687. | 13000. | 12737. | 11877. | 11078. | 10335. | 9042. | 8996. | 8394. |
| 7832. | 7307. | 6818. | 6361. | 5935. | 5538. | 5167. | 4821. | 4498. | 4197. |
| 3910. | 3654. | 3409. | 3101. | 2900. | 2769. | 2583. | 2410. | 2249. | 2098. |

| | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| STGR | | | | | | | | | |
| 337034. | 337730. | 338150. | 339420. | 341473. | 344502. | 354502. | 375029. | 397917. | 407358. |
| 399910. | 384170. | 371902. | 305454. | 301000. | 356909. | 353449. | 351084. | 349591. | 346518. |
| 347650. | 340920. | 340259. | 345050. | 345098. | 344501. | 344099. | 343650. | 343231. | 342841. |
| 342476. | 342130. | 341819. | 341525. | 341247. | 340990. | 340749. | 340525. | 340310. | 340120. |
| 339936. | 339706. | 339010. | 339402. | 339324. | 339195. | 339075. | 338902. | 338858. | 338700. |

| | | | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| STAGE | | | | | | | | | |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| | | | | | |
|------------|---------|---------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 193000. | 177600. | 148990. | 77100. | 1191337. |
| CMS | 5490. | 5032. | 4219. | 2183. | 33735. |
| INCHES | | 1.54 | 5.16 | 8.01 | 10.31 |
| MM | | 39.05 | 130.99 | 203.37 | 261.05 |
| AC-FT | | 80110. | 295517. | 450022. | 590740. |
| INDUS CU M | | 100602. | 364514. | 505940. | 720074. |

MAXIMUM STORAGE = 407358.

McFARLAND-JOHNSON ENGINEERS, INC. 

STATION 2, PLAN 1, RFD 5

| OUTFLOW | | | | | | | | | |
|---------|---------|--------|--------|--------|--------|--------|--------|---------|---------|
| 444. | 627. | 1436. | 3835. | 7733. | 13637. | 32626. | 96420. | 195649. | 242009. |
| 195575. | 121733. | 74360. | 54521. | 41744. | 35000. | 29629. | 25695. | 23020. | 21052. |
| 17452. | 18065. | 10017. | 15074. | 14617. | 13634. | 12720. | 11867. | 11072. | 10331. |
| 9639. | 6993. | 8331. | 7629. | 7305. | 6616. | 6359. | 5933. | 5536. | 5165. |
| 4619. | 4497. | 4196. | 3915. | 3652. | 3408. | 3180. | 2967. | 2766. | 2583. |

| STOR | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 337660. | 337807. | 337331. | 339686. | 342413. | 346240. | 356548. | 382755. | 407319. | 416909. |
| 407694. | 389895. | 376201. | 369915. | 364403. | 369475. | 356735. | 354055. | 352322. | 351046. |
| 350009. | 349109. | 348301. | 347560. | 346874. | 346236. | 345645. | 345092. | 344577. | 344056. |
| 343048. | 343229. | 342639. | 342475. | 342135. | 341916. | 341522. | 341246. | 340986. | 340748. |
| 340524. | 340315. | 349120. | 339937. | 339767. | 339609. | 339461. | 339323. | 339194. | 339074. |

| STAGE | | | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|---------|---------|---------|---------|--------------|
| CFS | 242009. | 218792. | 165075. | 94916. | 1466261. |
| C45 | 6655. | 6195. | 5241. | 2666. | 41520. |
| INCHES | | 1.69 | 6.41 | 9.80 | 12.69 |
| 44 | | 48.09 | 162.71 | 250.34 | 322.25 |
| AC-FT | | 108492. | 367091. | 564767. | 727071. |
| INDUS CU M | | 133823. | 452600. | 696655. | 696629. |

MAXIMUM STORAGE = 416909.

STATION 2, PLAN 1, RFD 6

| OUTFLOW | | | | | | | | | |
|---------|---------|--------|--------|--------|--------|--------|---------|---------|---------|
| 556. | 784. | 1795. | 4794. | 9667. | 17047. | 40782. | 129499. | 249999. | 302760. |
| 243223. | 147363. | 90492. | 66118. | 51850. | 41139. | 35765. | 31449. | 28476. | 26182. |
| 24256. | 22554. | 21009. | 19587. | 16266. | 17042. | 15699. | 14834. | 13840. | 12913. |
| 12048. | 11242. | 10449. | 9766. | 9131. | 8520. | 7949. | 7417. | 6920. | 6457. |
| 6024. | 5621. | 5244. | 4893. | 4565. | 4200. | 3975. | 3708. | 3460. | 3228. |

| STOR | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 337760. | 337908. | 338503. | 340508. | 343666. | 348450. | 363835. | 391919. | 418466. | 428428. |
| 417150. | 396403. | 361063. | 373216. | 368048. | 364066. | 360596. | 357785. | 355858. | 354371. |
| 353122. | 352019. | 351016. | 350096. | 349241. | 348446. | 347706. | 347015. | 346371. | 345770. |
| 345210. | 344687. | 344199. | 343743. | 343319. | 342922. | 342553. | 342207. | 341866. | 341585. |
| 341305. | 341043. | 340799. | 340572. | 340359. | 340161. | 339976. | 339804. | 339643. | 339493. |

| STAGE | | | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

PEAK 6-HOUR 24-HOUR 72-HOUR TOTAL VOLUME
 McFARLAND-JOHNSON ENGINEERS, INC.

| | | | | | |
|------------|---------|---------|---------|----------|---------|
| CFS | 302780. | 270390. | 233583. | 115577. | 183227. |
| CMS | 0574. | 7025. | 6014. | 331. | 51909. |
| INCHES | 2.39 | 6.09 | 6.09 | 12.22 | 15.00 |
| AC-F1 | 137053. | 403300. | 700170. | 906640. | 402.85 |
| THOUS CU M | 169052. | 571479. | 871056. | 1121037. | |

MAXIMUM STORAGE = 426428.

SUB-AREA RUNOFF COMPUTATION

CAVASERAGA CREEK INFLOW HYDROGRAPH AT JONES BRIDGE GAGE

| | | | | | | | | |
|-------|-------|-------|-------|------|------|-------|--------|-------|
| ISIAU | ICOMP | IECON | ITAPE | JPLT | JPKT | INAME | ISTAGE | IAUTO |
| 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |

HYDROGRAPH DATA

| | | | | | | | | | |
|-------|------|--------|------|--------|-------|-------|-------|-------|-------|
| INYDS | LNGL | AREA | SNAP | IRSEA | TRSPC | RAIIO | ISNGN | ISAME | LOCAL |
| 1 | -1 | 335.00 | 0.00 | 335.00 | 0.00 | 0.000 | 0 | 1 | 0 |

PRECIP DATA

| | | | | | | | |
|------|-------|-------|-------|-------|--------|------|------|
| SPFE | P4S | R6 | R12 | R24 | R40 | R72 | R96 |
| 0.00 | 22.10 | 73.00 | 83.00 | 93.00 | 103.00 | 0.00 | 0.00 |

TRSPC COMPUTED BY THE PROGRAM IS 0.093

LJSS DATA

| | | | | | | | | | | |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| LRPT | SIRKR | DLIKR | RIIOL | ERAIN | SIRKS | RIICK | SIRTL | CNSTL | ALSKX | RIIMP |
| 0 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.10 | 0.00 | 0.00 |

GIVEY UNIT GRAPH, NUNGS= 11

| | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| 2500. | 7800. | 8200. | 8600. | 4000. | 2800. | 1900. | 1300. | 800. | 500. |
| 200. | | | | | | | | | |

UNIT GRAPH TOTALS 36000. CFS OR 1.00 INCHES OVER THE AREA

RECESSION DATA

SIRI= -1.00 GRCS= -0.10 RIICK= 2.00

END-OF-PERIOD FLOW

| MO. DA | HR. MN | PERIOD | RAIN | EXCS | LOSS | COMP | MO. DA | HR. MN | PERIOD | RAIN | EXCS | LOSS | COMP |
|--------|--------|--------|-------|-------|------|---------|--------|--------|--------|------|------|------|-------|
| 1.01 | 6.00 | 1 | 0.05 | 0.00 | 0.06 | 315. | 1.07 | 12.00 | 26 | 0.00 | 0.00 | 0.00 | 5958. |
| 1.01 | 12.00 | 2 | 0.21 | 0.00 | 0.21 | 292. | 1.07 | 18.00 | 27 | 0.00 | 0.00 | 0.00 | 5559. |
| 1.01 | 18.00 | 3 | 1.55 | 0.52 | 1.03 | 1567. | 1.08 | 0.00 | 28 | 0.00 | 0.00 | 0.00 | 5187. |
| 1.02 | 0.00 | 4 | 0.13 | 0.00 | 0.13 | 4293. | 1.08 | 6.00 | 29 | 0.00 | 0.00 | 0.00 | 4839. |
| 1.02 | 6.00 | 5 | 0.79 | 0.19 | 0.60 | 4956. | 1.08 | 12.00 | 30 | 0.00 | 0.00 | 0.00 | 4515. |
| 1.02 | 12.00 | 6 | 1.97 | 1.37 | 0.60 | 8235. | 1.08 | 18.00 | 31 | 0.00 | 0.00 | 0.00 | 4213. |
| 1.02 | 18.00 | 7 | 14.40 | 13.89 | 0.60 | 49037. | 1.09 | 0.00 | 32 | 0.00 | 0.00 | 0.00 | 3931. |
| 1.03 | 0.00 | 8 | 1.18 | 0.58 | 0.60 | 123138. | 1.09 | 6.00 | 33 | 0.00 | 0.00 | 0.00 | 3568. |
| 1.03 | 6.00 | 9 | 0.00 | 0.00 | 0.00 | 127675. | 1.09 | 12.00 | 34 | 0.00 | 0.00 | 0.00 | 3422. |
| 1.03 | 12.00 | 10 | 0.00 | 0.00 | 0.00 | 94451. | 1.09 | 18.00 | 35 | 0.00 | 0.00 | 0.00 | 3193. |
| 1.03 | 18.00 | 11 | 0.00 | 0.00 | 0.00 | 63478. | 1.10 | 0.00 | 36 | 0.00 | 0.00 | 0.00 | 2979. |
| 1.04 | 0.00 | 12 | 0.00 | 0.00 | 0.00 | 44235. | 1.10 | 6.00 | 37 | 0.00 | 0.00 | 0.00 | 2780. |
| 1.04 | 6.00 | 13 | 0.00 | 0.00 | 0.00 | 30031. | 1.10 | 12.00 | 38 | 0.00 | 0.00 | 0.00 | 2593. |
| 1.04 | 12.00 | 14 | 0.00 | 0.00 | 0.00 | 20370. | 1.10 | 18.00 | 39 | 0.00 | 0.00 | 0.00 | 2420. |

McFARLAND-JOHNSON ENGINEERS, INC.

| | | | | | | | | | | | | | |
|------|-------|----|------|------|------|--------|------|-------|----|------|------|------|-------|
| 1.04 | 10.00 | 15 | 0.00 | 0.00 | 0.00 | 12771. | 1.11 | 0.00 | 40 | 0.00 | 0.00 | 0.00 | 2250. |
| 1.05 | 0.00 | 16 | 0.00 | 0.00 | 0.00 | 11910. | 1.11 | 0.00 | 41 | 0.00 | 0.00 | 0.00 | 2106. |
| 1.05 | 0.00 | 17 | 0.00 | 0.00 | 0.00 | 11110. | 1.11 | 12.00 | 42 | 0.00 | 0.00 | 0.00 | 1905. |
| 1.05 | 12.00 | 18 | 0.00 | 0.00 | 0.00 | 10374. | 1.11 | 10.00 | 43 | 0.00 | 0.00 | 0.00 | 1834. |
| 1.05 | 10.00 | 19 | 0.00 | 0.00 | 0.00 | 9679. | 1.12 | 0.00 | 44 | 0.00 | 0.00 | 0.00 | 1711. |
| 1.06 | 0.00 | 20 | 0.00 | 0.00 | 0.00 | 9031. | 1.12 | 6.00 | 45 | 0.00 | 0.00 | 0.00 | 1596. |
| 1.06 | 0.00 | 21 | 0.00 | 0.00 | 0.00 | 8420. | 1.12 | 12.00 | 46 | 0.00 | 0.00 | 0.00 | 1490. |
| 1.06 | 12.00 | 22 | 0.00 | 0.00 | 0.00 | 7802. | 1.12 | 10.00 | 47 | 0.00 | 0.00 | 0.00 | 1390. |
| 1.06 | 10.00 | 23 | 0.00 | 0.00 | 0.00 | 7335. | 1.13 | 0.00 | 48 | 0.00 | 0.00 | 0.00 | 1297. |
| 1.07 | 0.00 | 24 | 0.00 | 0.00 | 0.00 | 6844. | 1.13 | 6.00 | 49 | 0.00 | 0.00 | 0.00 | 1210. |
| 1.07 | 0.00 | 25 | 0.00 | 0.00 | 0.00 | 6386. | 1.13 | 12.00 | 50 | 0.00 | 0.00 | 0.00 | 1129. |

SUM 20.32 16.16 3.85 747206.
(510.)(416.)(98.)(21159.93)

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|---------|---------|---------|---------|--------------|
| CFS | 127070. | 125500. | 100430. | 49810. | 740533. |
| CMS | 3021. | 3554. | 2644. | 1410. | 21139. |
| InCHES | | 3.49 | 11.16 | 15.00 | 20.73 |
| MM | | 88.52 | 283.34 | 421.58 | 520.54 |
| AC-FI | | 62235. | 199201. | 296393. | 370181. |
| InJUS CU A | | 76765. | 245711. | 365595. | 450012. |

HYDROGRAPH AT STA 2 FOR PLAN 1, RTIO 1

| | | | | | | | | | |
|--------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
| 63. | 58. | 313. | 859. | 991. | 1047. | 9697. | 24020. | 25575. | 18890. |
| 12096. | 8047. | 5908. | 4074. | 2554. | 2383. | 2224. | 2075. | 1930. | 1600. |
| 1005. | 1572. | 1567. | 1309. | 1277. | 1192. | 1112. | 1037. | 908. | 903. |
| 843. | 780. | 734. | 604. | 639. | 590. | 556. | 519. | 484. | 452. |
| 421. | 393. | 307. | 342. | 319. | 298. | 276. | 259. | 242. | 220. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 25575. | 25101. | 20060. | 9902. | 149307. |
| CMS | 744. | 711. | 569. | 282. | 4228. |
| InCHES | | 0.70 | 2.23 | 3.32 | 4.15 |
| MM | | 17.70 | 56.07 | 84.32 | 105.31 |
| AC-FI | | 12447. | 39040. | 59279. | 74036. |
| InJUS CU A | | 15353. | 49142. | 73119. | 91322. |

HYDROGRAPH AT STA 2 FOR PLAN 1, RTIO 2

| | | | | | | | | | |
|--------|--------|--------|-------|-------|-------|--------|--------|--------|--------|
| 109. | 102. | 540. | 1503. | 1735. | 2002. | 17163. | 43098. | 44750. | 33058. |
| 22217. | 15402. | 10511. | 7129. | 4470. | 4171. | 3691. | 3031. | 3308. | 3161. |
| 2949. | 2752. | 2567. | 2395. | 2235. | 2065. | 1946. | 1815. | 1694. | 1580. |
| 1475. | 1370. | 1204. | 1196. | 1117. | 1043. | 973. | 908. | 847. | 790. |
| 737. | 689. | 042. | 599. | 559. | 521. | 486. | 454. | 423. | 395. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 44750. | 43927. | 35151. | 17434. | 201290. |
| CMS | 1207. | 1244. | 995. | 494. | 7399. |
| InCHES | | 1.22 | 3.90 | 5.81 | 7.26 |
| MM | | 30.98 | 99.17 | 147.55 | 184.29 |
| AC-FI | | 21782. | 69720. | 103737. | 129563. |
| InJUS CU A | | 26860. | 85993. | 127950. | 159014. |

HYDROGRAPH AT STA 2 FOR PLAN 1, RTIO 3

| | | | | | | | | | |
|------|------|------|-------|-------|-------|-------|--------|--------|--------|
| 150. | 146. | 703. | 2147. | 2478. | 4117. | 4519. | 61569. | 63937. | 47226. |
|------|------|------|-------|-------|-------|-------|--------|--------|--------|

McFARLAND-JOHNSON ENGINEERS, INC.

| | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 3173. | 2218. | 1501. | 1918. | 6386. | 5956. | 5559. | 5167. | 4839. | 4515. |
| 4213. | 3931. | 3066. | 3422. | 3193. | 2979. | 2780. | 2593. | 2420. | 2258. |
| 2106. | 1965. | 1834. | 1711. | 1596. | 1490. | 1390. | 1297. | 1210. | 1129. |
| 1053. | 933. | 917. | 856. | 798. | 745. | 695. | 648. | 605. | 564. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 63937. | 62753. | 50215. | 24905. | 373266. |
| CMS | 1811. | 1777. | 1422. | 705. | 10570. |
| INCHES | | 1.74 | 5.58 | 8.30 | 10.36 |
| MM | | 44.26 | 141.67 | 210.79 | 263.27 |
| AC-FI | | 31117. | 99600. | 148196. | 185091. |
| THOUS CU M | | 36383. | 122855. | 182797. | 228306. |

HYDROGRAPH AT STA 2 FOR PLAN 1, R110 4

| | | | | | | | | | |
|--------|--------|--------|--------|-------|-------|-------|--------|--------|--------|
| 203. | 190. | 1018. | 2791. | 3221. | 5353. | 1874. | 80040. | 83118. | 61393. |
| 41261. | 28753. | 19520. | 13240. | 8301. | 7745. | 7227. | 6743. | 6291. | 5870. |
| 5477. | 5110. | 4700. | 4449. | 4151. | 3673. | 3613. | 3371. | 3146. | 2935. |
| 2736. | 2555. | 2744. | 2224. | 2075. | 1935. | 1807. | 1686. | 1573. | 1467. |
| 1369. | 1276. | 1192. | 1112. | 1038. | 968. | 903. | 843. | 766. | 734. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 83118. | 81579. | 65280. | 32377. | 485246. |
| CMS | 2354. | 2310. | 1849. | 917. | 13741. |
| INCHES | | 2.27 | 7.25 | 10.79 | 15.47 |
| MM | | 57.54 | 184.17 | 274.03 | 342.25 |
| AC-FI | | 40452. | 129481. | 192555. | 240616. |
| THOUS CU M | | 49497. | 159712. | 237637. | 296798. |

HYDROGRAPH AT STA 2 FOR PLAN 1, R110 5

| | | | | | | | | | |
|--------|--------|--------|--------|--------|-------|--------|--------|---------|--------|
| 250. | 233. | 1253. | 3434. | 3965. | 6588. | 39230. | 98511. | 102300. | 75501. |
| 50783. | 35368. | 24025. | 16296. | 10217. | 9533. | 8694. | 8299. | 7743. | 7225. |
| 6741. | 6269. | 5868. | 5475. | 5109. | 4700. | 4447. | 4149. | 3872. | 3612. |
| 3370. | 3145. | 2937. | 2736. | 2554. | 2383. | 2224. | 2075. | 1936. | 1806. |
| 1665. | 1572. | 1467. | 1369. | 1277. | 1192. | 1112. | 1037. | 968. | 903. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|---------|---------|---------|---------|--------------|
| CFS | 102300. | 100405. | 80344. | 39848. | 597226. |
| CMS | 2897. | 2843. | 2275. | 1128. | 16912. |
| INCHES | | 2.79 | 8.92 | 13.28 | 16.58 |
| MM | | 70.82 | 226.67 | 337.27 | 421.23 |
| AC-FI | | 49788. | 159361. | 237114. | 296145. |
| THOUS CU M | | 61412. | 196569. | 292476. | 365290. |

HYDROGRAPH AT STA 2 FOR PLAN 1, R110 6

| | | | | | | | | | |
|--------|--------|--------|--------|--------|--------|--------|---------|---------|--------|
| 313. | 292. | 1507. | 4293. | 4956. | 8235. | 49037. | 123138. | 127875. | 94451. |
| 63478. | 44235. | 30031. | 20370. | 12771. | 11916. | 11118. | 10374. | 9679. | 9031. |
| 6426. | 7862. | 7335. | 6644. | 6356. | 5958. | 5559. | 5187. | 4839. | 4515. |
| 4213. | 3931. | 3668. | 3422. | 3193. | 2979. | 2780. | 2593. | 2420. | 2258. |
| 2106. | 1965. | 1834. | 1711. | 1596. | 1490. | 1390. | 1297. | 1210. | 1129. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|--------|---------|---------|---------|---------|--------------|
| CFS | 127875. | 125506. | 100430. | 49610. | 746533. |
| CMS | 3621. | 3554. | 2844. | 1410. | 21139. |
| INCHES | | 3.49 | 11.16 | 16.60 | 20.73 |
| MM | | 86.52 | 283.34 | 425.57 | 526.54 |

AC-FI 02235. 199201. 290393. 370101.
 INDUS CU M 70705. 240711. 300595. 400012.

COMBINE HYDROGRAPHS

COMBINE JOHNSON-ROBERT MORRIS DAM AND CAMASERAGA CREEK INFLOW

ISTAG 1COMP IECOM IIAPE JPLF JPRT INAME ISTAGE IAUID
 2 2 0 0 0 0 1 0 0

SUM OF 2 HYDROGRAPHS AT 2 PLAN 1 RTIO 1

| | | | | | | | | | |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 174. | 215. | 072. | 1817. | 2925. | 0050. | 17964. | 43950. | 01119. | 70946. |
| 03127. | 45503. | 32121. | 22040. | 10225. | 12740. | 10334. | 8790. | 7021. | 7127. |
| 0574. | 6100. | 5070. | 5290. | 4932. | 4001. | 4292. | 4004. | 3730. | 3400. |
| 3252. | 3034. | 2031. | 2042. | 2405. | 2300. | 2140. | 2002. | 1000. | 1743. |
| 1020. | 1517. | 1410. | 1321. | 1232. | 1150. | 1073. | 1001. | 934. | 071. |

| | | | | | |
|------------|--------|--------|---------|---------|--------------|
| | PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 70940. | 67035. | 59979. | 33034. | 515072. |
| CAS | 2009. | 1890. | 1690. | 952. | 14000. |
| INCHES | | 0.44 | 1.50 | 2.00 | 3.40 |
| MM | | 11.23 | 40.20 | 07.03 | 80.45 |
| AC-FI | | 33240. | 118906. | 200134. | 255004. |
| INDUS CU M | | 41001. | 140742. | 240062. | 315530. |

SUM OF 2 HYDROGRAPHS AT 2 PLAN 1 RTIO 2

| | | | | | | | | | |
|---------|--------|--------|--------|--------|--------|--------|--------|---------|---------|
| 394. | 377. | 1177. | 3100. | 5110. | 0049. | 31437. | 70912. | 110003. | 133776. |
| 110054. | 74389. | 40315. | 30107. | 26910. | 21092. | 17771. | 15243. | 13024. | 12445. |
| 11492. | 10070. | 9931. | 9206. | 0031. | 0051. | 7511. | 7007. | 0530. | 6100. |
| 5091. | 5310. | 4955. | 4023. | 4313. | 4024. | 3755. | 3504. | 3209. | 3050. |
| 2040. | 2055. | 2477. | 2311. | 2157. | 2012. | 1077. | 1752. | 1034. | 1525. |

| | | | | | |
|------------|---------|---------|---------|---------|--------------|
| | PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 133776. | 125219. | 109100. | 50074. | 902775. |
| CAS | 3700. | 3540. | 3092. | 1007. | 25564. |
| INCHES | | 0.83 | 2.80 | 4.66 | 5.96 |
| MM | | 20.98 | 73.19 | 118.39 | 151.28 |
| AC-FI | | 02092. | 216567. | 350320. | 447657. |
| INDUS CU M | | 70590. | 267131. | 432120. | 552177. |

SUM OF 2 HYDROGRAPHS AT 2 PLAN 1 RTIO 3

| | | | | | | | | | |
|---------|---------|--------|--------|--------|--------|--------|---------|---------|---------|
| 434. | 530. | 1001. | 4544. | 731. | 12041. | 44910. | 113000. | 170933. | 194557. |
| 150530. | 101900. | 05504. | 47150. | 30332. | 29970. | 24992. | 21599. | 19305. | 17743. |
| 10402. | 10235. | 14104. | 13221. | 12329. | 11501. | 10730. | 10011. | 9340. | 8714. |
| 0131. | 7500. | 7070. | 0004. | 6102. | 5749. | 5304. | 5005. | 4070. | 4357. |
| 4005. | 3793. | 3539. | 3302. | 3001. | 2975. | 2062. | 2503. | 2335. | 2179. |

PEAK 0-HOUR 24-HOUR 72-HOUR TOTAL VOLUME
 McFARLAND-JOHNSON ENGINEERS, INC.

| | | | | | |
|------------|---------|---------|---------|---------|----------|
| CFS | 194557. | 185745. | 158980. | 84125. | 1289079. |
| CMS | 5509. | 5200. | 4502. | 2382. | 36520. |
| INCHES | | 1.23 | 4.20 | 0.00 | 8.51 |
| MM | | 31.13 | 106.57 | 109.17 | 210.12 |
| AC-FI | | 92195. | 315345. | 500580. | 639510. |
| INDUS CU M | | 113010. | 386970. | 617450. | 788824. |

| | | | | | | | | | | | |
|-------------------------|---------|--------|--------|--------|--------|--------|---------|---------|---------|-----------------|--|
| SUM OF 2 HYDROGRAPHS AT | | | | | | | | | | 2 PLAN 1 RTIO 4 | |
| 554. | 099. | 2105. | 5907. | 9505. | 15433. | 58302. | 152022. | 236583. | 255274. | | |
| 202750. | 130208. | 82011. | 57927. | 44711. | 37842. | 31980. | 27854. | 25100. | 23022. | | |
| 21303. | 19797. | 14430. | 17185. | 18027. | 14951. | 13948. | 13014. | 12142. | 11329. | | |
| 10570. | 9802. | 9202. | 8505. | 8019. | 7474. | 6974. | 6507. | 6071. | 5604. | | |
| 5285. | 4931. | 4001. | 4293. | 4005. | 3737. | 3487. | 3253. | 3035. | 2832. | | |

| | | | | | |
|------------|---------|---------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 255274. | 245929. | 209032. | 109387. | 1676583. |
| CMS | 7229. | 6904. | 5919. | 3096. | 47476. |
| INCHES | | 1.02 | 5.52 | 8.66 | 11.06 |
| MM | | 41.21 | 140.11 | 219.97 | 260.95 |
| AC-FI | | 121948. | 414609. | 650899. | 831304. |
| INDUS CU M | | 150421. | 511412. | 802872. | 1025472. |

| | | | | | | | | | | | |
|-------------------------|---------|--------|--------|--------|--------|--------|---------|---------|---------|-----------------|--|
| SUM OF 2 HYDROGRAPHS AT | | | | | | | | | | 2 PLAN 1 RTIO 5 | |
| 094. | 801. | 2509. | 7270. | 11098. | 20225. | 71855. | 194931. | 295940. | 317570. | | |
| 240357. | 157121. | 90304. | 70017. | 52001. | 45132. | 38723. | 33994. | 30753. | 28277. | | |
| 20193. | 24354. | 22085. | 21149. | 19725. | 15401. | 17107. | 16017. | 14944. | 13943. | | |
| 13009. | 12138. | 11325. | 10507. | 9059. | 9199. | 8583. | 8008. | 7472. | 6971. | | |
| 6505. | 6009. | 5003. | 5203. | 4930. | 4599. | 4291. | 4004. | 3730. | 3486. | | |

| | | | | | |
|------------|---------|---------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 317570. | 306755. | 258973. | 134662. | 2063487. |
| CMS | 8993. | 8000. | 7333. | 3813. | 58431. |
| INCHES | | 2.02 | 6.83 | 10.66 | 13.01 |
| MM | | 51.40 | 173.59 | 270.79 | 345.79 |
| AC-FI | | 152110. | 513660. | 801293. | 1023217. |
| INDUS CU M | | 187625. | 633597. | 988380. | 1262119. |

| | | | | | | | | | | | |
|-------------------------|---------|---------|--------|--------|--------|--------|---------|---------|---------|-----------------|--|
| SUM OF 2 HYDROGRAPHS AT | | | | | | | | | | 2 PLAN 1 RTIO 6 | |
| 863. | 1070. | 3302. | 9087. | 14623. | 25282. | 89819. | 252437. | 377874. | 397232. | | |
| 306701. | 191590. | 120523. | 80407. | 64021. | 53055. | 46903. | 41822. | 38155. | 35213. | | |
| 32082. | 30410. | 28344. | 26431. | 24654. | 23000. | 21458. | 20021. | 18080. | 17429. | | |
| 16251. | 15172. | 14150. | 13200. | 12324. | 11499. | 10729. | 10010. | 9340. | 8714. | | |
| 6131. | 7580. | 7078. | 6004. | 6102. | 5749. | 5364. | 5005. | 4670. | 4357. | | |

| | | | | | |
|------------|---------|---------|---------|----------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 397232. | 387553. | 325956. | 168400. | 2579360. |
| CMS | 11240. | 10974. | 9230. | 4709. | 73039. |
| INCHES | | 2.56 | 8.00 | 13.33 | 17.02 |
| MM | | 64.94 | 210.49 | 338.03 | 432.23 |
| AC-FI | | 192175. | 640524. | 1002051. | 1279021. |
| INDUS CU M | | 237044. | 797470. | 1236012. | 1577049. |

HYDROGRAPH ROUTING

ROUTE COMBINE FLOWS TO AVERAGE GAGE USING MUSKIEGUA METHOD

| ISIAQ | ICBLC | ICLUV | ITAPE | JPLT | JPRI | INAME | ISTAGE | IAUTO |
|--------------|-------|-------|-------|-------|-------|-------|--------|-------|
| 3 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| ROUTING DATA | | | | | | | | |
| GROSS | CLASS | AVG | IRIS | ISAME | IOPT | IPMP | LSIR | |
| 0.0 | 0.000 | 0.00 | 0 | 1 | 0 | 0 | 0 | |
| MSIPS | MSIDL | LAS | AMSAR | A | ISA | STORA | ISPRAT | |
| 2 | 0 | 0 | 7.000 | 0.040 | 0.000 | 0. | 0 | |

STATION 3, PLAN 1, RFD 1

| OUTFLOW | | | | | | | | | |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 174. | 177. | 222. | 436. | 944. | 1606. | 3915. | 10073. | 22147. | 37449. |
| 50635. | 50826. | 54439. | 46455. | 36870. | 26120. | 21231. | 16252. | 12799. | 10464. |
| 8695. | 7812. | 7047. | 6419. | 5919. | 5467. | 5103. | 4752. | 4430. | 4132. |
| 3654. | 3595. | 3354. | 3130. | 2920. | 2725. | 2542. | 2372. | 2213. | 2065. |
| 1927. | 1790. | 1677. | 1565. | 1460. | 1362. | 1271. | 1186. | 1107. | 1032. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|-------------|--------|--------|---------|---------|--------------|
| CFS | 50620. | 50632. | 50963. | 32791. | 513957. |
| CMS | 1509. | 1575. | 1443. | 929. | 14554. |
| INCHES | | 0.37 | 1.34 | 2.00 | 3.39 |
| MM | | 9.32 | 34.16 | 65.94 | 86.13 |
| AC-FT | | 27500. | 101003. | 195116. | 254655. |
| THOUS Cu ft | | 34027. | 124664. | 240675. | 314359. |

STATION 3, PLAN 1, RFD 2

| OUTFLOW | | | | | | | | | |
|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|
| 304. | 309. | 369. | 762. | 1652. | 3160. | 6852. | 17628. | 39507. | 68669. |
| 93824. | 103721. | 90225. | 79061. | 69982. | 40063. | 34917. | 27033. | 21576. | 17659. |
| 15325. | 13547. | 12234. | 11202. | 10343. | 9596. | 8526. | 6315. | 7752. | 7210. |
| 6744. | 6292. | 5670. | 5477. | 5110. | 4766. | 4449. | 4151. | 3873. | 3613. |
| 3571. | 3146. | 2955. | 2738. | 2555. | 2384. | 2224. | 2075. | 1936. | 1807. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|-------------|---------|--------|---------|---------|--------------|
| CFS | 173721. | 99973. | 91909. | 57443. | 899425. |
| CMS | 2937. | 2831. | 2603. | 1627. | 25469. |
| INCHES | | 0.66 | 2.43 | 4.55 | 5.93 |
| MM | | 16.75 | 61.61 | 115.51 | 150.72 |
| AC-FT | | 49573. | 182296. | 341612. | 445996. |
| THOUS Cu ft | | 61148. | 224862. | 421616. | 550127. |

STATION 3, PLAN 1, RFD 3

| OUTFLOW | | | | | | | | | |
|---------|------|------|-------|-------|-------|-------|--------|--------|---------|
| 434. | 442. | 550. | 1069. | 2360. | 4514. | 9766. | 25429. | 58017. | 101625. |

McFARLAND-JOHNSON ENGINEERS, INC.

| | | | | | | | | | |
|---------|---------|---------|---------|--------|--------|--------|--------|--------|--------|
| 13e391. | 150e25. | 137e67. | 111231. | 04394. | 03010. | 4771e. | 37174. | 25947. | 25014. |
| 21e21. | 19210. | 17404. | 15900. | 14757. | 13599. | 12747. | 11077. | 11073. | 10328. |
| 9e34. | 0900. | 0300. | 7e24. | 7300. | 0011. | 0355. | 0930. | 0533. | 31e2. |
| 4e10. | 4494. | 4195. | 3914. | 3050. | 3400. | 3170. | 2905. | 2700. | 2581. |

| | | | | | |
|------------|---------|---------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 150220. | 144000. | 133350. | 52119. | 1204002. |
| CAS | 4271. | 4090. | 3770. | 2325. | 30394. |
| INCHES | | 0.95 | 3.50 | 0.50 | 0.40 |
| MM | | 24.23 | 89.39 | 100.13 | 215.31 |
| AC-FI | | 71707. | 264501. | 400042. | 637137. |
| INDUS CU A | | 00449. | 326258. | 002731. | 705696. |

STATION 3, PLAN 1, REID 4

| | | | | | | | | | |
|---------|---------|---------|---------|---------|--------|--------|--------|--------|---------|
| 504. | 574. | 723. | 1415. | 3009. | 5009. | 12725. | 33509. | 77300. | 135074. |
| 103405. | 190101. | 179101. | 143330. | 107516. | 79479. | 59937. | 40035. | 37950. | 31902. |
| 27797. | 24008. | 22539. | 20712. | 19163. | 17796. | 10500. | 15437. | 14394. | 13420. |
| 12525. | 11005. | 10902. | 10172. | 9490. | 8005. | 8202. | 7700. | 7192. | 6711. |
| 0201. | 5042. | 5451. | 5000. | 4745. | 4427. | 4131. | 3004. | 3500. | 3355. |

| | | | | | |
|------------|---------|---------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 190101. | 190753. | 175073. | 106513. | 1070300. |
| CAS | 5010. | 5402. | 4950. | 3025. | 47299. |
| INCHES | | 1.20 | 4.52 | 0.40 | 11.02 |
| MM | | 31.97 | 117.35 | 214.79 | 279.91 |
| AC-FI | | 94000. | 347253. | 635501. | 620270. |
| INDUS CU A | | 110073. | 420330. | 783970. | 1021655. |

STATION 3, PLAN 1, REID 5

| | | | | | | | | | |
|---------|---------|---------|---------|---------|--------|--------|--------|--------|---------|
| 694. | 757. | 809. | 1742. | 3777. | 7223. | 15561. | 41770. | 97270. | 170057. |
| 220994. | 245372. | 220104. | 174907. | 130079. | 90020. | 71909. | 50210. | 45700. | 36739. |
| 33660. | 30343. | 27040. | 25440. | 23559. | 21993. | 20303. | 10997. | 17714. | 10523. |
| 15415. | 14381. | 13415. | 12519. | 11000. | 10000. | 10100. | 9407. | 6052. | 8209. |
| 7700. | 7190. | 0709. | 0259. | 5040. | 5449. | 5004. | 4744. | 4420. | 4130. |

| | | | | | |
|------------|---------|---------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 245372. | 237103. | 210023. | 131525. | 2055020. |
| CAS | 6940. | 6716. | 6140. | 3724. | 56215. |
| INCHES | | 1.50 | 5.72 | 10.41 | 13.50 |
| MM | | 39.75 | 145.34 | 204.40 | 344.50 |
| AC-FI | | 117011. | 430002. | 702030. | 1019419. |
| INDUS CU A | | 145071. | 539474. | 965367. | 1257434. |

STATION 3, PLAN 1, REID 6

| | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|--------|--------|---------|---------|
| 000. | 004. | 1112. | 2170. | 4721. | 9029. | 19576. | 52091. | 124369. | 217050. |
| 290103. | 300010. | 274702. | 210970. | 101371. | 110209. | 80000. | 00302. | 55717. | 47402. |
| 41707. | 37005. | 34353. | 31690. | 29395. | 27339. | 25405. | 23739. | 22140. | 20053. |
| 19207. | 17970. | 15772. | 15040. | 14000. | 13023. | 12710. | 11059. | 11005. | 10324. |
| 9033. | 0950. | 0300. | 7024. | 7300. | 0011. | 0355. | 0930. | 0533. | 5102. |

McFARLAND-JOHNSON ENGINEERS, INC.

| | PEAR | 0-400R | 24-400R | 72-400R | TOTAL VOLUME |
|------------|---------|---------|---------|----------|--------------|
| CFS | 308514. | 299347. | 272793. | 164539. | 2569785. |
| CMS | 6730. | 8477. | 7722. | 4859. | 72708. |
| INCHES | | 1.97 | 7.20 | 13.03 | 16.95 |
| MM | | 50.16 | 182.79 | 330.87 | 430.03 |
| AC-FT | | 148430. | 540399. | 979074. | 1274273. |
| TRJUS CU M | | 183093. | 667189. | 1207009. | 1571793. |

*SUB-AREA RUNOFF COMPUTATION

LOCAL INFLOW HYDROGRAPH AT AVON GAGE

| ISIAQ | ICUMI | IECUN | ITAPE | JPLI | JPRT | INAME | ISIAQE | IAUTO |
|-------|-------|-------|-------|------|------|-------|--------|-------|
| 3 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |

HYDROGRAPH DATA

| IHYDS | IUNG | IAREA | SNAP | TKSDA | TRSPC | RATIO | ISNOW | ISAME | LOCAL |
|-------|------|--------|------|--------|-------|-------|-------|-------|-------|
| 1 | -1 | 250.00 | 0.00 | 250.00 | 0.00 | 0.000 | 0 | 1 | 0 |

PRECIP DATA

| SPFE | PMS | R6 | R12 | R24 | R48 | R72 | R96 |
|------|-------|-------|-------|-------|--------|------|------|
| 0.00 | 22.00 | 77.00 | 87.00 | 97.00 | 107.00 | 0.00 | 0.00 |

TRSPC COMPUTED BY THE PROGRAM IS 0.887

LOSS DATA

| LROPT | SIRKR | DLTKR | RTIOL | ERAIN | STRKS | RTIOK | SIRIL | CNSTL | ALSMX | RIIMP |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.10 | 0.00 | 0.00 |

GIVEN UNIT GRAPH, NUNGG= 10

| | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|------|------|------|------|
| 1000. | 4700. | 5100. | 3400. | 2200. | 1500. | 900. | 500. | 200. | 100. |
|-------|-------|-------|-------|-------|-------|------|------|------|------|

UNIT GRAPH TOTALS 19000. CFS OR 0.71 INCHES OVER THE AREA

RECESSION DATA

SRIQ= -1.00 JRCSN= -0.10 RTIOK= 2.00

| 0 | | END-OF-PERIOD FLOW | | | | | 0 | | END-OF-PERIOD FLOW | | | | | 0 | |
|-------|-------|--------------------|-------|-------|------|--------|-------|-------|--------------------|------|------|------|--------|---|--|
| MO.DA | HR.MN | PERIOD | RAIN | EXCS | LOSS | COMP Q | MO.DA | HR.MN | PERIOD | RAIN | EXCS | LOSS | COMP Q | | |
| 1.01 | 6.00 | 1 | 0.08 | 0.00 | 0.08 | 239. | 1.07 | 12.00 | 26 | 0.00 | 0.00 | 0.00 | 3561. | | |
| 1.01 | 12.00 | 2 | 0.20 | 0.00 | 0.20 | 223. | 1.07 | 18.00 | 27 | 0.00 | 0.00 | 0.00 | 3323. | | |
| 1.01 | 18.00 | 3 | 1.55 | 0.51 | 1.04 | 718. | 1.08 | 0.00 | 26 | 0.00 | 0.00 | 0.00 | 3100. | | |
| 1.02 | 0.00 | 4 | 0.12 | 0.00 | 0.12 | 219. | 1.08 | 6.00 | 29 | 0.00 | 0.00 | 0.00 | 2693. | | |
| 1.02 | 6.00 | 5 | 0.78 | 0.18 | 0.60 | 2 | 1.08 | 12.00 | 30 | 0.00 | 0.00 | 0.00 | 2699. | | |
| 1.02 | 12.00 | 6 | 1.95 | 1.35 | 0.60 | 4 | 1.08 | 18.00 | 31 | 0.00 | 0.00 | 0.00 | 2518. | | |
| 1.02 | 18.00 | 7 | 15.03 | 14.43 | 0.60 | 7 | 1.09 | 0.00 | 32 | 0.00 | 0.00 | 0.00 | 2350. | | |
| 1.03 | 0.00 | 8 | 1.17 | 0.57 | 0.60 | 11 | 1.09 | 6.00 | 33 | 0.00 | 0.00 | 0.00 | 2192. | | |
| 1.03 | 6.00 | 9 | 0.00 | 0.00 | 0.00 | 81082. | 1.09 | 12.00 | 34 | 0.00 | 0.00 | 0.00 | 2046. | | |
| 1.03 | 12.00 | 10 | 0.00 | 0.00 | 0.00 | 55613. | 1.09 | 18.00 | 35 | 0.00 | 0.00 | 0.00 | 1909. | | |
| 1.03 | 18.00 | 11 | 0.00 | 0.00 | 0.00 | 30106. | 1.10 | 0.00 | 36 | 0.00 | 0.00 | 0.00 | 1781. | | |
| 1.04 | 0.00 | 12 | 0.00 | 0.00 | 0.00 | 24375. | 1.10 | 6.00 | 37 | 0.00 | 0.00 | 0.00 | 1601. | | |
| 1.04 | 6.00 | 13 | 0.00 | 0.00 | 0.00 | 14662. | 1.10 | 12.00 | 38 | 0.00 | 0.00 | 0.00 | 1550. | | |
| 1.04 | 12.00 | 14 | 0.00 | 0.00 | 0.00 | 8182. | 1.10 | 18.00 | 39 | 0.00 | 0.00 | 0.00 | 1440. | | |
| 1.04 | 18.00 | 15 | 0.00 | 0.00 | 0.00 | 7034. | 1.11 | 0.00 | 40 | 0.00 | 0.00 | 0.00 | 1350. | | |
| 1.05 | 0.00 | 16 | 0.00 | 0.00 | 0.00 | 7123. | 1.11 | 6.00 | 41 | 0.00 | 0.00 | 0.00 | 1259. | | |

McJANLAND-JOHNSON ENGINEERS, INC.

| | | | | | | | | | | | | | |
|------|-------|----|------|------|------|-------|------|-------|----|------|------|------|-------|
| 1.05 | 6.00 | 17 | 0.00 | 0.00 | 0.00 | 6646. | 1.11 | 12.00 | 42 | 0.00 | 0.00 | 0.00 | 1175. |
| 1.05 | 12.00 | 18 | 0.00 | 0.00 | 0.00 | 6201. | 1.11 | 18.00 | 43 | 0.00 | 0.00 | 0.00 | 1096. |
| 1.05 | 18.00 | 19 | 0.00 | 0.00 | 0.00 | 5786. | 1.12 | 0.00 | 44 | 0.00 | 0.00 | 0.00 | 1023. |
| 1.06 | 0.00 | 20 | 0.00 | 0.00 | 0.00 | 5398. | 1.12 | 6.00 | 45 | 0.00 | 0.00 | 0.00 | 954. |
| 1.06 | 6.00 | 21 | 0.00 | 0.00 | 0.00 | 5037. | 1.12 | 12.00 | 46 | 0.00 | 0.00 | 0.00 | 890. |
| 1.06 | 12.00 | 22 | 0.00 | 0.00 | 0.00 | 4699. | 1.12 | 18.00 | 47 | 0.00 | 0.00 | 0.00 | 831. |
| 1.06 | 18.00 | 23 | 0.00 | 0.00 | 0.00 | 4385. | 1.13 | 0.00 | 48 | 0.00 | 0.00 | 0.00 | 775. |
| 1.07 | 0.00 | 24 | 0.00 | 0.00 | 0.00 | 4091. | 1.13 | 6.00 | 49 | 0.00 | 0.00 | 0.00 | 723. |
| 1.07 | 6.00 | 25 | 0.00 | 0.00 | 0.00 | 3817. | 1.13 | 12.00 | 50 | 0.00 | 0.00 | 0.00 | 675. |

SUM 20.89 17.05 3.84 436000.
(531.)(433.)(98.)(12348.01)

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 81682. | 79354. | 60967. | 26933. | 435610. |
| CMS | 2319. | 2247. | 1726. | 819. | 12335. |
| INCHES | | 2.88 | 8.86 | 12.62 | 15.83 |
| MM | | 73.24 | 225.08 | 320.45 | 402.05 |
| AC-FT | | 39349. | 120927. | 172161. | 216005. |
| THOUS CU M | | 48536. | 149161. | 212358. | 266438. |

HYDROGRAPH AT STA 3 FOR PLAN 1, RIIO 1

| | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
| 48. | 45. | 144. | 513. | 592. | 821. | 4598. | 15365. | 16376. | 11123. |
| 7221. | 4875. | 2932. | 1636. | 1527. | 1425. | 1329. | 1240. | 1157. | 1080. |
| 1007. | 940. | 877. | 618. | 753. | 712. | 665. | 620. | 579. | 540. |
| 504. | 470. | 438. | 409. | 382. | 356. | 332. | 310. | 289. | 270. |
| 252. | 235. | 219. | 205. | 191. | 178. | 166. | 155. | 145. | 135. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 16376. | 15871. | 12193. | 5787. | 87122. |
| CMS | 464. | 449. | 345. | 164. | 2467. |
| INCHES | | 0.58 | 1.77 | 2.52 | 3.17 |
| MM | | 14.65 | 45.02 | 64.09 | 60.41 |
| AC-FT | | 7870. | 24185. | 34432. | 43201. |
| THOUS CU M | | 9707. | 29832. | 42472. | 53288. |

HYDROGRAPH AT STA 3 FOR PLAN 1, RIIO 2

| | | | | | | | | | |
|--------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
| 84. | 78. | 251. | 906. | 1036. | 1436. | 8046. | 26889. | 28659. | 19465. |
| 12637. | 8531. | 5132. | 2864. | 2672. | 2493. | 2326. | 2170. | 2025. | 1889. |
| 1763. | 1645. | 1535. | 1432. | 1336. | 1247. | 1163. | 1065. | 1012. | 945. |
| 881. | 622. | 767. | 716. | 668. | 623. | 582. | 543. | 506. | 472. |
| 441. | 411. | 384. | 358. | 334. | 312. | 291. | 271. | 253. | 236. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 28659. | 27774. | 21339. | 10126. | 152464. |
| CMS | 812. | 786. | 604. | 287. | 4317. |
| INCHES | | 1.01 | 3.10 | 4.42 | 5.54 |
| MM | | 25.63 | 78.78 | 112.16 | 140.72 |
| AC-FT | | 13772. | 42324. | 60256. | 75602. |
| THOUS CU M | | 16988. | 52206. | 74325. | 93253. |

HYDROGRAPH AT STA 3 FOR PLAN 1, RIIO 3

| | | | | | | | | | |
|--------|--------|-------|-------|-------|-------|--------|--------|--------|--------|
| 119. | 111. | 359. | 1294. | 1460. | 2052. | 11495. | 38413. | 40941. | 27806. |
| 18053. | 12188. | 7331. | 4091. | 3817. | 3561. | 3323. | 3100. | 2893. | 2699. |
| 2518. | 2350. | 2192. | 2046. | 1909. | 1781. | 1661. | 1550. | 1446. | 1350. |

McFARLAND-JOHNSON ENGINEERS, INC.

| | | | | | | | | | |
|-------|-------|-------|-------|------|------|------|------|------|------|
| 1259. | 1175. | 1090. | 1023. | 954. | 890. | 831. | 775. | 723. | 675. |
| 630. | 587. | 540. | 511. | 477. | 445. | 415. | 388. | 362. | 337. |

| | | | | | |
|------------|--------|--------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 19941. | 39677. | 30484. | 14400. | 217805. |
| CMS | 1159. | 1124. | 863. | 410. | 6100. |
| INCHES | | 1.44 | 4.43 | 0.31 | 7.91 |
| MM | | 30.02 | 112.54 | 100.22 | 201.03 |
| AC-FI | | 19075. | 60463. | 80061. | 108003. |
| THOUS CU M | | 24208. | 74580. | 100179. | 133219. |

HYDROGRAPH AT STA 3 FOR PLAN 1, RTIO 4

| | | | | | | | | | |
|--------|--------|-------|-------|-------|-------|--------|--------|--------|--------|
| 155. | 145. | 400. | 1083. | 1924. | 2008. | 14943. | 49937. | 53223. | 30148. |
| 23469. | 15844. | 9531. | 5318. | 4962. | 4030. | 4320. | 4031. | 3701. | 3509. |
| 3274. | 3025. | 2850. | 2659. | 2461. | 2515. | 2100. | 2015. | 1880. | 1754. |
| 1037. | 1527. | 1425. | 1330. | 1241. | 1157. | 1080. | 1000. | 940. | 877. |
| 818. | 704. | 713. | 605. | 620. | 579. | 540. | 504. | 470. | 439. |

| | | | | | |
|------------|--------|--------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 53223. | 51580. | 39629. | 18606. | 283147. |
| CMS | 1507. | 1461. | 1122. | 533. | 8018. |
| INCHES | | 1.87 | 5.76 | 0.20 | 10.29 |
| MM | | 47.61 | 146.30 | 208.29 | 261.33 |
| AC-FI | | 25577. | 78002. | 111905. | 140403. |
| THOUS CU M | | 31549. | 90955. | 138033. | 173185. |

HYDROGRAPH AT STA 3 FOR PLAN 1, RTIO 5

| | | | | | | | | | |
|--------|--------|--------|-------|-------|-------|--------|--------|--------|--------|
| 191. | 178. | 574. | 2071. | 2369. | 3283. | 18391. | 61401. | 65505. | 44490. |
| 28885. | 19500. | 11730. | 6540. | 6107. | 5098. | 5317. | 4901. | 4029. | 4319. |
| 4029. | 3700. | 3508. | 3273. | 3054. | 2849. | 2050. | 2460. | 2314. | 2159. |
| 2015. | 1800. | 1754. | 1630. | 1527. | 1425. | 1329. | 1240. | 1157. | 1080. |
| 1007. | 940. | 877. | 818. | 763. | 712. | 605. | 620. | 579. | 540. |

| | | | | | |
|------------|--------|--------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 65505. | 63483. | 48774. | 23146. | 348488. |
| CMS | 1855. | 1798. | 1381. | 655. | 9800. |
| INCHES | | 2.31 | 7.09 | 10.09 | 12.66 |
| MM | | 58.59 | 180.07 | 256.36 | 321.64 |
| AC-FI | | 31479. | 90741. | 137729. | 172804. |
| THOUS CU M | | 38829. | 119329. | 109886. | 213151. |

HYDROGRAPH AT STA 3 FOR PLAN 1, RTIO 6

| | | | | | | | | | |
|--------|--------|--------|-------|-------|-------|--------|--------|--------|--------|
| 239. | 223. | 710. | 2589. | 2961. | 4104. | 22989. | 76820. | 81862. | 55613. |
| 30100. | 24375. | 14002. | 8102. | 7634. | 7123. | 6646. | 6201. | 5786. | 5398. |
| 5037. | 4699. | 4385. | 4091. | 3817. | 3561. | 3323. | 3100. | 2893. | 2699. |
| 2518. | 2350. | 2192. | 2046. | 1909. | 1781. | 1661. | 1550. | 1446. | 1350. |
| 1259. | 1175. | 1090. | 1023. | 954. | 890. | 831. | 775. | 723. | 675. |

| | | | | | |
|------------|--------|--------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 81862. | 79354. | 60907. | 28933. | 435611. |
| CMS | 2319. | 2247. | 1726. | 619. | 12335. |
| INCHES | | 2.88 | 8.80 | 12.62 | 15.83 |
| MM | | 73.24 | 225.08 | 320.45 | 402.05 |
| AC-FI | | 39349. | 120927. | 172101. | 210005. |
| THOUS CU M | | 48530. | 149161. | 212434. | 266438. |

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COMBINE HYDROGRAPHS

COMBINE FLOWS AT AVON GAGE

ISTAG 1COMP IECUN IFAPE JPLI JPRT INAME ISTAGE IAGID
 3 2 0 0 0 0 1 0 0

| | | SUM 2 HYDROGRAPHS AT | | | 3 PLAN 1 RIU 1 | | | | |
|--------|--------|----------------------|--------|--------|----------------|--------|--------|--------|--------|
| 221. | 221. | 300. | 953. | 1530. | 2027. | 8513. | 25438. | 38523. | 48571. |
| 57856. | 61701. | 57371. | 48091. | 38397. | 29545. | 22560. | 17492. | 13955. | 11544. |
| 9902. | 8752. | 7904. | 7237. | 6082. | 6200. | 5767. | 5373. | 5009. | 4671. |
| 4358. | 4065. | 3793. | 3539. | 3302. | 3081. | 2874. | 2682. | 2502. | 2335. |
| 2170. | 2032. | 1896. | 1769. | 1651. | 1540. | 1437. | 1341. | 1251. | 1107. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 61701. | 59779. | 56315. | 38065. | 601079. |
| CMS | 1747. | 1093. | 1595. | 1078. | 17021. |
| INCHES | | 0.33 | 1.26 | 2.55 | 3.30 |
| MM | | 8.48 | 31.95 | 64.78 | 85.25 |
| AC-FT | | 29042. | 111699. | 220502. | 298056. |
| THOUS CU M | | 36563. | 137779. | 279380. | 367640. |

| | | SUM OF 2 HYDROGRAPHS AT | | | 3 PLAN 1 RIU 2 | | | | |
|---------|---------|-------------------------|--------|--------|----------------|--------|--------|--------|--------|
| 387. | 387. | 640. | 1608. | 2689. | 4596. | 14898. | 44517. | 68165. | 88133. |
| 106401. | 112252. | 101357. | 81925. | 63654. | 46556. | 37243. | 29203. | 23601. | 19748. |
| 17067. | 15192. | 13709. | 12634. | 11679. | 10842. | 10089. | 9400. | 8704. | 8175. |
| 7620. | 7114. | 6030. | 6193. | 5778. | 5391. | 5030. | 4693. | 4379. | 4086. |
| 3812. | 3557. | 3319. | 3090. | 2889. | 2696. | 2515. | 2347. | 2190. | 2043. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|---------|---------|---------|---------|--------------|
| CFS | 112252. | 109357. | 101275. | 66726. | 1051888. |
| CMS | 3179. | 3097. | 2668. | 1889. | 29780. |
| INCHES | | 0.61 | 2.26 | 4.47 | 5.87 |
| MM | | 15.51 | 57.45 | 113.50 | 149.18 |
| AC-FT | | 54220. | 200876. | 397049. | 521597. |
| THOUS CU M | | 66887. | 247776. | 489753. | 643381. |

| | | SUM OF 2 HYDROGRAPHS AT | | | 3 PLAN 1 RIU 3 | | | | |
|---------|---------|-------------------------|---------|--------|----------------|--------|--------|--------|---------|
| 553. | 553. | 915. | 2383. | 3841. | 6566. | 21283. | 63642. | 98958. | 129631. |
| 150444. | 163014. | 144998. | 115322. | 88211. | 66579. | 51039. | 40275. | 32840. | 27713. |
| 24139. | 21560. | 19590. | 18011. | 16666. | 15480. | 14409. | 13427. | 12520. | 11677. |
| 10894. | 10103. | 9482. | 8047. | 8255. | 7702. | 7186. | 6705. | 6256. | 5837. |
| 5446. | 5081. | 4741. | 4423. | 4127. | 3851. | 3593. | 3352. | 3128. | 2918. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|-----|---------|---------|---------|---------|--------------|
| CFS | 163014. | 159729. | 146733. | 95448. | 1502697. |
| CMS | 4010. | 4523. | 4155. | 2883. | 42552. |

McFARLAND-JOHNSON ENGINEERS, INC.

| | | | | |
|------------|--------|---------|---------|---------|
| INCHES | 0.89 | 3.29 | 0.40 | 0.39 |
| MM | 22.65 | 83.24 | 102.44 | 213.12 |
| AC-FI | 79204. | 291041. | 507955. | 745139. |
| THOUS CU M | 97097. | 350393. | 700002. | 919115. |

| SUM OF 2 HYDROGRAPHS AT | | | | | 3 PLAN 1 R110 4 | | | | |
|-------------------------|---------|---------|---------|---------|-----------------|--------|--------|---------|---------|
| 719. | 719. | 1109. | 3098. | 4993. | 8530. | 27068. | 83440. | 130591. | 172022. |
| 206874. | 213945. | 108712. | 148050. | 112480. | 81109. | 64257. | 50860. | 41740. | 35470. |
| 31071. | 27004. | 25309. | 23371. | 21044. | 20113. | 10720. | 17453. | 10274. | 15180. |
| 14161. | 13212. | 12327. | 11501. | 10731. | 10012. | 9342. | 8716. | 8132. | 7588. |
| 7080. | 0000. | 0103. | 5750. | 5365. | 5000. | 4071. | 4358. | 4000. | 3794. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|---------|---------|---------|----------|--------------|
| CFS | 213945. | 210409. | 192407. | 124222. | 1953506. |
| CMS | 6050. | 5958. | 5450. | 3518. | 55317. |
| INCHES | 1.17 | 4.30 | 0.32 | 10.91 | |
| MM | 29.84 | 109.19 | 211.41 | 277.05 | |
| AC-FI | 104335. | 381754. | 739173. | 966081. | |
| THOUS CU M | 128696. | 470886. | 911750. | 1194850. | |

| SUM OF 2 HYDROGRAPHS AT | | | | | 3 PLAN 1 R110 5 | | | | |
|-------------------------|---------|---------|---------|---------|-----------------|--------|---------|---------|---------|
| 005. | 005. | 1403. | 3813. | 6145. | 10500. | 34052. | 103231. | 162750. | 215148. |
| 257079. | 204872. | 231034. | 181533. | 136787. | 101720. | 77280. | 01177. | 50408. | 43058. |
| 37097. | 34103. | 31148. | 28713. | 20613. | 24742. | 23041. | 21477. | 20029. | 18003. |
| 17429. | 15261. | 15171. | 14155. | 13207. | 12323. | 11497. | 10728. | 10009. | 9339. |
| 8713. | 8130. | 7505. | 7078. | 6604. | 6101. | 5749. | 5364. | 5005. | 4609. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|---------|---------|----------|----------|--------------|
| CFS | 264872. | 201370. | 238231. | 153040. | 2404310. |
| CMS | 7500. | 7401. | 6740. | 4334. | 68083. |
| INCHES | 1.40 | 5.32 | 10.25 | 13.42 | |
| MM | 37.07 | 135.15 | 200.46 | 340.99 | |
| AC-FI | 129608. | 472525. | 910653. | 1192223. | |
| THOUS CU M | 159069. | 582851. | 1123274. | 1470505. | |

| SUM OF 2 HYDROGRAPHS AT | | | | | 3 PLAN 1 R110 6 | | | | |
|-------------------------|---------|---------|---------|---------|-----------------|--------|---------|---------|---------|
| 1106. | 1107. | 1829. | 4767. | 7682. | 13133. | 42560. | 129717. | 206251. | 273471. |
| 326289. | 332885. | 209305. | 225100. | 169005. | 125332. | 94700. | 74563. | 61503. | 52801. |
| 40744. | 42200. | 38737. | 35707. | 33212. | 30900. | 28788. | 26840. | 25033. | 23352. |
| 21706. | 20320. | 18904. | 17094. | 16509. | 15403. | 14372. | 13409. | 12511. | 11674. |
| 10892. | 10162. | 9482. | 8047. | 8254. | 7702. | 7186. | 6705. | 0256. | 5837. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|---------|---------|----------|----------|--------------|
| CFS | 332885. | 329587. | 299461. | 191565. | 3005395. |
| CMS | 9426. | 9333. | 8430. | 5425. | 85103. |
| INCHES | 1.84 | 0.69 | 12.84 | 16.78 | |
| MM | 46.74 | 109.08 | 320.02 | 426.24 | |
| AC-FI | 163432. | 593978. | 1139090. | 1490279. | |
| THOUS CU M | 201590. | 732660. | 1406033. | 1838231. | |



HYDROGRAPH ROUTING

ROUTE FLOWS TO CONFLUENCE OF BLACK CREEK BY LAGGING FLOWS

| ISTAW | ICOMP | IECON | ITAPE | JPLI | JPRT | INAME | ISTAGE | IAUD |
|--------------|-------|-------|-------|-------|-------|-------|--------|------|
| 4 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| ROUTING DATA | | | | | | | | |
| WLOSS | CLOSS | AVG | IRES | ISA4E | IJPT | IPMP | LSTR | |
| 0.0 | 0.000 | 0.00 | 0 | 1 | 0 | 0 | 0 | |
| WSIPS | WSIDL | LAG | AMSKK | X | ISH | STOKA | ISPKAT | |
| 0 | 0 | 1 | 0.000 | 0.000 | 0.000 | 0. | 0 | |

STATION 4, PLAN 1, RFD 1

| OUTFLOW | | | | | | | | | |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 221. | 221. | 221. | 366. | 953. | 1536. | 2627. | 8513. | 25436. | 38523. |
| 46571. | 57856. | 61701. | 57371. | 48091. | 38397. | 29545. | 22500. | 17492. | 13955. |
| 11544. | 9902. | 8754. | 7904. | 7237. | 6082. | 5200. | 5707. | 5373. | 5009. |
| 4671. | 4358. | 4065. | 3793. | 3539. | 3302. | 3081. | 2874. | 2682. | 2502. |
| 2335. | 2178. | 2032. | 1890. | 1709. | 1551. | 1540. | 1437. | 1341. | 1251. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 61701. | 59779. | 56315. | 36065. | 600091. |
| CMS | 1747. | 1693. | 1595. | 1078. | 16993. |
| INCHES | | 0.33 | 1.20 | 2.55 | 3.35 |
| MM | | 8.48 | 31.95 | 64.78 | 85.11 |
| AC-FI | | 29642. | 111699. | 226502. | 297566. |
| THOUS CU M | | 30003. | 137779. | 279386. | 307042. |

STATION 4, PLAN 1, RFD 2

| OUTFLOW | | | | | | | | | |
|---------|---------|---------|---------|--------|--------|--------|--------|--------|--------|
| 367. | 387. | 387. | 640. | 1668. | 2689. | 4590. | 14898. | 44517. | 68105. |
| 88133. | 106461. | 112252. | 101357. | 81925. | 63654. | 48556. | 37243. | 29203. | 23601. |
| 19748. | 17087. | 15192. | 13769. | 12634. | 11579. | 10842. | 10089. | 9400. | 8704. |
| 8175. | 7026. | 7114. | 6038. | 6193. | 5778. | 5391. | 5030. | 4693. | 4379. |
| 4086. | 3812. | 3557. | 3319. | 3090. | 2889. | 2696. | 2515. | 2347. | 2190. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|---------|---------|---------|---------|--------------|
| CFS | 112252. | 109357. | 101275. | 66726. | 1050159. |
| CMS | 3179. | 3097. | 2888. | 1889. | 29737. |
| INCHES | | 0.61 | 2.20 | 4.47 | 5.80 |
| MM | | 15.51 | 57.45 | 113.50 | 148.94 |
| AC-FI | | 54226. | 200876. | 397049. | 520740. |
| THOUS CU M | | 66887. | 247776. | 489753. | 642323. |

STATION 4, PLAN 1, RFD 3

| OUTFLOW | | | | | | | | | |
|---------|---------|---------|---------|---------|--------|--------|--------|--------|--------|
| 503. | 503. | 503. | 915. | 2383. | 3841. | 6566. | 21283. | 63842. | 98958. |
| 129631. | 150444. | 163014. | 144998. | 115322. | 88211. | 66579. | 51039. | 40275. | 32840. |
| 27713. | 24139. | 21500. | 19590. | 18011. | 16000. | 14409. | 13427. | 12520. | |

McFARLAND-JOHNSON ENGINEERS, INC.

| | | | | | | | | | |
|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|
| 11071. | 10094. | 10103. | 9402. | 8047. | 8200. | 7702. | 7106. | 6705. | 6256. |
| 5037. | 5440. | 5061. | 4741. | 4423. | 4121. | 3551. | 3593. | 3352. | 3128. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|---------|---------|---------|---------|--------------|
| CFS | 163014. | 159729. | 146733. | 95449. | 1500227. |
| CMS | 4010. | 4523. | 4155. | 2703. | 42482. |
| INCHES | | 0.59 | 3.28 | 0.40 | 8.38 |
| MM | | 22.05 | 83.24 | 102.44 | 212.77 |
| AC-FT | | 79404. | 291041. | 507955. | 743914. |
| INJUS CU M | | 97097. | 358993. | 700502. | 917005. |

STATION 4, PLAN 1, RILD 4

| OUTFLOW | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|--------|--------|--------|---------|
| 719. | 719. | 719. | 1109. | 3098. | 4993. | 8530. | 27008. | 83440. | 130591. |
| 172022. | 206874. | 213945. | 186712. | 148650. | 112480. | 84109. | 64257. | 50860. | 41746. |
| 35470. | 31071. | 27002. | 25389. | 23371. | 21644. | 20113. | 18726. | 17453. | 16274. |
| 15100. | 14101. | 13212. | 12327. | 11501. | 10731. | 10012. | 9342. | 8710. | 8132. |
| 7588. | 7080. | 6600. | 6103. | 5750. | 5355. | 5000. | 4071. | 4350. | 4066. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|---------|---------|---------|---------|--------------|
| CFS | 213945. | 210409. | 192467. | 124222. | 1950290. |
| CMS | 6050. | 5958. | 5450. | 3518. | 55220. |
| INCHES | | 1.17 | 4.30 | 0.32 | 10.89 |
| MM | | 29.81 | 109.19 | 211.41 | 270.00 |
| AC-FI | | 104335. | 381754. | 739173. | 967089. |
| INJUS CU M | | 128696. | 470866. | 911750. | 1192866. |

STATION 4, PLAN 1, RILD 5

| OUTFLOW | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|--------|---------|---------|
| 805. | 885. | 805. | 1403. | 3013. | 0145. | 10500. | 34052. | 103231. | 162780. |
| 215146. | 257879. | 204872. | 231834. | 101533. | 136707. | 101720. | 77280. | 01177. | 50408. |
| 43050. | 37897. | 34103. | 31148. | 28713. | 26013. | 24742. | 23041. | 21477. | 20029. |
| 16003. | 17429. | 16201. | 15171. | 14155. | 13207. | 12323. | 11497. | 10720. | 10009. |
| 9339. | 8713. | 8130. | 7505. | 7078. | 6604. | 6161. | 5749. | 5304. | 5005. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|---------|---------|---------|----------|--------------|
| CFS | 204872. | 201376. | 238231. | 153040. | 2400305. |
| CMS | 7500. | 7401. | 6746. | 4334. | 07971. |
| INCHES | | 1.40 | 5.32 | 10.25 | 13.40 |
| MM | | 37.07 | 135.15 | 200.46 | 340.43 |
| AC-FI | | 129608. | 472525. | 910053. | 1190263. |
| INJUS CU M | | 159869. | 582851. | 1123274. | 1468106. |

STATION 4, PLAN 1, RILD 6

| OUTFLOW | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|--------|---------|---------|
| 1100. | 1100. | 1107. | 1629. | 4707. | 7002. | 13133. | 42560. | 129717. | 206251. |
| 273471. | 325289. | 332685. | 209305. | 225100. | 169005. | 125332. | 94700. | 74503. | 61503. |
| 52801. | 46744. | 42260. | 38737. | 35787. | 33212. | 30900. | 28708. | 20840. | 25033. |
| 23352. | 21780. | 20320. | 18904. | 17094. | 16509. | 15403. | 14372. | 13409. | 12511. |
| 11674. | 10892. | 10102. | 9482. | 8847. | 8254. | 7702. | 7186. | 6705. | 6256. |

PEAK 6-HOUR 24-HOUR 72-HOUR TOTAL VOLUME
 McFARLAND-JOHNSON ENGINEERS, INC.

| | | | | | |
|------------|---------|---------|---------|----------|----------|
| CFS | 332005. | 329587. | 299404. | 191505. | 3000450. |
| CAS | 9420. | 9335. | 8400. | 5425. | 84903. |
| INCHES | | 1.84 | 6.09 | 12.04 | 10.75 |
| 41 | | 40.74 | 109.30 | 320.02 | 425.54 |
| AC-FI | | 103432. | 593970. | 1139090. | 1487029. |
| INDUS CU M | | 201590. | 732000. | 1400033. | 1835210. |

SUB-AREA RUNOFF COMPUTATION

HONEY CREEK INFLOW HYDROGRAPH

| | | | | | | | | |
|-------|-------|-------|-------|------|------|-------|--------|-------|
| ISTAU | ICOMP | IECO. | ITAPE | JPLI | JPRI | INAME | ISTAGE | IAUIJ |
| 4 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |

HIDRGRAPH DATA

| | | | | | | | | | |
|------|------|--------|------|--------|-------|-------|-------|-------|-------|
| IMYD | IUMG | IAREA | SNAP | IRSDA | IRSPC | RATIO | ISNOX | ISAME | LGCAL |
| 1 | -1 | 200.00 | 0.00 | 200.00 | 0.00 | 0.000 | 0 | 1 | 0 |

PRECIP DATA

| | | | | | | | |
|------|-------|-------|-------|-------|--------|------|------|
| SPFE | PMS | K0 | K12 | K24 | R40 | R72 | K96 |
| 0.00 | 21.50 | 77.00 | 37.00 | 97.00 | 107.00 | 0.00 | 0.00 |

IRSPC COMPUTED BY THE PROGRAM IS 0.838

LOSS DATA

| | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| LROPT | SLRKR | DLRKR | RIIOL | ERAIN | SFRAS | RIIDK | SINIL | CNSIL | ALSMX | RTIMP |
| 0 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.10 | 0.00 | 0.00 |

GIVE: UNIT GRAPH, NUNGS= 12

| | | | | | | | | | |
|------|------|------|-------|-------|-------|-------|-------|-------|-------|
| 100. | 500. | 500. | 6300. | 5600. | 3000. | 2400. | 1700. | 1300. | 1000. |
| 700. | 400. | | | | | | | | |

UNIT GRAPH TOTALS 27200. CFS OR 0.97 INCHES OVER THE AREA

RECESSION DATA

STRJQ= -1.00 JRCSE= -0.10 RIIDK= 2.00

| MO. DA | HR. MN | PERIOD | RAIN | EXCS | LOSS | END-OF-PERIOD FLD*
COMP Q | MO. DA | HR. MN | PERIOD | RAIN | EXCS | LOSS | COMP Q |
|--------|--------|--------|-------|-------|------|------------------------------|--------|--------|--------|------|------|------|--------|
| 1.01 | 6.00 | 1 | 0.00 | 0.00 | 0.00 | 243. | 1.07 | 12.00 | 26 | 0.00 | 0.00 | 0.00 | 5421. |
| 1.01 | 12.00 | 2 | 0.20 | 0.00 | 0.20 | 226. | 1.07 | 18.00 | 27 | 0.00 | 0.00 | 0.00 | 5056. |
| 1.01 | 18.00 | 3 | 1.52 | 0.40 | 1.04 | 259. | 1.08 | 0.00 | 28 | 0.00 | 0.00 | 0.00 | 4719. |
| 1.02 | 0.00 | 4 | 0.12 | 0.00 | 0.12 | 436. | 1.08 | 6.00 | 29 | 0.00 | 0.00 | 0.00 | 4403. |
| 1.02 | 6.00 | 5 | 0.70 | 0.10 | 0.60 | 1919. | 1.08 | 12.00 | 30 | 0.00 | 0.00 | 0.00 | 4108. |
| 1.02 | 12.00 | 6 | 1.91 | 1.31 | 0.60 | 3392. | 1.08 | 18.00 | 31 | 0.00 | 0.00 | 0.00 | 3833. |
| 1.02 | 18.00 | 7 | 14.70 | 14.10 | 0.60 | 5480. | 1.09 | 0.00 | 32 | 0.00 | 0.00 | 0.00 | 3576. |
| 1.03 | 0.00 | 8 | 1.15 | 0.55 | 0.60 | 14711. | 1.09 | 6.00 | 33 | 0.00 | 0.00 | 0.00 | 3337. |
| 1.03 | 6.00 | 9 | 0.00 | 0.00 | 0.00 | 61462. | 1.09 | 12.00 | 34 | 0.00 | 0.00 | 0.00 | 3113. |
| 1.03 | 12.00 | 10 | 0.00 | 0.00 | 0.00 | 99624. | 1.09 | 18.00 | 35 | 0.00 | 0.00 | 0.00 | 2905. |
| 1.03 | 18.00 | 11 | 0.00 | 0.00 | 0.00 | 88216. | 1.10 | 0.00 | 36 | 0.00 | 0.00 | 0.00 | 2710. |
| 1.04 | 0.00 | 12 | 0.00 | 0.00 | 0.00 | 57807. | 1.10 | 6.00 | 37 | 0.00 | 0.00 | 0.00 | 2529. |
| 1.04 | 6.00 | 13 | 0.00 | 0.00 | 0.00 | 38509. | 1.10 | 12.00 | 38 | 0.00 | 0.00 | 0.00 | 2300. |
| 1.04 | 12.00 | 14 | 0.00 | 0.00 | 0.00 | 27425. | 1.10 | 18.00 | 39 | 0.00 | 0.00 | 0.00 | 2202. |
| 1.04 | 18.00 | 15 | 0.00 | 0.00 | 0.00 | 20706. | 1.11 | 0.00 | 40 | 0.00 | 0.00 | 0.00 | 2054. |
| 1.05 | 0.00 | 16 | 0.00 | 0.00 | 0.00 | 15872. | 1.11 | 6.00 | 41 | 0.00 | 0.00 | 0.00 | 1917. |
| 1.05 | 6.00 | 17 | 0.00 | 0.00 | 0.00 | 11010. | 1.11 | 0.00 | 42 | 0.00 | 0.00 | 0.00 | 1788. |

| | | | | | | | | | | | | | | |
|------|-------|----|------|------|------|-------|------|-------|----|------|---------|---------|--------|------------|
| 1.05 | 12.00 | 18 | 0.00 | 0.00 | 0.00 | 7430. | 1.11 | 10.00 | 43 | 0.00 | 0.00 | 0.00 | 1068. | |
| 1.05 | 10.00 | 19 | 0.00 | 0.00 | 0.00 | 5900. | 1.12 | 0.00 | 44 | 0.00 | 0.00 | 0.00 | 1557. | |
| 1.06 | 0.00 | 20 | 0.00 | 0.00 | 0.00 | 5210. | 1.12 | 0.00 | 45 | 0.00 | 0.00 | 0.00 | 1452. | |
| 1.06 | 0.00 | 21 | 0.00 | 0.00 | 0.00 | 7000. | 1.12 | 12.00 | 46 | 0.00 | 0.00 | 0.00 | 1355. | |
| 1.06 | 12.00 | 22 | 0.00 | 0.00 | 0.00 | 7153. | 1.12 | 10.00 | 47 | 0.00 | 0.00 | 0.00 | 1264. | |
| 1.06 | 10.00 | 23 | 0.00 | 0.00 | 0.00 | 0074. | 1.13 | 0.00 | 48 | 0.00 | 0.00 | 0.00 | 1180. | |
| 1.07 | 0.00 | 24 | 0.00 | 0.00 | 0.00 | 6227. | 1.13 | 0.00 | 49 | 0.00 | 0.00 | 0.00 | 1101. | |
| 1.07 | 0.00 | 25 | 0.00 | 0.00 | 0.00 | 5610. | 1.13 | 12.00 | 50 | 0.00 | 0.00 | 0.00 | 1027. | |
| | | | | | | | | | | SUM | 20.42 | 10.59 | 3.83 | 574150. |
| | | | | | | | | | | | (519.) | (421.) | (97.) | (10250.28) |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 93924. | 93920. | 73920. | 37079. | 573510. |
| CMS | 2021. | 2060. | 2093. | 1907. | 10240. |
| INCHES | | 3.30 | 10.53 | 16.18 | 20.52 |
| MM | | 85.35 | 266.73 | 410.90 | 521.19 |
| AC-FI | | 45572. | 146034. | 224207. | 264389. |
| INJUS CU A | | 57440. | 180870. | 276555. | 350789. |

HYDROGRAPH AT STA 4 FOR PLAN 1, RIIO 1

| | | | | | | | | | |
|--------|--------|-------|-------|-------|-------|-------|-------|--------|--------|
| 49. | 45. | 52. | 87. | 304. | 670. | 1097. | 2942. | 12292. | 19925. |
| 17043. | 11561. | 7734. | 5485. | 4153. | 3174. | 2203. | 1908. | 1761. | 1643. |
| 1533. | 1431. | 1335. | 1245. | 1162. | 1004. | 1012. | 944. | 881. | 822. |
| 707. | 715. | 607. | 623. | 561. | 542. | 500. | 472. | 440. | 411. |
| 303. | 355. | 334. | 311. | 290. | 271. | 253. | 236. | 220. | 205. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 19925. | 18784. | 14786. | 7530. | 114704. |
| CMS | 564. | 532. | 419. | 213. | 3240. |
| INCHES | | 0.67 | 2.12 | 3.24 | 4.10 |
| MM | | 17.07 | 53.75 | 82.18 | 104.24 |
| AC-FI | | 9314. | 29327. | 44041. | 56870. |
| INJUS CU 4 | | 11489. | 36174. | 55311. | 70150. |

HYDROGRAPH AT STA 4 FOR PLAN 1, RIIO 2

| | | | | | | | | | |
|--------|--------|--------|-------|-------|-------|-------|-------|--------|--------|
| 85. | 79. | 91. | 153. | 672. | 1107. | 1920. | 5149. | 21512. | 34868. |
| 30670. | 20232. | 13534. | 9599. | 7206. | 5555. | 3655. | 3303. | 3082. | 2876. |
| 2083. | 2503. | 2336. | 2179. | 2033. | 1897. | 1770. | 1052. | 1541. | 1438. |
| 1342. | 1252. | 1108. | 1090. | 1017. | 949. | 885. | 826. | 771. | 719. |
| 671. | 020. | 504. | 545. | 508. | 474. | 443. | 413. | 385. | 359. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 34000. | 32872. | 25875. | 13108. | 200731. |
| CMS | 907. | 931. | 733. | 373. | 5604. |
| INCHES | | 1.10 | 3.70 | 5.66 | 7.10 |
| MM | | 29.87 | 94.06 | 143.81 | 182.42 |
| AC-FI | | 16300. | 51322. | 78472. | 99530. |
| INJUS CU A | | 20100. | 63305. | 96794. | 122776. |

HYDROGRAPH AT STA 4 FOR PLAN 1, RIIO 3

| | | | | | | | | | |
|--------|--------|--------|--------|--------|-------|-------|-------|--------|--------|
| 121. | 113. | 129. | 210. | 959. | 1090. | 2743. | 7355. | 30731. | 49812. |
| 44108. | 26903. | 19335. | 13713. | 10353. | 7930. | 5505. | 4719. | 4403. | 4108. |
| 3633. | 3570. | 3337. | 3113. | 2905. | 2710. | 2529. | 2360. | 2202. | 2054. |
| 1917. | 1708. | 1000. | 1557. | 1452. | 1350. | 264. | 1100. | 1101. | 1027. |

McFARLAND-JOHNSON ENGINEERS, INC.

| | 950. | 094. | 034. | 170. | 720. | 070. | 032. | 090. | 500. | 514. |
|------------|------|--------|--------|---------|---------|--------------|------|------|------|------|
| | | PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME | | | | |
| CFS | | 49812. | 40960. | 36904. | 15540. | 280759. | | | | |
| CMS | | 1411. | 1330. | 1047. | 533. | 8120. | | | | |
| INCHES | | | 1.08 | 5.29 | 0.09 | 10.20 | | | | |
| MM | | | 42.58 | 134.37 | 205.45 | 200.50 | | | | |
| AC-FT | | | 23200. | 73317. | 112103. | 142195. | | | | |
| THOUS CU M | | | 20723. | 90435. | 130270. | 175394. | | | | |

HYDROGRAPH AT STA 4 FOR PLAN 1, RILL 4

| | 150. | 147. | 100. | 203. | 1247. | 2205. | 3500. | 9562. | 39950. | 64750. |
|--|--------|--------|--------|--------|--------|--------|-------|-------|--------|--------|
| | 57340. | 37574. | 25135. | 17020. | 13498. | 10317. | 7100. | 0135. | 5724. | 5341. |
| | 4903. | 4049. | 4330. | 4047. | 3770. | 3523. | 3280. | 3007. | 2062. | 2670. |
| | 2491. | 2325. | 2109. | 2024. | 1888. | 1702. | 1044. | 1534. | 1431. | 1335. |
| | 1240. | 1102. | 1004. | 1012. | 944. | 881. | 822. | 767. | 715. | 000. |

| | PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 04700. | 61040. | 40053. | 24491. | 372787. |
| CMS | 1834. | 1729. | 1301. | 094. | 10550. |
| INCHES | | 2.18 | 6.88 | 10.52 | 13.34 |
| MM | | 55.48 | 174.08 | 267.08 | 330.78 |
| AC-FT | | 30272. | 95312. | 145734. | 184853. |
| THOUS CU M | | 37340. | 117500. | 179701. | 228013. |

HYDROGRAPH AT STA 4 FOR PLAN 1, RILL 5

| | 194. | 101. | 207. | 349. | 1535. | 2714. | 4389. | 11709. | 49109. | 79699. |
|--|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------|
| | 70573. | 40240. | 30935. | 21940. | 16013. | 12097. | 0013. | 7550. | 7045. | 0573. |
| | 0133. | 5722. | 5339. | 4901. | 4040. | 4337. | 4040. | 3775. | 3522. | 3287. |
| | 3000. | 2001. | 2009. | 2491. | 2324. | 2160. | 2023. | 1800. | 1701. | 1643. |
| | 1533. | 1431. | 1335. | 1245. | 1102. | 1084. | 1012. | 944. | 881. | 822. |

| | PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 79099. | 75130. | 59142. | 30143. | 458015. |
| CMS | 2257. | 2120. | 1670. | 054. | 12992. |
| INCHES | | 2.09 | 8.40 | 12.94 | 16.42 |
| MM | | 60.28 | 214.99 | 328.72 | 410.90 |
| AC-FT | | 37257. | 117307. | 179300. | 227511. |
| THOUS CU M | | 45950. | 144690. | 221244. | 280031. |

HYDROGRAPH AT STA 4 FOR PLAN 1, RILL 6

| | 243. | 220. | 209. | 430. | 1919. | 3392. | 5400. | 14711. | 61462. | 99624. |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | 88210. | 57007. | 38009. | 27425. | 20700. | 15972. | 11016. | 9438. | 8806. | 8210. |
| | 7000. | 7153. | 0074. | 0227. | 5010. | 5421. | 5058. | 4719. | 4403. | 4100. |
| | 3833. | 3570. | 3337. | 3113. | 2905. | 2710. | 2529. | 2300. | 2202. | 2054. |
| | 1917. | 1700. | 1000. | 1557. | 1452. | 1355. | 1204. | 1180. | 1101. | 1027. |

| | PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 99024. | 93920. | 7223. | 37679. | 573519. |
| CMS | 2021. | 2660. | 2093. | 1007. | 16240. |
| INCHES | | 3.30 | 10.58 | 10.18 | 20.52 |
| MM | | 85.35 | 208.73 | 410.90 | 521.19 |
| AC-FT | | 40572. | 140034. | 224207. | 284389. |
| THOUS CU M | | 57440. | 180070. | 270555. | 350709. |

SUB-AREA RUNOFF COMPUTATION

JAINA CREEK INFLOW HYDROGRAPH

ISPAU 4 ICU: 4 IECDW 0 IIAPE 0 JPLF 0 JPHJ 0 INAME 1 ISAGE 0 IAUTO 0
 IHYD 1 IUMG -1 IAREA 0.00 SMAP 0.00 TRSDA 0.00 RATIO 0.0000 IASDA 0 ISAME 1 LOCAL 0

HYDROGRAPH DATA

SPFE 0.00 PMS 21.80 R0 78.00 K12 48.00 K24 98.00 K48 108.00 K72 0.00 R96 0.00

PRECIP DATA

LOSS DATA
 LROPI 0 SINKR 0.00 OLICK 1.00 RTIUL 1.00 ERAIN 0.00 SIRKS 1.00 RFLUK 1.00 SIRIL 1.00 CNSFL 0.10 ALSMX 0.00 RTIMP 0.00

100. 400. 1200. 2800. 4200. 4200. 12 3000. 2100. 1500. 1100.
 800.

GIVEY UNIT GRAPH, MUHQD= 12
 UNIF GRAPH TOTALS 21900. CFS OR 0.95 INCHES OVER THE AREA

RECESSION DATA
 SIRTQZ= -1.00 URCSNR= -0.10 RTIQR= 2.00

END-OF-PERIOD FLOW

| NO. DA | HR. MN | PERIOD | RAIN | EXCS | LOSS | COMP Q | WD. DA | HR. MN | PERIOD | RAIN | EXCS | LOSS | COMP Q |
|--------|--------|--------|-------|-------|------|--------|--------|--------|--------|------|------|------|--------|
| 1.01 | 6.00 | 1 | 0.08 | 0.00 | 0.08 | 201. | 1.07 | 12.00 | 26 | 0.00 | 0.00 | 0.00 | 3999. |
| 1.01 | 12.00 | 2 | 0.20 | 0.00 | 0.20 | 187. | 1.07 | 18.00 | 27 | 0.00 | 0.00 | 0.00 | 3731. |
| 1.01 | 18.00 | 3 | 1.53 | 0.49 | 1.04 | 224. | 1.08 | 0.00 | 28 | 0.00 | 0.00 | 0.00 | 3481. |
| 1.02 | 0.00 | 4 | 0.12 | 0.00 | 0.12 | 760. | 1.08 | 6.00 | 29 | 0.00 | 0.00 | 0.00 | 3218. |
| 1.02 | 6.00 | 5 | 0.77 | 0.00 | 0.77 | 360. | 1.08 | 12.00 | 30 | 0.00 | 0.00 | 0.00 | 3031. |
| 1.02 | 12.00 | 6 | 1.93 | 1.33 | 0.60 | 1721. | 1.08 | 18.00 | 31 | 0.00 | 0.00 | 0.00 | 2828. |
| 1.02 | 18.00 | 7 | 15.03 | 14.43 | 0.60 | 4379. | 1.09 | 0.00 | 32 | 0.00 | 0.00 | 0.00 | 2638. |
| 1.03 | 0.00 | 8 | 1.16 | 0.56 | 0.60 | 10089. | 1.09 | 6.00 | 33 | 0.00 | 0.00 | 0.00 | 2462. |
| 1.03 | 6.00 | 9 | 0.00 | 0.00 | 0.00 | 23562. | 1.09 | 12.00 | 34 | 0.00 | 0.00 | 0.00 | 2297. |
| 1.03 | 12.00 | 10 | 0.00 | 0.00 | 0.00 | 48500. | 1.09 | 18.00 | 35 | 0.00 | 0.00 | 0.00 | 2143. |
| 1.03 | 18.00 | 11 | 0.00 | 0.00 | 0.00 | 69082. | 1.10 | 0.00 | 36 | 0.00 | 0.00 | 0.00 | 2000. |
| 1.04 | 0.00 | 12 | 0.00 | 0.00 | 0.00 | 67911. | 1.10 | 6.00 | 37 | 0.00 | 0.00 | 0.00 | 1866. |
| 1.04 | 6.00 | 13 | 0.00 | 0.00 | 0.00 | 49116. | 1.10 | 12.00 | 38 | 0.00 | 0.00 | 0.00 | 1741. |
| 1.04 | 12.00 | 14 | 0.00 | 0.00 | 0.00 | 31475. | 1.10 | 18.00 | 39 | 0.00 | 0.00 | 0.00 | 1624. |
| 1.04 | 18.00 | 15 | 0.00 | 0.00 | 0.00 | 24841. | 1.11 | 0.00 | 40 | 0.00 | 0.00 | 0.00 | 1515. |
| 1.05 | 0.00 | 16 | 0.00 | 0.00 | 0.00 | 17924. | 1.11 | 6.00 | 41 | 0.00 | 0.00 | 0.00 | 1414. |
| 1.05 | 6.00 | 17 | 0.00 | 0.00 | 0.00 | 12484. | 1.11 | 12.00 | 42 | 0.00 | 0.00 | 0.00 | 1319. |
| 1.05 | 12.00 | 18 | 0.00 | 0.00 | 0.00 | 7721. | 1.11 | 18.00 | 43 | 0.00 | 0.00 | 0.00 | 1231. |
| 1.05 | 18.00 | 19 | 0.00 | 0.00 | 0.00 | 6497. | 1.12 | 0.00 | 44 | 0.00 | 0.00 | 0.00 | 1148. |
| 1.06 | 0.00 | 20 | 0.00 | 0.00 | 0.00 | 6061. | 1.12 | 6.00 | 45 | 0.00 | 0.00 | 0.00 | 1072. |
| 1.06 | 6.00 | 21 | 0.00 | 0.00 | 0.00 | 5650. | 1.12 | 12.00 | 46 | 0.00 | 0.00 | 0.00 | 1000. |
| 1.06 | 12.00 | 22 | 0.00 | 0.00 | 0.00 | 5277. | 1.12 | 18.00 | 47 | 0.00 | 0.00 | 0.00 | 933. |
| 1.06 | 18.00 | 23 | 0.00 | 0.00 | 0.00 | 4923. | 1.13 | 0.00 | 48 | 0.00 | 0.00 | 0.00 | 870. |
| 1.07 | 0.00 | 24 | 0.00 | 0.00 | 0.00 | 4594. | 1.13 | 6.00 | 49 | 0.00 | 0.00 | 0.00 | 812. |

McFARLAND-JOHNSON ENGINEERS, INC.

1.07 0.00 25 0.00 0.00 0.00 4200. 1.13 12.00 50 0.00 0.00 0.00 750.
 SUM 20.01 10.97 3.83 400004.
 (529.)(431.)(97.)(13027.50)

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|---------|---------|---------|--------------|
| CFS | 09002. | 08497. | 50907. | 30935. | 459554. |
| CMS | 1950. | 1940. | 1011. | 070. | 13014. |
| INCHES | | 2.90 | 9.05 | 10.00 | 19.03 |
| MM | | 75.20 | 250.15 | 407.95 | 505.07 |
| AC-FI | 33905. | 112073. | 184074. | 227093. | 227093. |
| INDUS CU 4 | 41896. | 139227. | 227051. | 261102. | 261102. |

HYDROGRAPH AT STA 4 FOR PLAN 1, RIIO 1

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME | | | | |
|--------|--------|--------|---------|---------|--------------|-------|-------|-------|-------|
| 40. | 37. | 40. | 72. | 152. | 344. | 070. | 2010. | 4712. | 9700. |
| 13010. | 13502. | 9829. | 0895. | 4097. | 3535. | 2577. | 1544. | 1299. | 1212. |
| 1131. | 1055. | 905. | 919. | 057. | 000. | 740. | 090. | 050. | 606. |
| 500. | 520. | 492. | 459. | 429. | 400. | 373. | 340. | 325. | 303. |
| 263. | 204. | 240. | 230. | 214. | 200. | 187. | 174. | 102. | 152. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 13010. | 13099. | 11381. | 6107. | 91917. |
| CMS | 391. | 300. | 322. | 175. | 2003. |
| INCHES | | 0.59 | 1.97 | 3.21 | 3.90 |
| MM | | 15.06 | 50.03 | 01.59 | 101.01 |
| AC-FI | 0793. | 22570. | 30015. | 45579. | 45579. |
| INDUS CU 4 | 0379. | 27045. | 45410. | 50220. | 50220. |

HYDROGRAPH AT STA 4 FOR PLAN 1, RIIO 2

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME | | | | |
|--------|--------|--------|---------|---------|--------------|-------|-------|-------|--------|
| 70. | 05. | 70. | 120. | 200. | 003. | 1533. | 3531. | 0247. | 10975. |
| 24179. | 23709. | 17201. | 12006. | 0569. | 6273. | 4510. | 2702. | 2274. | 2122. |
| 1979. | 1047. | 1723. | 1600. | 1500. | 1400. | 1300. | 1210. | 1137. | 1061. |
| 990. | 923. | 302. | 804. | 750. | 700. | 653. | 609. | 560. | 530. |
| 495. | 402. | 431. | 402. | 375. | 350. | 320. | 305. | 204. | 265. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 24179. | 23974. | 19917. | 10027. | 160054. |
| CMS | 000. | 079. | 564. | 307. | 4550. |
| INCHES | | 1.04 | 3.45 | 5.02 | 6.90 |
| MM | | 20.35 | 07.55 | 142.78 | 176.77 |
| AC-FI | 11000. | 39500. | 64426. | 79703. | 79703. |
| INDUS CU 4 | 14003. | 40729. | 79408. | 90300. | 90300. |

HYDROGRAPH AT STA 4 FOR PLAN 1, RIIO 3

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME | | | | |
|--------|--------|--------|---------|---------|--------------|-------|-------|--------|--------|
| 100. | 94. | 112. | 180. | 300. | 051. | 2109. | 5044. | 11701. | 24250. |
| 34541. | 33956. | 24573. | 17237. | 12242. | 0902. | 0442. | 3001. | 3240. | 3031. |
| 2028. | 2038. | 2402. | 2297. | 2143. | 2000. | 1000. | 1741. | 1024. | 1515. |
| 1414. | 1319. | 1231. | 1140. | 1072. | 1000. | 933. | 070. | 012. | 750. |
| 707. | 060. | 010. | 574. | 030. | 000. | 400. | 435. | 400. | 379. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|--------|--------|--------|---------|---------|--------------|
| CFS | 34541. | 34240. | 26453. | 15407. | 229792. |
| CMS | 970. | 970. | 800. | 430. | 6507. |
| INCHES | | 1.40 | 4.92 | 8.03 | 9.94 |
| MM | | 37.04 | 125.03 | 20 | 252.54 |

McFARLAND-JOHNSON ENGINEERS, INC.

| | | | | |
|------------|--------|--------|---------|---------|
| AC-FI | 18983. | 56430. | 92057. | 113947. |
| INDUS CU A | 29940. | 57013. | 113526. | 140051. |

| | | | | | | | | | |
|--|--------|--------|--------|--------|--------|-------|-------|--------|--------|
| HYDROGRAPH AT STA 4 FOR PLAN 1, R110 4 | | | | | | | | | |
| 130. | 122. | 140. | 234. | 494. | 1114. | 2040. | 6550. | 15315. | 31525. |
| 44904. | 44142. | 31945. | 22409. | 15914. | 11050. | 0375. | 5019. | 4223. | 3540. |
| 3070. | 3430. | 3200. | 2900. | 2700. | 2599. | 2425. | 2203. | 2111. | 1970. |
| 1000. | 1715. | 1000. | 1493. | 1393. | 1300. | 1213. | 1131. | 1050. | 985. |
| 919. | 057. | 000. | 740. | 070. | 050. | 000. | 500. | 525. | 492. |

| | | | | | |
|------------|--------|--------|---------|---------|--------------|
| | PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 44904. | 44523. | 30909. | 20107. | 290730. |
| C45 | 1272. | 1201. | 1047. | 559. | 0459. |
| INCHES | | 1.93 | 6.40 | 10.44 | 12.93 |
| MM | | 40.93 | 102.00 | 205.17 | 328.30 |
| AC-FI | | 22078. | 73367. | 119640. | 148130. |
| INDUS CU A | | 27232. | 90497. | 147503. | 182710. |

| | | | | | | | | | |
|--|--------|--------|--------|--------|--------|--------|-------|--------|--------|
| HYDROGRAPH AT STA 4 FOR PLAN 1, R110 0 | | | | | | | | | |
| 100. | 150. | 179. | 200. | 008. | 1377. | 3503. | 8071. | 19049. | 30800. |
| 55200. | 54329. | 39317. | 27000. | 19507. | 14339. | 10300. | 6177. | 5197. | 4049. |
| 4524. | 4221. | 3939. | 3675. | 3429. | 3197. | 2905. | 2705. | 2599. | 2425. |
| 2202. | 2111. | 1903. | 1037. | 1714. | 1000. | 1493. | 1393. | 1299. | 1212. |
| 1131. | 1055. | 900. | 919. | 057. | 000. | 740. | 090. | 050. | 000. |

| | | | | | |
|------------|--------|--------|---------|---------|--------------|
| | PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 55200. | 54790. | 45525. | 24740. | 367007. |
| C45 | 1505. | 1552. | 1209. | 701. | 10411. |
| INCHES | | 2.37 | 7.00 | 12.05 | 15.91 |
| MM | | 00.22 | 200.12 | 320.30 | 404.00 |
| AC-FI | | 27172. | 90290. | 147259. | 182314. |
| INDUS CU A | | 33517. | 111381. | 101041. | 224001. |

| | | | | | | | | | |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| HYDROGRAPH AT STA 4 FOR PLAN 1, R110 0 | | | | | | | | | |
| 201. | 107. | 224. | 300. | 700. | 1721. | 4379. | 10009. | 23502. | 40500. |
| 09002. | 07911. | 49140. | 34475. | 24403. | 17924. | 12004. | 7721. | 0497. | 0001. |
| 5050. | 0277. | 4923. | 4594. | 4200. | 3999. | 3731. | 3481. | 3240. | 3031. |
| 2020. | 2038. | 2402. | 2297. | 2143. | 2000. | 1000. | 1741. | 1624. | 1515. |
| 1414. | 1319. | 1231. | 1140. | 1072. | 1000. | 933. | 070. | 012. | 750. |

| | | | | | |
|------------|--------|--------|---------|---------|--------------|
| | PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 09002. | 08497. | 50907. | 30935. | 459504. |
| C45 | 1950. | 1940. | 1011. | 070. | 13014. |
| INCHES | | 2.90 | 9.05 | 10.00 | 19.88 |
| MM | | 75.20 | 250.10 | 407.95 | 505.07 |
| AC-FI | | 33905. | 112873. | 101074. | 227093. |
| INDUS CU A | | 41090. | 139227. | 227051. | 201102. |

SUB-AREA RUNOFF COMPUTATION
MCFARLAND-JOHNSON ENGINEERS, INC.



LOCAL LOSS HYDROGRAPH

ISAD 100P IECG 11AP JPLI JPRI IASG ISIAG IAUJ
 4 0 0 0 0 0 1 0 0

HYDROGRAPH DATA
 IADG 100P IAREA SAMP IRSDA IRSPC RAIIS ISAD IASG LOCAL
 1 -1 71.00 0.00 71.00 0.00 0.000 0 1 0

PRECIP DATA
 SPPK PKS NO R12 R24 R48 R72 R96
 0.00 21.50 92.00 102.00 113.00 124.00 0.00 0.00

IRSPC COMPUTED BY THE PROGRAM IS 0.009

LOSS DATA
 LRCP1 SIRR ULIRR RIIL ERAL SIRR RIIR SIRR CRIL ALSRA RIIRP
 0 0.00 0.00 1.00 0.00 0.00 1.00 1.00 0.10 0.00 0.00

GIVEN UNIT GRAPH, NUMBER = 4
 400. 2400. 2300. 1200. 700. 400. 200. 100.
 UNIT GRAPH TOTALS 7700. CFS OR 1.91 INCHES OVER THE AREA

RECESSION DATA
 SIRR = -1.50 JCS = -0.10 RIIR = 2.00

| NO. DA | HR. RA | PERIOD | RAI. | EXCS | LOSS | END-OF-PERIOD FLDG
COMP | NO. DA | HR. RA | PERIOD | RAI. | EXCS | LOSS | COMP |
|--------|--------|--------|-------|-------|------|----------------------------|--------|--------|--------|------|------|------|-------|
| 1.01 | 0.00 | 1 | 0.00 | 0.00 | 0.00 | 95. | 1.07 | 12.00 | 26 | 0.00 | 0.00 | 0.00 | 1720. |
| 1.01 | 12.00 | 2 | 0.10 | 0.00 | 0.10 | 95. | 1.07 | 15.00 | 27 | 0.00 | 0.00 | 0.00 | 1510. |
| 1.01 | 12.00 | 3 | 1.50 | 0.50 | 1.07 | 319. | 1.08 | 0.00 | 28 | 0.00 | 0.00 | 0.00 | 1533. |
| 1.02 | 0.00 | 4 | 0.12 | 0.00 | 0.12 | 1475. | 1.08 | 0.00 | 29 | 0.00 | 0.00 | 0.00 | 1432. |
| 1.02 | 0.00 | 5 | 0.01 | 0.21 | 0.00 | 1497. | 1.08 | 12.00 | 30 | 0.00 | 0.00 | 0.00 | 1300. |
| 1.02 | 12.00 | 6 | 1.35 | 1.25 | 0.00 | 1775. | 1.08 | 16.00 | 31 | 0.00 | 0.00 | 0.00 | 1221. |
| 1.02 | 18.00 | 7 | 10.50 | 10.30 | 0.00 | 10505. | 1.09 | 0.00 | 32 | 0.00 | 0.00 | 0.00 | 1134. |
| 1.03 | 0.00 | 8 | 1.22 | 0.02 | 0.00 | 42904. | 1.09 | 0.00 | 33 | 0.00 | 0.00 | 0.00 | 1053. |
| 1.03 | 6.00 | 9 | 0.00 | 0.00 | 0.00 | 40905. | 1.09 | 12.00 | 34 | 0.00 | 0.00 | 0.00 | 991. |
| 1.03 | 12.00 | 10 | 0.00 | 0.00 | 0.00 | 22152. | 1.09 | 18.00 | 35 | 0.00 | 0.00 | 0.00 | 925. |
| 1.03 | 18.00 | 11 | 0.00 | 0.00 | 0.00 | 12502. | 1.10 | 0.00 | 36 | 0.00 | 0.00 | 0.00 | 853. |
| 1.04 | 0.00 | 12 | 0.00 | 0.00 | 0.00 | 7303. | 1.10 | 0.00 | 37 | 0.00 | 0.00 | 0.00 | 795. |
| 1.04 | 0.00 | 13 | 0.00 | 0.00 | 0.00 | 4250. | 1.10 | 12.00 | 38 | 0.00 | 0.00 | 0.00 | 751. |
| 1.04 | 12.00 | 14 | 0.00 | 0.00 | 0.00 | 3965. | 1.10 | 18.00 | 39 | 0.00 | 0.00 | 0.00 | 701. |
| 1.04 | 18.00 | 15 | 0.00 | 0.00 | 0.00 | 3700. | 1.11 | 0.00 | 40 | 0.00 | 0.00 | 0.00 | 654. |
| 1.05 | 0.00 | 16 | 0.00 | 0.00 | 0.00 | 3452. | 1.11 | 0.00 | 41 | 0.00 | 0.00 | 0.00 | 610. |
| 1.05 | 0.00 | 17 | 0.00 | 0.00 | 0.00 | 3221. | 1.11 | 5.00 | 42 | 0.00 | 0.00 | 0.00 | 569. |
| 1.05 | 6.00 | 18 | 0.00 | 0.00 | 0.00 | 3005. | 1.11 | 12.00 | 43 | 0.00 | 0.00 | 0.00 | 531. |
| 1.05 | 12.00 | 19 | 0.00 | 0.00 | 0.00 | 2800. | 1.12 | 18.00 | 44 | 0.00 | 0.00 | 0.00 | 490. |
| 1.05 | 18.00 | 20 | 0.00 | 0.00 | 0.00 | 2618. | 1.12 | 0.00 | 45 | 0.00 | 0.00 | 0.00 | 452. |
| 1.06 | 0.00 | 21 | 0.00 | 0.00 | 0.00 | 2441. | 1.12 | 5.00 | 46 | 0.00 | 0.00 | 0.00 | 412. |
| 1.06 | 0.00 | 22 | 0.00 | 0.00 | 0.00 | 2276. | 1.12 | 12.00 | 47 | 0.00 | 0.00 | 0.00 | 370. |
| 1.06 | 12.00 | 23 | 0.00 | 0.00 | 0.00 | 2125. | 1.13 | 18.00 | 48 | 0.00 | 0.00 | 0.00 | 331. |
| 1.06 | 18.00 | 24 | 0.00 | 0.00 | 0.00 | 1963. | 1.13 | 0.00 | 49 | 0.00 | 0.00 | 0.00 | 295. |
| 1.07 | 0.00 | 25 | 0.00 | 0.00 | 0.00 | 1850. | 1.13 | 6.00 | 50 | 0.00 | 0.00 | 0.00 | 262. |
| 1.07 | 0.00 | | | | | | 1.13 | 12.00 | 50 | 0.00 | 0.00 | 0.00 | 227. |

SUM 22.69 19.04 3.55 200399.
 (501.)(484.)(98.)(5009.82)

PEAK 0-HOUR 24-HOUR 72-HOUR TOTAL VOLUME
 CFS 42504. 31905. 25444. 3143. 200650.
 CNS 1217. 1189. 834. 5043.

McFARLAND-JOHNSON ENGINEERS, INC.

| | | | | |
|------------|--------|--------|--------|---------|
| INCHES | 5.50 | 15.43 | 20.06 | 26.29 |
| MM | 139.72 | 391.91 | 524.04 | 667.00 |
| AC-FI | 20019. | 50401. | 70203. | 99514. |
| THOUS CU M | 25000. | 72030. | 90403. | 122749. |

| | | HYDROGRAPH AT STA | | 4 FOR PLAN 1, RII0 1 | | | | | |
|-------|-------|-------------------|------|----------------------|------|-------|-------|-------|-------|
| 20. | 19. | 04. | 295. | 299. | 355. | 2101. | 8597. | 0197. | 1430. |
| 2500. | 1461. | 850. | 793. | 740. | 090. | 644. | 001. | 501. | 523. |
| 488. | 450. | 125. | 397. | 370. | 345. | 322. | 301. | 280. | 262. |
| 244. | 220. | 213. | 190. | 185. | 173. | 101. | 150. | 140. | 131. |
| 122. | 114. | 100. | 99. | 92. | 86. | 81. | 75. | 70. | 65. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|-------|--------|---------|---------|--------------|
| CFS | 8597. | 9397. | 5839. | 2629. | 40137. |
| CMS | 243. | 238. | 107. | 74. | 1137. |
| INCHES | | 1.10 | 3.09 | 4.13 | 5.25 |
| MM | | 27.94 | 78.39 | 104.97 | 133.57 |
| AC-FI | | 4164. | 11030. | 15041. | 19903. |
| THOUS CU M | | 5136. | 14407. | 19293. | 24550. |

| | | HYDROGRAPH AT STA | | 4 FOR PLAN 1, RII0 2 | | | | | |
|-------|-------|-------------------|-------|----------------------|-------|-------|-------|--------|-------|
| 35. | 32. | 112. | 510. | 524. | 621. | 3677. | 1504. | 14345. | 7753. |
| 4401. | 2550. | 1488. | 1388. | 1295. | 1208. | 1127. | 1052. | 981. | 910. |
| 804. | 797. | 744. | 694. | 647. | 604. | 564. | 520. | 491. | 458. |
| 427. | 399. | 374. | 347. | 324. | 302. | 282. | 263. | 245. | 229. |
| 214. | 199. | 180. | 173. | 162. | 151. | 141. | 131. | 123. | 114. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 15044. | 14095. | 10305. | 4000. | 70240. |
| CMS | 420. | 416. | 292. | 130. | 1989. |
| INCHES | | 1.93 | 5.40 | 7.23 | 9.20 |
| MM | | 48.90 | 137.18 | 183.69 | 233.75 |
| AC-FI | | 7287. | 20440. | 27371. | 34830. |
| THOUS CU M | | 6988. | 25213. | 33762. | 42962. |

| | | HYDROGRAPH AT STA | | 4 FOR PLAN 1, RII0 3 | | | | | |
|-------|-------|-------------------|-------|----------------------|-------|-------|--------|--------|--------|
| 50. | 40. | 159. | 738. | 748. | 886. | 5252. | 21492. | 20493. | 11076. |
| 0401. | 3652. | 2125. | 1943. | 1850. | 1720. | 1610. | 1503. | 1402. | 1308. |
| 1221. | 1134. | 1063. | 991. | 925. | 863. | 805. | 751. | 701. | 654. |
| 510. | 509. | 531. | 496. | 462. | 432. | 403. | 376. | 351. | 327. |
| 305. | 285. | 200. | 248. | 231. | 210. | 201. | 188. | 175. | 164. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 21492. | 20992. | 14722. | 6571. | 100343. |
| CMS | 609. | 594. | 417. | 166. | 2841. |
| INCHES | | 2.75 | 7.72 | 10.33 | 13.45 |
| MM | | 69.86 | 195.97 | 262.42 | 333.93 |
| AC-FI | | 1009. | 29200. | 39102. | 49757. |
| THOUS CU M | | 12840. | 36018. | 48231. | 61374. |

| | | HYDROGRAPH AT STA | | 4 FOR PLAN 1, RII0 4 | | | | | |
|-------|-------|-------------------|-------|----------------------|-------|-------|--------|--------|--------|
| 05. | 00. | 207. | 959. | 973. | 1154. | 6820. | 27940. | 26640. | 14399. |
| 0321. | 4747. | 703. | 2578. | 2405. | 2244. | 2094. | 1953. | 1823. | 1701. |

McFARLAND-JOHNSON ENGINEERS, INC.



| | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|------|------|------|
| 1587. | 1480. | 1381. | 1269. | 1222. | 1122. | 1047. | 977. | 911. | 850. |
| 793. | 740. | 691. | 674. | 601. | 561. | 523. | 468. | 456. | 425. |
| 397. | 379. | 345. | 322. | 301. | 280. | 252. | 249. | 226. | 213. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 21940. | 21290. | 19136. | 8543. | 130440. |
| CMS | 791. | 773. | 542. | 242. | 3694. |
| INCHES | | 3.56 | 15.93 | 13.43 | 17.09 |
| MM | | 90.82 | 254.75 | 341.15 | 434.11 |
| AC-FI | | 13532. | 37900. | 50832. | 64604. |
| THOUS CU M | | 16092. | 46823. | 62701. | 79780. |

HIDROGRAPH AT STA 4 FOR PLAN 1, RFI0 5

| | | | | | | | | | |
|--------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
| 79. | 74. | 255. | 1180. | 1197. | 1420. | 8404. | 34387. | 32788. | 17722. |
| 10241. | 5843. | 3400. | 3172. | 7960. | 2762. | 2577. | 2404. | 2243. | 2093. |
| 1953. | 1822. | 1700. | 1560. | 1480. | 1361. | 1288. | 1202. | 1127. | 1046. |
| 570. | 911. | 850. | 793. | 740. | 650. | 644. | 601. | 561. | 523. |
| 480. | 456. | 425. | 397. | 370. | 345. | 322. | 301. | 280. | 262. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|-------|--------|---------|---------|--------------|
| CFS | 3387. | 33586. | 23555. | 10514. | 160549. |
| CMS | 974. | 951. | 667. | 298. | 4546. |
| INCHES | | 4.40 | 12.34 | 10.53 | 21.03 |
| MM | | 111.78 | 313.55 | 419.87 | 534.29 |
| AC-FI | | 16055. | 46721. | 62503. | 79611. |
| THOUS CU M | | 20544. | 57629. | 71170. | 98199. |

HIDROGRAPH AT STA 4 FOR PLAN 1, RFI0 0

| | | | | | | | | | |
|--------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
| 99. | 93. | 319. | 1475. | 1497. | 1776. | 10505. | 42984. | 40985. | 22152. |
| 12802. | 7303. | 4250. | 3965. | 3700. | 3452. | 3221. | 3005. | 2804. | 2610. |
| 2441. | 2278. | 2125. | 1983. | 1850. | 1726. | 1610. | 1503. | 1402. | 1308. |
| 1221. | 1139. | 1063. | 991. | 925. | 863. | 805. | 751. | 701. | 654. |
| 610. | 569. | 531. | 490. | 462. | 432. | 403. | 376. | 351. | 327. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 42984. | 41985. | 29444. | 13143. | 200680. |
| CMS | 1217. | 1189. | 834. | 372. | 5003. |
| INCHES | | 5.50 | 15.43 | 20.06 | 26.29 |
| MM | | 139.72 | 391.94 | 524.84 | 667.80 |
| AC-FI | | 20819. | 58401. | 78203. | 99514. |
| THOUS CU M | | 25680. | 72030. | 96403. | 124748. |

SUB-AREA RUN-OFF COMPUTATION

BLACK CREEK INFLOW HYDROGRAPH

| | | | | | | | | |
|-------|-------|-------|-------|------|------|-------|--------|-------|
| ISIAQ | ICOMP | IECUN | ITAPE | JPLI | JPKI | INAME | ISTAGE | IAUTJ |
| 4 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |

HYDROGRAPH DATA

| | | | | | | | | |
|------|------|-------|------|-------|-------|-------|-------|-------|
| INJG | IJNG | IAREA | SNAP | FRSDA | TRSPC | ISNOG | ISAME | LOCAL |
| | | | | | | | | |

McFARLAND-JOHNSON ENGINEERS, INC.

FRSPC COMPUTED BY THE PROGRAM IS 0.001

PRECIP DATA
 R12 K24 K18 K72 K90
 0.00 21.00 81.00 91.00 101.00 112.00 0.00 0.00 0.00

LOSS DATA
 UNOPI SINKK DLANK RTIUL ERAID STRKS RTIUA SIRIL CNSTL ALSMA RIIMP
 0 0.00 0.00 1.00 0.00 0.00 1.00 1.00 0.10 0.00 0.00

GIVEN UNIT GRAPH, MURJJE= 12
 100. 400. 900. 1300. 1700. 2300. 2800. 3100. 2000. 2000.
 1400. 900. 1300. 1700. 2300. 2800. 3100. 2000. 2000.

UNIT GRAPH TOTALS 19500. CFS OR 0.97 INCHES OVER THE AREA

RECESSION DATA
 STRIJE = -1.00 JRCSSN = -0.10 RTIOR = 2.00

| NO. DA | HR. MW | PERIOD | RAIN | EXCS | LOSS | END-OF-PERIOD FLOW COMP Q | MJ. DA | HR. MW | PERIOD | RAIN | EXCS | LOSS | COMP Q |
|--------|--------|--------|-------|------|------|---------------------------|--------|--------|--------|------|------|------|---------|
| 1.01 | 6.00 | 1 | 0.08 | 0.00 | 0.08 | 174. | 1.07 | 12.00 | 26 | 0.00 | 0.00 | 0.00 | 3115. |
| 1.01 | 12.00 | 2 | 0.21 | 0.00 | 0.21 | 163. | 1.07 | 18.00 | 27 | 0.00 | 0.00 | 0.00 | 2906. |
| 1.01 | 18.00 | 3 | 1.08 | 0.02 | 1.06 | 214. | 1.08 | 0.00 | 28 | 0.00 | 0.00 | 0.00 | 2711. |
| 1.02 | 0.00 | 4 | 0.12 | 0.00 | 0.12 | 391. | 1.08 | 6.00 | 29 | 0.00 | 0.00 | 0.00 | 2530. |
| 1.02 | 6.00 | 5 | 0.76 | 0.10 | 0.66 | 709. | 1.08 | 12.00 | 30 | 0.00 | 0.00 | 0.00 | 2360. |
| 1.02 | 12.00 | 6 | 1.30 | 0.00 | 0.60 | 1127. | 1.08 | 18.00 | 31 | 0.00 | 0.00 | 0.00 | 2202. |
| 1.02 | 18.00 | 7 | 15.41 | 1.30 | 0.60 | 3321. | 1.09 | 0.00 | 32 | 0.00 | 0.00 | 0.00 | 2055. |
| 1.03 | 0.00 | 8 | 1.14 | 0.54 | 0.60 | 8901. | 1.09 | 6.00 | 33 | 0.00 | 0.00 | 0.00 | 1917. |
| 1.03 | 6.00 | 9 | 0.00 | 0.00 | 0.00 | 17359. | 1.09 | 12.00 | 34 | 0.00 | 0.00 | 0.00 | 1789. |
| 1.03 | 12.00 | 10 | 0.00 | 0.00 | 0.00 | 24353. | 1.09 | 18.00 | 35 | 0.00 | 0.00 | 0.00 | 1559. |
| 1.03 | 18.00 | 11 | 0.00 | 0.00 | 0.00 | 31040. | 1.10 | 0.00 | 36 | 0.00 | 0.00 | 0.00 | 1557. |
| 1.04 | 0.00 | 12 | 0.00 | 0.00 | 0.00 | 40465. | 1.10 | 6.00 | 37 | 0.00 | 0.00 | 0.00 | 1453. |
| 1.04 | 6.00 | 13 | 0.00 | 0.00 | 0.00 | 48177. | 1.10 | 12.00 | 38 | 0.00 | 0.00 | 0.00 | 1356. |
| 1.04 | 12.00 | 14 | 0.00 | 0.00 | 0.00 | 51779. | 1.10 | 18.00 | 39 | 0.00 | 0.00 | 0.00 | 1265. |
| 1.04 | 18.00 | 15 | 0.00 | 0.00 | 0.00 | 43090. | 1.11 | 0.00 | 40 | 0.00 | 0.00 | 0.00 | 1180. |
| 1.05 | 0.00 | 16 | 0.00 | 0.00 | 0.00 | 33065. | 1.11 | 6.00 | 41 | 0.00 | 0.00 | 0.00 | 1027. |
| 1.05 | 6.00 | 17 | 0.00 | 0.00 | 0.00 | 23052. | 1.11 | 12.00 | 42 | 0.00 | 0.00 | 0.00 | 959. |
| 1.05 | 12.00 | 18 | 0.00 | 0.00 | 0.00 | 14144. | 1.11 | 18.00 | 43 | 0.00 | 0.00 | 0.00 | 894. |
| 1.05 | 18.00 | 19 | 0.00 | 0.00 | 0.00 | 5060. | 1.12 | 0.00 | 44 | 0.00 | 0.00 | 0.00 | 835. |
| 1.06 | 0.00 | 20 | 0.00 | 0.00 | 0.00 | 4721. | 1.12 | 6.00 | 45 | 0.00 | 0.00 | 0.00 | 779. |
| 1.06 | 6.00 | 21 | 0.00 | 0.00 | 0.00 | 4405. | 1.12 | 12.00 | 46 | 0.00 | 0.00 | 0.00 | 726. |
| 1.06 | 12.00 | 22 | 0.00 | 0.00 | 0.00 | 4110. | 1.12 | 18.00 | 47 | 0.00 | 0.00 | 0.00 | 678. |
| 1.06 | 18.00 | 23 | 0.00 | 0.00 | 0.00 | 3834. | 1.13 | 0.00 | 48 | 0.00 | 0.00 | 0.00 | 632. |
| 1.07 | 0.00 | 24 | 0.00 | 0.00 | 0.00 | 3578. | 1.13 | 6.00 | 49 | 0.00 | 0.00 | 0.00 | 590. |
| 1.07 | 6.00 | 25 | 0.00 | 0.00 | 0.00 | 3338. | 1.13 | 12.00 | 50 | 0.00 | 0.00 | 0.00 | 408805. |

SUM -1.31 17.44 3.87 408805.
 (541.)(443.)(98.)(11576.07)

| PCAN | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|--------|--------|---------|---------|--------------|
| 51778. | 49953. | 41940. | 28297. | 408421. |
| 1488. | 1415. | 1273. | 801. | 11565. |
| | 2.48 | 8.94 | 10.89 | 40.32 |
| | 03.12 | 227.13 | 429.05 | 516.05 |
| | 24770. | 89137. | 168379. | 202523. |
| | 30553. | 109949. | 207692. | 249808. |

| HYDROGRAPH AT STA 4 FOR PLAN 1, FIG 1 | | | | | | | | | |
|---------------------------------------|-------|-------|--------|-------|-------|-------|-------|-------|-------|
| 35. | 33. | 43. | 78. | 142. | 225. | 604. | 1700. | 3474. | 4871. |
| 6200. | 6093. | 9025. | 10356. | 8010. | 8013. | 4010. | 2829. | 1012. | 944. |
| 681. | 622. | 707. | 710. | 808. | 523. | 581. | 542. | 500. | 472. |
| 940. | 411. | 353. | 358. | 334. | 311. | 291. | 271. | 253. | 230. |
| 220. | 205. | 192. | 179. | 107. | 150. | 145. | 136. | 120. | 118. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 10356. | 9991. | 8989. | 5059. | 81684. |
| CMS | 293. | 283. | 255. | 100. | 2313. |
| INCHES | | 0.50 | 1.79 | 3.38 | 4.00 |
| MM | | 12.02 | 45.43 | 85.81 | 103.21 |
| AC-FT | | 4954. | 17827. | 33070. | 40505. |
| THOUS CU M | | 0111. | 21990. | 41530. | 49962. |

| HYDROGRAPH AT STA 4 FOR PLAN 1, FIG 2 | | | | | | | | | |
|---------------------------------------|--------|--------|--------|--------|--------|-------|-------|-------|-------|
| 61. | 57. | 75. | 137. | 248. | 305. | 1162. | 3115. | 6070. | 8524. |
| 10864. | 14103. | 10845. | 18122. | 15082. | 11573. | 8000. | 4950. | 1771. | 1052. |
| 1542. | 1438. | 1342. | 1252. | 1108. | 1090. | 1017. | 949. | 800. | 820. |
| 771. | 719. | 671. | 620. | 584. | 545. | 509. | 474. | 443. | 413. |
| 385. | 300. | 330. | 313. | 297. | 273. | 254. | 237. | 221. | 207. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 18122. | 17483. | 15729. | 9904. | 142947. |
| CMS | 513. | 495. | 445. | 200. | 4048. |
| INCHES | | 0.07 | 3.13 | 5.91 | 7.11 |
| MM | | 22.09 | 79.50 | 150.17 | 180.02 |
| AC-FT | | 8009. | 31198. | 58933. | 70883. |
| THOUS CU M | | 10094. | 38482. | 72692. | 87433. |

| HYDROGRAPH AT STA 4 FOR PLAN 1, FIG 3 | | | | | | | | | |
|---------------------------------------|--------|--------|--------|--------|--------|--------|-------|-------|--------|
| 87. | 81. | 107. | 195. | 354. | 504. | 1660. | 4450. | 8000. | 12177. |
| 15520. | 20232. | 24064. | 25889. | 21545. | 15533. | 11520. | 7072. | 2530. | 2360. |
| 2202. | 2055. | 1917. | 1709. | 1069. | 1557. | 1453. | 1350. | 1265. | 1180. |
| 1101. | 1027. | 959. | 894. | 835. | 779. | 720. | 670. | 632. | 590. |
| 551. | 514. | 479. | 447. | 417. | 389. | 363. | 339. | 310. | 295. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 25889. | 24976. | 22470. | 14148. | 204211. |
| CMS | 733. | 707. | 636. | 401. | 5783. |
| INCHES | | 1.24 | 4.47 | 8.45 | 10.10 |
| MM | | 31.50 | 113.57 | 214.52 | 250.03 |
| AC-FT | | 12385. | 44509. | 84189. | 101201. |
| THOUS CU M | | 15277. | 54975. | 103846. | 124904. |

| HYDROGRAPH AT STA 4 FOR PLAN 1, FIG 4 | | | | | | | | | |
|---------------------------------------|--------|--------|--------|--------|--------|--------|-------|--------|--------|
| 113. | 106. | 139. | 254. | 461. | 733. | 2159. | 5785. | 11283. | 15830. |
| 20170. | 20302. | 31203. | 33050. | 20009. | 21492. | 14984. | 9193. | 3289. | 3068. |
| 2863. | 2071. | 2492. | 2325. | 2170. | 2024. | 1889. | 1762. | 1044. | 1534. |
| 1431. | 1330. | 1246. | 1103. | 1005. | 1012. | 944. | 881. | 822. | 767. |
| 710. | 600. | 623. | 501. | 542. | 500. | 472. | 441. | 411. | 384. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|-----|--------|--------|---------|---------|--------------|
| CFS | 33050. | 32409. | 29211. | 18393. | 205474. |
| CMS | 953. | 919. | 827. | | 7517. |

McFARLAND-JOHNSON ENGINEERS, INC.



| | | | | |
|------------|--------|--------|---------|---------|
| L.C.H.S | 1.02 | 5.01 | 10.98 | 13.21 |
| 44 | 41.03 | 147.04 | 270.00 | 335.43 |
| AC-FF | 16100. | 57939. | 109440. | 131040. |
| THOUS CU M | 19800. | 71407. | 135000. | 102375. |

HYDROGRAPH AT STA 4 FOR PLAN 1, R110 5

| | | | | | | | | | |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 140. | 130. | 171. | 313. | 507. | 902. | 2057. | 7120. | 13667. | 19402. |
| 24032. | 32372. | 30502. | 41422. | 34472. | 20452. | 10441. | 11315. | 4040. | 3777. |
| 3524. | 3280. | 3000. | 2002. | 2670. | 2492. | 2325. | 2169. | 2024. | 1800. |
| 1702. | 1044. | 1034. | 1431. | 1335. | 1240. | 1102. | 1005. | 1012. | 944. |
| 081. | 022. | 707. | 710. | 008. | 023. | 001. | 542. | 500. | 472. |

| | | | | | |
|------------|--------|--------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 41422. | 39902. | 35952. | 22030. | 320737. |
| CMS | 1173. | 1132. | 1010. | 041. | 9252. |
| L.C.H.S | 1.99 | 7.10 | 13.51 | | 10.20 |
| 44 | 50.49 | 181.71 | 343.24 | | 412.64 |
| AC-FF | 19910. | 71310. | 134703. | | 102018. |
| THOUS CU M | 24443. | 07900. | 100104. | | 199847. |

HYDROGRAPH AT STA 4 FOR PLAN 1, R110 0

| | | | | | | | | | |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 174. | 103. | 214. | 391. | 709. | 1127. | 3321. | 8901. | 17359. | 24353. |
| 31040. | 40405. | 40127. | 51778. | 43090. | 33000. | 23052. | 14144. | 5060. | 4711. |
| 4405. | 4110. | 3034. | 3078. | 3334. | 3110. | 2900. | 2711. | 2030. | 2000. |
| 2202. | 2000. | 1917. | 1789. | 1069. | 1007. | 1453. | 1356. | 1265. | 1100. |
| 1101. | 1027. | 959. | 894. | 835. | 779. | 720. | 079. | 632. | 090. |

| | | | | | |
|------------|--------|---------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 51778. | 49953. | 44940. | 20297. | 400421. |
| CMS | 1400. | 1415. | 1273. | 001. | 11500. |
| L.C.H.S | 2.48 | 8.94 | 16.09 | | 20.32 |
| 44 | 63.12 | 227.13 | 429.05 | | 510.00 |
| AC-FF | 24770. | 09137. | 160379. | | 202523. |
| THOUS CU M | 30553. | 109949. | 207092. | | 249000. |

COMBINE HYDROGRAPHS

COMBINE FLOWS AT CONFLUENCE OF BLACK CREEK

| | | | | | | | | |
|-------|-------|-------|-------|------|------|-------|--------|-------|
| ISTAG | ICOMP | IECON | ITAPE | JPLI | JPRT | INAME | ISTAGE | IAUTO |
| 4 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |

SUM OF 5 HYDROGRAPHS AT 4 PLAN 1 R110 1

| | | | | | | | | | |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 305. | 355. | 424. | 898. | 1930. | 3140. | 7305. | 23850. | 54112. | 77449. |
| 08799. | 92553. | 09740. | 80900. | 66499. | 52459. | 39579. | 29421. | 22125. | 10270. |
| 15577. | 13000. | 12264. | 11100. | 10254. | 9534. | 8801. | 8250. | 7089. | 7170. |
| 0000. | 0239. | 5021. | 0431. | 5007. | 4720. | 4411. | 4110. | 3040. | 3583. |
| 3343. | 3119. | 2919. | 2710. | 2034. | 2304. | 2200. | 2050. | 1920. | 1792. |

| | | | | |
|------|--------|---------|---------|--------------|
| PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| | | | | |

McFARLAND-JOHNSON ENGINEERS, INC.

| | | | | | |
|------------|--------|---------|---------|--------|---------|
| CFS | 92553. | 91147. | 87507. | 59558. | 928533. |
| C+S | 2021. | 2501. | 2480. | 1007. | 20293. |
| INCHES | | 0.35 | 1.30 | 2.77 | 3.00 |
| MM | | 0.98 | 34.50 | 70.39 | 91.45 |
| AC-FI | 45197. | 173000. | 354397. | | 400430. |
| INJUS CU 4 | 55749. | 214230. | 437142. | | 507931. |

SUM OF 5 HYDROGRAPHS AT 4 PLAN 1 RTIO 2

| | | | | | | | | | |
|---------|---------|---------|---------|---------|--------|--------|--------|--------|---------|
| 038. | 021. | 743. | 1572. | 3378. | 5494. | 12888. | 41737. | 94090. | 130285. |
| 150032. | 107181. | 101320. | 142532. | 114139. | 88264. | 60116. | 49251. | 37311. | 31160. |
| 20007. | 23073. | 21337. | 19502. | 17983. | 10070. | 15499. | 14434. | 13454. | 12547. |
| 11704. | 10919. | 10137. | 9504. | 6800. | 8274. | 7720. | 7203. | 6720. | 6270. |
| 5000. | 5459. | 5093. | 4752. | 4434. | 4137. | 3000. | 3001. | 3360. | 3135. |

| | | | | | |
|------------|---------|---------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 167181. | 104250. | 150010. | 104340. | 1624933. |
| C+S | 4734. | 4051. | 4435. | 2955. | 40013. |
| INCHES | | 0.04 | 2.43 | 4.86 | 0.30 |
| MM | | 10.18 | 61.70 | 123.32 | 100.04 |
| AC-FI | | 81440. | 310032. | 620000. | 305752. |
| INJUS CU 4 | | 100463. | 383159. | 765826. | 993800. |

SUM OF 5 HYDROGRAPHS AT 4 PLAN 1 RTIO 3

| | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|--------|--------|---------|---------|
| 912. | 808. | 1051. | 2245. | 4825. | 7849. | 18412. | 59025. | 135526. | 196273. |
| 230201. | 243187. | 233110. | 203019. | 101342. | 123368. | 91600. | 68193. | 51050. | 43647. |
| 37790. | 33548. | 30338. | 27787. | 25053. | 23790. | 22133. | 20010. | 19219. | 17923. |
| 10719. | 15598. | 14502. | 13577. | 12666. | 11020. | 11028. | 10290. | 9000. | 8958. |
| 8358. | 7798. | 7276. | 6789. | 6334. | 5910. | 5514. | 5145. | 4000. | 4479. |

| | | | | | |
|------------|---------|---------|---------|----------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 243187. | 238149. | 220036. | 149102. | 2321332. |
| C+S | 6860. | 6744. | 6418. | 4224. | 5733. |
| INCHES | | 0.92 | 3.52 | 6.94 | 9.00 |
| MM | | 23.40 | 89.29 | 170.32 | 220.63 |
| AC-FI | | 110090. | 449520. | 887692. | 1151074. |
| INJUS CU 4 | | 145062. | 554482. | 1094952. | 1419828. |

SUM OF 5 HYDROGRAPHS AT 4 PLAN 1 RTIO 4

| | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|--------|---------|---------|
| 1185. | 1154. | 1300. | 2919. | 6273. | 10204. | 23935. | 77512. | 170035. | 257100. |
| 302763. | 319040. | 305070. | 205100. | 208482. | 153184. | 116722. | 86557. | 65924. | 55795. |
| 48579. | 43302. | 39274. | 30037. | 33306. | 30913. | 28762. | 26796. | 24902. | 23299. |
| 21734. | 20277. | 18910. | 17551. | 16468. | 15305. | 14336. | 13376. | 12481. | 11645. |
| 10065. | 10137. | 9459. | 6625. | 8234. | 7683. | 7168. | 6688. | 0240. | 5822. |

| | | | | | |
|------------|---------|---------|---------|----------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 319640. | 312355. | 297153. | 194070. | 3017733. |
| C+S | 9051. | 8845. | 8414. | 5496. | 85453. |
| INCHES | | 1.21 | 4.01 | 9.03 | 11.70 |
| MM | | 30.76 | 117.07 | 229.38 | 297.22 |
| AC-FI | | 154887. | 509395. | 1154031. | 1496390. |
| INJUS CU 4 | | 191050. | 727007. | 1424463. | 1845777. |



| SUM OF 5 HYDROGRAPHS AT | | | | | 4 PLAN 1 RTID 5 | | | | |
|-------------------------|---------|---------|---------|---------|-----------------|---------|---------|---------|---------|
| 1459. | 1420. | 1090. | 3093. | 7721. | 12559. | 29459. | 95400. | 217920. | 310453. |
| 370059. | 390005. | 377020. | 325990. | 255165. | 193037. | 141005. | 104733. | 79709. | 07700. |
| 59192. | 52951. | 48148. | 44253. | 40940. | 38021. | 35300. | 32973. | 30744. | 28075. |
| 26749. | 24950. | 23204. | 21724. | 20209. | 18911. | 17045. | 16403. | 15301. | 14332. |
| 13372. | 12477. | 11041. | 10002. | 10134. | 9450. | 0022. | 0232. | 7000. | 7100. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|---------|---------|----------|----------|--------------|
| CFS | 390008. | 380047. | 307992. | 239014. | 3714132. |
| CMS | 11232. | 10954. | 10420. | 0700. | 105172. |
| INCHES | 1.50 | 5.71 | 11.12 | 14.40 | |
| MM | 38.10 | 144.90 | 282.49 | 305.81 | |
| AC-FT | 191025. | 729902. | 1422232. | 1041710. | |
| INDUS CU M | 230013. | 900321. | 1754297. | 2271720. | |

| SUM OF 5 HYDROGRAPHS AT | | | | | 4 PLAN 1 RTID 6 | | | | |
|-------------------------|---------|---------|---------|---------|-----------------|---------|---------|---------|---------|
| 1023. | 1775. | 2122. | 4491. | 9051. | 15690. | 36823. | 119250. | 273005. | 400579. |
| 474010. | 499775. | 473078. | 407000. | 317200. | 239317. | 175504. | 129014. | 97729. | 03118. |
| 72903. | 65500. | 59924. | 55113. | 51071. | 47472. | 44206. | 41203. | 38423. | 35840. |
| 33435. | 31194. | 29104. | 27155. | 25330. | 23039. | 22050. | 20579. | 19201. | 17915. |
| 10715. | 15590. | 14552. | 13577. | 12600. | 11820. | 11028. | 10290. | 9000. | 0958. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|---------|----------|----------|----------|--------------|
| CFS | 499775. | 487193. | 402852. | 299032. | 4642605. |
| CMS | 14152. | 13790. | 13107. | 0400. | 131400. |
| INCHES | 1.89 | 7.10 | 13.91 | 10.00 | |
| MM | 47.98 | 182.35 | 353.42 | 457.20 | |
| AC-FT | 241503. | 918053. | 1779304. | 2302148. | |
| INDUS CU M | 297959. | 1132402. | 2194013. | 2039057. | |

HYDROGRAPH ROUTING

ROUTE COMBINE FLOWS TO COURT STREET DRY GUTLET USING MUSKINGUM METHOD

| ISIAQ | ICOMP | IECON | ITAPE | JPLT | JPRI | INAME | ISTAGE | IAUTO |
|--------------|-------|-------|-------|-------|-------|-------|--------|-------|
| 5 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| ROUTING DATA | | | | | | | | |
| JLOSS | CLOSS | AVG | IRES | ISAME | LOPT | IPHP | LSTR | |
| 0.0 | 0.000 | 0.00 | 0 | 1 | 0 | 0 | 0 | |
| MSIPS | MSIDL | LAG | APSKN | X | ISK | STGRN | ISPRAI | |
| 1 | 0 | 0 | 6.930 | 0.010 | 0.000 | 0. | 0 | |

STATION 5, PLAN 1, RTID 1

| OUTFLOW | | | | | | | | | |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 305. | 302. | 315. | 547. | 1067. | 1952. | 3930. | 10920. | 27782. | 50739. |
| 70305. | 82097. | 87000. | 80370. | 78704. | 07120. | 53374. | 42353. | 32310. | 24972. |
| 20090. | 10770. | 14007. | 12004. | 11553. | 10501. | 07730. | 9022. | 0330. | 7000. |

McFARLAND-JOHNSON ENGINEERS, INC.

1270. 0700. 0529. 0904. 0505. 5139. 4795. 4474. 4174. 3094.
 3034. 3390. 3103. 2901. 2754. 2509. 2397. 2237. 2097. 1947.

| | PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 67000. | 57117. | 32871. | 58490. | 926707. |
| CMS | 2409. | 2407. | 2347. | 1050. | 26241. |
| InCHES | | 0.34 | 1.29 | 2.72 | 3.59 |
| MM | | 6.58 | 32.05 | 09.13 | 91.27 |
| AC-FI | | 43199. | 164378. | 348040. | 459524. |
| InJUS Cu m | | 53285. | 202757. | 429301. | 506614. |

STATION 5, PLAN 1, RILD 2

| OUTFLOW | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| 030. | 033. | 002. | 956. | 1008. | 3416. | 5878. | 19109. | 40610. | 09010. |
| 124390. | 147735. | 157820. | 154300. | 130727. | 110075. | 92570. | 71401. | 54398. | 42175. |
| 34181. | 23702. | 24971. | 22214. | 20112. | 10420. | 17010. | 15774. | 14007. | 13000. |
| 12732. | 11873. | 11075. | 10332. | 9039. | 0993. | 6391. | 7829. | 7304. | 6815. |
| 0359. | 5933. | 5530. | 5105. | 4819. | 4490. | 4195. | 3914. | 3652. | 3400. |

| | PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|---------|---------|---------|---------|--------------|
| CFS | 157820. | 150097. | 147372. | 102512. | 1621737. |
| CMS | 4409. | 4420. | 4187. | 2903. | 45922. |
| InCHES | | 0.01 | 2.29 | 4.77 | 6.29 |
| MM | | 15.37 | 50.20 | 121.10 | 159.73 |
| AC-FI | | 77403. | 293300. | 009957. | 604167. |
| InJUS Cu m | | 95470. | 361760. | 752403. | 991925. |

STATION 5, PLAN 1, RILD 3

| OUTFLOW | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|
| 912. | 905. | 940. | 1300. | 2669. | 4000. | 9020. | 27299. | 09527. | 12741. |
| 179525. | 214220. | 225551. | 222737. | 190001. | 164044. | 130106. | 99740. | 75009. | 50748. |
| 47021. | 40450. | 35299. | 31522. | 20015. | 20201. | 24267. | 22517. | 20945. | 19510. |
| 18107. | 10900. | 10021. | 14759. | 13770. | 12047. | 11907. | 11184. | 10435. | 9730. |
| 9084. | 0470. | 7908. | 7379. | 6884. | 0423. | 5993. | 5592. | 5217. | 4808. |

| | PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|---------|---------|---------|----------|--------------|
| CFS | 220851. | 225794. | 213710. | 140006. | 2316707. |
| CMS | 0400. | 6394. | 6052. | 4151. | 05004. |
| InCHES | | 0.00 | 3.31 | 6.92 | 8.98 |
| MM | | 22.24 | 84.20 | 173.27 | 228.18 |
| AC-FI | | 111904. | 423902. | 872367. | 1140010. |
| InJUS Cu m | | 130105. | 522070. | 1070049. | 1417036. |

STATION 5, PLAN 1, RILD 4

| OUTFLOW | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|--------|---------|
| 1185. | 1170. | 1230. | 1778. | 3409. | 0344. | 12773. | 35489. | 90519. | 160234. |
| 235330. | 201377. | 300329. | 291350. | 250578. | 213147. | 167380. | 127590. | 90490. | 74801. |
| 01123. | 51922. | 45400. | 40742. | 37007. | 34067. | 31509. | 29253. | 27219. | 25357. |
| 23040. | 22047. | 20500. | 19187. | 17901. | 16701. | 15503. | 14539. | 13505. | 12057. |
| 11009. | 11010. | 10201. | 9592. | 6900. | 0350. | 7791. | 7269. | 6783. | 6320. |

PEAK 6-HOUR 24-HOUR 72-HOUR TOTAL VOLUME
 McFARLAND-JOHNSON ENGINEERS, INC.

| | | | | | |
|------------|---------|---------|---------|----------|----------|
| CFS | 300329. | 295544. | 280005. | 190700. | 3011790. |
| C4S | 5504. | 8377. | 7929. | 5402. | 65285. |
| INCHES | | 1.15 | 4.34 | 0.00 | 11.00 |
| MM | | 29.14 | 110.31 | 225.40 | 290.03 |
| AC-FT | | 140099. | 555361. | 1135099. | 1493454. |
| INDUS CU 4 | | 180951. | 685052. | 1406123. | 1842148. |

STATION 5, PLAN 1, R110 5

| OUTFLOW | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1459. | 1447. | 1513. | 2109. | 4270. | 7807. | 15721. | 43678. | 111500. | 206170. |
| 291022. | 349125. | 372210. | 359962. | 313220. | 201390. | 204590. | 155307. | 117120. | 90790. |
| 74212. | 03210. | 55543. | 49800. | 45474. | 41840. | 30736. | 35980. | 33493. | 31203. |
| 29092. | 27134. | 25512. | 23014. | 22031. | 20555. | 19179. | 17894. | 10090. | 15570. |
| 14535. | 13501. | 12053. | 11806. | 11015. | 10277. | 9589. | 8947. | 6340. | 7789. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|---------|---------|---------|----------|--------------|
| CFS | 372210. | 300089. | 340557. | 234956. | 3700820. |
| C4S | 10540. | 10306. | 9813. | 6053. | 104960. |
| INCHES | | 1.42 | 5.30 | 10.93 | 14.37 |
| MM | | 36.00 | 136.53 | 277.09 | 365.09 |
| AC-FT | | 181532. | 667360. | 1398098. | 1838090. |
| INDUS CU M | | 223910. | 847878. | 1724528. | 2267250. |

STATION 5, PLAN 1, R110 6

| OUTFLOW | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1623. | 1509. | 1592. | 2736. | 5337. | 9759. | 19051. | 54590. | 139659. | 258027. |
| 307170. | 440027. | 400440. | 451020. | 397780. | 325004. | 254135. | 192473. | 144561. | 111722. |
| 91301. | 77944. | 08704. | 01902. | 50571. | 52155. | 48335. | 44930. | 41030. | 38991. |
| 30359. | 33914. | 31030. | 29517. | 27539. | 25094. | 23973. | 22308. | 20070. | 19472. |
| 18108. | 10952. | 15010. | 14757. | 13709. | 12647. | 11967. | 11104. | 10435. | 9730. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|---------|---------|----------|----------|--------------|
| CFS | 400440. | 400030. | 435040. | 294989. | 4633535. |
| C4S | 13205. | 13027. | 12330. | 8325. | 131207. |
| INCHES | | 1.75 | 0.70 | 13.65 | 17.97 |
| MM | | 45.31 | 171.03 | 347.40 | 456.30 |
| AC-FT | | 220115. | 664091. | 1749355. | 2297621. |
| INDUS CU M | | 281379. | 1005041. | 2157790. | 2834073. |

SUB-AREA RUNOFF COMPUTATION

LOCAL INFLOW HYDROGRAPH AT OUILET OF CJURI STREET DAM

| | | | | | | | | |
|-------|-------|-------|-------|------|------|-------|--------|-------|
| ISTAG | ICOMP | IECUM | IIRPE | JPLI | JPRT | INAME | ISTAGE | IADTD |
| 5 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |

| HYDROGRAPH DATA | | | | | | | | | |
|-----------------|-----|-------|------|-------|-------|-------|------|-------|-------|
| INDO | IUM | IAREA | SNAP | IRSDA | IRSPC | RATIO | ISND | ISAME | LOCAL |
| 1 | -1 | 01.00 | 0.00 | 61.00 | 0.00 | 0 | 0 | 1 | 0 |

McFARLAND-JOHNSON ENGINEERS, INC.

PRECIP DATA
 SPPZ PAS NO R12 M24 R48 R72 R96
 0.00 21.00 99.00 104.00 110.00 120.00 0.00 0.00
 IPSPC COMPUTED BY THE PROGRAM IS 0.855

LOSS DATA
 LRJPI SIKR ULIKR RFIKL ERALR SIKRS RTIDK STRIL CUSIL ALS4X RTI4P
 0 0.00 0.00 1.00 0.00 0.00 1.00 1.00 0.10 0.00 0.00

GIVEY UNIT GRAPH, NUNGN= 0
 1500. 2300. 1100. 000. 400. 200. 100. 100.
 UNIT GRAPH TITLES 0900. CFS OR 1.04 INCHES OVER THE AREA

PRECSSION DATA
 SINTW= -2.00 WRCSE= -0.10 RTIDR= 2.00

| MO. JA | HR. MN | PERIOD | RAIN | EXCS | LOSS | END-OF-PERIOD FLOW
CUM. FT | MO. JA | HR. MN | PERIOD | RAIN | EXCS | LOSS | CUM. FT |
|--------|--------|--------|-------|-------|------|-------------------------------|--------|--------|--------|------|------|------|---------|
| 1.01 | 0.00 | 1 | 0.00 | 0.00 | 0.00 | 114. | 1.07 | 12.00 | 26 | 0.00 | 0.00 | 0.00 | 1835. |
| 1.01 | 12.00 | 2 | 0.10 | 0.00 | 0.10 | 100. | 1.07 | 18.00 | 27 | 0.00 | 0.00 | 0.00 | 1713. |
| 1.01 | 18.00 | 3 | 1.49 | 0.43 | 1.00 | 747. | 1.08 | 0.00 | 28 | 0.00 | 0.00 | 0.00 | 1598. |
| 1.02 | 0.00 | 4 | 0.11 | 0.00 | 0.11 | 1303. | 1.08 | 6.00 | 29 | 0.00 | 0.00 | 0.00 | 1491. |
| 1.02 | 6.00 | 5 | 0.88 | 0.28 | 0.00 | 985. | 1.08 | 12.00 | 30 | 0.00 | 0.00 | 0.00 | 1391. |
| 1.02 | 12.00 | 6 | 1.84 | 1.24 | 0.00 | 2907. | 1.08 | 18.00 | 31 | 0.00 | 0.00 | 0.00 | 1298. |
| 1.02 | 18.00 | 7 | 17.20 | 10.00 | 0.00 | 29030. | 1.09 | 0.00 | 32 | 0.00 | 0.00 | 0.00 | 1211. |
| 1.03 | 0.00 | 8 | 1.32 | 0.72 | 0.00 | 49404. | 1.09 | 6.00 | 33 | 0.00 | 0.00 | 0.00 | 1130. |
| 1.03 | 6.00 | 9 | 0.00 | 0.00 | 0.00 | 21332. | 1.09 | 12.00 | 34 | 0.00 | 0.00 | 0.00 | 1054. |
| 1.03 | 12.00 | 10 | 0.00 | 0.00 | 0.00 | 11457. | 1.09 | 18.00 | 35 | 0.00 | 0.00 | 0.00 | 984. |
| 1.03 | 18.00 | 11 | 0.00 | 0.00 | 0.00 | 7437. | 1.10 | 0.00 | 36 | 0.00 | 0.00 | 0.00 | 918. |
| 1.04 | 0.00 | 12 | 0.00 | 0.00 | 0.00 | 4844. | 1.10 | 6.00 | 37 | 0.00 | 0.00 | 0.00 | 856. |
| 1.04 | 6.00 | 13 | 0.00 | 0.00 | 0.00 | 4519. | 1.10 | 12.00 | 38 | 0.00 | 0.00 | 0.00 | 799. |
| 1.04 | 12.00 | 14 | 0.00 | 0.00 | 0.00 | 4217. | 1.10 | 18.00 | 39 | 0.00 | 0.00 | 0.00 | 745. |
| 1.04 | 18.00 | 15 | 0.00 | 0.00 | 0.00 | 3934. | 1.11 | 0.00 | 40 | 0.00 | 0.00 | 0.00 | 696. |
| 1.05 | 0.00 | 16 | 0.00 | 0.00 | 0.00 | 3671. | 1.11 | 6.00 | 41 | 0.00 | 0.00 | 0.00 | 649. |
| 1.05 | 6.00 | 17 | 0.00 | 0.00 | 0.00 | 3425. | 1.11 | 12.00 | 42 | 0.00 | 0.00 | 0.00 | 605. |
| 1.05 | 12.00 | 18 | 0.00 | 0.00 | 0.00 | 3190. | 1.11 | 18.00 | 43 | 0.00 | 0.00 | 0.00 | 565. |
| 1.05 | 18.00 | 19 | 0.00 | 0.00 | 0.00 | 2982. | 1.12 | 0.00 | 44 | 0.00 | 0.00 | 0.00 | 527. |
| 1.06 | 0.00 | 20 | 0.00 | 0.00 | 0.00 | 2782. | 1.12 | 6.00 | 45 | 0.00 | 0.00 | 0.00 | 492. |
| 1.06 | 6.00 | 21 | 0.00 | 0.00 | 0.00 | 2590. | 1.12 | 12.00 | 46 | 0.00 | 0.00 | 0.00 | 459. |
| 1.06 | 12.00 | 22 | 0.00 | 0.00 | 0.00 | 2422. | 1.12 | 18.00 | 47 | 0.00 | 0.00 | 0.00 | 428. |
| 1.06 | 18.00 | 23 | 0.00 | 0.00 | 0.00 | 2260. | 1.13 | 0.00 | 48 | 0.00 | 0.00 | 0.00 | 399. |
| 1.07 | 0.00 | 24 | 0.00 | 0.00 | 0.00 | 2108. | 1.13 | 6.00 | 49 | 0.00 | 0.00 | 0.00 | 373. |
| 1.07 | 6.00 | 25 | 0.00 | 0.00 | 0.00 | 1967. | 1.13 | 12.00 | 50 | 0.00 | 0.00 | 0.00 | 348. |

SUM 23.10 19.35 3.81 192457.
 (588.)(492.)(97.)(5449.77)

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 49404. | 39251. | 26764. | 12202. | 192225. |
| C4S | 1401. | 1111. | 755. | 346. | 5443. |
| INCHES | | 5.99 | 10.33 | 22.33 | 29.31 |
| AF | | 152.04 | 114.57 | 567.18 | 744.57 |
| AC-FT | | 19403. | 33085. | 72010. | 95318. |
| INJUS CU M | | 24004. | 65480. | 89503. | 117573. |

HYDROGRAPH AT STA 5 FOR PLAN 1, RTIC 1
 23. 21. 149. 201. 197. 597. 8808. 9893. 4206. 2291.
 MCFARLAND-JOHNSON ENGINEERS, INC.

| | | | | | | | | | |
|-------|------|------|------|------|------|------|------|------|------|
| 1707. | 909. | 904. | 043. | 707. | 730. | 505. | 039. | 090. | 556. |
| 519. | 404. | 424. | 422. | 343. | 307. | 343. | 320. | 290. | 273. |
| 230. | 242. | 220. | 211. | 197. | 109. | 171. | 100. | 144. | 139. |
| 130. | 121. | 113. | 105. | 90. | 72. | 00. | 00. | 70. | 70. |

| | PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|-------|--------|---------|---------|--------------|
| CFS | 9093. | 7050. | 5353. | 2440. | 30445. |
| CMS | 200. | 222. | 152. | 09. | 1009. |
| INCHES | | 1.20 | 3.27 | 4.47 | 5.00 |
| MM | | 30.41 | 82.93 | 113.44 | 140.91 |
| AC-FI | | 3093. | 10017. | 14522. | 19004. |
| INDUS CU 4 | | 4002. | 13090. | 17913. | 23515. |

HYDROGRAPH AT STA 5 FOR PLAN 1, RIIID 2

| | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|--------|--------|-------|-------|
| 40. | 37. | 202. | 400. | 345. | 1045. | 10163. | 17312. | 7400. | 4010. |
| 2003. | 1095. | 1502. | 1470. | 1377. | 1205. | 1199. | 1119. | 1044. | 974. |
| 909. | 040. | 791. | 730. | 089. | 042. | 599. | 559. | 522. | 487. |
| 404. | 424. | 395. | 309. | 344. | 321. | 300. | 200. | 201. | 243. |
| 227. | 212. | 190. | 184. | 172. | 101. | 150. | 140. | 130. | 122. |

| | PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 17312. | 13730. | 9307. | 4271. | 67279. |
| CMS | 490. | 309. | 205. | 121. | 1905. |
| INCHES | | 2.09 | 5.71 | 7.62 | 10.20 |
| MM | | 53.21 | 145.14 | 190.51 | 260.60 |
| AC-FI | | 6012. | 18500. | 25413. | 33301. |
| INDUS CU 4 | | 4403. | 22918. | 31347. | 41151. |

HYDROGRAPH AT STA 5 FOR PLAN 1, RIIID 3

| | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|--------|--------|--------|-------|
| 57. | 53. | 374. | 051. | 492. | 1493. | 14519. | 24732. | 10600. | 5720. |
| 3710. | 2422. | 2200. | 2100. | 1907. | 1835. | 1713. | 1590. | 1491. | 1391. |
| 1290. | 1211. | 1130. | 1054. | 904. | 910. | 850. | 799. | 745. | 690. |
| 049. | 005. | 505. | 527. | 402. | 459. | 420. | 399. | 373. | 340. |
| 324. | 303. | 202. | 204. | 200. | 229. | 214. | 200. | 100. | 114. |

| | PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 24732. | 19025. | 13302. | 6101. | 90112. |
| CMS | 700. | 550. | 379. | 173. | 2722. |
| INCHES | | 2.99 | 8.15 | 11.17 | 13.60 |
| MM | | 70.02 | 207.34 | 283.59 | 372.20 |
| AC-FI | | 9732. | 20543. | 30305. | 47659. |
| INDUS CU 4 | | 12004. | 32740. | 44781. | 56787. |

HYDROGRAPH AT STA 5 FOR PLAN 1, RIIID 4

| | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|--------|--------|--------|-------|
| 74. | 09. | 430. | 047. | 640. | 1941. | 18874. | 32152. | 13800. | 7447. |
| 4337. | 3140. | 2930. | 2741. | 2557. | 2300. | 2220. | 2077. | 1930. | 1808. |
| 1007. | 1574. | 1409. | 1370. | 1279. | 1193. | 1113. | 1039. | 969. | 904. |
| 044. | 707. | 734. | 600. | 039. | 097. | 557. | 519. | 400. | 452. |
| 422. | 394. | 307. | 343. | 320. | 290. | 278. | 260. | 242. | 226. |

| | PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|--------|--------|--------|---------|---------|--------------|
| CFS | 32152. | 25513. | 17397. | 7932. | 124940. |
| CMS | 910. | 722. | 493. | 225. | 3538. |
| INCHES | | 3.09 | 10.01 | 14.51 | 19.05 |
| MM | | 98.02 | 209.54 | 300. | 403.97 |

McFARLAND-JOHNSON ENGINEERS, INC.

AC-PI 12001. 34000. 47190. 01907.
 INJUS CU 4 15005. 42502. 00210. 70422.

HYDROGRAPH AT STA 5 FOR PLAN 1, RTID 5

| | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|--------|--------|--------|-------|
| 91. | 05. | 090. | 1042. | 700. | 2309. | 23230. | 39571. | 17050. | 9105. |
| 0950. | 3070. | 3010. | 3370. | 3145. | 2937. | 2740. | 2557. | 2300. | 2220. |
| 2077. | 1930. | 1000. | 1087. | 1574. | 1400. | 1370. | 1275. | 1193. | 1113. |
| 1030. | 909. | 74. | 043. | 707. | 734. | 005. | 039. | 096. | 050. |
| 519. | 404. | 452. | 422. | 393. | 307. | 343. | 320. | 290. | 270. |

| | | | | |
|------------|--------|---------|---------|--------------|
| PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS 39571. | 31401. | 21411. | 9702. | 153700. |
| CMS 1121. | 089. | 000. | 270. | 4355. |
| INCHES | 4.79 | 13.00 | 17.00 | 23.45 |
| MM | 121.03 | 331.74 | 453.75 | 595.05 |
| AC-PI | 15571. | 42400. | 00000. | 70254. |
| INJUS CU 4 | 19200. | 52304. | 71050. | 94050. |

HYDROGRAPH AT STA 5 FOR PLAN 1, RTID 0

| | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
| 114. | 100. | 747. | 1303. | 900. | 2907. | 29030. | 49404. | 21332. | 11457. |
| 7437. | 4044. | 4019. | 4217. | 3934. | 3071. | 3425. | 3190. | 2902. | 2702. |
| 2590. | 2422. | 2200. | 2100. | 1907. | 1035. | 1713. | 1590. | 1491. | 1391. |
| 1290. | 1211. | 1130. | 1054. | 904. | 910. | 650. | 799. | 745. | 090. |
| 049. | 000. | 005. | 027. | 492. | 459. | 420. | 399. | 373. | 348. |

| | | | | |
|------------|--------|---------|---------|--------------|
| PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS 49404. | 39251. | 20704. | 12202. | 192225. |
| CMS 1401. | 1111. | 750. | 340. | 5443. |
| INCHES | 5.99 | 16.33 | 22.33 | 29.31 |
| MM | 152.04 | 414.07 | 307.16 | 744.57 |
| AC-PI | 19400. | 53085. | 7010. | 95310. |
| INJUS CU 4 | 24000. | 05400. | 09503. | 117573. |

COMBINE HYDROGRAPHS

TOTAL OUTFLOW AT COURI STREET DAM

ISRAW 5 ICOMP 2 IECON 0 IIAPE 0 JPLI 0 JPRT 0 INAME 1 ISTAGE 0 IRTID 0

SUM OF 2 HYDROGRAPHS AT 5 PLAN 1 RTID 1

| | | | | | | | | | |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 307. | 303. | 020. | 000. | 1204. | 2549. | 9730. | 20012. | 32040. | 53030. |
| 71052. | 03000. | 00702. | 07219. | 79551. | 07002. | 55059. | 42992. | 32912. | 25570. |
| 20015. | 17002. | 14919. | 13220. | 11946. | 10920. | 10079. | 9342. | 0004. | 0000. |
| 7030. | 7021. | 0555. | 0115. | 5705. | 5323. | 4900. | 4033. | 4323. | 4034. |
| 3703. | 0511. | 3270. | 3057. | 2852. | 2001. | 2403. | 2317. | 2102. | 2017. |

| | | | | |
|------------|--------|---------|---------|--------------|
| PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS 00702. | 07991. | 03037. | 09044. | 900102. |
| CMS 2015. | 2492. | 2374. | 1 | 27330. |

McFARLAND-JOHNSON ENGINEERS, INC.

| | | | | |
|------------|--------|---------|---------|---------|
| INCREAS | 0.33 | 1.27 | 2.72 | 3.05 |
| AA | 0.45 | 32.21 | 00.97 | 52.70 |
| AC-FI | 43042. | 100409. | 300000. | 470000. |
| INDUS CU 4 | 03819. | 205119. | 439406. | 090329. |

| | | | | | | | | | |
|---|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| SUM OF 2 MICROGRAPHS AT 5 PLAN 1 RTIU 2 | | | | | | | | | |
| 070. | 070. | 024. | 1414. | 2213. | 4401. | 17041. | 30422. | 00004. | 93020. |
| 120993. | 149431. | 109407. | 105044. | 140104. | 117300. | 93709. | 72579. | 55442. | 43149. |
| 35009. | 29010. | 25702. | 22952. | 20301. | 19009. | 17009. | 10333. | 10109. | 14147. |
| 13100. | 12297. | 11470. | 10701. | 9983. | 9314. | 8090. | 0100. | 7500. | 7059. |
| 0000. | 0145. | 5733. | 0349. | 4991. | 4057. | 4345. | 4054. | 3703. | 3529. |

| | | | | |
|------------|---------|---------|---------|--------------|
| PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 109407. | 157020. | 149559. | 104935. |
| CAS | 4514. | 4463. | 4245. | 2973. |
| INCREAS | 0.00 | 2.20 | 4.70 | 0.39 |
| AA | 15.14 | 57.46 | 121.00 | 102.23 |
| AC-FI | 70101. | 290043. | 024700. | 837529. |
| INDUS CU 4 | 90411. | 305904. | 770504. | 1033070. |

| | | | | | | | | | |
|---|---------|---------|---------|---------|---------|---------|---------|--------|---------|
| SUM OF 2 MICROGRAPHS AT 5 PLAN 1 RTIU 3 | | | | | | | | | |
| 909. | 900. | 1329. | 2019. | 3101. | 0373. | 24345. | 52031. | 00193. | 133409. |
| 103243. | 210041. | 231110. | 224040. | 200509. | 100479. | 131019. | 101330. | 77150. | 60139. |
| 49119. | 41009. | 30429. | 32577. | 29559. | 27179. | 25123. | 23310. | 21091. | 20205. |
| 10000. | 17000. | 10300. | 10200. | 14202. | 13300. | 12410. | 11503. | 10000. | 10004. |
| 9409. | 0773. | 0191. | 7042. | 7130. | 0053. | 6207. | 5792. | 5404. | 5042. |

| | | | | |
|------------|---------|---------|----------|--------------|
| PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 231110. | 227970. | 216120. | 150240. |
| CAS | 0544. | 0450. | 0120. | 4255. |
| INCREAS | 0.00 | 0.00 | 3.27 | 0.42 |
| AA | 21.90 | 03.03 | 173.17 | 231.75 |
| AC-FI | 113047. | 420079. | 094030. | 1190409. |
| INDUS CU 4 | 139441. | 520700. | 1102776. | 1475823. |

| | | | | | | | | | |
|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| SUM OF 2 MICROGRAPHS AT 5 PLAN 1 RTIU 4 | | | | | | | | | |
| 1209. | 1245. | 1715. | 2025. | 4109. | 0205. | 31048. | 07040. | 104305. | 174201. |
| 240104. | 204020. | 303207. | 294099. | 201135. | 215033. | 169000. | 129000. | 90428. | 70009. |
| 02010. | 03490. | 40949. | 42112. | 30340. | 30200. | 32022. | 30291. | 20100. | 20202. |
| 24404. | 22337. | 21301. | 19072. | 10540. | 17200. | 10139. | 15050. | 14050. | 13109. |
| 12231. | 14112. | 10000. | 9935. | 9209. | 0049. | 8070. | 7529. | 7025. | 0554. |

| | | | | |
|------------|---------|---------|----------|--------------|
| PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 303207. | 290083. | 203135. | 195005. |
| CAS | 0500. | 0450. | 0017. | 5539. |
| INCREAS | 1.13 | 4.20 | 0.08 | 11.00 |
| AA | 20.09 | 100.70 | 225.45 | 301.20 |
| AC-FI | 143107. | 561591. | 1103929. | 1555410. |
| INDUS CU 4 | 132000. | 092712. | 1435005. | 1918509. |



| SUM OF 2 MICROGRAPHS AT | | | | | 5 PLAN 1 R110 5 | | | | |
|-------------------------|---------|--------|---------|---------|-----------------|---------|---------|---------|---------|
| 1550. | 1534. | 2111. | 3231. | 5059. | 15197. | 35751. | 83250. | 125034. | 215335. |
| 297572. | 353500. | 50532. | 303330. | 321375. | 254327. | 207530. | 157944. | 119515. | 93015. |
| 70200. | 55155. | 57551. | 51572. | 47047. | 43310. | 40105. | 37259. | 34051. | 32310. |
| 10131. | 25192. | 25215. | 24457. | 22514. | 21290. | 19004. | 18533. | 17272. | 15134. |
| 15054. | 14945. | 13105. | 12227. | 11409. | 10545. | 9932. | 9257. | 8540. | 8007. |

| | PLAN | 0-MGR | 24-MGR | 72-MGR | TOTAL VOLUME |
|------------|---------|---------|---------|----------|--------------|
| CFS | 375032. | 369584. | 350410. | 241627. | 3500000. |
| CAS | 19542. | 10455. | 5923. | 5825. | 109320. |
| INCRDS | | 1.40 | 5.30 | 16.94 | 14.50 |
| AC | | 35.50 | 134.53 | 277.60 | 370.61 |
| AC-FI | | 183205. | 895029. | 1454212. | 1914351. |
| INJUS CO X | | 225054. | 557305. | 1709075. | 2361317. |

| SUM OF 2 MICROGRAPHS AT | | | | | 5 PLAN 1 R110 6 | | | | |
|-------------------------|---------|---------|---------|---------|-----------------|---------|---------|---------|---------|
| 1937. | 1915. | 2539. | 4039. | 5322. | 12745. | 43669. | 104002. | 165991. | 270284. |
| 374013. | 444870. | 472907. | 455045. | 401721. | 329275. | 257500. | 195005. | 147545. | 114505. |
| 93090. | 63300. | 73904. | 64011. | 54539. | 53990. | 50047. | 46525. | 43327. | 40353. |
| 37057. | 35125. | 32700. | 30571. | 28523. | 25512. | 24530. | 23107. | 21615. | 20155. |
| 10017. | 17557. | 15351. | 15254. | 14261. | 13300. | 12415. | 11503. | 10808. | 10054. |

| | PLAN | 0-MGR | 24-MGR | 72-MGR | TOTAL VOLUME |
|------------|---------|---------|----------|----------|--------------|
| CFS | 472907. | 464400. | 440402. | 301716. | 4825750. |
| CAS | 15593. | 13151. | 12473. | 6544. | 130050. |
| INCRDS | | 1.70 | 6.00 | 13.09 | 10.25 |
| AC | | 44.51 | 107.22 | 347.75 | 403.51 |
| AC-FI | | 230204. | 873044. | 1755349. | 2392939. |
| INJUS CO X | | 284051. | 1077624. | 2214530. | 2951040. |



PEAK FLOW AND STORAGE (END OF PERIOD) SUMMARY FOR MULTIPLE PLAN-RATIO ECONOMIC COMPUTATIONS
 FLOWS IN CUBIC FEET PER SECOND (CUBIC METERS PER SECOND)
 AREA IN SQUARE MILES (SQUARE KILOMETERS)

| OPERATION | STATION | AREA | PLAN | RATIOS APPLIED TO FLOWS | | | | | |
|---------------|---------|-----------------------|------|-------------------------|-----------------------|-----------------------|-----------------------|------------------------|------------------------|
| | | | | RATIO 1
0.20 | RATIO 2
0.35 | RATIO 3
0.50 | RATIO 4
0.65 | RATIO 5
0.80 | RATIO 6
1.00 |
| HYDROGRAPH AT | 1 | 1075.00
(2704.24) | 1 | 59802.
(1093.42) | 104654.
(2963.48) | 149506.
(4233.54) | 194356.
(5503.60) | 239210.
(6773.66) | 299012.
(8467.06) |
| ROUTED TO | 2 | 1075.00
(2784.24) | 1 | 52056.
(1474.06) | 100718.
(2852.01) | 147331.
(4171.95) | 193080.
(5490.08) | 242009.
(6852.92) | 302780.
(8573.78) |
| HYDROGRAPH AT | 2 | 335.00
(867.65) | 1 | 25575.
(724.20) | 44756.
(1267.35) | 63937.
(1810.50) | 83118.
(2353.65) | 102300.
(2896.80) | 127875.
(3621.00) |
| 2 COMBINED | 2 | 1410.00
(3651.88) | 1 | 70940.
(2008.90) | 133770.
(3788.10) | 194557.
(5509.23) | 255274.
(7228.54) | 317570.
(8992.57) | 397232.
(11236.34) |
| ROUTED TO | 3 | 1410.00
(3651.88) | 1 | 50826.
(1009.14) | 103721.
(2937.04) | 150826.
(4270.91) | 196101.
(5609.59) | 245372.
(6948.16) | 308510.
(8736.02) |
| HYDROGRAPH AT | 3 | 256.00
(663.04) | 1 | 10370.
(463.73) | 20659.
(811.52) | 40941.
(1159.32) | 53223.
(1507.11) | 65505.
(1854.91) | 81882.
(2318.63) |
| 2 COMBINED | 3 | 1666.00
(4314.92) | 1 | 61701.
(1747.18) | 112252.
(3178.62) | 163014.
(4616.03) | 213945.
(6058.24) | 264872.
(7500.34) | 332885.
(9426.26) |
| ROUTED TO | 4 | 1666.00
(4314.92) | 1 | 61701.
(1747.18) | 112252.
(3178.62) | 163014.
(4616.03) | 213945.
(6058.24) | 264872.
(7500.34) | 332885.
(9426.26) |
| HYDROGRAPH AT | 4 | 260.00
(673.40) | 1 | 19925.
(564.21) | 34868.
(987.36) | 49812.
(1410.52) | 64756.
(1833.67) | 79699.
(2256.83) | 99624.
(2821.03) |
| HYDROGRAPH AT | 4 | 215.00
(556.85) | 1 | 13816.
(391.24) | 24179.
(684.67) | 34541.
(978.10) | 44904.
(1271.53) | 55206.
(1564.96) | 69082.
(1956.19) |
| HYDROGRAPH AT | 4 | 71.00
(183.89) | 1 | 8597.
(243.43) | 15044.
(426.01) | 21492.
(608.59) | 27940.
(791.16) | 34387.
(973.74) | 42984.
(1217.17) |
| HYDROGRAPH AT | 4 | 187.00
(484.33) | 1 | 10350.
(293.24) | 16122.
(513.16) | 25889.
(733.09) | 33656.
(953.02) | 41422.
(1172.95) | 51778.
(1466.18) |
| 5 COMBINED | 4 | 2399.00
(6213.38) | 1 | 92553.
(2620.82) | 167181.
(4734.04) | 243187.
(6886.29) | 319640.
(9051.19) | 396668.
(11232.37) | 499775.
(14152.06) |
| ROUTED TO | 5 | 2399.00
(6213.38) | 1 | 87058.
(2467.87) | 157826.
(4409.12) | 228851.
(6480.32) | 300329.
(8504.36) | 372216.
(10539.98) | 468448.
(13204.96) |
| HYDROGRAPH AT | 5 | 61.00
(157.99) | 1 | 9693.
(280.13) | 17312.
(490.23) | 24732.
(700.33) | 32152.
(910.43) | 39571.
(1120.53) | 49464.
(1400.66) |
| 2 COMBINED | 5 | 2460.00
(6371.37) | 1 | 88702.
(2513.46) | 159407.
(4513.91) | 231110.
(6544.31) | 303267.
(8587.55) | 375832.
(10642.36) | 472967.
(13392.93) |

 FLOOD HYDROGRAPH PACKAGE (HC-1)
 DAM SAFETY VERSION JULY 1978
 LAST MODIFICATION 20 FEB 79

| GENESEE RIVER BASIN | | | | | | | | | | | |
|---|----|-------|--|--------|--------|--------|--------|--------|--------|--------|--------|
| HYDROLOGIC-HYDRAULIC ANALYSIS OF SAFETY OF COURT STREET DAM | | | | | | | | | | | |
| RATIOS OF PAF ROUTED THROUGH THE RESERVOIR | | | | | | | | | | | |
| 1 | A | | | | | | | | | | |
| 2 | A | | | | | | | | | | |
| 3 | A | | | | | | | | | | |
| 4 | B | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | B1 | 5 | | | | | | | | | |
| 6 | J | 1 | 0 | 1 | | | | | | | |
| 7 | J1 | .2 | .35 | .5 | .65 | .8 | 1 | | | | |
| 8 | K | 0 | 1 | 0 | 0 | 0 | 1 | | | | |
| 9 | N1 | | GENESEE RIVER INFLOW HYDROGRAPH AT MOUNT MORRIS DAM | | | | | | | | |
| 10 | M | 1 | -1 | 1075 | 0 | 2400 | 0 | 0 | 0 | 1 | 0 |
| 11 | P | 0 | 22 | 41 | 55 | 63 | 74 | | | | |
| 12 | I | 0 | 0 | 0 | 0 | 0 | 0 | 1 | .1 | 0 | 0 |
| 13 | U | 14 | | | | | | | | | |
| 14 | U1 | 4900 | 13400 | 23000 | 24900 | 17000 | 6400 | 5000 | 4300 | 3400 | 2700 |
| 15 | U1 | 2100 | 1600 | 1300 | 1000 | | | | | | |
| 16 | X | -1 | -1 | 2 | | | | | | | |
| 17 | K | 1 | 2 | 0 | 0 | 0 | 0 | 1 | | | |
| 18 | K1 | | ROUTING OF INFLOW HYDROGRAPH USING MODIFIED PULS METHOD | | | | | | | | |
| 19 | Y | 0 | 0 | 0 | 1 | 1 | | | | | |
| 20 | Y1 | 1 | 0 | 0 | 0 | 0 | 0 | 4660 | | | |
| 21 | Y2 | 4000 | 22500 | 50000 | 120000 | 337400 | 364300 | 377700 | 391100 | 405000 | 417900 |
| 22 | Y3 | 0 | 0 | 0 | 0 | 0 | 0 | 41500 | 76500 | 126000 | 182000 |
| 23 | Y3 | 18000 | 359000 | 402000 | 447000 | | | | | | |
| 24 | X | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 25 | K1 | | CANASEKAGA CREEK INFLOW HYDROGRAPH AT JONES BRIDGE GAGE | | | | | | | | |
| 26 | M | 1 | -1 | 335 | 0 | 2400 | 0 | 0 | 0 | 1 | 0 |
| 27 | P | 0 | 22 | 41 | 55 | 63 | 74 | | | | |
| 28 | I | 0 | 0 | 0 | 0 | 0 | 0 | 1 | .1 | 0 | 0 |
| 29 | U | 11 | | | | | | | | | |
| 30 | U1 | 2500 | 7000 | 8200 | 6000 | 4000 | 2800 | 1900 | 1300 | 800 | 500 |
| 31 | U1 | 200 | | | | | | | | | |
| 32 | X | -1 | -1 | 2 | | | | | | | |
| 33 | K | 2 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 34 | N1 | | COMBINE OUTFLOW-MOUNT MORRIS DAM AND CANASEKAGA CREEK INFLOW | | | | | | | | |
| 35 | K | 1 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 36 | N1 | | ROUTE COMBINE FLOWS TO AVON GAGE USING MUSKINGUM METHOD | | | | | | | | |
| 37 | Y | 0 | 0 | 0 | 0 | 1 | | | | | |
| 38 | Y1 | 2 | 0 | 0 | 7.06 | .04 | 0 | 0 | | | |
| 39 | K | 0 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 40 | N1 | | LOCAL INFLOW HYDROGRAPH AT AVON GAGE | | | | | | | | |
| 41 | X | 1 | -1 | 250 | 0 | 2460 | 0 | 0 | 0 | 1 | 0 |
| 42 | P | 0 | 22 | 41 | 55 | 63 | 74 | | | | |
| 43 | I | 0 | 0 | 0 | 0 | 0 | 0 | 1 | .1 | 0 | 0 |
| 44 | U | 10 | | | | | | | | | |
| 45 | U1 | 1000 | 4700 | 5100 | 3400 | 2200 | 1500 | 900 | 500 | 200 | 100 |
| 46 | X | -1 | -1 | 2 | | | | | | | |
| 47 | K | 2 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 48 | K1 | | COMBINE FLOWS AT AVON GAGE | | | | | | | | |
| 49 | K | 1 | 4 | 0 | 0 | 0 | 0 | 1 | | | |
| 50 | K | 1 | 4 | 0 | 0 | 0 | 0 | 1 | | | |



| | | | | | | | | | | | |
|-----|----|--|------|------|------|------|------|------|------|------|------|
| 51 | K1 | ROUTE FLOWS TO CONFLUENCE OF BLACK CREEK BY LAGGING FLOWS | | | | | | | | | |
| 52 | Y | 0 | 0 | 0 | 0 | 1 | | | | | |
| 53 | Y1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | |
| 54 | K | 0 | 4 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 55 | K1 | ROULETTE CREEK INFLOW HYDROGRAPH | | | | | | | | | |
| 56 | M | 1 | -1 | 200 | 0 | 2400 | 0 | 0 | 0 | 1 | 0 |
| 57 | P | 0 | 22 | 41 | 55 | 63 | 74 | | | | |
| 58 | T | 0 | 0 | 0 | 0 | 0 | 0 | 1 | .1 | 0 | 0 |
| 59 | U | 12 | | | | | | | | | |
| 60 | U1 | 100 | 500 | 3000 | 6300 | 5000 | 3000 | 2400 | 1700 | 1300 | 1000 |
| 61 | U1 | 700 | 400 | | | | | | | | |
| 62 | X | -1 | -.1 | 2 | | | | | | | |
| 63 | K | 0 | 4 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 64 | K1 | DUTINA CREEK INFLOW HYDROGRAPH | | | | | | | | | |
| 65 | M | 1 | -1 | 215 | 0 | 2400 | 0 | 0 | 0 | 1 | 0 |
| 66 | P | 0 | 22 | 42 | 55 | 63 | 74 | | | | |
| 67 | T | 0 | 0 | 0 | 0 | 0 | 0 | 1 | .1 | 0 | 0 |
| 68 | U | 12 | | | | | | | | | |
| 69 | U1 | 100 | 400 | 1200 | 2800 | 4200 | 4200 | 3000 | 2100 | 1500 | 1100 |
| 70 | U1 | 800 | 500 | | | | | | | | |
| 71 | X | -1 | -.1 | 2 | | | | | | | |
| 72 | K | 0 | 4 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 73 | K1 | LOCAL INFLOW HYDROGRAPH | | | | | | | | | |
| 74 | M | 1 | -1 | 71 | 0 | 2450 | 0 | 0 | 0 | 1 | 0 |
| 75 | P | 0 | 22 | 41 | 55 | 63 | 74 | | | | |
| 76 | T | 0 | 0 | 0 | 0 | 0 | 0 | 1 | .1 | 0 | 0 |
| 77 | U | 12 | | | | | | | | | |
| 78 | U1 | 400 | 2400 | 2300 | 1200 | 700 | 400 | 200 | 100 | | |
| 79 | X | -1.5 | -.1 | 2 | | | | | | | |
| 80 | K | 0 | 4 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 81 | K1 | BLACK CREEK INFLOW HYDROGRAPH | | | | | | | | | |
| 82 | M | 1 | -1 | 105 | 0 | 2400 | 0 | 0 | 0 | 1 | 0 |
| 83 | P | 0 | 22 | 41 | 55 | 63 | 74 | | | | |
| 84 | T | 0 | 0 | 0 | 0 | 0 | 0 | 1 | .1 | 0 | 0 |
| 85 | U | 12 | | | | | | | | | |
| 86 | U1 | 100 | 400 | 900 | 1300 | 1700 | 2300 | 2800 | 3100 | 2000 | 2000 |
| 87 | U1 | 1400 | 900 | | | | | | | | |
| 88 | X | -1 | -.1 | 2 | | | | | | | |
| 89 | K | 5 | 4 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 90 | K1 | COMBINE FLOWS AT CONFLUENCE OF BLACK CREEK | | | | | | | | | |
| 91 | K | 1 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 92 | K1 | ROUTE COMBINE FLOWS TO COURT STREET DAM GULCH USING MUSKINGUM METHOD | | | | | | | | | |
| 93 | Y | 0 | 0 | 0 | 0 | 1 | | | | | |
| 94 | Y1 | 1 | 0 | 0 | 6.93 | .01 | | | | | |
| 95 | K | 0 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 96 | K1 | LOCAL INFLOW HYDROGRAPH AT OUTLET OF COURT STREET DAM | | | | | | | | | |
| 97 | M | 1 | -1 | 61 | 0 | 2400 | 0 | 0 | 0 | 1 | 0 |
| 98 | P | 0 | 22 | 41 | 55 | 63 | 74 | | | | |
| 99 | T | 0 | 0 | 0 | 0 | 0 | 0 | 1 | .1 | 0 | 0 |
| 100 | U | 6 | | | | | | | | | |



| | | | | | | | | | | | | | |
|-----|----|------------------------------------|------|------|-----|-----|-----|-----|-----|---|---|---|---|
| 101 | 01 | 1500 | 2800 | 1100 | 600 | 400 | 200 | 100 | 100 | | | | |
| 102 | X | -2 | -1 | 2 | | | | | | | | | |
| 103 | K | 2 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 104 | N1 | TOTAL QUANTITY AT COURT STREET DAM | | | | | | | | | | | |
| 105 | A | 99 | | | | | | | | | | | |



PREVIEW OF SEQUENCE OF STREAM NETWORK CALCULATIONS

| | |
|--------------------------|---|
| RUNOFF HYDROGRAPH A1 | 1 |
| RUNOFF HYDROGRAPH T0 | 2 |
| RUNOFF HYDROGRAPH AT | 2 |
| COMBINE 2 HYDROGRAPHS AT | 2 |
| RUNOFF HYDROGRAPH T0 | 3 |
| RUNOFF HYDROGRAPH AT | 3 |
| COMBINE 2 HYDROGRAPHS AT | 3 |
| RUNOFF HYDROGRAPH T0 | 4 |
| RUNOFF HYDROGRAPH AT | 4 |
| RUNOFF HYDROGRAPH AT | 4 |
| RUNOFF HYDROGRAPH AT | 4 |
| RUNOFF HYDROGRAPH AT | 4 |
| COMBINE 5 HYDROGRAPHS AT | 4 |
| RUNOFF HYDROGRAPH T0 | 5 |
| RUNOFF HYDROGRAPH AT | 5 |
| COMBINE 2 HYDROGRAPHS AT | 5 |
| END OF NETWORK | |



 FLOOD HYDROGRAPH PACKAGE (HEC-1)
 DAM SAFETY VERSION JULY 1978
 LAST MODIFICATION 26 FEB 79

TIME OF EXECUTION 20-AUG-80 11:48:11

GENESEE RIVER BASIN
 HYDROLOGIC-HYDRAULIC ANALYSIS OF SAFETY OF COURT STREET DAM
 RATIOS OF PAF ROUTED THROUGH THE RESERVOIR

NO 50
 HRR 0
 UMIN 0
 IDAY 0
 IHR 0
 IMIN 0
 MCIRC 0
 IPLT 0
 IPRT 0
 NSTAW 0
 JUPER 5
 NAI 0
 LROPT 0
 TRACE 0

MULTI-PLAN ANALYSES TO BE PERFORMED
 NPPLAN= 1 NRATIO= 6 LRTIME= 1
 RTIUSE= 0.20 U.35 0.50 0.65 0.80 1.00

SUB-AREA RUNOFF COMPUTATION

GENESEE RIVER INFLOW HYDROGRAPH AT MOUNT MORRIS DAM

1
 ISIAQ 1
 ICOMP 0
 IECUM 0
 ITAPE 0
 JPLI 0
 JPRI 0
 INAME 1
 ISAGE 1
 IAUTO 0

IHYDG 1
 IUHG -1
 IAREA 1075.00
 SNAP 0.00
 TRSDA 240.00
 TRSPC 0.00
 RATIO 0.000
 ISAME 1
 LOCAL 0

PRECIP DATA

SPEE 0.00
 PMS 22.00
 R12 41.00
 R24 55.00
 R48 63.00
 R72 74.00
 R96 0.00

IRSPC COMPUTED BY THE PROGRAM IS 0.925

LOSS DATA

LROPT 1
 STRKR 0.00
 DLFKR 0.00
 RIJUL 1.00
 ERAIN 0.00
 SIRAS 0.00
 RTIUK 1.00
 SIRIL 1.00
 CHSTL 0.10
 ALSMX 0.00
 RYIMP 0.00

4900. 13400. 23000. 24900. 17000. 8400. 5600. 4300. 3400. 2700.
 2100. 1300. 1000. 1000. 936. 1.07 12.00 26 0.00 0.00 12005.
 1.01 12.00 2 0.50 0.00 0.50 936. 1.07 12.00 27 0.00 0.00 11017.

UNIT GRAPH FALLS 113600. CFS OR 0.9 INCHES OVER THE AREA

RECESSION DATA

SRKJG= -1.00
 JKCSH= -0.10
 RTIUK= 2.00

END-JF-PERIOD FLOW

| NO.DA | HR.MN | PERIOD | RAIN | EXCS | LOSS | COMP | NO.DA | HR.MN | PERIOD | RAIN | EXCS | LOSS | COMP |
|-------|-------|--------|------|------|------|-------|-------|-------|--------|------|------|------|--------|
| 1.01 | 6.00 | 1 | 0.11 | 0.00 | 0.11 | 1003. | 1.07 | 12.00 | 26 | 0.00 | 0.00 | 0.00 | 12005. |
| 1.01 | 12.00 | 2 | 0.50 | 0.00 | 0.50 | 936. | 1.07 | 12.00 | 27 | 0.00 | 0.00 | 0.00 | 11017. |

McFARLAND-JOHNSON ENGINEERS, INC.

| | | | | | | | | | | | | | |
|------|-------|----|------|------|------|---------|------|-------|----|------|------|------|--------|
| 1.01 | 18.00 | 3 | 1.40 | 0.03 | 0.03 | 3947. | 1.00 | 0.00 | 28 | 0.00 | 0.00 | 0.00 | 11025. |
| 1.02 | 0.00 | 4 | 0.17 | 0.00 | 0.17 | 9221. | 1.00 | 6.00 | 29 | 0.00 | 0.00 | 0.00 | 10207. |
| 1.02 | 6.00 | 5 | 0.00 | 0.00 | 0.00 | 15439. | 1.00 | 12.00 | 30 | 0.00 | 0.00 | 0.00 | 9598. |
| 1.02 | 12.00 | 6 | 2.00 | 2.25 | 0.00 | 20020. | 1.00 | 18.00 | 31 | 0.00 | 0.00 | 0.00 | 8955. |
| 1.02 | 18.00 | 7 | 4.34 | 7.74 | 0.00 | 00542. | 1.00 | 0.00 | 32 | 0.00 | 0.00 | 0.00 | 8350. |
| 1.03 | 0.00 | 8 | 0.90 | 0.38 | 0.00 | 164409. | 1.00 | 6.00 | 33 | 0.00 | 0.00 | 0.00 | 7790. |
| 1.03 | 6.00 | 9 | 0.00 | 0.00 | 0.00 | 243980. | 1.00 | 12.00 | 34 | 0.00 | 0.00 | 0.00 | 7274. |
| 1.03 | 12.00 | 10 | 0.00 | 0.00 | 0.00 | 243250. | 1.00 | 18.00 | 35 | 0.00 | 0.00 | 0.00 | 6787. |
| 1.03 | 18.00 | 11 | 0.00 | 0.00 | 0.00 | 162747. | 1.10 | 0.00 | 36 | 0.00 | 0.00 | 0.00 | 6332. |
| 1.04 | 0.00 | 12 | 0.00 | 0.00 | 0.00 | 86380. | 1.10 | 6.00 | 37 | 0.00 | 0.00 | 0.00 | 5908. |
| 1.04 | 6.00 | 13 | 0.00 | 0.00 | 0.00 | 58096. | 1.10 | 12.00 | 38 | 0.00 | 0.00 | 0.00 | 5513. |
| 1.04 | 12.00 | 14 | 0.00 | 0.00 | 0.00 | 44579. | 1.10 | 18.00 | 39 | 0.00 | 0.00 | 0.00 | 5143. |
| 1.04 | 18.00 | 15 | 0.00 | 0.00 | 0.00 | 35305. | 1.11 | 0.00 | 40 | 0.00 | 0.00 | 0.00 | 4799. |
| 1.05 | 0.00 | 16 | 0.00 | 0.00 | 0.00 | 27901. | 1.11 | 6.00 | 41 | 0.00 | 0.00 | 0.00 | 4478. |
| 1.05 | 6.00 | 17 | 0.00 | 0.00 | 0.00 | 23033. | 1.11 | 12.00 | 42 | 0.00 | 0.00 | 0.00 | 4178. |
| 1.05 | 12.00 | 18 | 0.00 | 0.00 | 0.00 | 22001. | 1.11 | 18.00 | 43 | 0.00 | 0.00 | 0.00 | 3898. |
| 1.05 | 18.00 | 19 | 0.00 | 0.00 | 0.00 | 20074. | 1.12 | 0.00 | 44 | 0.00 | 0.00 | 0.00 | 3037. |
| 1.05 | 0.00 | 20 | 0.00 | 0.00 | 0.00 | 19190. | 1.12 | 6.00 | 45 | 0.00 | 0.00 | 0.00 | 3393. |
| 1.06 | 6.00 | 21 | 0.00 | 0.00 | 0.00 | 17911. | 1.12 | 12.00 | 46 | 0.00 | 0.00 | 0.00 | 3166. |
| 1.06 | 12.00 | 22 | 0.00 | 0.00 | 0.00 | 16711. | 1.12 | 18.00 | 47 | 0.00 | 0.00 | 0.00 | 2954. |
| 1.06 | 18.00 | 23 | 0.00 | 0.00 | 0.00 | 15592. | 1.13 | 0.00 | 48 | 0.00 | 0.00 | 0.00 | 2756. |
| 1.07 | 0.00 | 24 | 0.00 | 0.00 | 0.00 | 14548. | 1.13 | 6.00 | 49 | 0.00 | 0.00 | 0.00 | 2572. |
| 1.07 | 6.00 | 25 | 0.00 | 0.00 | 0.00 | 13574. | 1.13 | 12.00 | 50 | 0.00 | 0.00 | 0.00 | 2400. |

SUM 15.05 11.04 4.01 1525298.
(382.)(260.)(102.)(43191.62)

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|---------|---------|---------|---------|--------------|
| CFS | 243900. | 243015. | 193043. | 99500. | 1523590. |
| CMS | 0909. | 0090. | 5489. | 2822. | 43143. |
| INCMS | | 2.11 | 6.71 | 10.35 | 13.18 |
| MM | | 53.55 | 170.42 | 202.86 | 334.60 |
| AC-FI | | 120001. | 304482. | 593010. | 755502. |
| THOUS CU M | | 149005. | 474251. | 731477. | 931090. |

HYDROGRAPH AT STA 1 FOR PLAN 1, R110 1

| | | | | | | | | | |
|--------|--------|--------|-------|-------|-------|--------|--------|--------|--------|
| 201. | 107. | 709. | 1844. | 3008. | 5005. | 16108. | 32062. | 48796. | 48650. |
| 32549. | 17276. | 11019. | 8916. | 7061. | 5592. | 4727. | 4410. | 4115. | 3639. |
| 3582. | 3312. | 3118. | 2910. | 2715. | 2533. | 2303. | 2205. | 2057. | 1920. |
| 1791. | 1671. | 1559. | 1455. | 1357. | 1200. | 1102. | 1103. | 1029. | 960. |
| 896. | 830. | 780. | 727. | 679. | 633. | 591. | 551. | 514. | 480. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 40796. | 40723. | 30769. | 19932. | 304719. |
| CMS | 1382. | 1380. | 1098. | 564. | 8629. |
| INCMS | | 0.42 | 1.34 | 2.07 | 2.64 |
| MM | | 10.71 | 34.08 | 52.57 | 60.96 |
| AC-FI | | 24160. | 70896. | 118004. | 151100. |
| THOUS CU M | | 29001. | 94850. | 146295. | 180300. |

HYDROGRAPH AT STA 1 FOR PLAN 1, R110 2

| | | | | | | | | | |
|--------|--------|--------|--------|--------|-------|--------|--------|--------|--------|
| 351. | 320. | 1302. | 3227. | 5404. | 9809. | 28190. | 57543. | 85393. | 85137. |
| 50902. | 50233. | 29334. | 15003. | 12357. | 9786. | 8272. | 7710. | 7201. | 6719. |
| 6209. | 5049. | 5457. | 5092. | 4751. | 4433. | 4130. | 3859. | 3000. | 3359. |
| 3134. | 2924. | 2729. | 2540. | 2375. | 2216. | 2066. | 1929. | 1800. | 1680. |
| 1507. | 1402. | 1304. | 1213. | 1100. | 1108. | 1034. | 965. | 900. | 840. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 65393. | 85265. | 67645. | 34661. | 533259. |
| CMS | 2418. | 2414. | 1921. | 900. | 15100. |
| INCHES | | 0.74 | 2.35 | 3.02 | 4.61 |
| MM | | 18.74 | 59.65 | 92.00 | 117.21 |
| AC-FI | | 42260. | 134509. | 207550. | 264426. |
| THOUS CU A | | 52152. | 165968. | 256017. | 326154. |

HYDROGRAPH AT STA 1 FOR PLAN 1, R110 3

| | | | | | | | | | |
|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|
| 502. | 408. | 1974. | 4611. | 7719. | 14013. | 40271. | 82204. | 121990. | 121625. |
| 81374. | 43190. | 29048. | 22290. | 17652. | 13980. | 11817. | 11025. | 10287. | 9598. |
| 8955. | 6350. | 7796. | 7274. | 6767. | 6332. | 5900. | 5513. | 5143. | 4799. |
| 4478. | 4176. | 3698. | 3637. | 3373. | 3166. | 2954. | 2750. | 2572. | 2400. |
| 2239. | 2089. | 1949. | 1816. | 1697. | 1563. | 1477. | 1370. | 1260. | 1200. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|---------|---------|---------|---------|--------------|
| CFS | 121990. | 121807. | 96921. | 49630. | 761798. |
| CMS | 3454. | 3449. | 2745. | 1411. | 21572. |
| INCHES | | 1.05 | 3.35 | 5.17 | 6.59 |
| MM | | 26.77 | 85.21 | 131.43 | 167.44 |
| AC-FI | | 60400. | 192241. | 296509. | 377751. |
| THOUS CU A | | 74503. | 237125. | 365736. | 465949. |

HYDROGRAPH AT STA 1 FOR PLAN 1, R110 4

| | | | | | | | | | |
|---------|--------|--------|--------|--------|--------|--------|---------|---------|---------|
| 652. | 606. | 2560. | 5994. | 10035. | 16217. | 52352. | 106866. | 156587. | 158112. |
| 105766. | 56147. | 37763. | 28977. | 22948. | 16174. | 15362. | 14333. | 13373. | 12477. |
| 11642. | 10862. | 10135. | 9450. | 8823. | 8232. | 7681. | 7166. | 6687. | 6239. |
| 5621. | 5431. | 5007. | 4728. | 4411. | 4116. | 3840. | 3563. | 3343. | 3119. |
| 2910. | 2716. | 2534. | 2364. | 2266. | 2056. | 1920. | 1792. | 1672. | 1560. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|---------|---------|---------|---------|--------------|
| CFS | 158567. | 158350. | 125990. | 64779. | 990337. |
| CMS | 4491. | 4484. | 3566. | 1834. | 28043. |
| INCHES | | 1.37 | 4.36 | 6.73 | 6.57 |
| MM | | 34.80 | 110.77 | 170.86 | 217.67 |
| AC-FI | | 78520. | 249913. | 385462. | 491676. |
| THOUS CU A | | 96854. | 308263. | 475400. | 605734. |

HYDROGRAPH AT STA 1 FOR PLAN 1, R110 5

| | | | | | | | | | |
|---------|--------|--------|--------|--------|--------|--------|---------|---------|---------|
| 802. | 749. | 3158. | 7377. | 12351. | 22421. | 64433. | 131527. | 195184. | 194600. |
| 130198. | 69104. | 46477. | 35663. | 28244. | 22366. | 16907. | 17640. | 16459. | 15357. |
| 14329. | 13309. | 12474. | 11636. | 10859. | 10132. | 9453. | 8620. | 8230. | 7678. |
| 7164. | 6684. | 6237. | 5819. | 5429. | 5066. | 4727. | 4410. | 4115. | 3839. |
| 3562. | 3342. | 3116. | 2910. | 2715. | 2533. | 2363. | 2205. | 2057. | 1920. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|---------|---------|---------|---------|--------------|
| CFS | 195184. | 194892. | 155074. | 79728. | 1216677. |
| CMS | 5527. | 5519. | 4391. | 2258. | 34515. |
| INCHES | | 1.69 | 5.37 | 8.28 | 10.55 |
| MM | | 42.64 | 136.34 | 210.29 | 267.90 |
| AC-FI | | 96641. | 307565. | 474414. | 604402. |
| THOUS CU A | | 119204. | 379401. | 585161. | 745518. |

| HYDROGRAPH AT STA 1 FOR PLAN 1, R110 0 | | | | | | | | | |
|--|--------|--------|--------|--------|--------|--------|---------|---------|---------|
| 1003. | 930. | 3947. | 9221. | 15439. | 20320. | 00542. | 104409. | 243900. | 243250. |
| 102747. | 00300. | 09090. | 44579. | 35305. | 27951. | 23033. | 22051. | 20574. | 19190. |
| 17911. | 10711. | 15592. | 14540. | 13574. | 12005. | 11017. | 11025. | 10267. | 9598. |
| 0955. | 0350. | 7790. | 7274. | 6787. | 0352. | 5908. | 5513. | 5143. | 4799. |
| 4476. | 4170. | 3090. | 3037. | 3393. | 3100. | 2954. | 2700. | 2572. | 2400. |

| | FEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|---------|---------|---------|---------|--------------|
| CFS | 243900. | 243015. | 193843. | 99000. | 1523590. |
| CMS | 0909. | 6890. | 5489. | 2022. | 43143. |
| INCHES | | 2.11 | 0.71 | 10.35 | 13.10 |
| MA | | 53.55 | 170.42 | 202.80 | 334.80 |
| AC-FI | | 120301. | 304402. | 593010. | 755502. |
| THOUS Cu M | | 139005. | 474251. | 731477. | 931890. |

HYDROGRAPH ROUTING

ROUTING OF INFLOW HYDROGRAPH USING MODIFIED PULS METHOD

| | ISIAJ | ICOMP | IECON | ITAPE | JPLT | JKPI | IRAME | ISTAGE | IAUTO | |
|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----|
| | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | |
| ROUTING DATA | | | | | | | | | | |
| | ALJSS | CLJSS | AG | IRIS | ISAE | IUPI | IPMP | LSIR | | |
| | 0.0 | 0.000 | 0.00 | 1 | 1 | 0 | 0 | 0 | | |
| | MSIPS | MSILL | LAG | AMSKA | X | TSK | STORA | ISPRAT | | |
| | 1 | 0 | 0 | 0.000 | 0.000 | 0.000 | 0000. | 0 | | |
| STORAGE | 4000.00 | 22500.00 | 50000.00 | 120000.00 | 337400.00 | 364300.00 | 377700.00 | 391100.00 | 405000.00 | 41 |
| | 431300.00 | 430000.00 | 444700.00 | 451400.00 | | | | | | |
| OUTFLOW | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 41500.00 | 78500.00 | 120000.00 | 182000.00 | 24 |
| | 318000.00 | 359000.00 | 402000.00 | 447000.00 | | | | | | |

STATION 2, PLAN 1, R110 1

| OUTFLOW | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| STOR | | | | | | | | | |
| 4759. | 4850. | 5098. | 5751. | 6974. | 9129. | 14512. | 20659. | 46909. | 71069. |
| 91202. | 103555. | 110719. | 115810. | 119772. | 122909. | 125407. | 127732. | 129046. | 131818. |
| 133058. | 135375. | 130977. | 130471. | 130000. | 141107. | 142381. | 143513. | 144570. | 145556. |
| 146476. | 147335. | 148130. | 148003. | 149580. | 150231. | 150830. | 151404. | 151932. | 152425. |
| 152005. | 153315. | 153715. | 154009. | 154437. | 154703. | 155000. | 155349. | 155013. | 155860. |
| STAGE | | | | | | | | | |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

McFARLAND-JOHNSON ENGINEERS, INC.

0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

| | PCAR | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|------|--------|---------|---------|--------------|
| CFS | 0. | 0. | 0. | 0. | 0. |
| C45 | 0. | 0. | 0. | 0. | 0. |
| INCHES | | 0.00 | 0.00 | 0.00 | 0.00 |
| M4 | | 0.00 | 0.00 | 0.00 | 0.00 |
| AC-FF | | 0. | 0. | 0. | 0. |
| INDUS Cu M | | 0. | 0. | 0. | 0. |

MAXIMUM STORAGE = 155550.

STATION 2, PLAN 1, RIID 2

| OUTFLOW | | | | | | | | | |
|---------|----|----|----|----|----|----|----|----|----|
| 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |

| STOR | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 4834. | 5002. | 3420. | 6509. | 8709. | 12480. | 21902. | 43158. | 78590. | 120877. |
| 150108. | 177720. | 190203. | 199173. | 200105. | 211590. | 218072. | 220037. | 223730. | 227187. |
| 230407. | 233411. | 230214. | 230030. | 241270. | 243547. | 245071. | 247053. | 249503. | 251228. |
| 252836. | 254341. | 255742. | 257050. | 258270. | 259409. | 260471. | 261402. | 262387. | 263249. |
| 264054. | 264800. | 265500. | 266100. | 266770. | 267330. | 267870. | 268300. | 268820. | 269260. |

| STOR | | | | | | | | | |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| | PCAR | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|------|--------|---------|---------|--------------|
| CFS | 0. | 0. | 0. | 0. | 0. |
| C45 | 0. | 0. | 0. | 0. | 0. |
| INCHES | | 0.00 | 0.00 | 0.00 | 0.00 |
| M4 | | 0.00 | 0.00 | 0.00 | 0.00 |
| AC-FF | | 0. | 0. | 0. | 0. |
| INDUS Cu M | | 0. | 0. | 0. | 0. |

MAXIMUM STORAGE = 209250.

STATION 2, PLAN 1, RIID 3

| OUTFLOW | | | | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 0. | 0. | 0. | 1995. | 4761. | 5755. | 5962. | 5823. | 5549. | 5229. |
| 4902. | 4584. | 4282. | 3997. | 3731. | 3461. | 3248. | 3031. | 2826. | 2638. |
| 2462. | 2297. | 2143. | 2000. | 1806. | 1711. | 1624. | 1515. | 1414. | 1319. |

STOR

McFARLAND-JOHNSON ENGINEERS, INC.



| | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 4909. | 5149. | 5754. | 7387. | 10449. | 15034. | 29291. | 59057. | 110253. | 170084. |
| 221014. | 251597. | 269505. | 262530. | 292459. | 300204. | 390070. | 312341. | 317025. | 322555. |
| 327155. | 331447. | 335452. | 330093. | 340449. | 341137. | 341204. | 341174. | 340997. | 340790. |
| 340578. | 340372. | 340170. | 339991. | 339518. | 339050. | 339505. | 339355. | 339233. | 339110. |
| 339990. | 339039. | 338759. | 338090. | 338009. | 338520. | 338453. | 338352. | 338317. | 338255. |

| STAGE | | | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|-------|--------|---------|---------|--------------|
| CFS | 5902. | 5892. | 5708. | 4779. | 99549. |
| CMS | 109. | 107. | 102. | 135. | 2530. |
| InChes | | 0.05 | 0.29 | 0.50 | 0.77 |
| in | | 1.30 | 5.02 | 12.60 | 19.68 |
| AC-FI | | 2922. | 11321. | 28435. | 44404. |
| InJUS CU A | | 3004. | 13904. | 35074. | 54772. |

MAXIMUM STORAGE = 341204.

STATION 2, PUMP 1, P113 *

| JULY | | | | | | | | | |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 0. | 0. | 13337. | 24422. | 25274. | 22000. | 19403. | 16802. | 15206. | 13944. |
| 12901. | 11909. | 11104. | 10407. | 9700. | 9054. | 6447. | 7001. | 7353. | 6860. |
| 6401. | 5972. | 5572. | 5199. | 4851. | 4520. | 4225. | 3940. | 3676. | 3430. |
| 3200. | 2900. | 2700. | 2599. | 2425. | 2203. | 2111. | 1970. | 1832. | 1715. |

| AUG | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 4903. | 5290. | 6083. | 8205. | 12179. | 19164. | 36080. | 70150. | 141970. | 220491. |
| 205920. | 320009. | 340045. | 353230. | 353783. | 352092. | 349977. | 348343. | 347250. | 346438. |
| 345703. | 345171. | 344537. | 344140. | 343091. | 343259. | 342075. | 342008. | 342100. | 341047. |
| 341549. | 341271. | 341012. | 340770. | 340544. | 340334. | 340137. | 339954. | 339733. | 339623. |
| 339474. | 339330. | 339200. | 339085. | 338972. | 338807. | 338709. | 338677. | 338591. | 338512. |

| STAGE | | | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 25274. | 24948. | 22183. | 16315. | 317722. |
| CMS | 710. | 704. | 628. | 402. | 8997. |
| InChes | | 0.22 | 0.77 | 1.09 | 2.75 |
| in | | 5.40 | 19.50 | 43.03 | 69.63 |
| AC-FI | | 12321. | 44000. | 97081. | 157548. |
| InJUS CU A | | 15198. | 54273. | 119747. | 194332. |

MAXIMUM STORAGE = 353783.

McFARLAND-JOHNSON ENGINEERS, INC.



STATION 2, PLAN 1, R113 5

| OUTFLOW | | | | | | | | | |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 14963. | 71300. | 00332. | 44077. | 30522. | 30201. | 24200. | 21200. | 10937. | 17200. |
| 15922. | 14770. | 13749. | 12012. | 11747. | 11144. | 10000. | 9099. | 8049. | 6443. |
| 7070. | 7300. | 0000. | 0000. | 0070. | 0070. | 5197. | 4049. | 4020. | 4272. |
| 3337. | 3070. | 3427. | 3199. | 2700. | 2700. | 2099. | 2420. | 2204. | 2111. |

| STOR | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 5050. | 5442. | 0411. | 9023. | 13919. | 22000. | 44000. | 92000. | 173057. | 270290. |
| 347112. | 370110. | 371124. | 305450. | 301130. | 357000. | 353592. | 351107. | 349070. | 345505. |
| 347721. | 340777. | 340312. | 345700. | 340144. | 344023. | 344139. | 343007. | 343200. | 342073. |
| 342500. | 342104. | 341540. | 341040. | 341270. | 341011. | 340709. | 340543. | 340333. | 340136. |
| 339953. | 339702. | 339023. | 339474. | 339335. | 339205. | 339004. | 338972. | 338800. | 338700. |

| STAGE | | | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

| | PEAK | 8-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 71300. | 05949. | 50544. | 30905. | 545054. |
| CMS | 2021. | 1000. | 1431. | 875. | 15450. |
| INCHES | | 0.57 | 1.70 | 3.21 | 4.72 |
| ft | | 14.47 | 44.4* | 81.51 | 119.90 |
| AC-FI | | 32053. | 100203. | 103900. | 270091. |
| INJUS CU A | | 40270. | 123001. | 220037. | 333093. |

MAXIMUM STORAGE = 370110.

STATION 2, PLAN 1, R113 0

| OUTFLOW | | | | | | | | | |
|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| 150290. | 124072. | 75977. | 55355. | 42940. | 30224. | 30404. | 26242. | 23014. | 21506. |
| 19872. | 10400. | 17100. | 10013. | 14933. | 13929. | 12995. | 12124. | 11312. | 10554. |
| 9047. | 9100. | 8572. | 7900. | 7403. | 6903. | 6497. | 6002. | 5050. | 5277. |
| 4924. | 4094. | 4200. | 3999. | 3751. | 3432. | 3240. | 3031. | 2020. | 2030. |

| STOR | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 5157. | 5030. | 5049. | 10114. | 10220. | 27004. | 53922. | 114053. | 215907. | 330707. |
| 390019. | 390725. | 370793. | 309535. | 304022. | 300000. | 357140. | 354410. | 352042. | 351340. |
| 350201. | 349302. | 349530. | 347779. | 347079. | 340429. | 345023. | 345259. | 344732. | 344241. |
| 343703. | 343355. | 342957. | 342505. | 342237. | 341913. | 341011. | 341029. | 341050. | 340821. |
| 340591. | 340370. | 340170. | 339992. | 339019. | 339657. | 339500. | 339305. | 339213. | 339110. |

| STAGE | | | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

PEAK 8-HOUR 24-HOUR 72-HOUR TOTAL VOLUME
 McFARLAND-JOHNSON ENGINEERS, INC.

| | | | | | | | | | | | | | |
|------|-------|----|------|------|------|-------|------|-------|----|------|------|------|-------|
| 1.04 | 18.00 | 15 | 0.00 | 0.00 | 0.00 | 6169. | 1.11 | 0.00 | 40 | 0.00 | 0.00 | 0.00 | 1444. |
| 1.05 | 0.00 | 16 | 0.00 | 0.00 | 0.00 | 7622. | 1.11 | 6.00 | 41 | 0.00 | 0.00 | 0.00 | 1347. |
| 1.05 | 6.00 | 17 | 0.00 | 0.00 | 0.00 | 7112. | 1.11 | 12.00 | 42 | 0.00 | 0.00 | 0.00 | 1257. |
| 1.05 | 12.00 | 18 | 0.00 | 0.00 | 0.00 | 6635. | 1.11 | 18.00 | 43 | 0.00 | 0.00 | 0.00 | 1173. |
| 1.05 | 18.00 | 19 | 0.00 | 0.00 | 0.00 | 6191. | 1.12 | 0.00 | 44 | 0.00 | 0.00 | 0.00 | 1094. |
| 1.06 | 0.00 | 20 | 0.00 | 0.00 | 0.00 | 5776. | 1.12 | 6.00 | 45 | 0.00 | 0.00 | 0.00 | 1021. |
| 1.06 | 6.00 | 21 | 0.00 | 0.00 | 0.00 | 5390. | 1.12 | 12.00 | 46 | 0.00 | 0.00 | 0.00 | 953. |
| 1.06 | 12.00 | 22 | 0.00 | 0.00 | 0.00 | 5029. | 1.12 | 18.00 | 47 | 0.00 | 0.00 | 0.00 | 889. |
| 1.06 | 18.00 | 23 | 0.00 | 0.00 | 0.00 | 4692. | 1.13 | 0.00 | 48 | 0.00 | 0.00 | 0.00 | 829. |
| 1.07 | 0.00 | 24 | 0.00 | 0.00 | 0.00 | 4378. | 1.13 | 6.00 | 49 | 0.00 | 0.00 | 0.00 | 774. |
| 1.07 | 6.00 | 25 | 0.00 | 0.00 | 0.00 | 4085. | 1.13 | 12.00 | 50 | 0.00 | 0.00 | 0.00 | 722. |

SUM 15.05 11.04 4.01 498095.
(382.)(280.)(102.)(14104.46)

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 81997. | 81730. | 65810. | 32931. | 497577. |
| CMS | 2322. | 2314. | 1864. | 932. | 14090. |
| INCHES | | 2.27 | 7.31 | 10.97 | 13.82 |
| MM | | 57.64 | 185.67 | 278.72 | 350.95 |
| AC-FT | | 40527. | 130532. | 195951. | 246732. |
| THOUS CU 1 | | 49989. | 161009. | 241702. | 304340. |

HYDROGRAPH AT STA 2 FOR PLAN 1, RIIU 1

| | | | | | | | | | |
|-------|-------|------|-------|-------|-------|-------|--------|--------|--------|
| 63. | 56. | 308. | 1029. | 1102. | 2000. | 6003. | 16399. | 16293. | 11928. |
| 8053. | 5595. | 377. | 2545. | 1634. | 1524. | 1422. | 1327. | 1238. | 1155. |
| 1078. | 1006. | 936. | 876. | 817. | 762. | 711. | 664. | 619. | 578. |
| 539. | 503. | 489. | 438. | 408. | 361. | 356. | 332. | 310. | 289. |
| 269. | 251. | 235. | 219. | 204. | 191. | 178. | 166. | 155. | 144. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 16399. | 16340. | 13162. | 6566. | 99515. |
| CMS | 464. | 463. | 373. | 186. | 2818. |
| INCHES | | 0.45 | 1.40 | 2.19 | 2.76 |
| MM | | 11.53 | 37.13 | 55.74 | 70.19 |
| AC-FT | | 8105. | 26106. | 39190. | 49346. |
| THOUS CU M | | 9998. | 32202. | 48340. | 60868. |

HYDROGRAPH AT STA 2 FOR PLAN 1, RIIU 2

| | | | | | | | | | |
|--------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
| 109. | 102. | 644. | 1802. | 1928. | 3501. | 14005. | 26699. | 28512. | 20874. |
| 14093. | 9791. | 6644. | 4455. | 2859. | 2668. | 2469. | 2322. | 2167. | 2022. |
| 1860. | 1760. | 1642. | 1532. | 1430. | 1334. | 1245. | 1161. | 1083. | 1011. |
| 943. | 880. | 821. | 766. | 715. | 667. | 622. | 581. | 542. | 505. |
| 472. | 440. | 411. | 363. | 357. | 333. | 311. | 290. | 271. | 253. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 28699. | 28605. | 23034. | 11526. | 174152. |
| CMS | 813. | 810. | 652. | 326. | 4931. |
| INCHES | | 0.79 | 2.56 | 3.84 | 4.84 |
| MM | | 20.18 | 64.98 | 97.55 | 122.83 |
| AC-FT | | 14184. | 45686. | 68583. | 86356. |
| THOUS CU 1 | | 17496. | 56353. | 84596. | 106519. |

HYDROGRAPH AT STA 2 FOR PLAN 1, RIIU 3

| | | | | | | | | | |
|------|------|------|-------|-------|-------|-------|--------|--------|--------|
| 150. | 140. | 920. | 2574. | 2754. | 5001. | 5007. | 40998. | 40731. | 29821. |
|------|------|------|-------|-------|-------|-------|--------|--------|--------|

McFARLAND-JOHNSON ENGINEERS, INC.

| | | | | | | | | | |
|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| 20133. | 13957. | 9492. | 6304. | 4005. | 3511. | 3556. | 3310. | 3096. | 2888. |
| 2095. | 2514. | 2340. | 2189. | 2042. | 1900. | 1770. | 1659. | 1548. | 1444. |
| 1347. | 1257. | 1173. | 1094. | 1021. | 953. | 869. | 829. | 774. | 722. |
| 074. | 029. | 000. | 047. | 011. | 070. | 044. | 015. | 007. | 001. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 40996. | 40665. | 32905. | 16405. | 248750. |
| CMS | 1101. | 1157. | 932. | 406. | 7045. |
| INCHES | | 1.13 | 3.00 | 5.49 | 0.91 |
| MM | | 28.82 | 92.83 | 139.36 | 175.47 |
| AC-FT | | 20264. | 65200. | 97975. | 123300. |
| THOUS CU M | | 24990. | 80505. | 120651. | 152170. |

HYDROGRAPH AT STA 2 FOR PLAN 1, RTIO 4

| | | | | | | | | | |
|--------|--------|--------|-------|-------|-------|--------|--------|--------|--------|
| 203. | 190. | 1190. | 3340. | 3580. | 0001. | 26009. | 53298. | 52951. | 38767. |
| 20173. | 18182. | 12339. | 8273. | 5310. | 4954. | 4623. | 4313. | 4024. | 3755. |
| 3503. | 3209. | 3050. | 2840. | 2055. | 2477. | 2311. | 2157. | 2012. | 1877. |
| 1752. | 1634. | 1520. | 1423. | 1327. | 1239. | 1150. | 1070. | 1000. | 939. |
| 870. | 817. | 702. | 711. | 004. | 019. | 078. | 039. | 003. | 009. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 53298. | 53124. | 42777. | 21405. | 324425. |
| CMS | 1509. | 1504. | 1211. | 000. | 9156. |
| INCHES | | 1.48 | 4.70 | 7.13 | 0.98 |
| MM | | 37.47 | 120.68 | 181.17 | 228.12 |
| AC-FT | | 20343. | 64846. | 127300. | 100376. |
| THOUS CU M | | 32493. | 104656. | 157100. | 197821. |

HYDROGRAPH AT STA 2 FOR PLAN 1, RTIO 5

| | | | | | | | | | |
|--------|--------|--------|--------|-------|-------|--------|--------|--------|--------|
| 250. | 233. | 1472. | 4110. | 4407. | 8001. | 32012. | 05597. | 65170. | 47713. |
| 32212. | 22378. | 15107. | 10182. | 0535. | 0090. | 5689. | 5308. | 4953. | 4621. |
| 4312. | 4023. | 3754. | 3502. | 3260. | 3049. | 2045. | 2654. | 2470. | 2311. |
| 2150. | 2011. | 1877. | 1751. | 1634. | 1524. | 1422. | 1327. | 1238. | 1155. |
| 1070. | 1000. | 930. | 870. | 817. | 702. | 711. | 604. | 619. | 578. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 65597. | 65384. | 52048. | 26344. | 398061. |
| CMS | 1850. | 1851. | 1491. | 746. | 11272. |
| INCHES | | 1.82 | 5.85 | 8.70 | 11.05 |
| MM | | 40.12 | 148.53 | 222.97 | 280.76 |
| AC-FT | | 32422. | 104426. | 156701. | 197386. |
| THOUS CU M | | 39992. | 128000. | 193361. | 243472. |

HYDROGRAPH AT STA 2 FOR PLAN 1, RTIO 6

| | | | | | | | | | |
|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|
| 313. | 292. | 1840. | 5147. | 5508. | 10001. | 40015. | 01997. | 81463. | 59641. |
| 40260. | 27973. | 18904. | 12727. | 8169. | 7022. | 7112. | 6635. | 6191. | 5776. |
| 5390. | 5029. | 4692. | 4370. | 4080. | 3011. | 3556. | 3318. | 3096. | 2880. |
| 2095. | 2514. | 2340. | 2189. | 2042. | 1900. | 1770. | 1659. | 1548. | 1444. |
| 1347. | 1257. | 1173. | 1094. | 1021. | 953. | 869. | 829. | 774. | 722. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|--------|--------|--------|---------|---------|--------------|
| CFS | 81997. | 81730. | 65610. | 32931. | 497577. |
| CMS | 2322. | 2314. | 1864. | 932. | 14090. |
| INCHES | | 2.27 | 7.31 | 10.97 | 13.82 |
| MM | | 57.64 | 185.67 | 27 | 350.95 |

McFARLAND-JOHNSON ENGINEERS, INC.



AC-FI 40527. 130532. 195951. 240732.
 THOUS CU 4 49989. 161009. 241702. 304340.

COMBINE HYDROGRAPHS

COMBINE OUTFLOW-MOUNT MORRIS DAM AND CANASERAGA CREEK INFLOW

ISIAW 1COMP 1ECOV 1TAPE JPLT JPKT INAME ISTAGE IADIO
 2 2 0 0 0 0 1 0 0

| | | SUM OF 2 HYDROGRAPHS AT | | | | 2 PLAN 1 RTIO 1 | | | |
|-------|-------|-------------------------|-------|-------|-------|-----------------|--------|--------|--------|
| 03. | 50. | 308. | 1029. | 1102. | 2000. | 8003. | 16399. | 10293. | 11928. |
| 0053. | 5095. | 3797. | 2545. | 1634. | 1524. | 1422. | 1327. | 1238. | 1155. |
| 1070. | 1006. | 938. | 876. | 817. | 762. | 711. | 664. | 619. | 578. |
| 539. | 503. | 469. | 430. | 400. | 381. | 356. | 332. | 310. | 289. |
| 269. | 251. | 235. | 219. | 204. | 191. | 178. | 166. | 155. | 144. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 10399. | 10346. | 13162. | 6566. | 99515. |
| CMS | 404. | 403. | 373. | 186. | 2018. |
| INCHES | | 0.11 | 0.35 | 0.52 | 0.60 |
| MM | | 2.74 | 8.02 | 13.24 | 16.08 |
| AC-FI | | 8105. | 26106. | 39190. | 49346. |
| THOUS CU M | | 9998. | 32202. | 48340. | 60868. |

| | | SUM OF 2 HYDROGRAPHS AT | | | 2 PLAN 1 RTIO 2 | | | | |
|--------|-------|-------------------------|-------|-------|-----------------|--------|--------|--------|--------|
| 109. | 102. | 644. | 1802. | 1928. | 3501. | 14005. | 28699. | 28512. | 20874. |
| 14093. | 9791. | 6044. | 4455. | 2859. | 2668. | 2469. | 2322. | 2167. | 2022. |
| 1860. | 1700. | 1642. | 1532. | 1430. | 1334. | 1245. | 1161. | 1083. | 1011. |
| 943. | 880. | 821. | 700. | 715. | 607. | 622. | 581. | 542. | 505. |
| 472. | 440. | 411. | 383. | 357. | 333. | 311. | 290. | 271. | 253. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 28699. | 28605. | 23034. | 11520. | 174152. |
| CMS | 813. | 810. | 652. | 326. | 4931. |
| INCHES | | 0.19 | 0.61 | 0.91 | 1.15 |
| MM | | 4.79 | 15.44 | 23.18 | 29.18 |
| AC-FI | | 14184. | 45680. | 68583. | 86350. |
| THOUS CU M | | 17490. | 56353. | 84596. | 106519. |

| | | SUM OF 2 HYDROGRAPHS AT | | | 2 PLAN 1 RTIO 3 | | | | |
|--------|--------|-------------------------|-------|-------|-----------------|--------|--------|--------|--------|
| 150. | 140. | 920. | 2574. | 2754. | 5001. | 20007. | 40998. | 40731. | 29821. |
| 20133. | 13987. | 9492. | 6304. | 4085. | 3811. | 3556. | 3318. | 3096. | 2888. |
| 2095. | 2514. | 2340. | 4184. | 6824. | 7671. | 7740. | 7482. | 7097. | 6673. |
| 6250. | 5842. | 5455. | 5092. | 4752. | 4434. | 4137. | 3600. | 3002. | 3361. |
| 3130. | 2920. | 2730. | 2547. | 2376. | 2217. | 2069. | 1930. | 1801. | 1680. |

PEAK 6-HOUR 24-HOUR 72-HOUR TOTAL VOLUME
 McFARLAND-JOHNSON ENGINEERS, INC.

| | | | | | |
|------------|--------|--------|--------|---------|---------|
| CFS | 40990. | 40805. | 32905. | 16405. | 330337. |
| CMS | 1161. | 1157. | 932. | 460. | 9501. |
| INCHES | | 0.27 | 0.07 | 1.30 | 2.23 |
| MM | | 6.85 | 22.00 | 33.11 | 56.70 |
| AC-FI | | 20204. | 65200. | 97970. | 107771. |
| THOUS CU M | | 24995. | 80505. | 120051. | 206942. |

| | | | | | | | | | |
|--------|--------|-------------------------|--------|--------|-----------------|--------|--------|--------|--|
| 203. | 190. | SUM OF 2 HYDROGRAPHS AT | | | 2 PLAN 1 RTIO 4 | | | | |
| 20173. | 18182. | 3330. | 3580. | 6501. | 20009. | 53296. | 52951. | 38767. | |
| 10405. | 15257. | 25677. | 32695. | 30584. | 27021. | 24025. | 21195. | 19200. | |
| 8152. | 7500. | 14214. | 13252. | 12301. | 11531. | 10758. | 10037. | 9365. | |
| 4070. | 3503. | 7097. | 0622. | 0176. | 5705. | 5379. | 5018. | 4082. | |
| | | 3500. | 3311. | 3089. | 2002. | 2069. | 2509. | 2341. | |

| | | | | | |
|------------|--------|--------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 53296. | 53124. | 42777. | 31149. | 641147. |
| CMS | 1509. | 1504. | 1211. | 082. | 18155. |
| INCHES | | 0.35 | 1.13 | 2.47 | 4.23 |
| MM | | 8.90 | 26.07 | 62.64 | 107.44 |
| AC-FI | | 20343. | 64040. | 185349. | 317924. |
| THOUS CU M | | 32493. | 104050. | 220024. | 392153. |

| | | | | | | | | | |
|--------|--------|-------------------------|--------|--------|-----------------|--------|--------|--------|--|
| 250. | 233. | SUM OF 2 HYDROGRAPHS AT | | | 2 PLAN 1 RTIO 5 | | | | |
| 47195. | 93745. | 1472. | 4118. | 4407. | 8001. | 32012. | 05597. | 65170. | |
| 20234. | 18798. | 75519. | 54058. | 43158. | 30458. | 30070. | 20578. | 23867. | |
| 10034. | 9302. | 17003. | 10314. | 15215. | 14193. | 13241. | 12303 | 11520. | |
| 5017. | 4051. | 6735. | 0150. | 7604. | 7095. | 6020. | 0170 | 5703. | |
| | | 4307. | 4075. | 3802. | 3547. | 3310. | 3000. | 2881. | |

| | | | | | |
|------------|--------|--------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 93745. | 84632. | 67325. | 51218. | 943955. |
| CMS | 2005. | 2397. | 1900. | 1450. | 26730. |
| INCHES | | 0.50 | 1.78 | 4.00 | 6.23 |
| MM | | 14.10 | 45.13 | 102.99 | 158.10 |
| AC-FI | | 41900. | 133537. | 304705. | 468077. |
| THOUS CU M | | 51705. | 164715. | 375923. | 577364. |

| | | | | | | | | | |
|---------|---------|-------------------------|--------|--------|-----------------|--------|--------|--------|--|
| 313. | 292. | SUM OF 2 HYDROGRAPHS AT | | | 2 PLAN 1 RTIO 6 | | | | |
| 190555. | 152045. | 1040. | 5147. | 5508. | 10001. | 40015. | 81997. | 61463. | |
| 25262. | 23484. | 94980. | 08002. | 51109. | 43840. | 37566. | 32877. | 29705. | |
| 12542. | 11702. | 21072. | 20390. | 19017. | 17740. | 16551. | 15442. | 14407. | |
| 0271. | 5051. | 10910. | 10107. | 9505. | 0809. | 8275. | 7721. | 7203. | |
| | | 5459. | 5094. | 4753. | 4434. | 4137. | 3860. | 3002. | |

| | | | | | |
|------------|---------|---------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 190555. | 174600. | 127080. | 78018. | 1347701. |
| CMS | 5500. | 4944. | 3599. | 2209. | 38103. |
| INCHES | | 1.15 | 3.35 | 0.18 | 6.89 |
| MM | | 29.26 | 85.18 | 150.89 | 225.84 |
| AC-FI | | 86579. | 252070. | 404242. | 660281. |
| THOUS CU M | | 100793. | 310924. | 572033. | 824313. |



HYDRJGRAPH ROUTING

ROUTE COMBINE FLOWS TO AVON GAGE USING MUSKINGUM METHOD

| | | | | | | | | |
|--------------|-------|-------|-------|-------|-------|-------|--------|-------|
| ISFAM | ICOMP | IECOM | ITAPE | JPLI | JPKT | INAME | ISIAGE | IAUTO |
| 3 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| ROUTING DATA | | | | | | | | |
| JLOSS | CLOSS | AVG | IRES | ISARE | IQPT | IPAP | LSTK | |
| 0.0 | 0.000 | 0.00 | 0 | 1 | 0 | 0 | 0 | |
| NSIPS | NSIDL | LAS | AMSKN | X | TSK | STORA | ISPRAT | |
| 2 | 0 | 0 | 7.000 | 0.040 | 0.000 | 0. | 0 | |

STATION 3, PLAN 1, RFD 1

| | | | | | | | | | |
|---------|--------|-------|-------|-------|-------|-------|-------|-------|--------|
| OUTFLOW | | | | | | | | | |
| 03. | 62. | 85. | 211. | 469. | 807. | 1669. | 4155. | 8182. | 11512. |
| 12359. | 11110. | 8985. | 6820. | 4958. | 3522. | 2500. | 1992. | 1001. | 1450. |
| 1315. | 1200. | 1119. | 1040. | 909. | 904. | 843. | 700. | 734. | 684. |
| 639. | 596. | 550. | 519. | 484. | 452. | 421. | 393. | 367. | 342. |
| 319. | 298. | 270. | 259. | 242. | 226. | 211. | 197. | 183. | 171. |

| | | | | | |
|------------|--------|--------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 12359. | 11935. | 10891. | 6485. | 99277. |
| CMS | 350. | 338. | 308. | 184. | 2011. |
| INCHES | | 0.08 | 0.29 | 0.51 | 0.05 |
| MM | | 2.00 | 7.30 | 13.04 | 16.64 |
| AC-FT | | 5918. | 21603. | 38590. | 49228. |
| INJUS CU M | | 7300. | 26640. | 47000. | 60722. |

STATION 3, PLAN 1, RFD 2

| | | | | | | | | | |
|---------|--------|--------|--------|-------|-------|-------|-------|--------|--------|
| OUTFLOW | | | | | | | | | |
| 109. | 109. | 149. | 370. | 821. | 1413. | 2921. | 7272. | 14319. | 20147. |
| 21627. | 19443. | 15724. | 11935. | 8676. | 6164. | 4480. | 3486. | 2907. | 2548. |
| 2302. | 2114. | 1950. | 1821. | 1096. | 1581. | 1475. | 1376. | 1284. | 1198. |
| 1117. | 1043. | 973. | 908. | 847. | 790. | 737. | 688. | 642. | 599. |
| 559. | 521. | 460. | 454. | 423. | 395. | 369. | 344. | 321. | 299. |

| | | | | | |
|------------|--------|--------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 21627. | 20887. | 19060. | 11349. | 173736. |
| CMS | 612. | 591. | 540. | 321. | 4920. |
| INCHES | | 0.14 | 0.50 | 0.90 | 1.15 |
| MM | | 3.50 | 12.78 | 22.62 | 29.11 |
| AC-FT | | 10357. | 37804. | 67532. | 86150. |
| INJUS CU M | | 12775. | 46631. | 83299. | 106264. |

STATION 3, PLAN 1, RFD 3

| | | | | | | | | | |
|---------|------|------|------|-------|-------|-------|--------|--------|--------|
| OUTFLOW | | | | | | | | | |
| 156. | 155. | 213. | 528. | 1173. | 2016. | 4173. | 10388. | 20456. | 28781. |

McFARLAND-JOHNSON ENGINEERS, INC.

| | | | | | | | | | |
|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|
| 30890. | 27770. | 22403. | 17050. | 12395. | 4605. | 6401. | 4981. | 4152. | 3040. |
| 3209. | 3020. | 2197. | 2155. | 3284. | 4454. | 5157. | 6609. | 7111. | 7182. |
| 7010. | 0719. | 0300. | 5981. | 5004. | 5211. | 4890. | 4571. | 4200. | 3961. |
| 3714. | 3400. | 3254. | 3017. | 2015. | 2027. | 2451. | 2207. | 2134. | 1991. |

| | PLAN | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 30890. | 29839. | 27228. | 10213. | 334220. |
| CAS | 875. | 845. | 771. | 459. | 9404. |
| InCHES | | 0.20 | 0.72 | 1.28 | 2.21 |
| AM | | 5.00 | 18.25 | 32.60 | 50.01 |
| AC-FT | | 14796. | 54000. | 90474. | 105752. |
| InJUS Cu M | | 18251. | 66010. | 118999. | 204427. |

STATION 3, PLAN 1, R110 4

| OUTFLOW | | | | | | | | | |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 203. | 202. | 271. | 067. | 1525. | 2023. | 5425. | 13504. | 26593. | 37415. |
| 40105. | 30109. | 30232. | 21337. | 27909. | 29057. | 28135. | 27100. | 24799. | 22402. |
| 20392. | 18039. | 17152. | 15807. | 14730. | 13705. | 12767. | 11902. | 11100. | 10354. |
| 9059. | 9012. | 0400. | 7045. | 7320. | 6829. | 6372. | 5945. | 5547. | 5170. |
| 4029. | 4500. | 4204. | 3922. | 3060. | 3415. | 3100. | 2973. | 2774. | 2586. |

| | PLAN | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 40105. | 38790. | 35525. | 29573. | 635001. |
| CAS | 1137. | 1098. | 1000. | 637. | 18004. |
| InCHES | | 0.26 | 0.94 | 2.34 | 4.19 |
| AM | | 0.50 | 23.81 | 59.47 | 106.54 |
| AC-FT | | 19235. | 70404. | 175970. | 315275. |
| InJUS Cu M | | 23726. | 66910. | 217055. | 386884. |

STATION 3, PLAN 1, R110 5

| OUTFLOW | | | | | | | | | |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 250. | 249. | 340. | 845. | 1877. | 3229. | 6677. | 10021. | 32730. | 46050. |
| 50592. | 53045. | 02547. | 09218. | 00231. | 57090. | 48888. | 41019. | 34060. | 29802. |
| 20193. | 23405. | 21370. | 19050. | 18191. | 10890. | 15727. | 14055. | 13064. | 12745. |
| 11009. | 11092. | 10349. | 9050. | 9009. | 8405. | 7843. | 7317. | 6827. | 6370. |
| 5944. | 5540. | 5174. | 4820. | 4504. | 4203. | 3921. | 3659. | 3414. | 3185. |

| | PLAN | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 09218. | 67725. | 63442. | 49108. | 937370. |
| CAS | 1900. | 1910. | 1795. | 1392. | 26544. |
| InCHES | | 0.45 | 1.07 | 3.89 | 6.18 |
| AM | | 11.35 | 42.52 | 98.87 | 157.08 |
| AC-FT | | 33503. | 125035. | 292508. | 464815. |
| InJUS Cu M | | 41423. | 155216. | 360877. | 573340. |

STATION 3, PLAN 1, R110 6

| OUTFLOW | | | | | | | | | |
|---------|---------|---------|---------|---------|--------|--------|--------|--------|--------|
| 313. | 311. | 425. | 1050. | 2346. | 4036. | 8347. | 20770. | 40912. | 57502. |
| 74000. | 103078. | 127001. | 122938. | 103498. | 82288. | 64979. | 52416. | 43460. | 37120. |
| 34585. | 29241. | 40050. | 24531. | 22710. | 21109. | 19652. | 16315. | 17079. | 15930. |
| 14001. | 13005. | 12430. | 12009. | 11201. | 10507. | 9803. | 9147. | 8534. | 7903. |
| 7429. | 0932. | 0400. | 0035. | 5030. | 5253. | 4902. | 4573. | 4267. | 3981. |

McFARLAND-JOHNSON ENGINEERS, INC.



| | | | | | | | | | | | | | | |
|------|-------|----|------|------|------|-------|------|-------|----|------|---------|---------|---------|------------|
| 1.05 | 0.00 | 17 | 0.00 | 0.00 | 0.00 | 4923. | 1.11 | 12.00 | 42 | 0.00 | 0.00 | 0.00 | 711. | |
| 1.05 | 12.00 | 18 | 0.00 | 0.00 | 0.00 | 3755. | 1.11 | 18.00 | 43 | 0.00 | 0.00 | 0.00 | 683. | |
| 1.05 | 18.00 | 19 | 0.00 | 0.00 | 0.00 | 3502. | 1.12 | 0.00 | 44 | 0.00 | 0.00 | 0.00 | 619. | |
| 1.00 | 0.00 | 20 | 0.00 | 0.00 | 0.00 | 3267. | 1.12 | 0.00 | 45 | 0.00 | 0.00 | 0.00 | 578. | |
| 1.00 | 0.00 | 21 | 0.00 | 0.00 | 0.00 | 3049. | 1.12 | 12.00 | 46 | 0.00 | 0.00 | 0.00 | 539. | |
| 1.00 | 12.00 | 22 | 0.00 | 0.00 | 0.00 | 2844. | 1.12 | 18.00 | 47 | 0.00 | 0.00 | 0.00 | 503. | |
| 1.00 | 18.00 | 23 | 0.00 | 0.00 | 0.00 | 2654. | 1.13 | 0.00 | 48 | 0.00 | 0.00 | 0.00 | 469. | |
| 1.07 | 0.00 | 24 | 0.00 | 0.00 | 0.00 | 2476. | 1.13 | 0.00 | 49 | 0.00 | 0.00 | 0.00 | 438. | |
| 1.07 | 0.00 | 25 | 0.00 | 0.00 | 0.00 | 2310. | 1.13 | 12.00 | 50 | 0.00 | 0.00 | 0.00 | 408. | |
| | | | | | | | | | | SUM | 15.05 | 11.04 | 4.01 | 279293. |
| | | | | | | | | | | | (382.) | (280.) | (102.) | (7908.69) |

| | PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 49698. | 49588. | 38477. | 18398. | 278970. |
| CMS | 1407. | 1404. | 1090. | 521. | 7900. |
| INCHES | | 1.60 | 5.59 | 6.02 | 10.14 |
| AA | | 45.77 | 142.05 | 203.76 | 257.48 |
| AC-FT | | 24589. | 76318. | 109474. | 138532. |
| INJUS CU A | | 30330. | 94137. | 135034. | 170630. |

HYDROGRAPH AT STA 3 FOR PLAN 1, RTIO 1

| | | | | | | | | | |
|-------|-------|-------|------|------|------|-------|-------|-------|-------|
| 46. | 45. | 107. | 629. | 680. | 958. | 4020. | 9896. | 9940. | 6740. |
| 4394. | 2932. | 1754. | 990. | 924. | 862. | 805. | 751. | 700. | 653. |
| 610. | 569. | 531. | 495. | 462. | 431. | 402. | 375. | 350. | 327. |
| 305. | 284. | 265. | 248. | 231. | 210. | 201. | 188. | 175. | 163. |
| 152. | 142. | 135. | 124. | 116. | 108. | 101. | 94. | 88. | 82. |

| | PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|-------|--------|---------|---------|--------------|
| CFS | 9940. | 9918. | 7695. | 3680. | 55794. |
| CMS | 281. | 281. | 218. | 104. | 1580. |
| INCHES | | 0.30 | 1.12 | 1.60 | 2.03 |
| AA | | 9.15 | 28.41 | 40.75 | 51.50 |
| AC-FT | | 4916. | 15264. | 21695. | 27666. |
| INJUS CU M | | 6066. | 16827. | 27007. | 34126. |

HYDROGRAPH AT STA 3 FOR PLAN 1, RTIO 2

| | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
| 84. | 78. | 292. | 1100. | 1201. | 1670. | 7035. | 17317. | 17394. | 11794. |
| 7689. | 5131. | 3069. | 1733. | 1617. | 1509. | 1406. | 1314. | 1226. | 1144. |
| 1067. | 990. | 929. | 867. | 809. | 754. | 704. | 657. | 613. | 572. |
| 533. | 498. | 464. | 433. | 404. | 377. | 352. | 328. | 306. | 286. |
| 267. | 249. | 232. | 217. | 202. | 189. | 176. | 164. | 153. | 143. |

| | PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 17394. | 17356. | 13467. | 6439. | 97640. |
| CMS | 493. | 491. | 361. | 182. | 2765. |
| INCHES | | 0.63 | 1.96 | 2.81 | 3.55 |
| AA | | 16.02 | 49.72 | 71.32 | 90.12 |
| AC-FT | | 8606. | 26711. | 38316. | 48416. |
| INJUS CU M | | 10615. | 32948. | 47262. | 59721. |

HYDROGRAPH AT STA 3 FOR PLAN 1, RTIO 3

| | | | | | | | | | |
|--------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
| 119. | 111. | 416. | 1571. | 1716. | 2394. | 10051. | 24739. | 24849. | 16849. |
| 10965. | 7330. | 4384. | 2476. | 2310. | 2150. | 2011. | 1877. | 1751. | 1634. |
| 1524. | 1422. | 1327. | 1238. | 1155. | 1078. | 1006. | 938. | 875. | 817. |

McFARLAND-JOHNSON ENGINEERS, INC.



| | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|
| 704. | 711. | 003. | 019. | 570. | 539. | 503. | 409. | 438. | 408. |
| 301. | 350. | 332. | 310. | 209. | 209. | 251. | 235. | 219. | 204. |

| | PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 21049. | 24794. | 19239. | 9199. | 139400. |
| CMS | 704. | 792. | 545. | 200. | 3950. |
| InChES | | 0.90 | 2.80 | 4.01 | 5.07 |
| MM | | 22.48 | 71.03 | 101.88 | 126.74 |
| AC-FT | | 12294. | 38159. | 54737. | 69160. |
| InJUS Cu M | | 15165. | 47003. | 67517. | 85315. |

HYDROGRAPH AT STA 3 FOR PLAN 1, R110 4.

| | | | | | | | | | |
|--------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
| 155. | 140. | 543. | 2043. | 2230. | 3113. | 13066. | 32100. | 32303. | 21903. |
| 14260. | 9529. | 5099. | 3219. | 3003. | 2802. | 2615. | 2440. | 2276. | 2124. |
| 1982. | 1849. | 1725. | 1010. | 1502. | 1401. | 1307. | 1220. | 1138. | 1002. |
| 991. | 924. | 803. | 800. | 751. | 701. | 654. | 610. | 569. | 531. |
| 495. | 402. | 431. | 402. | 375. | 350. | 327. | 305. | 285. | 265. |

| | PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 32303. | 32232. | 25010. | 11958. | 181331. |
| CMS | 915. | 913. | 708. | 339. | 5135. |
| InChES | | 1.17 | 3.64 | 5.21 | 6.59 |
| MM | | 29.75 | 92.33 | 132.45 | 107.36 |
| AC-FT | | 15983. | 49807. | 71158. | 89910. |
| InJUS Cu M | | 19714. | 01189. | 87772. | 110910. |

HYDROGRAPH AT STA 3 FOR PLAN 1, R110 5

| | | | | | | | | | |
|--------|--------|-------|-------|-------|-------|--------|--------|--------|--------|
| 191. | 178. | 000. | 2514. | 2745. | 3831. | 10081. | 39582. | 39756. | 20958. |
| 17575. | 11728. | 7015. | 3962. | 3697. | 3449. | 3218. | 3003. | 2801. | 2614. |
| 2439. | 2276. | 2123. | 1901. | 1648. | 1725. | 1609. | 1501. | 1401. | 1307. |
| 1219. | 1138. | 1002. | 990. | 924. | 802. | 805. | 751. | 700. | 653. |
| 010. | 509. | 531. | 495. | 402. | 431. | 402. | 375. | 350. | 327. |

| | PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 39756. | 39070. | 30782. | 14715. | 223170. |
| CMS | 1120. | 1123. | 872. | 417. | 6320. |
| InChES | | 1.44 | 4.47 | 6.42 | 8.11 |
| MM | | 30.01 | 113.04 | 103.01 | 205.98 |
| AC-FT | | 19071. | 61054. | 87579. | 110600. |
| InJUS Cu M | | 24264. | 75310. | 108027. | 136504. |

HYDROGRAPH AT STA 3 FOR PLAN 1, R110 6

| | | | | | | | | | |
|--------|--------|-------|-------|-------|-------|--------|--------|--------|--------|
| 239. | 223. | 835. | 3143. | 3431. | 4789. | 20101. | 49478. | 49698. | 33698. |
| 21909. | 14000. | 8708. | 4952. | 4021. | 4311. | 4023. | 3753. | 3502. | 3267. |
| 3049. | 2844. | 2654. | 2470. | 2310. | 2156. | 2011. | 1877. | 1751. | 1634. |
| 1524. | 1422. | 1327. | 1238. | 1155. | 1078. | 1000. | 938. | 875. | 817. |
| 762. | 711. | 003. | 019. | 570. | 539. | 503. | 469. | 438. | 408. |

| | PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 49698. | 49588. | 38477. | 18398. | 278970. |
| CMS | 1407. | 1404. | 1090. | 521. | 7900. |
| InChES | | 1.80 | 5.59 | 8.02 | 10.14 |
| MM | | 45.77 | 142.05 | 203.76 | 257.48 |
| AC-FT | | 24589. | 76318. | 109474. | 130332. |
| InJUS Cu M | | 30330. | 94137. | 135000. | 170630. |

COMBINE HYDROGRAPHS

COMBINE FLOWS AT AVON GAGE

| | | | | | | | | |
|-------|-------|-------|-------|------|------|-------|--------|-------|
| ISIAQ | ICOMP | IECON | ITAPE | JPLI | JPRI | INAME | ISIAQE | IAUTQ |
| 3 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |

SUM OF 2 HYDROGRAPHS AT 3 PLAN 1 RTIO 1

| | | | | | | | | | |
|--------|--------|--------|-------|-------|-------|-------|--------|--------|--------|
| 110. | 197. | 252. | 840. | 1150. | 1705. | 5690. | 14051. | 18122. | 18252. |
| 10752. | 14042. | 10739. | 7011. | 5802. | 4385. | 3365. | 2743. | 2361. | 2109. |
| 1325. | 1777. | 1550. | 1530. | 1431. | 1335. | 1245. | 1162. | 1084. | 1011. |
| 943. | 880. | 221. | 700. | 715. | 007. | 022. | 501. | 542. | 506. |
| 472. | 440. | 411. | 303. | 357. | 334. | 311. | 290. | 271. | 253. |

| | | | | | |
|------------|--------|--------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 18252. | 18107. | 10793. | 10112. | 155071. |
| CAS | 517. | 515. | 470. | 286. | 4391. |
| INCHES | | 0.10 | 0.36 | 0.66 | 0.07 |
| MM | | 2.50 | 9.53 | 17.41 | 21.99 |
| AC-FT | | 9018. | 33309. | 00171. | 70095. |
| INJUS CU A | | 11124. | 41066. | 74219. | 94849. |

SUM OF 2 HYDROGRAPHS AT 3 PLAN 1 RTIO 2

| | | | | | | | | | |
|--------|--------|--------|--------|--------|-------|-------|--------|--------|--------|
| 193. | 107. | 441. | 1470. | 2022. | 3089. | 9957. | 24509. | 31713. | 31941. |
| 29317. | 24571. | 18793. | 13009. | 10294. | 7673. | 5088. | 4800. | 4132. | 3691. |
| 3309. | 3110. | 2887. | 2087. | 2505. | 2330. | 2179. | 2033. | 1890. | 1769. |
| 1051. | 1540. | 1437. | 1341. | 1251. | 1167. | 1089. | 1010. | 940. | 885. |
| 025. | 770. | 719. | 079. | 026. | 084. | 545. | 508. | 474. | 442. |

| | | | | | |
|------------|--------|--------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 31941. | 31827. | 29300. | 17096. | 271375. |
| CAS | 904. | 901. | 832. | 501. | 7054. |
| INCHES | | 0.10 | 0.66 | 1.19 | 1.52 |
| MM | | 4.51 | 10.07 | 30.12 | 38.49 |
| AC-FT | | 15702. | 58290. | 105298. | 134566. |
| INJUS CU A | | 19467. | 71900. | 129884. | 165965. |

SUM OF 2 HYDROGRAPHS AT 3 PLAN 1 RTIO 3

| | | | | | | | | | |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 270. | 207. | 630. | 2099. | 2889. | 4412. | 14224. | 35127. | 45305. | 45630. |
| 41881. | 35100. | 20847. | 19527. | 14705. | 10902. | 8412. | 6657. | 5903. | 5273. |
| 4813. | 4443. | 4124. | 3993. | 4439. | 5541. | 6703. | 7008. | 7986. | 7999. |
| 7770. | 7430. | 7024. | 6000. | 6182. | 5780. | 5398. | 5040. | 4703. | 4389. |
| 4090. | 3021. | 3500. | 3327. | 3104. | 2690. | 2702. | 2521. | 2352. | 2195. |

| | | | | | |
|-----|--------|--------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 45030. | 45467. | 41963. | 25280. | 473711. |
| CAS | 1292. | 1287. | 1189. | | 13414. |

McFARLAND-JOHNSON ENGINEERS, INC.



| | | | | |
|------------|--------|---------|---------|---------|
| INCHES | 0.25 | 0.94 | 1.09 | 2.65 |
| 44 | 0.45 | 23.02 | 43.02 | 67.16 |
| AC-FT | 22540. | 63272. | 150420. | 234890. |
| THOUS CU 3 | 27810. | 102715. | 185526. | 269742. |

| | | | | | | | | | |
|-------------------------|--------|--------|--------|-----------------|--------|--------|--------|--------|--------|
| SUM OF 2 HYDROGRAPHS AT | | | | 3 PLAN 1 RTIO 4 | | | | | |
| 358. | 347. | 819. | 2729. | 3755. | 5730. | 18491. | 45065. | 56690. | 59312. |
| 54445. | 45030. | 35932. | 30550. | 30972. | 31059. | 31349. | 29539. | 27070. | 24586. |
| 22373. | 20488. | 18877. | 17477. | 16232. | 15100. | 14074. | 13122. | 12238. | 11410. |
| 10050. | 9930. | 9271. | 8050. | 8071. | 7530. | 7026. | 6555. | 6110. | 5707. |
| 5325. | 4908. | 4635. | 4325. | 4035. | 3755. | 3513. | 3270. | 3058. | 2853. |

| | | | | | |
|------------|--------|--------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 59319. | 59108. | 54578. | 39740. | 817132. |
| CAS | 1080. | 1674. | 1545. | 1125. | 23139. |
| INCHES | | 0.33 | 1.22 | 2.60 | 4.56 |
| MA | | 8.38 | 30.90 | 67.64 | 115.89 |
| AC-FT | | 29310. | 100254. | 236500. | 405109. |
| THOUS CU 4 | | 36153. | 133529. | 291726. | 499794. |

| | | | | | | | | | |
|-------------------------|--------|--------|--------|-----------------|--------|--------|--------|--------|--------|
| SUM OF 2 HYDROGRAPHS AT | | | | 3 PLAN 1 RTIO 5 | | | | | |
| 441. | 427. | 1009. | 3359. | 4022. | 7000. | 22759. | 50203. | 72468. | 73008. |
| 60167. | 50373. | 09501. | 73180. | 69928. | 61347. | 52107. | 44022. | 37401. | 32416. |
| 20632. | 25761. | 23501. | 21659. | 20040. | 18621. | 17330. | 16150. | 15005. | 14052. |
| 13109. | 12230. | 11410. | 10640. | 9933. | 9255. | 8647. | 8008. | 7528. | 7024. |
| 6553. | 6114. | 5705. | 5323. | 4900. | 4634. | 4324. | 4034. | 3764. | 3512. |

| | | | | | |
|------------|--------|--------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 73180. | 72748. | 69353. | 61291. | 1160553. |
| CAS | 2072. | 2060. | 1905. | 1730. | 32603. |
| INCHES | | 0.41 | 1.55 | 4.11 | 6.48 |
| MA | | 10.32 | 39.37 | 104.31 | 164.59 |
| AC-FT | | 36073. | 137639. | 364707. | 575481. |
| THOUS CU 4 | | 44496. | 169775. | 449800. | 709845. |

| | | | | | | | | | |
|-------------------------|---------|---------|---------|-----------------|--------|--------|--------|--------|--------|
| SUM OF 2 HYDROGRAPHS AT | | | | 3 PLAN 1 RTIO 6 | | | | | |
| 551. | 534. | 1201. | 4199. | 5778. | 8825. | 28448. | 70254. | 90610. | 91260. |
| 95836. | 118538. | 135629. | 127891. | 108119. | 80599. | 69002. | 50172. | 46970. | 40367. |
| 35033. | 32085. | 29303. | 27007. | 25027. | 23264. | 21064. | 20192. | 18630. | 17564. |
| 10365. | 15207. | 14203. | 13307. | 12410. | 11505. | 10809. | 10005. | 9410. | 8779. |
| 8192. | 7643. | 7131. | 6654. | 6208. | 5792. | 5404. | 5043. | 4705. | 4390. |

| | | | | | |
|------------|---------|---------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 135329. | 131800. | 121069. | 90035. | 1618447. |
| CAS | 3840. | 3734. | 3427. | 2500. | 45029. |
| INCHES | | 0.74 | 2.70 | 6.07 | 9.04 |
| MA | | 18.70 | 68.00 | 154.25 | 229.53 |
| AC-FT | | 60385. | 240016. | 539314. | 802530. |
| THOUS CU 4 | | 80651. | 296057. | 665234. | 989913. |

HYDROGRAPH ROUTING

ROUTE FLOWS TO CONFLUENCE OF BLACK CREEK BY PASSING FLOWS

| | | | | | | | | |
|--------------|-------|-------|-------|-------|-------|-------|--------|-------|
| ISTAG | ICOMP | IECJN | ITAPE | JPLI | JPHI | INAME | ISTAGE | IAUTO |
| 4 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| ROUTING DATA | | | | | | | | |
| LOSS | CLOSS | AVG | IRCS | ISAME | IUPI | IPMF | LSTR | |
| 0.0 | 0.000 | 0.00 | 0 | 1 | 0 | 0 | 0 | |
| MSIPS | MSIDB | LAG | AMSKA | X | TSK | SIGMA | ISPRAI | |
| 0 | 0 | 1 | 0.000 | 0.000 | 0.000 | 0. | 0 | |

STATION 4, PLAN 1, RIID 1

| | | | | | | | | | |
|---------|--------|--------|--------|-------|-------|-------|-------|--------|--------|
| OUTFLOW | | | | | | | | | |
| 110. | 110. | 107. | 252. | 840. | 1156. | 1765. | 5690. | 14651. | 18122. |
| 18252. | 16752. | 14942. | 10739. | 7611. | 5802. | 4385. | 3365. | 2743. | 2361. |
| 2169. | 1925. | 1777. | 1650. | 1536. | 1431. | 1335. | 1245. | 1162. | 1084. |
| 1011. | 943. | 860. | 821. | 700. | 715. | 667. | 622. | 581. | 542. |
| 506. | 472. | 440. | 411. | 383. | 357. | 334. | 311. | 290. | 271. |

| | | | | | |
|------------|--------|--------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 16252. | 16187. | 16793. | 16112. | 154420. |
| CMS | 517. | 515. | 476. | 266. | 4367. |
| INCHES | | 0.10 | 0.36 | 0.56 | 0.87 |
| MM | | 2.56 | 9.53 | 17.21 | 21.97 |
| AC-FI | | 9018. | 33309. | 60171. | 76626. |
| INJUS CU M | | 11124. | 41065. | 74219. | 94756. |

STATION 4, PLAN 1, RIID 2

| | | | | | | | | | |
|---------|--------|--------|--------|--------|--------|-------|-------|--------|--------|
| OUTFLOW | | | | | | | | | |
| 193. | 193. | 187. | 441. | 1470. | 2022. | 3069. | 9957. | 24589. | 31713. |
| 31941. | 29317. | 24574. | 18793. | 13069. | 10294. | 7673. | 5888. | 4600. | 4132. |
| 3691. | 3369. | 3110. | 2867. | 2697. | 2505. | 2336. | 2179. | 2033. | 1896. |
| 1769. | 1651. | 1540. | 1437. | 1341. | 1251. | 1167. | 1069. | 1016. | 948. |
| 665. | 625. | 770. | 719. | 670. | 626. | 584. | 545. | 508. | 474. |

| | | | | | |
|------------|--------|--------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 31941. | 31827. | 29388. | 17696. | 271110. |
| CMS | 904. | 901. | 832. | 501. | 7677. |
| INCHES | | 0.18 | 0.60 | 1.19 | 1.51 |
| MM | | 4.51 | 16.07 | 30.12 | 38.45 |
| AC-FI | | 15782. | 58290. | 105298. | 134435. |
| INJUS CU M | | 19467. | 71900. | 129864. | 165823. |

STATION 4, PLAN 1, RIID 3

| | | | | | | | | | |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| OUTFLOW | | | | | | | | | |
| 276. | 276. | 267. | 670. | 2099. | 2869. | 4412. | 14224. | 35127. | 45305. |
| 45030. | 41861. | 35106. | 26847. | 19527. | 14705. | 10962. | 8412. | 6857. | 5903. |
| 5273. | 4813. | 4443. | 4124. | 3993. | 4439. | 5541. | 6763. | 7608. | 7986. |

McFARLAND-JOHNSON ENGINEERS, INC.

| | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 7999. | 1715. | 7430. | 7024. | 8880. | 8182. | 5789. | 5378. | 5948. | 4703. |
| 4589. | 4998. | 3821. | 3588. | 3327. | 3194. | 2898. | 2742. | 2521. | 2352. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 48830. | 45487. | 41953. | 25280. | 471713. |
| CAS | 1292. | 1287. | 1189. | 718. | 13387. |
| INCHES | | 0.25 | 0.94 | 1.89 | 2.83 |
| MA | | 8.45 | 23.84 | 43.04 | 88.90 |
| AC-FI | | 22548. | 83272. | 150428. | 233917. |
| INDUS CU A | | 27810. | 102715. | 185348. | 288529. |

STATION 4, PLAN 1, RIII 4

| OUTFLOW | | | | | | | | | |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 359. | 358. | 347. | 319. | 2729. | 3755. | 5738. | 18471. | 45885. | 58898. |
| 59319. | 54445. | 45838. | 35932. | 30356. | 30972. | 31459. | 31349. | 29539. | 27078. |
| 24588. | 22373. | 20488. | 18877. | 17477. | 18232. | 15186. | 14874. | 13122. | 12238. |
| 11418. | 10850. | 9938. | 9271. | 8880. | 8871. | 7530. | 7028. | 6555. | 6118. |
| 5787. | 5325. | 4988. | 4635. | 4328. | 4035. | 3788. | 3513. | 3278. | 3058. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 59319. | 59188. | 54578. | 39748. | 614584. |
| CAS | 1888. | 1874. | 1545. | 1125. | 23885. |
| INCHES | | 0.33 | 1.22 | 2.88 | 4.88 |
| MA | | 8.38 | 30.88 | 67.84 | 115.82 |
| AC-FI | | 29318. | 108254. | 238886. | 403981. |
| INDUS CU A | | 36153. | 133529. | 291728. | 498288. |

STATION 4, PLAN 1, RIII 5

| OUTFLOW | | | | | | | | | |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 441. | 441. | 427. | 1009. | 3359. | 4822. | 7688. | 22789. | 56283. | 72488. |
| 73888. | 68157. | 65373. | 69581. | 73188. | 69923. | 61347. | 52187. | 44822. | 37481. |
| 32418. | 28882. | 25781. | 23581. | 21839. | 20848. | 18821. | 17388. | 16158. | 15885. |
| 14882. | 13189. | 12288. | 11418. | 10848. | 9933. | 9288. | 8847. | 8888. | 7528. |
| 7824. | 8533. | 8118. | 5788. | 5323. | 4988. | 4834. | 4324. | 4834. | 3784. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 73188. | 72748. | 69393. | 61291. | 1157388. |
| CAS | 2872. | 2888. | 1985. | 1738. | 32773. |
| INCHES | | 0.41 | 1.58 | 4.11 | 8.48 |
| MA | | 10.32 | 39.37 | 104.31 | 184.14 |
| AC-FI | | 38873. | 137839. | 364787. | 573898. |
| INDUS CU A | | 44498. | 189775. | 449888. | 787889. |

STATION 4, PLAN 1, RIII 6

| OUTFLOW | | | | | | | | | |
|---------|--------|---------|---------|---------|---------|--------|--------|--------|--------|
| 851. | 551. | 534. | 1281. | 4199. | 5775. | 8625. | 28448. | 78254. | 98618. |
| 91288. | 95838. | 115338. | 135829. | 127891. | 188119. | 86598. | 69882. | 58172. | 48978. |
| 48387. | 35833. | 32888. | 29383. | 27887. | 25827. | 23284. | 21884. | 20192. | 18838. |
| 17884. | 18888. | 15287. | 14283. | 13387. | 12418. | 11885. | 10889. | 10885. | 9418. |
| 8779. | 8192. | 7883. | 7131. | 8854. | 8288. | 5792. | 5494. | 5843. | 4788. |

PEAK 6-HOUR 24-HOUR 72-HOUR TOTAL VOLUME
 McFARLAND-JOHNSON ENGINEERS, INC.

| | | | | | |
|------------|---------|--------|---------|---------|---------|
| CFS | 133749. | 13168. | 121079. | 90035. | 154432. |
| CMS | 3846. | 3734. | 3427. | 2566. | 45710. |
| InCHES | | 0.74 | 2.70 | 6.07 | 9.01 |
| IN | | 18.70 | 68.65 | 154.25 | 226.97 |
| AC-FT | | 65385. | 240018. | 539314. | 800554. |
| INCHS CU M | | 80051. | 290057. | 665234. | 987469. |

SUB-AREA RUNOFF COMPUTATION

HONEYCREEK INFLUX HYDROGRAPH

| | | | | | | | | |
|-------|-------|-------|-------|------|------|-------|--------|-------|
| ISLAW | ICOMP | IECON | ITAPE | JPLT | JPRT | INAME | ISLAGE | IAUTO |
| 4 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |

HYDROGRAPH DATA

| | | | | | | | | | |
|------|------|--------|------|---------|-------|-------|-------|-------|-------|
| IMYD | LONG | TAREA | SNAP | TRSDA | IRSPC | KATIO | ISNOW | ISARE | LOCAL |
| 1 | -1 | 260.00 | 0.00 | 2460.00 | 0.00 | 0.000 | 0 | 1 | 0 |

PRECIP DATA

| | | | | | | | |
|------|-------|-------|-------|-------|-------|------|------|
| SPFE | PMS | R6 | R12 | R24 | R48 | R72 | R96 |
| 0.00 | 22.00 | 41.00 | 55.00 | 63.00 | 74.00 | 0.00 | 0.00 |

IRSPC COMPUTED BY THE PROGRAM IS 0.925

LOSS DATA

| | | | | | | | | | | |
|-------|-------|-------|------|-------|-------|------|------|-------|-------|-------|
| LRUPI | SIRKR | DLTKR | KIOL | ERAIN | SIRKS | RIOR | SIRL | CHSIL | ALSMX | KIIMP |
| 0 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.10 | 0.00 | 0.00 |

GIVEN UNIT GRAPH, NUMGU= 12

| | | | | | | | | | |
|------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| 100. | 500. | 3000. | 6300. | 5000. | 3600. | 2400. | 1700. | 1300. | 1000. |
| 700. | 400. | | | | | | | | |

UNIT GRAPH TOTALS 27200. CFS OR 0.97 INCHES OVER THE AREA

RECESSION DATA

SIRTS= -1.00 IRCSN= -0.10 RIOR= 2.00

END-OF-PERIOD FLOW

| MO.DA | HR.MN | PERIOD | RAIN | EXCS | LOSS | COMP Q | MO.DA | HR.MN | PERIOD | RAIN | EXCS | LOSS | COMP Q |
|-------|-------|--------|------|------|------|--------|-------|-------|--------|------|------|------|--------|
| 1.01 | 6.00 | 1 | 0.11 | 0.00 | 0.11 | 243. | 1.07 | 12.00 | 26 | 0.00 | 0.00 | 0.00 | 3461. |
| 1.01 | 12.00 | 2 | 0.50 | 0.00 | 0.50 | 226. | 1.07 | 18.00 | 27 | 0.00 | 0.00 | 0.00 | 3229. |
| 1.01 | 18.00 | 3 | 1.46 | 0.63 | 0.83 | 274. | 1.08 | 0.00 | 28 | 0.00 | 0.00 | 0.00 | 3013. |
| 1.02 | 0.00 | 4 | 0.17 | 0.00 | 0.17 | 511. | 1.08 | 6.00 | 29 | 0.00 | 0.00 | 0.00 | 2811. |
| 1.02 | 6.00 | 5 | 0.65 | 0.05 | 0.60 | 2447. | 1.08 | 12.00 | 30 | 0.00 | 0.00 | 0.00 | 2623. |
| 1.02 | 12.00 | 6 | 2.85 | 2.25 | 0.60 | 4374. | 1.08 | 18.00 | 31 | 0.00 | 0.00 | 0.00 | 2447. |
| 1.02 | 18.00 | 7 | 6.34 | 7.74 | 0.60 | 5754. | 1.09 | 0.00 | 32 | 0.00 | 0.00 | 0.00 | 2283. |
| 1.03 | 0.00 | 8 | 0.98 | 0.38 | 0.60 | 14728. | 1.09 | 6.00 | 33 | 0.00 | 0.00 | 0.00 | 2131. |
| 1.03 | 6.00 | 9 | 0.00 | 0.00 | 0.00 | 44142. | 1.09 | 12.00 | 34 | 0.00 | 0.00 | 0.00 | 1988. |
| 1.03 | 12.00 | 10 | 0.00 | 0.00 | 0.00 | 64082. | 1.09 | 18.00 | 35 | 0.00 | 0.00 | 0.00 | 1855. |
| 1.03 | 18.00 | 11 | 0.00 | 0.00 | 0.00 | 54864. | 1.10 | 0.00 | 36 | 0.00 | 0.00 | 0.00 | 1731. |
| 1.04 | 0.00 | 12 | 0.00 | 0.00 | 0.00 | 36192. | 1.10 | 6.00 | 37 | 0.00 | 0.00 | 0.00 | 1615. |
| 1.04 | 6.00 | 13 | 0.00 | 0.00 | 0.00 | 24362. | 1.10 | 12.00 | 38 | 0.00 | 0.00 | 0.00 | 1507. |
| 1.04 | 12.00 | 14 | 0.00 | 0.00 | 0.00 | 17383. | 1.10 | 18.00 | 39 | 0.00 | 0.00 | 0.00 | 1406. |
| 1.04 | 18.00 | 15 | 0.00 | 0.00 | 0.00 | 13077. | 1.11 | 0.00 | 40 | 0.00 | 0.00 | 0.00 | 1311. |
| 1.05 | 0.00 | 16 | 0.00 | 0.00 | 0.00 | 9909. | 1.11 | 6.00 | 41 | 0.00 | 0.00 | 0.00 | 1224. |
| 1.05 | 6.00 | 17 | 0.00 | 0.00 | 0.00 | 6773. | 1.11 | 12.00 | 42 | 0.00 | 0.00 | 0.00 | 1142. |

McFARLAND-JOHNSON ENGINEERS, INC.

| | | | | | | | | | | | | | |
|------|-------|----|------|------|------|-------|------|-------|----|------|------|------|-------|
| 1.05 | 12.00 | 18 | 0.00 | 0.00 | 0.00 | 6026. | 1.11 | 18.00 | 43 | 0.00 | 0.00 | 0.00 | 1065. |
| 1.05 | 18.00 | 19 | 0.00 | 0.00 | 0.00 | 5622. | 1.12 | 0.00 | 44 | 0.00 | 0.00 | 0.00 | 994. |
| 1.06 | 0.00 | 20 | 0.00 | 0.00 | 0.00 | 5246. | 1.12 | 6.00 | 45 | 0.00 | 0.00 | 0.00 | 927. |
| 1.06 | 6.00 | 21 | 0.00 | 0.00 | 0.00 | 4895. | 1.12 | 12.00 | 46 | 0.00 | 0.00 | 0.00 | 865. |
| 1.06 | 12.00 | 22 | 0.00 | 0.00 | 0.00 | 4567. | 1.12 | 18.00 | 47 | 0.00 | 0.00 | 0.00 | 807. |
| 1.06 | 18.00 | 23 | 0.00 | 0.00 | 0.00 | 4261. | 1.13 | 0.00 | 48 | 0.00 | 0.00 | 0.00 | 753. |
| 1.07 | 0.00 | 24 | 0.00 | 0.00 | 0.00 | 3976. | 1.13 | 6.00 | 49 | 0.00 | 0.00 | 0.00 | 703. |
| 1.07 | 6.00 | 25 | 0.00 | 0.00 | 0.00 | 3709. | 1.13 | 12.00 | 50 | 0.00 | 0.00 | 0.00 | 656. |

SUM 15.05 11.04 4.01 380190.
(382.)(280.)(102.)(10765.78)

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 64082. | 59473. | 47348. | 24769. | 379741. |
| CMS | 1815. | 1664. | 1341. | 701. | 10753. |
| INCHES | | 2.13 | 6.78 | 10.63 | 13.59 |
| MM | | 54.05 | 172.11 | 270.11 | 345.10 |
| AC-FT | | 29491. | 93913. | 147365. | 186301. |
| THOUS CU M | | 36376. | 115640. | 181797. | 232266. |

HYDROGRAPH AT STA 4 FOR PLAN 1, R110 1

| | | | | | | | | | |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| 49. | 45. | 55. | 102. | 489. | 875. | 1151. | 2946. | 6828. | 12816. |
| 10573. | 7238. | 4672. | 3477. | 2615. | 1982. | 1355. | 1205. | 1124. | 1049. |
| 979. | 913. | 852. | 795. | 742. | 692. | 646. | 603. | 562. | 525. |
| 489. | 457. | 425. | 396. | 371. | 346. | 323. | 301. | 281. | 262. |
| 245. | 226. | 213. | 199. | 185. | 173. | 161. | 151. | 141. | 131. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 12616. | 11895. | 9470. | 4954. | 75946. |
| CMS | 363. | 337. | 266. | 140. | 2151. |
| INCHES | | 0.43 | 1.36 | 2.13 | 2.72 |
| MM | | 10.81 | 34.42 | 54.02 | 69.02 |
| AC-FT | | 5898. | 18783. | 29477. | 37660. |
| THOUS CU M | | 7275. | 23166. | 36359. | 46453. |

HYDROGRAPH AT STA 4 FOR PLAN 1, R110 2

| | | | | | | | | | |
|--------|--------|-------|-------|-------|-------|-------|-------|--------|--------|
| 85. | 79. | 96. | 179. | 857. | 1531. | 2014. | 5155. | 15450. | 22429. |
| 19203. | 12667. | 6527. | 6084. | 4577. | 3468. | 2371. | 2109. | 1968. | 1636. |
| 1713. | 1598. | 1491. | 1391. | 1296. | 1211. | 1130. | 1055. | 984. | 918. |
| 857. | 799. | 746. | 696. | 649. | 606. | 565. | 527. | 492. | 459. |
| 426. | 400. | 373. | 348. | 325. | 303. | 283. | 264. | 246. | 230. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 22429. | 20816. | 16572. | 8669. | 132909. |
| CMS | 635. | 589. | 469. | 245. | 3764. |
| INCHES | | 0.74 | 2.37 | 3.72 | 4.76 |
| MM | | 18.92 | 60.24 | 94.54 | 120.78 |
| AC-FT | | 10322. | 32870. | 51585. | 65965. |
| THOUS CU M | | 12732. | 40544. | 63629. | 81293. |

HYDROGRAPH AT STA 4 FOR PLAN 1, R110 3

| | | | | | | | | | |
|--------|--------|--------|-------|-------|-------|-------|-------|--------|--------|
| 121. | 113. | 137. | 255. | 1224. | 2187. | 2877. | 7364. | 22071. | 32041. |
| 27432. | 18096. | 12181. | 8692. | 6536. | 4954. | 3387. | 3013. | 2811. | 2623. |
| 2447. | 2263. | 2131. | 1988. | 1855. | 1731. | 1615. | 1506. | 1406. | 1311. |
| 1224. | 1142. | 1065. | 994. | 927. | 865. | 807. | 753. | 703. | 656. |

| | | | | | | | | | | |
|------|------|------------|--------|---------|---------|--------------|---------|------|------|--|
| 612. | 571. | 533. | 497. | 464. | 433. | 404. | 377. | 351. | 328. | |
| | | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME | | | | |
| | | CFS | 32041. | 29737. | 23674. | 12364. | 169871. | | | |
| | | CMS | 907. | 842. | 670. | 351. | 5377. | | | |
| | | INCHES | | 1.00 | 3.39 | 5.32 | 6.79 | | | |
| | | MM | | 27.02 | 86.06 | 135.05 | 172.55 | | | |
| | | AC-FT | | 14745. | 46950. | 73093. | 94151. | | | |
| | | INDUS CU M | | 13188. | 57920. | 90898. | 116133. | | | |

HYDROGRAPH AT STA 4 FOR PLAN 1, RIID 4

| | | | | | | | | | |
|--------|--------|--------|--------|-------|-------|-------|-------|--------|--------|
| 156. | 147. | 178. | 332. | 1591. | 2843. | 3740. | 9573. | 28692. | 41653. |
| 35602. | 23525. | 15835. | 11299. | 8500. | 6441. | 4409. | 3917. | 3655. | 3410. |
| 3182. | 2908. | 2770. | 2564. | 2411. | 2250. | 2099. | 1958. | 1827. | 1705. |
| 1591. | 1481. | 1385. | 1292. | 1206. | 1125. | 1050. | 979. | 914. | 852. |
| 795. | 742. | 692. | 646. | 603. | 562. | 525. | 490. | 457. | 426. |

| | | | | | | | | | | |
|--|--|------------|--------|---------|---------|--------------|---------|--|--|--|
| | | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME | | | | |
| | | CFS | 41653. | 38658. | 30776. | 16100. | 246832. | | | |
| | | CMS | 1179. | 1095. | 871. | 450. | 6989. | | | |
| | | INCHES | | 1.30 | 4.40 | 6.91 | 8.83 | | | |
| | | MM | | 35.13 | 111.87 | 175.57 | 224.31 | | | |
| | | AC-FT | | 19109. | 61043. | 95800. | 122390. | | | |
| | | INDUS CU M | | 23645. | 75296. | 118168. | 150973. | | | |

HYDROGRAPH AT STA 4 FOR PLAN 1, RIID 5

| | | | | | | | | | |
|--------|--------|--------|--------|--------|-------|-------|--------|--------|--------|
| 194. | 181. | 219. | 409. | 1958. | 3499. | 4603. | 11782. | 35314. | 51206. |
| 43892. | 28954. | 19490. | 13907. | 10461. | 7927. | 5419. | 4821. | 4498. | 4197. |
| 3910. | 3053. | 3409. | 3181. | 2968. | 2769. | 2583. | 2410. | 2249. | 2098. |
| 1956. | 1627. | 1704. | 1590. | 1484. | 1384. | 1292. | 1205. | 1124. | 1049. |
| 979. | 913. | 852. | 795. | 742. | 692. | 640. | 603. | 562. | 525. |

| | | | | | | | | | | |
|--|--|------------|--------|---------|---------|--------------|---------|--|--|--|
| | | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME | | | | |
| | | CFS | 51206. | 47579. | 37878. | 19815. | 303793. | | | |
| | | CMS | 1452. | 1347. | 1073. | 561. | 8002. | | | |
| | | INCHES | | 1.70 | 5.42 | 8.51 | 10.87 | | | |
| | | MM | | 43.24 | 137.69 | 216.09 | 276.08 | | | |
| | | AC-FT | | 23593. | 75130. | 117908. | 150641. | | | |
| | | INDUS CU M | | 29101. | 92672. | 145438. | 185813. | | | |

HYDROGRAPH AT STA 4 FOR PLAN 1, RIID 6

| | | | | | | | | | |
|--------|--------|--------|--------|--------|-------|-------|--------|--------|--------|
| 243. | 226. | 274. | 511. | 2447. | 4374. | 5754. | 14728. | 44142. | 64082. |
| 54864. | 36192. | 24302. | 17383. | 13077. | 9909. | 6773. | 6020. | 5622. | 5246. |
| 4895. | 4507. | 4201. | 3976. | 3709. | 3461. | 3229. | 3013. | 2811. | 2623. |
| 2447. | 2283. | 2131. | 1988. | 1855. | 1731. | 1615. | 1507. | 1406. | 1311. |
| 1224. | 1142. | 1065. | 994. | 927. | 865. | 807. | 753. | 703. | 656. |

| | | | | | | | | | | |
|--|--|------------|--------|---------|---------|--------------|---------|--|--|--|
| | | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME | | | | |
| | | CFS | 64082. | 59473. | 47348. | 24769. | 379741. | | | |
| | | CMS | 1815. | 1684. | 1341. | 701. | 10753. | | | |
| | | INCHES | | 2.13 | 6.70 | 10.63 | 13.59 | | | |
| | | MM | | 54.05 | 172.11 | 270.11 | 345.10 | | | |
| | | AC-FT | | 29491. | 93913. | 147365. | 188301. | | | |
| | | INDUS CU M | | 36370. | 115840. | 181797. | 232260. | | | |

McFARLAND-JOHNSON ENGINEERS, INC.



SUB-AREA RUNOFF COMPUTATION

JATKA CREEK INFLOW HYDROGRAPH

ISTAG 4 ICOMP 0 IECON 0 ITAPE 0 JPLT 0 JERT 0 INAME 1 ISTAGE 0 IAUTO 0

HYDROGRAPH DATA
 1HYDQ 1 IUMG -1 TAREA 215.00 SNAP 0.00 TRSDA 2460.00 TRSPC 0.00 RATIO 0.000 IENOW 0 ISAME 1 LOCAL 0

PRECIP DATA
 SPFE 0.00 PAS 22.00 R6 41.00 R12 55.00 R24 63.00 R48 74.00 R72 0.00 R96 0.00

TRSPC COMPUTED BY THE PROGRAM IS 0.925

LOSS DATA
 LGOPT 0 SIRKR 0.00 DLTKR 0.00 RIIDL 1.00 ERAIN 0.00 SIRKS 0.00 RTIOK 1.00 STRTL 1.00 CNSTL 0.10 ALSMX 0.00 RTIMP 0.00

GIVEN UNIT GRAPH, NUHGU= 12
 100. 400. 1200. 2800. 4200. 4200. 3000. 2100. 1500. 1100.
 800. 500.

UNIT GRAPH TOTALS 21900. CFS OR 0.95 INCHES OVER THE AREA

RECESSION DATA
 STRTD= -1.00 JRCSN= -0.10 RIICR= 2.00

| 0 | | END-OF-PERIOD FLOW | | | | | | | | | | | | |
|--------|--------|--------------------|------|------|------|--------|--------|--------|--------|------|------|------|--------|--|
| MO. DA | HR. MN | PERIOD | RAIN | EXCS | LOSS | COMP Q | MO. DA | HR. MN | PERIOD | RAIN | EXCS | LOSS | COMP Q | |
| 1.01 | 6.00 | 1 | 0.11 | 0.00 | 0.11 | 201. | 1.07 | 12.00 | 26 | 0.00 | 0.00 | 0.00 | 2529. | |
| 1.01 | 12.00 | 2 | 0.50 | 0.00 | 0.50 | 187. | 1.07 | 18.00 | 27 | 0.00 | 0.00 | 0.00 | 2360. | |
| 1.01 | 18.00 | 3 | 1.46 | 0.63 | 0.63 | 237. | 1.08 | 0.00 | 28 | 0.00 | 0.00 | 0.00 | 2202. | |
| 1.02 | 0.00 | 4 | 0.17 | 0.00 | 0.17 | 414. | 1.08 | 6.00 | 29 | 0.00 | 0.00 | 0.00 | 2055. | |
| 1.02 | 6.00 | 5 | 0.65 | 0.05 | 0.60 | 910. | 1.08 | 12.00 | 30 | 0.00 | 0.00 | 0.00 | 1917. | |
| 1.02 | 12.00 | 6 | 2.55 | 2.25 | 0.60 | 2144. | 1.08 | 18.00 | 31 | 0.00 | 0.00 | 0.00 | 1789. | |
| 1.02 | 18.00 | 7 | 8.34 | 7.74 | 0.60 | 4501. | 1.09 | 0.00 | 32 | 0.00 | 0.00 | 0.00 | 1669. | |
| 1.03 | 0.00 | 8 | 0.98 | 0.38 | 0.60 | 8732. | 1.09 | 6.00 | 33 | 0.00 | 0.00 | 0.00 | 1557. | |
| 1.03 | 6.00 | 9 | 0.00 | 0.00 | 0.00 | 17943. | 1.09 | 12.00 | 34 | 0.00 | 0.00 | 0.00 | 1453. | |
| 1.03 | 12.00 | 10 | 0.00 | 0.00 | 0.00 | 33202. | 1.09 | 18.00 | 35 | 0.00 | 0.00 | 0.00 | 1355. | |
| 1.03 | 18.00 | 11 | 0.00 | 0.00 | 0.00 | 44195. | 1.10 | 0.00 | 36 | 0.00 | 0.00 | 0.00 | 1265. | |
| 1.04 | 0.00 | 12 | 0.00 | 0.00 | 0.00 | 41721. | 1.10 | 6.00 | 37 | 0.00 | 0.00 | 0.00 | 1160. | |
| 1.04 | 6.00 | 13 | 0.00 | 0.00 | 0.00 | 30186. | 1.10 | 12.00 | 38 | 0.00 | 0.00 | 0.00 | 1101. | |
| 1.04 | 12.00 | 14 | 0.00 | 0.00 | 0.00 | 21205. | 1.10 | 18.00 | 39 | 0.00 | 0.00 | 0.00 | 1027. | |
| 1.04 | 18.00 | 15 | 0.00 | 0.00 | 0.00 | 14989. | 1.11 | 0.00 | 40 | 0.00 | 0.00 | 0.00 | 958. | |
| 1.05 | 0.00 | 16 | 0.00 | 0.00 | 0.00 | 10973. | 1.11 | 6.00 | 41 | 0.00 | 0.00 | 0.00 | 894. | |
| 1.05 | 6.00 | 17 | 0.00 | 0.00 | 0.00 | 7796. | 1.11 | 12.00 | 42 | 0.00 | 0.00 | 0.00 | 834. | |
| 1.05 | 12.00 | 18 | 0.00 | 0.00 | 0.00 | 4404. | 1.11 | 18.00 | 43 | 0.00 | 0.00 | 0.00 | 779. | |
| 1.05 | 18.00 | 19 | 0.00 | 0.00 | 0.00 | 4109. | 1.12 | 0.00 | 44 | 0.00 | 0.00 | 0.00 | 726. | |
| 1.06 | 0.00 | 20 | 0.00 | 0.00 | 0.00 | 3834. | 1.12 | 6.00 | 45 | 0.00 | 0.00 | 0.00 | 678. | |
| 1.06 | 6.00 | 21 | 0.00 | 0.00 | 0.00 | 3577. | 1.12 | 12.00 | 46 | 0.00 | 0.00 | 0.00 | 632. | |
| 1.06 | 12.00 | 22 | 0.00 | 0.00 | 0.00 | 3338. | 1.12 | 18.00 | 47 | 0.00 | 0.00 | 0.00 | 590. | |
| 1.06 | 18.00 | 23 | 0.00 | 0.00 | 0.00 | 3114. | 1.13 | 0.00 | 48 | 0.00 | 0.00 | 0.00 | 551. | |
| 1.07 | 0.00 | 24 | 0.00 | 0.00 | 0.00 | 2906. | 1.13 | 6.00 | 49 | 0.00 | 0.00 | 0.00 | 514. | |

McFARLAND - JOHNSON ENGINEERS, INC.

20 0.00 0.00 0.00 2711. 1.13 12.00 50 0.00 0.00 0.00 479.
 SUM 15.05 11.04 4.01 298623.
 (382.)(280.)(102.)(8456.06)

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 44195. | 42958. | 35820. | 19971. | 294282. |
| CMS | 1251. | 1216. | 1014. | 566. | 8446. |
| INCHES | | 1.80 | 0.20 | 10.37 | 12.91 |
| MM | | 47.21 | 157.49 | 263.17 | 327.80 |
| AC-FT | | 21302. | 71061. | 118830. | 147909. |
| THOUS CU 4 | | 20275. | 87652. | 146531. | 182443. |

HYDROGRAPH AT STA 4 FOR PLAN 1, RTIO 1

| | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 40. | 37. | 47. | 83. | 182. | 429. | 900. | 1740. | 3589. | 6640. |
| 8839. | 8344. | 6037. | 4241. | 2998. | 2195. | 1559. | 881. | 822. | 767. |
| 715. | 608. | 023. | 581. | 542. | 505. | 472. | 440. | 411. | 383. |
| 308. | 334. | 311. | 291. | 271. | 253. | 230. | 220. | 205. | 192. |
| 179. | 107. | 150. | 145. | 136. | 120. | 118. | 110. | 103. | 96. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|-------|--------|---------|---------|--------------|
| CFS | 8839. | 8592. | 7105. | 3994. | 59657. |
| CMS | 250. | 243. | 203. | 113. | 1089. |
| INCHES | | 0.37 | 1.24 | 2.07 | 2.58 |
| MM | | 9.44 | 31.50 | 52.67 | 65.50 |
| AC-FT | | 4200. | 14212. | 23707. | 29502. |
| THOUS CU 4 | | 5255. | 17530. | 29316. | 36409. |

HYDROGRAPH AT STA 4 FOR PLAN 1, RTIO 2

| | | | | | | | | | |
|--------|--------|--------|-------|-------|-------|-------|-------|-------|--------|
| 70. | 60. | 83. | 145. | 318. | 750. | 1575. | 3050. | 6280. | 11621. |
| 15466. | 14602. | 10563. | 7422. | 5246. | 3840. | 2729. | 1541. | 1438. | 1342. |
| 1252. | 1108. | 1090. | 1017. | 949. | 885. | 826. | 771. | 719. | 671. |
| 620. | 584. | 545. | 508. | 474. | 443. | 413. | 305. | 300. | 335. |
| 313. | 292. | 272. | 254. | 237. | 221. | 207. | 193. | 180. | 168. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 15466. | 15035. | 12539. | 6990. | 104399. |
| CMS | 436. | 426. | 355. | 198. | 2950. |
| INCHES | | 0.65 | 2.17 | 3.63 | 4.52 |
| MM | | 16.52 | 55.12 | 92.18 | 114.73 |
| AC-FT | | 7456. | 24871. | 41592. | 51768. |
| THOUS CU 4 | | 9190. | 30676. | 51303. | 63855. |

HYDROGRAPH AT STA 4 FOR PLAN 1, RTIO 3

| | | | | | | | | | |
|--------|--------|--------|--------|-------|-------|-------|-------|-------|--------|
| 100. | 94. | 119. | 207. | 455. | 1072. | 2251. | 4366. | 8971. | 16601. |
| 22098. | 20861. | 15093. | 10603. | 7495. | 5486. | 3898. | 2202. | 2055. | 1917. |
| 1789. | 1669. | 1557. | 1453. | 1355. | 1265. | 1160. | 1101. | 1027. | 958. |
| 894. | 834. | 779. | 726. | 678. | 632. | 590. | 551. | 514. | 479. |
| 447. | 417. | 369. | 303. | 339. | 316. | 295. | 275. | 257. | 240. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|--------|--------|--------|---------|---------|--------------|
| CFS | 22098. | 21479. | 17913. | 9905. | 149141. |
| CMS | 620. | 606. | 507. | 283. | 4223. |
| INCHES | | 0.93 | 3.10 | 5.18 | 6.45 |
| MM | | 23.60 | 78.74 | 130. | 163.90 |

McFARLAND-JOHNSON ENGINEERS, INC.

| | | | | |
|------------|--------|--------|--------|--------|
| AC-FT | 10651. | 35530. | 59416. | 73954. |
| INJUS CU M | 13138. | 43325. | 73291. | 91221. |

HYDROGRAPH AT STA 4 FOR PLAN 1, R110 4

| | | | | | | | | | |
|--------|--------|--------|--------|-------|-------|-------|-------|--------|--------|
| 150. | 122. | 154. | 209. | 591. | 1393. | 2926. | 5676. | 11663. | 21581. |
| 28727. | 27119. | 19621. | 13783. | 9743. | 7132. | 5067. | 2803. | 2671. | 2492. |
| 2325. | 2169. | 2024. | 1889. | 1762. | 1644. | 1534. | 1431. | 1335. | 1246. |
| 1163. | 1085. | 1012. | 944. | 881. | 822. | 767. | 710. | 668. | 623. |
| 581. | 542. | 506. | 472. | 441. | 411. | 384. | 358. | 334. | 312. |

| | | | | | |
|------------|--------|--------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 28727. | 27923. | 23287. | 12981. | 193864. |
| CMS | 813. | 791. | 659. | 368. | 5490. |
| INCHES | | 1.21 | 4.03 | 6.74 | 8.39 |
| MA | | 30.69 | 102.37 | 171.19 | 213.07 |
| AC-FT | | 13846. | 46189. | 77243. | 96141. |
| INJUS CU M | | 17079. | 56974. | 95276. | 118588. |

HYDROGRAPH AT STA 4 FOR PLAN 1, R110 5

| | | | | | | | | | |
|--------|--------|--------|--------|--------|-------|-------|-------|--------|--------|
| 160. | 150. | 190. | 331. | 728. | 1715. | 3601. | 6985. | 14354. | 26562. |
| 35356. | 33377. | 24149. | 16904. | 11991. | 8778. | 6237. | 3523. | 3267. | 3067. |
| 2802. | 2670. | 2491. | 2324. | 2169. | 2024. | 1888. | 1762. | 1644. | 1534. |
| 1431. | 1335. | 1240. | 1162. | 1084. | 1012. | 944. | 861. | 822. | 767. |
| 715. | 608. | 523. | 581. | 542. | 506. | 472. | 440. | 411. | 383. |

| | | | | | |
|------------|--------|--------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 35356. | 34367. | 28661. | 15977. | 238626. |
| CMS | 1001. | 973. | 812. | 452. | 6757. |
| INCHES | | 1.49 | 4.90 | 8.30 | 10.32 |
| MA | | 37.77 | 125.99 | 210.70 | 262.24 |
| AC-FT | | 17041. | 56849. | 95068. | 118327. |
| INJUS CU M | | 21020. | 70122. | 117265. | 145954. |

HYDROGRAPH AT STA 4 FOR PLAN 1, R110 6

| | | | | | | | | | |
|--------|--------|--------|--------|--------|--------|-------|-------|--------|--------|
| 261. | 187. | 237. | 414. | 910. | 2144. | 4501. | 8732. | 17943. | 33202. |
| 44195. | 41721. | 30180. | 21205. | 14989. | 10973. | 7796. | 4404. | 4109. | 3834. |
| 3577. | 3338. | 3114. | 2906. | 2711. | 2529. | 2360. | 2202. | 2055. | 1917. |
| 1789. | 1609. | 1557. | 1453. | 1355. | 1265. | 1180. | 1101. | 1027. | 958. |
| 894. | 834. | 779. | 726. | 678. | 632. | 590. | 551. | 514. | 479. |

| | | | | | |
|------------|--------|--------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 44195. | 42958. | 35826. | 19971. | 298283. |
| CMS | 1251. | 1216. | 1014. | 566. | 8446. |
| INCHES | | 1.86 | 6.20 | 10.37 | 12.91 |
| MA | | 47.21 | 157.49 | 263.37 | 327.80 |
| AC-FT | | 21302. | 71061. | 118835. | 147909. |
| INJUS CU M | | 26275. | 87652. | 146581. | 182443. |



LOCAL INFLOW HYDROGRAPH

ISTAQ 4 ICOMP 0 IECON 0 IIAPE 0 JPLI 0 JPKI 0 INAME 1 ISAGE 0 IAUTO 0

INIDG 1 IUMG -1 IAREA 71.00 SWAP 0.00 PRSUA 2400.00 IRSPC 0.00 RALIJ 0.000 ISNCA 0 ISAME 1 LOCAL 0

HYDROGRAPH DATA

SPFE 0.00 PMS 22.00 R6 41.00 R12 55.00 R24 63.00 R48 74.00 R72 84.00 R96 0.00

IRSPC COMPUTED BY THE PROGRAM IS 0.925

PRECIP DATA

LRDPI 0 STRKR 0.00 OLTKR 0.00 RTIOL 1.00 ERAIN 0.00 SIRAS 0.00 RFIUK 1.00 STRIL 1.00 CMSTL 0.10 ALSMX 0.00 RTIMP 0.00

400. 2400. 2300. 1200. 700. 400. 200. 100. 400. UNIF GRAPH TOTALS 7700. CFS OR 1.01 INCHES OVER THE AREA

RECESSION DATA

SRTD= -1.50 3RCSNE -0.10 RTIJK= 2.00

| NO.DA | HR.MN | PERIOD | RAIN | EXCS | LOSS | END-OF-PERIOD FLOW
COMP W | MO.DA | HR.MN | PERIOD | RAIN | EXCS | LOSS | COMP O |
|-------|-------|--------|------|------|------|------------------------------|-------|-------|--------|------|------|------|--------|
| 1.01 | 6.00 | 1 | 0.11 | 0.00 | 0.11 | 99. | 1.07 | 12.00 | 26 | 0.00 | 0.00 | 0.00 | 970. |
| 1.01 | 12.00 | 2 | 0.50 | 0.00 | 0.50 | 93. | 1.07 | 18.00 | 27 | 0.00 | 0.00 | 0.00 | 905. |
| 1.01 | 18.00 | 3 | 1.40 | 0.03 | 0.83 | 337. | 1.08 | 0.00 | 28 | 0.00 | 0.00 | 0.00 | 844. |
| 1.02 | 0.00 | 4 | 0.17 | 0.00 | 0.17 | 1586. | 1.08 | 6.00 | 29 | 0.00 | 0.00 | 0.00 | 784. |
| 1.02 | 6.00 | 5 | 0.55 | 0.05 | 0.60 | 1539. | 1.09 | 12.00 | 30 | 0.00 | 0.00 | 0.00 | 735. |
| 1.02 | 12.00 | 6 | 2.85 | 2.25 | 0.60 | 1844. | 1.08 | 18.00 | 31 | 0.00 | 0.00 | 0.00 | 686. |
| 1.02 | 18.00 | 7 | 8.34 | 7.74 | 0.60 | 9112. | 1.09 | 0.00 | 32 | 0.00 | 0.00 | 0.00 | 640. |
| 1.03 | 0.00 | 8 | 0.38 | 0.38 | 0.60 | 24269. | 1.09 | 6.00 | 33 | 0.00 | 0.00 | 0.00 | 597. |
| 1.03 | 6.00 | 9 | 0.00 | 0.00 | 0.00 | 21620. | 1.09 | 12.00 | 34 | 0.00 | 0.00 | 0.00 | 557. |
| 1.03 | 12.00 | 10 | 0.00 | 0.00 | 0.00 | 11863. | 1.09 | 18.00 | 35 | 0.00 | 0.00 | 0.00 | 520. |
| 1.03 | 18.00 | 11 | 0.00 | 0.00 | 0.00 | 6828. | 1.10 | 0.00 | 36 | 0.00 | 0.00 | 0.00 | 485. |
| 1.04 | 0.00 | 12 | 0.00 | 0.00 | 0.00 | 3860. | 1.10 | 6.00 | 37 | 0.00 | 0.00 | 0.00 | 452. |
| 1.04 | 6.00 | 13 | 0.00 | 0.00 | 0.00 | 2387. | 1.10 | 12.00 | 38 | 0.00 | 0.00 | 0.00 | 422. |
| 1.04 | 12.00 | 14 | 0.00 | 0.00 | 0.00 | 2228. | 1.10 | 18.00 | 39 | 0.00 | 0.00 | 0.00 | 394. |
| 1.04 | 18.00 | 15 | 0.00 | 0.00 | 0.00 | 2078. | 1.11 | 0.00 | 40 | 0.00 | 0.00 | 0.00 | 367. |
| 1.05 | 0.00 | 16 | 0.00 | 0.00 | 0.00 | 1939. | 1.11 | 6.00 | 41 | 0.00 | 0.00 | 0.00 | 343. |
| 1.05 | 6.00 | 17 | 0.00 | 0.00 | 0.00 | 1809. | 1.11 | 12.00 | 42 | 0.00 | 0.00 | 0.00 | 320. |
| 1.05 | 12.00 | 18 | 0.00 | 0.00 | 0.00 | 1688. | 1.11 | 18.00 | 43 | 0.00 | 0.00 | 0.00 | 298. |
| 1.05 | 18.00 | 19 | 0.00 | 0.00 | 0.00 | 1575. | 1.12 | 0.00 | 44 | 0.00 | 0.00 | 0.00 | 278. |
| 1.06 | 0.00 | 20 | 0.00 | 0.00 | 0.00 | 1470. | 1.12 | 6.00 | 45 | 0.00 | 0.00 | 0.00 | 260. |
| 1.06 | 6.00 | 21 | 0.00 | 0.00 | 0.00 | 1371. | 1.12 | 12.00 | 46 | 0.00 | 0.00 | 0.00 | 242. |
| 1.06 | 12.00 | 22 | 0.00 | 0.00 | 0.00 | 1279. | 1.12 | 18.00 | 47 | 0.00 | 0.00 | 0.00 | 226. |
| 1.06 | 18.00 | 23 | 0.00 | 0.00 | 0.00 | 1194. | 1.13 | 0.00 | 48 | 0.00 | 0.00 | 0.00 | 211. |
| 1.07 | 0.00 | 24 | 0.00 | 0.00 | 0.00 | 1114. | 1.13 | 6.00 | 49 | 0.00 | 0.00 | 0.00 | 197. |
| 1.07 | 6.00 | 25 | 0.00 | 0.00 | 0.00 | 1039. | 1.13 | 12.00 | 50 | 0.00 | 0.00 | 0.00 | 184. |

SUM 15.05 1.04 4.01 116142.
(382.)(280.)(102.)(3288.77)

CFS 24269. PEMA 24944. 0-HOUR 24-HOUR 72-HOUR TOTAL VOLUME
LMS 650. 465. 7460. 116001. 3265.



McFARLAND-JOHNSON ENGINEERS, INC.

| | | | | |
|------------|--------|--------|--------|--------|
| INCHES | 3.01 | 8.01 | 11.76 | 15.20 |
| MM | 76.36 | 218.72 | 298.71 | 386.04 |
| AC-FI | 11377. | 32590. | 44509. | 57521. |
| INJUS CU M | 14034. | 40199. | 54902. | 70951. |

| HYDROGRAPH AT STA | | | | 4 FOR PLAN 1, R110 1 | | | | | | |
|-------------------|------|------------|--------|----------------------|---------|--------------|--------|-------|-------|--|
| 20. | 19. | 07. | 317. | 308. | 309. | 1822. | 4854. | 4324. | 2373. | |
| 1360. | 772. | 477. | 440. | 410. | 308. | 362. | 330. | 315. | 294. | |
| 274. | 250. | 239. | 223. | 208. | 194. | 181. | 169. | 158. | 147. | |
| 137. | 128. | 119. | 111. | 104. | 97. | 90. | 84. | 79. | 73. | |
| 69. | 04. | 00. | 50. | 52. | 48. | 45. | 42. | 39. | 37. | |
| | | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME | | | | |
| | | CFS | 4854. | 4589. | 3286. | 1490. | 23200. | | | |
| | | CMS | 137. | 130. | 93. | 42. | 057. | | | |
| | | INCHES | 0.60 | 1.72 | 2.35 | 3.04 | | | | |
| | | MM | 15.27 | 43.74 | 59.74 | 77.21 | | | | |
| | | AC-FI | 2275. | 6510. | 8902. | 11504. | | | | |
| | | INJUS CU M | 2807. | 8040. | 10980. | 14190. | | | | |

| HYDROGRAPH AT STA | | | | 4 FOR PLAN 1, R110 2 | | | | | | |
|-------------------|-------|------------|--------|----------------------|---------|--------------|--------|-------|-------|--|
| 35. | 32. | 110. | 555. | 539. | 640. | 3189. | 8494. | 7507. | 4152. | |
| 2390. | 1351. | 336. | 700. | 727. | 079. | 633. | 591. | 551. | 514. | |
| 480. | 448. | 418. | 390. | 304. | 339. | 317. | 295. | 270. | 257. | |
| 240. | 224. | 209. | 195. | 182. | 170. | 150. | 140. | 138. | 129. | |
| 120. | 112. | 104. | 97. | 91. | 05. | 79. | 74. | 09. | 64. | |
| | | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME | | | | |
| | | CFS | 8494. | 8031. | 5751. | 2018. | 40600. | | | |
| | | CMS | 241. | 227. | 163. | 74. | 1150. | | | |
| | | INCHES | 1.05 | 3.01 | 4.12 | 5.32 | | | | |
| | | MM | 26.72 | 76.55 | 104.55 | 135.11 | | | | |
| | | AC-FI | 3982. | 11406. | 15570. | 20132. | | | | |
| | | INJUS CU M | 4912. | 14070. | 19216. | 24833. | | | | |

| HYDROGRAPH AT STA | | | | 4 FOR PLAN 1, R110 3 | | | | | | |
|-------------------|-------|------------|--------|----------------------|---------|--------------|--------|--------|-------|--|
| 50. | 46. | 169. | 793. | 769. | 922. | 4550. | 12134. | 10810. | 5932. | |
| 3414. | 1930. | 1194. | 1114. | 1039. | 970. | 905. | 844. | 788. | 735. | |
| 600. | 640. | 597. | 557. | 520. | 485. | 452. | 422. | 394. | 367. | |
| 343. | 320. | 298. | 278. | 260. | 2. | 220. | 211. | 197. | 184. | |
| 171. | 160. | 149. | 139. | 130. | 121. | 113. | 106. | 98. | 92. | |
| | | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME | | | | |
| | | CFS | 12134. | 11472. | 8215. | 3740. | 56000. | | | |
| | | CMS | 344. | 325. | 233. | 106. | 1042. | | | |
| | | INCHES | 1.50 | 4.31 | 5.88 | 7.60 | | | | |
| | | MM | 38.18 | 109.36 | 149.36 | 193.02 | | | | |
| | | AC-FI | 5689. | 16295. | 22255. | 28701. | | | | |
| | | INJUS CU M | 7017. | 20099. | 27451. | 35470. | | | | |

| HYDROGRAPH AT STA | | | | 4 FOR PLAN 1, R110 4 | | | | | | |
|-------------------|-------|-------|-------|----------------------|-------|-------|--------|--------|-------|--|
| 05. | 00. | 219. | 1031. | 1000. | 1199. | 5923. | 15775. | 14053. | 7711. | |
| 4438. | 2509. | 1552. | 1440. | 1351. | 1200. | 1176. | 1097. | 1024. | 955. | |

McFARLAND-JOHNSON ENGINEERS, INC.

| | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|
| 091. | 032. | 110. | 724. | 075. | 030. | 008. | 549. | 512. | 478. |
| 440. | 410. | 300. | 302. | 330. | 315. | 294. | 274. | 250. | 239. |
| 223. | 203. | 194. | 101. | 169. | 158. | 147. | 137. | 120. | 119. |

| | PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 15775. | 14914. | 10680. | 4802. | 75401. |
| CMS | 447. | 422. | 302. | 138. | 2135. |
| INCHES | | 1.95 | 5.60 | 7.64 | 9.88 |
| MM | | 49.63 | 142.17 | 194.16 | 250.92 |
| AC-FT | | 7395. | 21183. | 28931. | 37389. |
| THOUS CU 4 | | 9122. | 26129. | 35000. | 40118. |

HYDROGRAPH AT STA 4 FOR PLAN 1, RFD 5

| | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|--------|--------|-------|
| 79. | 74. | 270. | 1209. | 1231. | 1475. | 7290. | 19415. | 17290. | 9490. |
| 3403. | 3088. | 1910. | 1782. | 1063. | 1551. | 1447. | 1351. | 1260. | 1170. |
| 1097. | 1023. | 955. | 091. | 631. | 170. | 724. | 075. | 030. | 588. |
| 548. | 512. | 477. | 440. | 410. | 388. | 302. | 338. | 315. | 294. |
| 274. | 256. | 239. | 223. | 208. | 194. | 181. | 169. | 158. | 147. |

| | PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 19415. | 18356. | 13144. | 5984. | 92601. |
| CMS | 550. | 520. | 372. | 169. | 2020. |
| INCHES | | 2.40 | 6.89 | 9.41 | 12.16 |
| MM | | 61.09 | 174.97 | 238.97 | 308.83 |
| AC-FT | | 9102. | 26072. | 35006. | 40017. |
| THOUS CU 4 | | 11227. | 32159. | 43921. | 50761. |

HYDROGRAPH AT STA 4 FOR PLAN 1, RFD 6

| | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
| 99. | 93. | 337. | 1500. | 1539. | 1844. | 9112. | 24269. | 21620. | 11863. |
| 6828. | 3000. | 2307. | 2723. | 2078. | 1939. | 1809. | 1088. | 1575. | 1470. |
| 1371. | 1279. | 1194. | 1114. | 1039. | 970. | 905. | 844. | 780. | 735. |
| 686. | 640. | 597. | 557. | 520. | 485. | 452. | 422. | 394. | 307. |
| 343. | 320. | 298. | 270. | 200. | 242. | 226. | 211. | 197. | 184. |

| | PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 24269. | 22944. | 16431. | 7480. | 110001. |
| CMS | 687. | 650. | 465. | 212. | 3285. |
| INCHES | | 3.01 | 8.01 | 11.76 | 15.20 |
| MM | | 76.36 | 218.72 | 298.71 | 386.04 |
| AC-FT | | 11377. | 32590. | 44510. | 57521. |
| THOUS CU 4 | | 14034. | 40199. | 54902. | 70951. |

SUB-AREA RUNOFF COMPUTATION

BLACK CREEK INFLO. HYDROGRAPH

| | | | | | | | | |
|------|-------|-------|-------|------|------|-------|--------|-------|
| IS1W | ICOMP | IECOV | ITAPE | JPLT | JKRT | INARE | ISIAGE | IAU10 |
| 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |

HYDROGRAPH DATA

| | | | | | | | | | |
|-------|------|-------|------|-------|-------|---|------|-------|-------|
| INT-G | IUNS | TAREA | SNAP | IRSDA | IRSPC | R | ISNU | ISAME | LOCAL |
|-------|------|-------|------|-------|-------|---|------|-------|-------|

McFARLAND-JOHNSON ENGINEERS, INC.



INSPEC COMPUTED BY THE PROGRAM IS 0.925

1 -1 157.00 0.00 2400.00 0.00 0.000 0 1 0

PRECIP DATA
 R12 R24 K18 R72 K96
 0.00 22.00 41.00 55.00 63.00 74.00 0.00 0.00

LOSS DATA
 STRAS RTIUA SIRIL CNSTL ALSMX RTIMP
 0.00 1.00 1.00 1.00 0.10 0.00 0.00

GIVEN UNIF GRAPH, WUNGSJ= 12
 100. 400. 900. 1300. 1700. 2300. 2800. 3100. 2600. 2000.
 1400.

UNIT GRAPH TOTALS 19500. CFS OR 0.97 INCHES OVER THE AREA

RECESSION DATA
 SIMUJ= -1.00 GRCSNE =0.10 RIIOK= 2.00

| MO.DA | HR.MN | PERIOD | RAIN | EXCS | LOSS | END-OF-PERIOD FLOW
COMP Q | HR.MN | PERIOD | RAIN | EXCS | LOSS | COMP Q |
|-------|-------|--------|------|------|------|------------------------------|-------|--------|------|------|------|--------|
| 1.01 | 6.00 | 1 | 0.11 | 0.00 | 0.11 | 174. | 12.00 | 26 | 0.00 | 0.00 | 0.00 | 1890. |
| 1.01 | 12.00 | 2 | 0.50 | 0.00 | 0.50 | 163. | 18.00 | 27 | 0.00 | 0.00 | 0.00 | 1769. |
| 1.01 | 18.00 | 3 | 1.46 | 0.03 | 0.43 | 215. | 0.00 | 28 | 0.00 | 0.00 | 0.00 | 1651. |
| 1.02 | 0.00 | 4 | 0.17 | 0.00 | 0.17 | 393. | 6.00 | 29 | 0.00 | 0.00 | 0.00 | 1540. |
| 1.02 | 6.00 | 5 | 0.65 | 0.05 | 0.60 | 702. | 12.00 | 30 | 0.00 | 0.00 | 0.00 | 1437. |
| 1.02 | 12.00 | 6 | 2.85 | 2.25 | 0.60 | 1184. | 18.00 | 31 | 0.00 | 0.00 | 0.00 | 1341. |
| 1.02 | 18.00 | 7 | 8.34 | 7.74 | 0.60 | 2900. | 0.00 | 32 | 0.00 | 0.00 | 0.00 | 1251. |
| 1.03 | 0.00 | 8 | 0.98 | 0.38 | 0.60 | 6773. | 6.00 | 33 | 0.00 | 0.00 | 0.00 | 1167. |
| 1.03 | 6.00 | 9 | 0.00 | 0.00 | 0.00 | 11982. | 12.00 | 34 | 0.00 | 0.00 | 0.00 | 1089. |
| 1.03 | 12.00 | 10 | 0.00 | 0.00 | 0.00 | 16377. | 18.00 | 35 | 0.00 | 0.00 | 0.00 | 1016. |
| 1.03 | 18.00 | 11 | 0.00 | 0.00 | 0.00 | 20677. | 0.00 | 36 | 0.00 | 0.00 | 0.00 | 948. |
| 1.04 | 0.00 | 12 | 0.00 | 0.00 | 0.00 | 26229. | 6.00 | 37 | 0.00 | 0.00 | 0.00 | 885. |
| 1.04 | 6.00 | 13 | 0.00 | 0.00 | 0.00 | 30591. | 12.00 | 38 | 0.00 | 0.00 | 0.00 | 825. |
| 1.04 | 12.00 | 14 | 0.00 | 0.00 | 0.00 | 35228. | 18.00 | 39 | 0.00 | 0.00 | 0.00 | 770. |
| 1.04 | 18.00 | 15 | 0.00 | 0.00 | 0.00 | 25923. | 0.00 | 40 | 0.00 | 0.00 | 0.00 | 719. |
| 1.05 | 0.00 | 16 | 0.00 | 0.00 | 0.00 | 13669. | 6.00 | 41 | 0.00 | 0.00 | 0.00 | 670. |
| 1.05 | 6.00 | 17 | 0.00 | 0.00 | 0.00 | 13712. | 12.00 | 42 | 0.00 | 0.00 | 0.00 | 626. |
| 1.05 | 12.00 | 18 | 0.00 | 0.00 | 0.00 | 7546. | 18.00 | 43 | 0.00 | 0.00 | 0.00 | 584. |
| 1.05 | 18.00 | 19 | 0.00 | 0.00 | 0.00 | 3081. | 0.00 | 44 | 0.00 | 0.00 | 0.00 | 545. |
| 1.06 | 0.00 | 20 | 0.00 | 0.00 | 0.00 | 2874. | 6.00 | 45 | 0.00 | 0.00 | 0.00 | 508. |
| 1.06 | 6.00 | 21 | 0.00 | 0.00 | 0.00 | 2682. | 12.00 | 46 | 0.00 | 0.00 | 0.00 | 474. |
| 1.06 | 12.00 | 22 | 0.00 | 0.00 | 0.00 | 2502. | 18.00 | 47 | 0.00 | 0.00 | 0.00 | 442. |
| 1.06 | 18.00 | 23 | 0.00 | 0.00 | 0.00 | 2335. | 0.00 | 48 | 0.00 | 0.00 | 0.00 | 413. |
| 1.07 | 0.00 | 24 | 0.00 | 0.00 | 0.00 | 2178. | 6.00 | 49 | 0.00 | 0.00 | 0.00 | 385. |
| 1.07 | 6.00 | 25 | 0.00 | 0.00 | 0.00 | 2033. | 12.00 | 50 | 0.00 | 0.00 | 0.00 | 359. |

SUM 15.05 11.04 4.01 257833.
 (382.)(280.)(102.)(7301.02)

72-HOUR TOTAL VOLUME

| 72-HOUR | 24-HOUR | 6-HOUR | PEAK |
|---------|---------|--------|--------|
| 17842. | 27937. | 31110. | 31628. |
| 505. | 791. | 881. | 896. |
| 10.65 | 5.56 | 1.55 | |
| 270.52 | 141.20 | 39.31 | |
| 106105. | 55413. | 15420. | |
| 130954. | 68350. | 19028. | |

CFS
 INCHES
 MM
 AC-FT
 FWDUS CU M



McFARLAND-JOHNSON ENGINEERS, INC.

| HYDROGRAPH AT STA | | | | 4 FOR PLAN 1, RTIO 1 | | | | | | |
|-------------------|-------|-------|-------|----------------------|-------|-------|-------|-------|-------|--|
| 35. | 33. | 43. | 79. | 140. | 237. | 500. | 1355. | 2396. | 3275. | |
| 4135. | 5240. | 0110. | 0320. | 5185. | 3942. | 2734. | 1509. | 010. | 575. | |
| 530. | 500. | 407. | 430. | 407. | 379. | 354. | 330. | 300. | 207. | |
| 200. | 200. | 233. | 210. | 203. | 190. | 177. | 105. | 154. | 144. | |
| 134. | 125. | 117. | 109. | 102. | 95. | 86. | 63. | 77. | 72. | |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|-------|--------|---------|---------|--------------|
| CFS | 0320. | 0222. | 5587. | 3508. | 51514. |
| CMS | 179. | 170. | 150. | 101. | 1459. |
| INCHES | | 0.31 | 1.11 | 2.13 | 2.56 |
| MM | | 7.80 | 28.24 | 54.10 | 65.09 |
| AC-FI | | 3085. | 11083. | 21233. | 25544. |
| THOUS CU A | | 3800. | 13670. | 26190. | 31500. |

| HYDROGRAPH AT STA | | | | 4 FOR PLAN 1, RTIO 2 | | | | | | |
|-------------------|-------|--------|--------|----------------------|-------|-------|-------|-------|-------|--|
| 01. | 57. | 15. | 137. | 240. | 414. | 1015. | 2371. | 4194. | 5732. | |
| 7237. | 9180. | 10707. | 11070. | 9673. | 0899. | 4764. | 2641. | 1078. | 1006. | |
| 939. | 870. | 017. | 702. | 711. | 004. | 619. | 578. | 539. | 503. | |
| 409. | 438. | 409. | 301. | 350. | 332. | 310. | 209. | 270. | 252. | |
| 235. | 219. | 204. | 191. | 178. | 100. | 155. | 144. | 135. | 126. | |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 11070. | 10900. | 9770. | 0245. | 90149. |
| CMS | 313. | 308. | 277. | 177. | 2553. |
| INCHES | | 0.54 | 1.95 | 3.73 | 4.40 |
| MM | | 13.70 | 49.42 | 94.68 | 113.91 |
| AC-FI | | 5399. | 19394. | 37158. | 44702. |
| THOUS CU A | | 0000. | 23923. | 45033. | 55139. |

| HYDROGRAPH AT STA | | | | 4 FOR PLAN 1, RTIO 3 | | | | | | |
|-------------------|--------|--------|--------|----------------------|-------|-------|-------|-------|-------|--|
| 07. | 01. | 107. | 190. | 351. | 592. | 1450. | 3300. | 5991. | 0100. | |
| 10339. | 13114. | 15290. | 15014. | 12901. | 9000. | 0034. | 3773. | 1540. | 1437. | |
| 1341. | 1251. | 1107. | 1009. | 1016. | 948. | 005. | 625. | 770. | 719. | |
| 070. | 020. | 004. | 540. | 500. | 474. | 442. | 413. | 305. | 359. | |
| 335. | 313. | 292. | 272. | 254. | 237. | 221. | 200. | 193. | 180. | |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 15814. | 15550. | 13909. | 8921. | 120705. |
| CMS | 440. | 440. | 390. | 203. | 3047. |
| INCHES | | 0.77 | 2.70 | 5.33 | 6.41 |
| MM | | 19.65 | 70.00 | 135.26 | 162.72 |
| AC-FI | | 7713. | 27706. | 53082. | 63000. |
| THOUS CU A | | 9514. | 34175. | 65476. | 70771. |

| HYDROGRAPH AT STA | | | | 4 FOR PLAN 1, RTIO 4 | | | | | | |
|-------------------|--------|--------|--------|----------------------|--------|-------|-------|-------|--------|--|
| 113. | 100. | 140. | 255. | 450. | 770. | 1005. | 4402. | 7700. | 10045. | |
| 13440. | 17049. | 19804. | 20550. | 16850. | 12013. | 0005. | 4905. | 2002. | 1868. | |
| 1743. | 1027. | 1510. | 1410. | 1321. | 1233. | 1150. | 1073. | 1001. | 934. | |
| 072. | 013. | 709. | 700. | 661. | 610. | 575. | 537. | 501. | 407. | |
| 430. | 407. | 379. | 354. | 330. | 308. | 200. | 200. | 250. | 234. | |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|-----|--------|--------|---------|---------|--------------|
| CFS | 20550. | 20221. | 18159. | 11597. | 167420. |
| CMS | 502. | 573. | 514. | | 4741. |

McFARLAND-JOHNSON ENGINEERS, INC.



| | | | | |
|------------|--------|--------|--------|---------|
| INCHES | 1.01 | 3.01 | 6.92 | 8.33 |
| 4M | 25.50 | 91.70 | 175.84 | 211.54 |
| AC-FT | 10027. | 36010. | 69007. | 83018. |
| THOUS CU M | 12308. | 44420. | 95119. | 102402. |

HYDROGRAPH AT STA 4 FOR PLAN 1, RTIO 5

| | | | | | | | | | |
|--------|------------|--------|---------|---------|--------------|---------|-------|-------|--------|
| 140. | 130. | 172. | 314. | 502. | 947. | 2320. | 5410. | 9505. | 13102. |
| 10542. | 20903. | 24473. | 25303. | 20730. | 15770. | 10935. | 6037. | 2405. | 2300. |
| 2140. | 2002. | 1800. | 1743. | 1626. | 1517. | 1410. | 1321. | 1232. | 1150. |
| 1073. | 1001. | 934. | 871. | 813. | 759. | 706. | 660. | 610. | 575. |
| 530. | 500. | 407. | 430. | 407. | 379. | 354. | 330. | 306. | 287. |
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME | | | | |
| | CFS | 25303. | 24800. | 22350. | 14273. | 206056. | | | |
| | CMS | 716. | 700. | 633. | 404. | 5835. | | | |
| | INCHES | | 1.24 | 4.45 | 8.52 | 10.25 | | | |
| | 4M | | 31.45 | 112.96 | 216.41 | 260.36 | | | |
| | AC-FT | | 12341. | 44330. | 84932. | 102170. | | | |
| | THOUS CU M | | 15223. | 54680. | 104702. | 126033. | | | |

HYDROGRAPH AT STA 4 FOR PLAN 1, RTIO 6

| | | | | | | | | | |
|--------|------------|--------|---------|---------|--------------|---------|-------|--------|--------|
| 174. | 103. | 215. | 393. | 702. | 1184. | 2900. | 6773. | 11982. | 16377. |
| 20077. | 26229. | 30591. | 31020. | 25923. | 19712. | 13609. | 7546. | 3081. | 2074. |
| 2602. | 2502. | 2335. | 2170. | 2033. | 1890. | 1769. | 1651. | 1540. | 1437. |
| 1341. | 1251. | 1167. | 1089. | 1010. | 940. | 865. | 825. | 770. | 719. |
| 070. | 620. | 584. | 545. | 500. | 474. | 442. | 413. | 385. | 359. |
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME | | | | |
| | CFS | 31620. | 31110. | 27937. | 17842. | 257570. | | | |
| | CMS | 890. | 881. | 791. | 500. | 7294. | | | |
| | INCHES | | 1.55 | 5.56 | 10.65 | 12.81 | | | |
| | 4M | | 39.31 | 141.20 | 270.52 | 325.45 | | | |
| | AC-FT | | 15426. | 55413. | 106165. | 127721. | | | |
| | THOUS CU M | | 19028. | 68350. | 130952. | 157541. | | | |

COMBINE HYDROGRAPHS

COMBINE FLOWS AT CONFLUENCE OF BLACK CREEK

| | | | | | | | | |
|-------|-------|-------|-------|------|------|-------|--------|-------|
| ISTAJ | ICOMP | IECON | ITAPE | JPLI | JPRI | INAME | ISIAGE | IAUT0 |
| 4 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |

SUM OF 5 HYDROGRAPHS AT 4 PLAN 1 RTIO 1

| | | | | | | | | | |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 254. | 244. | 319. | 833. | 1959. | 3065. | 6219. | 16590. | 33180. | 43227. |
| 43565. | 38353. | 31548. | 25228. | 19024. | 14305. | 10394. | 7298. | 5620. | 5046. |
| 4014. | 4262. | 3950. | 3084. | 3434. | 3202. | 2967. | 2787. | 2000. | 2426. |
| 2204. | 2112. | 1971. | 1839. | 1715. | 1601. | 1493. | 1393. | 1300. | 1213. |
| 1132. | 1050. | 905. | 919. | 658. | 800. | 747. | 697. | 650. | 607. |

PEAK 6-HOUR 24-HOUR 72-HOUR TOTAL VOLUME
MCFARLAND-JOHNSON ENGINEERS, INC.

| | | | | | |
|------------|--------|--------|--------|---------|---------|
| CFS | 43500. | 43390. | 39375. | 24050. | 305239. |
| CMS | 1234. | 1229. | 1115. | 061. | 10342. |
| INCHES | | 0.17 | 0.01 | 1.12 | 1.42 |
| MA | | 4.27 | 15.51 | 28.44 | 35.97 |
| AC-FI | | 21519. | 75105. | 143100. | 151110. |
| INJUS CU # | | 26543. | 96342. | 170595. | 223395. |

| SUM OF 5 HYDROGRAPHS AT | | | | | 4 PLAN 1 R110 2 | | | | |
|-------------------------|--------|--------|--------|--------|-----------------|--------|--------|--------|--------|
| 444. | 427. | 559. | 1450. | 3429. | 5303. | 10883 | 29032. | 56079. | 75047. |
| 70239. | 07110. | 55209. | 44149. | 33292. | 25180. | 10190. | 12771. | 9830. | 8831. |
| 8075. | 7459. | 0926. | 0446. | 0009. | 5094. | 5228. | 4877. | 4550. | 4246. |
| 3901. | 3090. | 3440. | 3218. | 3002. | 2801. | 2613. | 2438. | 2275. | 2123. |
| 1901. | 1048. | 1724. | 1009. | 1501. | 1401. | 1307. | 1219. | 1138. | 1061. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 70239. | 75943. | 68912. | 42105. | 639100. |
| CMS | 2159. | 2150. | 1951. | 1192. | 18099. |
| INCHES | | 0.29 | 1.07 | 1.90 | 2.48 |
| MA | | 7.48 | 27.15 | 49.70 | 02.95 |
| AC-FI | | 37050. | 130085. | 250544. | 316943. |
| INJUS CU # | | 46450. | 163098. | 309041. | 390943. |

| SUM OF 5 HYDROGRAPHS AT | | | | | 4 PLAN 1 R110 3 | | | | |
|-------------------------|--------|--------|--------|--------|-----------------|--------|--------|--------|---------|
| 034. | 010. | 799. | 2082. | 4098. | 7552. | 15547. | 41475. | 82970. | 108007. |
| 106913. | 95882. | 70009. | 63069. | 47560. | 35971. | 25985. | 10244. | 14051. | 12015. |
| 11530. | 10056. | 3094. | 9211. | 8739. | 8007. | 9073. | 10010. | 11204. | 11342. |
| 11130. | 10700. | 10156. | 9507. | 8973. | 0390. | 7846. | 7326. | 6830. | 0301. |
| 5955. | 5500. | 5104. | 4837. | 4513. | 4211. | 3929. | 3000. | 3420. | 3191. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|---------|---------|---------|---------|--------------|
| CFS | 108913. | 108490. | 96445. | 60150. | 997510. |
| CMS | 3004. | 3072. | 2700. | 1703. | 20246. |
| INCHES | | 0.42 | 1.53 | 2.80 | 3.87 |
| MA | | 10.09 | 36.78 | 71.09 | 98.25 |
| AC-FI | | 53797. | 195204. | 357920. | 494633. |
| INJUS CU # | | 66357. | 240854. | 441408. | 610121. |

| SUM OF 5 HYDROGRAPHS AT | | | | | 4 PLAN 1 R110 4 | | | | |
|-------------------------|---------|---------|--------|--------|-----------------|--------|--------|---------|---------|
| 824. | 793. | 1030. | 2707. | 6368. | 9900. | 20211. | 53917. | 107861. | 140487. |
| 141506. | 124647. | 102530. | 83020. | 67000. | 58610. | 51390. | 44131. | 38891. | 35801. |
| 32727. | 29969. | 27075. | 25490. | 23047. | 21989. | 20477. | 19086. | 17797. | 16601. |
| 15460. | 14448. | 13480. | 12577. | 11735. | 10949. | 10216. | 9531. | 8693. | 8298. |
| 7742. | 7224. | 0740. | 6288. | 5867. | 5474. | 5108. | 4766. | 4447. | 4149. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|---------|---------|---------|---------|--------------|
| CFS | 141506. | 141037. | 127979. | 83752. | 1498071. |
| CMS | 4009. | 3994. | 3624. | 2374. | 42421. |
| INCHES | | 0.55 | 1.98 | 3.90 | 5.81 |
| MA | | 13.89 | 50.42 | 98.99 | 147.55 |
| AC-FI | | 69936. | 253043. | 498350. | 742845. |
| INJUS CU # | | 80264. | 313110. | 614715. | 910286. |



| SUM OF 5 HYDROGRAPHS AT | | | | 4 PLAN 1 R110 5 | | | | | | |
|-------------------------|---------|---------|---------|-----------------|---------|--------|--------|---------|---------|--|
| 1015. | 970. | 1270. | 3331. | 7537. | 12259. | 24075. | 00300. | 132752. | 172907. | |
| 174200. | 154509. | 135394. | 127517. | 118034. | 103954. | 85305. | 87836. | 55532. | 48200. | |
| 42430. | 37901. | 34483. | 31039. | 29253. | 27125. | 25232. | 23504. | 21911. | 20430. | |
| 19062. | 17783. | 16591. | 15400. | 14443. | 13470. | 12573. | 11731. | 10945. | 10212. | |
| 9529. | 8890. | 8295. | 7740. | 7221. | 6738. | 6287. | 5860. | 5473. | 5106. | |

| | PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|---------|---------|---------|---------|--------------|
| CFS | 114260. | 173584. | 153952. | 115452. | 1996632. |
| CAS | 4934. | 4915. | 4501. | 3209. | 50595. |
| InCh2S | | 0.07 | 2.47 | 5.37 | 7.75 |
| IN | | 17.10 | 62.02 | 130.45 | 196.85 |
| AC-FI | | 80074. | 315278. | 886987. | 991057. |
| INDUS CU A | | 195171. | 308889. | 447355. | 1222451. |

| SUM OF 5 HYDROGRAPHS AT | | | | 4 PLAN 1 R110 6 | | | | | | |
|-------------------------|---------|---------|---------|-----------------|---------|---------|--------|---------|---------|--|
| 1208. | 1220. | 1597. | 4104. | 9797. | 15324. | 31093. | 62949. | 105940. | 216134. | |
| 217825. | 203636. | 205005. | 205274. | 183953. | 150652. | 110646. | 80050. | 70559. | 60394. | |
| 52512. | 47320. | 42909. | 39477. | 36499. | 33003. | 31528. | 29374. | 27386. | 25542. | |
| 23020. | 22228. | 20739. | 19350. | 18053. | 16844. | 15710. | 14054. | 13002. | 12760. | |
| 11911. | 11113. | 10309. | 9675. | 9027. | 8422. | 7850. | 7332. | 6841. | 6383. | |

| | PEAK | 0-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|---------|---------|---------|----------|--------------|
| CFS | 217825. | 215779. | 209933. | 158336. | 2000440. |
| CAS | 0100. | 6144. | 5945. | 4404. | 75494. |
| InCh2S | | 0.04 | 3.20 | 7.37 | 10.34 |
| IN | | 21.37 | 92.71 | 157.14 | 262.50 |
| AC-FI | | 107593. | 410396. | 942103. | 1322096. |
| INDUS CU A | | 132714. | 513617. | 1102141. | 1030070. |

HYDROGRAPH ROUTING

ROUTE COMBINE FLOWS TO COURT STREET DAM OUTLET USING MUSKINGUM METHOD

| ISIAQ | ICORP | IECOV | ITAPE | JPLI | JPRI | IAAME | ISTAGE | IAUTO |
|--------------|-------|-------|-------|-------|-------|-------|--------|-------|
| 5 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| ROUTING DATA | | | | | | | | |
| GLSS | CLSS | AVG | IRCS | ISANE | IDPT | IFHP | LSIR | |
| 0.0 | 0.000 | 0.00 | 0 | 1 | 0 | 0 | 0 | |
| VSIPS | MSIDL | LAS | ANSKN | X | ISK | SIGRA | ISPRAT | |
| 1 | 0 | 0 | 6.930 | 0.010 | 0.000 | 0. | 0 | |

STATION 5, PLAN 1, R110 1

OUTFLOW

| | | | | | | | | | |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 254. | 251. | 209. | 452. | 1019. | 1929. | 3554. | 8250. | 18201. | 30327. |
| 30277. | 27945. | 30954. | 31786. | 25952. | 20359. | 15539. | 11488. | 8440. | 8554. |
| 5508. | 4860. | 4400. | 4052. | 3754. | 3490. | 3251. | 3031. | 2627. | 2637. |

McFARLAND-JOHNSON ENGINEERS, INC.

1230. 1140. 1071. 999. 932. 870. 812. 757. 707. 659.

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 39945. | 39111. | 36556. | 25728. | 364771. |
| CMS | 1131. | 1108. | 1035. | 672. | 10329. |
| INCHES | | 0.15 | 0.57 | 1.10 | 1.41 |
| MM | | 3.85 | 14.10 | 28.04 | 35.93 |
| AC-FI | 19394. | 19394. | 72512. | 141190. | 180678. |
| THOUS CU M | 23922. | 89442. | 174155. | | 223110. |

STATION 5, PLAN 1, RTIO 2

| OUTFLOW | | | | | | | | | |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 444. | 439. | 471. | 792. | 1783. | 3359. | 6219. | 14451. | 31956. | 53073. |
| 80904. | 89905. | 84009. | 55620. | 45415. | 35628. | 27193. | 20104. | 14770. | 11469. |
| 9639. | 8504. | 7710. | 7091. | 6509. | 6108. | 5690. | 5304. | 4947. | 4615. |
| 4300. | 4017. | 3748. | 3497. | 3263. | 3044. | 2841. | 2650. | 2473. | 2307. |
| 2153. | 2009. | 1874. | 1749. | 1631. | 1522. | 1420. | 1325. | 1236. | 1154. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|---------|---------|---------|--------------|
| CFS | 69905. | 68445. | 63977. | 41524. | 638350. |
| CMS | 1979. | 1938. | 1812. | 1176. | 18076. |
| INCHES | | 0.27 | 0.99 | 1.93 | 2.48 |
| MM | | 6.74 | 25.20 | 49.08 | 62.87 |
| AC-FI | 33939. | 126890. | 247082. | | 316537. |
| THOUS CU M | 41864. | 156524. | 304772. | | 390443. |

STATION 5, PLAN 1, RTIO 3

| OUTFLOW | | | | | | | | | |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 634. | 627. | 673. | 1131. | 2547. | 4799. | 8884. | 20644. | 45652. | 75818. |
| 95692. | 99864. | 92385. | 79465. | 64879. | 50897. | 38847. | 28720. | 21100. | 16384. |
| 13000. | 12449. | 11014. | 10130. | 9430. | 9048. | 9177. | 9700. | 10456. | 10952. |
| 11100. | 11001. | 10650. | 10177. | 9629. | 9059. | 8492. | 7944. | 7423. | 6931. |
| 6470. | 6038. | 5634. | 5257. | 4905. | 4577. | 4271. | 3985. | 3718. | 3469. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|---------|---------|---------|--------------|
| CFS | 99864. | 97778. | 91396. | 59319. | 994239. |
| CMS | 2820. | 2769. | 2588. | 1680. | 28154. |
| INCHES | | 0.38 | 1.42 | 2.76 | 3.86 |
| MM | | 9.63 | 36.01 | 70.11 | 97.92 |
| AC-FI | 48485. | 181280. | 352975. | | 493011. |
| THOUS CU M | 59805. | 223606. | 435388. | | 698120. |

STATION 5, PLAN 1, RTIO 4

| OUTFLOW | | | | | | | | | |
|---------|---------|---------|---------|--------|--------|--------|--------|--------|--------|
| 824. | 815. | 875. | 1470. | 3311. | 6239. | 11550. | 26838. | 59348. | 98564. |
| 124400. | 129823. | 120100. | 103611. | 86321. | 72073. | 61738. | 53284. | 46157. | 40818. |
| 30851. | 33522. | 30649. | 28159. | 25987. | 24070. | 22354. | 20798. | 19373. | 18059. |
| 16840. | 15708. | 14654. | 13671. | 12750. | 11901. | 11104. | 10360. | 9666. | 9019. |
| 6415. | 7651. | 7326. | 6835. | 6377. | 5950. | 5552. | 5180. | 4833. | 4509. |

PEAK 6-HOUR 24-HOUR 72-HOUR TOTAL VOLUME
 McFARLAND-JOHNSON ENGINEERS, INC.



| | | | | | |
|------------|---------|---------|---------|---------|----------|
| CFS | 129823. | 127111. | 118852. | 82437. | 1493819. |
| CMS | 3676. | 3599. | 3366. | 2334. | 42300. |
| INCHES | | 0.49 | 1.84 | 3.84 | 5.79 |
| MM | | 12.52 | 46.82 | 97.43 | 147.13 |
| AC-FT | | 63030. | 235740. | 490535. | 740737. |
| THOUS CU M | | 77747. | 290781. | 605066. | 913685. |

STATION 5, PLAN 1, R110 5

| OUTFLOW | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|--------|--------|---------|
| 1015. | 1003. | 1070. | 1809. | 4075. | 7678. | 14215. | 33031. | 73043. | 121309. |
| 153107. | 160126. | 151046. | 139181. | 129265. | 118247. | 104031. | 87470. | 71867. | 59748. |
| 51009. | 44468. | 39481. | 35595. | 32473. | 29875. | 27639. | 25661. | 23875. | 22241. |
| 20734. | 19336. | 18037. | 16827. | 15099. | 14047. | 13060. | 12751. | 11897. | 11100. |
| 10357. | 9063. | 9016. | 8412. | 7849. | 7323. | 6833. | 6375. | 5948. | 5550. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|---------|---------|---------|---------|--------------|
| CFS | 160126. | 156617. | 148631. | 113119. | 1993399. |
| CMS | 4534. | 4435. | 4209. | 3203. | 56447. |
| INCHES | | 0.61 | 2.31 | 5.26 | 7.73 |
| MM | | 15.43 | 58.56 | 133.69 | 196.33 |
| AC-FT | | 77661. | 294305. | 673103. | 988462. |
| THOUS CU M | | 95794. | 363637. | 830260. | 1219250. |

STATION 5, PLAN 1, R110 6

| OUTFLOW | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|--------|---------|
| 1266. | 1254. | 1346. | 2262. | 5093. | 9598. | 17769. | 41289. | 91306. | 151636. |
| 191384. | 203316. | 204236. | 205943. | 200134. | 180332. | 152189. | 122246. | 96432. | 77668. |
| 64933. | 55957. | 49414. | 44601. | 40543. | 37305. | 34523. | 32060. | 29635. | 27796. |
| 25915. | 24169. | 22546. | 21033. | 19624. | 18309. | 17082. | 15938. | 14871. | 13875. |
| 12946. | 12079. | 11270. | 10515. | 9811. | 9154. | 8541. | 7969. | 7435. | 6938. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|---------|---------|---------|----------|--------------|
| CFS | 205943. | 205090. | 202314. | 155308. | 2659505. |
| CMS | 5832. | 5807. | 5729. | 4398. | 75309. |
| INCHES | | 0.80 | 3.14 | 7.23 | 10.31 |
| MM | | 20.20 | 79.70 | 183.56 | 261.94 |
| AC-FT | | 10697. | 401283. | 924147. | 1318763. |
| THOUS CU M | | 125442. | 494975. | 1139918. | 1626670. |

SUB-AREA RUNOFF COMPUTATION

LOCAL INFLOW HYDROGRAPH AT OUTLET OF COURT STREET DAM

| | | | | | | | | |
|-------|-------|-------|-------|------|------|-------|--------|-------|
| ISTAQ | ICOMP | IECON | ITAPE | JPLT | JPRT | INAME | ISTAGE | IAUTO |
| 5 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |

| HYDROGRAPH DATA | | | | | | | | | |
|-----------------|------|-------|------|---------|-------|-------|-------|-------|-------|
| INHYD | IUHG | TAREA | SNAP | TRSDA | TRSPC | KATIO | ISHGW | ISAME | LOCAL |
| 1 | -1 | 61.00 | 0.00 | 2400.00 | 0.00 | 0.00 | 0 | 1 | 0 |

McFARLAND-JOHNSON ENGINEERS, INC.



| | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|
| 707. | 489. | 457. | 420. | 398. | 371. | 346. | 323. | 301. | 281. |
| 202. | 245. | 220. | 213. | 199. | 185. | 173. | 161. | 151. | 141. |
| 131. | 122. | 114. | 107. | 99. | 93. | 87. | 81. | 75. | 70. |
| 06. | 01. | 57. | 53. | 50. | 40. | 43. | 40. | 30. | 35. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|-------|--------|---------|---------|--------------|
| CFS | 4987. | 4322. | 2966. | 1336. | 21219. |
| CMS | 141. | 122. | 84. | 38. | 601. |
| INCHES | | 0.66 | 1.81 | 2.45 | 3.24 |
| MM | | 16.74 | 45.95 | 62.11 | 82.19 |
| AC-FT | | 2143. | 5882. | 7951. | 10522. |
| THOUS CU M | | 2644. | 7256. | 9808. | 12978. |

HYDROGRAPH AT STA 5 FOR PLAN 1, RTIO 2

| | | | | | | | | | |
|-------|------|------|------|------|-------|-------|-------|-------|-------|
| 40. | 37. | 304. | 647. | 398. | 1390. | 6400. | 8727. | 3873. | 2132. |
| 1342. | 857. | 799. | 746. | 696. | 649. | 606. | 565. | 527. | 492. |
| 459. | 428. | 400. | 373. | 348. | 325. | 303. | 283. | 264. | 246. |
| 230. | 214. | 200. | 186. | 174. | 162. | 151. | 141. | 132. | 123. |
| 115. | 107. | 100. | 93. | 87. | 81. | 76. | 71. | 66. | 61. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|-------|--------|---------|---------|--------------|
| CFS | 8727. | 7563. | 5190. | 2338. | 37133. |
| CMS | 247. | 214. | 147. | 66. | 1051. |
| INCHES | | 1.15 | 3.17 | 4.28 | 5.60 |
| MM | | 29.30 | 80.41 | 108.69 | 143.83 |
| AC-FT | | 3750. | 10294. | 13915. | 16413. |
| THOUS CU M | | 4626. | 12698. | 17163. | 22712. |

HYDROGRAPH AT STA 5 FOR PLAN 1, RTIO 3

| | | | | | | | | | |
|-------|-------|-------|-------|------|-------|-------|--------|-------|-------|
| 57. | 53. | 520. | 925. | 426. | 1986. | 9143. | 12467. | 5532. | 3045. |
| 1917. | 1224. | 1142. | 1065. | 994. | 927. | 865. | 807. | 753. | 703. |
| 656. | 612. | 571. | 533. | 497. | 464. | 433. | 404. | 377. | 351. |
| 328. | 306. | 285. | 260. | 248. | 232. | 216. | 202. | 188. | 176. |
| 164. | 153. | 143. | 133. | 124. | 116. | 108. | 101. | 94. | 88. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|--------|--------|---------|---------|--------------|
| CFS | 12467. | 10805. | 7414. | 3341. | 53047. |
| CMS | 353. | 306. | 210. | 95. | 1502. |
| INCHES | | 1.65 | 4.52 | 6.11 | 8.09 |
| MM | | 41.85 | 114.88 | 155.28 | 205.47 |
| AC-FT | | 5358. | 14706. | 19878. | 26304. |
| THOUS CU M | | 6609. | 18140. | 24519. | 32446. |

HYDROGRAPH AT STA 5 FOR PLAN 1, RTIO 4

| | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|--------|--------|-------|-------|
| 74. | 69. | 676. | 1202. | 554. | 2581. | 11885. | 16207. | 7192. | 3959. |
| 2492. | 1591. | 1484. | 1385. | 1292. | 1200. | 1125. | 1049. | 979. | 914. |
| 852. | 795. | 742. | 692. | 646. | 603. | 562. | 525. | 490. | 457. |
| 426. | 398. | 371. | 346. | 323. | 301. | 281. | 262. | 245. | 228. |
| 213. | 199. | 180. | 173. | 162. | 151. | 141. | 131. | 122. | 114. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|--------|--------|--------|---------|---------|--------------|
| CFS | 16207. | 14046. | 9639. | 4343. | 66960. |
| CMS | 459. | 398. | 273. | 123. | 1953. |
| INCHES | | 2.14 | 5.88 | 7.95 | 10.52 |
| MM | | 54.41 | 149.34 | 207.67 | 267.11 |

AC-FI 0905. 19118. 25041. 34195.
 IHJUS CU M 0591. 23582. 31070. 42179.

HYDROGRAPH AT STA 5 FOR PLAN 1, RTIO 5

| | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|--------|--------|-------|-------|
| 91. | 85. | 832. | 1479. | 682. | 3177. | 14626. | 19947. | 8852. | 4873. |
| 3067. | 1950. | 1827. | 1704. | 1590. | 1484. | 1384. | 1292. | 1205. | 1124. |
| 1049. | 979. | 913. | 852. | 795. | 742. | 692. | 646. | 604. | 502. |
| 525. | 489. | 457. | 420. | 398. | 371. | 346. | 323. | 301. | 281. |
| 262. | 245. | 228. | 213. | 199. | 185. | 173. | 161. | 151. | 141. |

| | | | | | |
|------------|--------|--------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 19947. | 17286. | 11863. | 5345. | 84874. |
| CMS | 505. | 490. | 336. | 151. | 2403. |
| INCHES | | 2.04 | 7.24 | 9.78 | 12.94 |
| MM | | 80.96 | 183.80 | 248.44 | 328.75 |
| AC-FI | | 8572. | 23530. | 31805. | 42086. |
| IHJUS CU M | | 10574. | 29024. | 39231. | 51913. |

HYDROGRAPH AT STA 5 FOR PLAN 1, RTIO 6

| | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|--------|--------|--------|-------|
| 114. | 100. | 1040. | 1649. | 853. | 3971. | 18285. | 24934. | 11005. | 6091. |
| 5033. | 2447. | 2205. | 2130. | 1988. | 1855. | 1730. | 1615. | 1506. | 1406. |
| 1511. | 1224. | 1142. | 1005. | 994. | 927. | 805. | 807. | 753. | 703. |
| 656. | 612. | 571. | 533. | 497. | 464. | 433. | 404. | 377. | 351. |
| 328. | 306. | 285. | 266. | 248. | 232. | 216. | 202. | 188. | 176. |

| | | | | | |
|------------|--------|--------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 24934. | 21610. | 14829. | 6681. | 106093. |
| CMS | 700. | 612. | 420. | 189. | 3004. |
| INCHES | | 3.30 | 9.05 | 12.23 | 16.18 |
| MM | | 83.70 | 229.75 | 310.55 | 410.94 |
| AC-FI | | 10710. | 29412. | 39756. | 52608. |
| IHJUS CU M | | 13216. | 36280. | 49038. | 64891. |

COMBINE HYDROGRAPHS

TOTAL OUTFLOW AT COURT STREET DAM

ISTAU 5 ICOMP 2 IECUM 0 ITAPE 0 JPLT 0 JPRT 0 INAME 1 ISTAGE 0 IAUO 0

SUM OF 2 HYDROGRAPHS AT 5 PLAN 1 RTIO 1

| | | | | | | | | | |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 276. | 272. | 477. | 822. | 1189. | 2714. | 7211. | 13245. | 20474. | 31545. |
| 39043. | 40435. | 37411. | 32212. | 26349. | 20730. | 15885. | 11811. | 8741. | 6835. |
| 5770. | 5104. | 4634. | 4265. | 3953. | 3676. | 3424. | 3193. | 2978. | 2778. |
| 2592. | 2418. | 2256. | 2105. | 1964. | 1832. | 1710. | 1595. | 1488. | 1389. |
| 1296. | 1209. | 1128. | 1052. | 982. | 916. | 855. | 798. | 744. | 694. |

| | | | | | |
|-----|--------|--------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 40435. | 39739. | 37192. | 24700. | 385990. |
| CMS | 1145. | 1125. | 1053. | | 10930. |

McFARLAND-JOHNSON ENGINEERS, INC.



| | | | | |
|------------|--------|--------|---------|---------|
| INCHES | 0.15 | 0.50 | 1.12 | 1.40 |
| MM | 3.82 | 14.29 | 28.54 | 37.07 |
| AC-FI | 19705. | 73709. | 147330. | 191400. |
| THOUS CU M | 24300. | 90993. | 181729. | 236088. |

| | | | | | | | | | |
|-------------------------|--------|--------|--------|--------|-----------------|--------|--------|--------|--------|
| SUM OF 2 HYDROGRAPHS AT | | | | | 5 PLAN 1 RTID 2 | | | | |
| 484. | 470. | 835. | 1439. | 2081. | 4749. | 12619. | 23178. | 35829. | 55205. |
| 60320. | 70701. | 05408. | 56371. | 40111. | 36277. | 27799. | 20669. | 15297. | 11901. |
| 10098. | 6933. | 8110. | 7464. | 0917. | 6433. | 5993. | 5587. | 5211. | 4861. |
| 4535. | 4231. | 3948. | 3004. | 3437. | 3207. | 2992. | 2792. | 2605. | 2430. |
| 2268. | 2110. | 1974. | 1042. | 1718. | 1003. | 1496. | 1396. | 1302. | 1215. |

| | | | | | |
|------------|--------|--------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 70701. | 09544. | 65086. | 43329. | 675482. |
| CMS | 2004. | 1909. | 1843. | 1227. | 19128. |
| INCHES | | 0.26 | 0.98 | 1.97 | 2.55 |
| MM | | 6.68 | 25.01 | 49.94 | 64.88 |
| AC-FI | | 34484. | 129096. | 257028. | 334950. |
| THOUS CU M | | 42536. | 159238. | 318026. | 413154. |

| | | | | | | | | | |
|-------------------------|---------|--------|--------|--------|-----------------|--------|--------|--------|--------|
| SUM OF 2 HYDROGRAPHS AT | | | | | 5 PLAN 1 RTID 3 | | | | |
| 691. | 080. | 1193. | 2055. | 2973. | 0784. | 10027. | 33111. | 51194. | 70804. |
| 97009. | 101087. | 93520. | 80530. | 05873. | 51824. | 39712. | 29528. | 21053. | 17087. |
| 14420. | 12761. | 11505. | 10602. | 9927. | 9511. | 9610. | 10163. | 10033. | 11304. |
| 11454. | 11307. | 10941. | 10443. | 9870. | 9291. | 0708. | 8146. | 7011. | 7107. |
| 0034. | 6191. | 5777. | 5391. | 5030. | 4093. | 4379. | 4085. | 3812. | 3557. |

| | | | | | |
|------------|---------|--------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 101087. | 99348. | 92980. | 61899. | 1047200. |
| CMS | 2062. | 2813. | 2033. | 1753. | 29650. |
| INCHES | | 0.38 | 1.41 | 2.81 | 3.96 |
| MM | | 9.54 | 35.72 | 71.34 | 100.59 |
| AC-FI | | 49203. | 184423. | 308325. | 519315. |
| THOUS CU M | | 60766. | 227482. | 404322. | 640506. |

| | | | | | | | | | |
|-------------------------|---------|---------|---------|--------|-----------------|--------|--------|--------|---------|
| SUM OF 2 HYDROGRAPHS AT | | | | | 5 PLAN 1 RTID 4 | | | | |
| 898. | 884. | 1551. | 2072. | 3865. | 8020. | 23435. | 43045. | 60540. | 102523. |
| 126091. | 131414. | 121584. | 104996. | 87613. | 73279. | 62803. | 54333. | 47137. | 41731. |
| 37704. | 34318. | 31391. | 28651. | 26633. | 24073. | 22917. | 21323. | 19803. | 18516. |
| 17207. | 10106. | 15025. | 14017. | 13078. | 12202. | 11385. | 10622. | 9911. | 9247. |
| 8020. | 8050. | 7511. | 7008. | 6539. | 6101. | 5692. | 5311. | 4955. | 4624. |

| | | | | | |
|------------|---------|---------|---------|---------|--------------|
| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
| CFS | 131414. | 129152. | 120912. | 85130. | 1502779. |
| CMS | 3721. | 3657. | 3424. | 2411. | 44253. |
| INCHES | | 0.49 | 1.83 | 3.86 | 5.91 |
| MM | | 12.40 | 46.45 | 98.12 | 150.10 |
| AC-FI | | 64043. | 239826. | 506558. | 774932. |
| THOUS CU M | | 78995. | 295020. | 624830. | 955804. |



| SUM OF 2 HYDROGRAPHS AT | | | | | 5 PLAN 1 RTID 5 | | | | |
|-------------------------|---------|---------|---------|---------|-----------------|---------|--------|--------|---------|
| 1100. | 1088. | 1909. | 3209. | 4757. | 10555. | 28843. | 52970. | 81090. | 126182. |
| 156174. | 102004. | 152073. | 140885. | 130850. | 119730. | 105415. | 88702. | 73072. | 60673. |
| 52058. | 45447. | 40395. | 30447. | 33200. | 30017. | 28331. | 26306. | 24477. | 22803. |
| 21250. | 19020. | 10494. | 17253. | 10097. | 15010. | 14012. | 13074. | 12190. | 11381. |
| 10019. | 9908. | 9244. | 0625. | 0048. | 7509. | 7000. | 6537. | 6099. | 5691. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|---------|---------|---------|---------|--------------|
| CFS | 102004. | 159129. | 151166. | 116238. | 2070273. |
| CMS | 4590. | 4506. | 4281. | 3291. | 58850. |
| INCHES | | 0.00 | 2.29 | 5.27 | 7.80 |
| MM | | 15.28 | 58.08 | 133.97 | 199.01 |
| AC-FI | | 78907. | 299033. | 091663. | 1030549. |
| THOUS CU M | | 97330. | 369839. | 853153. | 1271103. |

| SUM OF 2 HYDROGRAPHS AT | | | | | 5 PLAN 1 RTID 6 | | | | |
|-------------------------|---------|---------|---------|---------|-----------------|---------|---------|---------|---------|
| 1382. | 1360. | 2380. | 4111. | 5946. | 13509. | 36054. | 66223. | 102360. | 157727. |
| 195217. | 205703. | 200519. | 208074. | 202122. | 102247. | 153920. | 123801. | 97930. | 79073. |
| 60245. | 57100. | 50550. | 45526. | 41537. | 30232. | 35388. | 32867. | 30580. | 28499. |
| 20570. | 24781. | 23116. | 21500. | 20121. | 18773. | 17515. | 16342. | 15240. | 14227. |
| 13274. | 12385. | 11555. | 10782. | 10060. | 9386. | 8757. | 8171. | 7020. | 7113. |

| | PEAK | 6-HOUR | 24-HOUR | 72-HOUR | TOTAL VOLUME |
|------------|---------|---------|---------|----------|--------------|
| CFS | 208074. | 207297. | 204757. | 159034. | 2705598. |
| CMS | 5892. | 5870. | 5798. | 4503. | 78313. |
| INCHES | | 0.78 | 3.10 | 7.22 | 10.46 |
| MM | | 19.91 | 78.67 | 103.30 | 205.63 |
| AC-FI | | 102792. | 400129. | 946317. | 1371371. |
| THOUS CU M | | 120792. | 500952. | 1167204. | 1691561. |

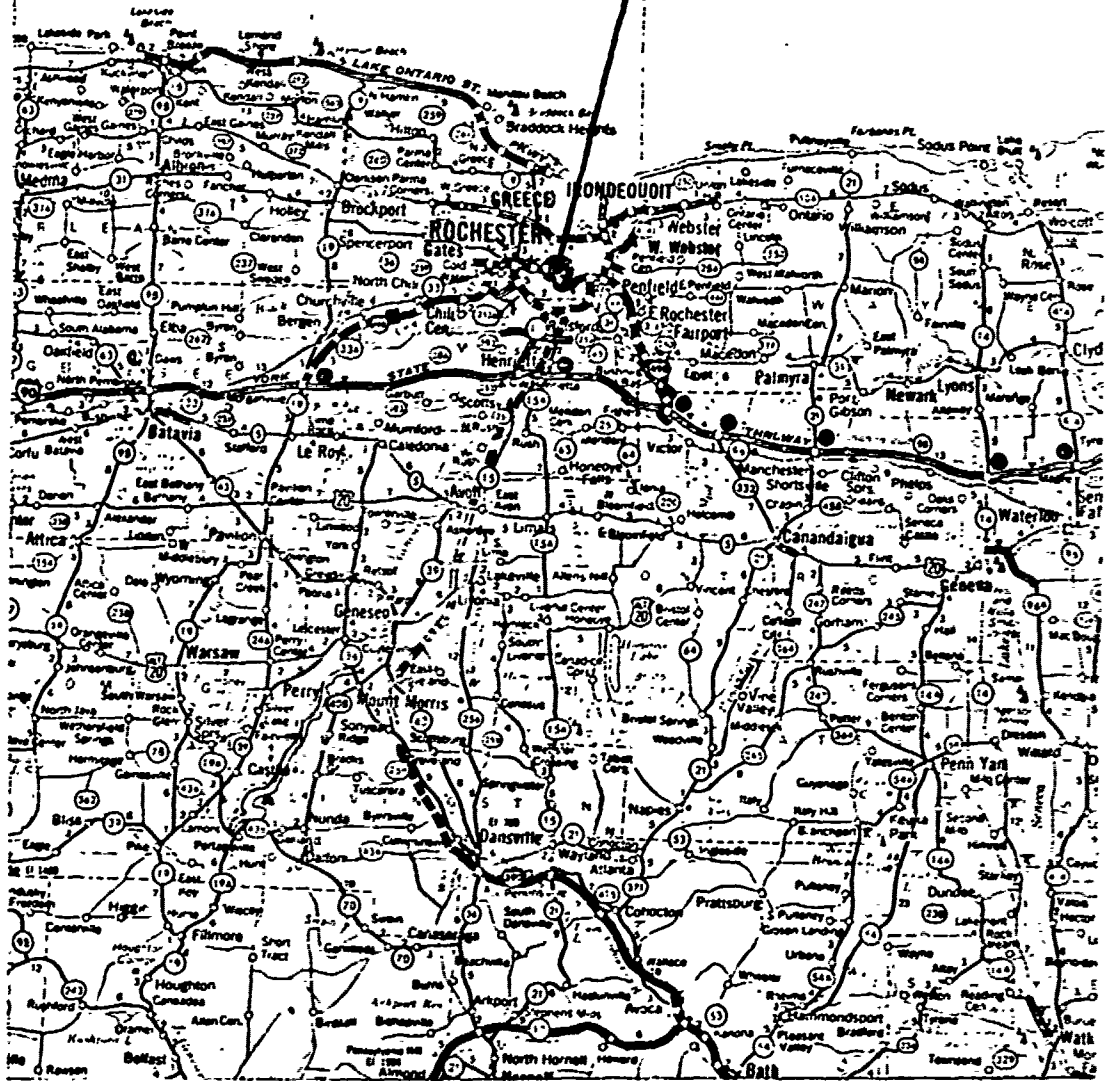
PEAK FLOW AND STORAGE (END OF PERIOD) SUMMARY FOR MULTIPLE PLAN-RATIO ECONOMIC COMPUTATIONS
 FLOWS IN CUBIC FEET PER SECOND (CUBIC METERS PER SECOND)
 AREA IN SQUARE FEET (SQUARE KILOMETERS)

| OPERATION | STATION | AREA | PLAN | RATIOS APPLIED TO FLOWS | | | | | |
|---------------|---------|-----------------------|------|-------------------------|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | | | | RATIO 1
0.20 | RATIO 2
0.35 | RATIO 3
0.50 | RATIO 4
0.65 | RATIO 5
0.80 | RATIO 6
1.00 |
| HYDROGRAPH AT | 1 | 1075.00
(2784.24) | 1 | 48796.
(1301.75) | 85393.
(2418.06) | 121990.
(3454.37) | 150587.
(4490.68) | 195184.
(5520.99) | 243980.
(6908.74) |
| ROUTED TO | 2 | 1075.00
(2784.24) | 1 | 0.
(0.00) | 0.
(0.00) | 5962.
(168.82) | 25274.
(715.69) | 71366.
(2020.87) | 150290.
(4425.63) |
| HYDROGRAPH AT | 2 | 335.00
(867.05) | 1 | 16399.
(464.38) | 28699.
(812.66) | 40998.
(1160.94) | 53298.
(1509.22) | 65597.
(1857.51) | 81997.
(2321.88) |
| 2 COMBINED | 2 | 1410.00
(3651.88) | 1 | 16399.
(464.38) | 28699.
(812.66) | 40998.
(1160.94) | 53298.
(1509.22) | 93745.
(2654.55) | 190555.
(5565.83) |
| ROUTED TO | 3 | 1410.00
(3651.88) | 1 | 12359.
(349.90) | 21627.
(612.42) | 30090.
(874.89) | 40165.
(1137.35) | 69218.
(1960.05) | 127001.
(3597.97) |
| HYDROGRAPH AT | 3 | 256.00
(663.04) | 1 | 9940.
(261.40) | 17394.
(492.55) | 24849.
(713.64) | 32303.
(914.73) | 39758.
(1125.62) | 49098.
(1407.28) |
| 2 COMBINED | 3 | 1666.00
(4314.92) | 1 | 16252.
(510.84) | 31941.
(904.46) | 45630.
(1292.09) | 59319.
(1679.72) | 73180.
(2072.23) | 135829.
(3846.26) |
| ROUTED TO | 4 | 1666.00
(4314.92) | 1 | 16252.
(510.84) | 31941.
(904.46) | 45630.
(1292.09) | 59319.
(1679.72) | 73180.
(2072.23) | 135829.
(3846.26) |
| HYDROGRAPH AT | 4 | 260.00
(673.40) | 1 | 12816.
(362.92) | 22429.
(635.11) | 32041.
(907.30) | 41053.
(1179.49) | 51206.
(1451.68) | 64082.
(1814.61) |
| HYDROGRAPH AT | 4 | 215.00
(556.65) | 1 | 8639.
(250.29) | 15468.
(438.01) | 22098.
(625.73) | 28727.
(813.45) | 35356.
(1001.17) | 44195.
(1251.47) |
| HYDROGRAPH AT | 4 | 71.00
(183.89) | 1 | 4854.
(137.44) | 8494.
(240.53) | 12134.
(343.61) | 15775.
(446.69) | 19415.
(549.77) | 24269.
(687.22) |
| HYDROGRAPH AT | 4 | 187.00
(484.33) | 1 | 6326.
(179.12) | 11070.
(313.47) | 15814.
(447.81) | 20558.
(582.15) | 25303.
(716.49) | 31628.
(895.61) |
| 5 COMBINED | 4 | 2399.00
(6213.38) | 1 | 43565.
(1233.62) | 76239.
(2159.84) | 108913.
(3084.06) | 141586.
(4009.28) | 174260.
(4934.49) | 217825.
(6168.12) |
| ROUTED TO | 5 | 2399.00
(6213.38) | 1 | 39945.
(1131.13) | 69905.
(1979.46) | 99864.
(2827.82) | 129623.
(3676.17) | 160126.
(4534.26) | 205943.
(5831.66) |
| HYDROGRAPH AT | 5 | 61.00
(157.99) | 1 | 4987.
(141.21) | 8727.
(247.12) | 12467.
(353.03) | 16207.
(458.94) | 19947.
(564.65) | 24934.
(706.06) |
| 2 COMBINED | 5 | 2460.00
(6371.37) | 1 | 40435.
(1144.99) | 70761.
(2003.73) | 101087.
(2862.47) | 131414.
(3721.22) | 162084.
(4589.70) | 208074.
(5891.99) |

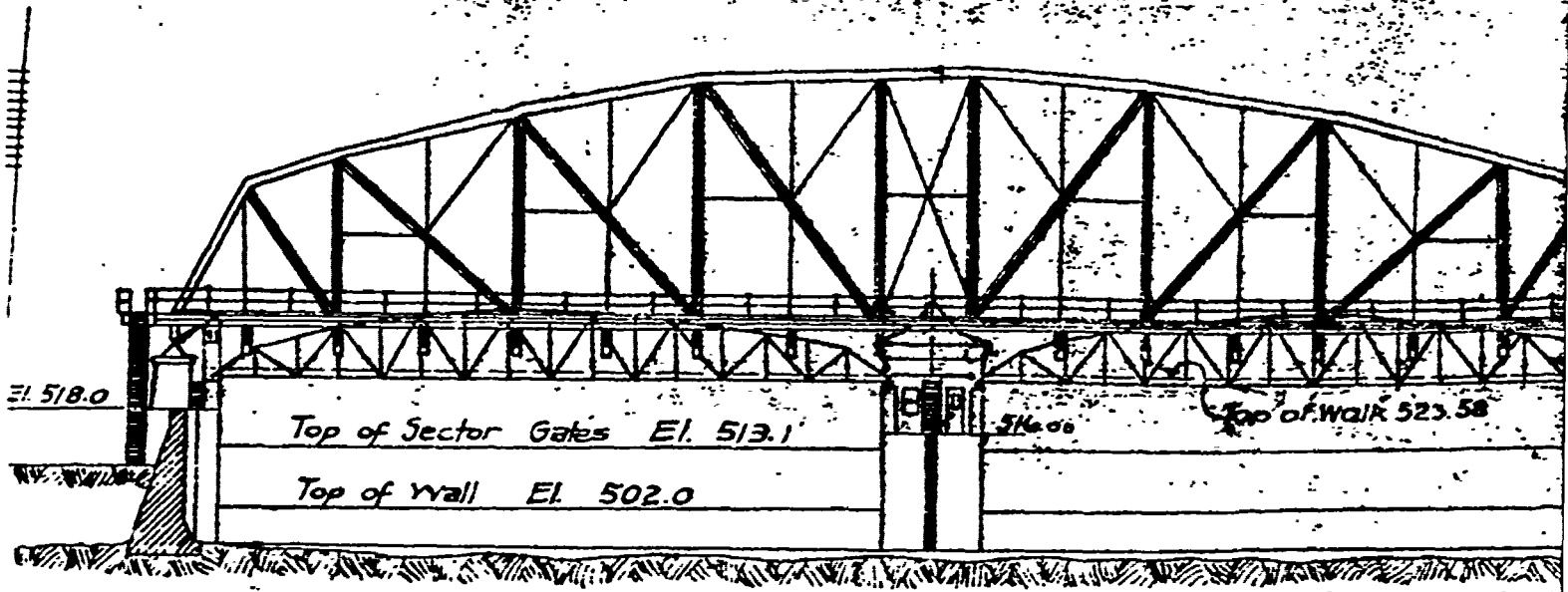
APPENDIX D

DRAWINGS

DAM SITE



VICINITY MAP
COURT STREET DAM
I.D. NO. N.Y. 683

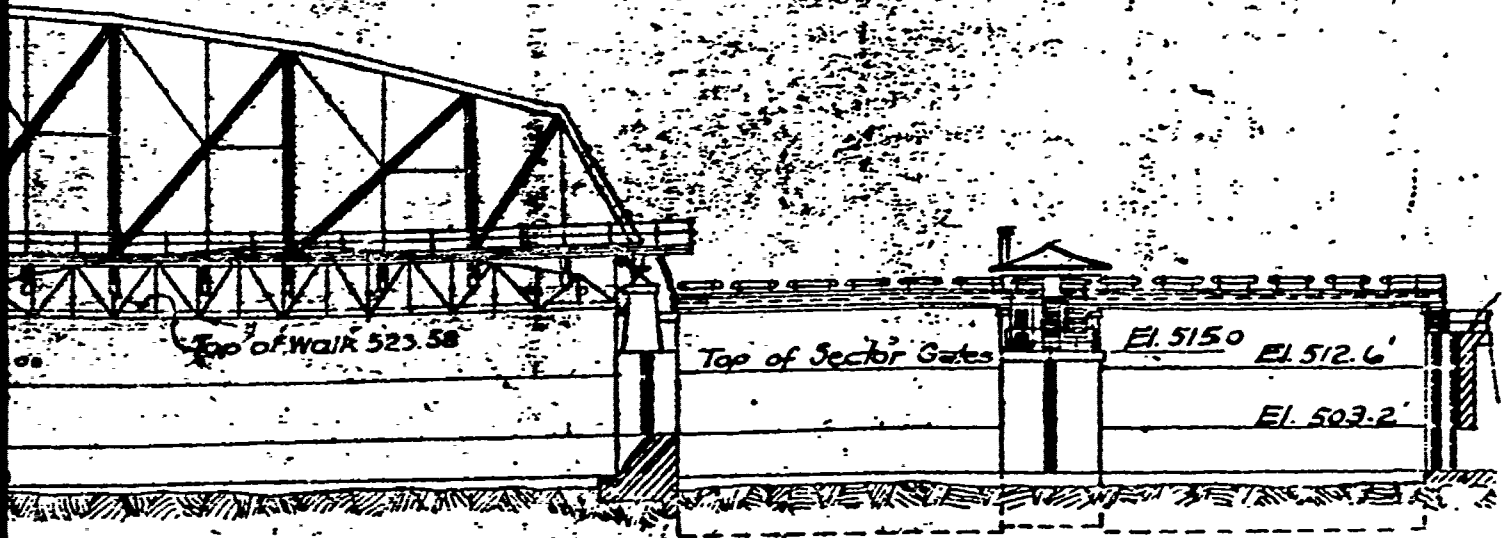


From Drawings Entitled:
 ROCHESTER GAS AND ELECTRIC
 PROPOSED LOCATION FOR
 SECTOR TYPE CONTROL
 GATES AT COURT STREET
 BARGE CANAL HARBOR

ELEVATION (LOOKING DOWNSTREAM)
Scale 1" = 30'

| | |
|--------|------|
| NOTICE | |
| (E) | DATE |
| (F) | DATE |

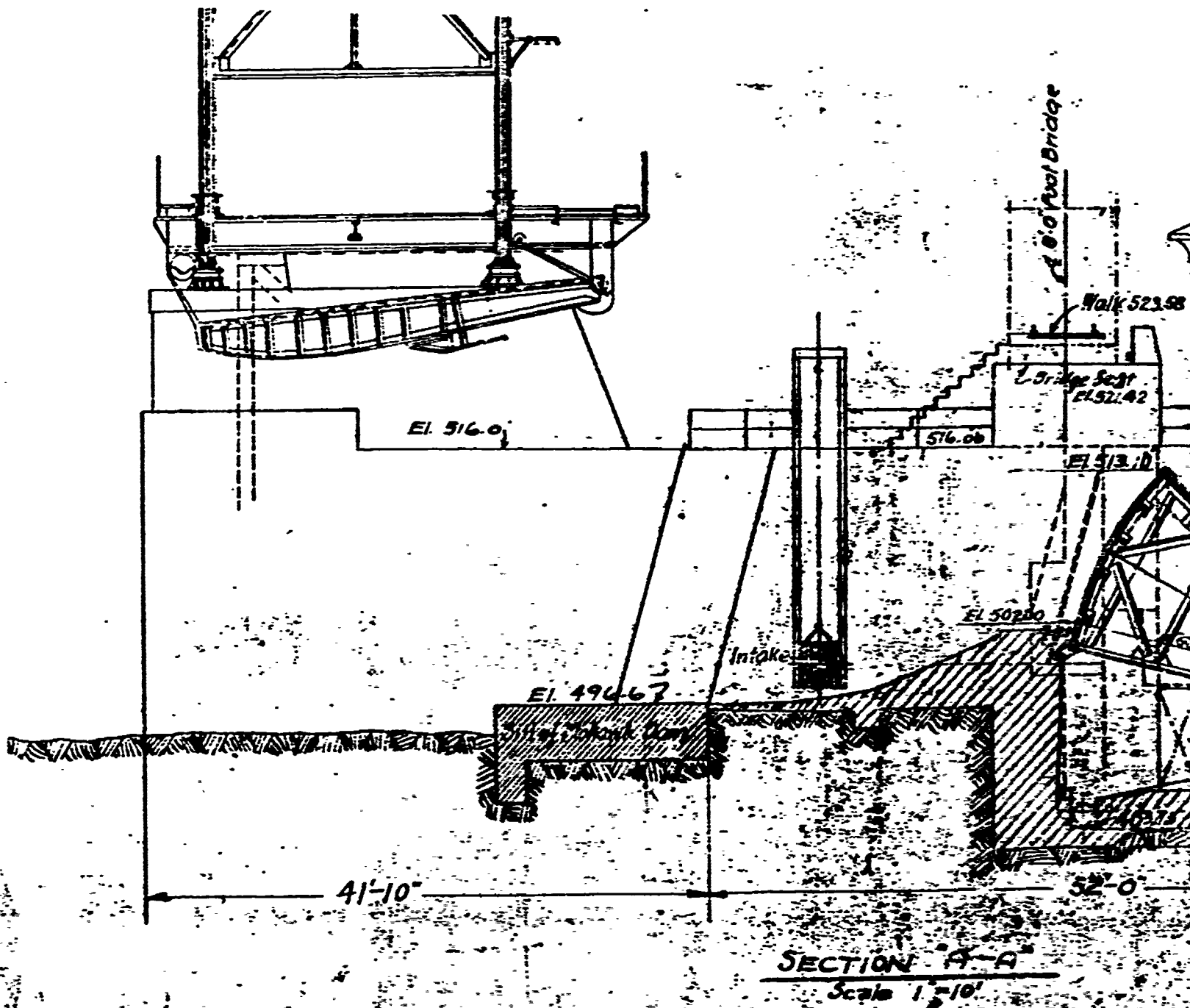
2



(LOOKING DOWNSTREAM)
 Scale 1" = 30'

| NOTICE REVISIONS — RETURN TO DRAFTING DEPARTMENT ALL PRINTS PRIOR | | | |
|---|----------|--|------------------|
| (E) | | (C) Rock Et, Excavation & Foundation Lines corrected as per A-A. | (A) Elev. 520.58 |
| DATE | O. K. W. | DATE 5-3-26 | DATE 8- |
| (F) | | (D) Corrected According to Details on Construction Drawings | (B) Add. 24 |
| DATE | O. K. W. | DATE 12-19-26 | DATE 9 |

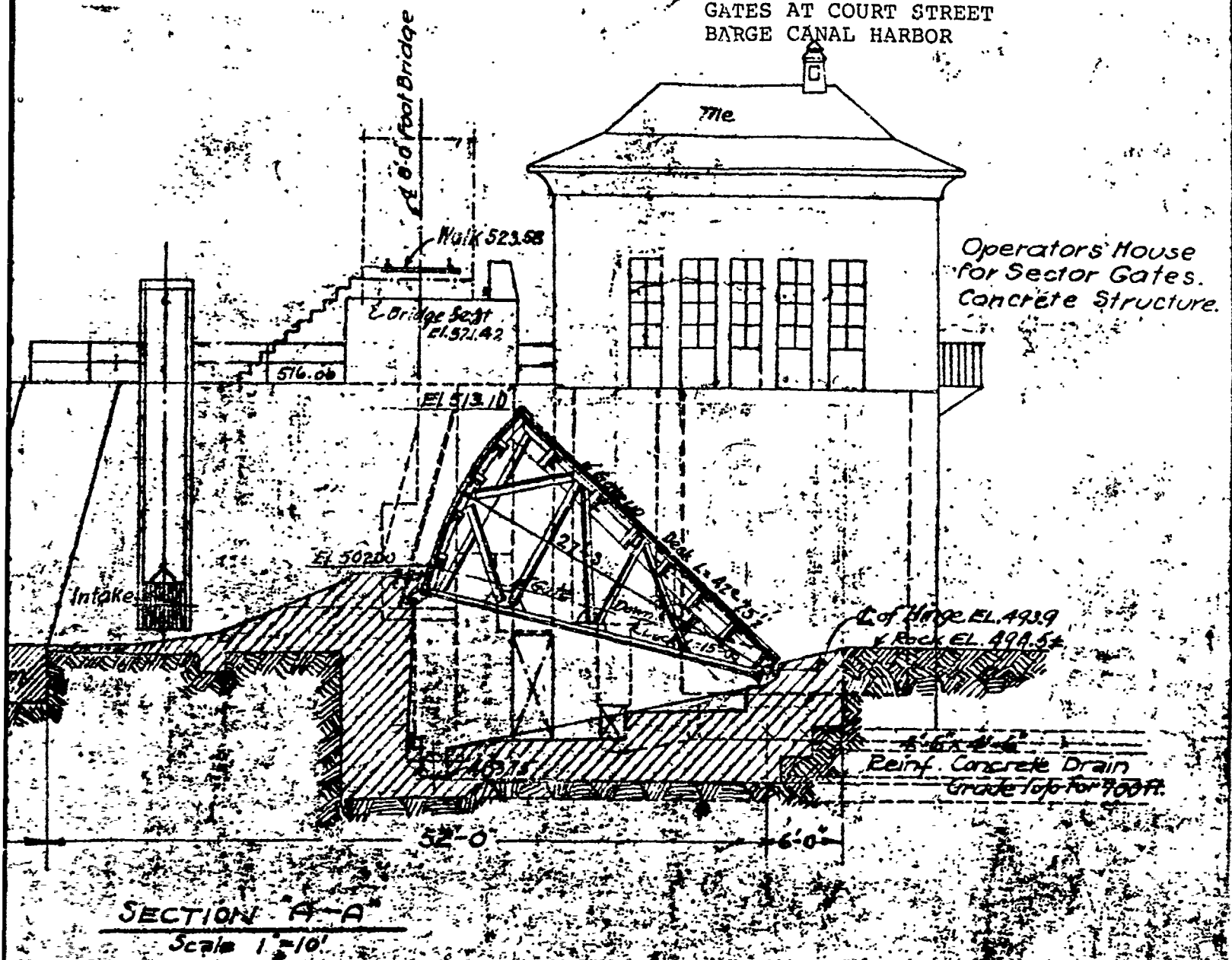
2



2

From Drawings Entitled:

ROCHESTER GAS AND ELECTRIC
PROPOSED LOCATION FOR
SECTOR TYPE CONTROL
GATES AT COURT STREET
BARGE CANAL HARBOR



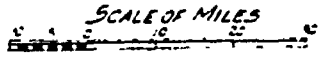
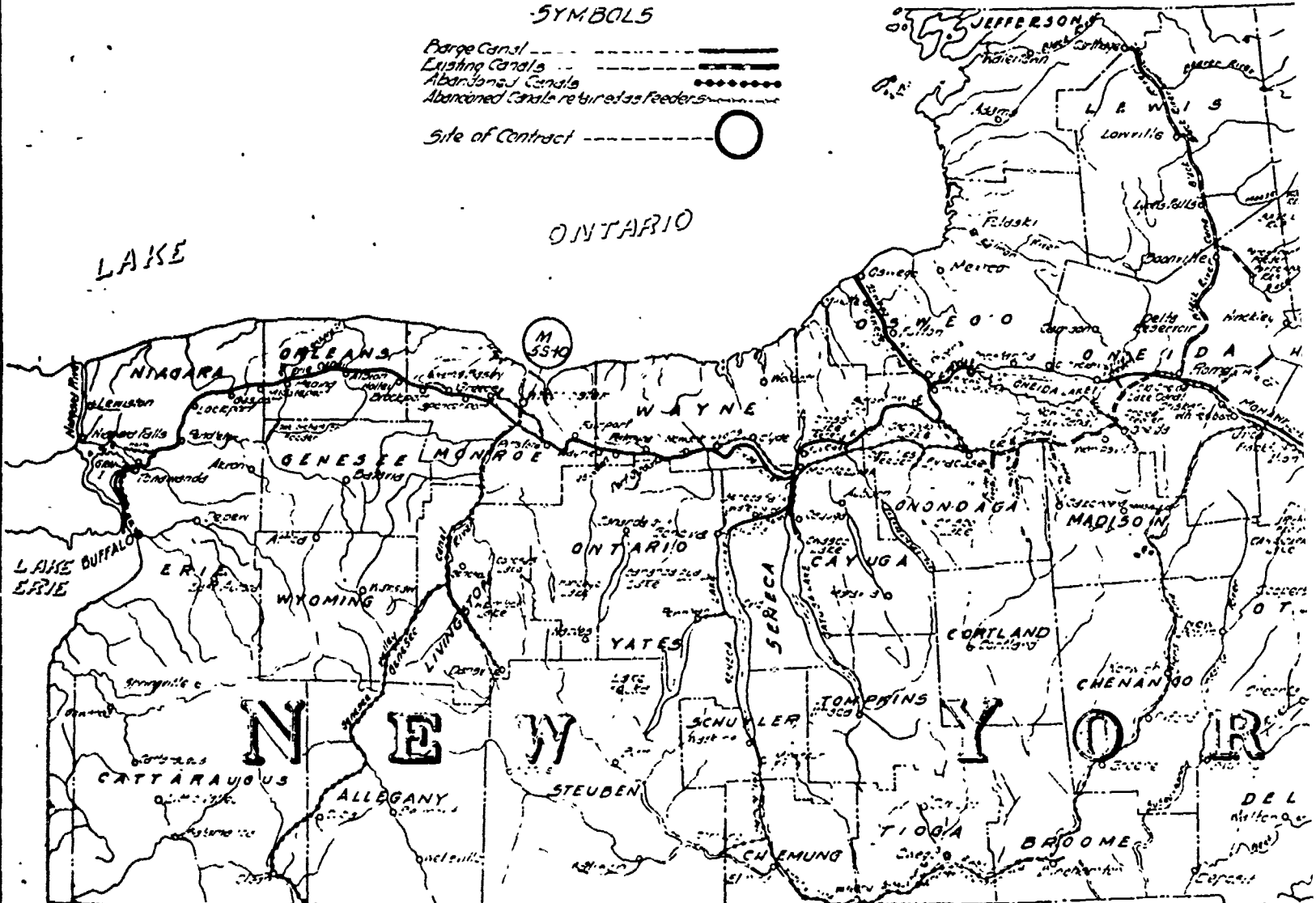
Operators House
for Sector Gates.
Concrete Structure.

SECTION A-A
Scale 1"=10'

1 2

SYMBOLS

- Parge Canal
- Existing Canals
- Abandoned Canals
- Abandoned Canals retained as Feeders
- Site of Contract



| ESTIMATE OF QUANTITIES | | | | |
|------------------------|---|------|------|-------|
| NO | ITEM | UNIT | NEAT | ROUND |
| 821 | Cofferdams | LS | | |
| 210 | Sandblasting and Clearing Steel | LS | | |
| 211 | Furnishing and Applying Red Primer Paint | Gal | 125 | 130 |
| 212 | Furnishing and Applying 2 1/2" Gal. Gray Paint | Gal | 105 | 120 |
| 213 | Furnishing and Applying 3 1/2" Gal. Black Paint | Gal | 105 | 120 |

Approved 19

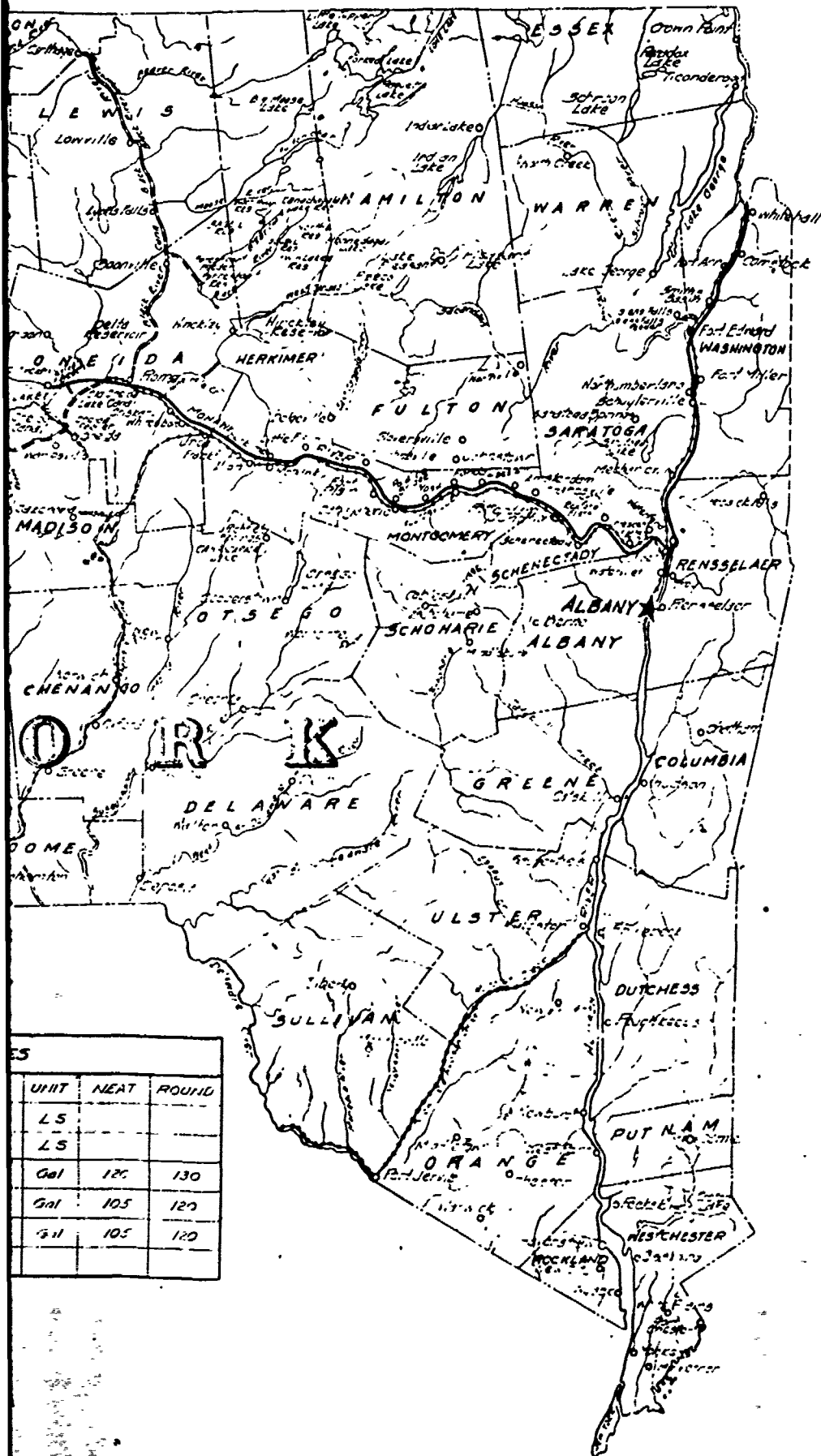
Deputy Chief Engineer
Department of Public Works

Approved for the State of New York
Date 19

Superintendent of Public Works

Prepared pursuant to the Canal Law
Approved 1958

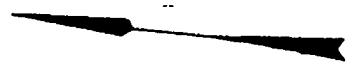
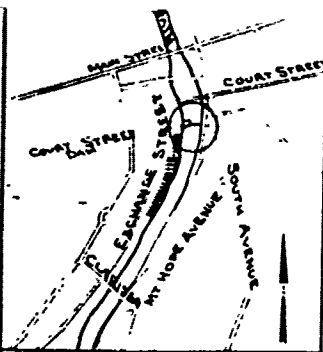
B. F. Perry, District Engineer, Dist. 11A



Datum:
 The elevations shown on this contract are referred to Charge Canal Datum. This datum is based on the Greenbush Bench Mark. The established elevation of the Greenbush Bench Mark referred to Charge Canal Datum is 14730 feet.

STATE OF NEW YORK
 DEPARTMENT OF PUBLIC WORKS
 DIVISION OF CONSTRUCTION
 CHAPTER 542 LAWS OF 1939
 CONTRACT M 58-10
 FOR
 CLEANING AND PAINTING
 SECTOR GATE NO. 3
 COURT STREET DAM
 ROCHESTER, MONROE COUNTY
 NEW YORK
 SHEETS 1 TO 3 INC
 SCALES AS INDICATED

| UNIT | NEAR | ROUND |
|------|------|-------|
| LS | | |
| LS | | |
| Gal | 120 | 130 |
| Gal | 105 | 120 |
| Gal | 105 | 120 |



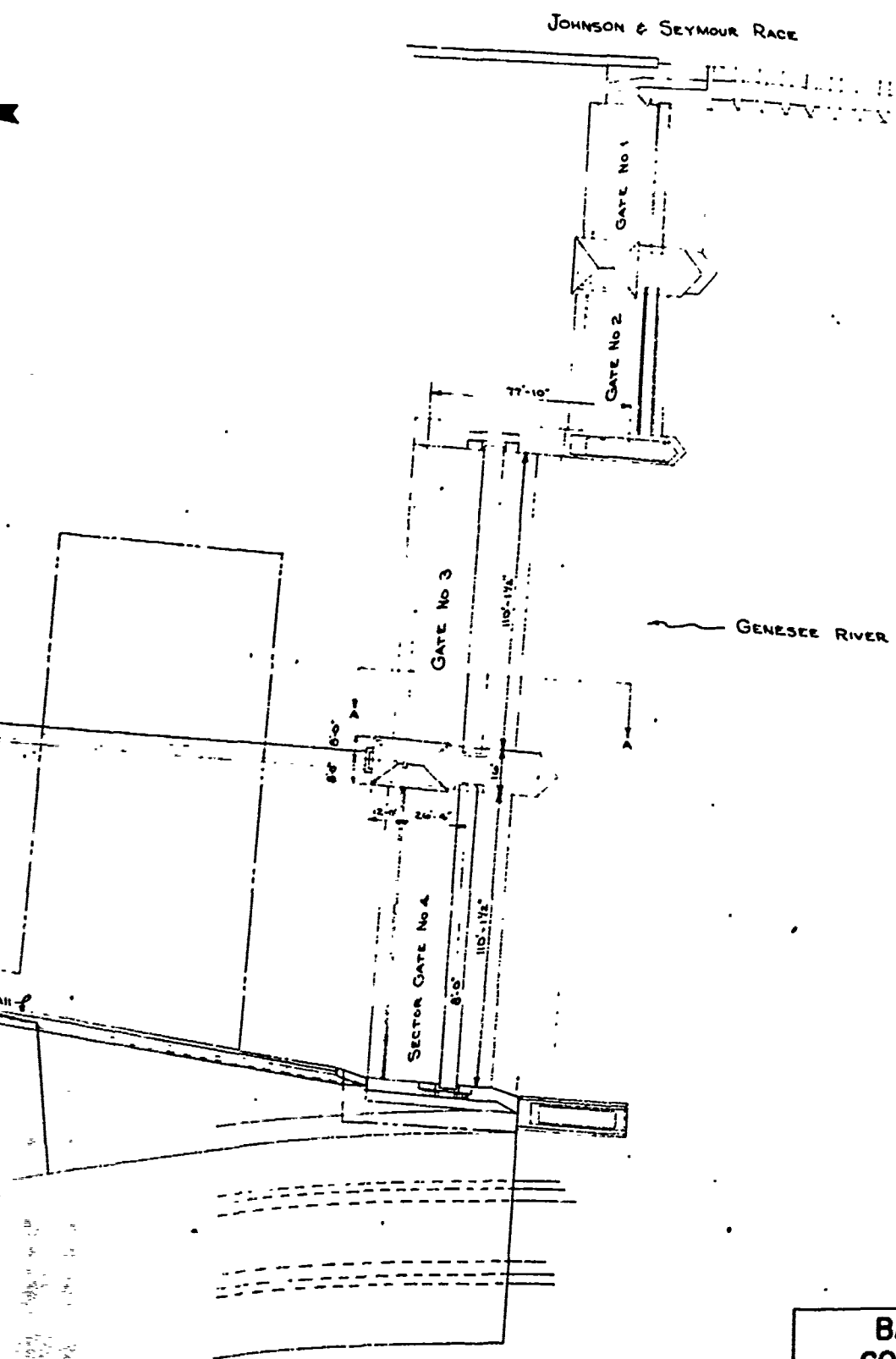
COURT STREET

GENESEE RIVER

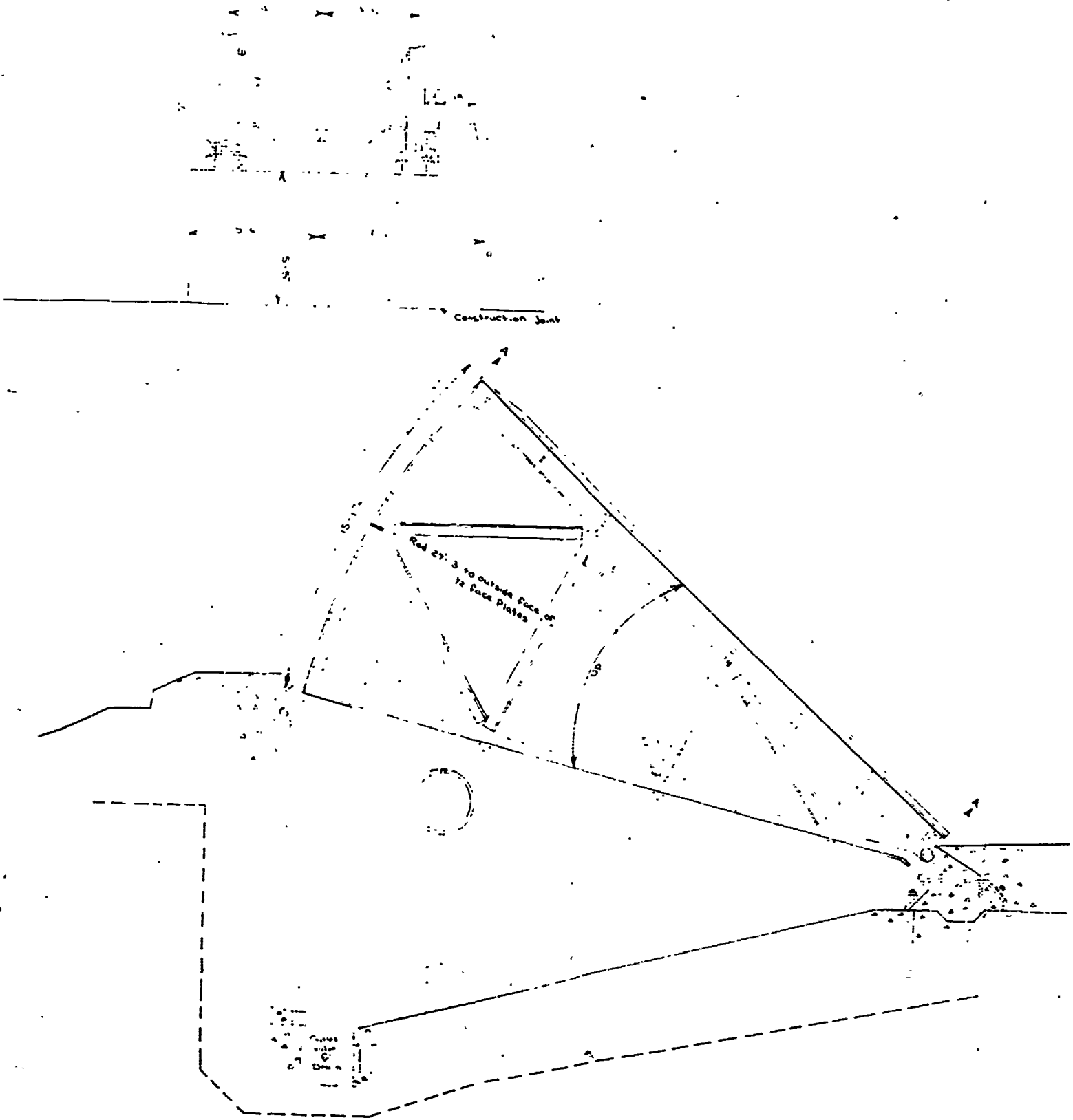
DRAINAGE TUNNEL

WEST RIVER WALL

1



| | | |
|---|--|------------------------|
| BARGE CANAL HARBOR DAM
COURT STREET ROCHESTER N.Y. | | |
| CONSTRUCTION | | |
| DRAWN BY
BARLEY | LOCATION PLAN
FOR PAINTING
SECTOR GATE NO. 3 | SCALE
1" = 30' |
| TRACED BY
ERRIGO | | DATE MAY 3 |
| CHECKED BY
H. J. J. | | SHEET 1 OF 2
SHEETS |
| STATE OF NEW YORK
DEPARTMENT OF PUBLIC WORKS
DIVISION OF CONSTRUCTION | | |

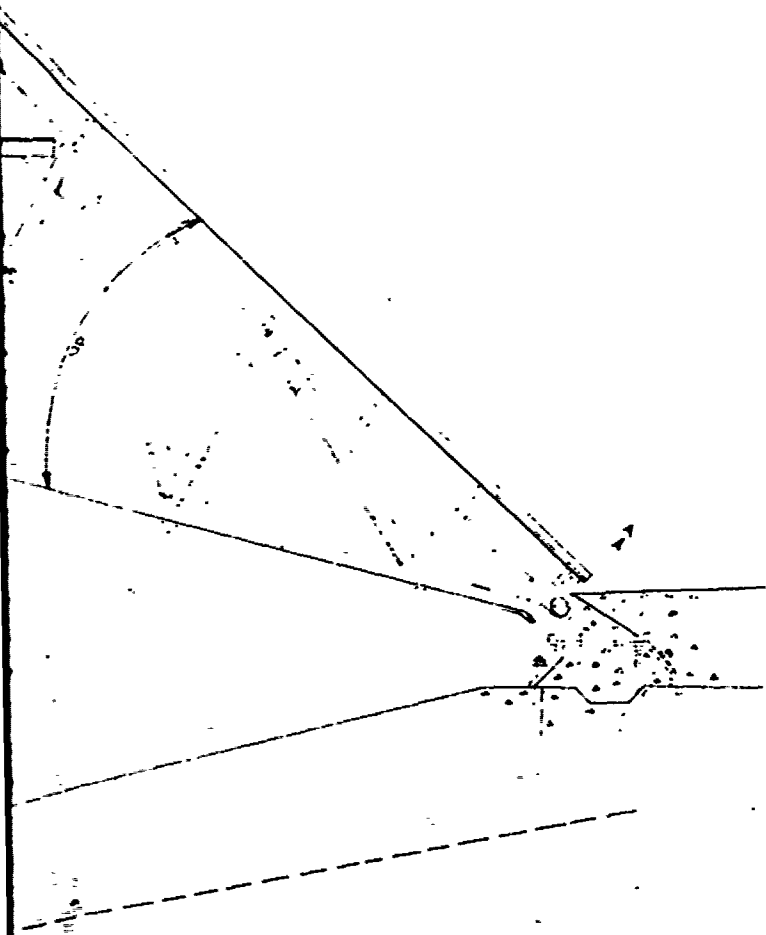


Construction Joint

Red 27' 3' to outside face of
1/2 inch Face Plates

Section A-A

7



Section A-A

2

| | | |
|--|---|---------------------------|
| BARGE CANAL HARBOR DAM
COURT STREET ROCHESTER N.Y. | | |
| CONSTRUCTION | | |
| DRAWN BY
BARLEY | SECTION OF
SECTOR GATES NO.3 | SCALE
3/8" = 1' |
| TRACED BY
ERRICO | | DATE MAY 5 |
| CHECKED BY | | SHEET OF
SHEETS |
| STATE OF NEW YORK
DEPARTMENT OF PUBLIC WORKS
DIVISION OF CONSTRUCTION | | |
| APPROVED | DATE | |