

DEPARTMENT OF NATURAL
RESOURCES AND CONSERVATION



JUDY MARTZ
GOVERNOR

DIRECTOR'S OFFICE (406) 444-2074
TELEFAX NUMBER (406) 444-2684

STATE OF MONTANA

WATER RESOURCES DIVISION (406) 444-6601
TELEFAX NUMBERS (406) 444-0533 / (406) 444-5918

48 NORTH LAST CHANCE GULCH
PO BOX 201601
HELENA, MONTANA 59620-1601

Cover Letter

August 9 2002

TO: Governor's Office, Barbara Ranf, Rm. 204, State Capitol, P.O. Box 200801, Helena, MT 59620-0801
Environmental Quality Council, Capitol Building, Room 106, P.O. Box 201704, Helena, MT 59620
Dept. of Environmental Quality, Metcalf Building, P.O. Box 200901, Helena, MT 59620-0901
Director's Office
Dept. of Natural Resources and Conservation, US F&G Bldg. 1625 11th Ave. Helena, MT 59620
Director's Office
Information Services Section
Water Resources Division, 48 N. Last Chance Gulch, P.O. Box 201601, Helena, MT 59620-1601
Montana Fish, Wildlife & Parks, 1420 E. 6th Ave. Helena, MT 59620
Director's Office
FWP Region 2 Office, 3201 Spurgin Road, Missoula, MT 59804
Wayne Hadley, MT Dept. of Fish, Wildlife & Parks, P.O. Box 1, Deer Lodge, MT 59722
MT Historical Society, State Historic Preservation Office, P.O. Box 201202 Helena, MT 59620-1202
MT State Library, 1515 E. Sixth Ave., P.O. Box 201800, Helena, MT 59620
Montana Environmental Information Center, P.O. Box 1184, Helena, MT 59624
Montana Audubon Council, P.O. Box 595, Helena, MT 59624
Ed Lord, Flint Creek Water Users Association, Box 4796 Skalkaho Rd., Philipsburg, MT 59858
Granite County Commissioners, P.O. Box 929, Philipsburg, MT 59858-0925
Northern Plains Resource Council, 2401 Montana Ave. Suite 200, Billings, MT 59101-2336
U.S. Army Corps of Engineers, 301 S. Park Ave. Drawer 10014, Helena, MT 59626-0014
U.S. Fish & Wildlife Service, MT Field Office, 100 N. Park Ave. Helena, MT 59601
Wildlife Federation, P.O. Box 1175, Helena, MT 59624
Trout Unlimited, P.O. Box 7186, Missoula, MT 59807

Ladies and Gentlemen:

The enclosed Environmental Assessment (EA) has been prepared for the Marshall Canal Siphon Replacement Project and is submitted for your consideration. Please feel free to contact me at (406) 444-6622 (e-mail jdomino@state.mt.us) should you have any questions or comments. Comments will be accepted until 5:00 p.m., September 9 2002. Comments can also be mailed to: MT Dept. of Natural Resources and Conservation, State Water Projects Bureau, 48 N. Last Chance Gulch, P.O. Box 201601, Helena, MT 59620-1601, attn. James P. Domino. Copies of the EA are available upon request. The EA can also be viewed on the DNRC website at www.dnrc.state.mt.us Thank you.

Sincerely,

Handwritten signature of James P. Domino in cursive.

James P. Domino
Environmental Specialist
State Water Projects Bureau

STATE WATER PROJECTS
BUREAU
(406) 444-6646

WATER MANAGEMENT
BUREAU
(406) 444-6637

WATER OPERATIONS
BUREAU
(406) 444-0860

WATER RIGHTS
BUREAU
(406) 444-6610

DRAFT ENVIRONMENTAL ASSESSMENT MEPA CHECKLIST

Part I. Proposed Action Description

1. Type of Proposed State Action
2. Agency Authority for the Proposed Action

Owner: MT Dept. of Natural Resources and Conservation; Sec. 85-1-210, 85-1-211, 85-6-109 (5) (1997) MCA.

3. Name of Project Marshall Canal Siphon Replacement
4. Name, Address and Phone Number of Project Sponsor (if other than the agency)

MT. Dept. of Natural Resources & Conservation, 48 N. Last Chance Gulch, P.O. Box 201601, Helena, MT 59620 – 1601 (406) 444-6646

5. If Applicable: Estimated Construction/Commencement Date September 30, 2002
 Estimated Completion Date April 30, 2003
 Current Status of Project Design (% complete) N/A %

6. Location Affected by Proposed Action (county, range and township)

Granite County – Township 6N, Range 14W, NW ¼, NW ¼, Section 10

7. Project Size: Estimate the number of acres that would be directly affected that are currently:

(a)	Developed:	(c)	Floodplain.....	<u>acres.</u>
	Residential			
	Industrial	(d)	Productive:	
	Open Space/		Irrigated cropland	<u>acres</u>
	Woodlands /		Dry cropland	<u>acres</u>
	Recreation.....		Forestry	<u>acres</u>
			X Rangeland.....	<u>2 acres</u>
(b)	Wetlands/Riparian	(e)	Other:.....	<u>acres</u>
	Areas.....			

8. Map/site plan: attach an original 8 1/2" x 11" or larger section of the most recent USGS 7.5' series topographic map showing the location and boundaries of the area that would be affected by the proposed action. A different map scale may be substituted if more appropriate or if required by agency rule. If available, a site plan should also be attached.

Map and project drawings attached.

9. Narrative Summary of the Proposed Action or Project including the Benefits and Purpose of the Proposed Action.

The Marshall Canal is a component of the Flint Creek Water Project and is being proposed for eventual transfer to the Flint Creek Water Users Association. The siphon is located in Granite County, T6N, R 14W, NW ¼, NW ¼ of section 10. It consists of an underground 36" steel pipe, approximately 550 feet in length. The siphon connects two portions of the canal through a small valley that is bisected by a small, spring fed intermittent stream. The siphon was constructed in 1939 as part of the Flint Creek Water Project. It was placed to eliminate the need to construct the canal channel through the upper part of the valley. The Marshall Canal and siphon are owned by the DNRC. The surrounding lands are privately owned. The DNRC possesses an easement for access to the canal and siphon.

The Marshall Creek Siphon is approaching imminent failure. The pipe is severely corroded along its length. The siphon burst on May 22 of this year, which necessitated the shutdown of the irrigation-canal system for the west side of the Philipsburg Valley. The emergency repair involved exposing the siphon and welding a steel-plate patch, measuring 6" X 24"x1/4", along the bottom of the pipe. Upon inspection of the siphon, it was revealed that 75% of the interior surface was deeply pitted with rust and that the combined forces of corrosion and scouring have abraded the pipe wall at the invert to an unacceptable thickness of one-sixteenth of an inch. The repair was only an expedient measure taken to return the siphon into service for the current irrigation season. DNRC engineering staff has been evaluating different alternatives for the replacement of the siphon. The project will most likely require the excavation and removal of the old steel pipe, and the installation and backfilling of a new 3' X 550' piping system. The original concrete inlet and outlet structures would be utilized. A coated steel pipe with galvanic corrosion protection, plastic pipe, PCV pipe, concrete pipe, and fiberglass pipe are various options available for the replacement alternative. The costs for these systems is similar, i.e., approximately \$100,000 to \$120,000. It is anticipated that the new pipe would have a service life of 75 to 100 years, depending on the material used. The disturbed area for the excavation alternatives would extend along the length of the pipe and about three feet on either side. An existing gravel road would be used to access the work site. A tracked excavator and backhoe will be used for the project. Any disturbed areas would be reclaimed and reseeded upon completion of the project. The irrigation canal would not be operational during the project.

A second alternative to replacing the siphon would be to repair the existing steel pipe with installation of a plastic liner. This option would be more expensive, about \$165,000, and have an anticipated service life of less than 20 years. This option would involve less on-site physical disturbance.

10. Listing of any other Local, State or Federal agency that has overlapping or additional jurisdiction.

(a) Permits:

<u>Agency Name</u>	<u>Permit</u>	<u>Date Filed/#</u>
MT Dept. of Fish, Wildlife & Parks	124-Permit	Pending
MT Dept. of Environmental Quality	318- Authorization	Pending
MT State Historic Preservation Office	Cultural Clearance	Clearance obtained 7/25/02
U.S. Army Corps of Engineers	404-Permit	Pending

10. (Continued)

(b) Funding:

<u>Agency Name</u>	<u>Funding Amount</u>
DNRC Emergency Repair Account	\$100,000 - \$120,000 (replacement) \$165,000 (liner)

(c) Other Overlapping or Additional Jurisdictional Responsibilities:

<u>Agency Name</u>	<u>Type of Responsibility</u>
--------------------	-------------------------------

N/A

11. List of Agencies Consulted during Preparation of the EA:

Montana Department of Fish, Wildlife and Parks
Montana Department of Environmental Quality
MT State Library, Natural Resources Information System
MT State Historic Preservation Office
U.S. Army Corps of Engineers

Part II. Environmental Checklist Review

1. PHYSICAL ENVIRONMENT

IMPACTS

Unknown *	No Significant Impacts	Minor Impacts*	Potentially Significant Impacts*	Can Impacts be Mitigated*	Comment Index
<p>1. <u>LAND RESOURCES</u></p> <p>Will the proposed action result in:</p> <p>a. Soil instability or changes in geologic substructure?</p> <p>b. Disruption, displacement, erosion, compaction, moisture loss, or over-covering of soil which would reduce productivity or fertility?</p> <p>c. Destruction, covering or modification of any unique geologic or physical features?</p> <p>d. Changes in siltation, deposition or erosion patterns that may modify the channel of a river or stream or the bed or shore of a lake?</p> <p>e. Exposure of people or property to earthquakes, landslides, ground failure, or other natural hazard?</p> <p>f. Other: _____</p>					
	X				
		X		See comment 1b.	1.b
	X				
	X				
	X				

1b) Minor, short-term impacts would occur to the over covering of soil with the replacement alternative. Approximately 2 acres of ground would be disturbed by the excavation of the pipe. Little or no ground disturbance would occur with the liner alternative. All disturbed areas would be reclaimed and reseeded upon completion of the project. No long-term or significant impacts are anticipated with either the replacement or liner alternatives.

PHYSICAL ENVIRONMENT
(Continued)

IMPACTS

Unknown*	No Significant Impacts	Minor Impacts*	Potentially Significant Impacts*	Can Impacts be Mitigated*	Comment Index
<p>2. <u>AIR</u></p> <p>Will the proposed action result in:</p> <p>a. Emission of air pollutants or deterioration of ambient air quality?</p> <p>b. Creation of objectionable odors?</p> <p>c. Alteration of air movement, moisture, or temperature patterns or any change in climate, either locally or regionally?</p> <p>d. Adverse effects on vegetation, including crops, due to increased emissions of pollutants?</p> <p>e. Other: _____</p>		X			2a
		X			2b
	X				
	X				

2 a&b) During construction, equipment emissions would contain some pollutants. Because of the rural location of this site, these emissions should not impact adjacent property owners. The impacts would be short-term and end upon completion of the project.

PHYSICAL ENVIRONMENT

IMPACTS

3. WATER

Will the proposed action result in:

a. Discharge into surface water or any alteration of surface water quality including but not limited to temperature, dissolved oxygen or turbidity?

b. Changes in drainage patterns or the rate and amount of surface runoff?

c. Alteration of the course or magnitude of flood water or other flows?

d. Changes in the amount of surface water in any water body or creation of a new water body?

e. Exposure of people or property to water related hazards such as flooding?

f. Changes in the quality of groundwater?

g. Changes in the quantity of groundwater?

h. Increase in the risk of contamination of surface or groundwater?

i. Violation of the Montana Non-Degradation Statute?

j. Effects on any existing water right or reservation?

k. Effects on other water users as a result of any alteration in surface or groundwater quality?

l. Effects on other users as a result of any alteration in surface or groundwater quantity?

Unknown*	No Significant Impacts	Minor Impacts*	Potentially Significant Impacts*	Can Impacts be Mitigated*	Comment Index
	X				3a.
	X				
	X				
	X				
	X				
	X				
	X				
	X				3j.
	X				3k.
	X				

3a. The siphon runs through a small valley that is bisected by a small intermittent spring fed creek. This unnamed creek usually stops flowing, normally by the end of the summer, in an average precipitation year. It is anticipated that the replacement or liner alternatives would not result in any significant impacts to surface water.

3k&J. The canal is normally shut down by the end of September and would be inoperable during the proposed construction, resulting in no impacts to water rights or water users.

PHYSICAL ENVIRONMENT
(Continued)

IMPACTS

Unknown*	No Significant Impacts	Minor Impacts*	Potentially Significant Impacts*	Can Impacts be mitigated*	Comment Index
4. VEGETATION					
Will the proposed action result in:					
		X			4a
	X				
	X				4c
	X				
		X			4e

4a) Approximately two acres of ground cover vegetation would be disturbed, consisting of mostly sage and native grasses with the replacement alternative. Little or no vegetative cover would be disturbed with the liner alternative. Any areas disturbed would be reclaimed and reseeded using native seed stock.

4c.) A file search on plant species of special concern was conducted by the Natural Resources Information System of the Montana State Library. No threatened, endangered or listed plant species of special concern are known to exist in the project area. Montana Fish, Wildlife and Parks (DFWP) and the U.S Fish & Wildlife Service (FWS) will also have the opportunity to comment on the proposed action. Any comments or recommendations received from the DFWP and/or the FWS will be incorporated into the Final EA and Notice of Decision.

4e) The ground disturbance associated with the replacement alternative would increase the potential for weeds to be established. The potential for weed proliferation would be less under the liner alternative. Weed control measures would be implemented by the Water Users as part of the project. No significant, long-term impacts are anticipated.

PHYSICAL ENVIRONMENT
(Continued)

IMPACTS

Unknown*	No Significant Impacts	Minor Impacts*	Potentially Significant Impacts*	Can Impacts be Mitigated*	Comment Index
5. FISH/WILDLIFE					
Will the proposed action result in:					
a. Deterioration of critical fish or wildlife habitat?	X				5a
b. Changes in the diversity or abundance of game animals or bird species?	X				
c. Changes in the diversity or abundance of nongame species?	X				
d. Introduction of new species into an area?	X				
e. Creation of a barrier to the migration or movement of animals?	X				
f. Adverse effects on any unique, rare, threatened, or endangered species?	X				5f.
g. Increase in conditions that stress wildlife populations or limit abundance (including harassment, legal or illegal harvest or other human activity)?	X				
h. Impacts to any wetlands?	X				5h.
i. Other					

5a&f) A file search on animal species of special concern was conducted by the Natural Resources Information System of the Montana State Library. No threatened, endangered or listed animal species of special concern are known to exist in the immediate project area. Flint Creek (located approximately 1/2 mile east of the siphon) and Trout Creek (located approximately 1 mile south of the siphon) are designated as bull trout habitat. Montana Fish, Wildlife and Parks (DFWP) and the U.S Fish & Wildlife Service (FWS) will be consulted to identify any potential impacts to bull trout. Comments, recommendations and/or mitigation proposals received from the DFWP and/or the FWS will be incorporated into the Final EA and Notice of Decision. It is not anticipated that any of the proposed action alternatives would impact bull trout due to the proximity of the siphon to the listed bull trout streams, and the intermittent nature of the stream where the siphon is located. The no action alternative could result in potential impacts downstream should the siphon fail due to the potential for sedimentation and siltation from flooding.

5h.) The intermittent stream channel in the immediate vicinity of the canal would be impacted by the replacement alternative due to the excavation and backfilling. Little or no disturbance is associated with the liner option. It is not anticipated that any long-term significant impacts to existing or potential wetlands would occur due to the small areas of disturbance and the reclamation and reseeding of all disturbed areas. The U.S. Army Corps of Engineers would be consulted as part of the 404-Permitting process.

2. HUMAN ENVIRONMENT

IMPACTS

	Unknown*	No Significant Impacts	Minor Impacts*	Potentially Significant Impacts*	Can Impacts be Mitigated*	Comment Index
6. NOISE/ELECTRICAL EFFECTS						
Will the proposed action result in:						
a. Increases in existing noise levels?			X		See comment 6a.	6a
b. Exposure of people to severe or nuisance noise levels?		X				
c. Creation of electrostatic or electromagnetic effects that could be detrimental to human health or property?		X				
d. Interference with radio or television reception and operation?		X				
e. Other: _____						

6a) During construction, noise levels would temporarily increase from equipment operations. Because of the rural location of this site, this should not impact adjacent property owners. The impacts would be short-term and end upon completion of the project.

HUMAN ENVIRONMENT
(Continued)

IMPACTS

	Unknown*	No Significant Impacts	Minor Impacts*	Potentially Significant Impacts*	Can Impacts be Mitigated*	Comment Index
7. LAND USE						
Will the proposed action result in:						
a. Alteration of or interference with the productivity or profitability of the existing land use of an area?				X	See comment 7a.	7a.
b. Conflict with a designated natural area or area of unusual scientific or educational importance?		X				
c. Conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action?		X				
d. Adverse effects on or relocation of residences?		X				
e. Increase regulatory restrictions on private property rights?		X				
f. Other: _____						

7a.) Under the no action alternative, the productivity and profitability of the existing agricultural lands served by the Marshal Canal could be severely impacted should the siphon fail.

HUMAN ENVIRONMENT
(Continued)

IMPACTS

Unknown*	No Significant Impacts	Minor Impacts*	Potentially Significant Impacts*	Can Impacts be Mitigated*	Comment Index
<p>8. <u>RISK/HEALTH HAZARDS</u></p> <p>Will the proposed action result in:</p> <p>a. Risk of an explosion or release of hazardous substances (including but not limited to oil, pesticides, chemicals, or radiation) in the event of an accident or other forms of disruption?</p> <p>b. Affect an existing emergency response or emergency evacuation plan or create a need for a new plan?</p> <p>c. Creation of any human health hazard or potential hazard?</p> <p>d. Other: _____</p>	<p>X</p> <p>X</p> <p>X</p>				

**HUMAN ENVIRONMENT
(Continued)**

IMPACTS

Unknown*	No Significant Impacts	Minor Impacts*	Potentially Significant Impacts*	Can Impacts be Mitigated*	Comment Index
9. <u>COMMUNITY IMPACTS</u>					
Will the proposed action result in:					
a. Alteration of the location, distribution, density, or growth rate of the human population of an area?	X				
b. Alteration of the social structure of a community?	X				
c. Alteration of the level or distribution of employment or community or personal income?			X	See comment 9c.	9c.
d. Changes in industrial or commercial activity?			X	See comment 9d.	9d.
e. Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods?	X				
f. Other: _____					

9c&d) The community and personal income levels and commercial activity could be seriously impacted should the siphon fail under the no action alternative, due to the possibility that farms and ranches dependent on the Marshall Canal for irrigation and stock watering could go out of business.

HUMAN ENVIRONMENT
(Continued)

IMPACTS

Unknown*	No Significant Impacts	Minor Impacts*	Potentially Significant Impacts*	Can Impacts be Mitigated*	Comment Index
<p>10. <u>PUBLIC SERVICES/ TAXES/UTILITIES</u></p> <p>Will the proposed action:</p> <p>a. Have an effect upon or result in a need for new or altered governmental services in any of the following areas: fire or police protection, schools, parks/recreational facilities, roads or other public maintenance, water supply, sewer or septic systems, solid waste disposal, health, or other governmental services? If any, specify:</p> <p>b. Have an effect upon the local or state tax base and revenues?</p> <p>c. Result in a need for new facilities or substantial alterations of any of the following utilities: electric power, natural gas, other fuel supply or distribution systems, or communications?</p> <p>d. Result in increased use of any energy source?</p> <p>e. Other: _____</p>	<p>X</p> <p>X</p> <p>X</p>	<p>X</p>		<p>See 10b. comment</p>	<p>10b.</p>

10b. The no action alternative could result in the possible delay of the proposed transfer of this project, resulting in continued State liability for the property and the need for administrative oversight.

HUMAN ENVIRONMENT
(Continued)

IMPACTS

Unknown*	No Significant Impacts	Minor Impacts*	Potentially Significant Impacts*	Can Impacts be Mitigated*	Comment Index
<p>11. <u>AESTHETICS/RECREATION</u></p> <p>Will the proposed action result in:</p> <p>a. Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view?</p> <p>b. Alteration of the aesthetic character of a community or neighborhood?</p> <p>c. Alteration of the quality or quantity of recreational opportunities and settings?</p> <p>d. Other: _____</p>	<p>X</p> <p>X</p> <p>X</p>				

IMPACTS

HUMAN ENVIRONMENT
(Continued)

Unknown*	No Significant Impacts	Minor Impacts*	Potentially Significant Impacts*	Can Impacts be Mitigated*	Comment Index
12. <u>CULTURAL/HISTORICAL RESOURCES</u>					
Will the proposed action result in:					
a. Destruction or alteration of any site, structure or object of prehistoric, historic, or paleontological importance?	X				12a
b. Physical change that would affect unique cultural values?	X				12b
c. Effects on existing religious or sacred uses of a site or area?	X				12c
d. Other: _____					

12 a, b & c) An assessment on potential impacts to cultural resources was completed by the State Historic Preservation Office (SHPO). The SHPO review indicated a low likelihood of impacts to cultural or historic resources.

**3. SIGNIFICANCE
CRITERIA**

IMPACTS

**13. SUMMARY
EVALUATION OF
SIGNIFICANCE**

Will the proposed action, considered as a whole:

a. Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on two or more separate resources which create a significant effect when considered together or in total.)

b. Involve potential risks or adverse effects which are uncertain but extremely hazardous if they were to occur?

c. Potentially conflict with the substantive requirements of any local, state, or federal law, regulation, standard or formal plan?

d. Establish a precedent or likelihood that future actions with significant environmental impacts will be proposed?

e. Generate substantial debate or controversy about the nature of the impacts that would be created?

f. Other: _____

Unknown*	No Significant Impacts	Minor Impacts*	Potentially Significant Impacts*	Can Impacts be Mitigated*	Comment Index
	X				
	X				
	X				
	X				
	X				

Part III. Alternatives and Evaluation

1. Description and analysis of reasonable alternatives (including the no action alternative) to the proposed action whenever alternatives are reasonably available and prudent to consider and a discussion of how the alternatives would be implemented. Also, identify the preferred alternative and provide justification for its selection:

- A. No action - The ability of the Marshall Canal to deliver irrigation water would be negatively impacted should the siphon fail, resulting in potentially severe economic impacts to farmers and ranchers and to the commercial activity and personal income levels in the area. There could also be a negative effect to the regional economy, which is heavily dependent on agriculture. Downstream water quality could also be negatively impacted due to sedimentation, siltation and flooding should the siphon fail. The no action alternative would also result in the possible delay of the proposed transfer of this project, resulting in continued State liability for the property and administrative oversight.
- B. Proceed as planned with the project – Replacement Option. This will have the beneficial effects of allowing for the continued provision of irrigation water through the canal, thereby maintaining the areas economy, which is heavily dependent on agricultural, and eliminating the State's liability and administrative oversight of the property by allowing the proposed transfer to proceed. The replacement option is less costly (\$100,000 - \$120,000 compared to \$165,000 for a liner) and will provide a much longer-term solution (75 to 100 years). The impacts associated with the replacement option from the increased disturbance are short-term, minor and/or non-significant.
- C. Proceed as planned with the project – Liner Option. This option involves little or no ground disturbance, with fewer potential environmental impacts. A significantly higher cost would be incurred (\$165,000) with a shorter anticipated useful life span for the system (less than 20 years). This option would also have the beneficial effects of allowing for the continued provision of irrigation water through the canal, thereby helping to support the area's agricultural economy, and eliminating the State's liability and administrative oversight of the property by allowing the proposed transfer to proceed.

Proposed Implementation of Action Alternatives (B & C):

Owing to the urgency for the replacement of this siphon, it would be most expedient to contract for professional services by direct negotiation and to solicit estimates from three local contractors, and thus streamline the design/build process as much as possible. Since the canal must be dry before construction can commence, it would be desirable to begin the project at the end of the present irrigation season, remove the old pipe and lay the new pipe this fall, and complete the pipe-trench backfilling and site restoration activities next spring before the onset of the next irrigation season.

Preferred Alternative:

The preferred alternative is Alternative B, the replacement option. This is preferred due to the lower cost and significantly longer service life compared to Alternative C. No significant environmental impacts are anticipated with Alternative B. The No Action Alternative A could result in potentially significant impacts should the siphon fail.

2. Evaluation and listing of mitigation, stipulation, or other control measures enforceable by the agency or another government agency:

No significant impacts are anticipated as a result of either of the proposed action alternatives. Minor, short-term and temporary impacts to soil over covering, vegetative cover, and weed proliferation associated with the replacement option would be mitigated by the reclamation and reseeding of all disturbed areas, and the implementation of weed control measures. Impacts related to noise and air emissions would be temporary, non-significant and end upon completion of the project. Potentially significant impacts could occur to the areas

agricultural economy and to downstream water quality from siltation, sedimentation and flooding should the siphon fail.

3. Based on the significance criteria evaluated in this EA, is an EIS required? YES / NO If an EIS is not required, explain why.

The EA is the appropriate level of analysis for this proposed action.

This is appropriate due to the absence of any significant negative impacts.

4. Describe the level of public involvement for this project if any and, given the complexity and the seriousness of the environmental issues associated with the proposed action, is the level of public involvement appropriate under the circumstances?

The appropriate level of public involvement for this proposal is the distribution of the draft EA to those agencies, groups and individuals listed on the EA cover page for review and/or comment, and publication of the proposed action in the legal notices section of the Helena Independent Record and Butte Montana Standard newspapers. This is an appropriate level of public involvement considering the absence of any negative impacts associated with the proposed actions.

5. Duration of comment period if any: Copies of the EA can be obtained from the address listed below.

Comments will be accepted until 5:00 p.m., September 9 2002 and should be submitted to DNRC at the address listed below.

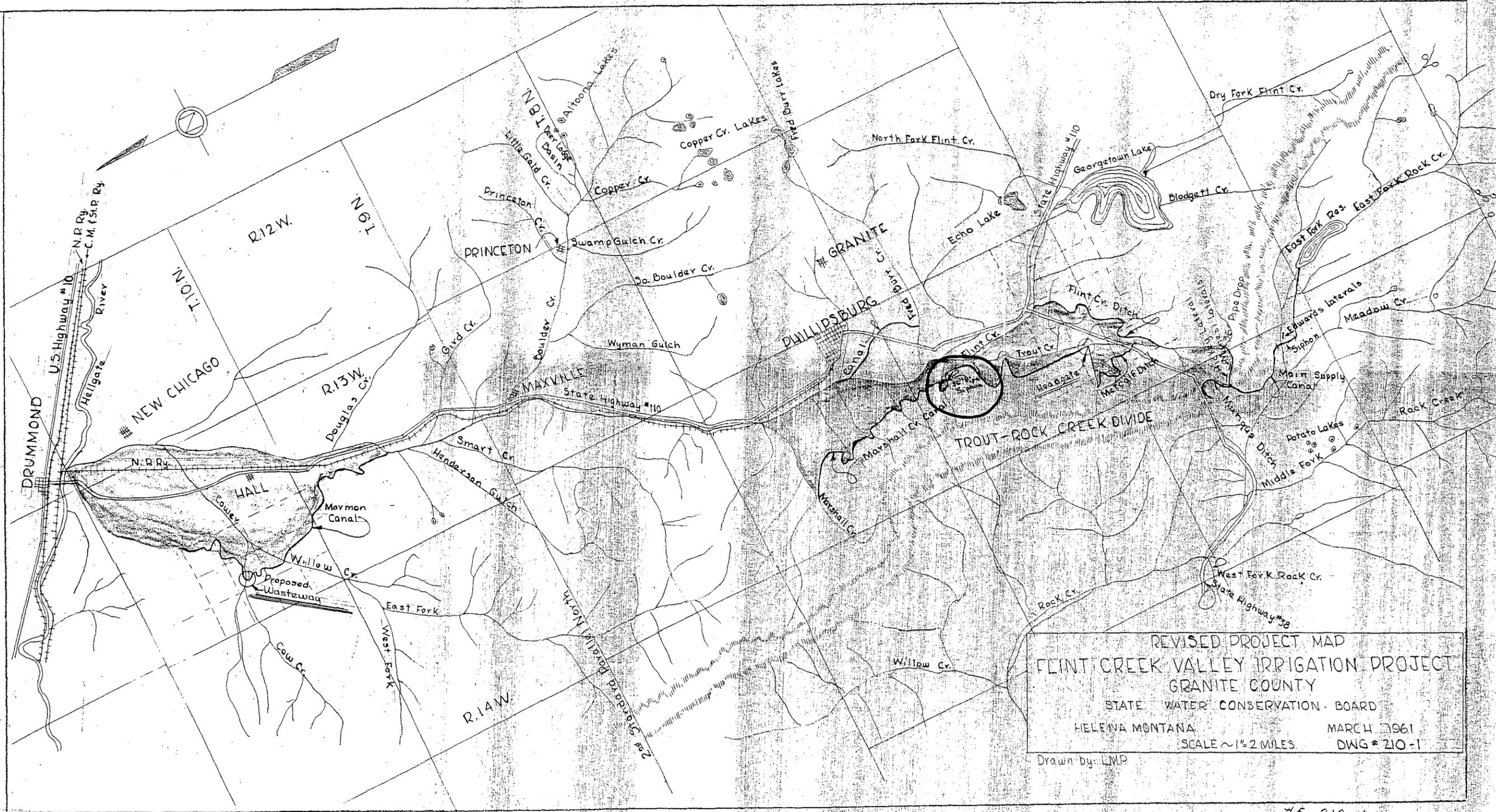
6. Name, title, addresses and telephone number of the Person(s) Responsible for Preparing the EA:

James P. Domino, Environmental Specialist, Department of Natural Resources and Conservation, Water Resources Division, State Water Projects Bureau, 48 N. Last Chance Gulch, P.O. Box 201601, Helena, MT 59620-1601, (406) 444-6622. e-mail jdomino@state.mt.us The EA can also be viewed on the DNRC website at www.dnrc.state.mt.us.

Part IV. Narrative Evaluation and Comment

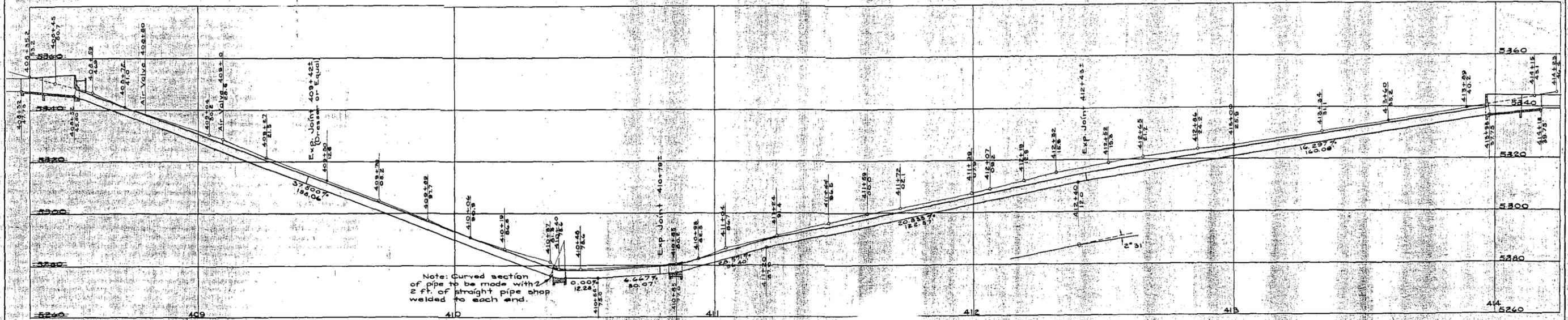
The action alternatives as proposed do not have any significant impacts. Minor, short-term and temporary impacts to soil overcovering, vegetative cover, and weed proliferation associated with the replacement option would be mitigated by the reclamation and reseeding of all disturbed areas, and the implementation of weed control measures. It is not anticipated that any impacts would occur to bull trout habitat or to any other plant or animal species of special concern with implementation of either of the action alternatives. Impacts related to noise and air emissions would be temporary, non-significant and end upon completion of the project. The public benefits of allowing for the continued provision of irrigation water through the canal, thus supporting the area's agricultural economy and eliminating the State's liability and administrative oversight responsibilities for irrigation canals by allowing the proposed transfer to proceed, are ample justification for the proposed action alternatives. Potentially significant negative impacts to the area's agricultural economy and downstream water quality are associated with the no action alternative and could occur should the siphon fail. Public health and safety would not be negatively impacted by either of the proposed action alternatives.



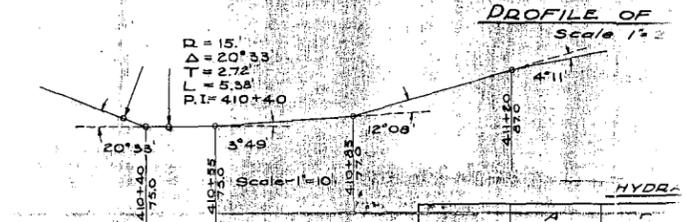


REVISED PROJECT MAP
 FLINT CREEK VALLEY IRRIGATION PROJECT
 GRANITE COUNTY
 STATE WATER CONSERVATION BOARD
 HELENA MONTANA MARCH 1961
 SCALE ~ 1/42 MILES DWG # 210-1
 Drawn by: LMP

#5-210-1



GENERAL NOTES
 All exposed concrete edges to be chamfered.
 Minimum distance between surface of concrete and reinforcing to be 2" unless otherwise stated.
 Reinforcing bars when bent at ends shall have a minimum bend of 4" square or a 6" half circle bend.
 All splices to lap 40 diameters and be wrapped with No. 14 wire.
 Total length of pipe along bottom 564.85'



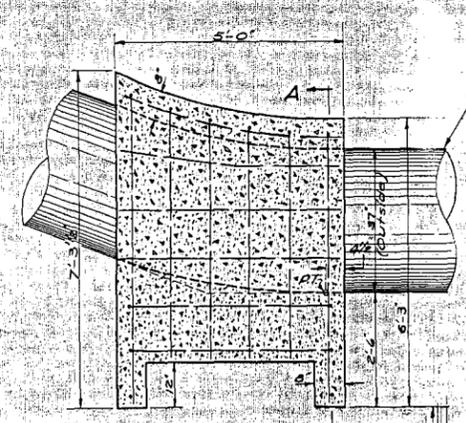
HYDRA.

Ditch	330	1.95
Syphon	7.07	0.75

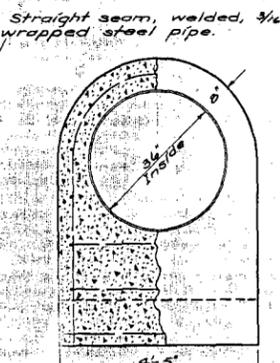
VERTICES

11	2.0	66.0
0.0/3	9.49	67.0

Drawn by L.O.E.
 Checked by L.M.H.
 Revised by L.M.H.
 Revised by

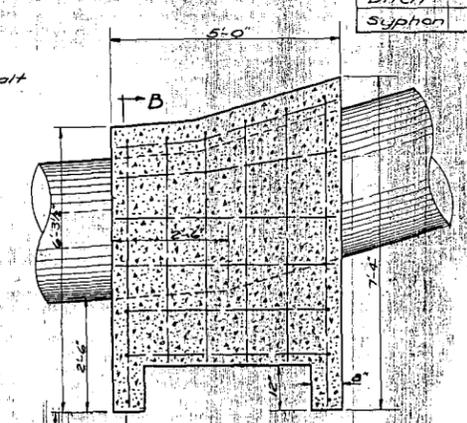


LONGITUDINAL SECTION
 Scale 1/2"=1'-0"



SECTION A-A OR B-B
 Scale 1/2"=1'-0"

Note: All steel 1/2" φ placed as shown.



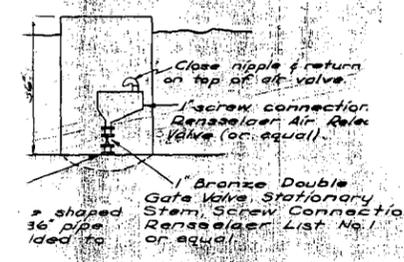
LONGITUDINAL SECTION
 Scale 1/2"=1'-0"

PLAN PIPE ANCHOR STA. 411+00
 Scale 1/2"=1'-0"

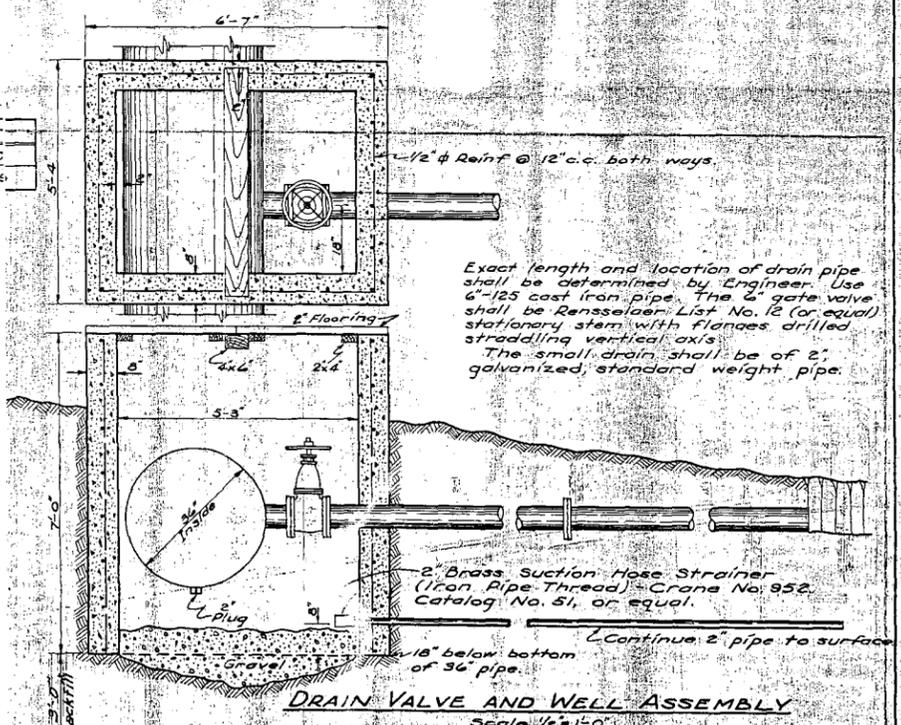


Wooden 4" plate over corr.

Corr. pipe to be hinged to 36" pipe on turning.



LONGITUDINAL SECTION VALVE AND CHAMBER
 Scale 1/2"=1'-0"



DRAIN VALVE AND WELL ASSEMBLY
 Scale 1/2"=1'-0"

Note: The 6" flanged T shall be of pipe manufacturer's standard design to be welded to 36" pipe in field after final location of drain is determined. Overall length of fitting shall not exceed 7' and it shall be designed to withstand 100' pressure. Flange shall fit A.W.W.A. standard 6" 125' cast iron pipe and be drilled with holes straddling vertical axis.

MARSHALL CREEK CANAL SYPHON
FLINT CREEK STORAGE PROJECT
 GRANITE COUNTY
 STATE WATER CONSERVATION BOARD
 HELENA, MONTANA
 MARCH 3, 1937
 SCALE AS SHOWN
 D.W.A. No. 1009-R
 Dwg. No. 22A