I. INTRODUCTION

During the Forty-Sixth Legislature of the State of Wyoming 1982 Session, funds were authorized to conduct a Level III Development Plan as described in Wyoming Statute 41-1-114. On October 20th, 1982, Boyle Engineering Corporation (Boyle) was authorized by the Riverton Valley Irrigation District (RVID), concert with the Wyoming Water Development Commission (WWDC), proceed with the Level III Development Plan.

The report presented today is to inform the Wyoming Water Development Commission of the status of the project and the work which has been completed, as well as to present cost estimates from the recently completed Preliminary Design Report.

II. PROJECT SCHEDULE

Attached is a Critical Path Schedule showing the project schedule which was revised after Notice to Proceed (NTP) was issued. Note that key dates include the submittal of a Preliminary Design Report on December 6th, the submittal of Contract Documents for Priority I and II Facilities on January 19th, and Contract Documents for Priority III, if approved, on January 31st, 1983.
III. PROJECT STATUS

Boyle mobilized immediately after NTP was received, and survey work was started on October 27th and completed on November 12, 1982 by Robert Jack Smith and Associates of Rawlins, Wyoming. Aerial photography and mapping were completed by Horizon's, Inc. on November 5, 1982. Boyle initiated work on the hydrologic analysis, canal hydraulics, turnout inventory and preliminary design.

A meeting was held on November 16th in Riverton with the Commissioners of the Riverton Valley Irrigation District; Bernie Scott, City Engineer for Riverton; and R. D. Connell, Engineer for the Riverton Valley Irrigation District. A tour was made of the canal to review the structures to be modified or replaced and to review the problems and receive comments of the RVID relative to preparation of the Preliminary Design Report. The Preliminary Design Report, containing definition of design, irrigation flow rates, hydrologic and hydraulic analyses, preliminary engineering designs and cost estimates was completed and submitted to RVID and the WWDC on December 6, 1982. The Soil Conservation Service, Bureau of Reclamation, and Chamber of Commerce were contacted for additional design information.

A meeting was held on December 10th, 1982 with the Commissioners of the Riverton Valley Irrigation District, their attorney and engineer, and Al Likes of the Wyoming Water Development Commission in which the Preliminary Design Report
was explained and comments were received from RVID, WWDC and the City of Riverton Engineer.

Final comments are due to be completed by the reviewing authority on December 20 and transmitted to Boyle.

Boyle is proceeding at present with the detailed soils analysis, title investigations, and determining the locations of utilities which may affect construction. Upon the receipt of comments from the reviewing bodies, Boyle will initiate Final Design and preparation of contract documents.

IV. PROJECT IMPROVEMENTS AND COST ESTIMATES

Rehabilitation improvement requirements to the existing canal have been determined and construction priorities have been set. Priority No. I Improvements have been designated by RVID as requiring immediate attention. Priority No. II is designated as requiring attention within the next three years and Priority No. III is to be completed within four years.

Priority No. I contains eleven (1 through 11) individual construction items. Priority No. II contains four (1 through 4) individual construction items and Priority No. III is for the construction of buried pipe through the City limits. The location of the priority items are shown on the attached drawing.

It should be noted that during review of the Preliminary Design Report with the RVID, it was determined that the location of overflows I-5, I-6 and I-7 may be revised. This item is currently under final review.
<table>
<thead>
<tr>
<th>PRIORITY NO. I ITEM</th>
<th>DESCRIPTION</th>
<th>ESTIMATED INSTALLATION COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-1</td>
<td>Sand trap and emergency overflow</td>
<td>$ 128,000</td>
</tr>
<tr>
<td>2</td>
<td>New flume (Mazet property)</td>
<td>104,000</td>
</tr>
<tr>
<td>3</td>
<td>Rebuild canal and storm drainage way (Davison farm)</td>
<td>118,000</td>
</tr>
<tr>
<td>4</td>
<td>Reline canal in Riverton North of Adams Avenue</td>
<td>90,000</td>
</tr>
<tr>
<td>5</td>
<td>Emergency overflow west of Terrace Estates</td>
<td>113,000</td>
</tr>
<tr>
<td>6</td>
<td>Emergency overflow west of Befus property</td>
<td>408,000</td>
</tr>
<tr>
<td>7</td>
<td>Emergency overflow west of Pickenpaugh property</td>
<td>146,000</td>
</tr>
<tr>
<td>8</td>
<td>Emergency overflow Prison Farm Draw</td>
<td>162,000</td>
</tr>
<tr>
<td>9</td>
<td>Emergency overflow Madden Draw</td>
<td>80,000</td>
</tr>
<tr>
<td>10</td>
<td>Emergency overflow Haymaker Draw</td>
<td>202,000</td>
</tr>
<tr>
<td>11</td>
<td>Install measuring devices at all turnouts</td>
<td>$ 184,000</td>
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TOTAL ESTIMATED INSTALLATION COST $1,735,000
<table>
<thead>
<tr>
<th>PRIORITY NO. II ITEM</th>
<th>DESCRIPTION</th>
<th>ESTIMATED INSTALLATION COST</th>
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</thead>
<tbody>
<tr>
<td>II-1</td>
<td>Replace existing chute Young farm with RCP</td>
<td>$ 152,000</td>
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<tr>
<td>2</td>
<td>Construct lining due to seepage</td>
<td>67,000</td>
</tr>
<tr>
<td>3</td>
<td>Reconstruction various checks</td>
<td>36,000</td>
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<tr>
<td>4</td>
<td>Rebuild chute across canal</td>
<td>46,000</td>
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</table>

TOTAL ESTIMATED INSTALLATION COST $ 301,000
### PRIORITY III

**ESTIMATED INSTALLATION COST**  
**PIPELINE THROUGH CITY**  
*(Station 367+50 to Station 439+60)*

<table>
<thead>
<tr>
<th>ITEM</th>
<th>UNIT OF MEASURE</th>
<th>UNIT COST ($/UNIT)</th>
<th>APPROXIMATE QUANTITY</th>
<th>ESTIMATED COST</th>
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<tbody>
<tr>
<td>RCAP (Reinforced Concrete Arch Pipe)</td>
<td>LF</td>
<td>250.0</td>
<td>7,210</td>
<td>1,803,000</td>
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<tr>
<td>TRENCH EXCAVATION</td>
<td>CY</td>
<td>3.4</td>
<td>7,000</td>
<td>24,000</td>
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<td>PIPE TRENCH COMPACTED BACKFILL</td>
<td>CY</td>
<td>7.00</td>
<td>77,000</td>
<td>539,000</td>
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<tr>
<td>PIPE TRENCH BEDDING MATERIAL</td>
<td>CY</td>
<td>8.00</td>
<td>8,000</td>
<td>64,000</td>
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<tr>
<td>TURNOUT MODIFICATIONS</td>
<td>LS</td>
<td>LS</td>
<td>40,000</td>
<td>40,000</td>
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<tr>
<td>EXISTING UTILITY RELOCATIONS OR CONSTRUCTION COORDINATION</td>
<td>LS</td>
<td>LS</td>
<td>25,000</td>
<td>25,000</td>
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<tr>
<td>CAST-IN-PLACE TAPER SECTIONS AT BRIDGES</td>
<td>LS</td>
<td>LS</td>
<td>45,000</td>
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**SUBTOTAL**  
2,540,000

<table>
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<th>Contingencies (10%)</th>
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<th></th>
<th>254,000</th>
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<tbody>
<tr>
<td>Total Estimated Construction Cost</td>
<td></td>
<td></td>
<td>2,794,000</td>
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<tr>
<td>Engineering and Legal (15%)</td>
<td></td>
<td></td>
<td>419,000</td>
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**TOTAL ESTIMATED INSTALLATION COST**  
$3,213,000
V. SUMMARY

The project is proceeding on schedule and no significant problem areas have been encountered. It is anticipated that comments will be received from RVID on December 20th and that Boyle will be able to proceed with final design and preparation of construction documents without delay.

The cost of Priority I Improvements is $1,735,000; Priority II Improvements is $301,000; and Priority III Improvements is $3,213,000. All costs are dependent upon adjustments to be made during the final design. If Priority III Improvements were to be built immediately, Priority Items I-4 and a portion of II-2 could be deleted.

Items which were not originally a part of the contract but which are worthy of additional evaluation include:

a) Modifications to existing canal headworks
b) Installation of additional cross drainage culverts and over chutes
c) Canal realignment in several problem areas
d) Facilities to convey storm drainage flows beyond the limits of the existing canal right-of-way
e) Coordination with the City development of storm drainage system which will ultimately discharge to the Wind River.

The cooperation received from the Riverton Valley Irrigation District Commissioners, R. D. Connell, and Bernie Scott of the City of Riverton, has been outstanding. Al Likes
of the Wyoming Water Development Commission has always helpfully answered any questions which Boyle has had and has coordinated and arranged numerous meetings and conferences between the consultant, the State and the Riverton Valley Irrigation District. Close communication and cooperation is being maintained.
CRITICAL PATH
RIVERTON VALLEY IRRIGATION DISTRICT
LEVEL III DEVELOPMENT

AERIAL PHOTOGRAMMETRY
- Run Control Points
- Site Specific Structural Topo
- Research Land Ownership
- Legal Opinion on Title
- Subsurface Investigation
- Prepare WWDC Present Design Report
- Legislate
- Final Plans & Specs
- Coordination & Contract Doc Prep
- Cost Est.
- Bid Period
- Monitor & Administer Construction Contract
- Final Inspection

THIS PROPOSAL

FUTURE AUTHORIZATION

MILESTONES
- Notice to Proceed: Oct. 20
- Notice to Proceed: Oct. 25
- Notice to Proceed: Nov. 1
- Notice to Proceed: Nov. 8
- Notice to Proceed: Nov. 16
- Notice to Proceed: Nov. 22
- Notice to Proceed: Nov. 29
- Notice to Proceed: Dec. 6
- Notice to Proceed: Dec. 13
- Notice to Proceed: Dec. 20
- Notice to Proceed: Christmas
- Notice to Proceed: New Year's Day
- Notice to Proceed: Jan. 3
- Notice to Proceed: Jan. 10
- Notice to Proceed: Jan. 17
- Notice to Proceed: Jan. 24
- Notice to Proceed: Jan. 31
- Notice to Proceed: Feb. 7
- Notice to Proceed: Feb. 14
- Notice to Proceed: 1983

TIME
- 1982
- 1983

ENGINEERING MANAGEMENT
- Boyle Engineering Corporation