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SANCTUARY AT KEYSTONE PLANNED UNIT DEVELOPMENT DESIGNATION

This Planned Unit Development Designation, to be known as the Sanctuary at Keystone Planned Unit Development Designation, hereinafter referred to as the "Designation", approved the 27th day of March, 2007, and revised on March 25, 2008 by the Board of County Commissioners of Summit County, Colorado, hereinafter referred to as the "County," for certain real property located in Summit County and described in attached Exhibit A, hereinafter referred to as the "Property." This Designation establishes the land uses and density that shall be permitted on the Property, a general development plan, development standards and conditions which must be adhered to by Blenheim Keystone, LLC and any subsequent successor's, heir's, or assigns, collectively hereinafter referred to as the "Owner/Developer". This designation also specifies improvements that must be made and conditions which must be fulfilled in conjunction with this Designation by the Owner/Developer.

Where this Designation does not address a specific development standard or requirement of the Summit County Land Use and Development Code currently in effect or hereinafter amended, hereinafter referred to as the "Development Code", the provisions of the Development Code shall apply. Where the Designation addresses a specific development standard or requirement, the provisions of this Designation shall supersede the provisions of the Code.

A. PERMITTED USES AND DEVELOPMENT PLAN

Use and development of the property shall be in accordance with the Development Plan attached hereto as Exhibit B and the following specific requirements:

1. Permitted Uses

A site plan for Lots 6-15 and Lot 19 was approved under Planning Case #06-003. A site plan for Lots 16 and 17 was approved under Planning Case #06-049. Density on each lot shall be in accordance with those approved site plans. A maximum of thirty dwelling units is allowed in this Designation per the following density limitations based on Exhibit B:

- Lot 6: 2 duplex units
- Lot 7: 2 duplex units
- Lot 8: 2 duplex units
- Lot 9: 2 duplex units
- Lot 10: 1 single-family unit
- Lot 11: 2 duplex units
- Lot 12: 2 duplex units
- Lot 13: 2 duplex units
- Lot 14: 2 duplex units
- Lot 15: 2 duplex units (over-under configuration), both of which are employee units (see the Employee Units section in this PUD for further provisions).
- Lot 16: 4 duplex units
- Lot 17: 6 townhouse units (2 buildings, three units each)
- Lot 19: 1 single-family unit

The "Subdivision Exemption Plat of Caravelle at Keystone Amended" was recorded on March 28, 2006, under Reception number 818328. This plat depicts the open space tracts which have no density associated with those portions of the property.

Due to the environmental constraints on the property, additional density, beyond that expressly permitted by this Designation, shall *not* be allowed by any mechanism, including but not limited to Transfer of Development Rights (TDRs).

2. Accessory

Accessory uses are limited to:

- garages, per the provisions set forth in the Code
- home occupations, per the provisions set forth in the Code

3. Conditional Uses

Conditional uses are limited to one caretaker's unit associated with Lot 1, per the provisions set forth in the Code.

B. DEVELOPMENT STANDARDS

1. Building Height

Building heights shall be a maximum of 35 feet as defined in Section 3505.06 of the Summit County Land Use & Development Code.

2. Setbacks and Disturbance Limitations

Setbacks on each lot are established per the building envelopes as shown on Exhibit B.

3. Parking

At least two (2) parking spaces shall be required per residence. No parking shall be permitted on County roads.

4. Wetlands/Water Quality

Development of the property shall comply with all requirements for wetland and water quality protection pursuant to Chapter 7 of the Summit County Land Use and Development Code.

Wetland mitigation shall be in accordance with Nationwide Permit number 39, project number 200175048, issued by the Department of the Army, Army Corps of Engineers, originally issued on April 15, 2003 and reissued on January 18, 2006. Wetland Mitigation shall also comply with the Deer Creek Mitigation Plan, prepared by Best Ecological Design Group, and dated January 21, 2004 (Exhibit C).

A Site Improvements Location Certificate shall be submitted for any building improvements located within 25 feet of wetlands.

5. Open Space and Trails

Designated trails are shown on Exhibit B, and a trail easement was established on the plat recorded under Reception number 818328.

5.9 acres of open space have been dedicated under a Deed of Conservation Easement recorded under reception number 647479. All of the provisions related to such conservation easement remain in effect.

6. Design Standards

All structures shall be designed with:

- ❖ natural or naturally-appearing materials and colors so that the structures blend visually with the forest; Colors and materials shall generally comply with those approved under Planning Case # 06-003.
- ❖ non-mirrored glass;
lighting for the exterior of the buildings or any freestanding lights that are full cut-off luminaries. Any exterior light fixtures not approved under Planning Case #06-003 shall obtain approval from the Planning Department prior to installation.
- ❖ roofing material that is non-reflective.

7. Employee Housing

Lot 15 is required to contain two employee housing units. The sale price of the employee units will not exceed the affordability of the area median income multiplied by 120% as defined by the Housing Authority, or as otherwise approved by the Housing Authority. A deed restriction for these units shall be approved by the Summit Housing Authority and the County Attorney's Office and recorded prior to the platting of those units.

The certificate of occupancy for the employee housing units shall be issued prior to or concurrent with the certificate of occupancy for the last market rate unit within the PUD Designation.

8. Landscaping

All areas disturbed by construction shall be revegetated with a Summit County native grass seed mix, or returned to a natural state, and be free of weeds, as identified by the County as invasive, noxious, or otherwise, nuisance weed species prior to the issuance of a Certificate of Occupancy and shall be guaranteed through a financial agreement in accordance with Section 3600 of the Code.

Landscaping shall be in accordance with the landscape plan included in Exhibit B, which was approved under Planning Case #06-003. Minor modifications to the landscape plan may be approved by the Planning Department, if such plan still meets the intent of the approved landscaping plan and Section 3600 of the Development Code.

A landscape berm along the eastern property line, adjacent to Loveland Pass Village, shall be submitted showing natural undulations, both horizontally and vertically, and include a minimal amount of rock.

Prior to the issuance of the first certificate of occupancy, the Owner/Developer shall submit an adequate financial guarantee, to the Satisfaction of the County Planning and Engineering Departments, to cover the warranty period for all of the approved landscaping in the subdivision, in accordance with Section 3608, et. seq. of the Code. The Owner/Developer may submit a phasing plan for the landscaping, to be reviewed and approved by the Planning Department, and submit a financial guarantee accordingly.

9. Driveways

Driveways shall be located in accordance with Exhibit B. Modifications to driveways may be approved by the Planning and Engineering Department upon compliance with specific standards set forth in the Development Code. Modifications to driveways shall consider minimizing or reducing disturbance to wetlands.

10. Wildlife

Bear-proof trash containers shall be used throughout the subdivision for any outdoor storage of refuse, including containers used for curbside pick-up.

C. REQUIRED IMPROVEMENTS

1. Access

Access shall be provided by the driveway off of Highway 6 as permitted under the Colorado Department of Transportation (CDOT) Access Permit and as shown on the conceptual development plan.

2. Water Systems

a. Water shall be provided by the Snake River Water District.

3. Wastewater Disposal

a. Sewage shall be provided by the Snake River Wastewater Treatment Plant.

4. Fire Protection

The entire property is located within the Lake Dillon Fire Protection Area. All development on the property shall meet all fire protection requirements of the District.

5. Utilities and Easements

All new utility lines shall be installed in full accordance with the standards of each utility provider and County Subdivision Regulations. Any easements necessary for the installation of utilities shall be shown on the subdivision plat. Any new utility lines shall be buried underground. The approved locations of the utility easements are depicted on the attached conceptual development plan (Exhibit B). The Owner/Developer shall be responsible for installing the utility lines to each lot within the PUD.

D. IMPLEMENTATION

1. Platting Requirements

All duplex and townhouse units must be subdivided through the subdivision exemption process prior to sale.

E. GENERAL PROVISIONS

1. Enforcement

The provisions of the planned unit designation and the development plan relating to the use of land and the location of common open space shall run in favor of Summit County and shall be enforceable at law or in equity by the County without limitation on any power or regulation otherwise granted by law. Other provisions of the planned unit development designation and the development plan shall run in favor of the residents, occupants and owners of the planned unit development, but only to the extent expressly provided in, and in accordance with the terms of, the planned unit development designation and the development plan. Provisions not expressly stated as running in favor of the residents, occupants or owners of the planned unit development shall run in favor of the County.

2. Breach of Provisions of PUD Designation

If at any time, any provision or requirements stated in the planned unit development designation has been breached by the Owner/Developer, the County may withhold approval of any or all site plans or plat maps, or the issuance of any or all grading or building permits or occupancy permits applied for on the Property, until such breach has been remedied; provided, however, that the County shall not take affirmative action on the account of such breach until it shall have first notified the Owner/Developer in writing and afforded the Owner/Developer a reasonable opportunity to remedy the same.

3. Binding Effect

The PUD Designation shall run with the land and be binding upon the Owner/Developer, their respective successors, representatives and assigns, and all persons who may hereafter acquire an interest in the Property or any part thereof, with the exception that provisions of this designation may be modified through an amendment in accordance with the procedure stated in the County Development Review Procedures. This designation shall be recorded in order to put prospective purchasers or other interested persons on notice as to the terms contained herein.

4. Amendments

Amendments to the provisions of a planned unit development designation shall be reviewed and acted upon as a rezoning application, subject to the County's procedures for zoning amendments and to the requirement for findings under the Planned Unit Development Act of 1972 at CRS 24-67-106(3)(b).

5. Notices

All notices required by this designation shall be in writing and shall be either hand-delivered or sent by certified mail, return receipt requested, postage prepaid, as follows:

Notice to County:

Board of County Commissioners
P.O. Box 68
Breckenridge, CO 80424

Notice to Owner/Developer
Blenheim Land and Development, LLC
Steve Lewerenz
5700 Stateline Road
Mission Hills, KS 66206

All notices so given shall be considered delivered three days after the mailing thereof. Either party, by notice so given, may change the address to which future notices shall be sent.

6. Entire Designation

This designation contains all provisions and requirements incumbent upon the Owner/Developer relative to the Sanctuary at Keystone Planned Unit Development, except as modified by subsequent action of the Board of County Commissioners in accordance with procedures set forth in the Summit County Land Use and Development Code and the Colorado Planned Unit Development Act (CRS 24-67-106) for amending planned unit developments, and except that nothing contained herein shall be construed as waiving any requirements of the Summit County Land Use and Development Code or other regulations otherwise applicable to the development of the Property.

7. Effective Date

This Designation must be signed by both the Summit County Board of County Commissioners and the Owner/Developer and must be recorded by the Summit County Clerk and Recorder in order to become effective. The effective date shall be the date of recordation.

8. PUD Review Requirements

The Summit County Land Use and Development Code, Chapter 12, includes procedures and requirements for review of all Planned Unit Developments. The Owner/Developer shall be on notice of these requirements and their potential impact should new design guidelines be established.

IN WITNESS WHEREOF, the County and the Owner/Developer have executed this Designation as of the date first written above.

BOARD OF COUNTY COMMISSIONERS
OF SUMMIT COUNTY, COLORADO

/s/ Thomas A. Long, Chairman*
Thomas A. Long, Chairman
Summit County BOCC

ATTEST:

/s/ Cheri Brunvand*
Cheri Brunvand, Clerk and Recorder

*Denotes the original signatories to the Sanctuary at Keystone PUD Designation, originally approved on January 23, 1995.

APPROVAL OF AMENDMENTS

The foregoing document is Sanctuary at Keystone Planned Unit Development Designation as approved and signed by the Summit County Board of County Commissioners on the 27th day of March, 2007, and recorded at Reception No. 878868 and as amended by the Summit County Board of County Commissioners as follows:

Resolution No.
08-13

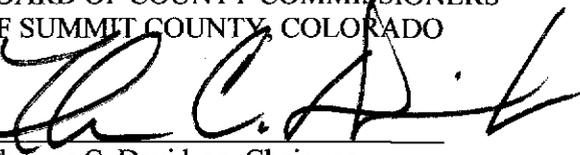
Reception No.
886377

Date
March 25, 2008

The planned unit development document dated the 27th day of March, 2007, and recorded at Reception No. 878868 and revised to incorporate the amendments approved as noted above shall remain in force as revised. The foregoing document is issued as a continuation of the original document. Copies of the original Summit County Library & Service Center Planned Unit Development Designation and the amendments noted above are available from the Summit County Clerk and Recorder.

Adopted this 25th day of March, 2008.

BOARD OF COUNTY COMMISSIONERS
OF SUMMIT COUNTY, COLORADO



Thomas C. Davidson, Chairman



ATTEST:



Sheri Brunvand, Clerk and Recorder

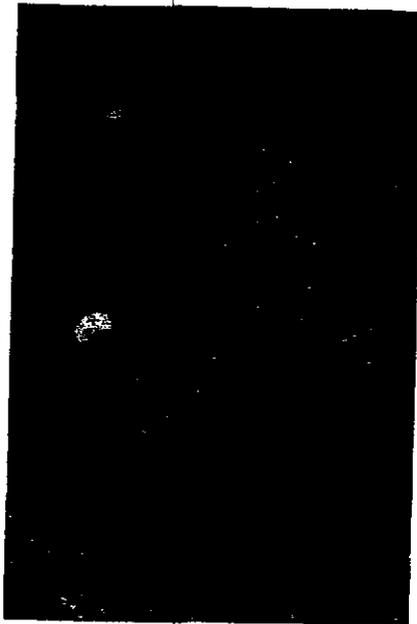
Exhibit A

Lots 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, Tract A, Tract B, and Open Space as designated per the Caravelle at Keystone Amended Plat, Recorded under Reception No. 818328.

ATTACHMENT C OF THE PUD
DEER CREEK
MITIGATION PLAN

SPECIFICATIONS & CONSTRUCTION MANUAL

TO ACCOMPANY MITIGATION CONSTRUCTION DESIGN PLANS



- *Preliminary Issued April 3, 2001*
- *Re-Issued April 5, 2001*
- *Revised, Issued May 31, 2001*
- *Revised, Issued July 27, 2001*
- *Revised, Issued September 11, 2002*
- *Revised, March, 2003*
- *Revised, April, 2003*
- *Revised, May 12, 2003*
- *Issued June 26, 2003*
- *Revised, Issued January 21, 2004*

PREPARED BY

Best Ecological Design Group
VIRGIL O. BEST II, PRINCIPAL ECOLOGIST

BRECKENRIDGE, COLORADO, 2003

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COPYRIGHT & LIMIT OF ALLOWED USES

This statement of conditional use applies only to the copyrights of specific design, design elements, design applications, and project specifications created by Best Ecological Design Group (BEDG), Virgil O. Best II, Principal Ecologist as included here for the limited uses of planning, construction, monitoring and maintenance of the Caravelle/Deer Creek wetland mitigation/creation project described herein. Stated proprietary claims do not claim right to, nor supersede the rights of, proprietary information by others shown or not shown. All base information shown and not shown is referenced from civil, architectural, and consulting ecologist drawings; refer to those drawings and specifications for details and conditions of use, if any. Some design and installation details pertaining to geo-textile products and applications are referenced from product specifications from purveyors or manufacturers, refer to those product specification details for use conditions if any.

All design, design applications, and specifications as presented in Deer Creek Wetland Mitigation Plan design drawings and Construction Manual are provided and intended solely for the use in fulfilling those tasks necessary for completion of planning, construction, monitoring, and maintenance of the Deer Creek Wetland Mitigation project, and limited for use only by Novak & Nelson/Beaverbrook LLC.

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Best Ecological Design Group and its agents assume no liability from the re-use or transfer of the design, design applications or specifications either whole or in part to unauthorized projects.

Limit of liability on authorized project, Deer Creek Wetland Mitigation (Project), while every effort has been made to ensure that wetland design drawings accurately reflect site conditions and needs for safe and successful completion of the project described herein, BEDG assumes no liability for Project design or specifications by others, nor for the actions or interpretations by Project contractor(s). See General Notes for BEDG/Principal Ecologist and contractor responsibilities.

No warranty of contractor provided materials or services is expressed or implied. All warranties are the responsibility of contractor(s), purveyor(s), or manufacturer(s), if any.

SHEET DESCRIPTIONS

SHEET SHEET TITLE AND DESCRIPTION All Sheets are Attached as Appendix 2

Note: All sheets demonstrate emphasized features and conditions according to sheet titles

- W-1 General Site Plan – Site layout including wetland boundary, upland areas, mitigation sites, roadway, proposed structures,
- W-2 Wetland Delineation Plan – Areal extent of jurisdictional wetland, fen-like locations, and upland vegetation bounded within wetland area
- W-3 Existing Hydrologic Plan – Approximate locations of present and historic flowlines, and data points for surface and ground water
- W-4 Wetland Disturbance Plan – Areal extent of both permanent and temporary Impacts for road construction, and temporary impacts for wetland mitigation and stream channel construction
- W-5 Mitigation Construction Plan – Location and extent of all mitigation sites, and identification and locations of restored or historic surface for mitigation sites.
- W-6 Channel Design Enlarged Plan & Details – Stream areas S-A, S-B, & S-D enlarged plan view and typical details.
- W-7 Mitigation Erosion & Sediment Control Plan – Locations and extent of site BMP's to be employed in association with mitigation construction.
- W-8 Construction Erosion & Sediment Control Plan – Locations and extent of site BMP's to be employed in association with road and building construction.
- W-9 Plant and Soil Salvage Plan – Areal extent of Soil, Plant, and Plant & soil salvage areas.
- W-10 Planting Plan – Areal extent of planting areas and distribution of plant species groupings.
- W-11 Revegetation Plan – Areal extent and distribution of seed mix areas, #1 Wetland, #2 Transitional, & #3 Upland
- W-12 Details – Mitigation Sites A & 2 Soil Reconstruction Details, Mitigation Site 2 Liner Installation Detail, Dam Construction & Log Placement Details, and Waterbar Details
- W-13 Details – Energy Dissipater Details, Planting Details, Erosion & Sediment Control Details
- W-14 Road Sections and Details – Roadway Sections details by stations
- W-15 Photo Point Reference Plan – Photo Point Locations

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SECTION 1, PART A - PROJECT DESCRIPTION

Project Name: Deer Creek Wetland Mitigation

Client Novak & Nelson/Beaver Brook L.L.C.

Project Location: Section 24, Township 4S, Range 78W, Keystone, Summit County, Colorado
Wetland Mitigation Design/Wetland Re-delineation/Stream Channel Design/Wetland Construction
Design and Specifications/BMPs/ Nationwide Permit Application: Best Ecological Design Group -
Virgil Best II, Principal Ecologist

Project Engineers: Range West Engineers and Surveyors, Inc. & Tetra-Tech ISG

Project Description:

1.A.1 Deer Creek Wetland Mitigation area encompasses an approximately 5.5 Acre wetland complex in an approximately 15 Acre parcel

1.A.2 The constructed wetlands, for both mitigation of permanent disturbance and remediation of temporary disturbance, will be fully comprised of Keystone native plant species, from plant materials salvaged from the site and sources as similar to the local ecological conditions as possible.

1.A.3 These native plant species will be employed in coordination with design drawings and specifications to create a specialized sub-alpine wetland complex appropriate to Keystone.

1.A.4 Willow/sedge dominant, sedge/grass dominant, and emergent sedge dominant plant communities will be established for mitigation.

1.A.5 Plant species diversity and plant community associations, such as microclimate patch diversity, will match the character of undisturbed native wetland areas as closely as possible.

1.A.6 The total revised mitigation area (as proposed) equals 37,952.90 square feet (0.87 AC.). Permanent impacts equal 21,456.82 square feet (0.50 AC.). Mitigation ratio is approximately 1.7:1.

1.A.7 Mitigation construction plan sheets include the general site plan, wetland delineation, hydrologic, wetland disturbance for construction, mitigation construction, stream channel construction, mitigation erosion and sediment control, road and building construction erosion and sediment control, plant and soil salvage, planting, revegetation, and details related to each of the sheets. The Mitigation Plan - Specifications and Construction Manual (rev. June 2003) includes narrative descriptions and specifications pertaining to all of the above as well as sections covering the following: Project Description, General Notes, Wetland Soil Specifications, and Monitoring & Maintenance.

1.A.8 Mitigation wetland monitoring is to be conducted by Principal Ecologist and will begin the first summer following installation. Monitoring will continue for 5 years or until accepted by the Corps. Monitoring will be based on as-built baseline information established following completion of mitigation construction activities.

SECTION 1, PART B - GENERAL NOTES

SHEET REFERENCE: General Site Plan W-1

1.B.1 Refer to civil, architectural, and consulting ecologist drawings for all base information shown and not shown. Contractor(s) shall be responsible for verifying existing conditions prior to commencing site work.

1.B.2 Contractor(s) shall be responsible for notifying Principal Ecologist of any discrepancies between design or specifications as shown, and any existing conditions, which may cause the contractor to deviate from the wetland mitigation design drawings.

1.B.3 All wetland mitigation design details and specifications both written and represented in drawings are based on the best available information for finished grade conditions. Contractor(s) shall not knowingly proceed with installation as designed when obvious discrepancies or obstructions exist that may not have been known during design. Contractor(s) shall be responsible for notifying Principal Ecologist should these situations arise.

1.B.4 Contractor(s) shall be responsible for field-locating of all existing overhead and underground utilities and shall be responsible for costs, fees, or fines for any damages occurring during wetland installation and related work.

1.B.5 All mitigation site finish grade, soil reconstruction, soil placement, plant species and locations, topsoil and backfill mixes, and native seed mix and application shall be according to the wetland design drawings and specifications by the Principal Ecologist. Photo documentation of implementation of all specialized design elements is to be conducted and reported by Principal Ecologist. If others conduct photo documentation, verification and reporting will be by Principal Ecologist.

1.B.6 No substitution of plant species shown or described according to the wetland design drawings, whether in containers, bareroot, B&B, geo-textile, transplanted, or seed, shall be allowed without prior approval by the Principal Ecologist.

1.B.7 Prior to installation all plant materials 24" B&B and under (transplant and nursery stock), except plugs, shall be placed according to design drawings by contractor, for approval by Principal Ecologist. Installation locations for plugs are to be verified in groupings. Contractor shall notify Principal Ecologist when plant materials are in place.

1.B.8 Locations of all plant materials above 24" B&B are to be staked by the contractor and approved by the Principal Ecologist. Contractor shall notify Principal Ecologist when location stakes are in place.

1.B.9 All disturbed soil areas are to be revegetated with specified Keystone native plant seed mixes. Refer to seed mix specifications for details.

1.B.10 Location and extent of liner are to be field verified by contractor and Principal Ecologist prior to completion of backfill. Contractor shall notify Principal Ecologist when ready for liner installation. Photo documentation is to be verified by Principal Ecologist.

1.B.11 All base information provided by Range West Surveyors and Engineers, Tetra Tech ISG, Market Place Architects, and Erik Olgeirson Partnership. Site topography, berm and sediment ponds, road and SWM grading including culverts by Range West. East flow diversion corridor shown by Tetra Tech. Land planning by Market Place Architects. Initial wetland delineation by E.O. Partnership. Modified wetland delineation, wetland impacts for mitigation, mitigation sites, hydrologic analysis, new stream channels (locations, geometry, and associated wetland vegetation), and all mitigation specifications and construction drawings revised, and/or completed by Principal Ecologist.

1.B.12 Contractor(s) and Principal Ecologist shall establish a system for verifying progress and completion according to the design specifications.

1.B.13 Contractor(s) shall assume full responsibility for all necessary revisions and replacement of completed site-work due to failure to provide the notifications as listed above.

SECTION 2, PART A - WETLAND DELINEATION

SHEET REFERENCE: Wetland Delineation Plan W-2

2.A.1 The extent of jurisdictional wetlands delineated and surveyed in the project area is demonstrated on Sheet W-2.

2.A.2 Original wetland delineation completed by E.O. Partnership May 2000. Wetland delineation associated with Mitigation Site 1 revised and updated by Virgil O. Best II, BEDG, Principal Ecologist, May 2001. All wetland surveying conducted by Range West Surveyors and Engineers.

2.A.3 All impacts and mitigation acreage has been determined according to the above mentioned delineation reports.

2.A.4 Percentage wetlands associated with impact calculations are according to E.O. Partnership & Corps.

2.A.5 Fen-Like areas delineated by Principal Ecologist/BEDG and Montane 2002.

SECTION 3, PART A - HYDROLOGY

SHEET REFERENCE: Hydrologic Plan W-3

3.A.1 Observed ground and surface water conditions as determined during the growing season of 2001 are defined on Sheet W-3.

3.A.2 Hydrologic assessment conducted during May 2001 by Principal Ecologist included, stream channel geometry, stream flow calculations, exposed ground (surface) water observations, assessment of previous ground water test pits. Refer to Stream Analysis Report, Virgil O. Best II, May 2001 for stream data.

3.A.3 Observations indicated the surfacing of ground water in both disturbed and undisturbed areas following an east to west transect approximately following the 9330' elevation contour. Surfacing of ground water was also observed at several lower elevations throughout the project area.

3.A.4 Surface water observation points are identified on the Hydrologic Plan, Sheet W-3. All observation points represent sites where surface water was visible on the vegetated surface and saturated, seeping, or flowing conditions existed.

3.A.5 Test well (approximate) locations are shown, final surveyed locations will be provided on as-built plans.

3.A.6 Additional random soil samples will be taken to the north and south of Mit. Site A, to the east and west of Mit. Site 3, and around the perimeter of all other Mit. Sites. Soil test samples will be used to determine if saturated conditions are present in the upper 12" of the soil column, and if present, duration of saturation during growing season will be documented.

3.A.7 Soil saturation conditions documented prior to mitigation construction will be used to modify specific hydrologic restoration activities or performance standards in Mit. Sites.

SECTION 4, PART A - WETLAND IMPACT

SHEET REFERENCE: Wetland Impact Plan W-3

- 4.A.1 A total of 0.50 acres of permanent wetland impacts are proposed for roadway construction.
- 4.A.2 Temporary wetland impacts for roadway construction will include an area approximately 3' outside of roadway retaining walls. All temporary impacts will be restored to adjacent wetland type and functions.
- 4.A.3 Plants and/or soil materials are to be salvaged from all areas of wetland disturbance, both permanent and temporary, to be utilized in mitigation and restoration sites.
- 4.A.5 All disturbance associated with new stream channel construction will be minimized to the greatest extent possible by field-fitting the final design and flow corridors.
- 4.A.6 All disturbance associated with access to Mitigation Site 3 will be minimized to the greatest extent possible by any combination of the following means
- 1) utilizing Mitigation Site A for labor, material, and equipment access,
 - 2) craning materials into Mit. Site 3,
 - 3) utilizing low ground weight vehicles for material transport,
 - 4) utilizing pathways across the wetland terrace.
- Disturbance associated with mitigation construction access is to be restored to prior conditions.

SECTION 4, PART B - MITIGATION OVERVIEW

SHEET REFERENCE: Mitigation Construction Plan W-5

- 4.B.1 Baseline Information - Existing conditions of each Mitigation Site
- Site 1 - Historic side-cast berms, materials discharged during previous road building efforts, plant cover includes both upland and wetland species.
- Site 2 - Old roadbed, some interstitial spaces have filled with sediment, presence of hydrology, vegetation dominated by wetland plant species.
- Site 3 - Historic ditch, probably dug to dewater the site. Some active beaver dams, some abandoned/failed beaver dams, step-pool series acts as an effluent stream. Vegetation dominated by wetland plant species.
- Site A - Historic ditch, probably dug to dewater the site. Acts as an effluent stream. Vegetation dominated by wetland plant species.
- Sites C & D - Historic side-cast berms, materials discharged during previous road building efforts. Vegetation dominated by non-native upland species.
- Sites F & G - These will be creation wetlands on the lower terrace associated with retaining walls at the entrance. Vegetation dominated by non-native upland plant species.
- 4.B.2 Mitigation Goals & Objectives - Primary goals include the successful establishment of self-perpetuating wetland replacement sites within the greater wetland complex. Replacement wetlands have been designed to increase previously degraded functions and values associated with this wetland complex, including groundwater recharge, floodflow attenuation, sediment stabilization and retention, and nutrient retention. Successful self-perpetuating wetlands are to meet wetland determination criteria according to the Corps 1987 Manual by the fifth year following construction.
- 4.B.3 Mitigation Site Selection - Mitigation sites were selected based on locations where wetland functions were severely degraded. Wetland mitigation will occur in revised Sites 1, 2, 3, A, C, D, F & G.

4.B.5 Performance Standards - Herbaceous vegetation is to be a minimum 90% cover by hydrophytes by the end of five years. Shrubs survival is to be 90% of planted materials by the end of five years. Shrub Current Year's Growth (CYG) is to match control samples from other parts of the site. Hydrology will be measured by saturation in the upper 12" of the soil column in mitigation areas for a minimum of 5% of the growth season. Groundwater test wells will be monitored to determine effects, if any, of site construction such as road and building pads.

4.B.6 Contingency Plan - Over and above interim remediation for maintenance (see Section 13), if during any monitoring period it is determined that mitigation measures are failing, i.e. that performance standards cannot be met through routine maintenance, additional measures will be undertaken to ensure success. Failed sites will be thoroughly studied to determine mechanisms leading to failure (lack of proper hydrology, soils, soil chemistry, topography, etc.). Remedial actions, including but not limited to, regrading, construction of hydrologic sources, or soil replacement, will be undertaken immediately. Once remedial actions have been implemented plant materials and seed application appropriate for performance standards will be installed. Monitoring of any failed mitigation site will begin following completion of remedial actions and replanting. Monitoring and maintenance will be conducted for a minimum of five years or until accepted by the Corps.

SECTION 5, PART A - MITIGATION CONSTRUCTION

SHEET REFERENCE: Mitigation Construction Plan W-5

5.A.1 Wetland mitigation will occur in revised Sites 1, 2, 3, A, C, D, F & G.

TABLE 1 - Mitigation Work Plan/Timeline

Mitigation tasks include concurrent documentation and reporting as required by Corps conditions of verification. The schedule for each mitigation site includes prep, soil reconstruction, and planting according to specifications.

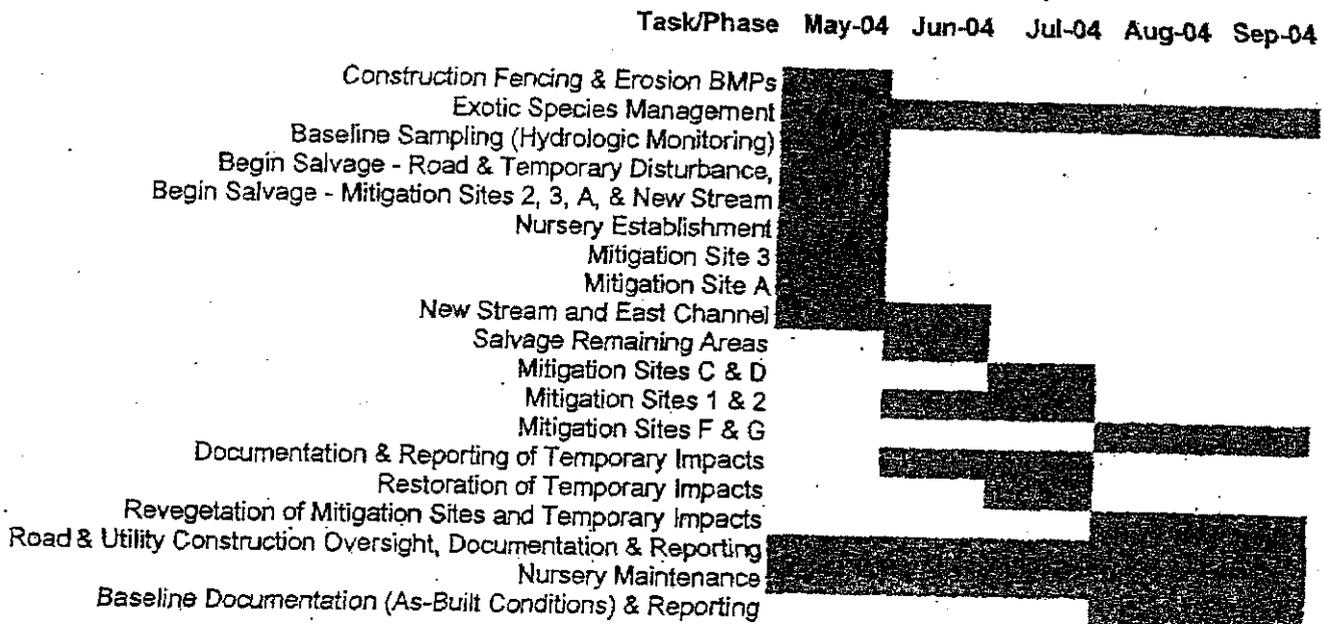


TABLE 2 - Mitigation Plant Communities by Site

Site	Total AC (SF)	Plant Communities	Location/Description
Site 1	0.31 (13,378.65)	Willow/Sedge & Sedge/Grass	Disturbed wetland/upland vegetation area in Tract A & Open Space near highway
Site 2	0.41 (17,726.56)	Willow/Sedge & Sedge/Grass	Abandoned west road
Site 3	0.07 (3,111.39)	Aquatic/Emergent Sedge	West ditch, parallel to west property line
Site A	0.01 (637.44)	Willow/Sedge	Ditch on lot 2 connecting west ditch and abandoned west road
Site C	0.04 (1,549.59)	Sedge/Grass	Upland vegetation area near entrance
Site D	0.01 (542.93)	Sedge/Grass	Upland vegetation area on side-cast berm near old road junction
Site F	0.01 (307.85)	Sedge/Grass	Upland vegetation area parallel to roadway at foot of retaining wall (west).
Site G	0.02 (698.49)	Sedge/Grass	Upland vegetation area parallel to roadway at foot of retaining wall (east).
Total	0.87 (37,952.90)		

TABLE 3 - Mitigation Ratio

Total Permanent Impacts for Construction 0.50 AC

Total Compensatory Mitigation Acreage as Shown on 0.87 AC

Compensatory Mitigation Ratio as Proposed- 1.7:1

MITIGATION ACTIONS, BY SITE

Mitigation Actions Site 1

5.A.2 Soil profile test pits will be dug to determine to what depth overburden must be removed to expose underlying wetland soils. Removal of existing overburden to the depth of original wetland soil grade will be approximately 2'-4' in most places, but up to 6' in the location of some mounds and berms.

5.A.3 Finish grade of Site 1 is to be according to Sheet W-5, Mitigation Construction Plan.

5.A.4 Prior to excavation, management of non-native plant species (herbicide application & mechanical removal), and salvage of existing wetland plant species are to be conducted (refer to Section 9)

5.A.5 During excavation all soil material is to be sorted and saved for application in other mitigation soil reconstruction areas. Mollisols (high organic wetland topsoil) are to be sorted from mineral soil, gravel, and rock to the greatest extent possible. All of these materials are present in the overburden, as these are the spoils of wetland soils from the previous road construction efforts.

5.A.6 Refer to Section 7 for BMP specifications associated with this mitigation site.

Mitigation Hydrology Site 1

5.A.7 The finished grade, exhibiting slight depressions and other microtopographic features, is expected to create saturation in the upper 12" for $\geq 5\%$ of the growing season by accessing the apparent watertable. Presence of groundwater is to be verified by soil samples in the wetland complex surrounding Mit. Site 1. Surface flow is to be reintroduced to the Site by the creation of small surface diversion flowlines from the two culvert outlets at the north edge of Site 1, and then branching throughout site 1. The finished grade of Site 1 will also assist in the distribution of surface water.

5.A.8 Refer to Section 10 for planting specifications for this mitigation site.

Mitigation Actions Site 2

5.A.9 Finish grade conditions are intended to re-establish a continuous grade between the wetland terraces on lot 20 to the east, and lots 1, 2, 3, & 4 to the west.

5.A.10 Following completion of utility installation, existing roadside slopes are to be excavated to the depth of the A2 soil horizon and approximately sixty feet (60') wide, and existing road surface is to be graded according to Liner Installation Details (see Sheet W-12, Liner Installation Details). The 3-ply liner, consisting of 40 mil PVC sandwiched between two layers of Mirafi 1100 N (or equivalent) is to be installed at a depth of approximately thirty inches (30"), between the A1 & A2 soil horizons, under the entire mitigation Site 2. Approximately five to eight (5'-8') feet at the south/east end of the liner is to be angled upward to block and divert sheet flows into existing wetlands to the west.

5.A.11 Finished grade will include a series of waterbars placed approximately every fifty feet (50') to divert surface water flows to the west.

5.A.12 Prior to excavation Salvage of existing wetland plant species must be conducted (refer to Section 9).

5.A.13 During excavation all soil material is to be sorted and saved for application in soil reconstruction areas.

5.A.14 Soil is to be reconstructed according to adjacent native soil structure, A2 Horizon approx. 6", A1 Horizon approx. 24"-30", O1 & O2 Horizons approx. 2"-3".

5.A.15 Refer to Section 11 for soil specifications.

Mitigation Hydrology Site 2

5.A.16 Reconstructed soil is intended to effectively convey ground water across the existing road cut. The liner will prohibit sheet flows from falling downward to the utility trench, creating a perched water table and conveying suspended water to the west.

5.A.17 Presence of groundwater is to be verified by soil samples in the wetland complex surrounding Mit. Site 2. Surface water will be re-established in a series of historic flowlines to convey flows to the west. A flow splitter is to be constructed according to Section 6. The splitter will convey approximately 50% of surface flows from Stream Area S-B in each direction, west into the historic flowlines (area S-C), and east into a newly constructed channel (area S-D).

Mitigation Actions Site 3

5.A.18 Mitigation actions in this site are intended to create greater capture, infiltration, and diversion of both surface and ground water to improve and restore hydrology to the wetland complex.

5.A.19 Existing beaver dams identified for improvement are to be raised to increase pond water surface elevations or fortified from leakage or both according to the following notes. Presence, or lack, of soil saturation is to be verified adjacent to existing dams and ponds by soil samples.

5.A.20 New permeable dams, to replicate beaver dams, are to be constructed at intervals indicated on Sheet W-5 to create new ponds for impoundment, infiltration, and diversion of surface and ground water. Presence, or lack, of soil saturation is to be verified adjacent to new dam/pond locations both prior to and following dam construction.

5.A.21 Moving downslope through mitigation site 3 new dam locations and existing dams will be encountered according to Table 3.

5.A.22 All new dams are to be constructed according to New Dam Section detail on Sheet 12, and according to field-fit instruction by Principal Ecologist.

5.A.23 New dam construction is to be a two-stage construction. Two layers of CF-9 or equivalent coir blanket are to be placed and staked on the down stream side of the dam. The lower blanket is to be wrapped up and over the stage-one fill, rock, vegetated organic soil, bundles of live and dead willow cuttings (to be collected on-site), and the first two-to-three buried logs, according to Section detail on Sheet 11. The second coir blanket is to be wrapped up and over the stage-two fill, similar to stage-one fill, according to Section detail on Sheet 12.

5.A.24 The completed two-stage construction is to be staked according to Section detail on Sheet 12.

5.A.25 Minimums of two stake sets are to be installed, to a maximum of 24" between stake sets.

5.A.26 Improved beaver dam construction is to be constructed according to Existing Beaver Dam detail on Sheet 12.

5.A.27 Improved dam construction is to be conducted similar to stage-two construction noted above (Note 5.A.23). Coir blanket is to be staked on the downstream side of the dam and wrapped up and over fill materials and buried logs according to Section detail on Sheet 12.

5.A.28 The completed construction is to be staked according to Section detail on Sheet 12.

5.A.29 Minimums of two stake sets are to be installed, to a maximum of 24" between stake sets.

Table 4 - Mitigation Site 3 New and Existing Dam Locations

Dam #	New/Existing	Improve/Remain	Distance From North	Distance From Previous
N1	New		39'	0
N2	New		86'	47'
E1	Existing	Improve	121'	35'
E2	Existing	Remain	152'	31'
E3	Existing	Remain	164'	12'
E4	Existing	Improve	218'	56'
E5	Existing	Remain	257.5'	39.5'
N3	New		297'	39.5'
N4	New		351'	54'

N5	New		394'	43'
N6	New		445'	51'
N7	New		492'	47'
E6	Existing	Improve	507'	15'
E7	Existing	Improve	523'	16'
E8	Existing	Remain	562'	39'
E9	Existing	Remain	586'	6'

5.A.30 All dams new or improved are to be constructed to a maximum height that matches the surrounding ditch banks or elevation of historic side-cast materials.

5.A.31 All new dam locations are estimated to create a pond series where each pond water surface elevation matches the dam base elevation of the next upstream dam.

5.A.32 All new dam locations are to be verified in the field to match desired water surface elevations.

5.A.33 Soil materials required for dam construction will utilize excavated materials from mitigation sites 3 & A, and from recovery of easily accessible historic side-cast. No shrubs may be removed for soil recovery in this area.

5.A.34 Log materials required for dam construction should be conifers collected from other construction activities on site.

5.A.34 Rock materials required for dam construction should be collected from other construction activities on site.

5.A.35 All dam materials and construction activities are to be coordinated with Restoration Ecologist

Mitigation Hydrology Site 3

5.A.36 Hydrologic restoration in this site is for the restoration of ground and surface flows into the surrounding wetland complex. This series of ponds is fed by surface flows from the north, and by ground water seeping from the surroundings. The stream/pond series will be converted from the existing effluent stream flow to an influent stream flow.

Mitigation Actions Site A

5.A.37 All existing topsoil and vegetated matter sluffed down into the side of the ditch is to be excavated and saved for soil reconstruction. This material is suitable for replacement of the 01 & 02 horizons.

5.A.38 Soil is to be reconstructed according to adjacent native soil structure, A2 Horizon approx. 6", A1 Horizon approx. 24"-30", 01 & 02 Horizons approx. 2"-3".

5.A.39 Refer to Section 11 for soil specifications

5.A.40 Finished grade is to be continuous between adjacent wetland terraces and will include a series of waterbars to divert surface flows to the south and protect the ditch from erosion.

5.A.41 This site may serve as an access for mitigation construction in Site 3. Following excavation, and prior to soil reconstruction, a temporary bed of compacted gravel and cobble can be installed for manual transport of materials, labor foot traffic, and small equipment access.

5.A.42 Upon completion of Mitigation Site 3 construction work requiring this access, the temporary bed material is to be removed prior to soil reconstruction.

Mitigation Hydrology Site A

5.A.43 Reconstructed soil is intended to convey ground water and reconnect historic sheet flows. This ditch currently functions as an effluent stream. Following mitigation activities this area will reconnect sheet flows through this part of the wetland complex.

5.A.44 Restored sheet flows will recharge ground water to the south.

5.A.45 Surface water will be shed from the reconstructed surface to the south by a series of waterbars. Standing water behind the water bars will percolate into the soil.

5.A.46 Surface flow in the reconnected historic flowline (near the east ¼ of ditch) will recharge surface flows to the wetland complex.

Mitigation Actions Site C

5.A.47 Removal and management of aggressive invasive non-native plant species, such as *Bromus* spp. and *Trifolium* spp.

5.A.48 Soil profile test pits will be dug to determine whether and if so, to what depth, overburden may be removed to expose underlying wetland soils, or to determine the need for soil replacement.

5.A.49 Site is to be planted and seed applied according to specifications in Sections 10 & 12, and as indicated on Sheets 10 & 11.

Mitigation Hydrology Site C

5.A.50 Surrounding soil moisture conditions (2001) indicate that this mitigation site will receive sufficient ground water saturation. Soil saturation is to be verified by samples in the wetland complex surrounding Mit. C. Ground water is to be the primary source of hydrology.

Mitigation Actions Site D

5.A.51 Removal and management of aggressive invasive non-native plant species, such as *Bromus* spp. and *Trifolium* spp.

5.A.52 Soil profile test pits will be dug to determine to what depth overburden will be removed to expose underlying wetland soils.

5.A.53 Site is to be planted and seed applied according to specifications in Sections 10 & 12, and as indicated on Sheets 10 & 11.

5.A.54 Overburden removed is to be evaluated for soil reconstruction in other mitigation sites.

Mitigation Hydrology Site D

5.A.55 Surrounding soil moisture conditions (2001) indicate that this mitigation site will receive sufficient ground water saturation. Soil saturation is to be verified by samples in the wetland complex surrounding Mit. C. Ground water is to be the primary source of hydrology.

Mitigation Actions Site F

5.A.56 Removal and management of aggressive invasive non-native plant species, such as Bromus spp. and Trifolium spp.

5.A.57 Soil reconstruction is to be consistent with surrounding wetland habitat.

5.A.58 Site is to be planted and seed applied according to specifications in Sections 10 & 12, and as indicated on Sheets 10 & 11.

Mitigation Hydrology Site F

5.A.59 Surface flows will be connected to the Site from the roadside stormwater flows along the west side of the road.

Mitigation Actions Site G

5.A.60 Removal and management of aggressive invasive non-native plant species, such as Bromus spp. and Trifolium spp.

5.A.61 Soil reconstruction is to be consistent with surrounding wetland habitat.

5.A.62 Site is to be planted and seed applied according to specifications in Sections 10 & 12, and as indicated on Sheets 10 & 11.

Mitigation Hydrology Site G

5.A.63 Surface flows will be connected to the Site from the roadside stormwater flows along the east side of the road.

SECTION 6, PART A - STREAM CHANNEL CONSTRUCTION

SHEET REFERENCE: Stream Channel Construction Plan W-6

6.A.1 New Stream channel construction will be completed in four areas,
Stream Area S-A, culvert inlet between lots 6 & 7,
Stream Area S-B, new channel between lots 17 & 19
Stream Area S-C, West flow diversion across lot 20,
Stream Area S-D, the East flow diversion across lot 18.

Refer to channel Section details on Sheet W-6 for dimensions.

Stream Area S-A

6.A.2 Multiple drop structures are combined in this area to create a cascading flow, approximately a 10' vertical drop over a 40' horizontal area.

6.A.3 Each pool and drop set of the step-pool design drops approximately 3'.

6.A.4 Pools are created by flow constrictions of the boulder configurations of the drop structures.

6.A.5 The upper-most pool creates a diversion and saturation zone to sustain the hydrology of the surrounding wetlands.

6.A.6 A single 6" perforated PVC pipe is to be placed as shown on Sheet W-5. The pipe is to be capped and a clean-out installed on the distal end, and capped with a fine screen on the proximal end to filter litter and sediment.

Hydrology - Area S-A

6.A.7 The pipe diversion will fill with water from the stream flow and create a saturation zone in the existing channel to be closed, and maintain the restored wetlands.

Stream Area S-B

6.A.8 Stream channel construction in this area is to replace the historic channel. The historic channel is to remain intact for secondary flows.

6.A.9 Multiple riffle - pool and step series and meanders are combined to replicate the character of the historic stream. Point bars will be treated with cobble; cut banks will be protected with bio-logs or other geo-textile treatments. Final design specifications to be determined in the field by Principal Ecologist.

6.A.10 Constructed channel geometry and dimensions are based on stream channel measurements conducted on an upper reach of the same stream and in the historic channel.

Hydrology - Area S-B

6.A.11 Surface flows conducted through this channel will provide the primary surface feed for the riparian corridor and downstream wetland areas to the west and east parts of the overall wetland complex.

Stream Area S-C

6.A.12 West flow from the splitter (see detail Sheet W-6) to the historic network of flowlines throughout the wetland terrace, and conducting surface flows to the west to mitigation site two.

Hydrology - Area S-C

6.A.13 Surface flows conducted through the network of historic flowlines will provide the primary hydrology for the central wetland terrace and to mitigation site two.

Stream Area S-D

6.A.14 Surface flows conducted through the new east channel will provide the primary flows to the eastern portion of the wetland complex. During peak flows channel will overflow and provide supplementary hydrology to the central portion of the wetland complex prior to entering the culvert.

Hydrology - Area S-D

6.A.15 Surface flows provided by the new channel construction is the primary source for the new riparian corridor, the east portion of the wetland complex, and will provide supplemental hydrology to the central portion.

Flow Splitter

6.A.16 A flow splitter to conduct 50% of surface flow each to the east (S-D) and west (S-C) will be constructed of boulders and planted willow shrubs. Additional armoring may be provided with geo-textile treatments.

6.A.17 Exact location, dimension, and construction design/details are to be fitted in the field by Principal Ecologist.

6.A.18 Refer to plan detail on Sheet W-6 for preliminary flow splitter design.

SECTION 7, PART A - MITIGATION EROSION AND SEDIMENT CONTROL

SHEET REFERENCE: Mitigation Erosion and Sediment Control Plan W-7

7.A.1 All straw-bale check-dams and sediment fences are to be installed according to specifications prior to commencement of mitigation site work, see installation details on Sheet W-13.

7.A.2 All erosion and sediment control BMPs are to be maintained both during and after completion of wetland construction. All damaged fences or check-dams are to be repaired or replaced by Contractor(s) upon discovery or as informed.

7.A.3 Fences or dams must be cleaned out periodically depending on rate of sedimentation, to prevent overburdened structures leading to failure.

7.A.4 All practices are to remain in place and be maintained until all soil and vegetation has stabilized.

7.A.5 Straw bales are to be configured as indicated, staked to ensure tight joints, and must be embedded a minimum of 4".

7.A.6 Silt fence is to be Mirafi Pre-Fabricated Silt Fence or equivalent, and must be installed as indicated with loose fabric buried in a maximum 6" X 6" trench.

7.A.7 Upon removal of silt fences and straw bales, all disturbed soil area is to be revegetated with approved Seed Mix specified for the area.

7.A.8 All Mitigation Sites and roadside disturbance areas are to receive specified seed mixes, see Sheet W-8, Revegetation.

7.A.9 Mitigation Sites and roadside disturbance areas in the wetland complex are to receive SoilGuard® Bonded Fiber Matrix, or equivalent BFM product, applied according to manufacturer specifications, to protect against soil erosion and sedimentation of adjacent wetlands.

7.A.10 All roadsides outside of the wetland complex are to receive standard hydro-mulch applied according to manufacturer specifications for slope gradients, to protect against soil erosion and sedimentation of wetland and upland areas.

SECTION 8, PART A - CONSTRUCTION EROSION AND SEDIMENT CONTROL

SHEET REFERENCE: Construction Erosion and Sediment Control Plan W-8

8.A.1 Straw bale check dams are to be installed as road and utility construction progress.

8.A.2 Dewatering discharge must be contained in sediment ponds and filtered by a series of straw bale check dams before reaching the highway ditch or discharging into adjacent vegetation.

8.A.3 All straw bale dams must be maintained by conducting periodic cleaning and repair, or replaced as necessary to prevent failure.

8.A.4 All erosion and sediment control practices including, silt fences, straw bale check dams, and temporary sediment ponds, indicated for each phase of building construction are to be in place prior to commencement of construction.

8.A.5 Two silt fence specifications are included in this part of the project, refer to Sheet W-13 for details and specifications of fence along berm and channel (lots 17-18 & 19-20), and on lots 15 & 16. All other silt fence is to be Mirafi Pre-Fabricated Silt Fence or equivalent, installed as indicated, see Sheet W-13, and maintained or repaired periodically to prevent failure.

8.A.6 Erosion and sediment control practices are to remain in place and be maintained until all soil and vegetation has established and stabilized.

8.A.7 Energy dissipaters are to be installed at the outlets of culverts discharging into or immediately adjacent to wetland areas.

8.A.8 Energy dissipaters are to be installed at the time of culvert installation, and are to be maintained or replaced by the contractor in the event of failure during tenure of contractor on-site.

8.A.9 Refer to Energy Dissipater details on Sheet W-13 for installation. Dissipaters are to be constructed of minimum 24" boulders as shown in details for scour protection and flow splitting; and 3" gravel is to be installed as shown to a minimum of 6" deep.

8.A.10 The size and configuration of each dissipater is designed for each location and should not be substituted.

SECTION 9, PART A - PLANT AND SOIL SALVAGE

SHEET REFERENCE: Plant and Soil Salvage Plan W-9

9.A.1 Salvage of wetland plant species and wetland soils is to be conducted as indicated for use in mitigation construction.

9.A.2 All salvaged plants are to be hand dug or removed with a mechanical tree-spade and balled-and-burlapped, and placed in the temporary wetland storage nursery (location to be determined, and design to follow).

9.A.3 A few test plants of each target species are to be removed from the ground and examined to determine root structure & root zone for optimal transplant size.

9.A.4 First priority transplants are those plants growing in soil. Plants growing in the gravel roadbed are lower priority.

9.A.5 Approximately 350 willows of various species (*Salix* spp) and 60 Alders (*Alnus incana tenuifolius*) are specified on the planting plans.

9.A.6 Target quantities of 400 and 75 respectively, will allow for loss during digging, storage, and planting due to transplant shock.

9.A.7 All transplants are to be supplemented with Superthrive®, Wiltpruf, or equivalent transplant stress reducer.

9.A.8 All salvaged soil material is to be sorted to retrieve Mollic soil from sand, gravel, and rock to the highest extent possible.

9.A.9 Mixed soil material should be placed according to most appropriate relationship with adjacent native soil.

9.A.10 All areas where non-native species are present in soil to be salvaged, appropriate management techniques, such as herbicide application or mechanical removal, are to be employed to reduce potential "transplanting" of non-native species.

SECTION 10, PART A - PLANTING SPECIFICATIONS

SHEET REFERENCE: Planting Plan W-10

General Planting Notes

10.A.1 All herbaceous plant materials in all areas of wetland design drawings are to be planted ~18" O.C. variably, and in uneven quantity groupings.

10.A.2 Refer to the written specifications provided in this document as well as planting details on sheets W-10 for plant species allocations within each mitigation area.

10.A.3 All shrubs noted in all areas of wetland design drawings are to be planted 4'-6' O.C. (small shrubs) and 5'-10' (large shrubs) variably, and in uneven quantity groupings.

10.A.4 Refer to planting details, sheet W-10 for shrub species allocations within each mitigation area.

10.A.5 Backfill on all B&B plantings is to be conducted according to specifications, and details shown sheet W-13. See soil specifications in Section 11 for recommended topsoil, subsoil, and backfill mixes.

10.A.6 The wetland plant lists include both nursery and transplant materials (B&B, container, starter sizes) and seed mix plant species.

10.A.7 Refer to planting plan sheet W-9, Mitigation Site Planting Specifications below, and seed mix specifications for species allocations.

SECTION 10, PART B - PLANT LIST TABLES

10.B.1 These are comprehensive plant lists all species here are acceptable for use as defined. Any substitutes MUST come from these pages and MUST be approved in advance of supply by Principal Ecologist see Planting Plan sheet W-10 and mitigation sites planting specifications on following pages for species allocations by mitigation area. Wetland plant indicator status determined from the National List of Plant Species That occur in Wetlands.

TABLE 5 - WETLAND PLANT LIST

Graminoids	CODE	INDICATOR
<i>Carex aquatilis</i> , Aquatic Sedge	caraqu	obl
<i>Carex microptera</i> , Smallwinged Sedge	carmic	fac
<i>Carex nebrascensis</i> , Nebraska Sedge	carneb	obl
<i>Carex urticulata</i> (<i>rostrata</i>), (Beaked Sedge)	carurt	obl
<i>Eleocharis palustris</i> , Spikerush	elep	obl
<i>Juncus balticus</i> , Baltic Rush	junbal	facw
<i>Beckmannia syzigachne</i> , Beckman's Sloughgrass	becsyz	obl
<i>Calamagrostis canadensis</i> , Reedgrass	calcan	obl
<i>Calamagrostis strictus</i> , Reedgrass	calstr	facw
<i>Deschampsia cespitosa</i> , Tufted Hairgrass	desces	facw

Forbs	<i>Glyceria striata</i> , Fowl Mannagrass	glystr	obl
	<i>Aconitum columbianum</i> , Monkshood	acocol	facw
	<i>Cardamine cordifolia</i> , Bittercress	carcor	facw+
	<i>Delphinium barbeyi</i> , Delphinium	delbar	fac
	<i>Geum macrophyllum</i> , Large-leafed Avens	geumac	obl
	<i>Heracleum spondylium</i> , Cow Parsnip	herspo	facw
	<i>Iris missouriensis</i> , Blue Flag Iris	irimis	facw
	<i>Mertensia ciliata</i> , Mountain Bluebells	mercil	obl
	<i>Pedicularis groenlandica</i> , Pink Elephants	pedgro	obl
	<i>Psychrophila leptosepala</i> , Marsh Marigold	psylep	obl
	<i>Trollius albiflorus</i> , Globeflower	troalb	obl
Shrubs	<i>Alnus incana tenuifolius</i> , Thin-Leafed Alder	alnten	facw
	<i>Betula glandulosa</i> , Bog Birch	betgla	facw
	<i>Salix monticola</i> , Willow	salmon	facw+
	<i>S drummondiana</i> , Willow	saldru	facw
	<i>S scouleriana</i> , Willow	salsco	facu
	<i>S geeyeriana</i> , Willow	salgey	facw+
	<i>S wolfii</i> , Willow	salwol	facw+

SECTION 10, PART C - MITIGATION SITES PLANTING SPECIFICATIONS

10.C.1 All open soil area of the wetland mitigation sites are to be planted ~18" O.C. with a variety of graminoid plant species (sedges, rushes, grasses), and forbs (herbaceous perennials). See below and sheet W-10 for species allocation by mitigation site. (Average count per mitigation site can be obtained by multiplying total square footage of aerial distribution of each group by 0.75)

10.C.2 The open soil area of the wetland mitigation sites is all area not covered by boulders, trees, shrubs, or existing ground cover vegetation specified to remain.

10.C.3 All shrubs noted in all areas of wetland design drawings are to be planted 4'-6' O.C. (small shrubs) and 5'-10' (large shrubs) variably, and in uneven quantity groupings. Refer to planting details sheet W-13 for installation, and sheet W-10 for shrub species allocations within each mitigation site.

10.C.4 Planting of all graminoid, forb, and shrub species will be coordinated along moisture gradients expected in the wetland mitigation areas and along flows.

10.C.5 All Mitigation Sites are to receive both, specified plantings and specified seed mix application. See sheet W-11, Revegetation Plan, and Section 12 for seed mixes and application.

TABLE 6 - Mitigation Site 1

10.C.6 Refer to Sheet W-10 for hatch areas indicating distribution of the following groups.

	CODE	INDICATOR
<i>Carex nebrascensis</i> , Nebraska Sedge	carneb	obl
<i>Carex aquatilis</i> , Aquatic Sedge	caraqu	obl
<i>Carex urticulata (rostrata)</i> , (Beaked Sedge)	carurt	obl
<i>Beckmannia syzigachne</i> , Beckman's Sloughgrass	becsyz	obl
<i>Geum macrophyllum</i> , Large-leafed Avens	geumac	obl
<i>Psychrophila leptosepala</i> , Marsh Marigold	psylep	obl

<i>Deschampsia cespitosa</i> , Tufted Hairgrass	desces	facw
<i>Glyceria striata</i> , Fowl Mannagrass	glystr	obl
<i>Calamagrostis strictus</i> , Reedgrass	calstr	facw
<i>Iris missouriensis</i> , Blue Flag Iris	irimis	facw
<i>Aconitum columbianum</i> , Monkshood	acocol	facw
(10-12 Total, See W-7)		
<i>Alnus incana tenuifolius</i> , Thin-Leafed Alder	alnten	facw
(50-60 Total, See W-7)		
<i>Salix monticola</i> , Willow	salmon	facw+
<i>S drummondiana</i> , Willow	saldru	facw
<i>S scouleriana</i> , Willow	salsco	facu
<i>S geeyeriana</i> , Willow	salgey	facw+
<i>S wolfii</i> , Willow	salwol	facw+

TABLE 7 - Mitigation Site 2

10.C.7 Refer to Sheet W-10 for areal extent of group distributions.

	CODE	INDICATOR
<i>Carex nebrascensis</i> , Nebraska Sedge	carneb	obl
<i>Carex aquatilis</i> , Aquatic Sedge	caraqu	obl
<i>Carex urticulata (rostrata)</i> , (Beaked Sedge)	carurt	obl
<i>Glyceria striata</i> , Fowl Mannagrass	glystr	obl
<i>Calamagrostis canadensis</i> , Reedgrass	calcan	obl
<i>Pedicularis groenlandica</i> , Pink Elephants	pedgro	obl
<i>Mertensia ciliata</i> , Mountain Bluebells	mercil	obl
<i>Psychrophila leptosepala</i> , Marsh Marigold	psylep	obl
<i>Beckmannia syzigachne</i> , Beckman's Sloughgrass	becsyz	obl
<i>Juncus balticus</i> , Baltic Rush	junbal	facw
<i>Juncus mertensianus</i> , Merten's Rush	junmer	facw
<i>Calamagrostis strictus</i> , Reedgrass	calstr	facw
<i>Deschampsia cespitosa</i> , Tufted Hairgrass	desces	facw
<i>Iris missouriensis</i> , Blue Flag Iris	irimis	facw
<i>Cardamine cordifolia</i> , Bittercress	carcor	facw+
<i>Heracleum spondylium</i> , Cow Parsnip	herspo	facw
(100-125 Total, See W-7)		
<i>Salix monticola</i> , Willow	salmon	facw+
<i>S drummondiana</i> , Willow	saldru	facw
<i>S scouleriana</i> , Willow	salsco	facu
<i>S geeyeriana</i> , Willow	salgey	facw+
<i>S wolfii</i> , Willow	salwol	facw+

Table 8 - Mitigation Site A

10.C.8 Refer to Sheet W-10 for areal extent of group distributions.

	CODE	INDICATOR
<i>Carex aquatilis</i> , Aquatic Sedge	caraqu	obl
<i>Carex urticulata (rostrata)</i> , (Beaked Sedge)	carurt	obl
<i>Eleocharis palustris</i> , Spikerush	elepals	obl
<i>Mertensia ciliata</i> , Mountain Bluebells	mercil	obl
<i>Aconitum columbianum</i> , Monkshood	acocol	facw
(50-60 Total, See W-7)		
<i>Salix monticola</i> , Willow	salmon	facw+
<i>S drummondiana</i> , Willow	saldru	facw
<i>S scouleriana</i> , Willow	salsco	facu
<i>S geeyeriana</i> , Willow	salgey	facw+
<i>S wolfii</i> , Willow	salwol	facw+

Table 9 - Mitigation Sites C & D

10.C.10 Refer to Sheet W-10 for areal extent of group distributions.

	CODE	INDICATOR
<i>Glyceria striata</i> , Fowl Mannagrass	glystr	obl
<i>Calamagrostis strictus</i> , Reedgrass	calstr	facw
<i>Iris missouriensis</i> , Blue Flag Iris	irimis	facw
<i>Pedicularis groenlandica</i> , Pink Elephants	pedgro	obl

Table 10 - Mitigation Site F & G

10.C.11 Refer to Sheet W-10 for areal extent of group distributions.

	CODE	INDICATOR
<i>Glyceria striata</i> , Fowl Mannagrass	glystr	obl
<i>Calamagrostis strictus</i> , Reedgrass	calstr	facw
<i>Iris missouriensis</i> , Blue Flag Iris	irimis	facw
<i>Pedicularis groenlandica</i> , Pink Elephants	pedgro	obl

NEW CHANNEL - PLANTING SPECIFICATIONS

Table 11 - Stream Area S-A

Refer to Sheet W-10 for areal extent of group distributions.

	CODE	INDICATOR
<i>Carex nebrascensis</i> , Nebraska Sedge	carneb	obl
<i>Carex aquatilis</i> , Aquatic Sedge	caraqu	obl
<i>Carex urticulata (rostrata)</i> , (Beaked Sedge)	carurt	obl
<i>Glyceria striata</i> , Fowl Mannagrass	glystr	obl
<i>Calamagrostis canadensis</i> , Reedgrass	calcan	obl
<i>Pedicularis groenlandica</i> , Pink Elephants	pedgro	obl
<i>Mertensia ciliata</i> , Mountain Bluebells	mercil	obl

<i>Psychrophila leptosepala</i> , Marsh Marigold	psylep	obl
(5-10 Total, See W-9)		
<i>Alnus incana tenuifolius</i> , Thin-Leafed Alder	alnten	facw
(10-15 Total, See W-9)		
<i>Salix monticola</i> , Willow	salmon	facw+
<i>S drummondiana</i> , Willow	saldru	facw
<i>S scouleriana</i> , Willow	salsco	facu
<i>S geeyeriana</i> , Willow	salgey	facw+
<i>S wolfii</i> , Willow	salwol	facw+

Table 12 - Stream Areas S-B, S-C, & S-D

Refer to Sheet W-10 for areal extent of group distributions.

	CODE	INDICATOR
<i>Carex nebrascensis</i> , Nebraska Sedge	carneb	obl
<i>Carex aquatilis</i> , Aquatic Sedge	caraqu	obl
<i>Carex urticulata (rostrata)</i> , (Beaked Sedge)	carurt	obl
<i>Glyceria striata</i> , Fowl Mannagrass	glystr	obl
<i>Calamagrostis canadensis</i> , Reedgrass	calcan	obl
<i>Pedicularis groenlandica</i> , Pink Elephants	pedgro	obl
<i>Mertensia ciliata</i> , Mountain Bluebells	mercil	obl
<i>Psychrophila leptosepala</i> , Marsh Marigold	psylep	obl
(20-25 Total, See W-9)		
<i>Alnus incana tenuifolius</i> , Thin-Leafed Alder	alnten	facw
(30-40 Total, See W-9)		
<i>Salix monticola</i> , Willow	salmon	facw+
<i>S drummondiana</i> , Willow	saldru	facw
<i>S scouleriana</i> , Willow	salsco	facu
<i>S geeyeriana</i> , Willow	salgey	facw+
<i>S wolfii</i> , Willow	salwol	facw+

SECTION 11, PART A - SOIL SPECIFICATIONS

11.A.1 If imported soil materials are required, earthworm castings, or materials of equivalent composition, are recommended for organic amendments. This material is rich in organic and low in nitrogenous components. Resource contacts can be obtained from Principal Ecologist

11.A.2 Peat moss and products including combined peat are to be avoided as amendments.

11.A.3 The construction of native soil on site consists of a significant layer of decomposing plant litter and a deep layer of organic soil underlain by a layer of sand/sand-gravel.

11.A.4 A generalized soil profile would demonstrate soil horizons, upper to lower, in the following sequence; O1, O2, A1, A2, A3, B1, B2, B3, C, & R. Native wetland soil on this project area demonstrates the following materials corresponding to the O and A horizons.

Table 13 - Native & Reconstructed Soil Descriptions

Horizon	General Description	On-Site Representation	Reconstructed Soil
01	Undecomposed litter	Same 1"-3"	Salvaged material or mulched
02	Decomposing litter	Same 1"-3"	Salvaged or amended material
A1	Rich organic/moderate biological activity and mineral matter	Same 15"-30"	Salvaged or amended material
A2	Organic/silt/sand increased mineral component	Sandy-gravel 6"-10"	Salvaged or sand-gravel

11.A.5 All reconstructed soils will be applied to a depth (horizon thickness) corresponding with native soils immediately adjacent to the reconstruction site.

11.A.6 Amended soils for reconstruction are to be prepared as follows:

11.A.7 01 Horizon - Soil Guard Bonded Fiber Matrix is to be applied to all mitigation sites regardless of salvaged materials employed. If no 01 horizon is present, this application will replace 01 material.

11.A.8 02 Horizon - Earthworm castings are to be combined with suitable but low organic soil. Amended soil should equal 50% organic amendment component.

11.A.9 A1 Horizon - Earthworm castings are to be combined with suitable but reduced organic soil. Amended soil should equal minimum 30% organic amendment component/maximum 70% mineral component (sand or silt).

11.A.10 A2 Horizon - Sand or sand/gravel mix, using 1/4" minus gravel.

Planting Backfill Soil

11.A.11 Backfill soil for all plantings is to be equal to the surrounding native soil horizon, A1 or A2 depending on depth, and top-dressed with 01 and/or 02 material. See above for matching reconstructed and native soils.

SECTION 12, PART A - REVEGETATION

SHEET REFERENCE: Revegetation Plan W-11

SEED MIX AND APPLICATION SPECIFICATIONS

12.A.1 All seed mix application as indicated on the Revegetation Plan, Sheet W-11, will be hand-sown application and raked.

12.A.2 All wetland mitigation sites are to receive SoilGuard Bonded Fiber Matrix, applied according to manufacturer specification immediately following seed application for soil erosion protection.

12.A.3 All Mix 3 areas are to receive clean hydro-mulch (no seed in slurry) immediately following seed application for soil erosion protection.

12.A.4 Application rates are as follows:

- Mix 1 ½ pound pls/1000 SF
- Mix 2 ½ pound pls/1000 SF
- Mix 1 1 pound pls/1000 SF

12.A.5 All seed mixes will be supplied to contractor by Principal Ecologist.

Seed Mix List Tables

12.A.6 All areas identified for seed application will receive plantings and seed according to sheets W-10 and W-11 See Planting Plan, sheet W-10 for planted species allocations. See Revegetation Plan, Sheet W-11 for seed mix allocation areas.

Table 14 - SEED MIX 1 (WETLAND)

	CODE	INDICATOR
<i>Carex aquatilis</i> , Aquatic Sedge	caraqu	obl
<i>Carex microptera</i> , Smallwinged Sedge	carmic	fac
<i>Carex urticulata (rostrata)</i> , (Beaked Sedge)	carurt	obl
<i>Juncus balticus</i> , Baltic Rush	junbal	facw
<i>Glyceria striata</i> , Fowl Mannagrass	glystr	obl
<i>Beckmannia syzigachne</i> , Beckman's Sloughgrass	becsyz	obl

Table 15 - SEED MIX 2 (TRANSITIONAL-MOIST)

<i>Agrostis scabra</i> , Native Ticklegrass	agrsca	fac
<i>Deschampsia cespitosa</i> , Tufted Hairgrass	desces	facw
<i>Calamagrostis strictus</i> , Reedgrass	calstr	facw

Table 16 - SEED MIX 3 (DRY)

		ALL UPLAND Or non-indicator
<i>Blepharoneuron tricholepis</i> , Pine Dropseed	bletri	
<i>Festuca idahoensis</i> , Idaho Fescue	fesida	
<i>Festuca saximontana</i> , Alpine Fescue	fessax	
<i>Festuca thurberi</i> , Thurber's Fescue	festhu	
<i>Poa alpina</i> , Alpine Bluegrass	poaalp	
<i>Poa compressa</i> , Canada Bluegrass	poacom	
<i>Achillea lanulosa</i> , Native Yarrow	achlan	
<i>Linum lewisii</i> , Native Flax	linlew	
<i>Penstemon strictus</i> , Rocky Mountain Penstemon	penstr	
<i>Thermopsis montanus</i> , Golden Banner	themon	

SECTION 13, PART A - PERFORMANCE STANDARDS,
MONITORING, MAINTENANCE & CONTINGENCY PLAN

13.A.1 Baseline conditions for monitoring success is to be based on as-built reports to be prepared following completion of mitigation work. Annual monitoring will occur as indicated below.

13.A.2 Herbaceous Vegetation Stratum - Performance standards include 90% herbaceous cover by hydrophytes by the end of 5 years. Permanent line intercept transect plots will be established in each mitigation site. Additional random sample plots will be located in each mitigation site. Annual monitoring will occur in July.

13.A.3 Shrub Stratum - Stem counts and counts of individual shrubs to determine percent survival of installed plants will be conducted in July of each year. Current Year's Growth (CYG) will be determined for each year of monitoring based on random stem sampling of woody species. Controls for CYG will be

established for each year of monitoring by random stem sampling of woody species in undisturbed areas of the site. CYG measurements will be conducted in August of each year.

13.A.5 Hydrology - Surface water depths and/or flow will be monitored each year during peak runoff. Soil samples to determine presence of saturation in the upper 12" will be conducted monthly between May and October of each year. Soil auger samples will be randomly located throughout the site and in mitigation sites. Groundwater test wells will be monitored monthly between April and October of each year. Test wells are located both upgradient and downgradient of the roadway as well as in various locations in the wetland complex.

13.A.6 Hydrologic monitoring will begin prior to commencement of mitigation work (May 2003). Vegetation monitoring will begin in the first year following completion. All vegetation plots will have permanently marked and registered (compass bearing) photo points. All monitoring will be conducted for a minimum of five years, or until accepted by the Corps. Reporting will be prior to September 30 of each year.

13.A.7 Maintenance - Interim remediation during the 5-year monitoring period will include replacement of plant materials to meet performance standards. Management of non-native plant species will be conducted as necessary to meet performance standards.

APPENDIX 1

Responsible Parties

Beaver Brook, LLC
Craig Nelson
Terry Novak
Barbara Schneeman

P.O. Box 2383 Dillon, CO 80435
970.468.9240

Best Ecological Design Group (Mitigation Design, Construction, Monitoring, & Reporting)
Virgil O. Best II, Principal Ecologist

P.O. Box 8202 Breckenridge, CO 80424
970.453.9469

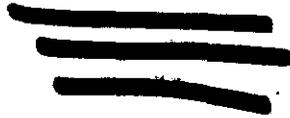
Site Protection in Perpetuity

To protect the site in perpetuity the wetland areas have been placed under a conservation easement in favor of Summit County, Colorado.

Long Term Monitoring & Management/Financial Assurance

Long term monitoring and management has been committed to agreements with Summit County as part of the approval process and is also committed to in the covenants contained in the condominium declaration for the project. Beaver Brook, LLC has put approximately \$10,000.00 in escrow with the Summit County Trails and Open Space Department to fund management and maintenance of the wetlands in perpetuity.

APPENDIX 2



DEER CREEK AT KEYSTONE WETLAND MITIGATION PLANS

CONSTRUCTION DOCUMENTS

MITIGATION DESIGN, MITIGATION CONSTRUCTION, WETLAND PERMITTING

BEST ECOLOGICAL DESIGN GROUP

VIRGIL O. BEST II, PRINCIPAL ECOLOGIST
P.O. BOX 9020
BIRMGHAM, AL 35208

WETLAND PERMITTING

CONTACT:
MARKETPLACE ARCHITECTS
P.O. BOX 9020
BIRMGHAM, AL 35208

MITIGATION CONSTRUCTION

CONTACT:
MARKETPLACE ARCHITECTS
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WETLAND PERMITTING

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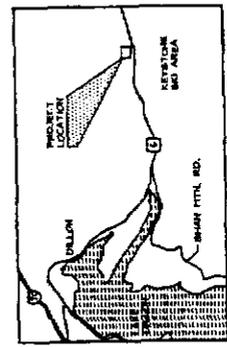
MITIGATION CONSTRUCTION

CONTACT:
MARKETPLACE ARCHITECTS
P.O. BOX 9020
BIRMGHAM, AL 35208

SHEET INDEX

- CS - COVER SHEET & GENERAL NOTES
- M - GENERAL SITE PLAN
- M2 - WETLAND DELINEATION PLAN
- M3 - EXISTING HYDROLOGIC PLAN
- M4 - WETLAND DISTURBANCE PLAN AND IMPACT
- M5 - MITIGATION CONSTRUCTION PLAN
- M6 - CHANNEL DESIGN ENLARGED PLAN AND DETAILS
- M7 - MITIGATION BRIDGE AND RESTRICTION PLAN
- M8 - CONSTRUCTION BRIDGE AND RESTRICTION PLAN
- M9 - PLANT AND SOIL SALVAGE PLAN
- M10 - PLANTING PLAN
- M11 - REVEGETATION PLAN
- M12 - DETAILS
- M13 - DETAILS
- M14 - ROAD SECTIONS AND DETAILS
- M15 - PHOTO REFERENCE PLAN

ADDITIONAL - ROAD PROFILE (PAGE NEXT DRAWING SHEET 2)



VICINITY MAP
N.T.S.

- GENERAL NOTES**
- 1.1.1. REFER TO CIVIL ENGINEERING ARCHITECTURAL AND CONSULTING ECOLOGIST (CEA) FOR ALL WETLAND INFORMATION AND NOT SHOW. CONTRACTORS SHALL BE RESPONSIBLE FOR VERIFYING THE CONDITIONS PRIOR TO COMMENCING SITE WORK.
 - 1.1.2. CONTRACTOR(S) SHALL BE RESPONSIBLE FOR NOTIFYING PRINCIPAL ECOLOGIST (PE) OF ANY CHANGES TO THE MITIGATION PLAN THAT MAY CAUSE THE CONTRACTOR TO DEVIATE FROM THE MITIGATION DESIGN REQUIREMENTS.
 - 1.1.3. ALL WETLAND MITIGATION DESIGN DETAILS AND SPECIFICATIONS WITHIN MITIGATION CONSTRUCTION PLAN SHALL BE CONSIDERED AS PART OF THE MITIGATION DESIGN. CONTRACTOR(S) SHALL NOT BE RESPONSIBLE FOR NOTIFYING PRINCIPAL ECOLOGIST (PE) OF ANY CHANGES TO THE MITIGATION PLAN THAT MAY CAUSE THE CONTRACTOR TO DEVIATE FROM THE MITIGATION DESIGN REQUIREMENTS.
 - 1.1.4. CONTRACTOR(S) SHALL BE RESPONSIBLE FOR PRE-LOCATING ALL EXISTING DRAINAGE AND UNDERGROUND UTILITIES PRIOR TO INSTALLATION AND RELATED WORK. CONTRACTOR(S) SHALL BE RESPONSIBLE FOR NOTIFYING PRINCIPAL ECOLOGIST (PE) OF ANY CHANGES TO THE MITIGATION PLAN THAT MAY CAUSE THE CONTRACTOR TO DEVIATE FROM THE MITIGATION DESIGN REQUIREMENTS.
 - 1.1.5. ALL MITIGATION DESIGN DETAILS AND SPECIFICATIONS WITHIN MITIGATION CONSTRUCTION PLAN SHALL BE CONSIDERED AS PART OF THE MITIGATION DESIGN. CONTRACTOR(S) SHALL NOT BE RESPONSIBLE FOR NOTIFYING PRINCIPAL ECOLOGIST (PE) OF ANY CHANGES TO THE MITIGATION PLAN THAT MAY CAUSE THE CONTRACTOR TO DEVIATE FROM THE MITIGATION DESIGN REQUIREMENTS.
 - 1.1.6. CONTRACTOR(S) SHALL BE RESPONSIBLE FOR NOTIFYING PRINCIPAL ECOLOGIST (PE) OF ANY CHANGES TO THE MITIGATION PLAN THAT MAY CAUSE THE CONTRACTOR TO DEVIATE FROM THE MITIGATION DESIGN REQUIREMENTS.
 - 1.1.7. CONTRACTOR(S) SHALL BE RESPONSIBLE FOR NOTIFYING PRINCIPAL ECOLOGIST (PE) OF ANY CHANGES TO THE MITIGATION PLAN THAT MAY CAUSE THE CONTRACTOR TO DEVIATE FROM THE MITIGATION DESIGN REQUIREMENTS.
 - 1.1.8. CONTRACTOR(S) SHALL BE RESPONSIBLE FOR NOTIFYING PRINCIPAL ECOLOGIST (PE) OF ANY CHANGES TO THE MITIGATION PLAN THAT MAY CAUSE THE CONTRACTOR TO DEVIATE FROM THE MITIGATION DESIGN REQUIREMENTS.
 - 1.1.9. CONTRACTOR(S) SHALL BE RESPONSIBLE FOR NOTIFYING PRINCIPAL ECOLOGIST (PE) OF ANY CHANGES TO THE MITIGATION PLAN THAT MAY CAUSE THE CONTRACTOR TO DEVIATE FROM THE MITIGATION DESIGN REQUIREMENTS.
 - 1.1.10. CONTRACTOR(S) SHALL BE RESPONSIBLE FOR NOTIFYING PRINCIPAL ECOLOGIST (PE) OF ANY CHANGES TO THE MITIGATION PLAN THAT MAY CAUSE THE CONTRACTOR TO DEVIATE FROM THE MITIGATION DESIGN REQUIREMENTS.

- 1.1.11. CONTRACTOR(S) SHALL BE RESPONSIBLE FOR NOTIFYING PRINCIPAL ECOLOGIST (PE) OF ANY CHANGES TO THE MITIGATION PLAN THAT MAY CAUSE THE CONTRACTOR TO DEVIATE FROM THE MITIGATION DESIGN REQUIREMENTS.
- 1.1.12. CONTRACTOR(S) SHALL BE RESPONSIBLE FOR NOTIFYING PRINCIPAL ECOLOGIST (PE) OF ANY CHANGES TO THE MITIGATION PLAN THAT MAY CAUSE THE CONTRACTOR TO DEVIATE FROM THE MITIGATION DESIGN REQUIREMENTS.
- 1.1.13. CONTRACTOR(S) SHALL BE RESPONSIBLE FOR NOTIFYING PRINCIPAL ECOLOGIST (PE) OF ANY CHANGES TO THE MITIGATION PLAN THAT MAY CAUSE THE CONTRACTOR TO DEVIATE FROM THE MITIGATION DESIGN REQUIREMENTS.
- 1.1.14. CONTRACTOR(S) SHALL BE RESPONSIBLE FOR NOTIFYING PRINCIPAL ECOLOGIST (PE) OF ANY CHANGES TO THE MITIGATION PLAN THAT MAY CAUSE THE CONTRACTOR TO DEVIATE FROM THE MITIGATION DESIGN REQUIREMENTS.
- 1.1.15. CONTRACTOR(S) SHALL BE RESPONSIBLE FOR NOTIFYING PRINCIPAL ECOLOGIST (PE) OF ANY CHANGES TO THE MITIGATION PLAN THAT MAY CAUSE THE CONTRACTOR TO DEVIATE FROM THE MITIGATION DESIGN REQUIREMENTS.
- 1.1.16. CONTRACTOR(S) SHALL BE RESPONSIBLE FOR NOTIFYING PRINCIPAL ECOLOGIST (PE) OF ANY CHANGES TO THE MITIGATION PLAN THAT MAY CAUSE THE CONTRACTOR TO DEVIATE FROM THE MITIGATION DESIGN REQUIREMENTS.
- 1.1.17. CONTRACTOR(S) SHALL BE RESPONSIBLE FOR NOTIFYING PRINCIPAL ECOLOGIST (PE) OF ANY CHANGES TO THE MITIGATION PLAN THAT MAY CAUSE THE CONTRACTOR TO DEVIATE FROM THE MITIGATION DESIGN REQUIREMENTS.
- 1.1.18. CONTRACTOR(S) SHALL BE RESPONSIBLE FOR NOTIFYING PRINCIPAL ECOLOGIST (PE) OF ANY CHANGES TO THE MITIGATION PLAN THAT MAY CAUSE THE CONTRACTOR TO DEVIATE FROM THE MITIGATION DESIGN REQUIREMENTS.
- 1.1.19. CONTRACTOR(S) SHALL BE RESPONSIBLE FOR NOTIFYING PRINCIPAL ECOLOGIST (PE) OF ANY CHANGES TO THE MITIGATION PLAN THAT MAY CAUSE THE CONTRACTOR TO DEVIATE FROM THE MITIGATION DESIGN REQUIREMENTS.
- 1.1.20. CONTRACTOR(S) SHALL BE RESPONSIBLE FOR NOTIFYING PRINCIPAL ECOLOGIST (PE) OF ANY CHANGES TO THE MITIGATION PLAN THAT MAY CAUSE THE CONTRACTOR TO DEVIATE FROM THE MITIGATION DESIGN REQUIREMENTS.

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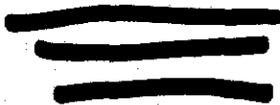
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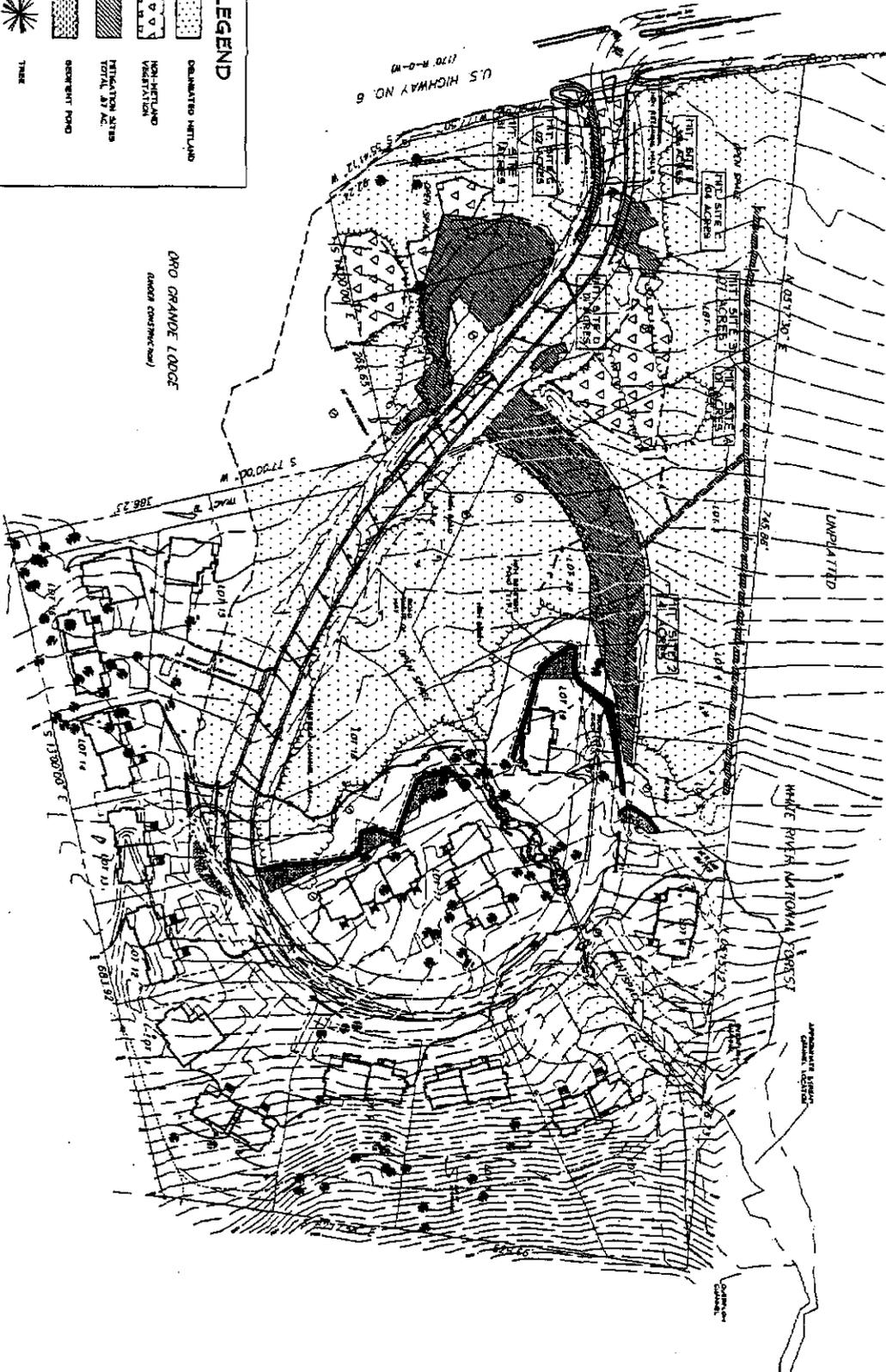
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APPENDIX 2



LEGEND

- OBLITERATED WETLAND
- NON-WETLAND VEGETATION
- VEGETATION AFTER TREATMENT AT 1% TOTAL AT 1%
- DEBRIS FILL
- TREE
- LINE OF WETLAND DELINEATION



GENERAL SITE PLAN



PROJECT & DRAWING INFORMATION

PROJECT: W-1
 DATE: 10/14/08
 DRAWING NO.: 108-100-0001-001
 SCALE: AS SHOWN
 SHEET: 1 OF 15

DESIGNER: BEST & ASSOCIATES, INC.
PREPARED FOR: [Client Name]

APPROVED: [Signature]

DATE: 10/14/08

DEER CREEK AT KEYSTONE WETLAND MITIGATION GENERAL SITE PLAN SUMMIT COUNTY, COLORADO

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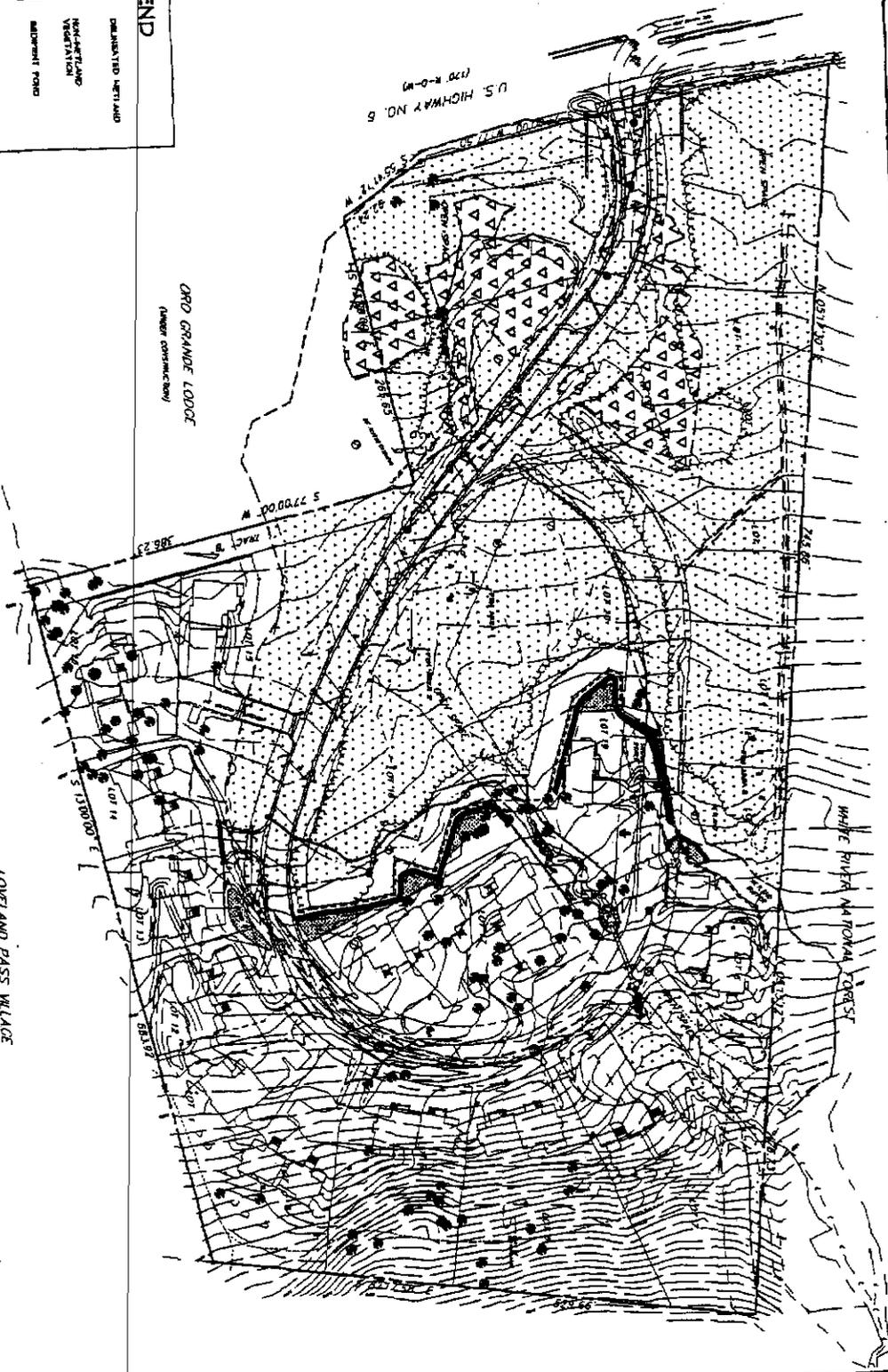
ECOLOGICAL DESIGN CONSULTING & CONSTRUCTION FOR WETLAND & UPLAND HABITATS

WETLAND DELINEATION, STREAM & RIVER RESTORATION, NATIVE LANDSCAPES

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LEGEND

-  DELIMITED WETLAND
-  NON-WETLAND VEGETATION
-  MIDWINTER POND
-  TREE
-  LINE OF WETLAND DELINEATION



LOWELAND PASS WILCOX
WETLAND DELINEATION
 - AREAL EXTENT OF JURISDICTIONAL WETLANDS



**DEER CREEK AT KEYSTONE
 WETLAND MITIGATION
 WETLAND DELINEATION
 SUMMIT COUNTY, COLORADO**

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 • WETLAND MITIGATION

WETLAND DELINEATION
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 NATIVE LANDSCAPE

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PROJECT # 04-01
 DATE: 10/20/04
 DRAWN BY: J. WILCOX
 CHECKED BY: J. WILCOX
 SCALE: 1"=400'



SHEET
W-2
 2 of 15

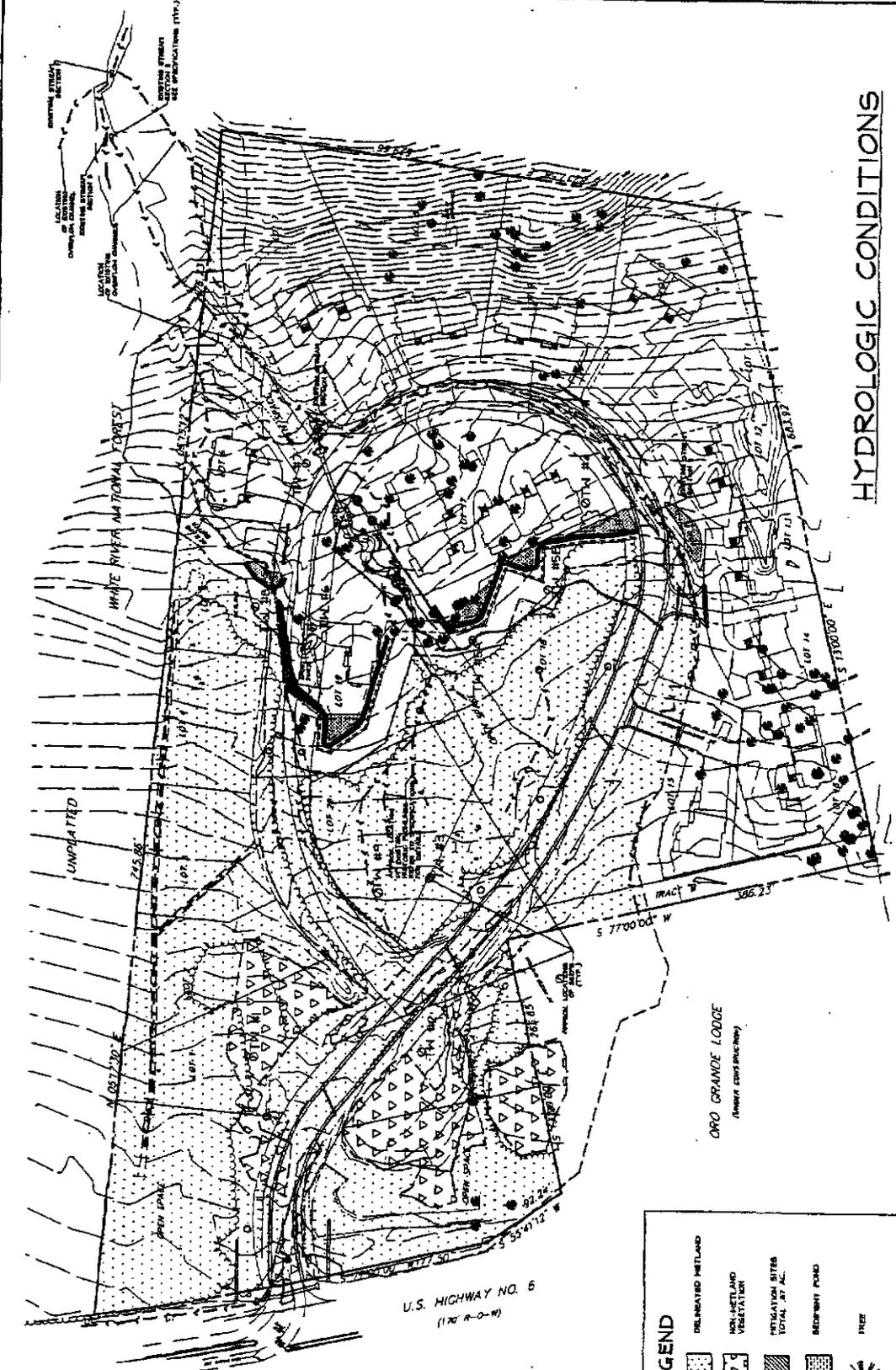
VIRGIL O. BEST II
 PRINCIPAL, ECOTECH
 8700 453-8488
 1001 453-8488
 1001 453-8488
 www.ecotechinc.com
 1001 453-8488
 1001 453-8488
 1001 453-8488

DEER CREEK AT KEYSTONE
 WETLAND MITIGATION
 HYDROLOGIC CONDITIONS
 SUMMIT COUNTY, COLORADO



PROJECT NO. 08-00
 DATE: 1/27/04
 DRAWN BY: VEB
 SCALE: 1"=40'
 DATE: 1/27/04

SHEET
 M-3
 3 of 15



HYDROLOGIC CONDITIONS
 - KNOWN EXISTING HYDROLOGIC CONDITIONS



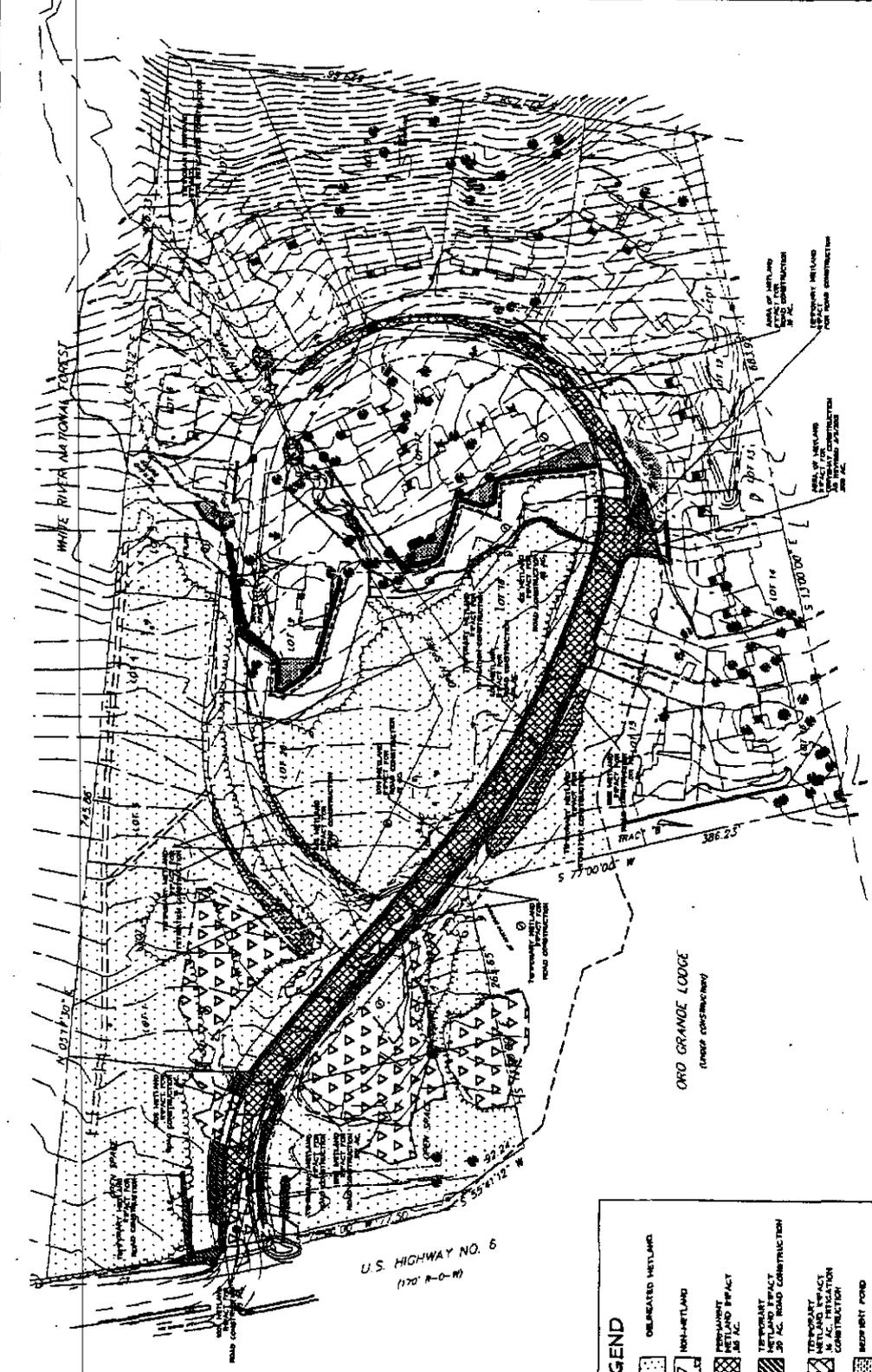
LEGEND	
	DELIMITED WETLAND
	NON-WETLAND VEGETATION
	MITIGATION SITES TOTAL BY AC.
	BEDROCK POND
	TREE
	LINE OF WETLAND DELINEATION
	WELLS

DEER CREEK AT KEYSTONE
WETLAND MITIGATION
WETLAND IMPACT PLAN
SUMMIT COUNTY, COLORADO



PROJECT # 10-00
DATE: 08/11/00
DRAWN BY: VBA
CHECKED BY: VBA
SCALE: 1"=40'

DATE: 08/11/00
DRAWN BY: VBA
CHECKED BY: VBA
SCALE: 1"=40'



LOVELAND PASS VILLAGE
WETLAND IMPACT PLAN
- AREAL EXTENT OF WETLAND IMPACT



SCALE: 1"=40'

LEGEND

	DEGRADED WETLAND
	NON-WETLAND
	PERMANENT WETLAND IMPACT 25 AC.
	TEMPORARY WETLAND IMPACT 25 AC. ROAD CONSTRUCTION
	TEMPORARY WETLAND IMPACT CONSTRUCTION
	RESPIRANT POND
	TREE
	LINE OF WETLAND DELINEATION

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WETLAND MITIGATION
WETLAND IMPACT PLAN
SUMMIT COUNTY, COLORADO
NATIVE LANDSCAPE
DESIGN & CONSTRUCTION
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DENVER, CO 80202
303.733.8888
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WETLAND MITIGATION
WETLAND IMPACT PLAN
SUMMIT COUNTY, COLORADO
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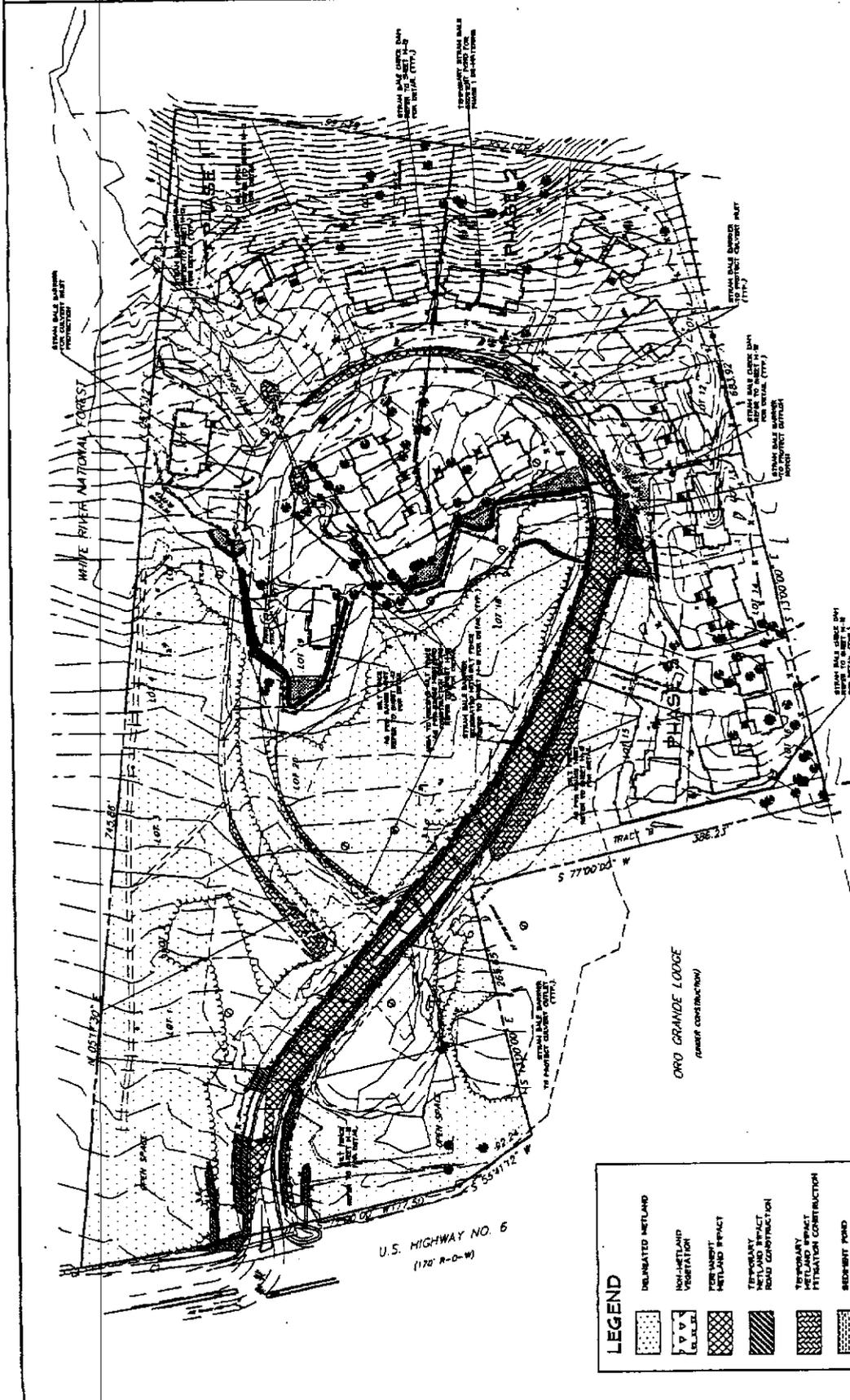
VIRGIL O. BEST II
 PRINCIPAL GEOLOGIST
 REG. NO. 1000
 DIST. OFFICE NO. 1000
 DIST. OFFICE NO. 1000
 DIST. OFFICE NO. 1000



DEER CREEK AT KEYSTONE
 WETLAND MITIGATION
 CONSTRUCTION EROSION AND SEDIMENT CONTROL PLAN
 SUMMIT COUNTY, COLORADO

PROJECT NO. 0000
 DRAWN BY: J.M.K.
 REVISIONS BY: V.M.
 SCALE: 1" = 40'
 DATE: 10/1/00
 L.O.S. CONSTRUCTION

SHEET
 W-8
 8 of 15



LORELAND PASS VILLAGE
 CONSTRUCTION EROSION AND
 SEDIMENT CONTROL PLAN
 SCALE: 1" = 40'

LEGEND

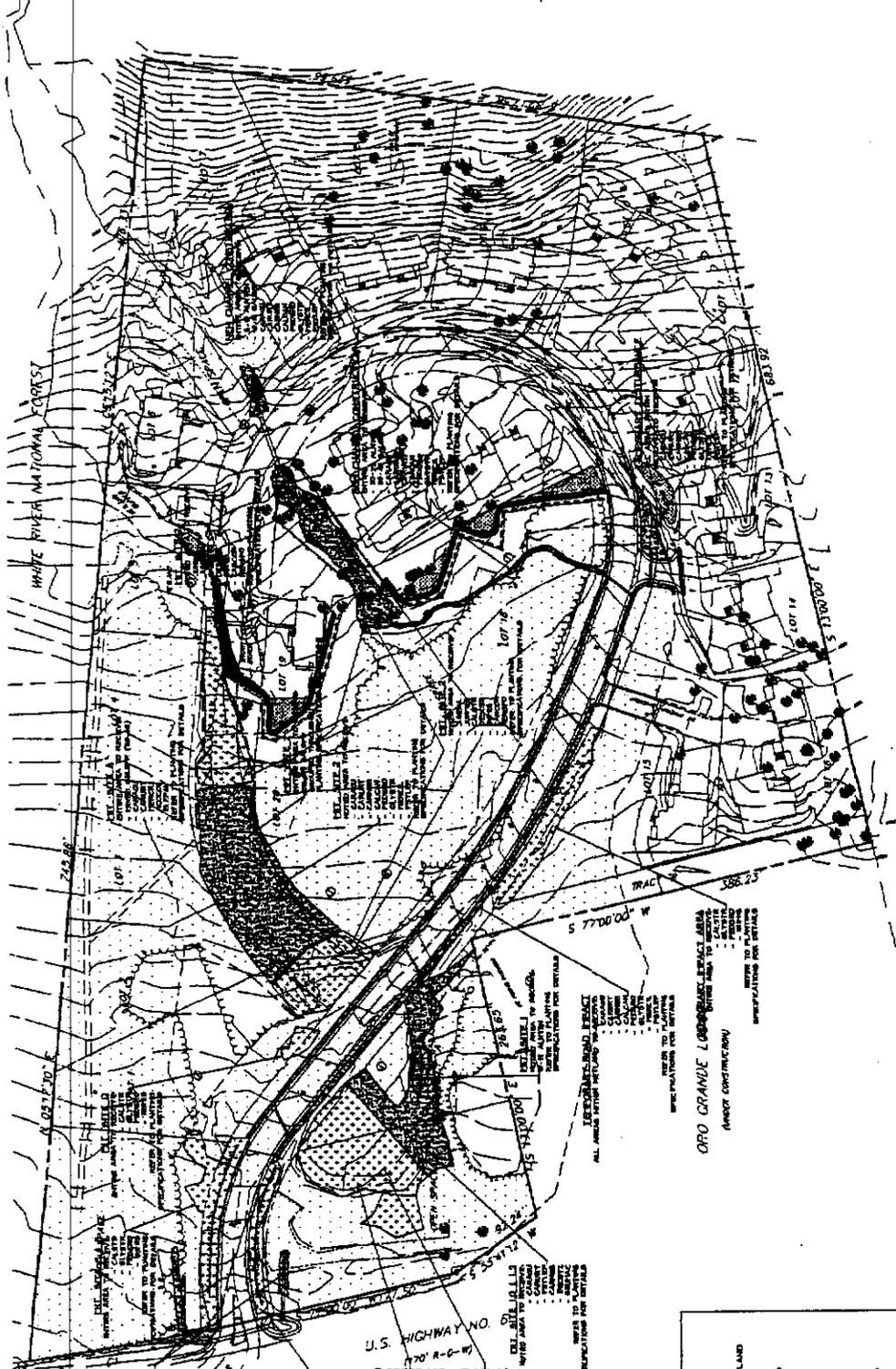
	DELINEATED WETLAND
	NON-WETLAND VEGETATION
	PERMANENT WETLAND IMPACT
	TEMPORARY WETLAND IMPACT ROAD CONSTRUCTION
	TEMPORARY WETLAND IMPACT MITIGATION CONSTRUCTION
	SEDIMENT POND
	TREE
	LINE OF WETLAND DELINEATION

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 1000 10TH AVENUE
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 WWW: www.vocbest.com

DEER CREEK AT KEYSTONE
 WETLAND MITIGATION
 PLANTING PLAN
 SUMMIT COUNTY, COLORADO

DEER CREEK AT KEYSTONE
 WETLAND MITIGATION
 PLANTING PLAN
 SUMMIT COUNTY, COLORADO

PROJECT NO. 04-08
 DATE: 08/14/04
 DRAWN BY: JAVIER
 CHECKED BY: VBI
 SCALE: 1"=40'
 DATE: 08/14/04
 PROJECT NO. 04-08
 DATE: 08/14/04
 DRAWN BY: JAVIER
 CHECKED BY: VBI
 SCALE: 1"=40'
 DATE: 08/14/04



PLANTING PLAN
 SCALE: 1"=40'
 LOVELAND PASS VILLAGE

LEGEND

	DELINEATED WETLAND
	LOWER WETLAND PLANTING
	UPPER WETLAND PLANTING
	SEDIMENT POND
	TREE
	LINE OF WETLAND DELINEATION

DEER CREEK AT KEYSTONE WETLAND MITIGATION PLANTING PLAN

LEGEND

- DELINEATED WETLAND
- LOWER WETLAND PLANTING
- UPPER WETLAND PLANTING
- SEDIMENT POND
- TREE
- LINE OF WETLAND DELINEATION

DEER CREEK AT KEYSTONE WETLAND MITIGATION PLANTING PLAN

LEGEND

- DELINEATED WETLAND
- LOWER WETLAND PLANTING
- UPPER WETLAND PLANTING
- SEDIMENT POND
- TREE
- LINE OF WETLAND DELINEATION

DEER CREEK AT KEYSTONE WETLAND MITIGATION PLANTING PLAN

LEGEND

- DELINEATED WETLAND
- LOWER WETLAND PLANTING
- UPPER WETLAND PLANTING
- SEDIMENT POND
- TREE
- LINE OF WETLAND DELINEATION

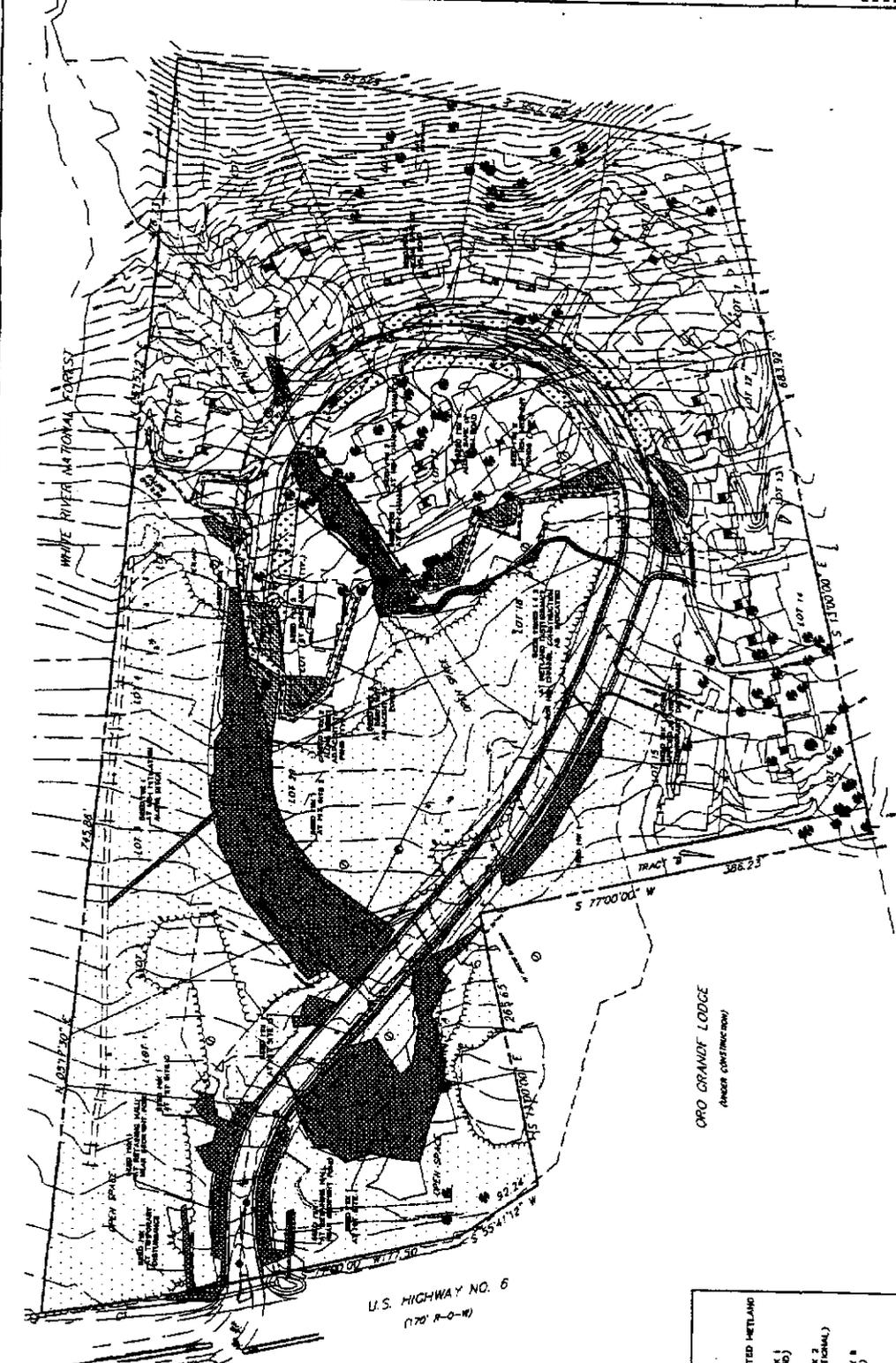
VIRGIL O. BEST II
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 vob@bestecological.com

BEST
 ECOLOGICAL DESIGN CONSULTING
 & CONSULTING FOR WETLANDS
 & UPLAND HABITATS
 WETLAND DELINEATION
 HAVING LABORERS
 SUMMIT COUNTY, COLORADO

DEER CREEK AT KEYSTONE
WETLAND MITIGATION
REVEGETATION PLAN
 SUMMIT COUNTY, COLORADO

PROJECT NO. 08-04
 DATE: 10/20/08
 DRAWN BY: J. W. WILSON
 CHECKED BY: J. W. WILSON
 SCALE: 1"=40'
 DATE: 10/20/08

SHEET
 W-11
 11 OF 15



LOVELAND PASS VILLAGE
REVEGETATION PLAN
 SCALE: 1"=40'
 SHEET
 W-11
 11 OF 15

LEGEND

- DELIMITED WETLAND
- SEED PK 1 (WETLAND)
- SEED PK 2 (TRANSITIONAL)
- SEED PK 3 (UPLAND)
- BECKWORTH POND
- TRAIL
- LINE OF WETLAND DELINEATION

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 C. GREENBERG, VICE PRES.
 STATE OF COLORADO PERMIT
 000000000000000000000000

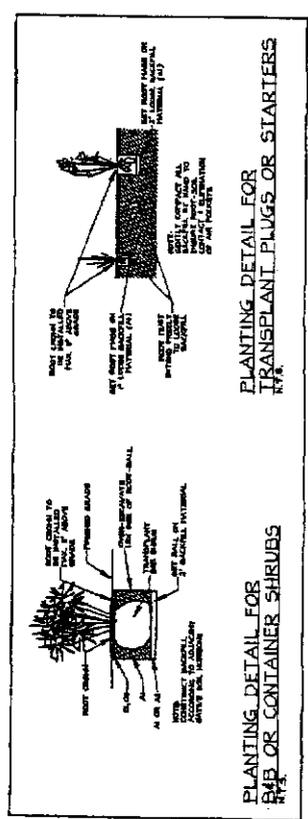
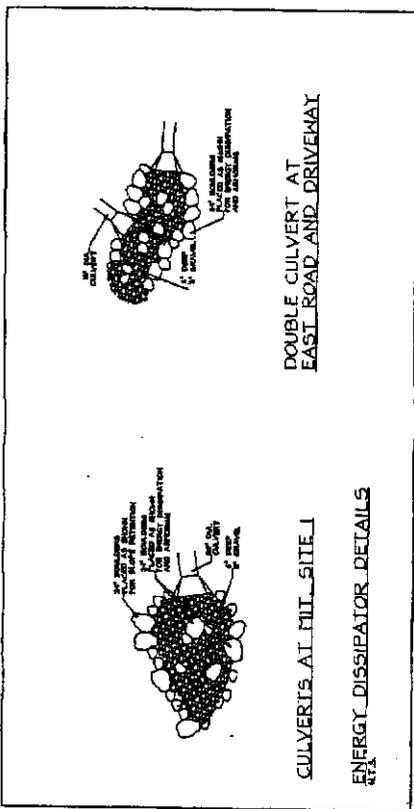
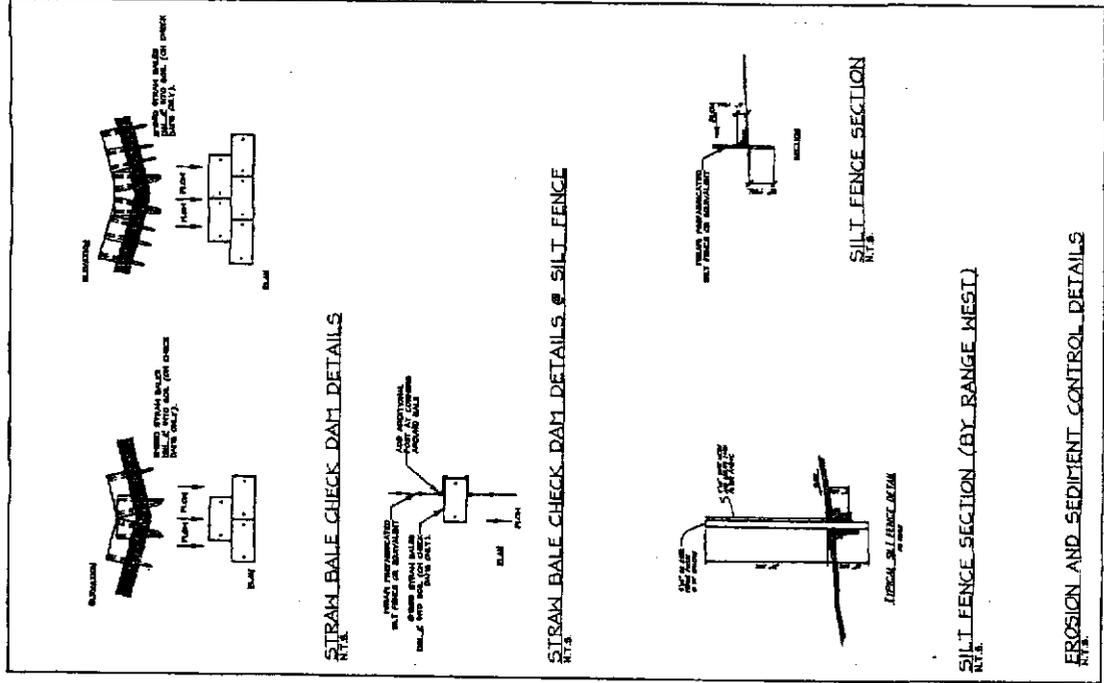
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 FORT COLLINS, CO 80526
 www.ecologicaldesign.com
 STATE OF COLORADO PERMIT
 000000000000000000000000

DEER CREEK AT KEYSTONE
 WETLAND MITIGATION
 DETAILS
 SUMMIT COUNTY, COLORADO

PROJECT # 10-08
 DATE: 1/1/2008
 DRAWN BY: VMJL
 CHECKED BY: VSB
 SCALE: N.T.S.

ISSUE FOR CONSTRUCTION

13 of 15
 W-13
 SHEET



DEER CREEK AT KEYSTONE
WETLAND MITIGATION
ROAD SECTIONS AND DETAILS
SUMMIT COUNTY, COLORADO

PROJECT No. 08-08
DATE: 1/2/2004
DRAWN BY: VML/AK
CHECKED BY: VML
SCALE: AS SHOWN

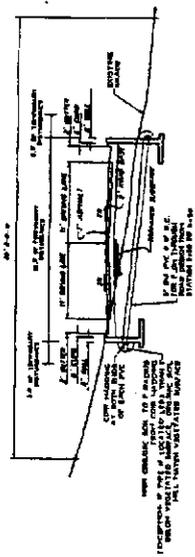
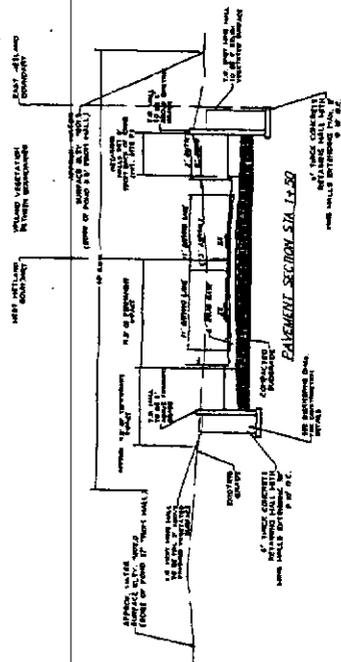
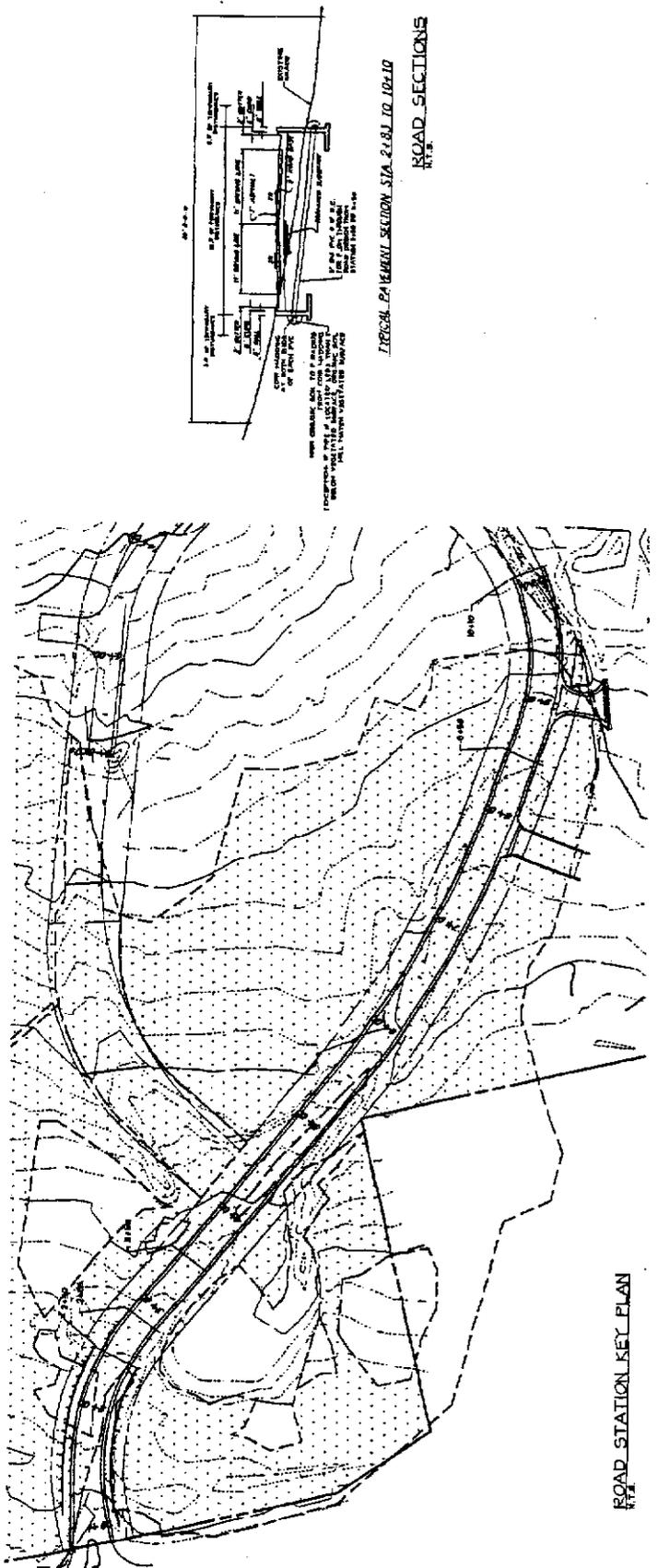
DATE: 1/2/2004
DRAWN BY: VML/AK
CHECKED BY: VML
SCALE: AS SHOWN

FOR CONSTRUCTION

SHEET
W-14
14 of 15

VIRGIL O. BEST II
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WETLAND DETAILING
STREAM & RIVER RESTORATION
WETLAND MITIGATION
WETLAND DETAILING
WETLAND DETAILING
WETLAND DETAILING



ROAD SECTIONS
BY:

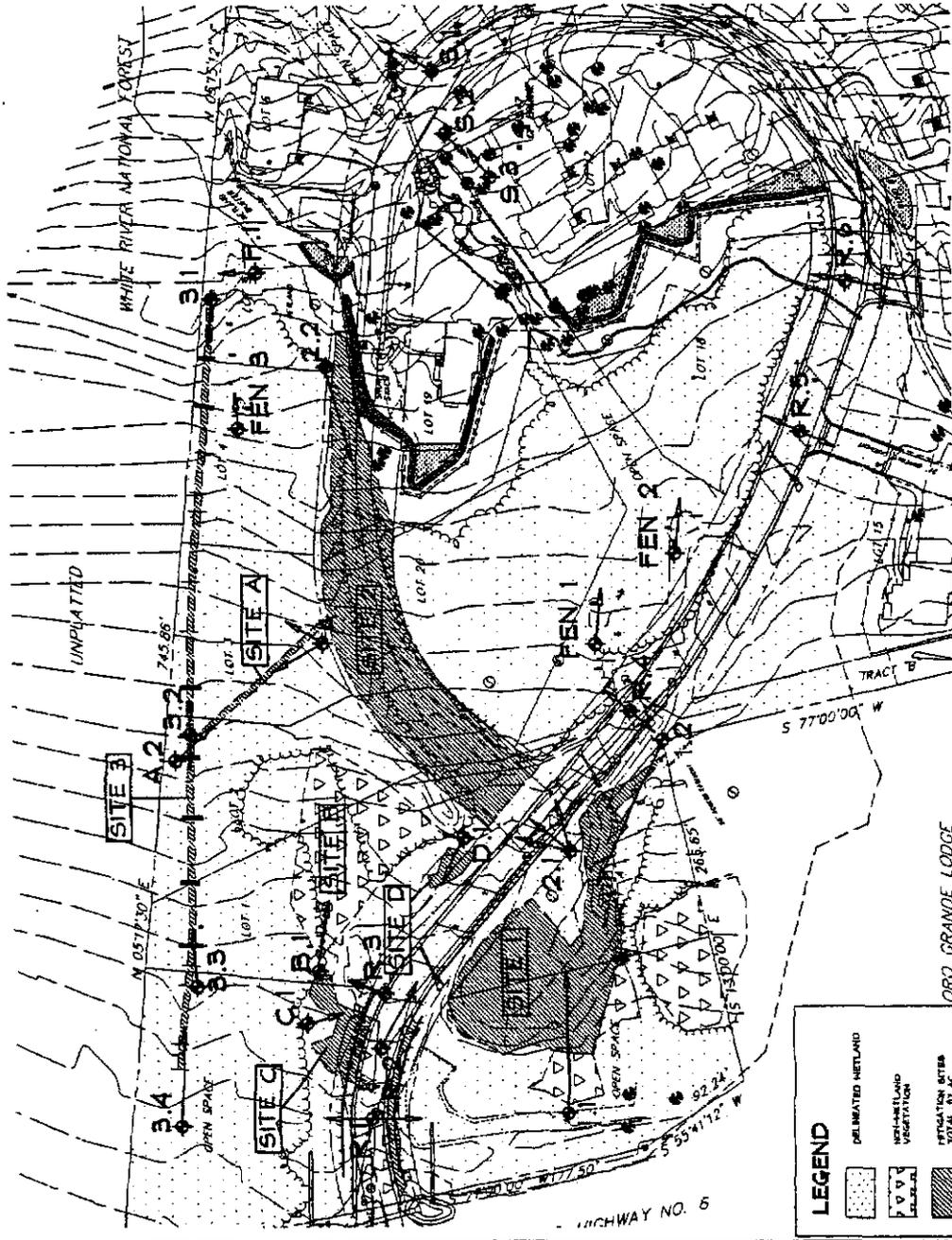
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 www.ecologicalrepair.com
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DEER CREEK AT KEYSTONE
 WETLAND MITIGATION
 PHOTO REFERENCE PLAN
 SUMMIT COUNTY, COLORADO

PROJECT NO. 08-08
 DATE: 10/20/08
 DRAWN BY: J. W. HARRIS
 SCALE: 1" = 40'
 SHEET NO. 15 OF 15
 SHEET
 W-15
 15 OF 15

- LEGEND**
- 1.1 - MIT. 1 LOOKING NORTH
 - 1.2 - MIT. 1 LOOKING SOUTH
 - 2.1 - MIT. 2 NORTH PANORAMIC
 - 2.2 - MIT. 2 LOOKING SOUTH
 - 3.1 - MIT. 3 LOOKING SOUTH
 - 3.2 - MIT. 3 NORTH & SOUTH
 - 3.3 - MIT. 3 LOOKING NORTH
 - 3.4 - MIT. 3 LOOKING NORTH
 - A.1 - MIT. A WEST & DETAIL
 - A.2 - MIT. A LOOKING EAST
 - B.1 - MIT. B LOOKING NORTH
 - C.1 - MIT. C LOOKING NE
 - D.1 - MIT. D LOOKING SOUTH
 - FEN 1 - LOOKING NORTH
 - FEN 2 - LOOKING NORTH
 - FEN 3 - LOOKING NORTH
 - S.1 - CULVERT INLET
 - S.2 - CULVERT OUTLET
 - S.3 - CHANNEL TO OUTLET
 - R.1 - ENTRANCE PONDS E&W
 - R.2 - CL @ CP SHARP TO NORTH
 - R.3 - FIRE HYDRANT POND
 - R.4 - JEFFERET CORNER N&S
 - R.5 - CL @ BRIDGE EAST & WEST
 - R.6 - CL @ LOT 14 DRIVE E&W
 - P.1 - WEST POND



- LEGEND**
- DELIMITED WETLAND
 - WETLAND VEGETATION
 - MITIGATION SITES TOTAL 31 AC.
 - SEWAGE POND
 - TREE
 - LINE OF WETLAND DELIMITATION

PHOTO REFERENCE PLAN
 (PHOTO POINT LOCATIONS)

HIGHWAY NO. 6