



# Board of Adjustment Staff Report

Meeting Date: August 7, 2014      Agenda Item Number: 8.C.

Subject: Special Use Permit Case Number SB14-012  
Applicant(s): The Nature Conservancy  
Project Summary: Grading for Truckee River restoration  
**Recommendation: Approval with Conditions**  
Prepared by: Roger Pelham, MPA, Senior Planner  
Planning and Development Division  
Washoe County Community Services Department  
Phone: 775.328.3622  
E-Mail: rpelham@washoecounty.us

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## Description

**Special Use Permit Case Number SB14-012 (Truckee River Restoration, West McCarran Ranch)** – To allow grading for restoration of flood plain including 100,500 cubic yards of excavation and approximately 26 acres of disturbed area.

- Applicant/Property Owner: The Nature Conservancy  
1 E. First Street, Suite 1007  
Reno, NV 89501
- Location: South of Interstate 80, east of the Mustang Exit, west of Patrick and adjacent to the Truckee River 084-450-02
- Assessor's Parcel Number(s): 61.4 Acres
- Parcel Size: Rural (R)
- Master Plan Category: General Rural (GR)
- Regulatory Zone: Truckee Canyon
- Area Plan: East Truckee Canyon (inactive)
- Citizen Advisory Board: Authorized in Article 810, Special Use Permits; and Article 438, Grading Standards
- Development Code: 4 – Commissioner Hartung
- Commission District: T19N R21E, Section 11, MDM
- Section/Township/Range: Washoe County, NV

**Staff Report Contents**

Project Description ..... 1  
Special Use Permit ..... 3  
Vicinity Map ..... 4  
Site Plan ..... 5  
Project Evaluation ..... 6  
East Truckee Canyon Citizen Advisory Board (ETCCAB) ..... 8  
Reviewing Agencies..... 8  
Recommendation .....10  
Motion .....10  
Appeal Process.....10

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**Exhibits Contents**

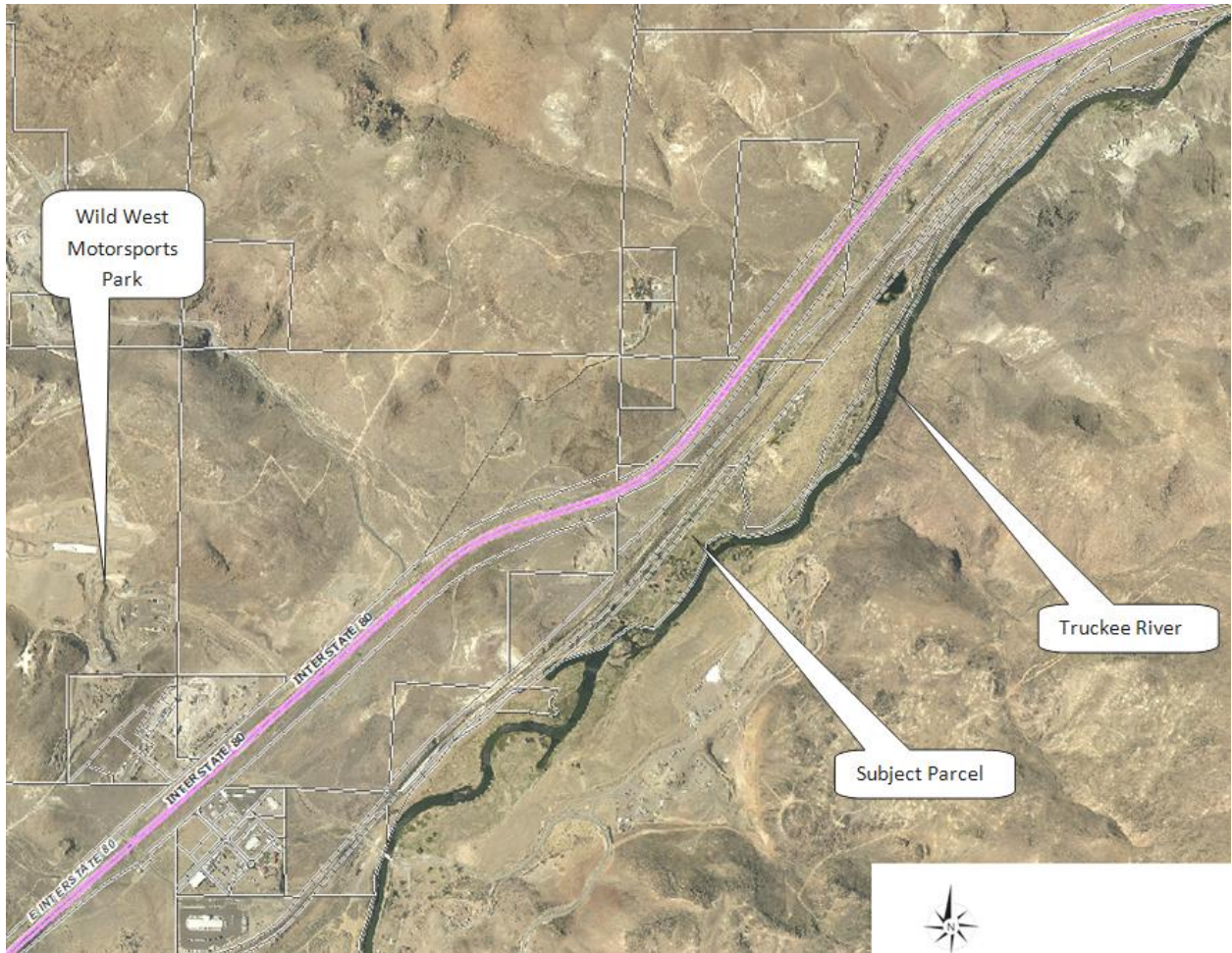
Conditions of Approval.....Exhibit A  
Project Application .....Exhibit B  
Public Notice Map ..... Exhibit C  
Agency Comments..... Exhibit D  
Noxious Weed Memorandum.....Exhibit E

**Special Use Permit**

The purpose of a Special Use Permit is to allow a method of review to identify any potential harmful impacts on adjacent properties or surrounding areas for uses that may be appropriate within a regulatory zone; and to provide for a procedure whereby such uses might be permitted by further restricting or conditioning them so as to mitigate or eliminate possible adverse impacts. If the Board of Adjustment grants an approval of the Special Use Permit, that approval is subject to Conditions of Approval. Conditions of Approval are requirements that need to be completed during different stages of the proposed project. Those stages are typically:

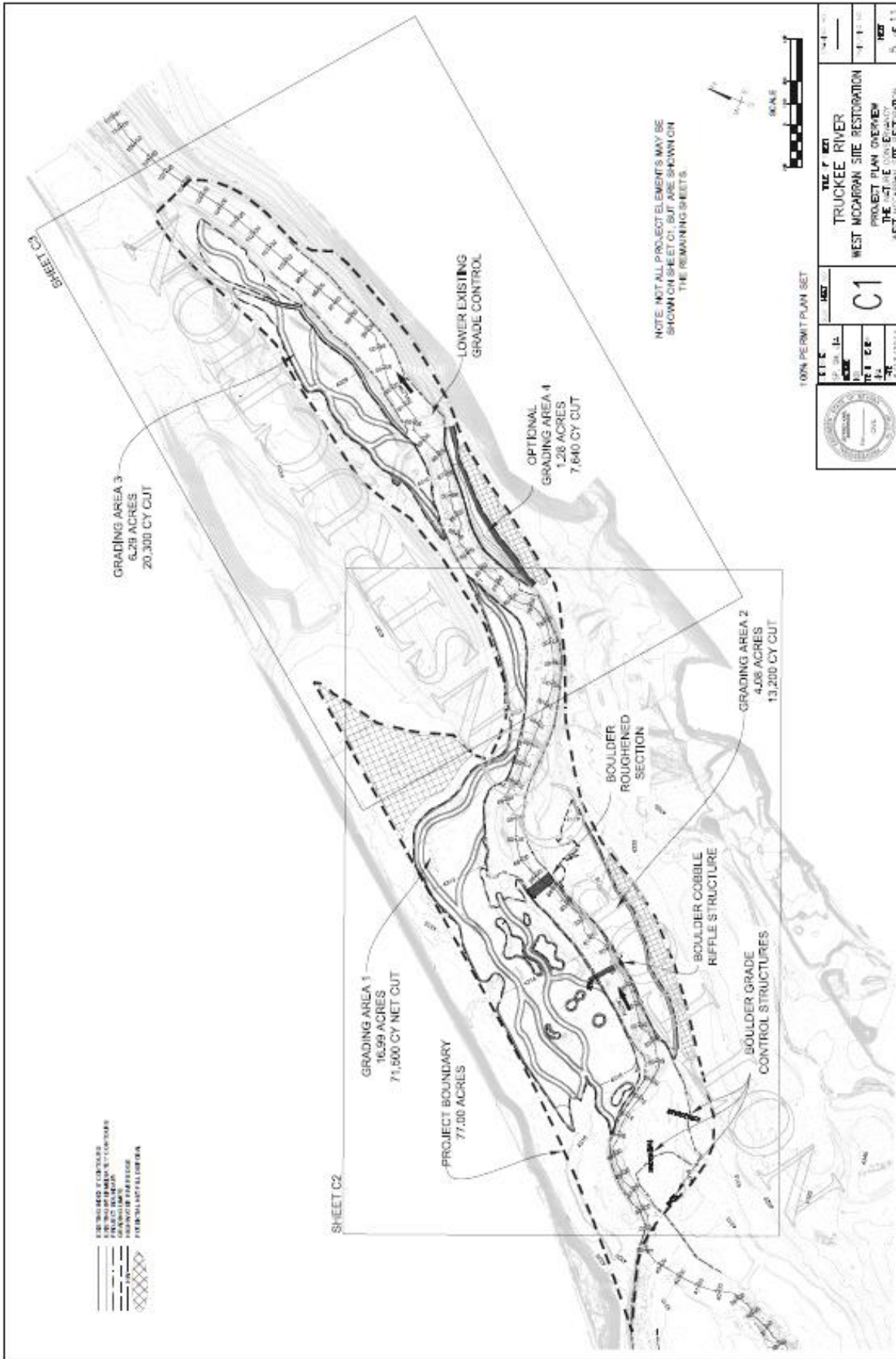
- Prior to permit issuance (i.e. a grading permit, a building permit, etc.).
- Prior to obtaining a final inspection and/or a certificate of occupancy on a structure.
- Prior to the issuance of a business license or other permits/licenses.
- Some Conditions of Approval are referred to as “Operational Conditions.” These conditions must be continually complied with for the life of the business or project.

The Conditions of Approval for Special Use Permit Case Number SB14-012 is attached to this staff report and will be included with the Action Order.



Vicinity Map





Site Plan

## **Project Evaluation**

The purpose of this project is to contribute to the ecological restoration of the lower Truckee River. This is proposed to be done by lowering the elevation of the land adjacent to the river channel, restoring that area to more natural contours, including meandering the river channel and replanting the area with native vegetation. The proposed project is intended to create new areas of aquatic and terrestrial habitat and to restore the ecosystem that has been degraded by decades of human intervention. The proposed project will entail approximately 100,500 cubic yards of excavation and approximately 26 acres of disturbed area.

Previous disturbance of the lower Truckee River was intended to reduce flood hazard, but has resulted in a very straight river channel that has lowered the water table as there is much less area of water to infiltrate into the groundwater table. This has also resulted in the channel of the river continuing to erode the riverbed and channelize the river even more.

The proposed project is the fifth phase of river restoration undertaken by The Nature Conservancy and is intended to connect other areas that have been restored both in Washoe and Storey counties. Some small to medium-sized willow and cottonwood trees may be removed during grading, but many more will be planted as the area is seeded with native vegetation and irrigated until the re-vegetation is established.

Because the intent of the project is to mimic the natural terrain and to return the area to a more natural contour, there is little required in the way of analysis or conditions of approval. Most of the standards of Washoe County Code, Chapter 110, Development Code, Article 438, Grading Standards are intended to provide for development of land while maintaining some level of a natural aspect of the undisturbed area. This proposed project is restoring a disturbed area to a more natural aspect and, therefore, few grading standards are applicable. Staff recommends approval and believes that all necessary findings of fact can be made by the Board of Adjustment.



**East Truckee Canyon Citizen Advisory Board (ETCCAB)**

The East Truckee Canyon Citizen Advisory Board is inactive at this time.

**Reviewing Agencies**

The following agencies received a copy of the project application for review and evaluation.

## Washoe County Community Services Department

- Planning and Development
- Engineering
- Water Resources
- Regional Parks and Open Space
- Washoe County Health District
  - Vector-Borne Disease Prevention Program
  - Environmental Health Services Division
  - Air Quality Management Division
- US Army Corps of Engineers
- State of Nevada
  - Environmental Protection
  - Department of Wildlife
  - Historic Preservation
- Washoe Storey Conservation District
- Regional Transportation Commission

Five out of the thirteen above listed agencies/departments provided comments and/or recommended conditions of approval in response to their evaluation of the project application. A **summary** of each agency's comments and/or recommended conditions of approval and their contact information is provided below. Each agency's recommended conditions of approval are included in the Conditions of Approval document, attached as Exhibit A, to this staff report and that document will be included with the Action Order, if approved by the Board of Adjustment.

- Washoe County Planning and Development addressed grading and re-vegetation standards.  
**Contact Name: Roger Pelham, 775.328.3622, [rpelham@washoecounty.us](mailto:rpelham@washoecounty.us)**
- Washoe County Engineering provided standard conditions of approval, similar to conditions provided for most other large grading projects.  
**Contact Name: Leo Vesely, 775.328.2040, [lvesely@washoecounty.us](mailto:lvesely@washoecounty.us)**
- Washoe County Regional Parks and Open Space provided comments and conditions to limit the spread of noxious weeds during grading activities  
**Contact Name: Jennifer Budge, 775.325-8094, [jbudge@washoecounty.us](mailto:jbudge@washoecounty.us)**



- Washoe County Health District, Vector-Borne Diseases Program provided conditions that to inhibit mosquito habitat.  
**Contact Name: Jim Shaffer, 775.785.4599, [jshaffer@washoecounty.us](mailto:jshaffer@washoecounty.us)**
- Washoe County Health District, Air Quality Management Division provided a comment that the applicant must obtain a dust control permit.  
**Contact Name: Charlene Albee, 775.784.7211, [calbee@washoecounty.us](mailto:calbee@washoecounty.us)**

### **Staff Comment on Required Findings**

Section 110.810.30 of Article 810, Special Use Permits, within the Washoe County Development Code, requires that all of the following findings be made to the satisfaction of the Washoe County Board of Adjustment before granting approval of the request. Staff has completed an analysis of the special use permit application and has determined that the request is in compliance with the required findings as follows.

1. Consistency. That the proposed use is consistent with the action programs, policies, standards and maps of the Master Plan and the Truckee Canyon Area Plan.

Staff Comment: The Truckee Canyon Area Plan, Policy and Action Program, TC.1.2 reads as follows, "Encourage uses and developments, which will protect the Truckee River as a scenic, natural feature in the Truckee Canyon planning area." This development is specifically intended to restore a section of the Truckee River to a more natural and healthy condition.

2. Improvements. That adequate utilities, roadway improvements, sanitation, water supply, drainage, and other necessary facilities have been provided, the proposed improvements are properly related to existing and proposed roadways, and an adequate public facilities determination has been made in accordance with Division Seven.

Staff Comment: The proposed grading is intended to restore a section of the Truckee River to a more natural and healthy condition, no utilities, roadways, sanitation infrastructure or water supply are required by the improvements proposed.

3. Site Suitability. That the site is physically suitable for grading to facilitate river restoration, and for the intensity of such a development.

Staff Comment: The site does not function in a natural manner at this time. The site has been modified from its natural state during the past decades and is proposed to be restored so that it functions as a more natural meandering riverbed and floodplain. The site is physically suitable, as it is located adjacent to the Truckee River.

4. Issuance Not Detrimental. That issuance of the permit will not be significantly detrimental to the public health, safety or welfare; injurious to the property or improvements of adjacent properties; or detrimental to the character of the surrounding area.

Staff Comment: The site does not function in a natural manner at this time. The site has been modified from its natural state during the past decades and is proposed to be restored so that it functions as a more natural meandering riverbed and floodplain. The site is physically suitable, as it is located adjacent to the Truckee River.

5. Effect on a Military Installation. Issuance of the permit will not have a detrimental effect on the location, purpose or mission of the military installation.

Staff Comment: There is no military installation in the vicinity of the proposed grading project.

**Recommendation**

Those agencies which reviewed the application recommended conditions in support of approval of the project. Therefore, after a thorough analysis and review, Special Use Permit Case Number SB14-012 is being recommended for approval with conditions. Staff offers the following motion for the Board's consideration.

**Motion**

I move that after giving reasoned consideration to the information contained in the staff report and information received during the public hearing, the Washoe County Board of Adjustment approve with conditions Special Use Permit Case Number SB14-012 for The Nature Conservancy, having made all five findings in accordance with Washoe County Development Code, Section 110.810.30.

1. Consistency. That the proposed use is consistent with the action programs, policies, standards and maps of the Washoe County Master Plan and the Truckee Canyon Area Plan;
2. Improvements. That adequate utilities, roadway improvements, sanitation, water supply, drainage, and other necessary facilities have been provided, the proposed improvements are properly related to existing and proposed roadways, and an adequate public facilities determination has been made in accordance with Division Seven.
3. Site Suitability. That the site is physically suitable for grading to facilitate river restoration, and for the intensity of such a development.
4. Issuance Not Detrimental. That issuance of the permit will not be significantly detrimental to the public health, safety or welfare; injurious to the property or improvements of adjacent properties; or detrimental to the character of the surrounding area.
5. Effect on a Military Installation. Issuance of the permit will not have a detrimental effect on the location, purpose or mission of the military installation.

**Appeal Process**

Board of Adjustment action will be effective 10 days after the public hearing date, unless the action is appealed to the County Commission, in which case the outcome of the appeal shall be determined by the Washoe County Commission.

Applicant/Property Owner: The Nature Conservancy  
1 E. First Street, Suite 1007  
Reno, NV 89501

Representatives: Graham Matthews & Associates  
PO Box 1516  
Weaverville, CA 96093





# Conditions of Approval

Special Use Permit Case Number: SB14-012

The project approved under Special Use Permit Case Number SB14-012 shall be carried out in accordance with the Conditions of Approval granted by the Board of Adjustment on August 7, 2014. Conditions of Approval are requirements placed on a permit or development by each reviewing agency. These Conditions of Approval may require submittal of documents, applications, fees, inspections, amendments to plans, and more. These conditions do not relieve the applicant of the obligation to obtain any other approvals and licenses from relevant authorities required under any other act or to abide by all other generally applicable Codes.

**Unless otherwise specified**, all conditions related to the approval of this Special Use Permit shall be met or financial assurance must be provided to satisfy the Conditions of Approval prior to issuance of a grading or building permit. The agency responsible for determining compliance with a specific condition shall determine whether the condition must be fully completed or whether the applicant shall be offered the option of providing financial assurance. All agreements, easements, or other documentation required by these conditions shall have a copy filed with the County Engineer and the Planning and Development Division.

Compliance with the Conditions of Approval related to this Special Use Permit is the responsibility of the applicant, his/her successor in interest, and all owners, assignees, and occupants of the property and their successors in interest. Failure to comply with any of the conditions imposed in the approval of the Special Use Permit may result in the initiation of revocation procedures.

Washoe County reserves the right to review and revise the Conditions of Approval related to this Special Use Permit should it be determined that a subsequent license or permit issued by Washoe County violates the intent of this approval.

For the purpose of conditions imposed by Washoe County, “may” is permissive and “shall” or “must” is mandatory.

Conditions of Approval are usually complied with at different stages of the proposed project. Those stages are typically:

- Prior to permit issuance (i.e., grading permits, building permits, etc.).
- Prior to obtaining a final inspection and/or a certificate of occupancy.
- Prior to the issuance of a business license or other permits/licenses.
- Some “Conditions of Approval” are referred to as “Operational Conditions.” These conditions must be continually complied with for the life of the project or business.

**The Washoe County Commission oversees many of the reviewing agencies/departments with the exception of the following agencies.**

- **The DISTRICT BOARD OF HEALTH, through the Washoe County Health District, has jurisdiction over all public health matters in the Health District.**

**Any conditions set by the District Health Department must be appealed to the District Board of Health.**

- **The RENO-TAHOE AIRPORT AUTHORITY is directed and governed by its own Board. Therefore, any conditions set by the Reno-Tahoe Airport Authority must be appealed to their Board of Trustees.**
- **The REGIONAL TRANSPORTATION COMMISSION (RTC) is directed and governed by its own board. Therefore, any conditions set by the Regional Transportation Commission must be appealed to that Board.**

FOLLOWING ARE CONDITIONS OF APPROVAL REQUIRED BY THE REVIEWING AGENCIES. EACH CONDITION MUST BE MET TO THE SATISFACTION OF THE ISSUING AGENCY.

**Washoe County Planning and Development Division**

1. The following conditions are requirements of the Planning and Development Division, which shall be responsible for determining compliance with these conditions.

**Contact Name: Roger Pelham, 775.328.3622, [rpelham@washoecounty.us](mailto:rpelham@washoecounty.us)**

- a. The applicant shall demonstrate substantial conformance to the plans approved as part of this special use permit. The Planning and Development Division shall determine compliance with this condition.
- b. The applicant shall submit complete construction plans and grading permits shall be issued within two years from the date of approval by Washoe County. The applicant shall complete construction within the time specified by the building permits. Compliance with this condition shall be determined by the Planning and Development Division.
- c. The applicant shall attach a copy of the action order approving this project to all administrative permit applications (including grading permits) applied for as part of this special use permit.
- d. A note shall be placed on all construction drawings and grading plans stating:

**NOTE**

Should any prehistoric or historic remains/artifacts be discovered during site development, work shall temporarily be halted at the specific site and the State Historic Preservation Office of the Department of Museums, Library and Arts shall be notified to record and photograph the site. The period of temporary delay shall be limited to a maximum of two (2) working days from the date of notification.

- e. The applicant shall submit landscaping and re-vegetation plans for all disturbed areas. Landscaping plans shall include irrigation of all areas until living plant materials cover at least 50% of all disturbed areas.
- f. Re-vegetation shall consist of native plants and trees.

**Washoe County Engineering and Capital Projects Division**

2. The following conditions are requirements of the Engineering and Capital Projects Division, which shall be responsible for determining compliance with these conditions.

**Contact Name:** Leo Vesely, 775.328-2040, [lvesely@washoecounty.us](mailto:lvesely@washoecounty.us)

- a. A complete set of construction improvement drawings, including an onsite grading plan, shall be submitted to the County Engineer for approval. Grading shall comply with best management practices (BMP's) and shall include detailed plans for grading and drainage, access roads, erosion control (including BMP locations and installation details), slope stabilization and mosquito abatement. Disposal of any excavated material onsite shall be indicated on the grading plans. The County Engineer shall determine compliance with this condition.
- b. Any existing easements or utilities that conflict with the project shall be relocated, quitclaimed, and/or abandoned, as appropriate. The County Engineer shall determine compliance with this condition.
- c. Any new easement documents recorded for the project shall include an exhibit map that shows the location and limits of the easement in relationship to the project. The County Engineer shall determine compliance with this condition.
- d. The owner/applicant shall obtain from the Nevada Division of Environmental Protection a Stormwater Discharge Permit for construction and submit a copy to the Engineering Division prior to issuance of a grading permit.
- e. The owner/applicant shall complete and submit the Construction Permit Submittal Checklist, the Performance Standards Compliance Checklist and pay the Construction Stormwater Inspection Fee prior to obtaining a grading permit. The County Engineer shall determine compliance with this condition.
- f. A grading bond of \$2,000/acre of disturbed area shall be provided to the Engineering Division prior to issuance of a grading permit.
- g. A hydrology/hydraulic report shall be submitted to the County Engineer. The report shall show that there will be no adverse impact to adjacent properties.
- h. The Truckee Meadows Regional Stormwater Quality Management Program Construction Permit Submittal Checklist and Inspection Fee shall be submitted with each final map. The County Engineer shall determine compliance with this condition.
- i. The maximum permissible flow velocity (that which does not cause scour) shall be determined for all proposed channels and open ditches. The determination shall be based on a geotechnical analysis of the channel soil, proposed channel lining and channel cross section, and it shall be in accordance with acceptable engineering publications/calculations. Appropriate linings shall be provided for all proposed channels and open ditches such that the 100-year flows do not exceed the maximum permissible flow velocity. The County Engineer shall determine compliance with this condition.

- j. All slopes steeper than 3:1 shall be mechanically stabilized to control erosion. As an alternative to riprap, an engineered solution (geofabric, etc.) may be acceptable. The County Engineer shall determine compliance with this condition.
- k. Maintenance access and drainage easements shall be provided for all existing and proposed drainage facilities. The County Engineer shall determine compliance with this condition.
- l. Improvements necessary to access the project shall be designed and constructed to County standards and specifications. The County Engineer shall determine compliance with this condition.
- m. A Conditional Letter of Map Revision (CLOMR) shall be obtained from Federal Emergency Management Agency (FEMA) prior to the issuance of a grading permit.
- n. A Letter of Map Revision (LOMR) shall be obtained from FEMA prior to the finalization of the grading permit.
- o. All required state and federal permits shall be obtained prior to the issuance of a grading permit.

### **Washoe County Regional Parks and Open Spaces**

- 3. The following conditions are requirements of Parks and Open Space, which shall be responsible for determining compliance with these conditions.

**Contact Name: Jennifer Budge, 775.325-8094, [jbudge@washoecounty.us](mailto:jbudge@washoecounty.us)**

- a. Any imported fill dirt; straw and fiber logs used for sediment control as part of the project are required to be "certified weed free."
- b. Certify that all construction material sources used for supplies used for sand, gravel, rock and mulch are weed-free prior to obtaining or transporting material to project site.
- c. Best management practices will be used to prevent the spread of noxious and invasive weeds during construction activities. At minimum, the highlighted portion in the attached document (Exhibit E to the BOA staff report dated 7/15/2014).

### **Washoe County Health District**

- 4. The following conditions are requirements of the Health District, Air Quality Management Division, which shall be responsible for determining compliance with these conditions. The District Board of Health has jurisdiction over all public health matters in the Health District. Any conditions set by the Health District must be appealed to the District Board of Health.

**Contact Name: Charlene Albee, 775.784.7211, [calbee@washoecounty.us](mailto:calbee@washoecounty.us)**

- a. The applicant shall obtain a dust control permit prior to any grading activity.

5. The following conditions are requirements of the Health District, Vector-Borne Disease Program, which shall be responsible for determining compliance with these conditions. The District Board of Health has jurisdiction over all public health matters in the Health District. Any conditions set by the Health District must be appealed to the District Board of Health.

**Contact Name: Jim Shaffer, 775.785.4599, [jshaffer@washoecounty.us](mailto:jshaffer@washoecounty.us)**

- a. The Health District will require the flow line of the swales lined with 4-6 inch cobble rock to reduce the transport flow of sediment (040.021).
- b. The existing scour/irrigation channel system will require the low points to be filled to the flow line with 4-6 inch cobble rock. In addition Health District will require the flow line of these channels lined with 4-6 inch cobble rock to reduce the downstream transport of sediment (040.021).
- c. In the planting of cottonwoods and/or willows, the Health District will require these trees planted fifty (50) feet on center.
- d. Prior to the sign off of the building plans the above detail designs are required on the plans and a scheduled compliance inspection is required for the above condition(s).

\*\*\* End of Conditions \*\*\*





## Washoe County Development Application

Your entire application is a public record. If you have a concern about releasing personal information, please contact Community Development staff at 775.328.6100.

<b>Project Information</b>		Staff Assigned Case No.: _____	
Project Name (commercial/industrial projects only): West McCarran Restoration Project			
Project Description: River restoration; see attached report for more details			
Project Address: I-80 East between Mustang and Patrick			
Project Area (acres or square feet): 26 acres			
Project Location (with point of reference to major cross streets AND area locator): Site is along the Truckee River approximately 7 miles east of Sparks, between Mustang and Patrick			
Assessor's Parcel No(s):	Parcel Acreage:	Assessor's Parcel No(s):	Parcel Acreage:
084-450-02	61.4		
Section(s)/Township/Range: T19N, R21E, Section 11			
<b>Indicate any previous Washoe County approvals associated with this application:</b>			
Case Nos. NA			
<b>Applicant Information</b> (attach additional sheets if necessary)			
<b>Property Owner:</b>		<b>Professional Consultant:</b>	
Name: The Nature Conservancy		Name: Graham Matthews & Associates	
Address: 1 E. First Street, Suite 1007		Address: P.O. Box 1516	
Reno, NV	Zip: 89501	Weaverville, CA	Zip: 96093
Phone: 775-322-4990	Fax: 322-5132	Phone:	Fax:
Email: mhazelwood@tnc.org		Email: graham@gmahydrology.com	
Cell:	Other:	Cell:	Other:
Contact Person: Mickey Hazelwood		Contact Person: Graham Matthews	
<b>Applicant/Developer:</b>		<b>Other Persons to be Contacted:</b>	
Name:		Name:	
Address:		Address:	
	Zip:		Zip:
Phone:	Fax:	Phone:	Fax:
Email:		Email:	
Cell:	Other:	Cell:	Other:
Contact Person:		Contact Person:	
<b>For Office Use Only</b>			
Date Received:	Initial:	Planning Area:	
County Commission District:		Master Plan Designation(s):	
CAB(s):		Regulatory Zoning(s):	

## Special Use Permit Application for Grading Supplemental Information

(All required information may be separately attached)

Chapter 110 of the Washoe County Code is commonly known as the Development Code. Specific references to special use permits may be found in Article 810, Special Use Permits. Article 438, Grading, and Article 418, Significant Hydrologic Resources, are the ordinances specifically involved in this request.

1. What is the purpose of the grading?

This project is a continuation of restoration efforts along the lower Truckee River that began in 2003 and has involved five sites prior to this project. Floodplain adjacent to the river will be excavated in order to provide topographic and hydrologic complexity and to increase flood water storage potential.

2. How many cubic yards of material are you proposing to excavate on site?

100,500 CY

3. How many square feet of surface of the property are you disturbing?

1132560 sq.ft.

4. How many cubic yards of material are you exporting or importing? If none, how are you managing to balance the work on-site?

No material will be imported or exported. Material excavated from the floodplain will be distributed in other areas of the site and incorporated into the finish grading and revegetation efforts.

5. Is it possible to develop your property without surpassing the grading thresholds requiring a Special Use Permit? (Explain fully your answer.)

No, the applicant is implementing a river restoration project which requires excavation of floodplain sufficient to achieve hydrologic goals.

6. Has any portion of the grading shown on the plan been done previously? (If yes, explain the circumstances and the year the work was done.)

No

7. Have you shown all areas on your site plan that are proposed to be disturbed by grading? (If no, explain fully your answer.)

Yes

8. Can the disturbed area be seen from off-site? If yes, from which directions, and which properties or roadways?

Yes, from Mustang Road to the west and from the BLM and gravel pit properties across the river to the south.

9. Could neighboring properties also be served by the proposed access/grading requested (i.e. if you are creating a driveway, would it be used for access to additional neighboring properties)?

No

10. What is the slope (Horizontal:Vertical) of the cut and fill areas proposed to be? What methods will be used to prevent erosion until the revegetation is established?

The slopes vary across the project site; see project plans for details. BMPs described in the Construction Sequence and BMP report, including silt fencing and fiber rolls, will remain in place for at least two years until vegetation becomes established.

11. Are you planning any berms?

Yes     No    If yes, how tall is the berm at its highest?

12. If your property slopes and you are leveling a pad for a building, are retaining walls going to be required? If so, how high will the walls be and what is their construction (i.e. rockery, concrete, timber, manufactured block)?

NA

13. What are you proposing for visual mitigation of the work?

The end-product of the project is a restored river system/riparian woodland, which has a higher scenic value than the current conditions.

14. Will the grading proposed require removal of any trees? If so, what species, how many and of what size?

A handful of cottonwoods/willows of small to medium size may be removed, but will be replaced by thousands more cottonwoods/willows.

15. What type of revegetation seed mix are you planning to use and how many pounds per acre do you intend to broadcast? Will you use mulch and, if so, what type?

Seeding will be done in combination with other planting methods (poles and cuttings, containerized plants, bare root), in various zones throughout the project site: riparian woodland, riparian shrub, upland. Seed mixes and rates will vary with those zones and be based on previous experience on similar project sites and in consultation with seed supplier (Comstock Seed). Mulch products will be used as needed.

16. How are you providing temporary irrigation to the disturbed area?

A temporary overhead and drip irrigation system will be installed on the site and maintained until vegetation is established. Water will be pumped from the river via water rights leased by the City of Reno; diversion points will be identified and permits filed with the Nevada Division of Water Resources for those points.

17. Have you reviewed the revegetation plan with the Washoe Storey Conservation District? If yes, have you incorporated their suggestions?

No

18. Are there any restrictive covenants, recorded conditions, or deed restrictions (CC&Rs) that may prohibit the requested grading?

Yes     No    If yes, please attach a copy.



# Washoe County Special Use Permit Application Truckee River Restoration Program West McCarran Project

## Nature of Activity

The project proposes to lower the existing (abandoned) floodplain on the project site in order to reconnect it with the Truckee River. The Truckee River water surface elevation will be altered locally through the use of constructed riffles and by lowering an existing (abandoned) diversion dam. Swales and scour channels will be excavated into the designed floodplain surface to provide topographic and hydrologic complexity and to increase flood water storage potential. Grade control structures will step-down the existing upstream riffle, while another rock structure/riffle will partially backwater the existing upstream riffle.

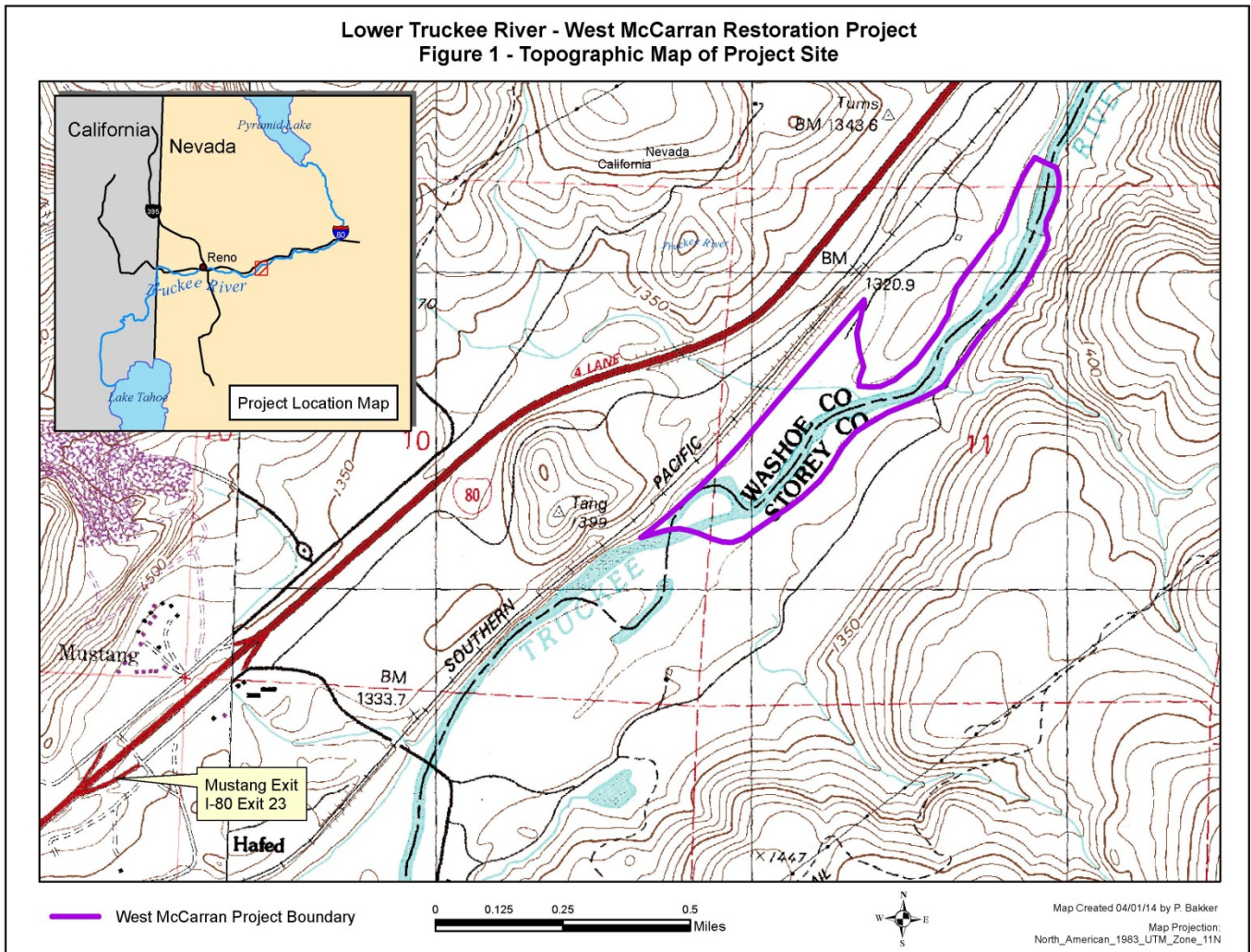


Figure 1. Topographic Map of Project Site

**Primary elements of this project include:**

- Lowering the floodplain
- Construction of riffles and grade control structures in and adjacent to the active channel
- Lowering an abandoned diversion structure
- Sequestering spoils along floodplain margins

**A. Pre-construction Activities and Best Management Practices (BMPs)**

Phased construction will combine various activities and BMPs to minimize surface water contact with exposed cuts and fills, and reduce or prevent associated impacts. The following Pre-construction, construction and Post-construction BMPs will be implemented.

**1. Construction Access**

Primary access to the site is along the established road through the previously-constructed Mustang Ranch project site, along the north side of the river. It is a 10 foot wide compacted and graveled roadbed suitable for heavy equipment. Two potential staging areas exist along this road. The south side of the river may be accessed by Mustang Ranch Road as it exits the paved portion approximately ½ mile south of the bridge over the Truckee River. Additional secondary access roads will be graded as needed on floodplains and will have a native surface which can be watered and re-graded as necessary during construction.

**2. Location of Rock and Gravel Stockpiles**

Gravel and cobble can be end-dumped and loaded in areas with good turnaround access along the north and south sides of the river. Riprap materials will be stored near the placement sites. All materials to be placed in the river will be washed by spraying the stockpiles with the water trucks. Washing will be repeated as piles are depleted.

**3. All Construction Volumes and Areas**

**Table 1. Estimated construction materials volumes for Truckee River near West McCarran**

Structure (1-2 ton boulders)	TW, ft	H, ft	BW, ft	L, ft	VOL, CY	Fraction in Washoe Co	Vol, CY Washoe	Fraction in Storey Co	VOL, CY Storey
GC1	30	6	30	63	420	0%	-	100%	420
GC2	30	6	30	190	1,267	0%	-	100%	1,267
GC3	30	6	30	293	1,953	0%	-	100%	1,953
GC4	30	6	30	154	1,027	0%	-	100%	1,027
RS1	30	6	30	204	1,360	67%	911	33%	449
RS2	30	6	30	247	1,647	50%	823	50%	823
<b>Total</b>					<b>7,674</b>		<b>1,735</b>		<b>5,939</b>
Riffle Gravel					1,500	78%		1,170	330
Riffle Cobble					1,000	78%		780	220
<b>Total</b>					<b>2,500</b>		<b>1,950</b>		<b>550</b>

**Table 2. Computed cut volumns**

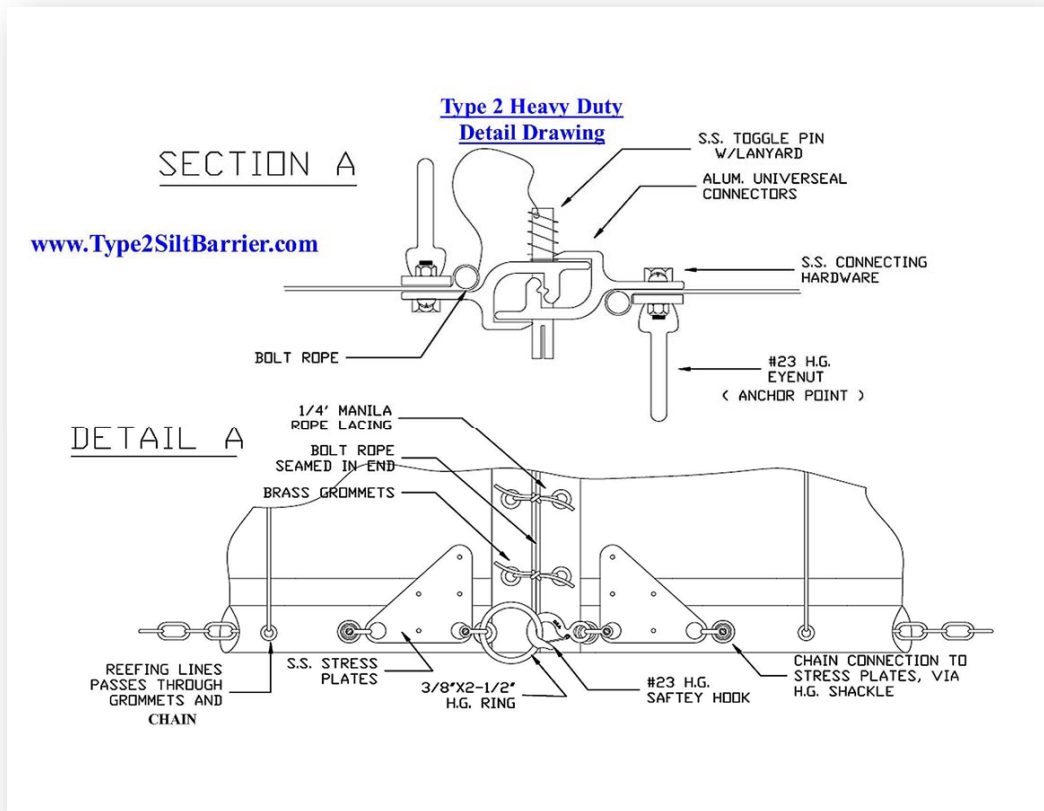
Area	Cubic Yards
Entire Project	121,290
North Side (Washoe County)	100,500
South Side (Storey County)	20,790

**4. Staging Areas and Equipment Wash Sites**

The staging areas will double as equipment wash sites. Parking surfaces will be graded to contain runoff and will be covered with gravel. Straw wattles (fiber rolls) will be staked along perimeters to further facilitate containment.

**5. Establishment of Turbidity Curtains**

To minimize turbidity impacts during floodplain grading, Type II heavy duty turbidity curtains (Figure2) will be installed parallel to the Truckee River stream bank. If both floodplains are graded simultaneously, the Type II turbidity curtains will be staked along both banks. A floating Type III heavy duty turbidity curtain will be installed across the channel downstream of the project site.



**Figure 2. Detail of Type II heavy duty turbidity curtain, courtesy Granite Environmental**

## **6. Sensitive Areas**

No disturbance will take place outside the project boundaries. Riparian save areas within the project footprint will be fenced, flagged and avoided as delineated in final plans.

## **B. Construction and BMPs**

### **1. Water and Air Quality Monitoring**

Background turbidity samples will be collected twice per day upstream of all planned activities, above the upstream grade control structure. Downstream samples will be collected at a location determined by NDEP below the downstream grading boundary of the project. Samples will be collected at the downstream site before, during and after construction activities each day at a sampling frequency of approximately once per hour.

Air quality will be qualitatively monitored by the contractor during all ground disturbance activities. Water trucks will be deployed as necessary to keep the production of air borne particulates to a minimum.

### **2. Floodplain Grading**

The starting location and progression of floodplain grading will be chosen by the contractor. Excavators or scrapers will likely be used to lower the floodplains to the design grade. When gravel or cobble lenses are encountered, these materials should be screened and separated for potential use in cobble blankets.

### **3. Excavation of Swales and Scour Channels**

After the floodplain is lowered to the designed grade, new features will be cut into the landscape as detailed in the (final) plan and under supervision from TNC staff. The primary elements of such features are to provide seasonal hydrologic connectivity to water in the main river channel: swales will be wet during spring runoff and scour channels will flow during flood events, serving to slowly return water from floodplains back to the main channel.

### **4. Excavation in-Channel for the Placement of Grade Control Structures**

Grade control materials will be stockpiled near the existing channel location and excavation will likely proceed from upstream to downstream to minimize potential difficulties due to backwatering effects during construction. K-rails or other diversion structures may be deployed as velocity barriers at the contractor's discretion. It is understood that water depth may preclude cross-channel notching in some cases and that grade control materials (1-2 ton boulders) may be worked into the bed as required.

### **5. Placement of Spoils**

Some spoiled material may be screened and used to construct riffles and some will be sequestered at the toes of slopes along the project boundary near the stockpiling sites and as detailed in the Final 100% plans. Spoiled material volumes are estimated not to exceed 121,290 CY.

Stockpiling of spoils will occur near the interfaces of floodplain/native slopes and will be blended to the existing bank slopes.

## **6. Construction of Riffles and Grade Control**

All materials will be washed prior to placement in the channel. Riffles shall consist of the streambed over-excavated to accommodate boulders or cobble blankets on the downstream slope such that the finished surface of cobble is at design grade, typically 2-3 feet above existing grade (Design Sheet C7). Cobbles and gravel can be delivered to the riffle locations by driving trucks along the newly excavated floodplain (soil conditions permitting). Spreading and grading can be accomplished from either bank with an excavator. Depth of cobbles in riffles shall be at least 2 feet and boulder depths will be up to 5 feet and may protrude above existing grade. Large boulders will be placed as directed to provide complexity in constructed riffles. The length of cobble blankets over the downstream face of riffles will vary but will average approximately 100 feet. A gravel blanket (3/8-3" size range) will be placed along the upstream slope of the riffle to a depth of at least one foot overlapping the cobble blanket and extending upstream approximately 50 feet. Toes of gravel riffles must be backwatered by the next riffle crest downstream. Placement volumes will vary with the size of the feature; gravel and cobble will be incorporated into the grade control matrices (Table 1).

The grade control structures (Design Sheet 7) are intended to (1) protect the channel from headcutting and (2) to elevate the water surface to activate topographic features along the floodplain. Voids must be backfilled with gravel and cobble prior to placement of the next layer of 1-2 ton boulders if more than one course is required. The finished structures will protrude above the grade of the riverbed and will blend into the upstream and downstream regions with sloping gravel/cobble riffles.

## **7. Post Grading Treatment**

TNC assumes responsibility for post grading soil treatments to reduce short term erosion. Such treatments may include; pole plantings, containerized seedlings, water jetted cuttings, and seeding. Mulch can be added to facilitate water retention, reduce erosion and inhibit colonization by undesired species. Given the extremely windy conditions which often occur in the region, a tackifier will be added as needed.

## **8. Erosion Prevention Treatments during Construction**

All large disturbance areas will be fenced with wire backed silt fencing which provides extra strength in windy areas. Spacing of steel posts will not exceed 8 feet. Wire fencing will be installed on the downhill side of the filter fabric, between the fabric and the posts and the fabric will be anchored in a 12 inch deep ditch (Nevada BMP Guide, June 2008). Some areas (e.g. long slopes along floodplain boundaries and spoils sequestration areas) may be protected with rows of straw wattles (fiber rolls), staked in place along level contours. Rolls should be keyed in to the ground surface 2-4 inches and staked at least every 4 feet with the space between rows not to exceed 20 feet (Nevada BMP Guide, June 2008).

## **C. Post-construction**

### **1. Road Surfaces Treatments**

Primary haul roads along both north and south sides of the river will be graded and watered regularly, and track-out areas will be graveled with ¾ inch road base rock as needed. Temporary construction roads of native surface will be ripped or disked to reduce compaction in preparation for TNC revegetation efforts.

## **2. Revegetation/Air Quality/Erosion Treatments**

Silt fencing and fiber rolls located in non-flood prone areas will remain on site until vegetation becomes established. BMP's located along the river's edge and on the lowest floodplain surfaces will be removed following construction. Under TNC direction a spray mulch/tackifier mixture may be applied to exposed soils to reduce wind-blown soils. Weed free straw mulch may also be applied.

## **3. Riparian, Wetland, Upland Vegetation Restoration**

In riparian and wetland areas revegetation will occur as a combination of natural recruitment and TNC planting efforts. Floodplain and upland plantings will need to be watered for the first few years following construction as in other TNC restoration projects, such as Mustang and 102. Removal of invasive species will be a component of TNC's Vegetation Restoration Plan.

## **D. Type of equipment to be used and how it will be operated**

The excavation of the floodplain, the placement of riffle rock, and other activities at the site will require the hiring of an excavation crew. The equipment listed below, or its equivalent, is expected to be used throughout the site.

Cat 330 Excavator  
Cat 973 Loader  
Cat D400  
Cat D7 Dozer  
Cat 14G Grader  
4000 gal water truck



## E. Site Plan (Figures 2-3)

The proposed area showing the site specific location and details of specific work elements planned for the project.

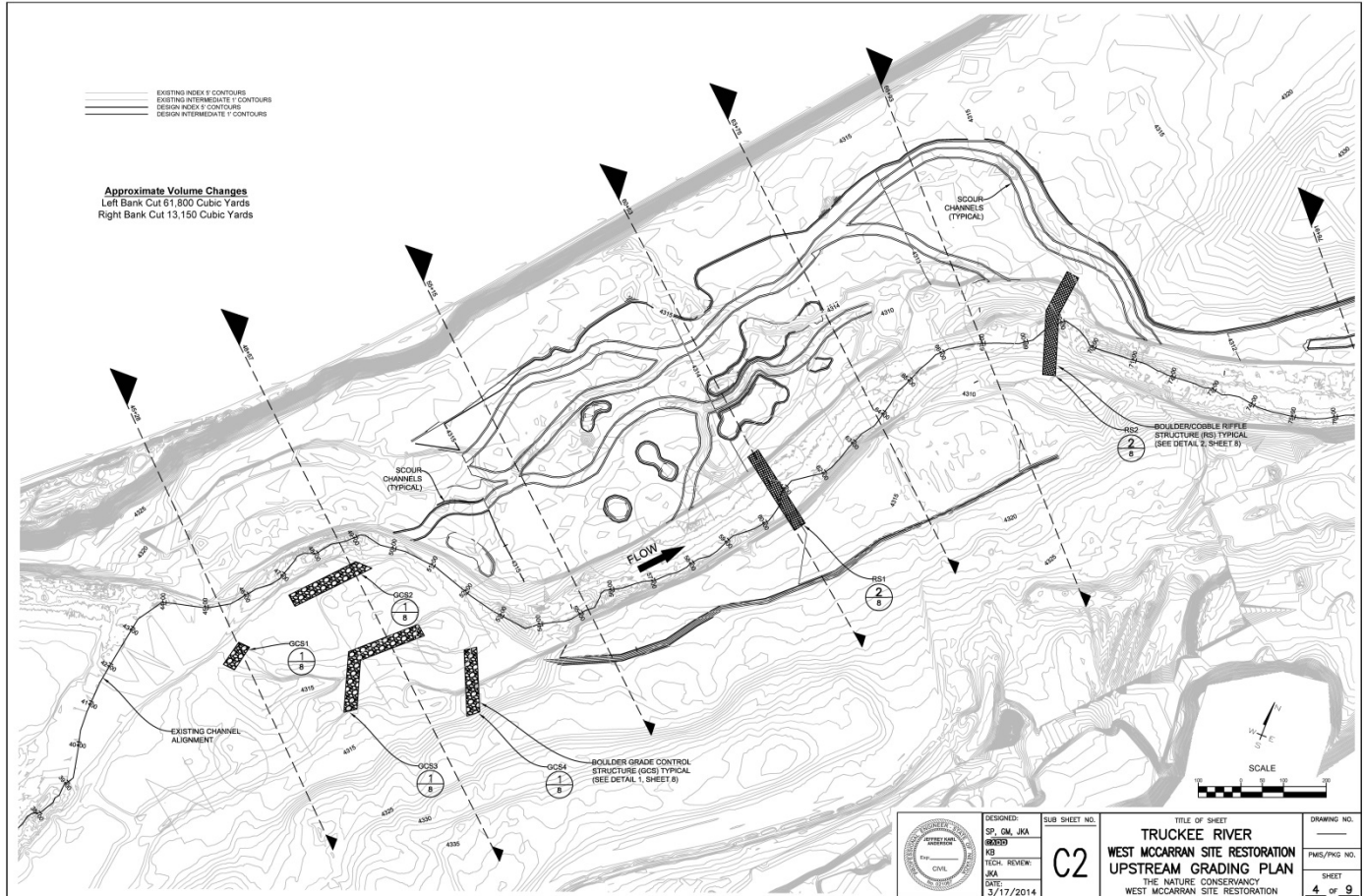


Figure 3. Upstream Site Plan

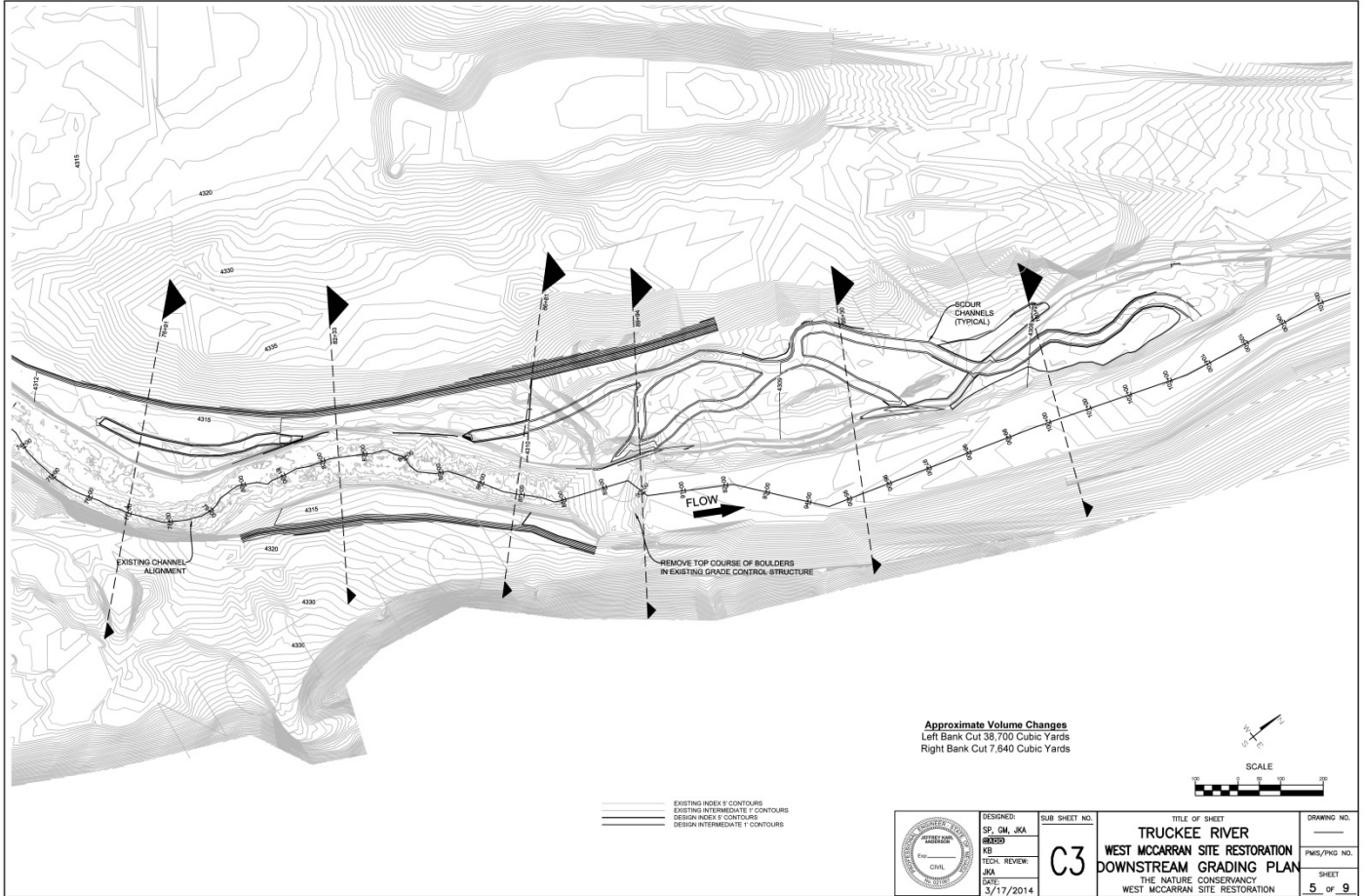


Figure 4. Downstream Site Plan

## **Proposed Project Purpose**

### **Background**

Over the past century, the lower Truckee River downstream from Vista has suffered from many human-caused changes, which have greatly altered the ecological integrity and functioning of the river. Truckee River flows are regulated by a number of agreements, decrees, and river operating requirements.

Well intended but failed efforts at flood control in the early 1960s led to exacerbated channel down cutting along the lower Truckee River and as a result, depression of the groundwater table. The lowered groundwater depth and deeply incised channel has disconnected the river from the riparian habitat and surrounding floodplains. Without access to groundwater, regeneration of native riparian vegetation has been impaired for decades, and invasive species have begun to dominate the riparian communities along the river's edge.

Land use practices along the Truckee River have altered the flow regimes, also causing the condition of riparian vegetation to decline and resulting in a significant reduction of important habitat for birds, mammals, reptiles, and amphibians. Urban growth and development in the cities of Reno and Sparks have increased the amount of impervious surfaces, affecting water quality and the extent and timing of flooding.

Since 2003, TNC and its partner agencies have demonstrated river restoration techniques on the lower Truckee River through two projects at TNC's 305-acre McCarran Ranch, the Lockwood site, the lower Mustang Ranch site, and the 102 Ranch site. The site proposed for restoration is within the same reach of the lower Truckee River as the completed restoration sites. The restoration activities at McCarran Ranch included the creation of a new river meander; approximately one mile of new channel and riffle construction; revegetation of approximately 120 acres; creation of wetlands and ponds, including oxbow wetlands; and a variety of wildlife nesting, cover, and shelter improvements. The constructed riffles raised the water surface level and promoted more frequent overbank flooding within the project areas. The localized overbank flooding of these uninhabited floodplain areas improved soil fertility and ecological productivity, while attenuating downstream flooding.

These river and riparian restoration measures are correcting the undesirable effects of channelization and river entrenchment, while retaining the benefits of flood flow attenuation. Restoration at the McCarran Ranch sites is resulting in the recovery of the groundwater table in the project area, increased populations and survivorship of native plants, and increased fish and native bird populations. The decreased channel width promotes improved hydraulic connection between the river channel and its floodplain to better support wetland habitat.

### **Purpose of and Need for the Proposed Action**

The primary purpose of the project is to contribute to the ecological restoration of the lower Truckee River. Overall, the project is intended to help restore basic physical and biological functions to a more natural condition so that the ecological systems and native organisms can depend on those functions. Generally, the restoration project will involve the creation of new areas of aquatic and terrestrial habitat, including river channel modifications, scour channels and swales, and areas of native vegetation, for the purposes of restoring the degraded ecosystem to a more natural condition.

Monitoring results support the effectiveness of TNC's restoration projects since 2003 and the need for continued, well-designed restoration projects at high priority sites on the lower Truckee River.

The West McCarran site was selected by TNC and cooperating agencies in order to restore the river channel, floodplain, and riparian forest and to undo the damage of the human-caused changes. The proposed channel-and-floodplain restoration work to be implemented at the site would create a variety of benefits in terms of long-term floodwater flow attenuation, water quality, habitats for native plants and animals including special-status species, biological productivity and diversity, noxious weed reduction and control, and restoration of native species. The proposed project would continue TNC's program of restoration on key reaches of the lower Truckee River and provide linkage and continuity with the previously restored sites.

The decision to propose this site, as well as previous projects for restoration, was based in part on their relatively high scores in a report prepared by Otis Bay Ecological Consultants (Otis Bay Ecological Consultants 2007) for the U.S. Army Corps of Engineers. The report includes a ranking of the ecological restoration potential of 20 sites along the lower Truckee River based on field and aerial observations. The criteria included flow regime, average floodplain width and potential for floodplain expansion, riparian forest and potential for recovery, existing aquatic habitat diversity and potential to increase hydraulic habitat diversity, encroachments into the channel and floodplain, existing entrenchment, floodplain reconnection potential, and connection to natural features.

### **West McCarran**

TNC acquired the McCarran Ranch riverfront with the purpose of restoring the health of the river and associated riparian and wetland habitats. The Truckee River at West McCarran has a deeply incised straight channel, a disconnected floodplain, and backwater effects of a downstream weir. The site also contains existing elements such as functional historic swales, remnant late seral cottonwoods, and relict wetlands, which would accelerate the restoration process.

The West McCarran site is immediately downstream of the Lower Mustang project, where extensive restoration work was done in 2009 to lower the floodplain, realign the channel, and restore native riparian vegetation. The 1-mile West McCarran reach is the upstream segment of TNC's McCarran Ranch Preserve, which totals nearly five river miles. Most of the downstream portion of the river frontage was restored from 2003 to 2006. The purpose and need for restoration proposed at West McCarran Ranch is to provide river and ecological restoration, and to provide physical and biological continuity with previously restored sites upstream and downstream of the West McCarran reach.

### **Timeframe of the proposed project**

January-August 2014 Finalize design and secure permits.

September-December 2014 Site preparation; rock stockpiling; plant salvage; excavation of floodplains; construction of grade control structures and riffles.

## Other Permits and Approvals Required

The construction work associated with restoring this site requires a series of federal, state, and local permits, as well as letters of permission and easements. As of March 2014, the permit application process is in the initial stages, and all permits are expected to be in-hand by late August 2014. The 2003 and 2006 McCarran Ranch projects served to demonstrate exactly which permits and easements were needed, and they are as follows:

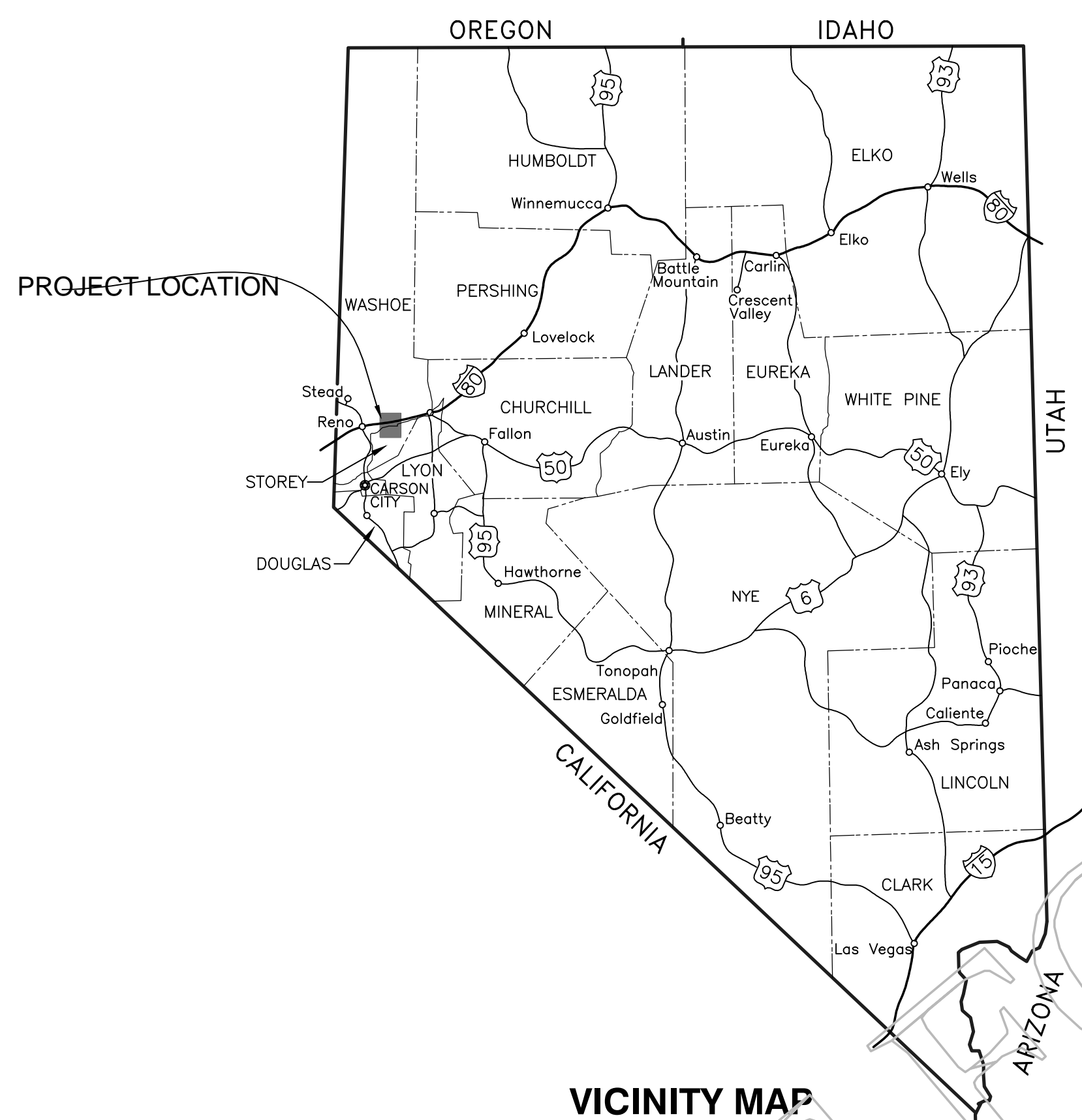
1. Temporary Working in Waterways (Rolling Stock) Permit – issued by NDEP.
2. 401 Water Quality Certification – issued by NDEP.
3. Stormwater General Permit – issued by NDEP.
4. Letters of Authorization from State of Nevada – both the State Engineer (Division of Water Resources) and Department of Wildlife must approve the project. State Engineer Contact: Robert Martinez (775) 684-2735; NDOW Contact: Laura Richards (775) 688-1996.
5. Grading Permits – issued by Washoe and Storey Counties. Washoe County Contact: Don Jeppson, AIA (775) 328-2020; Storey County contact: Dean Haymore (775) 847-0966.
6. Special Use Permits – issued by Storey and Washoe Counties. Washoe County Contact: Roger Pellham, (775) 328-3622; Storey County Contact: Dean Haymore (775) 847-0966.
7. Dust Control and Vector Control Permits – Washoe County District Health Department. Contact: Air Quality Management Division (775) 784-7200.
8. Right of Entry and Construction Authorization – Division of State Lands. Division of State Lands Contact: David Marlow (775) 684-2720.

TNC will be responsible for preparing and submitting all necessary materials to secure these permits and easements. TNC will be named on each permit for the project (as will contractors as appropriate).



# TRUCKEE RIVER RESTORATION THE NATURE CONSERVANCY

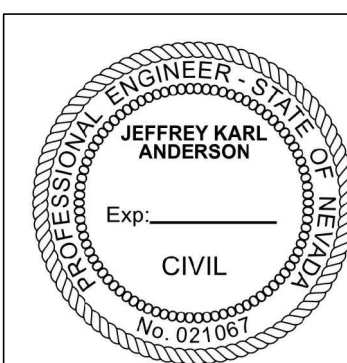
WEST MCCARRAN SITE  
STOREY AND WASHOE  
COUNTIES, NEVADA



## SHEET INDEX

SHEET	DESCRIPTION
G1	COVER SHEET
G2	NOTES
G3	EXISTING SITE PLAN AND BOUNDARIES
G4	DESIGN BREAKLINES AND CONTOURS
C1	PROJECT PLAN OVERVIEW
C2	UPSTREAM GRADING PLAN
C3	DOWNSTREAM GRADING PLAN
C4	UPSTREAM CROSS SECTIONS
C5	DOWNSTREAM CROSS SECTIONS
C6	THALWEG PROFILE
C7	DETAILS

100% PERMIT PLAN SET



**GMA**  
**GRAHAM MATTHEWS & ASSOCIATES**  
Hydrology · Geomorphology · Stream Restoration  
P.O. Box 1516 Weaverville, CA 96093-1516  
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**Northern Hydrology and Engineering**  
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PO BOX 2515  
MCKINLEYVILLE, CA 95519  
(707) 839-2195

**TRUCKEE RIVER RESTORATION**  
WEST MCCARRAN SITE  
THE NATURE CONSERVANCY  
COUNTY: STOREY/WASHOE STATE: NEVADA

SHEET  
1  
OF  
11



**GENERAL NOTES:**

1. ALL IMPROVEMENTS SHALL BE ACCOMPLISHED UNDER THE APPROVAL, INSPECTION, AND TO THE SATISFACTION OF THE OWNER. IMPROVEMENT CONSTRUCTION SHALL COMPLY WITH THESE PLANS, SPECIFICATIONS, AND THE 2001 NEVADA DOT STANDARD PLANS FOR CONSTRUCTION OF LOCAL STREETS AND ROADS, UNLESS NOTED OTHERWISE. ALL REFERENCES TO THE "STANDARD SPECIFICATIONS" SHALL MEAN THE STATE OF NEVADA, DEPARTMENT OF TRANSPORTATION (NDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION OF LOCAL STREETS AND ROADS, 2001. CONSTRUCTION NOT SPECIFIED ON THESE PLANS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS. THE CONTRACTOR IS OBLIGATED TO BE FAMILIAR WITH APPLICABLE SECTIONS OF THE STANDARD SPECIFICATIONS NOT DISCUSSED IN THE GENERAL NOTES. THE CONTRACT SPECIAL PROVISIONS SHALL SUPERSEDE THOSE OF THE STANDARD SPECIFICATIONS WHERE DISCREPANCIES OCCUR.

2. CONSTRUCTION HOURS SHALL BE WEEKDAYS BETWEEN 7:00 A.M. AND 6:00 P.M. UNLESS PRIOR APPROVAL IS RECEIVED FROM THE OWNER.

3. THE LOCATIONS AND EXTENT OF EXISTING UTILITIES AND UNDERGROUND UTILITIES IN THE WORK AREA AS SHOWN ARE APPROXIMATE AND ARE NOT NECESSARILY COMPLETE. A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE EXISTING UTILITIES BASED UPON AVAILABLE RECORDS. THE CONTRACTOR SHALL DETERMINE THE TYPE, LOCATION, SIZE, AND/OR DEPTH OF THE EXISTING UTILITIES WITHIN THE WORK AREA BEFORE COMMENCING WORK. THE CONTRACTOR OR ANY SUBCONTRACTOR FOR THIS CONTRACT SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT AT (800) 227-2600 AT LEAST 48 HOURS PRIOR TO ANY CONSTRUCTION. SEE SPECIAL PROVISIONS FOR CONTRACTOR NOTIFICATION REQUIREMENTS. THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR DAMAGED UTILITIES. THE OWNER AND THEIR CONSULTANTS ASSUME NO RESPONSIBILITY FOR ANY UNDERGROUND UTILITIES OR OTHER BURIED OBJECTS WHICH MAY BE ENCOUNTERED AND ARE NOT SHOWN ON THESE PLANS.

4. UNLESS NOTED OTHERWISE ON THE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SURVEY MONUMENTS AND OTHER SURVEY MARKERS DURING CONSTRUCTION.

5. THE CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, AND FURTHER AGREES THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS IN ACCORDANCE WITH THE PROVISIONS OUTLINED BY THE PROJECT CONTRACT AND STANDARD SPECIFICATIONS.

7. THERE SHALL BE NO GRADING OR LAND DISTURBANCE PERFORMED WITH RESPECT TO THE PROJECT BETWEEN DECEMBER 15 AND JULY 1 UNLESS PROPER APPROVALS ARE OBTAINED FROM THE APPROPRIATE AGENCIES.

8. THE CONTRACTOR SHALL MAINTAIN A SET OF PLANS ON THE JOB SHOWING "AS-CONSTRUCTED" CHANGES MADE TO DATE. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUPPLY TO THE OWNER A SET OF PLANS, MARKED UP TO THE SATISFACTION OF THE OWNER, REFLECTING THE AS-CONSTRUCTED MODIFICATIONS.

9. AT NO TIME SHALL THE CONTRACTOR UNDERTAKE TO CLOSE OFF ANY EXISTING UTILITY LINES OR OPEN VALVES OR TAKE ANY OTHER ACTION WHICH WOULD AFFECT THE OPERATION OF EXISTING WATER OR SEWER SYSTEMS WITHOUT PRIOR APPROVAL FROM THE OWNER.

10. THE CONTRACTOR SHALL BE REQUIRED TO PERFORM PREVENTIVE DUST CONTROL MEASURES TO ENSURE THAT DUST RESULTING FROM THE CONTRACTOR'S PERFORMANCE OF THE WORK IS CONTROLLED IN CONFORMANCE WITH THE PROVISIONS OF SECTION 107, "LEGAL RELATIONS AND RESPONSIBILITY," OF THE STANDARD SPECIFICATIONS, COUNTY, AND LOCAL ORDINANCES.

11. EROSION CONTROL STRUCTURES SHALL CONTAIN AND CONTROL EROSION CAUSED SILT DEPOSITS AND PROVIDE FOR THE SAFE DISCHARGE OF SILT-FREE RUNOFF FROM THE PROJECT SITE INTO RECEIVING WATER BODIES. SUITABLE SUPPLIES FOR MITIGATING SEDIMENT IMPACTS TO ONSITE WATERWAYS SHALL BE MAINTAINED AT THE PROJECT SITE BY THE CONTRACTOR DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING ALL TEMPORARY EROSION CONTROL MEASURES. THE EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE NEVADA DIVISION OF ENVIRONMENTAL PROTECTION "HANDBOOK OF BEST MANAGEMENT PRACTICES." AN INSPECTION SHALL OCCUR PRIOR TO THE COMMENCEMENT OF WORK FOR A PRE-GRADING INSPECTION OF THE INSTALLED TEMPORARY EROSION CONTROL FACILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND PERFORMANCE OF THE TEMPORARY EROSION CONTROL MEASURES THROUGHOUT THE DURATION OF THE PROJECT.

12. CONSTRUCTION LIMITS SHOWN ON THE PLANS DELINEATE BOUNDARIES FOR THE CONTRACTOR'S OPERATIONS OUTSIDE THE COUNTY STREET RIGHT-OF-WAY. CONSTRUCTION LIMIT FENCING SHALL BE ERECTED ALONG THESE BOUNDARIES PRIOR TO COMMENCEMENT OF CONSTRUCTION.

13. THE CONTRACTOR SHALL USE ONLY DESIGNATED SPECIFIC SITES FOR STORAGE OF EQUIPMENT AND MATERIALS AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SECURITY OF ALL EQUIPMENT AND MATERIALS.

14. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND HIS SUBCONTRACTOR(S) TO EXAMINE THE PROJECT SITE PRIOR TO THE OPENING OF BID PROPOSALS. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED, SUCH AS THE NATURE AND LOCATION OF THE WORK AND THE GENERAL AND LOCAL CONDITIONS, PARTICULARLY THOSE AFFECTING THE AVAILABILITY OF TRANSPORTATION, THE DISPOSAL, HANDLING, AND STORAGE OF MATERIALS, AVAILABILITY OF LABOR, WATER, ELECTRICITY, ROADS, THE UNCERTAINTIES OF WEATHER, THE CONDITIONS OF THE GROUND, SURFACE AND SUBSURFACE MATERIALS, THE EQUIPMENT AND FACILITIES NEEDED PRIMARILY FOR AND DURING THE PERFORMANCE OF THE WORK, AND THE COSTS THEREOF. ANY FAILURE BY THE CONTRACTOR AND SUBCONTRACTOR(S) TO ACQUAINT HIMSELF WITH ALL THE AVAILABLE INFORMATION WILL NOT RELIEVE HIM FROM RESPONSIBILITY FOR PROPERLY ESTIMATING THE DIFFICULTY AND COST OF SUCCESSFULLY PERFORMING THE WORK.

15. NO CONSTRUCTION SHALL COMMENCE UNTIL ALL REQUIRED ENVIRONMENTAL REGULATORY PERMITS HAVE BEEN OBTAINED AND ARE PART OF THE CONSTRUCTION DOCUMENTS AVAILABLE FOR THE CONTRACTOR. POTENTIAL PERMITS INCLUDE, BUT ARE NOT LIMITED TO, THE UNITED STATES ARMY CORPS OF ENGINEERS, NEVADA DEPARTMENT OF ENVIRONMENTAL PROTECTION, UNITED STATES FISH AND WILDLIFE SERVICE, STOREY AND WASHOE COUNTIES, ETC. THE CONTRACTOR SHALL CONDUCT ALL CONSTRUCTION OPERATIONS TO BE IN CONFORMANCE WITH THE PROVISIONS CONTAINED WITHIN THESE PERMITS. THE CONTRACTOR SHALL OBTAIN AT HIS OWN EXPENSE ALL PERMITS, LICENSES, INSURANCE POLICIES, ETC., NOT ALREADY OBTAINED BY OWNER, AS MAY BE NECESSARY TO COMPLY WITH STATE AND LOCAL LAWS ASSOCIATED WITH THE PERFORMANCE OF THE WORK. SEE SPECIAL PROVISIONS.

16. THE CONTRACTOR IS RESPONSIBLE TO REVIEW THE CONTRACT DOCUMENTS FOR ALL SUBMITTALS REQUIRED FOR OWNER REVIEW AND ACCEPTANCE.

17. THE CONSULTANT TEAM AND OVERSEEING ENGINEER RESPONSIBLE FOR PREPARATION OF THESE PLANS AND SPECIFICATIONS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE CONSULTANT TEAM AND OVERSEEING ENGINEER RESPONSIBLE FOR PREPARATION OF THESE PLANS. CONTACT PERSON: GRAHAM MATTHEWS, P.O. BOX 1516, WEAVERVILLE, CALIFORNIA, 96093-1516; TELEPHONE (530) 623-0520.

18. CONTRACTOR'S LICENSE CLASSIFICATION: BIDDERS SHALL BE PROPERLY LICENSED TO PERFORM THE WORK PURSUANT TO THE STATE CONTRACTOR'S LICENSE ACT (NAC 624 ET SEQ.) AND SHALL POSSESS A CLASS A LICENSE OR EQUIVALENT COMBINATION OF CLASSES REQUIRED BY THE CATEGORIES AND TYPE OF WORK INCLUDED IN THE CONTRACT DOCUMENTS AND PLANS. FAILURE OF THE SUCCESSFUL BIDDER TO OBTAIN PROPER AND ADEQUATE LICENSING FOR AN AWARD OF THE CONTRACT SHALL CONSTITUTE A FAILURE TO EXECUTE THE CONTRACT, AND FORFEITURE AS PROVIDED UNDER THAT SECTION.

19. THE VERTICAL DATUM FOR THIS PROJECT IS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988. HORIZONTAL DATUM IS BASED ON US STATE PLANE 1983 NEVADA WEST 2703 (NAD83).

20. TOPOGRAPHIC MAPPING WAS PREPARED USING LIDAR METHODS BY TOWILL, INC., SAN FRANCISCO, CA IN 2010 AND SUPPLEMENTARY GROUND SURVEYS BY GRAHAM MATTHEWS & ASSOCIATES, WEAVERVILLE, CA IN 2010- 2012.

21. LINE AND GRADE: THE LAYOUT CONTROL, DIMENSIONS AND CONTOURS SHOWN ARE INTENDED TO PROVIDE THE CONTRACTOR SUFFICIENT INFORMATION TO LAYOUT AND PERFORM INITIAL STAKING OF THE PROJECT. THE STAKES SHALL BE REVIEWED AND ADJUSTED WITH THE CONTRACTING OFFICER PRIOR TO ANY GRADING. ADJUSTMENTS TO THE GRADING WILL BE REQUIRED AS DIRECTED BY THE CONTRACTING OFFICER TO ACHIEVE A FUNCTIONAL, RESTORED CREEK. CAD FILES WILL BE MADE AVAILABLE FOR THE CONTRACTOR'S CONVENIENCE. IN THE EVENT OF A CONFLICT, THE HARD COPY DRAWINGS SHALL GOVERN.

22. SHOULD IT APPEAR THAT THE WORK TO BE DONE, OR ANY MATTER RELATIVE THERETO, IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS AND ATTACHED SPECIFICATIONS, THE CONTRACTOR SHALL CONTACT THE CONSULTANT TEAM RESPONSIBLE FOR THE PLAN PREPARATION. CONTACT PERSON: GRAHAM MATTHEWS, P.O. BOX 1516, WEAVERVILLE, CALIFORNIA, 96093-1516; TELEPHONE (530) 623-0520.

23. NO TREES OR WETLAND VEGETATION SHALL BE REMOVED UNLESS THEY ARE SHOWN AND NOTED TO BE REMOVED ON THE PLANS, OR AS DIRECTLY SPECIFIED ON-SITE BY THE PROJECT MANAGEMENT STAFF. ALL TREES CONFLICTING WITH GRADING SHALL BE TRIMMED. NO GRADING SHALL TAKE PLACE WITHIN THE DRIP LINE OF TREES NOT TO BE REMOVED.

24. IF, DURING CONSTRUCTION, ARCHAEOLOGICAL REMAINS ARE ENCOUNTERED, CONSTRUCTION IN THE VICINITY SHALL BE HALTED, AND THE STATE OFFICE OF HISTORIC PRESERVATION AND A QUALIFIED ARCHEOLOGIST SHALL BE NOTIFIED IMMEDIATELY.

25. PERMIT CONDITIONS MAY CONTAIN SPECIFIC REQUIREMENTS FOR THE CONTROL OF OFF-SITE TURBIDITY FROM PROJECT OPERATIONS. TURBIDITY WILL BE MONITORED ON A FREQUENT BASIS BY THE PROJECT MANAGEMENT AND INSPECTION STAFF ON-SITE. TURBIDITY AMOUNTS IN EXCESS OF THE PERMITTED AMOUNT AND/OR DURATIONS WILL CAUSE WORK TO BE STOPPED UNTIL IMPROVED PRACTICES ARE IN EFFECT AND THE PROBLEMS CONTROLLED. THE CONTRACTOR IS COMPLETELY RESPONSIBLE FOR ANY PROJECT DELAYS THAT OCCUR BY NATURE OF THIS FAILURE TO ADEQUATELY CONTROL SEDIMENT ON-SITE.

26. THE CONTRACTOR SHALL CONFORM TO THE RULES AND REGULATIONS OF THE STATE CONSTRUCTION SAFETY ORDERS PERTAINING TO EXCAVATIONS AND TRENCHES

**GENERAL GRADING NOTES:**

1. GENERAL SITE GRADING: ALL GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, AND ALL APPLICABLE LOCAL, COUNTY, AND STATE GRADING ORDINANCES.

2. EARTHWORK QUANTITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND ARE FURNISHED FOR THE CONTRACTOR'S INFORMATION ONLY. THE ACTUAL AMOUNT OF EARTH MOVED WILL VARY DEPENDING ON CONDITIONS IN THE FIELD INCLUDING BUT NOT LIMITED TO COMPACTION, CONSOLIDATION, STRIPPING, AND THE CONTRACTOR'S METHOD OF OPERATION.

3. THE SITE SHALL BE MAINTAINED IN AN ORDERLY FASHION. FOLLOWING THE CESSATION OF CONSTRUCTION ACTIVITY, ALL CONSTRUCTION DEBRIS SHALL BE REMOVED FROM THE SITE OR PLACED ON-SITE AS DIRECTED BY THE OWNER.

**PROJECT TOTAL CUT/FILL QUANTITIES**

COUNTY	CUT VOLUME (CY)	FILL VOLUME (CY)	NET VOLUME (CY)
WASHOE	92,000	200	91,800
STOREY	13,200	0	13,200
<b>TOTAL</b>	<b>105,200</b>	<b>200</b>	<b>105,000</b>

NOTE: CUT/FILL VOLUMES ASSUME SOLID VOLUME

**BOULDER/COBBLE/GRAVEL QUANTITIES**

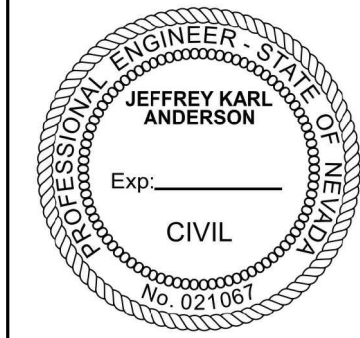
PROJECT ELEMENT	MATERIAL TYPE	TOTAL VOLUME (CY)	TOTAL WEIGHT (TON)
BOULDER	1 TO 2 TON ROCK	2310	3601
GRAVEL/COBBLE MIX	2 TO 12 INCH GRAVEL/COBBLE	1900	3386

NOTE: BOULDER, COBBLE, GRAVEL VOLUMES ASSUME SOLID VOLUME; QUANTITIES ASSUME 30% VOIDS FOR BOULDERS AND 20% VOIDS FOR GRAVEL/COBBLE, AND 165 LBS/CY.

**PROJECT CONTROL POINTS**

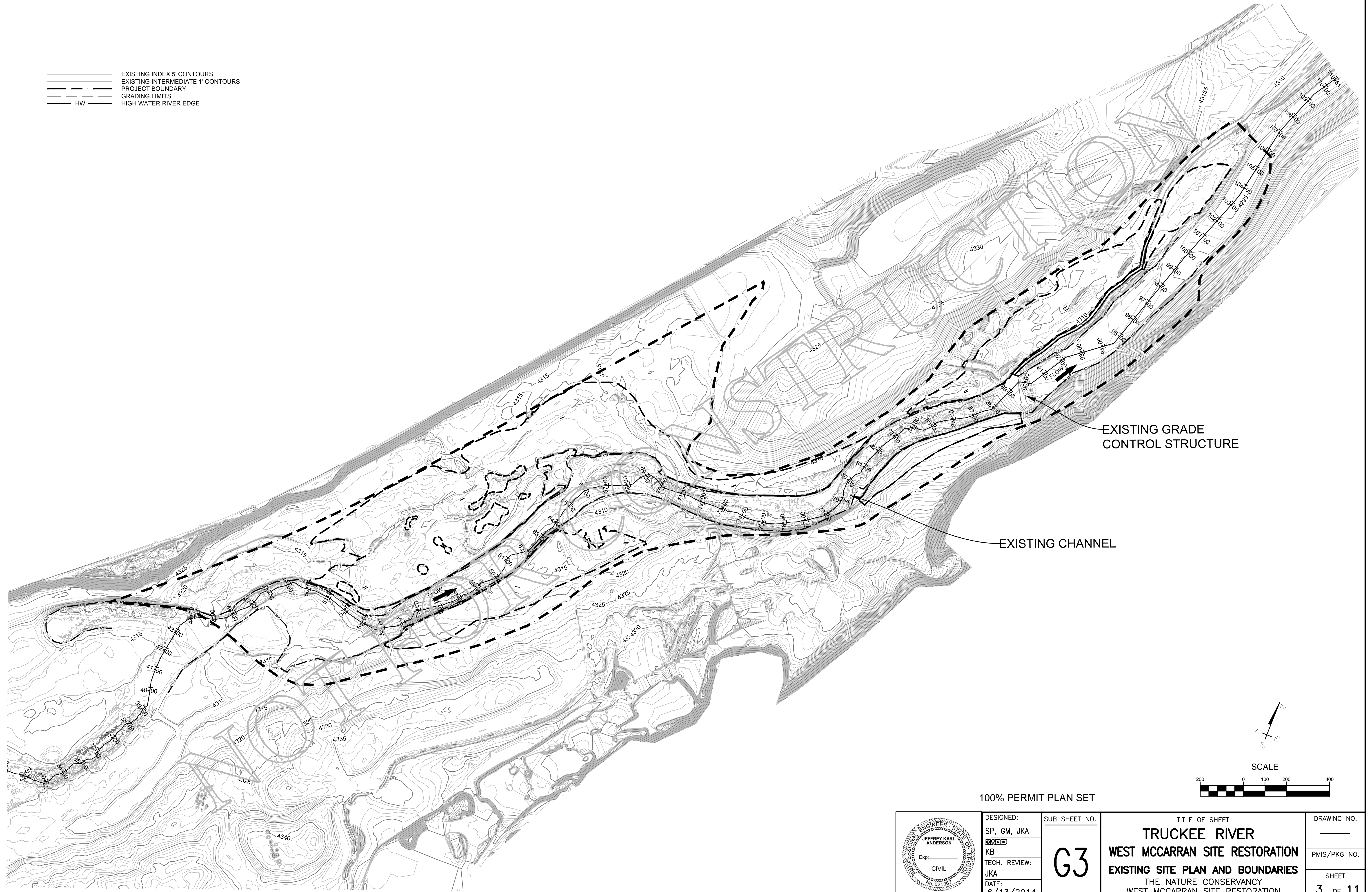
CP #	NORTHING (NAD83, FT)	EASTING (NAD83, FT)	ELEVATION (NAVD88, FT)	TYPE
215	14877034.805	2356540.942	4264.665	REBAR
216	14876798.940	2355860.311	4281.947	REBAR
217	14876972.487	2355984.875	4282.668	REBAR
218	14876984.429	2354730.203	4271.237	REBAR

**100% PERMIT PLAN SET**

	DESIGNED: SP, GM, JKA	SUB SHEET NO.  <b>G2</b>	TITLE OF SHEET <b>TRUCKEE RIVER WEST MCCARRAN SITE RESTORATION NOTES</b> THE NATURE CONSERVANCY WEST MCCARRAN SITE RESTORATION	DRAWING NO. _____
	TECH. REVIEW: JKA		PMIS/PKG NO. _____	
	DATE: 6/13/2014		SHEET <b>2</b> OF <b>11</b>	

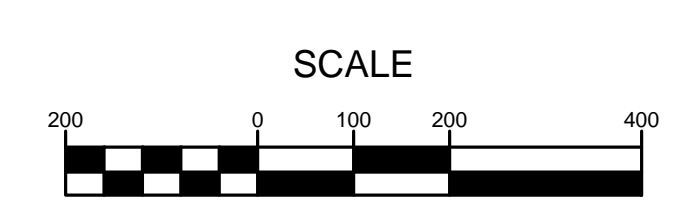
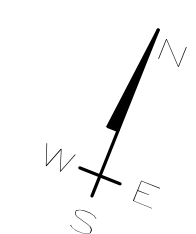


- EXISTING INDEX 5' CONTOURS
- - - EXISTING INTERMEDIATE 1' CONTOURS
- - - PROJECT BOUNDARY
- - - GRADING LIMITS
- HW HIGH WATER RIVER EDGE



EXISTING GRADE CONTROL STRUCTURE

EXISTING CHANNEL

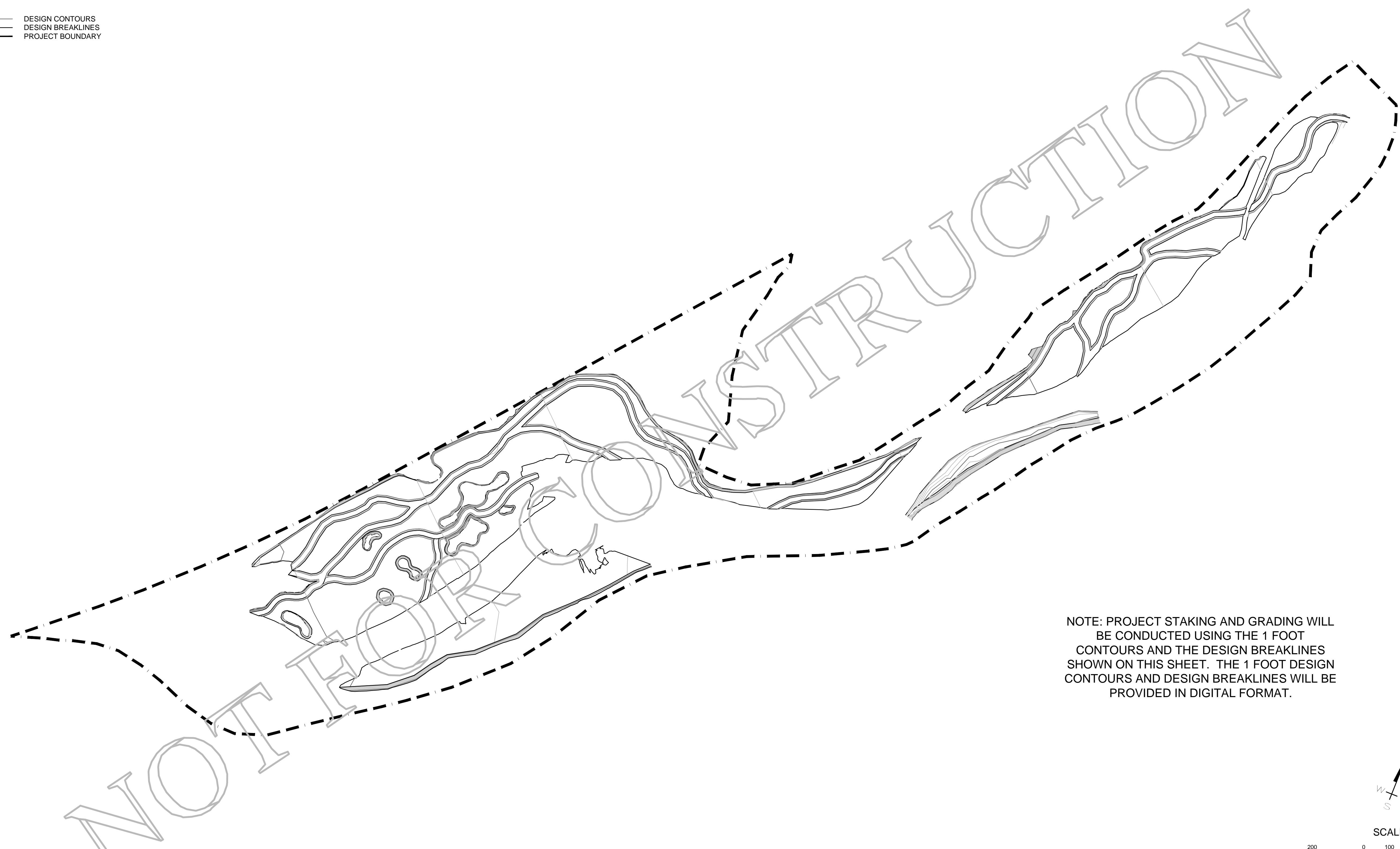


100% PERMIT PLAN SET

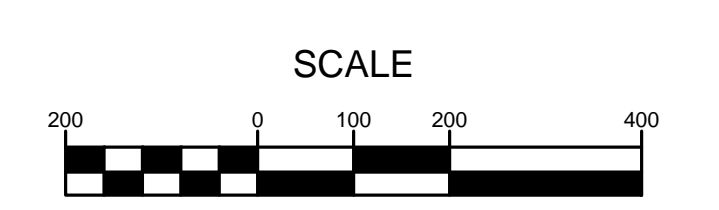
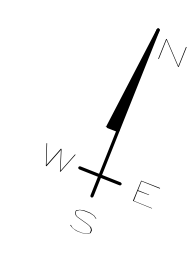
	DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
	SP, GM, JKA	G3	<b>TRUCKEE RIVER</b> <b>WEST MCCARRAN SITE RESTORATION</b> <b>EXISTING SITE PLAN AND BOUNDARIES</b> THE NATURE CONSERVANCY WEST MCCARRAN SITE RESTORATION	_____
	KB			PMS/PKG NO.
	TECH. REVIEW:			JKA
DATE:	6/13/2014			3 of 11



\_\_\_\_\_ DESIGN CONTOURS  
 \_\_\_\_\_ DESIGN BREAKLINES  
 - - - - - PROJECT BOUNDARY









NOTE: PROJECT STAKING AND GRADING WILL  
 BE CONDUCTED USING THE 1 FOOT  
 CONTOURS AND THE DESIGN BREAKLINES  
 SHOWN ON THIS SHEET. THE 1 FOOT DESIGN  
 CONTOURS AND DESIGN BREAKLINES WILL BE  
 PROVIDED IN DIGITAL FORMAT.

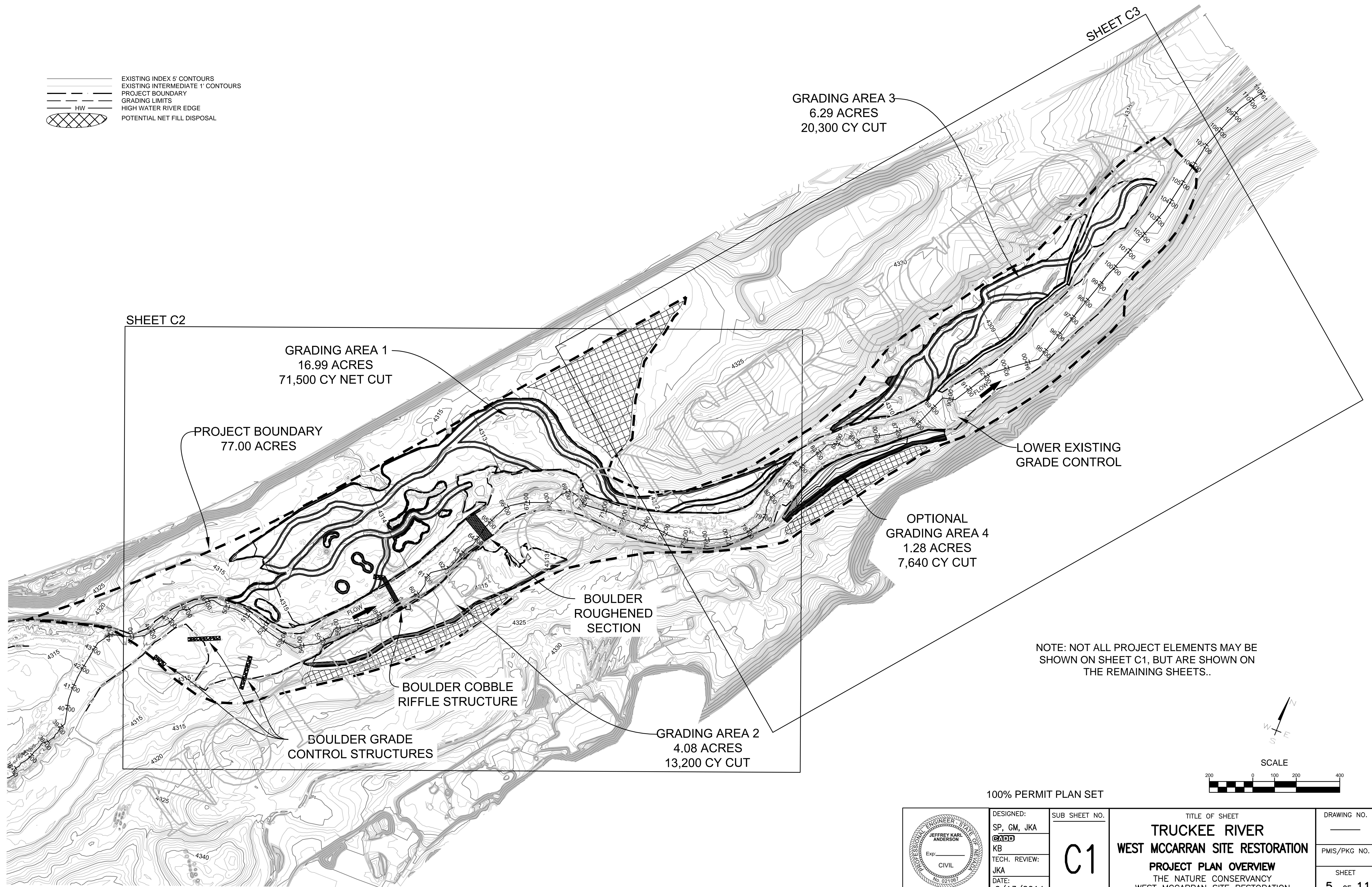


100% PERMIT PLAN SET

	DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
	SP, GM, JKA	<b>G4</b>	<b>TRUCKEE RIVER          WEST MCCARRAN SITE RESTORATION          DESIGN BREAKLINES AND CONTOURS</b> THE NATURE CONSERVANCY WEST MCCARRAN SITE RESTORATION	_____
	KB			PMIS/PKG NO.
	TECH. REVIEW:			JKA
DATE:	6/13/2014	<b>4</b> of <b>11</b>		



-  EXISTING INDEX 5' CONTOURS
-  EXISTING INTERMEDIATE 1' CONTOURS
-  PROJECT BOUNDARY
-  GRADING LIMITS
-  HIGH WATER RIVER EDGE
-  POTENTIAL NET FILL DISPOSAL



GRADING AREA 3  
6.29 ACRES  
20,300 CY CUT

GRADING AREA 1  
16.99 ACRES  
71,500 CY NET CUT

PROJECT BOUNDARY  
77.00 ACRES

LOWER EXISTING  
GRADE CONTROL

OPTIONAL  
GRADING AREA 4  
1.28 ACRES  
7,640 CY CUT

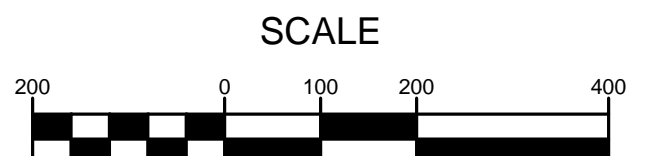
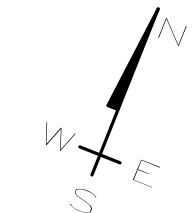
BOULDER  
ROUGHENED  
SECTION

NOTE: NOT ALL PROJECT ELEMENTS MAY BE  
SHOWN ON SHEET C1, BUT ARE SHOWN ON  
THE REMAINING SHEETS..

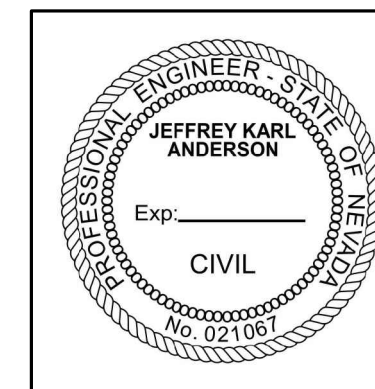
BOULDER COBBLE  
RIFFLE STRUCTURE

GRADING AREA 2  
4.08 ACRES  
13,200 CY CUT

BOULDER GRADE  
CONTROL STRUCTURES



100% PERMIT PLAN SET



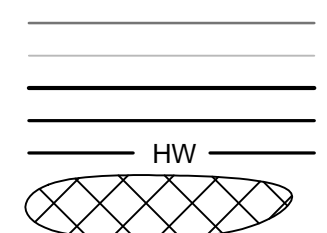
DESIGNED:  
SP, GM, JKA  
KB  
TECH. REVIEW:  
JKA  
DATE:  
6/13/2014

SUB SHEET NO.  
**C1**

TITLE OF SHEET  
**TRUCKEE RIVER  
WEST MCCARRAN SITE RESTORATION  
PROJECT PLAN OVERVIEW**  
THE NATURE CONSERVANCY  
WEST MCCARRAN SITE RESTORATION

DRAWING NO.  
PMS/PKG NO.  
SHEET  
**5 of 11**




 EXISTING INDEX 5' CONTOURS  
 EXISTING INTERMEDIATE 1' CONTOURS  
 DESIGN INDEX 5' CONTOURS  
 DESIGN INTERMEDIATE 1' CONTOURS  
 HW HIGH WATER RIVER EDGE  
 POTENTIAL NET FILL DISPOSAL

NOTE: SCOUR CHANNELS ARE SHALLOW CHANNELS CONSTRUCTED ON THE RESTORED FLOODPLAINS. THE SCOUR CHANNELS WILL ONLY CONTAIN WATER DURING FLOOD FLOWS, AND ARE NOT INTENDED TO BE BACKWATERED OR CONTAIN WATER AT LOW-FLOW CONDITIONS.

**Approximate Volume**  
 Left Bank Cut 71,500 Cubic Yards  
 Right Bank Cut 13,200 Cubic Yards

BOULDER GRADE CONTROL STRUCTURE 4, TO BE LOCATED AND PLACED AS DIRECTED IN FIELD (SEE DETAIL 1, SHEET 11)

SCOUR CHANNELS (TYPICAL)

BOULDER ROUGHENED SECTION, TO BE LOCATED AND PLACED AS DIRECTED IN FIELD.

SCOUR CHANNELS (TYPICAL)

EXISTING CHANNEL ALIGNMENT

FLOW

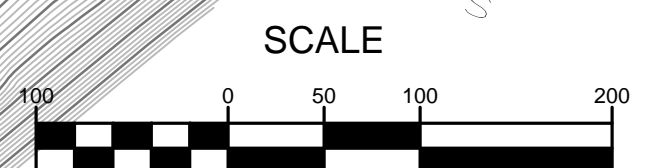
BOULDER/COBBLE/GRAVEL RIFFLE STRUCTURE TO BE LOCATED AND PLACED AS DIRECTED IN THE FIELD (SEE DETAIL 2, SHEET 11)

TIE RIFFLE BOULDERS INTO EXISTING RIGHT BANK ROCK SLOPE PROTECTION

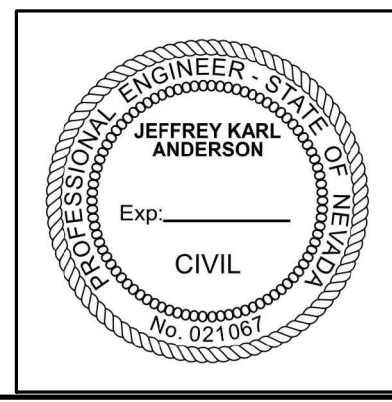
BOULDER GRADE CONTROL STRUCTURE 1, TO BE LOCATED AND PLACED AS DIRECTED IN FIELD (SEE DETAIL 1, SHEET 11)

BOULDER GRADE CONTROL STRUCTURE 2, TO BE LOCATED AND PLACED AS DIRECTED IN FIELD (SEE DETAIL 1, SHEET 11)

BOULDER GRADE CONTROL STRUCTURE 3 TO BE LOCATED AND PLACED AS DIRECTED IN FIELD (SEE DETAIL 1, SHEET 11)



100% PERMIT PLAN SET



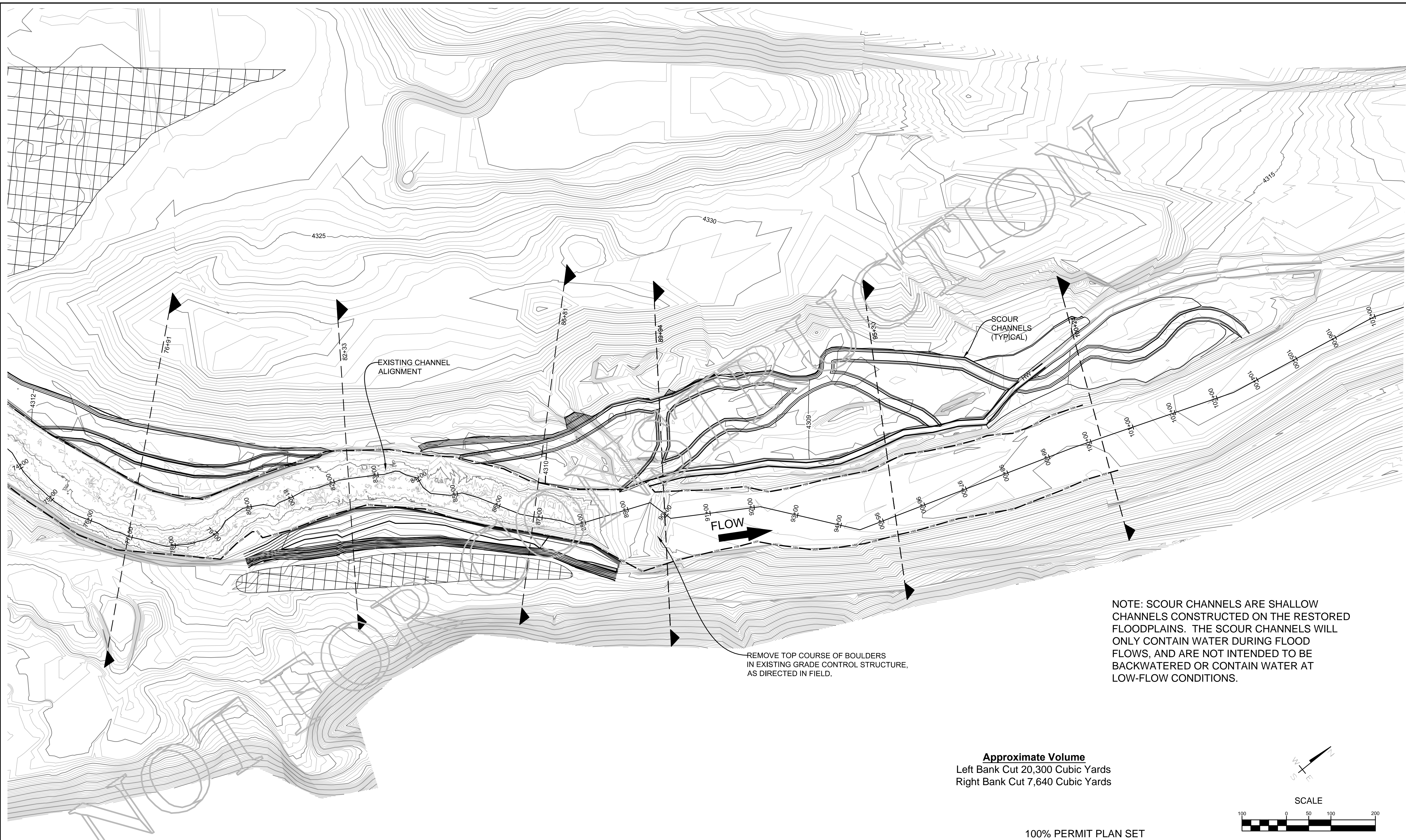
DESIGNED:  
 SP, GM, JKA  
 KB  
 TECH. REVIEW:  
 JKA  
 DATE:  
 6/13/2014

SUB SHEET NO.  
  
**C2**

TITLE OF SHEET  
**TRUCKEE RIVER**  
**WEST MCCARRAN SITE RESTORATION**  
**UPSTREAM GRADING PLAN**  
 THE NATURE CONSERVANCY  
 WEST MCCARRAN SITE RESTORATION

DRAWING NO.  
 PMS/PKG NO.  
 SHEET  
**6 of 11**

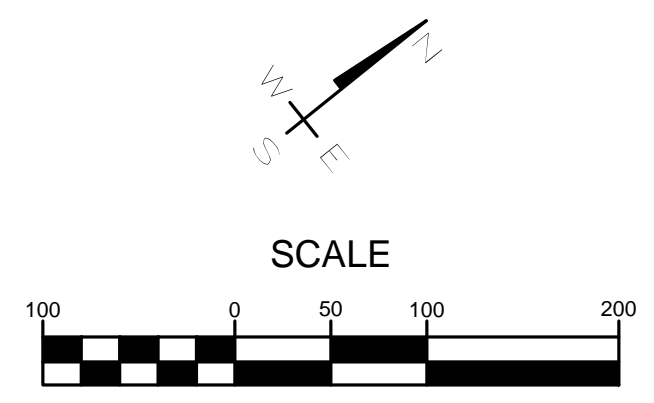




REMOVE TOP COURSE OF BOULDERS  
IN EXISTING GRADE CONTROL STRUCTURE,  
AS DIRECTED IN FIELD.

NOTE: SCOUR CHANNELS ARE SHALLOW  
CHANNELS CONSTRUCTED ON THE RESTORED  
FLOODPLAINS. THE SCOUR CHANNELS WILL  
ONLY CONTAIN WATER DURING FLOOD  
FLOWS, AND ARE NOT INTENDED TO BE  
BACKWATERED OR CONTAIN WATER AT  
LOW-FLOW CONDITIONS.

**Approximate Volume**  
Left Bank Cut 20,300 Cubic Yards  
Right Bank Cut 7,640 Cubic Yards



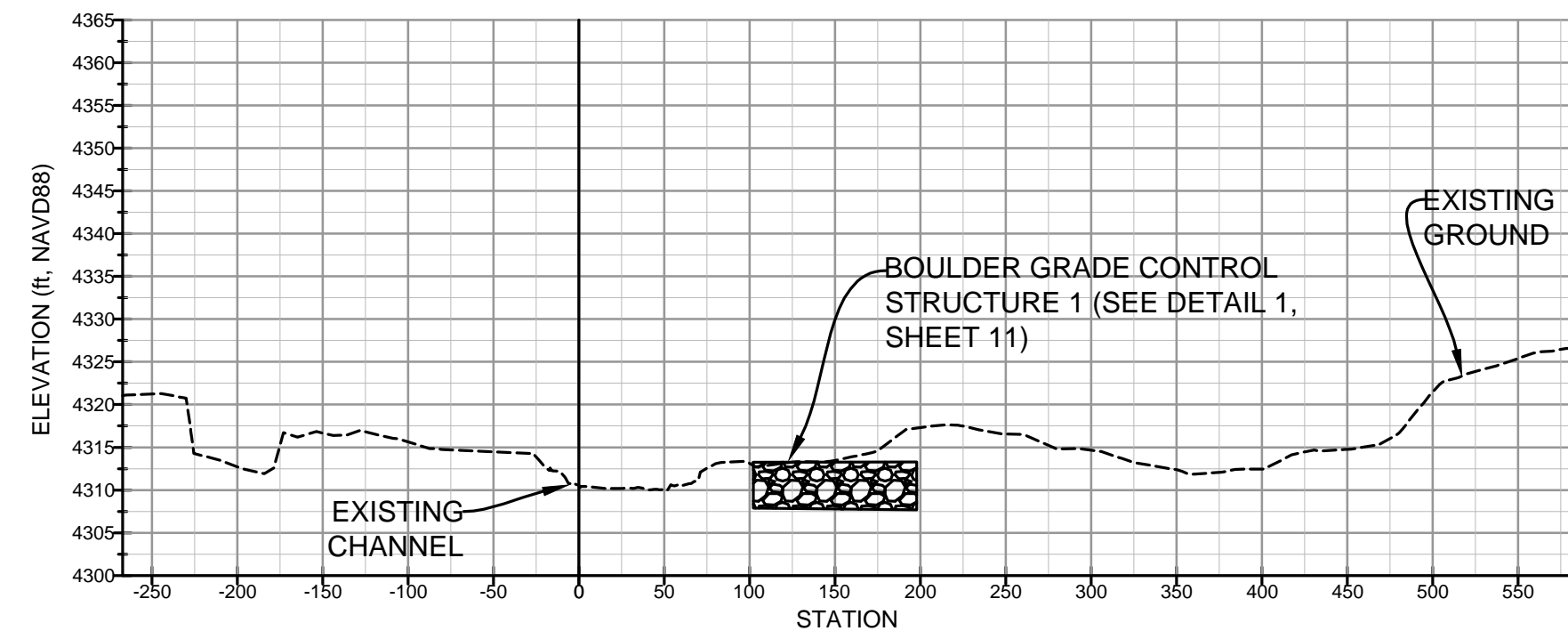
100% PERMIT PLAN SET

- EXISTING INDEX 5' CONTOURS
- EXISTING INTERMEDIATE 1' CONTOURS
- DESIGN INDEX 5' CONTOURS
- DESIGN INTERMEDIATE 1' CONTOURS
- HW HIGH WATER RIVER EDGE
- ▨ POTENTIAL NET FILL DISPOSAL

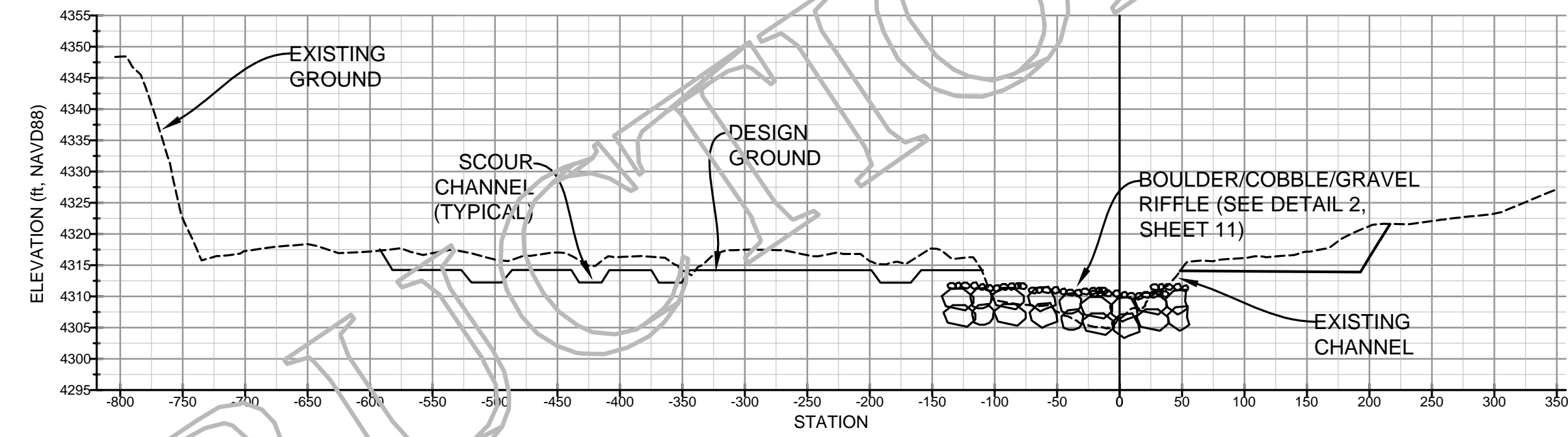
	DESIGNED: SP, GM, JKA	SUB SHEET NO. <b>C3</b>	TITLE OF SHEET <b>TRUCKEE RIVER WEST MCCARRAN SITE RESTORATION DOWNSTREAM GRADING PLAN</b>	DRAWING NO.
	KB TECH. REVIEW: JKA DATE: 6/13/2014		THE NATURE CONSERVANCY WEST MCCARRAN SITE RESTORATION	PMIS/PKG NO.
			SHEET <b>7 of 11</b>	



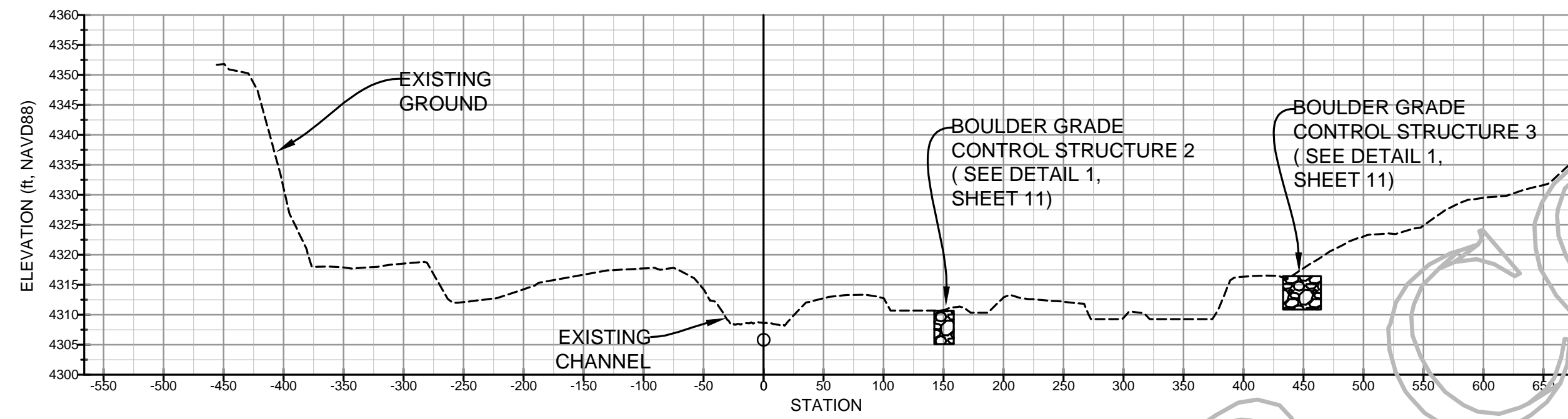
CROSS SECTION 45+53



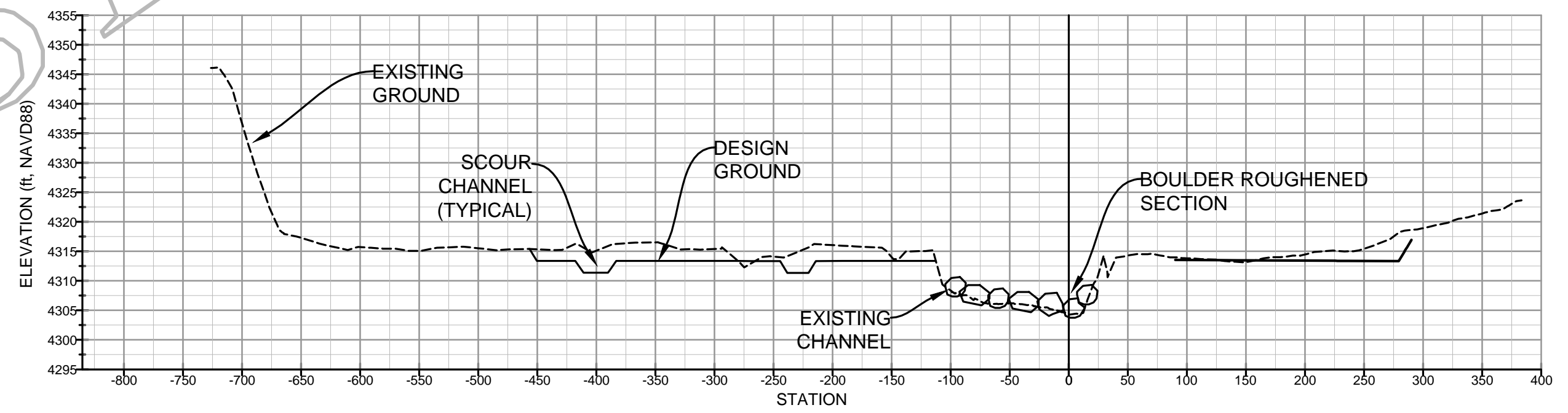
CROSS SECTION 59+01



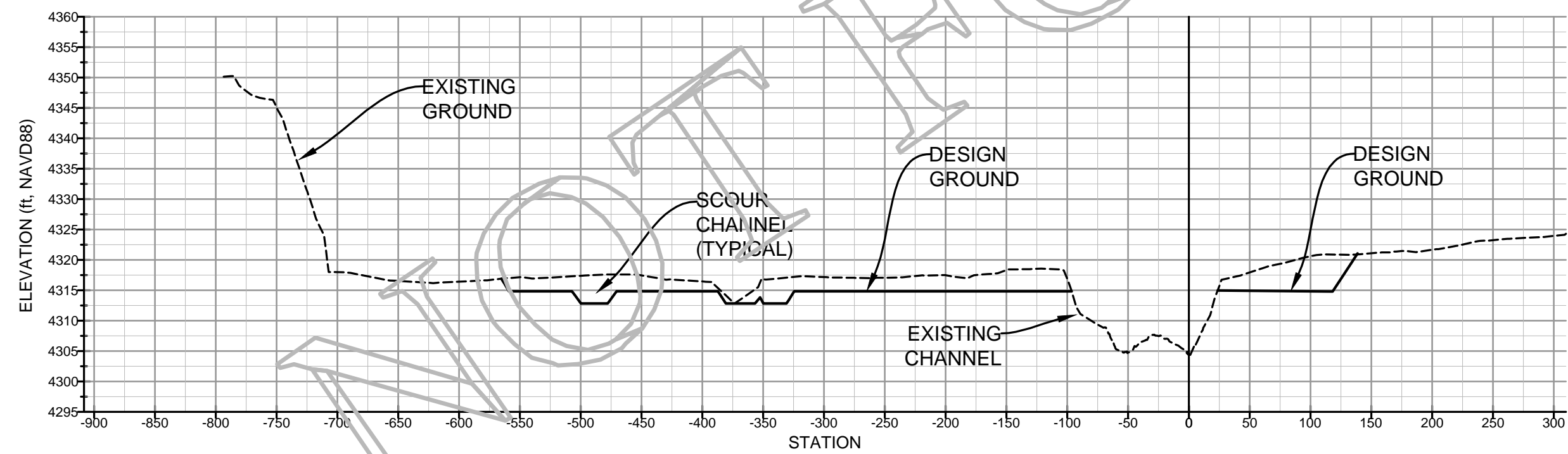
CROSS SECTION 48+57



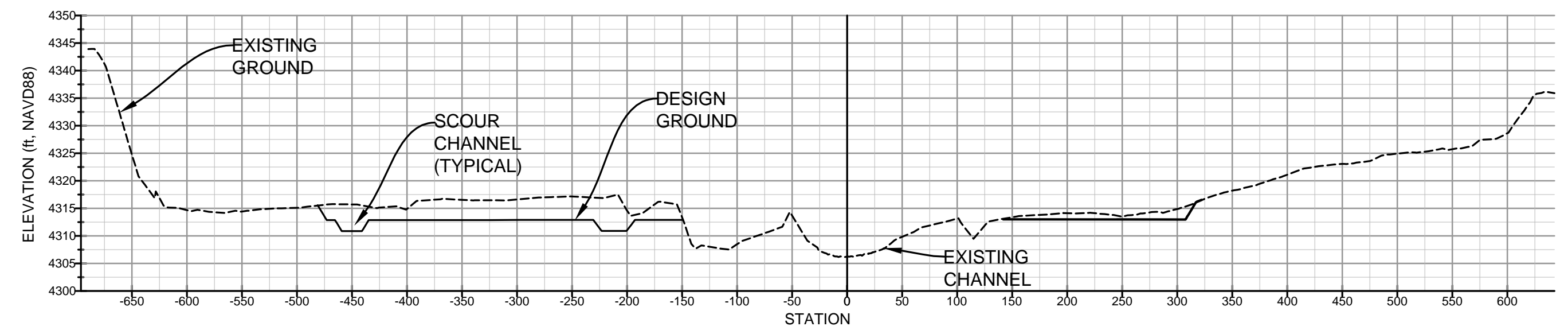
CROSS SECTION 64+20



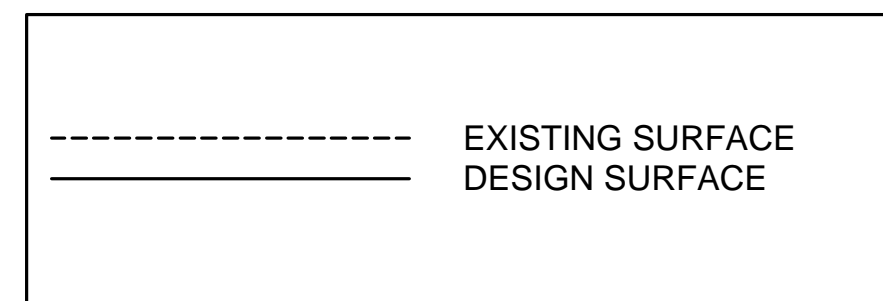
CROSS SECTION 55+15



CROSS SECTION 66+93



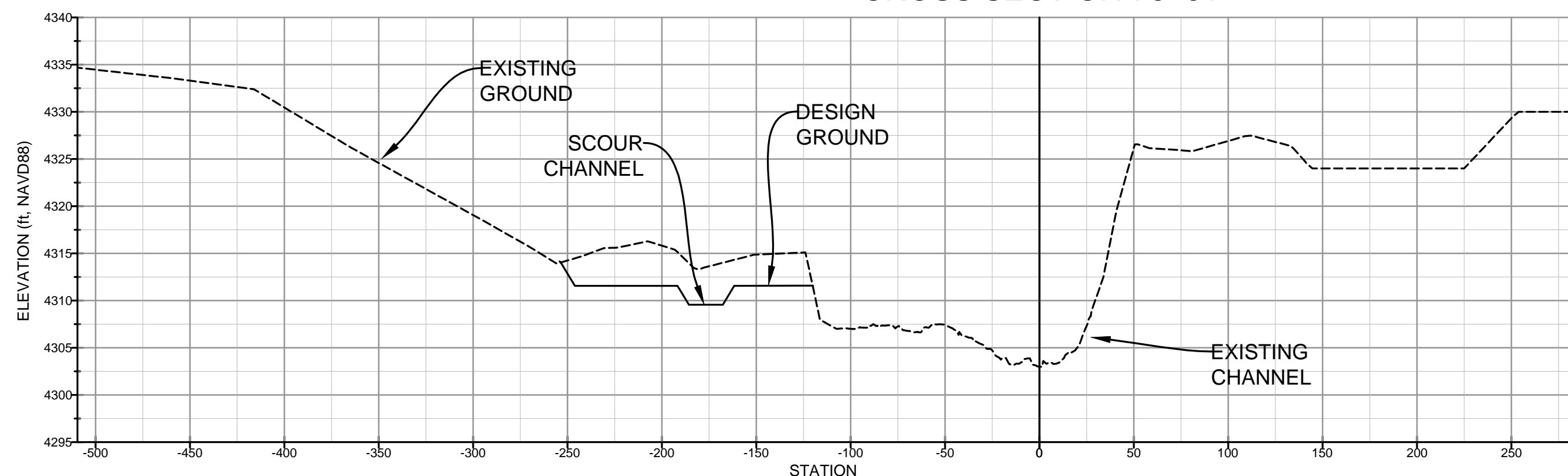
HORIZONTAL SCALE: 1"=100'  
VERTICAL SCALE: 1"=500'



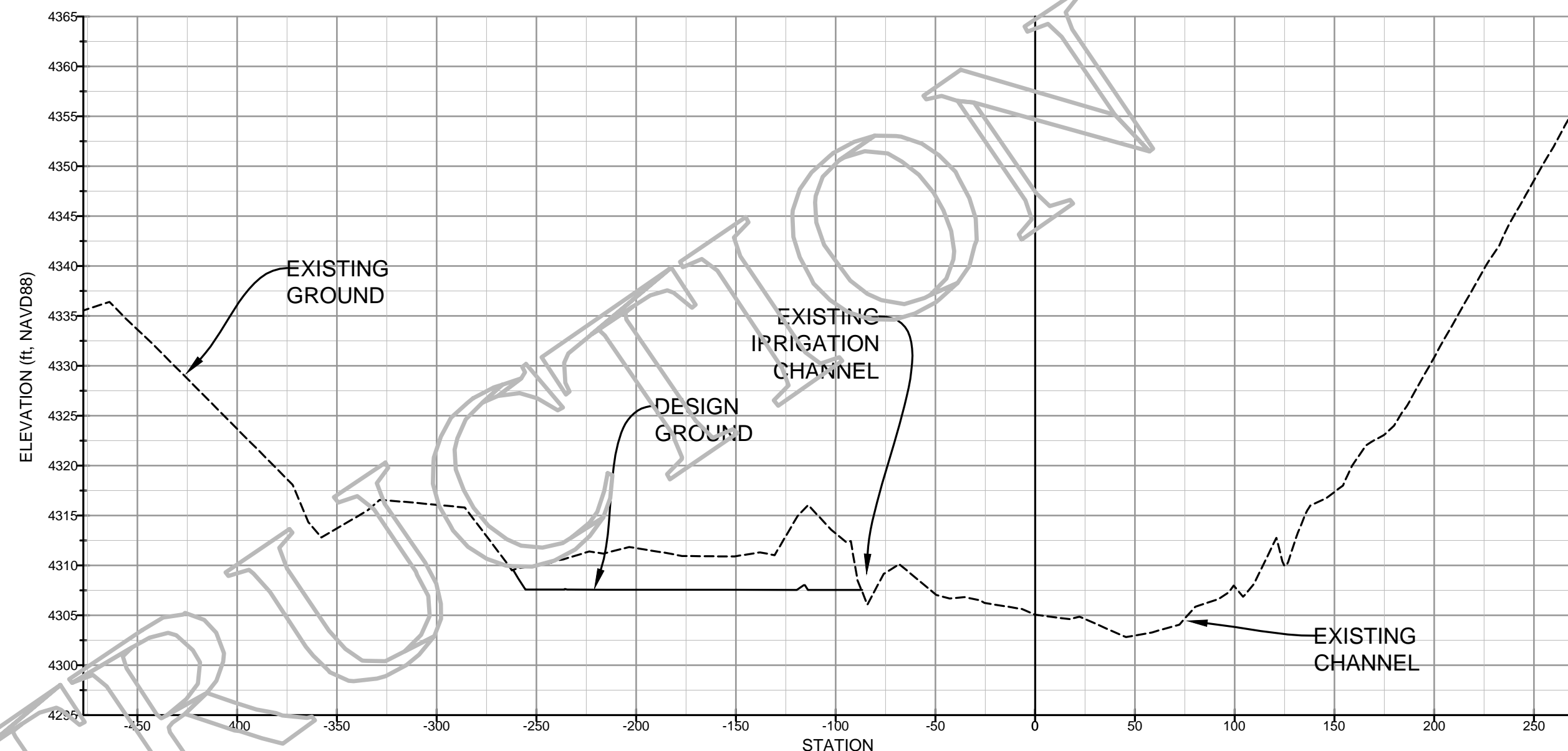
100% PERMIT PLAN SET

	DESIGNED:	SUB SHEET NO.	TITLE OF SHEET <b>TRUCKEE RIVER WEST MCCARRAN SITE RESTORATION UPSTREAM CROSS SECTIONS</b> THE NATURE CONSERVANCY WEST MCCARRAN SITE RESTORATION	DRAWING NO.
	SP, GM, JKA	<b>C4</b>		PMIS/PKG NO.
	KB			SHEET
	TECH. REVIEW: JKA			<b>8</b> OF <b>11</b>
DATE: 6/13/2014				

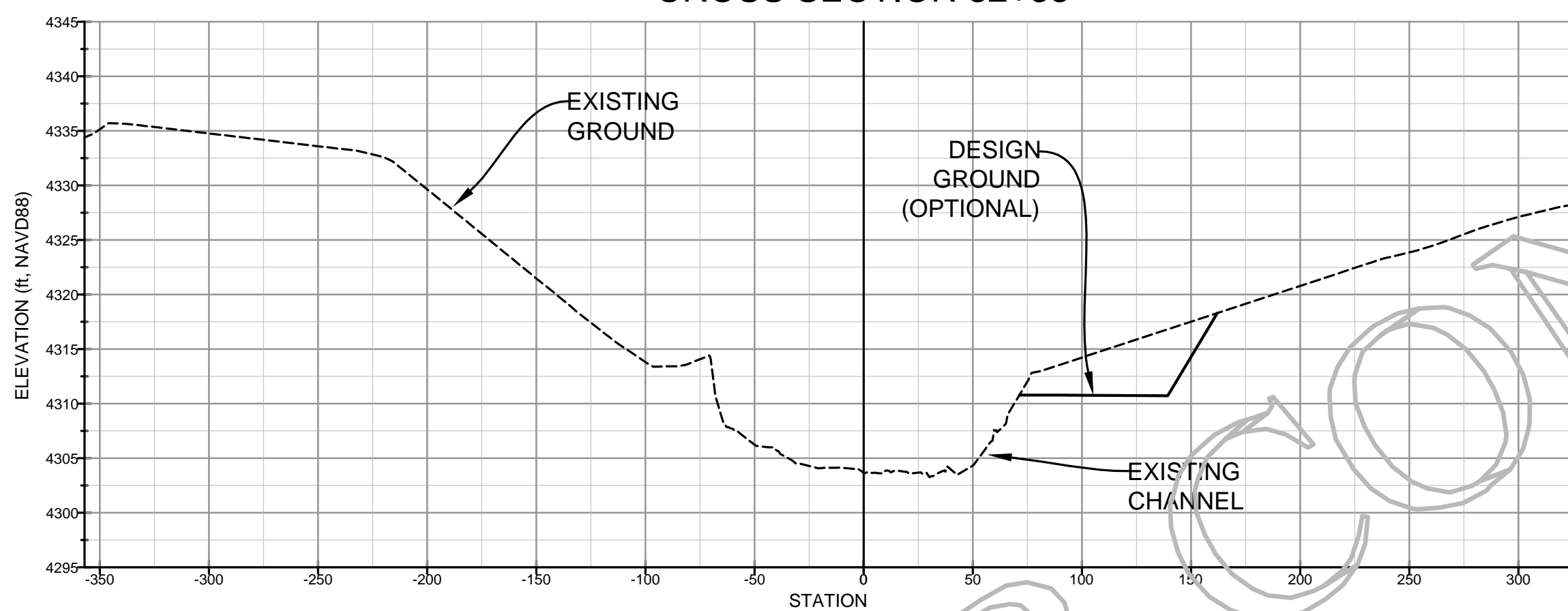
CROSS SECTION 76+91



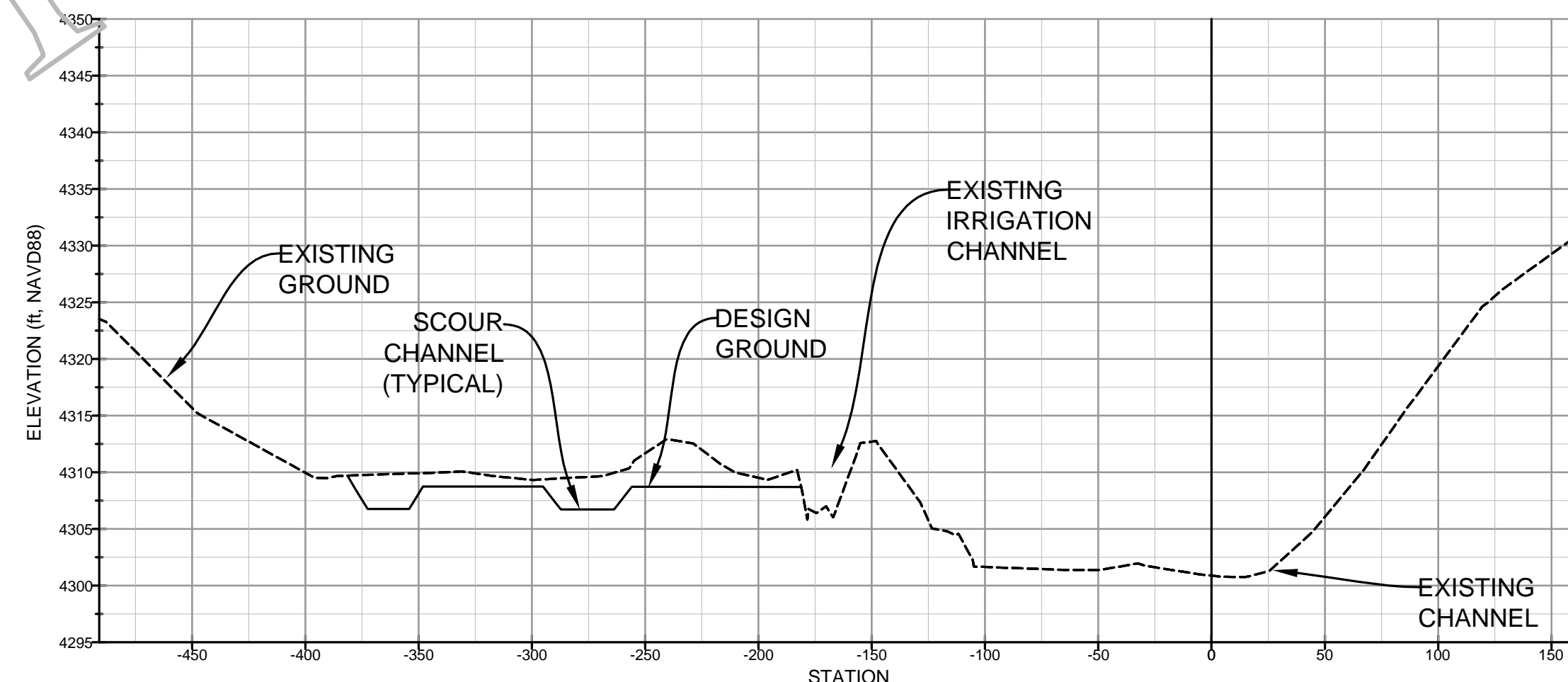
CROSS SECTION 89+94



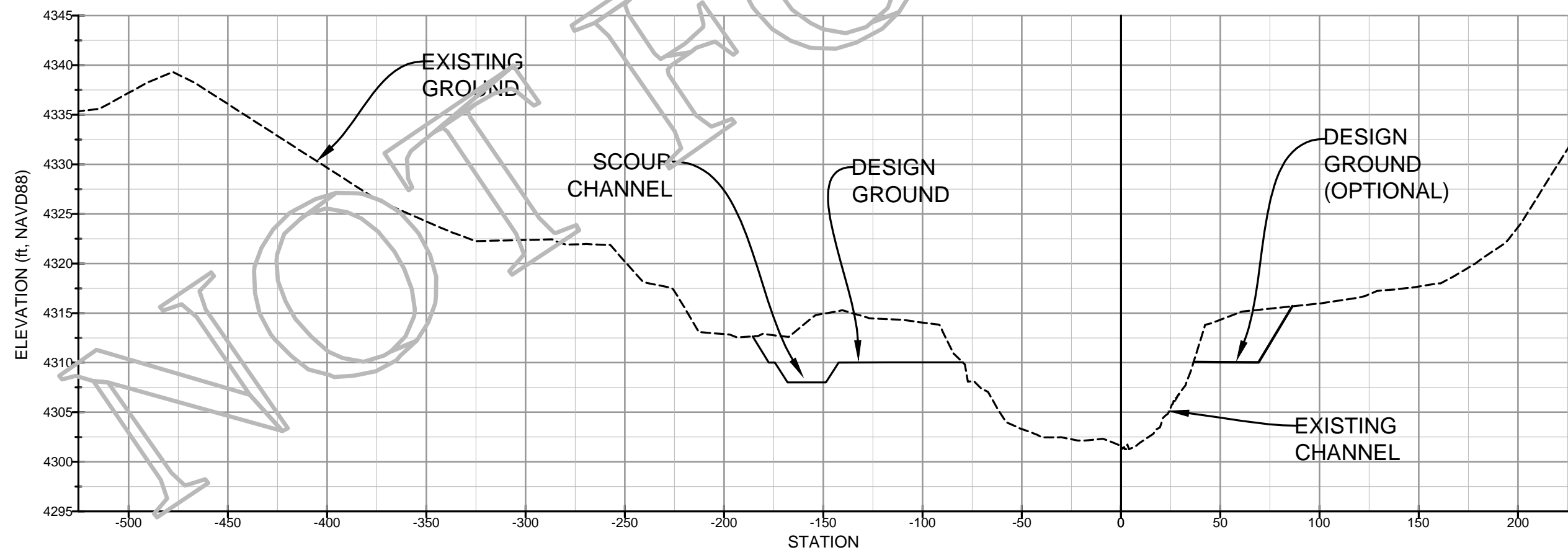
CROSS SECTION 82+33



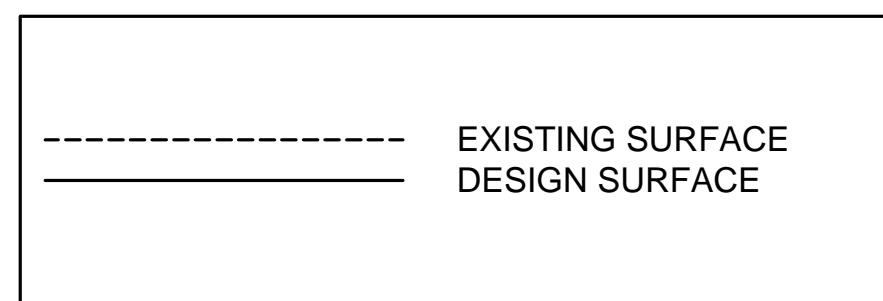
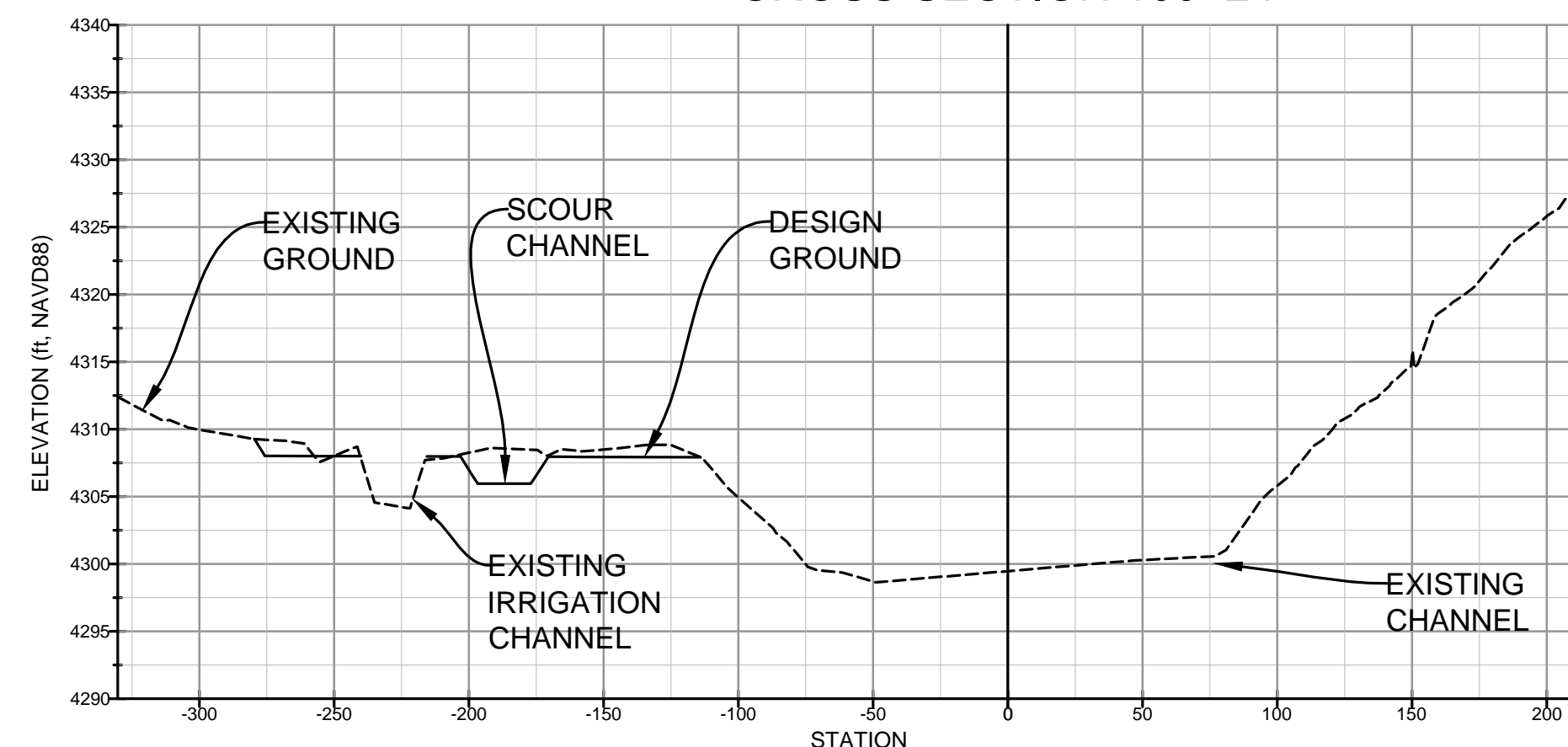
CROSS SECTION 95+30



CROSS SECTION 86+81

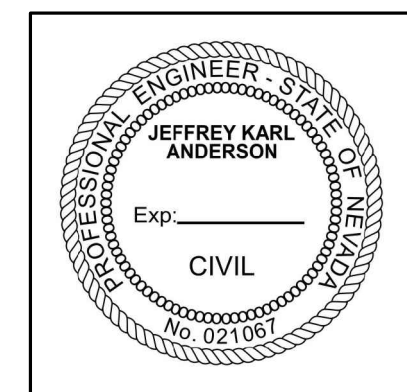


CROSS SECTION 100+24



HORIZONTAL SCALE: 1"=60'  
 VERTICAL SCALE: 1"=300'

100% PERMIT PLAN SET



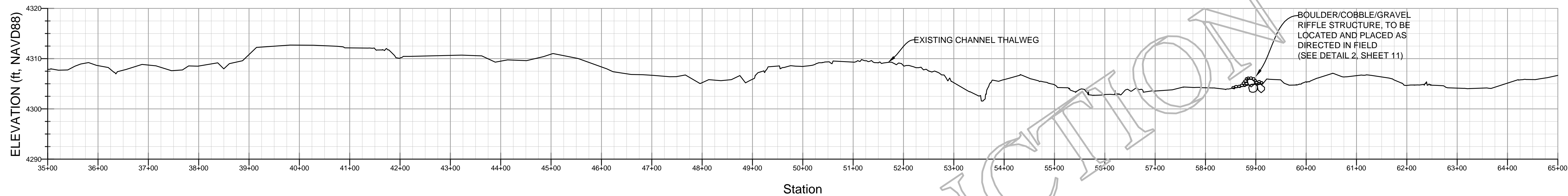
DESIGNED:  
 SP, GM, JKA  
 KB  
 TECH. REVIEW:  
 JKA  
 DATE:  
 6/13/2014

SUB SHEET NO.  
**C5**

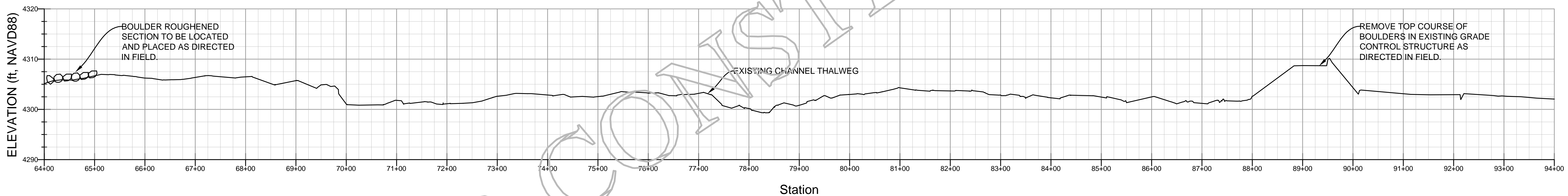
TITLE OF SHEET  
**TRUCKEE RIVER  
 WEST MCCARRAN SITE RESTORATION  
 DOWNSTREAM CROSS SECTIONS**  
 THE NATURE CONSERVANCY  
 WEST MCCARRAN SITE RESTORATION

DRAWING NO.  
 \_\_\_\_\_  
 PMS/PKG NO.  
 \_\_\_\_\_  
 SHEET  
**9** OF **11**

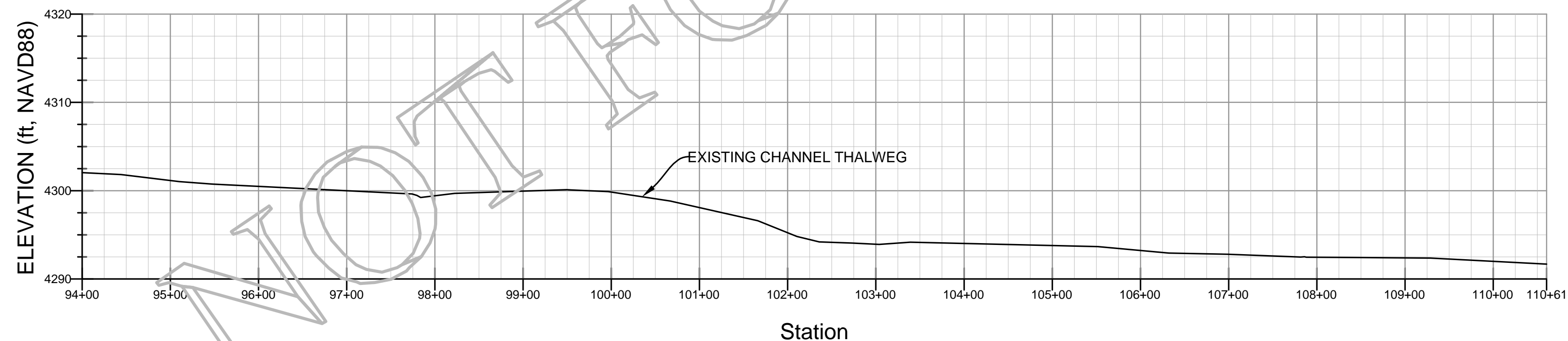
TRUCKEE MCCARRAN THALWEG



TRUCKEE MCCARRAN THALWEG

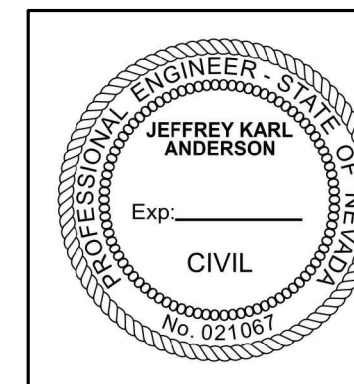


TRUCKEE MCCARRAN THALWEG



HORIZONTAL SCALE: 1"=100'  
VERTICAL SCALE: 1"=1000'

100% PERMIT PLAN SET

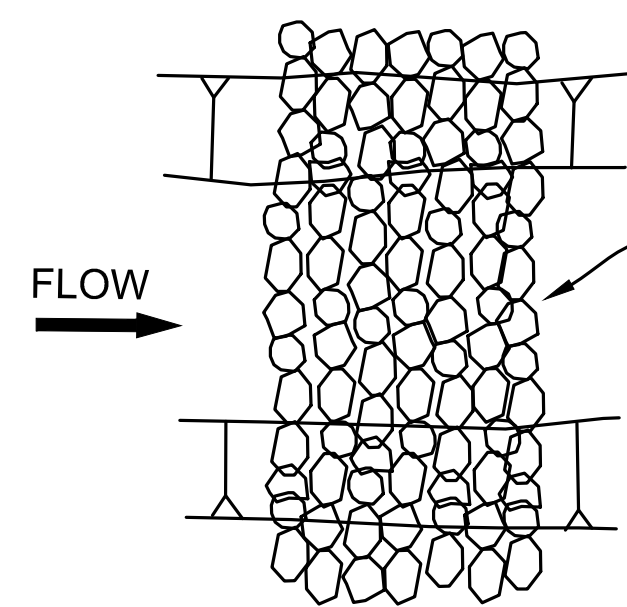


DESIGNED:  
SP, GM, JKA  
KB  
TECH. REVIEW:  
JKA  
DATE:  
6/13/2014

SUB SHEET NO.  
**C6**

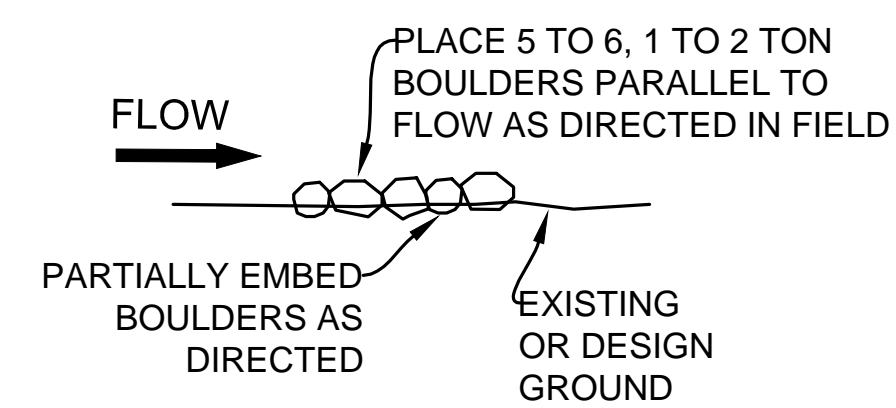
TITLE OF SHEET  
**TRUCKEE RIVER  
WEST MCCARRAN SITE RESTORATION  
THALWEG PROFILE**  
THE NATURE CONSERVANCY  
WEST MCCARRAN SITE RESTORATION

DRAWING NO.  
PMS/PKG NO.  
SHEET  
**10 of 11**

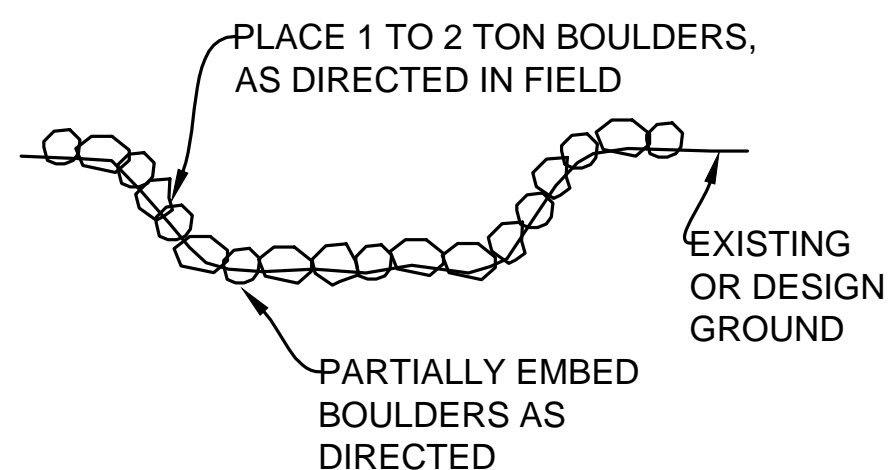


PLAN VIEW

NOTE: GRADE CONTROL STRUCTURE TO BE LOCATED AND CONSTRUCTED AS DIRECTED IN FIELD



SIDE VIEW

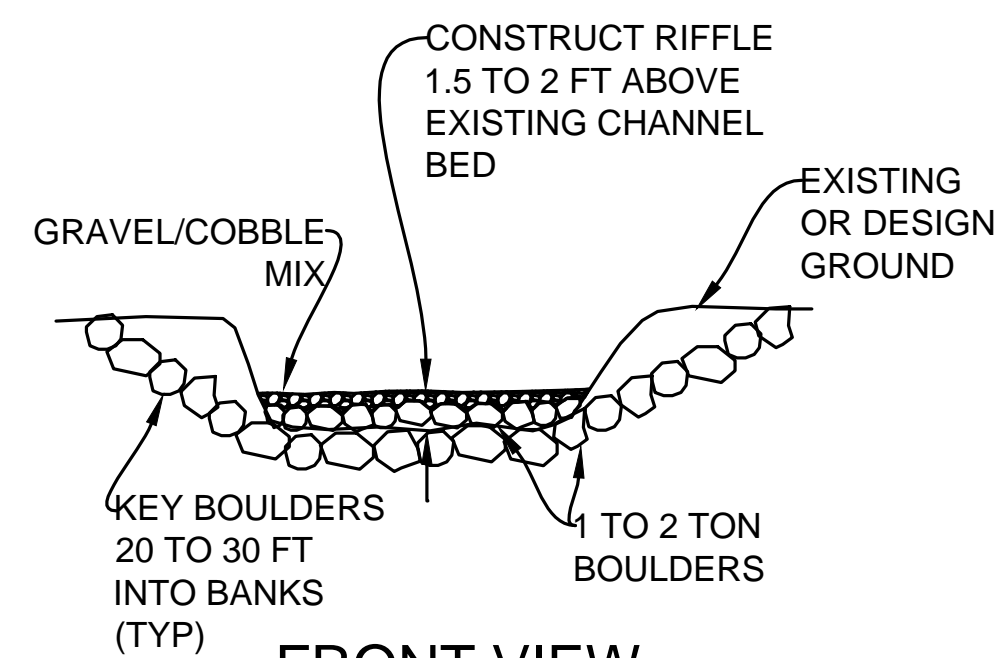


FRONT VIEW

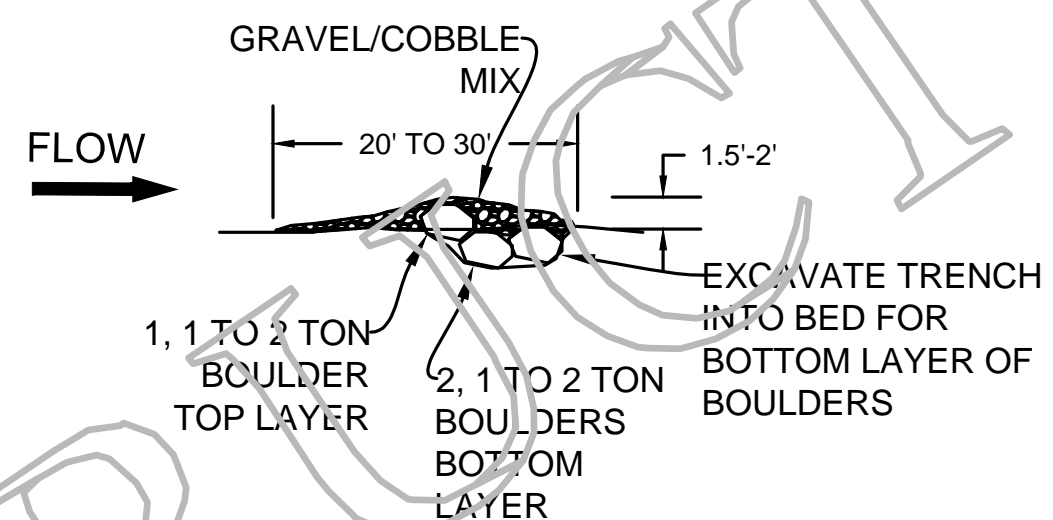
**DETAIL 1**

**BOULDER GRADE CONTROL STRUCTURE**

SCALE= NTS



FRONT VIEW



SIDE VIEW

NOTE: RIFFLE TO BE LOCATED AND CONSTRUCTED AS DIRECTED IN FIELD

**DETAIL 2**

**BOULDER/COBBLE/GRAVEL RIFFLE**

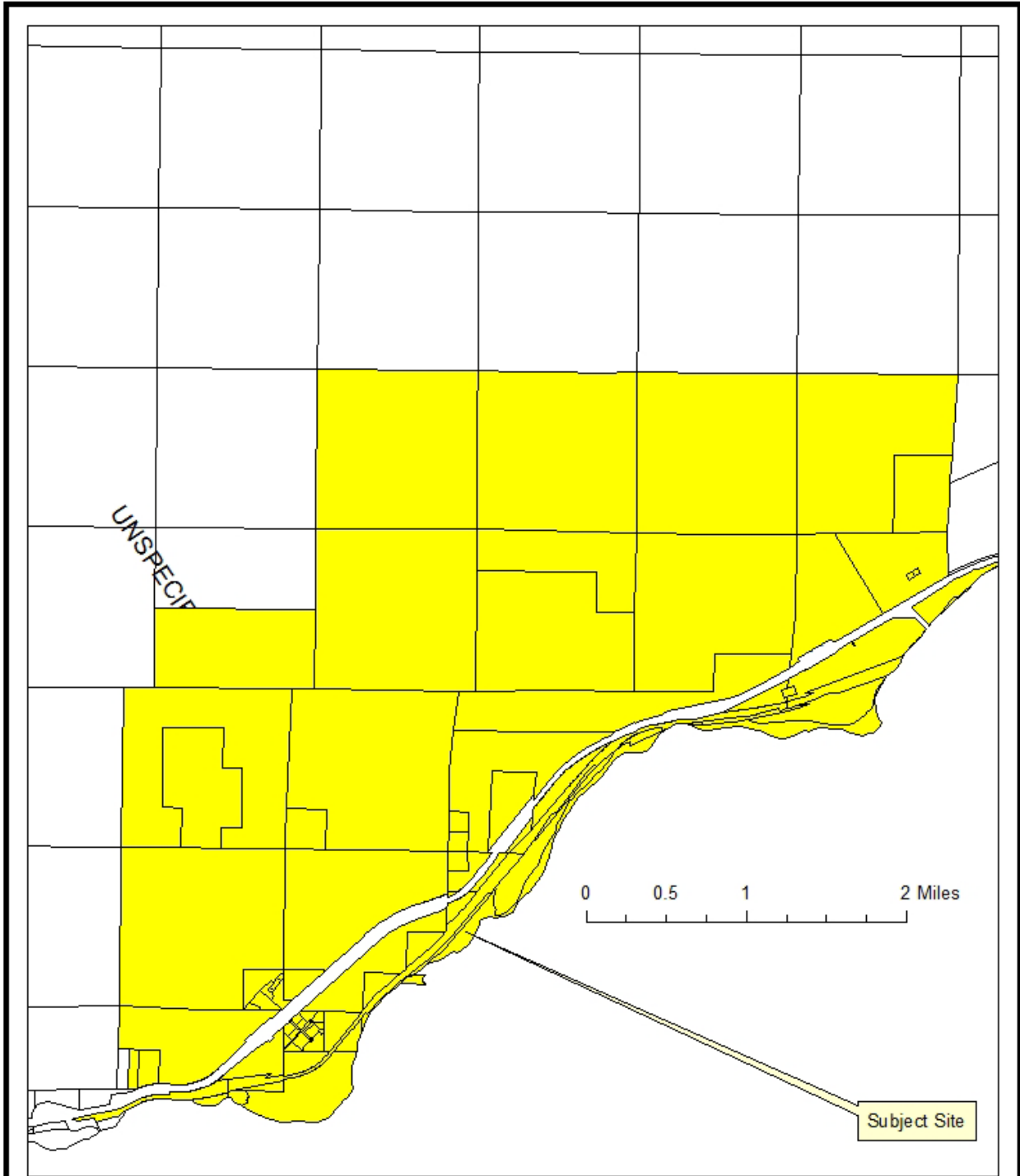
SCALE= NTS

NOT FOR CONSTRUCTION

100% PERMIT PLAN SET

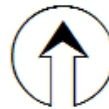
	DESIGNED:	SP, GM, JKA	C7	TITLE OF SHEET	<b>TRUCKEE RIVER</b> <b>WEST MCCARRAN SITE RESTORATION</b> <b>DETAILS</b> THE NATURE CONSERVANCY WEST MCCARRAN SITE RESTORATION	DRAWING NO.
	TECH. REVIEW:	JKA		PMIS/PKG NO.		
	DATE:	6/13/2014		SHEET		
				11 OF 11		





Mailing Label Map  
**Special Use Permit Case No. SB14-012**  
**Truckee River Restoration - West McCarran Ranch**  
 90 Parcels selected at 10000 feet.

Source: Community Planning Services



Date: June 2014

Department of  
 Community  
 Development  
**WASHOE COUNTY  
 NEVADA**  
 Post Office Box 11130  
 Reno, Nevada 89520  
 (775) 335-3600

Public notice of the hearing has been provided in accordance with Washoe County Code Section 110.810.25.

**SB14-012**  
**EXHIBIT C**



From: Albee, Charlene  
Sent: Tuesday, June 24, 2014 11:49 AM  
To: Pelham, Roger  
Subject: SB14-012 - Truckee River Restoration, West McCarran Ranch

Hi Roger,

SB14-012 has been reviewed by the Air Quality Management Division of the Washoe County Health District. The only Air Quality requirement will be for the project to obtain and maintain a dust control permit for the grading activities.

Thanks

Charlene Albee, REM  
Director, Air Quality Management Division  
Washoe County Health District  
1001 East Ninth Street, Suite B171  
Reno, NV 89512  
P.O. Box 11130  
Reno, Nevada 89520-0027  
(775) 784-7211  
(775) 784-7225 (fax)  
<mailto:calbee@washoecounty.us>  
[www.ourcleanair.com](http://www.ourcleanair.com)



# WASHOE COUNTY COMMUNITY SERVICES DEPARTMENT

Engineering and Capital Projects Division

*"Dedicated to Excellence in Public Service"*

1001 East 9<sup>th</sup> Street PO Box 11130 Reno, Nevada 89520 Telephone: (775) 328-2040 Fax: (775) 328-3699

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## INTEROFFICE MEMORANDUM

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DATE: July 2, 2014  
TO: Roger Pelham, Planning and Development Division  
FROM: Leo R. Vesely, P.E., Engineering and Capital Projects Division  
SUBJECT: **SB14-012**  
**APN 084-450-02**  
**TRUCKEE RIVER RESTORATION, WEST MCCARRAN RANCH**

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I have reviewed the referenced tentative map application and have the following conditions:

1. A complete set of construction improvement drawings, including an onsite grading plan, shall be submitted to the County Engineer for approval. Grading shall comply with best management practices (BMP's) and shall include detailed plans for grading and drainage, access roads, erosion control (including BMP locations and installation details), slope stabilization and mosquito abatement. Disposal of any excavated material onsite shall be indicated on the grading plans. The County Engineer shall determine compliance with this condition.
2. Any existing easements or utilities that conflict with the project shall be relocated, quitclaimed, and/or abandoned, as appropriate. The County Engineer shall determine compliance with this condition.
3. Any new easement documents recorded for the project shall include an exhibit map that shows the location and limits of the easement in relationship to the project. The County Engineer shall determine compliance with this condition.
4. The owner/applicant shall obtain from the Nevada Division of Environmental Protection a Stormwater Discharge Permit for construction and submit a copy to the Engineering Division prior to issuance of a grading permit.
5. The owner/applicant shall complete and submit the Construction Permit Submittal Checklist, the Performance Standards Compliance Checklist and pay the Construction Stormwater Inspection Fee prior to obtaining a grading permit. The County Engineer shall determine compliance with this condition.
6. A grading bond of \$2,000/acre of disturbed area shall be provided to the Engineering Division prior to issuance of a grading permit.
7. A hydrology/hydraulic report shall be submitted to the County Engineer. The report shall show that there will be no adverse impact to adjacent properties.

- B. The Truckee Meadows Regional Stormwater Quality Management Program Construction Permit Submittal Checklist and Inspection Fee shall be submitted with each final map. The County Engineer shall determine compliance with this condition.
9. The maximum permissible flow velocity (that which does not cause scour) shall be determined for all proposed channels and open ditches. The determination shall be based on a geotechnical analysis of the channel soil, proposed channel lining and channel cross section, and it shall be in accordance with acceptable engineering publications/calculations. Appropriate linings shall be provided for all proposed channels and open ditches such that the 100-year flows do not exceed the maximum permissible flow velocity. The County Engineer shall determine compliance with this condition.
10. All slopes steeper than 3:1 shall be mechanically stabilized to control erosion. As an alternative to riprap, an engineered solution (geofabric, etc.) may be acceptable. The County Engineer shall determine compliance with this condition.
11. Maintenance access and drainage easements shall be provided for all existing and proposed drainage facilities. The County Engineer shall determine compliance with this condition.
12. Improvements necessary to access the project shall be designed and constructed to County standards and specifications. The County Engineer shall determine compliance with this condition.
13. A Conditional Letter of Map Revision (CLOMR) shall be obtained from FEMA (Federal Emergency Management Agency) prior to the issuance of a grading permit.
14. A Letter of Map Revision (LOMR) shall be obtained from FEMA prior to the finalization of the grading permit.
15. All required state and federal permits shall be obtained prior to the issuance of a grading permit.



**Community Services Department**  
Planning & Development Division  
Regional Parks & Open Space

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**TO:** Roger Pelham Sr. Planner  
**FROM:** Jennifer Budge, CPRP, Park Planner  
**DATE:** May 30, 2014  
**SUBJECT:** Tentative Map Case Number SB14-012 (Truckee River Restoration-West McCarran Ranch)

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The proposed plans and specifications are consistent with the adopted Washoe County Open Space and Natural Resource Management Plan, the Park District 2C East Truckee Canyon Park Master Plan, and with the previous river restoration projects constructed in the vicinity. The proposed project will enhance water quality; and promote wildlife habitat and native plants, while reducing invasive species. The plant materials and revegetation application methods selected are consistent with other successful projects within the East Truckee Canyon corridor.

**Recommended Conditions of Approval:**

1. Any imported fill dirt; straw and fiber logs used for sediment control as part of the project are required to be "certified weed free."
2. Certify that all construction material sources used for supplies used for sand, gravel, rock and mulch are weed-free prior to obtaining or transporting material to project site.
3. Best management practices will be used to prevent the spread of noxious and invasive weeds during construction activities. At minimum, the highlighted portion in the attached document provided will be included in construction plans and/or specifications.

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Post Office Box 11130, Reno, NV 89520-0027 – 1001 E. Ninth St., Reno, NV 89512  
Telephone: 775.328.3600 – Fax: 775.328.6133  
Regional Parks & Open Space: 775.823.6500  
[www.washoecountyparks.com](http://www.washoecountyparks.com)



# Washoe County Health District

ENVIRONMENTAL HEALTH SERVICES DIVISION



**Public Health**  
Prevent. Promote. Protect.

Washoe County  
Community Development  
C/O Roger Pelham  
1001 E Ninth St.  
Reno, NV 89512

July 15, 2014

Dear Roger,

After having reviewed the special use permit request from Truckee River Restoration, West McCarran Ranch (SB14-012), please be advised of the following.

1. The Health District will require the flow line of the swales lined with 4-6 inch cobble rock to reduce the transport flow of sediment (040.021).
2. The existing scour/irrigation channel system will require the low points to be filled to the flow line with 4-6 inch cobble rock. In addition District Health will require the flow line of these channels lined with 4-6 inch cobble rock to reduce the downstream transport of sediment (040.021).
3. In the planting of cottonwoods and or willows the Health District will require these trees planted fifty (50) feet on center.
4. Prior to the sign off of the building plans the above detail designs are required on the plans and a scheduled compliance inspection is required for the above condition(s).

If there are any questions concerning the aforementioned vector-planning conditions as it relates to environmental health, please call us at 785-4599.

Sincerely,

J. L. Shaffer  
Program Coordinator/Planner  
Vector-Borne Diseases Program  
Environmental Health Division

Cc: Jeppson





University of Nevada  
Cooperative Extension

**Fact Sheet FS-03-59**

# **Measures to Prevent the Spread of Noxious and Invasive Weeds During Construction Activities**

**Steven Siegel, Environmental Scientist  
Sierra Pacific Power Company**

**Susan Donaldson, Water Quality Education Specialist  
University of Nevada Cooperative Extension**

Invasive weeds are plants that have been introduced into an environment outside of their native range, where they have few or no natural enemies to limit their spread. Invasive weeds affect us all—as homeowners, taxpayers, consumers, tourists, and land managers. Some invasive weeds are designated as noxious in Nevada state law, requiring control by the property owner or manager.

The spread of invasive and noxious weeds is a significant issue in construction projects that involve land disturbance. Earth moving activities contribute to the spread of weeds, as does the use of contaminated construction fill, seed, or erosion-control products. Permits for construction projects may now require that measures be incorporated to identify and manage these weeds.

Experience has demonstrated that prevention is the least expensive and most effective way to halt the spread of noxious and invasive weeds. Preventing the establishment or spread of weeds relies upon:

- Educating workers about the importance of managing weeds on an ongoing basis;
- Properly identifying weed species;
- Avoiding or treating existing weed populations; and
- Incorporating measures into projects that prevent weed seeds or other plant parts from establishing new or bigger populations such as certification of weed-free products.

A search was conducted of Internet sites and published permit requirements that incorporate weed prevention measures to determine appropriate practices to prevent weed spread during projects involving land disturbance. These measures may not be applicable or appropriate for all projects, but the list below should contain at least a few useful measures for any project. The weed management process should include education, weed identification, avoidance or treatment and reclamation of bare or disturbed areas. Following the list of management practices, we have provided sample suggested language for inclusion in contracts for projects that may be impacted by weed invasion.



## **Construction and Property Maintenance**

1. Incorporate a strategy of integrated weed management into construction layout, design, and project alternatives evaluation.
2. Remove or treat seed sources and other viable reproducing plant parts that could be spread by construction disturbance or by passing vehicles or foot traffic.
3. Avoid moving weed-infested gravel, rock and other fill materials to relatively weed-free locations. Gravel and fill should come from weed-free sources. Inspect gravel pits and fill sources to identify weed-free sources.
4. Identify existing noxious weeds along access roads and control them before construction equipment moves into relatively weed-free areas.
5. Clean off-road equipment (power or high-pressure cleaning) of all mud, dirt, and plant parts before moving into relatively weed-free areas.
6. Minimize the removal of roadside vegetation during construction, maintenance and other ground-disturbing activities.
7. Use only certified weed-free straw and mulch for erosion control projects. Consider the use of weed-free fiber roll barriers or sediment logs.
8. Minimize contact with roadside sources of weed seed that could be transported to other areas.
9. Keep active road construction sites that are in relatively weed-free areas closed to vehicles that are not involved with construction.
10. Road maintenance programs should include monitoring and treatment for noxious weeds.
11. Provide training to management and workers on the identification of noxious weeds, the importance of noxious weed control and measures to minimize their spread.
12. Quickly treat individual plants or small infestations before they become established, produce seed or are able to spread.

## **Seeding and Planting**

1. Obtain soil components and mulches from weed-free sources.
2. Purchase and use only certified weed-free seed.
3. Reestablish vegetation on all bare ground (including areas denuded by fire) to minimize weed spread.
4. Ensure establishment and maintenance of vigorous, desirable vegetation to discourage weeds.
5. Minimize contact with sources of weed seed in areas not yet revegetated.
6. Monitor all seeded sites for weed infestation. Treat all weeds adjacent to newly seeded areas prior to planting and treat planted areas for weeds in the first growing season.
7. Mulch to minimize the amount of noxious weed seeds that will reach the soil surface and subsequently germinate.

## **Grazing and Livestock Management**

1. Refrain from grazing or moving cattle through populations of noxious weeds while they are setting seed or when fruit is ripened.

2. Purchase only weed-free hay and other feed.
3. Keep cattle and other livestock out of newly planted areas.
4. Employ rotational grazing and other management strategies that minimize soil disturbance.
5. Purge animals with weed-free feed for five days before moving them from infested to non-infested areas

### **General**

1. Identify and map noxious weed populations on lands that you own or manage. Provide mapping information using the protocol for your state's weed mapping efforts. Contact the Natural Resources Conservation Service, 775-784-5863 ext. 118, for Nevada's protocol.
2. Suppress fires that may impact native plant populations. Clean vehicles that may contribute to the spread of weeds during fire fighting activities.
3. Minimize soil disturbances caused by water, vehicle, and animal traffic in weed infested areas.
4. Minimize transport of weed seeds or reproductive weed parts by irrigation water.

### **Suggested Construction Contract Wording for Weed Prevention**

*Note: This section is provided as an example of language that can be included in construction contracts when appropriate to help prevent the spread of weeds. Nevada Revised Statutes Chapter 555 advises that the control of noxious weeds is the responsibility of every landowner or occupant. This suggested contract wording can be modified as needed to fit individual projects.*

#### **Prior to any construction disturbance you will:**

- Identify and map all noxious and invasive weed populations present in the project area
- Treat or contain any weed populations that may be impacted or disturbed by construction activity
- Flag all weed populations to be avoided
- Provide training to construction workers and equipment operators on the identification of weeds to be avoided
- Certify that all construction material sources used for supplies of sand, gravel, rock and mulch are weed-free prior to obtaining or transporting any material from them
- Obtain and use only certified weed-free straw or use fiber roll logs for sediment containment
- Wash and inspect all vehicles for weed seeds and plant parts prior to bringing them onto the job site
- Install stormwater Best Management Practices to prevent erosion of the job site and the potential transport of weedy material onto or off of the job site

#### **During construction you will:**

- Minimize ground disturbance and vegetation removal as much as possible and practical

- Wash, or using an air compressor, blow clean all vehicles (including tires and undercarriage) that may have entered weed-infested areas prior to entering uninfested areas of the job site
- Restrict vehicles or other traffic that may transport weed seeds or plant material from entering the job site unless they are first washed and inspected

After construction is complete you or the property owner will:

- Revegetate or otherwise prevent the establishment of weeds in all areas of the job site through a program of monitoring and post-construction weed treatment for the life of the project
- Revegetate using soil components and mulches obtained from non-weed infested sources
- Utilize seed and other plant materials that has been checked and certified as noxious weed-free and that has a weed content of 0.05 percent or less
- Revegetate using plant materials that have a high likelihood of survival
- Maintain all planted material and native vegetation located on the project site for the life of the project

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### References:

- California Bureau of Land Management. 2003. Weed Management and Prevention Guidelines for Public Lands. <http://www.ca.blm.gov/pa/weeds/weedprevent.html>
- Center for Invasive Plant Management. 2003. Guidelines for Coordinated Weed Management of Noxious Weeds: Development of Weed Management Areas, Section IV: Prevention and Early Detection and Appendix 1: Sample Contracts, Agreements and Memorandums of Understanding. <http://www.weedcenter.org/management/guidelines/tableofcontents.html>
- Colorado Bureau of Land Management. 1991. Prototype Weed Prevention Measures. <http://www.co.blm.gov/botany/lolostip.htm>
- Lewis County Noxious Weed Control Board. 2003. Weed Prevention. Washington State University Cooperative Extension. Lewis County, Washington.
- Sheley, Roger and Kim Goodwin. 2000. Plan Now For Noxious Weed Invasion. Montana State University.
- Sheley, R., M. Manoukian and G. Marks. 2000. Preventing Noxious Weed Invasion. Pp. 69-72 in: Biology and Management of Noxious Rangeland Weeds, ed. R.L. Sheley and J.K. Petroff. Oregon State University Press, Corvallis, Oregon.
- Trainor, Meghan and A.J. Bussan. 2000. Integrated Weed Management; Preventing Weed Invasion. Montana State University Extension.

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### For more information, contact:

University of Nevada Cooperative Extension  
 5305 Mill St., Reno, NV 89502  
 (775) 784-4848

Nevada Department of Agriculture  
 405 South 21st Street, Sparks, NV 89431  
 (775) 353-3673

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# Special Use Permit Case Number SB14-012

## Truckee River Restoration

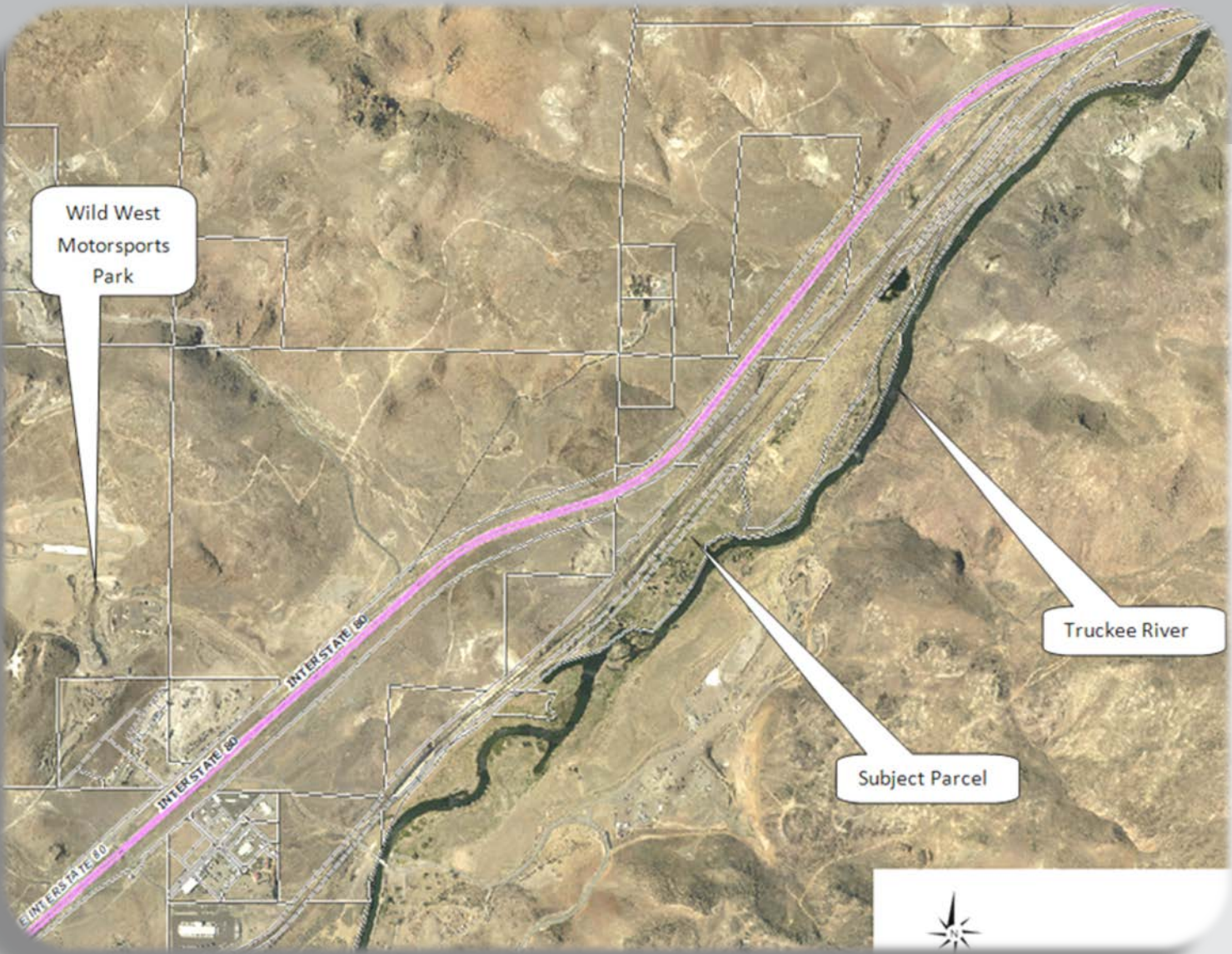
**Washoe County  
Board of Adjustment**

**August 7, 2014**



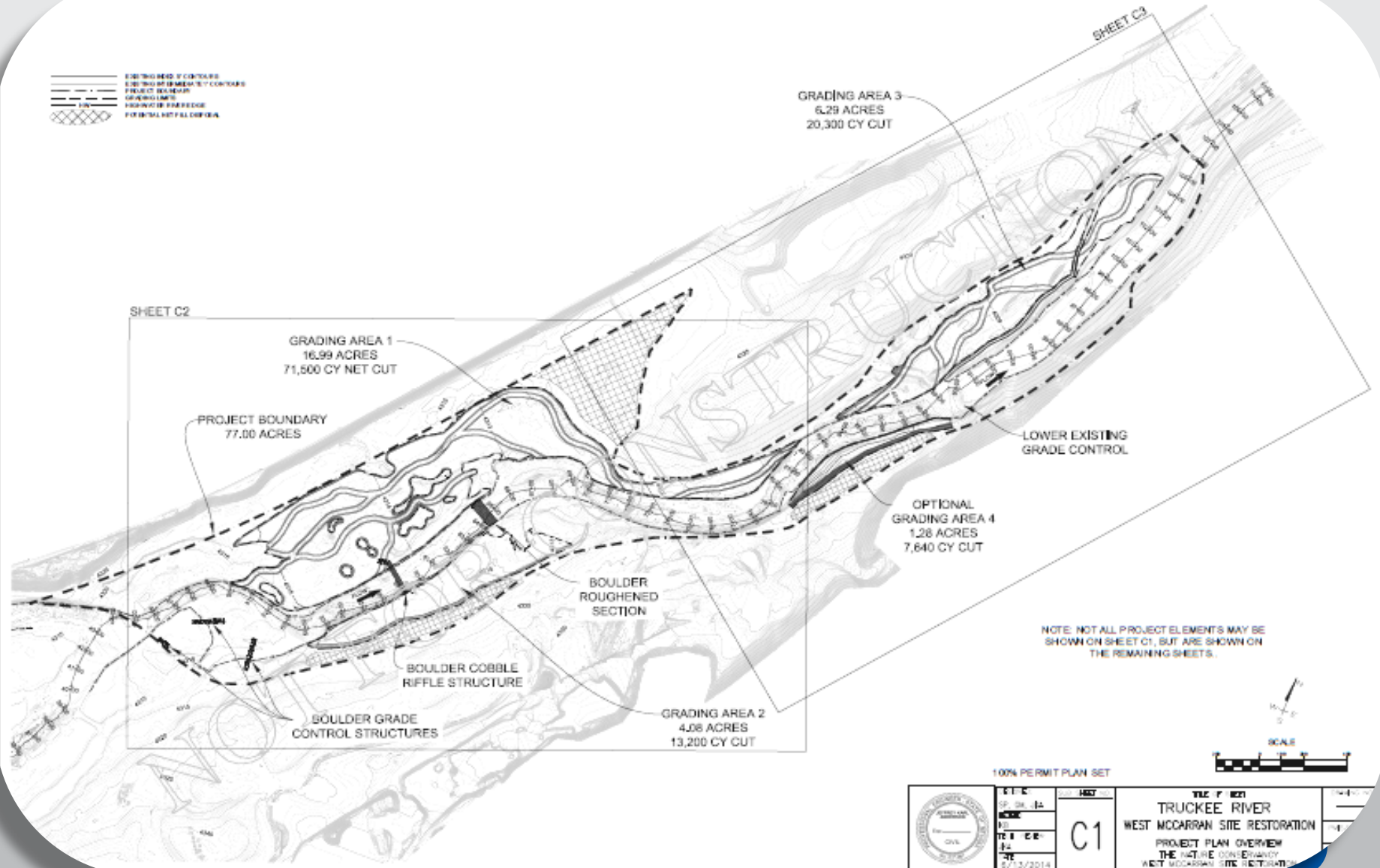


# Vicinity Map



# Site Plan

- EXISTING BOUNDARY OF CONTIGUOUS
- EXISTING OR GRADING AREA BOUNDARY
- PROJECT BOUNDARY
- GRADING LIMIT
- HIGHWAY RIGHT OF WAY
- POTENTIAL NATURAL OBSTACLE



NOTE: NOT ALL PROJECT ELEMENTS MAY BE SHOWN ON SHEET C1, BUT ARE SHOWN ON THE REMAINING SHEETS.

100% PERMIT PLAN SET



DATE: 07/23/2014

**C1**

**TRUCKEE RIVER**  
**WEST MCCARRAN SITE RESTORATION**  
 PROJECT PLAN OVERVIEW  
 THE NATURE CONSERVANCY  
 WEST MCCARRAN SITE RESTORATION

1 of 4

# Background

- Purpose is to contribute to the ecological restoration of the lower Truckee River
- Lowering the elevation of the land adjacent to the river channel, restoring that area to more natural contours, including meandering the river channel and replanting the area with native vegetation
- approximately 100,500 cubic yards of excavation and approximately 26 acres of disturbed area.
- Previous disturbance resulted in a very straight river channel that has lowered the water table as there is much less area of water to infiltrate into the groundwater table and the channel of the river continuing to erode the riverbed



# Background

- **5th phase of river restoration undertaken by The Nature Conservancy**
- **Some small to medium-sized willow and cottonwood trees may be removed during grading, but many more will be planted as the area is seeded with native vegetation and irrigated until the re-vegetation is established**
- **Intent of the project is to mimic the natural terrain and to return the area to a more natural contour**





# Background



# Analysis

- Most standards of the Grading Code are intended to provide for development of land while maintaining some level of a natural aspect of the undisturbed area
- The proposed project is restoring a disturbed area to a more natural aspect and, therefore, few grading standards are applicable



# Reviewing Agencies

- Washoe County Community Services Department
  - Planning and Development
  - Engineering
  - Water Resources
  - Regional Parks and Open Space
- Washoe County Health District
  - Vector-Borne Disease Prevention Program
  - Environmental Health Services Division
  - Air Quality Management Division
- US Army Corps of Engineers
- State of Nevada
  - Environmental Protection
  - Department of Wildlife
  - Historic Preservation
- Washoe Storey Conservation District
- Regional Transportation Commission



# Reviewing Agencies Responses

**Typical conditions for control of weeds, dust, vector-borne diseases and erosion.**



# Citizen Advisory Board

- **East Truckee Canyon is inactive at this time.**



# Conditions of Approval

**No unique conditions of approval have been included.**

**All conditions are related to the grading proposed.**





# Special Use Permit Findings

1. Consistency. That the proposed use is consistent with the action programs, policies, standards and maps of the Master Plan and the Truckee Canyon Area Plan.

*Staff Comment: The Truckee Canyon Area Plan, Policy and Action Program, TC.1.2 reads as follows, “Encourage uses and developments, which will protect the Truckee River as a scenic, natural feature in the Truckee Canyon planning area.” This development is specifically intended to restore a section of the Truckee River to a more natural and healthy condition.*



# Special Use Permit Findings

2. **Improvements.** That adequate utilities, roadway improvements, sanitation, water supply, drainage, and other necessary facilities have been provided, the proposed improvements are properly related to existing and proposed roadways, and an adequate public facilities determination has been made in accordance with Division Seven.

*Staff Comment: The proposed grading is intended to restore a section of the Truckee River to a more natural and healthy condition, no utilities, roadways, sanitation infrastructure or water supply are required by the improvements proposed.*





# Special Use Permit Findings

**3. Site Suitability.** That the site is physically suitable for grading to facilitate river restoration, and for the intensity of such a development.

*Staff Comment: The site does not function in a natural manner at this time. The site has been modified from its natural state during the past decades and is proposed to be restored so that it functions as a more natural meandering riverbed and floodplain. The site is physically suitable, as it is located adjacent to the Truckee River.*



# Special Use Permit Findings

4. **Issuance Not Detrimental.** That issuance of the permit will not be significantly detrimental to the public health, safety or welfare; injurious to the property or improvements of adjacent properties; or detrimental to the character of the surrounding area.

***Staff Comment: The site does not function in a natural manner at this time. The site has been modified from its natural state during the past decades and is proposed to be restored so that it functions as a more natural meandering riverbed and floodplain. The site is physically suitable, as it is located adjacent to the Truckee River.***



# Special Use Permit Findings

**5. Effect on a Military Installation.**  
Issuance of the permit will not have a detrimental effect on the location, purpose or mission of the military installation.

***Staff Comment: There is no military installation in the vicinity of the proposed grading project.***



# Possible Motion

I move that after giving reasoned consideration to the information contained in the staff report and information received during the public hearing, the Washoe County Board of Adjustment approve with conditions, Special Use Permit Case Number SB14-012 for The Nature Conservancy, having made all five findings in accordance with Washoe County Code Section 110.810.30.

