

OPEN SPACE ADVISORY COMMITTEE STAFF REPORT

MEETING DATE: February 22, 2016

AGENDA ITEM NUMBER: 3B

STAFF: Richard Wilkinson, Senior Natural Resource Specialist

REQUEST: **For Possible Action:** To approve the wetlands enhancement project at the old Buzzy's Ranch property as designed by Ducks Unlimited.

GENERAL DISCUSSION:

Staff received the final draft of the plans from John Ranlett with Ducks Unlimited. The plans arrived on January 6, 2016 and were dispersed to the various parties for review. Staff received comments from NRCS and rancher Mick Anderson. The Carson City Public Works Department is still reviewing the plans and has not provided their input. These comments are listed below for your reference. The design plan is attached for your review.

Comments from the NRCS engineer include:

- Per review, it looks like the northwest cut area on page 4 with elevation 4597.5 is higher than some of the adjacent land elevations. This may be okay depending on your intent. However, it is the only area where the cut area was higher than some of the surrounding elevations. All the other cuts were lower than the surrounding elevations.
- How much potential water (___ CFS) will be going through the structure on page 5? It's an 18" structure which can hold 7 CFS if the slope is flat. It can hold more with more slope. Clarification on the amount of water anticipated would help clarify the design.
- The concrete sill – just a thought – most of it is underground with 0.5 foot above ground. If you make that permanent concrete, that is not moveable. When things change you will be stuck with that elevation not sure how important that might be but other material that can be adjusted might be considered depending on your concern.
- The road shows 12'. What is the equipment that might be used on the road? If there is a possibility of anything bigger than a truck you might reconsider the size.

Comments from rancher Mick Anderson include:

- Depths of ponds should be deeper which would provide more dirt to use elsewhere and would take advantage of shallow water table to seep into the pond, thereby keeping tules from growing.
- What is the operation plan for the project and how will it impact grazing or stock water access? (Timing, schedule, access, duration and overall operation).
- Sheet No. 4 Recommend removal of old pipe if it is not needed for function of project.
- Sheet No. 4 WCS01 Need access to cross ditch to open head gate.
- Sheet No. 4 WCS02 Appears to show a different length pipe and the head gate is in the ditch. This ditch does not carry enough water to fill anything.
- Sheet No. 5 Plans show existing fence repair and this fence does not exist and would

need a new fence.

- Sheet No. 5 Plans show no fence and this should be added as a new fence.
- Sheet No. 5 There is no access to the wetlands and in early discussions there were two 14' gates and one 12' gate to allow for grazing and access to stock water.
- Sheet No. 5 Do not recommend rebar grate because it will constantly be plugged up with trash and debris.
- Sheet No. 5 Prefab cement drop structure seems too expensive and may plug up. You should consider gabions or an open stepped down drop structure.
- Sheet No. 6 Recommend organic material placed with re-seeding along all levees.
- Sheet No. 6 Recommend 6' of compacted material on temporary road not 12'. Too much material for a temporary access road and will require less material to be excavated or disturbed.

Comments from Open Space staff:

- BMPs should be identified in the plans for the contractor to know what is expected. The bid documents should include that all equipment and vehicles need to be clean, debris and leak free prior to entering the project site.
- There needs to be a re-seeding plan with a desired seed mix. If this is not listed on the plan set, then it needs to be added into the contract as a deliverable. City staff will develop the seed mix and seeding treatments to be incorporated into the plan or contract.
- The area of disturbance has increased as a result of expanding the project scope. We would like to look at ways to minimize ground disturbance (smaller roads or levees).
- Sheet No. 2 General notes. Please add #10: Carson City is the property owner and can be reached at (775) 887-2262. Contractor shall coordinate with property owner regarding construction access, dates and project status.
- Sheet No. 6. Change wording from typical section for new road to typical section repair of existing road. We do not want anyone to think we are creating a new road in the floodplain.
- There are questions and concerns with operations such as how to fill, maintain or draw down wetlands. There needs to be clarification regarding operations which include the ranch and cattle management plan with the wetlands i.e. timing, duration and schedule.
- There are existing noxious weeds throughout the project site which include: perennial pepperweed, bull thistle and Canada thistle. Staff intends on mapping and completing an abatement of the project area prior to construction. Do you have a proposed project timeline or a construction period of performance that we can work around?
- As mentioned in the past, water is critical for long term management. Are there any plans with your funding source to help Carson City acquire water rights for the old Buzzy's Ranch and the wetlands project?

In summary, staff has provided the committee with our comments reviewing the Ducks Unlimited wetlands enhancement plan set. The comments are provided to help the committee make a decision on if you would like to proceed as designed or make changes to the plans.

RECOMMENDED ACTION: I move to approve the wetlands enhancement project at the old Buzzy's Ranch property as designed by Ducks Unlimited.

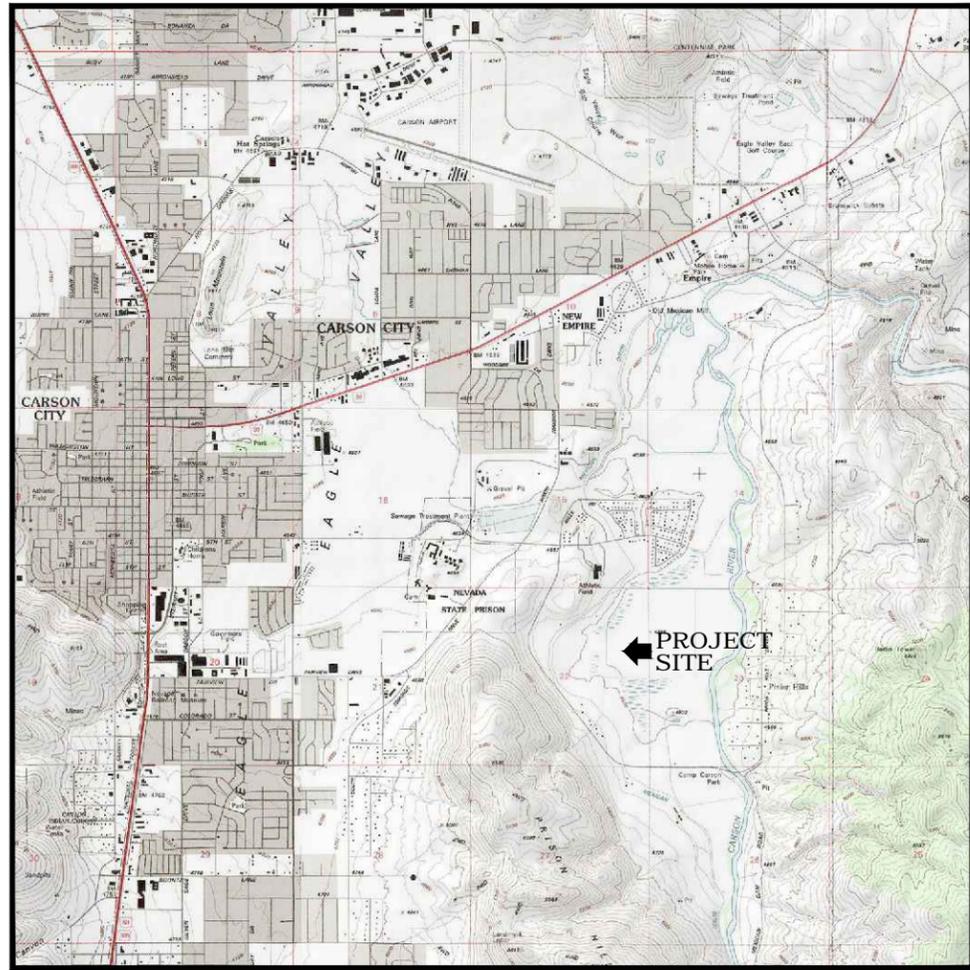


US-NV-33-7

LAHONTAN VALLEY / WESTERN NEVADA WETLANDS I NAWCA - BUZZY'S RANCH PROJECT WETLAND RESTORATION / ENHANCEMENT

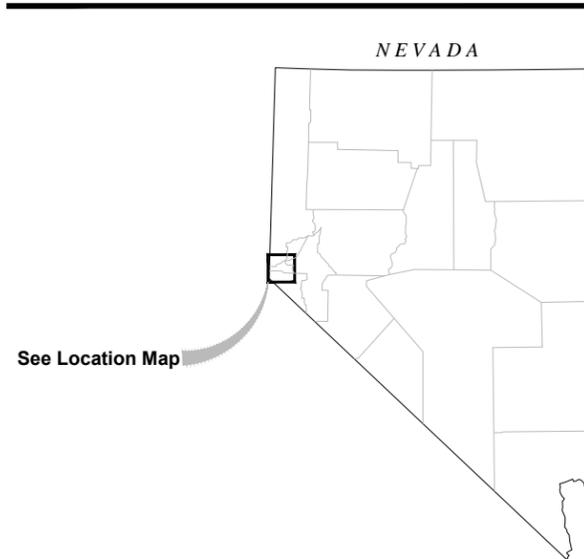


LOCATION MAP



NOT TO SCALE

VICINITY MAP



See Location Map

SURVEY DATUM

The horizontal datum for this survey is the Nevada Coordinate System of 1983, West Zone (2703), NAD 83 (2011), Epoch Date 2010.00 in U.S. Survey Feet. The vertical datum for this survey is the North American Vertical Datum of 1988 (NAVD88) computed using GEOID12. Horizontal datum was derived from Static GPS observations collected on October 22, 2014 and corrected using the National Geodetic Survey (NGS) Online Positioning User Service (OPUS) program. Vertical datum was derived from RTK GPS ties to City of Carson City Control Network, Benchmark "CC046," respectively. The NGS OPUS Solution Report and CC046 Survey Control Record are on file at the WRO engineering department in Rancho Cordova, California.

MAP DATA

CONTOUR INTERVAL: 1 FOOT

AERIAL PHOTO: 2012 NAIP

SHEET INDEX

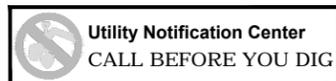
1	Cover Sheet
2	Definitions & Legend
3	Sheet Index
4	Site Plan
5	Site Plan
6	Site Plan
7	Detail Sheet

PROJECT DIRECTORY

Ducks Unlimited, Inc.
Western Regional Office
3074 Gold Canal Drive
Rancho Cordova, Ca. 95670-6116
Ph. (916) 852-2000

PRELIMINARY

Unauthorized Changes & Uses
The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes must be in writing and must be approved by the preparer of these plans.



PRELIMINARY
NOT FOR CONSTRUCTION

REV. NO.	DESCRIPTION	DATE	APPROVED



PROJECT NO. US-NV-33-7	DATE: 1/6/2016	DESIGNED BY: JR
BUZZY'S RANCH PROJECT		DRAWN BY: JS
WETLAND RESTORATION / ENHANCEMENT		SURVEYED BY: JM
APPROVED BY:		CHECKED BY:
		SHEET NO. 1 of 7

GENERAL NOTES:

- Ducks Unlimited makes no representations as to the existence or nonexistence of utilities. It is the responsibility of the contractor to comply with the provisions of all applicable utility notification regulations. The contractor will be liable for any damage to utilities caused by construction activities.
- The engineer does not represent that the location of utilities shown on the plans are exact or complete. It shall be the responsibility of the contractor to determine the presence of, actual locations of and make provisions for all watercourses and utilities. The contractor shall verify location, depth and height. Their verification shall be coordinated by the contractor with the appropriate utility company.
- The contractor shall exercise extreme caution when working in the vicinity of overhead power lines. Verify location in the field and protect in place.
- At least 2 working days prior to beginning any digging or excavation work, the contractor shall notify underground service alert (a.k.a. USA North) at www.usanorth.org or by phone at 811 or 1-800-227-2600, to determine locations of existing utilities.
- In accordance with generally accepted construction practices, the contractor will be solely and completely responsible for the conditions of the job site including safety of all persons and property during performance of the work. The contractor shall ensure that all work is performed in accordance with occupational safety laws, including the design and construction of proper shoring of trenches. The duties of the project engineer do not include review of the adequacy of the contractor's safety in, on, or near the job site.
- It is the responsibility of the contractor to be knowledgeable about the project specifications and permits. All work shall be completed in compliance with the contract documents. The contractor shall have copies of the most current approved plans, specifications and permit conditions on site during all work operations.
- The project site and adjacent areas contain sensitive habitat areas for protected wildlife, and may include endangered species. The contractor shall protect wildlife and water quality, and minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
- Should it appear that the work to be done, or any matter relative thereto, is not sufficiently detailed or explained on these plans or in the specifications, the contractor shall contact the construction manager for such further explanations as may be necessary.
- Should the contractor find any discrepancies between the conditions existing in the field and the information shown on the drawings, he shall notify the construction manager before proceeding with construction.

SURVEY POINT DESCRIPTORS

CTBM	Bench Mark (permanent)	RDSH	Road Shoulder
CTBT	Bench Mark (temporary)	RDSN	Road Sign
CTCP	Survey Control Point (permanent)	RDTO	Road, Toe of Slope
CTCT	Survey Control Point (temporary)	RDTP	Road, Top of Slope
DIFL	Ditch Flowline	SDMH	Storm Drain, Manhole
DIGB	Ditch Grade Break	SDPI	Storm Drain, Pipe Invert
DITO	Ditch Toe	SDPT	Storm Drain, Pipe Top
DITP	Ditch Top	SSMH	Sanitary Sewer, Manhole
ELBX	Electric, Box or Pullbox	SWFL	Swale Flowline
ELGY	Electric, Guy Wire	SWGB	Swale Grade Break
ELPP	Electric, Power Pole	SWTO	Swale Toe
ELSN	Electric, Warning Sign	SWTP	Swale Top
ELTR	Electric, Transformer	TFBL	Topo Feature, Building
ELTW	Electric, Tower	TFBR	Topo Feature, Brush
ELVT	Electric, Vault	TFCO	Topo Feature, Concrete (pad, slab, etc.)
FNAP	Fence Angle Point	TFFL	Topo Feature, Flowline
FNCR	Fence Corner	TFGB	Topo Feature, Grade Break
FNGT	Fence Gate	TFGS	Topo Feature, Ground Shot
FNLN	Fence Line	TFRK	Topo Feature, Rock Or Rocky Area Boundary
IRCO	Irrigation Concrete Pad	TFTL	Topo Feature, Tree line
IRCP	Irrigation Control Panel	TFTO	Topo Feature, Grade Break at Toe
IRPI	Irrigation Pipe Invert	TFTP	Topo Feature, Grade Break at Top
IRPM	Irrigation Pump	TFTR	Topo Feature, Tree
IRPT	Irrigation Pipe Top	WAEW	Edge of Water
IRVL	Irrigation Valve	WAHW	High Water Mark
IRWL	Irrigation Well	WAUW	Under Water Ground Shot
LVCL	Levee Centerline	WAWS	Water Surface
LVGB	Levee Grade Break	WCFL	Water Control Structure, Flowline/Invert at Structure
LVTO	Levee Toe of Slope	WCFR	Water Control Structure, Frame Top
LVTP	Levee Top of Slope	WCHW	Water Control Structure, Headwall
RDCL	Road, Centerline	WCPI	Water Control Structure, Pipe Invert at Outlet
RDED	Road, Edge of Dirt Road	WCPT	Water Control Structure, Pipe Top at Outlet
RDEG	Road, Edge of Gravel Road	WCST	Water Control Structure, Top of Structure
RDEP	Road, Edge of Paved Road	WCWW	Water Control Structure, Wing Wall
RDBG	Road Grade Break		

ABBREVIATIONS

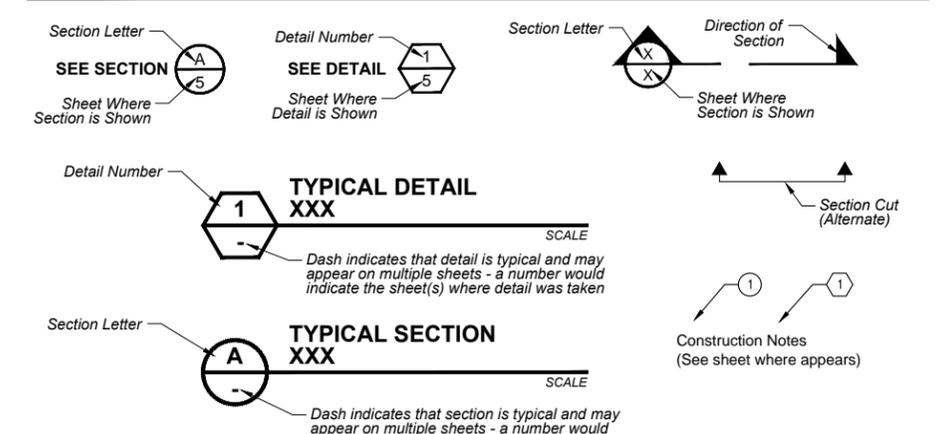
AB	Aggregate Base	(N)	New
AC	Acre	N	North
APPROX	Approximate	NIC	Not In Contract
BM	Benchmark	NTS	Not To Scale
CAP	Corrugated Aluminum Pipe	OC	On Center
CC	Center to Center	OD	Outside Diameter
CF	Cubic Foot	PIP	Pressure Irrigation Pipe
CFS	Cubic Foot Per Second	PP	Power Pole
CL	Centerline	PSI	Pounds per Square Inch
CMP	Corrugated Metal Pipe	PVC	Polyvinyl Chloride
CMPA	Corrugated Metal Arch Pipe	QTY	Quantity
CONC	Concrete	R	Right
CP	Control Point	RCB	Reinforced Concrete Box
CY	Cubic Yard	RD	Road
DIA	Diameter	REF	Reference Dimension
Dp	Pipe Diameter	REQD	Required
Dr	Riser Diameter	ROW	Right Of Way
DU	Ducks Unlimited, Inc.	S	South
D/S	Downstream	SCH	Schedule
E	East	SS	Stainless Steel
EG	Existing Ground	SDR	Standard Dimension Ratio
EL	Elevation	SF	Square Feet
EX, EXIST	Existing	SHT	Sheet
FRG	Final Rough Grade	SP	Special
FG	Finished Grade	SPECS	Specifications
FL	Flowline	SY	Square Yard
FT	Foot, Feet	STA	Station
FTG	Fitting, Footing	STD	Standard
GA	Gauge	TBD	To Be Determined by Engineer
GB	Grade Break	TBM	Temporary Benchmark
H	Height	TE	Top Elevation
HDPE	High-Density Polyethylene	TEMP	Temporary
ID	Inside Diameter	TOL	Top of Levee
IE	Invert Elevation	TOB	Top of Berm
IN	Inch, Inches	TYP	Typical
INV	Invert	USA	Underground Service Alert
IPS	Iron Pipe Size	U/S	Upstream
L	Length, Left	VLV	Valve
LBF	Pounds-Force	W	Width, West (where applicable)
LF	Linear Feet	W /	With
MAINT	Maintenance	WCS	Water Control Structure
MAX	Maximum	WS	Water Surface
MIN	Minimum	WSEL	Water Surface Elevation
MISC	Miscellaneous	WWF	Welded Wire Fabric
		X:1	Slope, Horizontal:Vertical

LEGEND & STANDARD SYMBOLS

	Existing Fence Line - Barbed Wire		Existing Power / Telephone Pole
	Existing Fence Line - Chain Link		Existing Electric Guy Wire
	Existing Fence Line - Stockade		Existing Electric Transformer
	Existing Guard Rail		Existing Electric Tower
	Power / Telephone Overhead Lines		Existing Electric Vault
	Underground Gas Line		Existing Blind
	Electric Line		Existing Gate Valve
	Force Main Line		Existing Air Relief Valve
	Sanitary Sewer Line		Existing Alfalfa / Overflow Valve
	Storm Drain Line		Existing Irrigation Well
	Existing Ditch		Existing Irrigation Pump
	Existing Levee		Existing Water Meter
	Existing Swale		Existing Fire Hydrant
	Existing Road - Dirt		Existing Manhole
	Existing Road - Gravel		Existing Drain Inlet
	Existing Road - Paved		Existing Sewer Cleanout
	Existing Trees / Brushline		Existing Natural Gas Meter / Valve
			Existing Sign
			Existing Pipe / Culvert
			Existing Water Control Structure (Precast Concrete)
			Existing Water Control Structure (Full Round)
			Existing Water Control Structure (Half Round)

	Water Control Structure ID#		New Power Pole
	Revision Number Identifier		New Gate Valve
	Cut/Borrow Area		New Air Relief Valve
	Pothole		New Alfalfa / Overflow Valve
	Fill Area		New Irrigation Pump
	New / Reconstructed Fence		New Water Control Structure
	New Swale Centerline / Flowline		New Water Control Structure
	Regraded Ditch Centerline / Flowline		Benchmark
	New Levee Centerline		Temporary Benchmark
	Improved Levee Centerline		Control Point
	Remove Existing Levee		
	Design Water Surface Elevation		

DETAILING CONVENTIONS



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REVISIONS			
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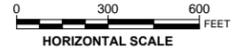


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WETLAND RESTORATION / ENHANCEMENT		
DRAWN BY: JM	SURVEYED BY: JM	
CHECKED BY:	SHEET NO.	
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DEFINITIONS & LEGEND



PRELIMINARY



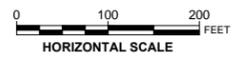
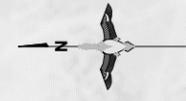
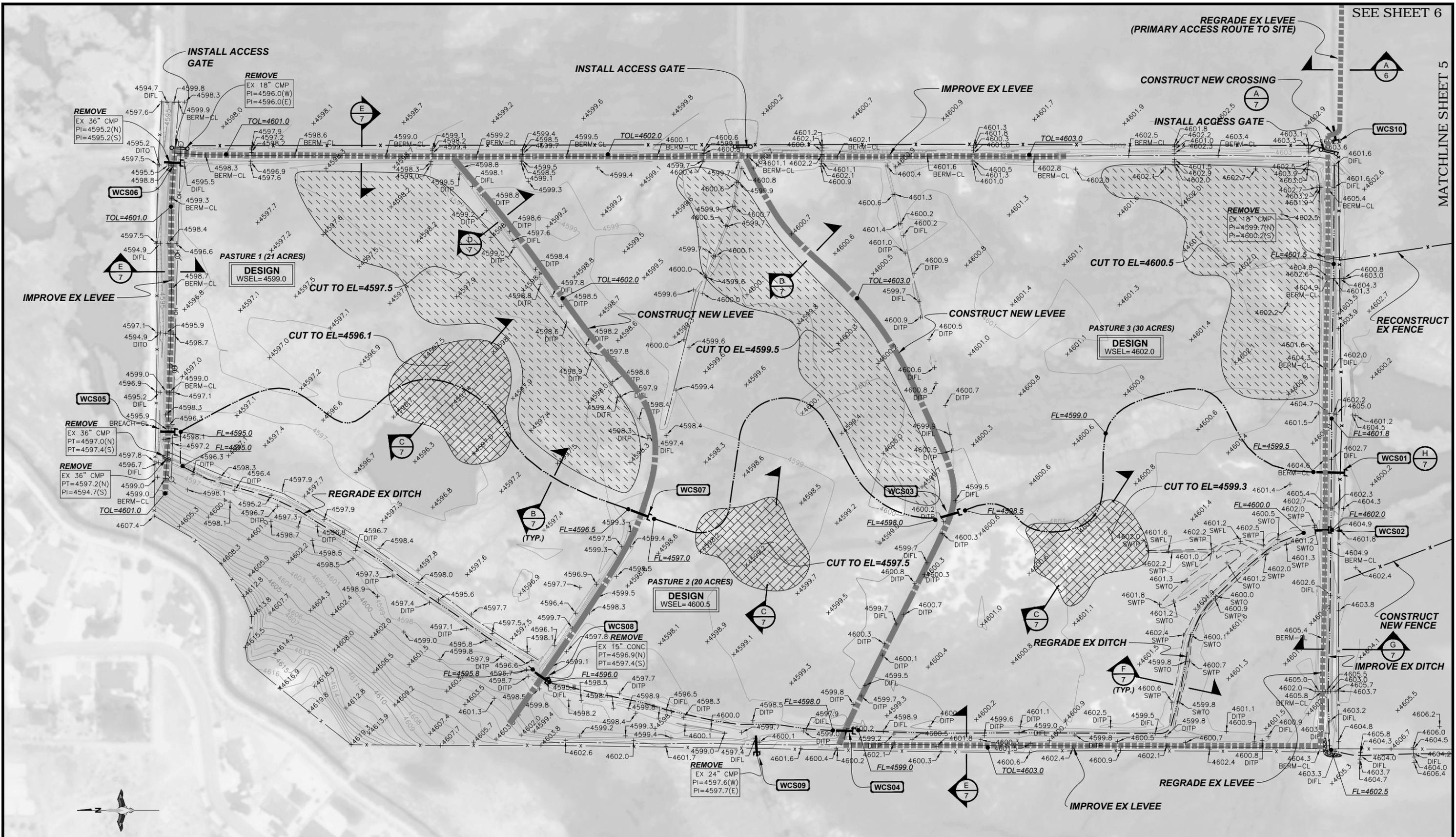
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SHEET INDEX		SHEET NO. 3 of 7



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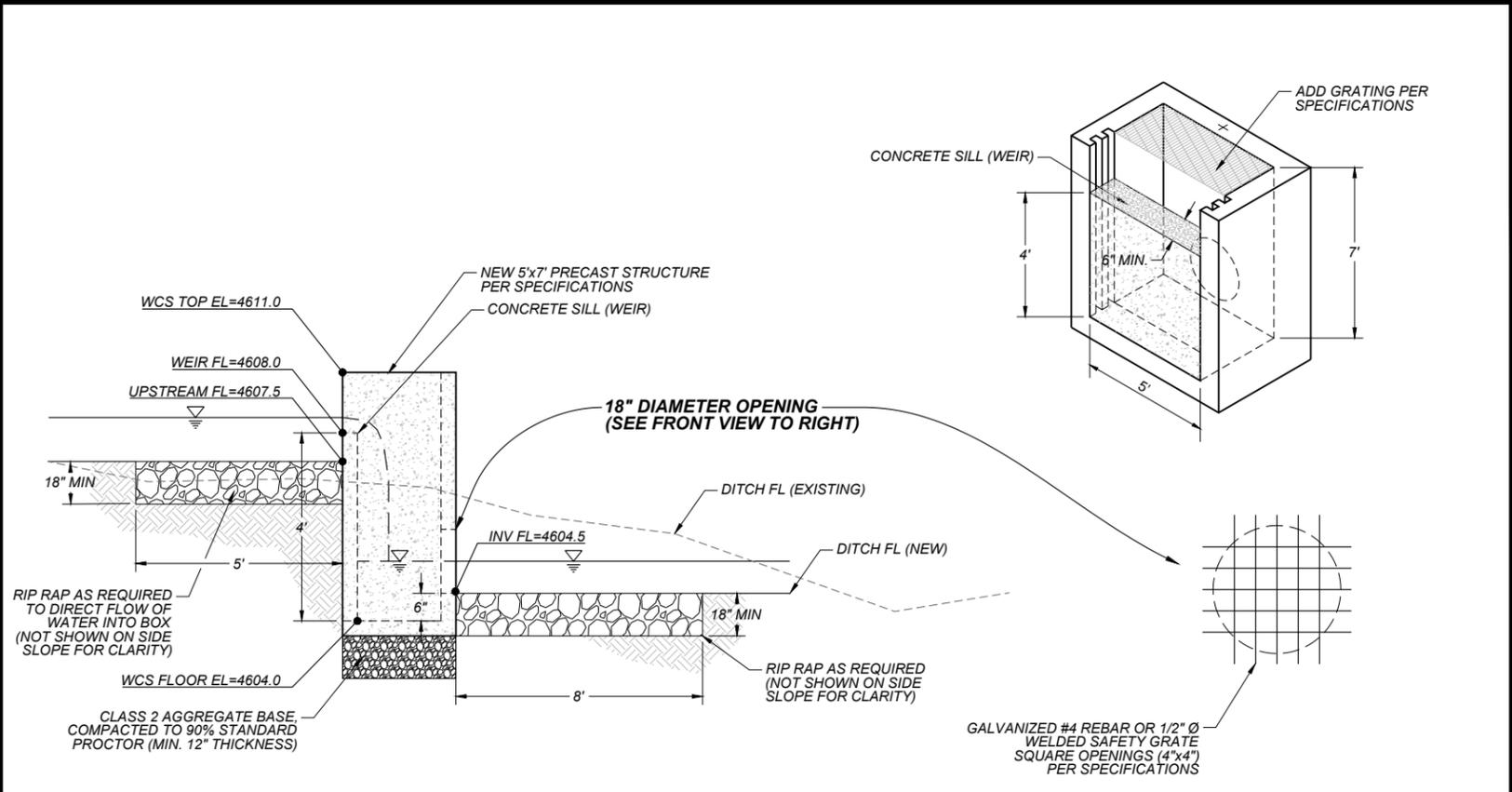
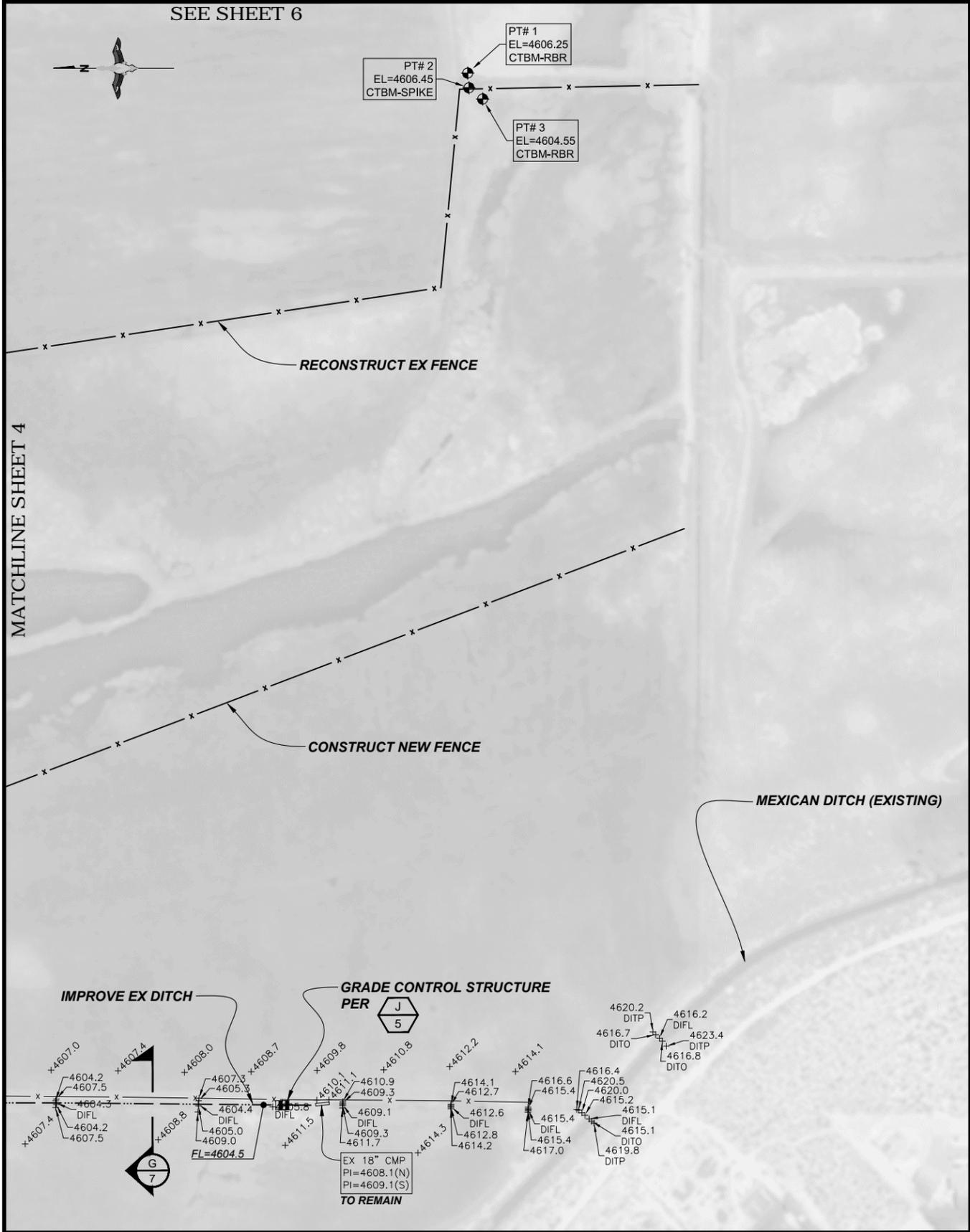
BUZZY'S RANCH PROJECT DRAWN BY: **JM**

WETLAND RESTORATION / ENHANCEMENT SURVEYED BY: **JM**

CHECKED BY: **JM**

SITE PLAN SHEET NO. **4 of 7**

SEE SHEET 6



J-5
DETAIL GRADE CONTROL STRUCTURE
NTS

PRELIMINARY

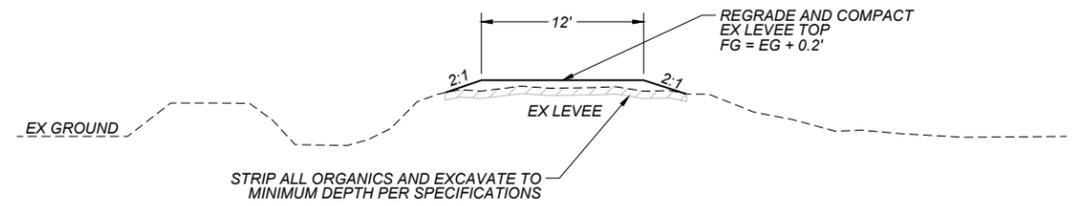
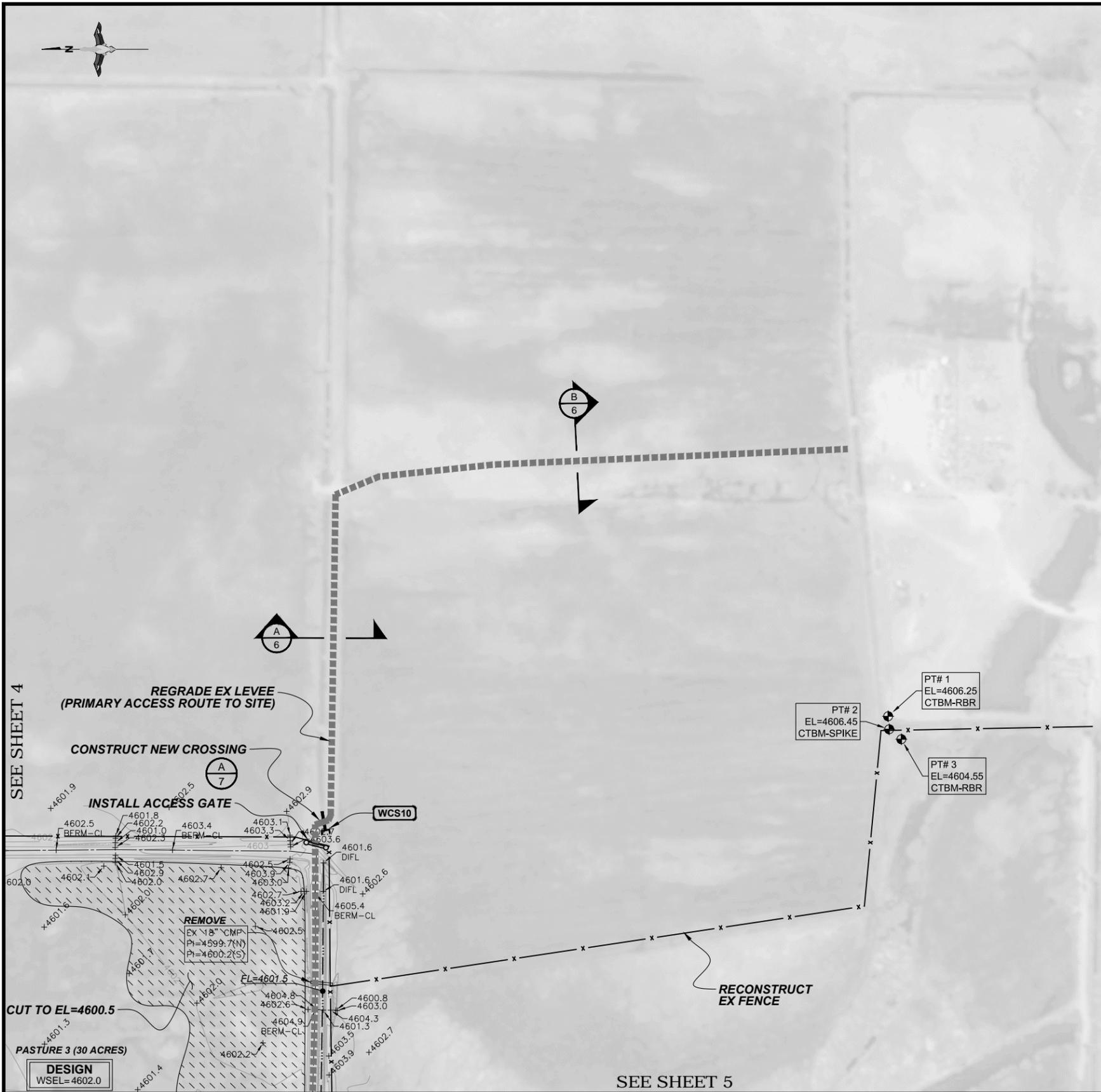
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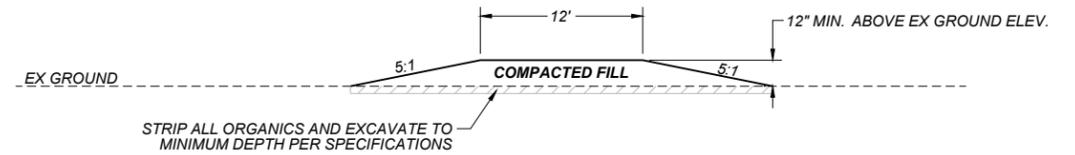
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		CHECKED BY:
		SHEET NO. 5 of 7

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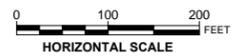
SITE PLAN



A
TYPICAL SECTION IMPROVED LEVEE
NOT TO SCALE



B
TYPICAL SECTION NEW ROAD
NOT TO SCALE



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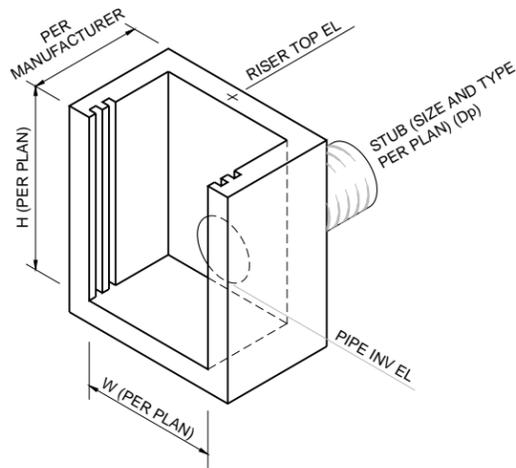
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DESIGNED BY: JR
 DRAWN BY: JS
 SURVEYED BY: JM
 CHECKED BY:
 SHEET NO.

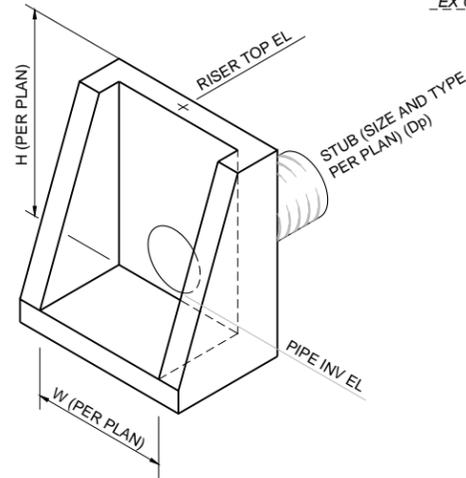
6 of 7

WATER CONTROL STRUCTURE TABLE

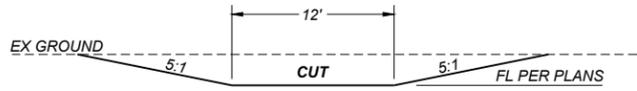
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								INLET	OUTLET	
WCS01	3	6	24	80	4604.5	4605.0	4598.5	8	8	TAILWALL 3X5
WCS02	3	4	24	30	4604.0	4604.5	4600.0	5	8	TAILWALL 3X4
WCS03	3	4	24	30	4602.0	4603.0	4598.0	5	8	TAILWALL 3X4
WCS04	3	4	24	30	4602.0	4603.0	4598.0	5	8	TAILWALL 3X4
WCS05	4	6	36	30	4601.0	4601.0	4595.0	5	8	TAILWALL 4X5
WCS06	3	6	24	30	4601.0	4601.0	4595.0	5	8	TAILWALL 3X5
WCS07	3	5	24	30	4601.5	4602.0	4596.5	5	8	TAILWALL 3X4
WCS08	3	5	24	30	4601.5	4602.0	4596.5	5	8	TAILWALL 3X4
WCS09	3	4	24	30	4601.5	4601.0	4597.5	5	8	TAILWALL 3X4
WCS10	3	5	30	30	4604.0	4605.5	4599.0	5	8	TAILWALL 3X4



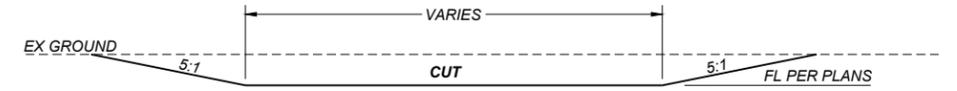
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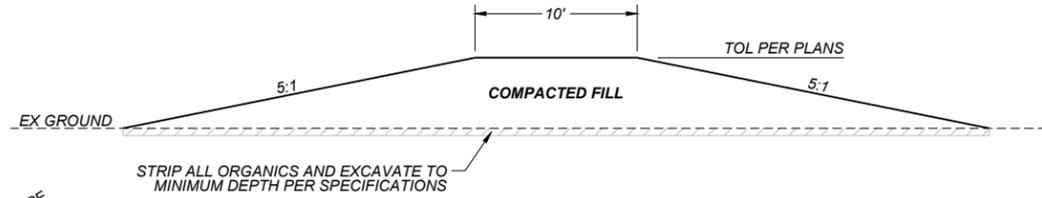
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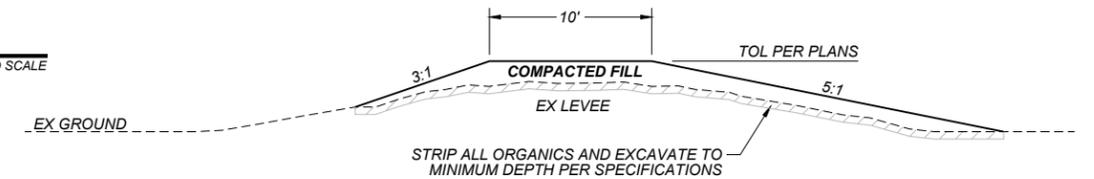
B TYPICAL SECTION NEW SWALE
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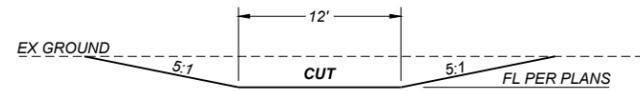
C TYPICAL SECTION POTHOLE/BORROW AREA
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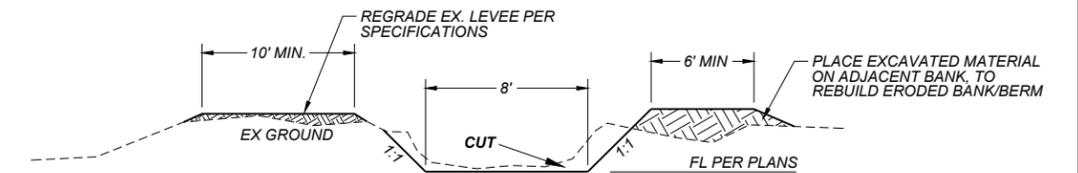
D TYPICAL SECTION NEW LEVEE
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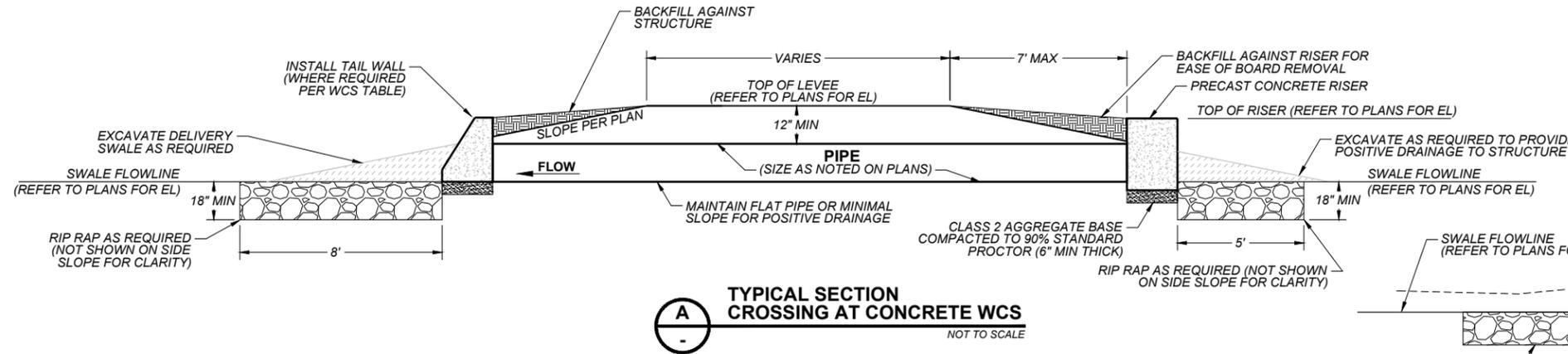
E TYPICAL SECTION IMPROVED LEVEE
NOT TO SCALE



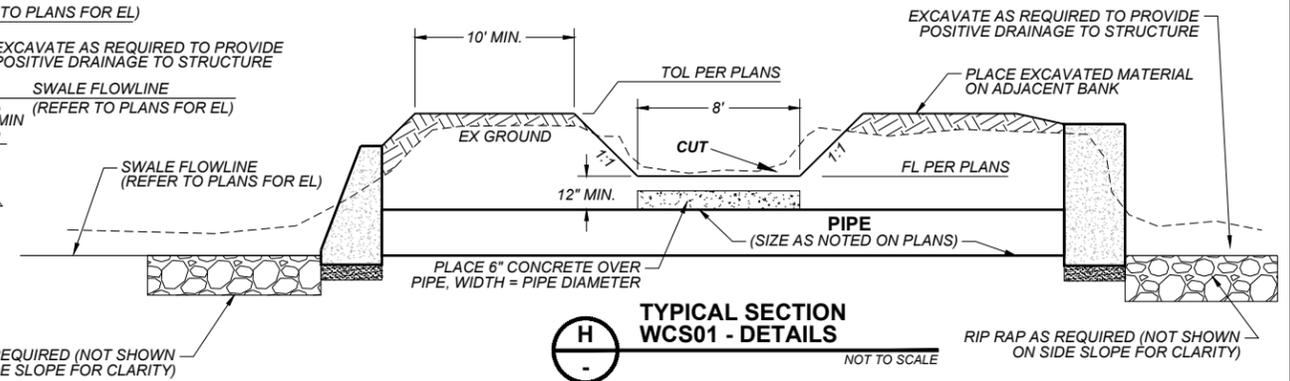
F TYPICAL SECTION DITCH REGRADING
NOT TO SCALE



G TYPICAL SECTION DITCH IMPROVEMENT
NOT TO SCALE



A TYPICAL SECTION CROSSING AT CONCRETE WCS
NOT TO SCALE



H TYPICAL SECTION WCS01 - DETAILS
NOT TO SCALE

PRELIMINARY

Unauthorized Changes & Uses
The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes must be in writing and must be approved by the preparer of these plans.

REVISIONS			
REV. NO.	DESCRIPTION	DATE	APPROVED



PROJECT NO. US-NV-33-7	DATE: 1/6/2016	DESIGNED BY: JR
BUZZY'S RANCH PROJECT		DRAWN BY: JM
WETLAND RESTORATION / ENHANCEMENT		SURVEYED BY: JM
		CHECKED BY: JM
		SHEET NO. 7 of 7

DETAILS